

# Solution Requirement Phase

**Project Title:** Optimizing User, Group, and Role Management with Access Control and Workflows  
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## 1. Objective of the Requirement Phase

The objective of this phase is to identify, define, and document all **functional and non-functional requirements** essential for developing the ServiceNow-based **User, Group, and Role Management System**.  
It ensures that the system’s design aligns with organizational goals — improving **security, automation, and accountability** while minimizing manual administrative effort.

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## 2. Functional Requirements

S.No	Requirement Category	Description
1.	User Management	Ability to create, view, update, and delete user profiles within ServiceNow.
2.	Group Management	Functionality to define and manage groups for task or project categorization.
3.	Role Assignment	Assign specific roles (e.g., Project Manager, Team Member) with defined access privileges.
4.	Access Control Lists (ACLs)	Implement ACLs for tables and fields to ensure data access is restricted by user role.
5.	Workflow Automation	Automate task assignments, role approval processes, and status updates using Flow Designer.
6.	Approval Management	Allow managers to approve or reject access requests and workflow operations.
7.	Audit Trail and Logs	Maintain a complete audit log of all user, group, and role activities for accountability.
8.	Dashboard and Reporting	Generate dynamic dashboards showing access statistics, workflow progress, and user activity.

9.	<b>User Impersonation Testing</b>	Enable impersonation to verify the effectiveness of ACLs and permissions in real-time.
10.	<b>Notification System</b>	Send email or in-app alerts for approvals, workflow changes, or security events.

### 3. Non-Functional Requirements

Category	Requirement Description
<b>Performance</b>	The system should process access or workflow updates within 2–3 seconds.
<b>Scalability</b>	Must support enterprise-level deployment with up to 10,000 users and multiple departments.
<b>Security</b>	Enforce least-privilege access, encryption of sensitive data, and regular access reviews.
<b>Usability</b>	Provide intuitive UI through ServiceNow workspace with minimal training needed.
<b>Availability</b>	Ensure 99.9% uptime with ServiceNow's cloud infrastructure reliability.
<b>Auditability</b>	Every change to user roles or workflows must be logged with a timestamp and user ID.
<b>Maintainability</b>	The solution should support easy updates and configuration without coding changes.
<b>Compliance</b>	Align with organization's data protection and IT security policies.

### 4. System Inputs and Outputs

Category	Inputs	Outputs
<b>User Management</b>	User details (name, email, department, role)	User record created in ServiceNow
<b>Group Assignment</b>	Group name, members	Group mapped to corresponding users
<b>Role Configuration</b>	Role name, permissions	Role linked to user and group tables
<b>Workflow Actions</b>	Task creation, approval triggers	Updated task status and audit log entry

<b>Access Requests</b>	Role change or access modification request	Approval notification and ACL update
<b>Reporting</b>	Data on user and access activities	Dashboard displaying access summary and compliance logs

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## 5. System Interfaces

Interface Type	Description
<b>User Interface</b>	ServiceNow forms, dashboards, and portal views for interaction.
<b>Workflow Interface</b>	Flow Designer for automation of approval and assignment processes.
<b>Database Interface</b>	Custom tables ( <code>u_project_table</code> , <code>u_task_table2</code> ) for structured data storage.
<b>Integration Interface</b>	LDAP/OAuth for authentication and synchronization with external systems.
<b>Admin Interface</b>	Impersonation and ACL testing tools for configuration and validation.

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## 6. Constraints

- Must operate entirely within the ServiceNow platform environment.
  - Only authorized users can modify access roles or workflow rules.
  - Changes to ACLs require admin privileges.
  - System must maintain backward compatibility with existing ServiceNow modules.
  - Approval flows must complete within predefined SLA time limits.
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## 7. Assumptions

- The organization already uses ServiceNow as its core ITSM platform.
- User and role data will be imported through standardized Import Sets.

- All stakeholders will participate in sprint reviews and UAT testing.
  - Internet connectivity and ServiceNow licenses are available for all users involved.
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## 8. Expected Deliverables

- Requirements Specification Document (RSD)
  - Functional and Non-Functional Requirement List
  - ER Diagram and Data Schema Design
  - Workflow Process Diagrams
  - User Role and Permission Matrix
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## 9. Conclusion

The **Solution Requirement Phase** defines a clear and comprehensive set of specifications guiding the development of a secure, scalable, and automated **User, Group, and Role Management System**.

By addressing both functional and non-functional aspects, this phase ensures that the upcoming design and implementation stages are **well-aligned, technically sound, and compliant with organizational goals**.