

OPTIMIZING USER, GROUP, AND ROLE MANAGEMENT WITH ACCESS CONTROL AND WORKFLOWS

Team ID: NM2025TMID01606

Team Size: 4

Team Leader: Ashik Peer Mohameed M

Team member: Ashlin TJ

Team member: Ashin K

Team member: Ashwin N

OPTIMIZING USER, GROUP, AND ROLE MANAGEMENT WITH ACCESS CONTROL AND WORKFLOWS

AIM:

To automate ServiceNow administration by optimizing user, group, and role management with secure access controls and workflows.

PROBLEM STATEMENT:

In a small project management team consisting of a Project Manager (Alice) and a Team Member (Bob), efficient task management and accountability throughout the project lifecycle are crucial. The existing system lacks:

- Clear role definitions
- Proper access controls
- Structured workflows

PROJECT OBJECTIVES:

- Define and manage Users, Groups, and Roles in ServiceNow.
- Enable controlled access permissions through ACLs.
- Create a custom project table to track project-related tasks.
- Assign users to groups and roles based on responsibilities.
- Implement application access and workflows for smooth task management.
- Ensure accountability by using Flow Designer to automate task assignments.

PROCEDURES:

Step 1: Create Users

1. Login to **ServiceNow** with an admin account.
2. In the left navigation filter, type **Users**.
3. Select: All → Users (System Security → Users)
4. Click on **New**.
5. Fill in user details:

• **User ID:** alice.p •

First Name: Alice

- Last Name: P
 - Email: alice@example.com
 - **Password:** (set as per policy)
6. Click **Submit**.

Repeat the process to create another user:

- **User ID:** bob.p
 - First Name: Bob
 - **Last Name:** P
 - **Email:** bob@example.com
 - **Password:** (set as per policy)
7. Verify both users are listed under **User records**.

Step 2: Create Groups

1. In the navigation filter, type **Groups**.
2. Navigate: All → **Groups** (System Security → **Groups**).
3. Click **New**.
4. Enter details:
 - **Name:** Project Team Group
 - **Description:** Group for project-related tasks and access.
5. Click **Submit**.
6. Group is now available under **System Security → Groups**.

Step 3: Create Roles

1. In the navigation filter, type **Roles**.

2. Navigate: **All → Roles (System Security → Roles)**.
3. Click **New**.
4. Create roles one by one:
 - **Project Manager Role** (Full control on Project Table, Task Table).
 - **Team Member Role** (Basic access to Project Table).
 - **u_project_table Role** (specific access to project table).
 - **u_task_table Role** (specific access to task table).
5. Save each role by clicking **Submit**.

Step 4: Create table

1. In the navigation filter, type **Tables**.
2. Navigate: **All → Tables (System Definition → Tables)**.
3. Click **New**.
4. Fill in details:
 - **Label:** Project Table
 - **Name:** u_project_table (auto-generated)
 - **Create Module:** checked
 - **Create Mobile Module:** checked

Under **New Menu Name**, enter: Project Table.

6. Define **Table Columns**:
 - Task Name (String)
 - Assigned To (Reference → User)
 - Status (Choice → Open, In Progress, Closed)
 - Priority (Integer)

Click **Submit**.

Step 5: Assign Users to Team

1. Navigate: **All → Groups → Project Team Group.**
2. Under the group record, scroll to the **Group Members** tab.
3. Click **Edit**.
4. Select **Alice P** and **Bob P** from the available users list.
5. Move them to the **Selected** list.
6. Click **Save**. Step

6: Assign Roles Assign

Roles to Alice

1. Navigate: **All → Users (System Security → Users)**.
2. Open the record for **Alice P**.
3. Scroll to the **Roles** tab.
4. Click **Edit**.
5. Add the following roles:
 - **Project Manager Role**
 - **u_project_table**
 - **u_task_table**
6. Move them to the **Selected** list.
7. Click **Save** and then **Update** the user record.

Assign Roles to Bob

1. Navigate: **All → Users (System Security → Users)**.
2. Open the record for **Bob P**.
3. Scroll to the **Roles** tab.
4. Click **Edit**.
5. Add the following roles:
 - Team Member Role
 - **u_project_table** (if limited access needed)

6. Move them to the **Selected** list.
 7. Click **Save and Update** the user record.
-
8. (Optional) Use **Impersonate User → Bob** to verify access

Step 7: Assign Table Access to Application

1. When the **Project Table** was created, ServiceNow automatically generated an **Application and Module**.
2. Navigate: All → Application Menus → Project Table Application.
3. Open the module and click **Edit**.
4. Assign the following roles:
 - **Project Member Role** → For full access.
5. Save the application module.

Configure Task Table Application Access

1. Navigate: All → Application Menus → **Task Table Application**.
2. Open the module and click **Edit**.
3. Assign roles:
 - Project Member Role
 - **Team Member Role**
4. Save the application module.

Step 8: Create ACL

1. Navigate: All → Access Control (ACL) (System Security → Access Control).
2. Click **Elevate Role** (choose security_admin).
3. Click **New**.
4. Define ACL for the **Project Table**:
 - **Type:** Table.None / Table.Field
 - **Operation:** read, write, delete

- **Role(s):** Assign Project Manager Role and/or Team Member Role
5. Save the ACL.
 6. Repeat the process for the **Task Table**.
 7. Verify by impersonating users (Alice and Bob) to ensure access is restricted correctly.

Step 9: Create a Flow to Assign Operations Ticket to Group

1. Navigate: All → Flow Designer (Process Automation → Flow Designer).
2. Click **New** → **Flow**.
3. In **Flow Properties**:
 - **Name:** Task Table Flow
 - **Application:** Global
 - **Table:** Task Table
 - **Trigger:** When a record is created

Build The Flow

1. Add **Action** → *Update Record*.
2. Set Assignment Group = Project Team Group.
3. Optionally add:
 - **Notification** to group members when a new task is assigned.
 - **Approval Step** for Project Manager (Alice).
4. Save the Flow.
5. Activate the Flow.

Testing

- Impersonate Bob → Create a new Task record.
- Verify the task is automatically assigned to **Project Team Group**.
- Check notification/assignment workflow.

OUTPUT:

Servicenow All Favorites History Workspaces Admin Users

Actions on selected rows... New

User ID	Name	Email	Active	Created	Updated
bob	Bob p	bob@gmail.com	true	2025-09-19 22:20:25	2025-09-19 22:20:25
alice	alice p	alice@gmail.com	true	2025-09-19 22:19:15	2025-09-19 22:19:15
aes.creator	Creator User		true	2025-09-16 12:51:55	2025-09-19 21:17:09
admin	System Administrator	admin@example.com	true	2007-07-03 11:48:47	2025-09-19 21:17:09
margot.arenburg	Margot Arenburg	margot.arenburg@example.com	true	2012-02-17 19:04:52	2025-09-16 12:23:30
jannie.bowditch	Jannie Bowditch	jannie.bowditch@example.com	true	2012-02-17 19:04:52	2025-09-16 12:23:30
bette.barcelona	Bette Barcelona	bette.barcelona@example.com	true	2012-02-17 19:04:52	2025-09-16 12:23:30
jonathon.waldall	Jonathon Waldall	jonathon.waldall@example.com	true	2012-02-17 19:04:52	2025-09-16 12:23:30
deshawn.inafuku	Deshawn Inafuku	deshawn.inafuku@example.com	true	2012-02-17 19:04:52	2025-09-16 12:23:30
nickolas.khosravi	Nickolas Khosravi	nickolas.khosravi@example.com	true	2012-02-17 19:04:52	2025-09-16 12:23:30
lizzie.torregrossa	Lizzie Torregrossa	lizzie.torregrossa@example.com	true	2012-02-17 19:04:52	2025-09-16 12:23:30
garfield.lijewski	Garfield Lijewski	garfield.lijewski@example.com	true	2012-02-17 19:04:52	2025-09-16 12:23:30
bernard.laboy	Bernard Laboy	bernard.laboy@example.com	true	2012-02-17 19:04:52	2025-09-16 12:23:30
bart.hachey	Bart Hachey	bart.hachey@example.com	true	2012-02-17 19:04:52	2025-09-16 12:23:30
kasey.nguyen	Kasey Nguyen	kasey.nguyen@example.com	true	2012-02-17 19:04:49	2025-09-16 12:23:30
kris.persson	Kris Persson	kris.persson@example.com	true	2012-02-17 19:04:49	2025-09-16 12:23:30

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Optimizing user group and role Student - Skill Wallet ServiceNow user management ServiceNow Developers Bob p | User | ServiceNow

servicenow All Favorites History Workspaces Admin User - Bob p

User ID: bob

First name: Bob

Last name: p

Title:

Department:

Email: bob@gmail.com

Language: None

Calendar integration: Outlook

Time zone: System (America/Los_Angeles)

Date format: System (yyyy-MM-dd)

Business phone:

Mobile phone:

Password needs reset:

Locked out:

Active:

Web service access only:

Internal Integration User:

Photo: Click to add...

Update Set Password Delete

Related Links: View linked accounts, View Subscriptions, Reset a password

Entitled Custom Tables Roles (2) Groups (1) Delegates Subscriptions User Client Certificates

Role State Inherited Inheritance Count

team member	Active	false	
u_task_table_user	Active	false	

35°C Partly sunny 15:58 20-09-2025 ENG IN 15:58 20-09-2025

Optimizing user group and role | Student - Skill Wallet | ServiceNow user management | ServiceNow Developers | alice p | User | ServiceNow

[User - alice p](#)

User ID: alice

First name: alice

Last name: p

Title:

Department:

Password needs reset:

Locked out:

Active:

Email: alice@gmail.com

Language: -- None --

Calendar integration: Outlook

Time zone: System (America/Los_Angeles)

Date format: System (yyyy-MM-dd)

Business phone:

Mobile phone:

Photo: Click to add...

Web service access only:

Internal Integration User:

[Update](#) [Set Password](#) [Delete](#)

Related Links

- [View linked accounts](#)
- [View Subscriptions](#)

Optimizing user group and role | Student - Skill Wallet | ServiceNow user management | ServiceNow Developers | alice p | User | ServiceNow

[User - alice p](#)

User ID: alice

First name: alice

Last name: p

Title:

Department:

Password needs reset:

Locked out:

Active:

Email: alice@gmail.com

Language: -- None --

Calendar integration: Outlook

Time zone: System (America/Los_Angeles)

Date format: System (yyyy-MM-dd)

Business phone:

Mobile phone:

Photo: Click to add...

Web service access only:

Internal Integration User:

[Update](#) [Set Password](#) [Delete](#)

Related Links

- [View linked accounts](#)
- [View Subscriptions](#)
- [Reset a password](#)

Entitled Custom Tables				Roles (3)	Groups (1)	Delegates	Subscriptions	User Client Certificates																								
<table border="1"> <thead> <tr> <th colspan="2">Role</th> <th colspan="2">State</th> <th>Inherited</th> <th>Inheritance Count</th> </tr> </thead> <tbody> <tr> <td><input type="checkbox"/></td> <td>Role</td> <td>u_project_table_user</td> <td>Active</td> <td>false</td> <td></td> </tr> <tr> <td><input type="checkbox"/></td> <td></td> <td>project_member</td> <td>Active</td> <td>false</td> <td></td> </tr> <tr> <td><input type="checkbox"/></td> <td></td> <td>u_task_table_user</td> <td>Active</td> <td>false</td> <td></td> </tr> </tbody> </table>									Role		State		Inherited	Inheritance Count	<input type="checkbox"/>	Role	u_project_table_user	Active	false		<input type="checkbox"/>		project_member	Active	false		<input type="checkbox"/>		u_task_table_user	Active	false	
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<input type="checkbox"/>	Role	u_project_table_user	Active	false																												
<input type="checkbox"/>		project_member	Active	false																												
<input type="checkbox"/>		u_task_table_user	Active	false																												

35°C Partly sunny

Search

Actions on selected rows... Edit...

ENG IN 15:58 20-09-2025

ServiceNow User Management - Group - project team

Name: projectteam
Manager:
Description:

Group Email:
Parent:

Group Members (2)

User
alice p
Bob p

Role - project member

Name: project member
Application: Global
Elevated privilege:

Description:

Applications with Role (2)

Title	Active	Order	Roles	Name	Updated
task table	true	100	u.task_table_user project member team member	task table	2025-09-19 23:20:02
project table	true	100	u.project_table_user project member	project table	2025-09-19 23:18:24

Role - team member

Name: team member
Application: Global
Elevated privilege:

Description:

Applications with Role (1)

Title	Active	Order	Roles	Name	Updated
task table	true	100	u.task_table_user project member team member	task table	2025-09-19 23:20:02

Table - project table

* Label: project table
* Name: u_project_table

Table Columns

Column label	Type	Reference	Max length	Default value	Display
status	Choice	{empty}	40	false	false
Updated	Date/Time	{empty}	40	false	false
project name	String	{empty}	40	false	false
Created by	String	{empty}	40	false	false
start date	Date	{empty}	40	false	false
Sys ID	Sys ID (GUID)	{empty}	32	false	false
Created	Date/Time	{empty}	40	false	false
description	String	{empty}	40	false	false
end date	Date	{empty}	40	false	false
Updated by	String	{empty}	40	false	false
project id	Integer	{empty}	40	false	false
Updates	Integer	{empty}	40	false	false
project manager	String	{empty}	40	false	false
Insert a new row...					

Table task table

A table is a collection of records in the database. Each record corresponds to a row in a table, and each field on a record corresponds to a column on that table. Applications use tables and records to manage data and processes. [More Info](#)

* Label: task table
* Name: u_task_table

Table Columns

Column label	Type	Reference	Max length	Default value	Display
Created by	String	{empty}	40	false	false
Created	Date/Time	{empty}	40	false	false
Sys ID	Sys ID (GUID)	{empty}	32	false	false
Comments	String	{empty}	40	false	false
status	Choice	{empty}	40	false	false
assigned to	String	{empty}	40	false	false
Updated by	String	{empty}	40	false	false
task name	String	{empty}	40	false	false
Updates	Integer	{empty}	40	false	false
task id	Integer	{empty}	40	false	false
due date	Date	{empty}	40	false	false
Updated	Date/Time	{empty}	40	false	false
Insert a new row...					

Application Menu - project table

* Title: project table
Application: Global

Active:

Restricts access to the specified roles. Otherwise, all users can view the application menu when it is active.

Roles: u_project_table_user, project member

Specifies the **menu category**, which defines the navigation menu style. The default value is Custom Applications.

Category: Custom Applications

The text that appears in a tooltip when a user points to this application menu

Hint:
Description:

Update | Delete

Application Menu - task_table

An application menu is a group of modules in the application navigator. Choose the roles that are required to access the application and add or remove modules in the related list below. [More Info](#)

* Title: **task_table** Application: Global Active:

Role: **u_task_table_user, project member, team member**

Category: Custom Applications

The text that appears in a tooltip when a user points to this application menu.

Hint: Description:

Update **Delete**

Access Controls

All

Name	Decision Type	Operation	Type	Active	Updated by	Updated
Search	Search	Search	Search	true	admin	2025-09-19 23:39:16
u_task_table.u_task_name	Allow If	write	record	true	admin	2025-09-19 23:37:26
u_task_table.u_task_id	Allow If	write	record	true	admin	2025-09-19 23:36:23
u_task_table.u_due_date	Allow If	write	record	true	admin	2025-09-19 23:33:32
u_task_table.u_assigned_to	Allow If	write	record	true	admin	2025-09-19 23:30:00
u_task_table.u_status	Allow If	write	record	true	admin	2025-09-19 23:10:09
u_task_table	Allow If	create	record	true	admin	2025-09-19 22:51:09
u_task_table	Allow If	delete	record	true	admin	2025-09-19 22:51:09
u_task_table	Allow If	read	record	true	admin	2025-09-19 22:51:09
u_project_table	Allow If	read	record	true	admin	2025-09-19 22:41:03
u_project_table	Allow If	write	record	true	admin	2025-09-19 22:41:03
u_project_table	Allow If	delete	record	true	admin	2025-09-19 22:41:03
u_project_table	Allow If	create	record	true	admin	2025-09-19 22:41:03

Access Control - u_task_table.u_status

Type: record Operation: write Decision Type: Allow If Active: Admin overrides: Protection policy: -- None -- Name: u_task_table.u_status Description: Applies To: No of records matching the condition: 0 (empty)

Conditions

Access Control Rules have two decision types, and these types will behave differently depending on conditions.

- Allow Access: Allows access to a resource if all conditions are met.
- Deny Access: Denies access to a resource unless all conditions are met.

[More Info](#)

Requires role:

- team member
- u_task_table_user

Security Attribute Condition:

Local or Existing Local

Workflow Studio | task table Flow | Active

task table

Trigger

task table Created where (status is in progress 2, and Comments is feedback, and assigned to is bob)

Trigger: **Created**

* Table: **task table [u_task_table]**

Condition: All of these conditions must be met

- status is in progress 2
- Comments is feedback
- assigned to is bob

OR AND OR AND OR AND

New Criteria Advanced Options

Delete Cancel Done

Data Collapsible All

- Flow Variables
- Trigger - Record Created
 - task table Record
 - task table Table
 - Run Start Time UTC
 - Run Start Date/Time
- 1 - Update Record
 - task table Record
 - task table Table
 - Action Status
- 2 - Ask For Approval
 - Approval State
 - Action Status

Workflow Studio | task table Flow | Active

task table

2 Ask For Approval

Action: **Ask For Approval**

* Record: Trigger - Record Created

Table: **task table [u_task_table]**

Approval Field: **status**

Journal Field: Select a field

* Rules

- Approve When: All users approve
- When: alice p X

OR AND

Due Date: None

Add another OR rule set

Delete Cancel Done

Data Collapsible All

- Flow Variables
- Trigger - Record Created
 - task table Record
 - task table Table
 - Run Start Time UTC
 - Run Start Date/Time
- 1 - Update Record
 - task table Record
 - task table Table
 - Action Status
- 2 - Ask For Approval
 - Approval State
 - Action Status

Workflow Studio | task table Flow | Active

task table

task table Created where (status is in progress 2, and Comments is feedback, and assigned to is bob)

ACTIONS: Select multiple

1 Update task table Record

Action: **Update Record**

* Record: Trigger - Record Created

* Table: **task table [u_task_table]**

* Fields: **status** completed

+ Add field value

Delete Cancel Done

2 Ask For Approval

Data Collapsible All

- Flow Variables
- Trigger - Record Created
 - task table Record
 - task table Table
 - Run Start Time UTC
 - Run Start Date/Time
- 1 - Update Record
 - task table Record
 - task table Table
 - Action Status
- 2 - Ask For Approval
 - Approval State
 - Action Status

Project on user... | ServiceNow Dev | ServiceNow | task table | Work | Created 2024-10-22 | ChatGPT | New Tab

task table 2 - Created 2024-10-22 22:25:18

task table 2
Created 2024-10-22 22:25:18

task id	bob
task name	
status	completed
assigned to	
comments	
due date	

[Update](#) [Delete](#)

Activate Windows
Go to Settings to activate Windows.

Project on user... | ServiceNow Dev | ServiceNow | task table | Work | Approvals | ChatGPT | New Tab

Approvals

Approvals | Created | Search | Actions on selected rows...

All	State	Approver	Comments	Approval for	Created
Approved	alice p		(empty)	2024-10-22 22:26:19	
Rejected	Fred Luddy		(empty)	2024-09-01 12:19:33	
Requested	Fred Luddy		(empty)	2024-09-01 12:17:03	
Requested	Fred Luddy		(empty)	2024-09-01 12:15:44	
Requested	Howard Johnson		CHG0000096	2024-09-01 06:15:29	
Requested	Ron Kettering		CHG0000096	2024-09-01 06:15:29	
Requested	Luke Wilson		CHG0000096	2024-09-01 06:15:29	
Requested	Christen Mitchell		CHG0000096	2024-09-01 06:15:29	
Requested	Bernard Laboy		CHG0000096	2024-09-01 06:15:29	
Requested	Howard Johnson		CHG0000095	2024-09-01 06:15:25	
Requested	Ron Kettering		CHG0000095	2024-09-01 06:15:25	
Requested	Luke Wilson		CHG0000095	2024-09-01 06:15:25	
Requested	Christen Mitchell		CHG0000095	2024-09-01 06:15:25	
Requested	Bernard Laboy		CHG0000095	2024-09-01 06:15:25	

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Activate Windows
Go to Settings to activate Windows.

CONCLUSION:

This project successfully demonstrated the optimization of user, group, and role management in ServiceNow by implementing access controls and automated workflows. With Alice and Bob having clearly defined roles, access permissions, and structured task assignments, the project team can now operate with clarity, accountability, and efficiency throughout the project lifecycle.