

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

Team Id: NM2025TMID05923

Team Members: 4

Team Leader : PRICILA S

Team Member 1 : RAHUL M

Team Member 2 : RAMYA C

Team Member 3 : ROHAN SHARMA P

Problem Context:

In a small project environment, a Project Manager (Alice) and a Team Member (Bob) are responsible for delivering tasks. However, the absence of well-defined roles, access restrictions, and structured workflows often creates confusion in responsibilities, accountability, and progress monitoring.

Objectives:

- 1. Role Definition:** Clearly outline the duties of Alice as Project Manager and Bob as Team Member, ensuring both responsibility and access boundaries are transparent.
- 2. Access Control:** Introduce mechanisms that limit Bob's ability to create or edit projects beyond his assigned tasks, while still allowing him to view and update his responsibilities.
- 3. Workflow Organization:** Establish a structured process that enables Alice to assign work, track task progress, and oversee completion in a timely and efficient manner.

Key Skills/Tools: Users, Groups, Roles, Tables, Access Control Lists (ACL), Workflow/Flow Designer.

TASK INITIATION

Milestone 1: Users

Activity 1: Create Users

1. Open service now
2. Click on All >> search for users
3. Select Users under system security
4. Click on new
5. Fill the following details to create a new user
6. Click on submit

The screenshot shows the ServiceNow User creation interface. The User ID is set to 'alice'. The First name is 'Alice' and the Last name is 'p'. The Title field is empty. The Department field has a search icon. The Email is 'alice@gmail.com'. The Language is set to 'None'. The Calendar integration is 'Outlook'. The Time zone is 'System (America/Los_Angeles)'. The Date format is 'System (yyyy-MM-dd)'. The Business phone and Mobile phone fields are empty. The Active checkbox is checked. Other checkboxes include 'Password needs reset', 'Locked out', 'Web service access only', and 'Internal Integration User'. At the bottom, there are 'Update', 'Set Password', and 'Delete' buttons. A 'Related Links' section includes 'View linked accounts', 'View Subscriptions', and 'Reset a password'. A navigation bar at the bottom includes 'Entitled Custom Tables', 'Roles', 'Groups', 'Delegates', 'Subscriptions', and 'User Client Certificates'.

Create one more user:

7. Create another user with the following details

8. Click on submit

The screenshot shows the ServiceNow User creation form. The User ID is set to 'bob'. The First name is 'Bob' and the Last name is 'p'. The Title field is empty. The Department field contains 'Student' with a search icon. The Email is 'bob@gmail.com'. The Language is set to 'None'. The Calendar integration is 'Outlook'. The Time zone is 'System (America/Los_Angeles)'. The Date format is 'System (yyyy-MM-dd)'. The Active checkbox is checked. There are also checkboxes for 'Password needs reset', 'Locked out', 'Web service access only', and 'Internal Integration User'. At the bottom, there are buttons for 'Update', 'Set Password', and 'Delete'. Below the form, there is a 'Related Links' section with links to 'View linked accounts', 'View Subscriptions', and 'Reset a password'. A navigation bar at the bottom includes tabs for 'Entitled Custom Tables', 'Roles', 'Groups', 'Delegates', 'Subscriptions', and 'User Client Certificates'. The main interface has tabs for 'Table' and 'Search'.

Milestone 2: Groups

Activity 1: Create Groups

1. Open service now.
2. Click on All >> search for groups
3. Select groups under system security
4. Click on new
5. Fill the following details to create a new group
6. Click on submit.

The screenshot shows the 'Group - New Record' page in ServiceNow. The 'Name' field contains 'project team'. The 'Manager' field is empty. The 'Group email' and 'Parent' fields are also empty. Below the form is a large, empty text area for 'Description'. At the bottom left is a 'Submit' button.

Milestone 3: Roles

Activity 1: Create roles

1. Open service now.
2. Click on All >> search for roles
3. Select roles under system security
4. Click on new
5. Fill the following details to create a new role
6. Click on submit.

The screenshot shows the 'Role - project member' page in ServiceNow. The 'Name' field contains 'project member'. The 'Application' dropdown is set to 'Global'. The 'Elevated privilege' checkbox is checked. Below the form is a large, empty text area for 'Description'. At the bottom, there are tabs for 'Contains Roles', 'Applications with Role', 'Modules with Role', and 'Custom Tables'. A search bar and a 'New' button are located at the bottom right.

Create one more role:

7. Create another role with the following details

8. Click on submit

The screenshot shows a ServiceNow interface for creating a new role. The top navigation bar includes links for 'All', 'Favorites', 'History', 'Workspaces', and 'Admin'. The main title is 'Role - New Record'. A search bar is present. The form fields include:

- Name:** team member (highlighted with a green border)
- Application:** Global
- Elevated privilege:** (unchecked)
- Description:** (empty text area)

A 'Submit' button is located at the bottom left of the form area.

Milestone 4: Table

Activity 1: Create Table

1. Open service now.
2. Click on All >> search for tables
3. Select tables under system definition
4. Click on new
5. Fill the following details to create a new table

Label: project table

Check the boxes Create module & Create mobile module

6. Under new menu name: project table
7. Under table columns give the columns

Table - New Record

Name	u_project_table	Create module	<input checked="" type="checkbox"/>
Extends table		Create mobile module	<input checked="" type="checkbox"/>
Add module to menu	-- Create new --	New menu name	project table
Remote Table <input type="checkbox"/>			

Dictionary Entries

Column label	Type	Reference	Max length	Default value	Display
project id				false	
project name				false	
project manager				false	
+ <input type="text" value="s"/> <input type="button" value="I"/> <input type="button" value="O"/> <input type="button" value="X"/>					

8. Click on submit

Table - New Record

Name	u_task_table_2	Create module	<input checked="" type="checkbox"/>
Extends table		Create mobile module	<input checked="" type="checkbox"/>
Add module to menu	-- Create new --	New menu name	task table 2
Remote Table <input type="checkbox"/>			

Dictionary Entries

Column label	Type	Reference	Max length	Default value	Display
Updated by	String	(empty)	40	false	
Updates	Integer	(empty)	40	false	
Updated	Date/Time	(empty)	40	false	
Sys ID		(empty)	32	false	
+ <input type="text" value="emp"/> <input type="button" value="I"/> <input type="button" value="O"/> <input type="button" value="X"/>					
Insert a new row...					

Create one more table:

9. Create another table as: task table 2 and fill with following details.

10. Click on submit.

The screenshot shows the ServiceNow interface for creating a new record in a table. The top navigation bar includes links for All, Favorites, History, Workspaces, and Admin. The title bar says "Table - New Record". The main area displays a table of columns with the following data:

Column label	Type	Reference	Max length	Default value	Display
Updated by	String	{empty}	40		false
Updates	Integer	{empty}	40		false
Updated	Date/Time	{empty}	40		false
Sys ID	Integer	{empty}	32		false
Created by	String	{empty}	40		false
Created	Date/Time	{empty}	40		false
task id	Integer				false
task name	String				false
assigned to	String				false
due date	Date				false
status	Choice				false
comments	String				false

At the bottom of the table, there is a link "Insert a new row..." and buttons for "Submit" and "Cancel".

Milestone 5: Assign users to groups

Activity 1: Assign users to project team group

1. Open service now.

2. Click on All >> search for groups

3. Select tables under system definition

4. Select the project team group

5. Under group members

6. Click on edit

7. Select alice p and bob p and save

User - alice p

Locked out

Active

Internal Integration User

Business phone

Mobile phone

Photo Click to add...

Update Set Password Delete

Related Links

/view linked accounts
/view Subscriptions
Reset a password

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

User = alice p

Role	State	Inherited	Inheritance Count
			No records to display

Milestone 6: Assign roles to users

Activity 1: Assign roles to alice user

1. Open servicenow.Click on All >> search for user
2. Select tables under system definition
3. Select the project manager user
4. Under project manager
5. Click on edit
6. Select project member and save
- 7.click on edit add u_project_table role and u_task_table role
- 8.click on save and update the form.

User - alice p

Password needs reset

Locked out

Active

Internal Integration User

Date format: System (yyyy-MM-dd)

Business phone:

Mobile phone:

Photo: Click to add...

Entitled Custom Tables

Role	State	Inherited	Inheritance Count
u_project_table_user	Active	false	
u_task_table_2_user	Active	false	

1 to 2 of 2

Activity 2: Assign roles to bob user

1. Open servicenow.Click on All >> search for user
2. Select tables under system definition
3. Select the bob p user
4. Under team member
5. Click on edit
6. Select team member and give table role and save
7. Click on profile icon Impersonate user to bob
8. We can see the task table2.

ServiceNow Developers

User - bob p

User ID: bob

First name: bob

Last name: p

Title:

Department:

Password needs reset:

Locked out:

Active:

Internal Integration User:

Email: bob@gmail.com

Identity type: Human

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...

Update Set Password Delete

Related Links

- New linked accounts
- New Subscriptions
- Reset a password

Entitled CustomTables Roles Groups (1) Delegates Subscriptions User Client Certificates

Group Search Actions on selected rows... New Edit...

Milestone 7: Application access

Activity 1: Assign table access to application

1. while creating a table it automatically create application and module for that table
 2. Go to application navigator search for search project table application
 3. Click on edit module
 4. Give project member roles to that application
 5. Search for task table2 and click on edit application.
 6. Give the project member and team member role for task table 2 application

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

Roles u_project_table_user

Specifies the [menu category](#), which defines the navigation menu style. The default value is Custom Applications.

Category Custom Applications [Search] [Reset]

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

Hint

Description

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

Application menu - project table

<input type="checkbox"/>	Title	Table	Active	Filter	Order ▾	Link type	Device type	Roles	Updated
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Milestone 8: Access control list

Activity 1: Create ACL

1. Open service now.
2. Click on All >> search for ACL
3. Select Access Control (ACL) under system security
4. Click on elevate role
5. Click on new

The screenshot shows the ServiceNow Access Controls creation interface. At the top, there are tabs for All, Favorites, History, Workspaces, Admin, and the current tab, Access Controls. A search bar is at the top right. Below the tabs, a message says "Access Control New record". A warning message states: "Warning: A role, security attribute, data condition, script or ACL control via reference fields is required to properly secure access with this ACL." The main form has the following fields:

- Type: record
- Operation: write
- Decision Type: Allow If
- Application: Global
- Active: checked
- Advanced: unchecked
- Admin overrides: checked
- Protection policy: -- None --
- Name: * (highlighted with a red asterisk)
- Description: (empty text area)
- Applies To: (button to Add Filter Condition or Add OR Clause)

A "Conditions" section is visible below the main form, which is currently empty.

6. Fill the following details to create a new ACL
7. Scroll down under requires role
8. Double click on insert a new row
9. Give task table and team member role
10. Click on submit
11. Similarly create 4 acl for the following fields
12. Click on profile on top right side

13. Click on impersonate user

14. Select bob user

15. Go to all and select task table2 in the application menu bar

16. Comment and status fields have the edit access

Milestone 9: Flow

Activity 1: Create a Flow to Assign operations ticket to group

1. Open service now.

2. Click on All >> search for Flow Designer

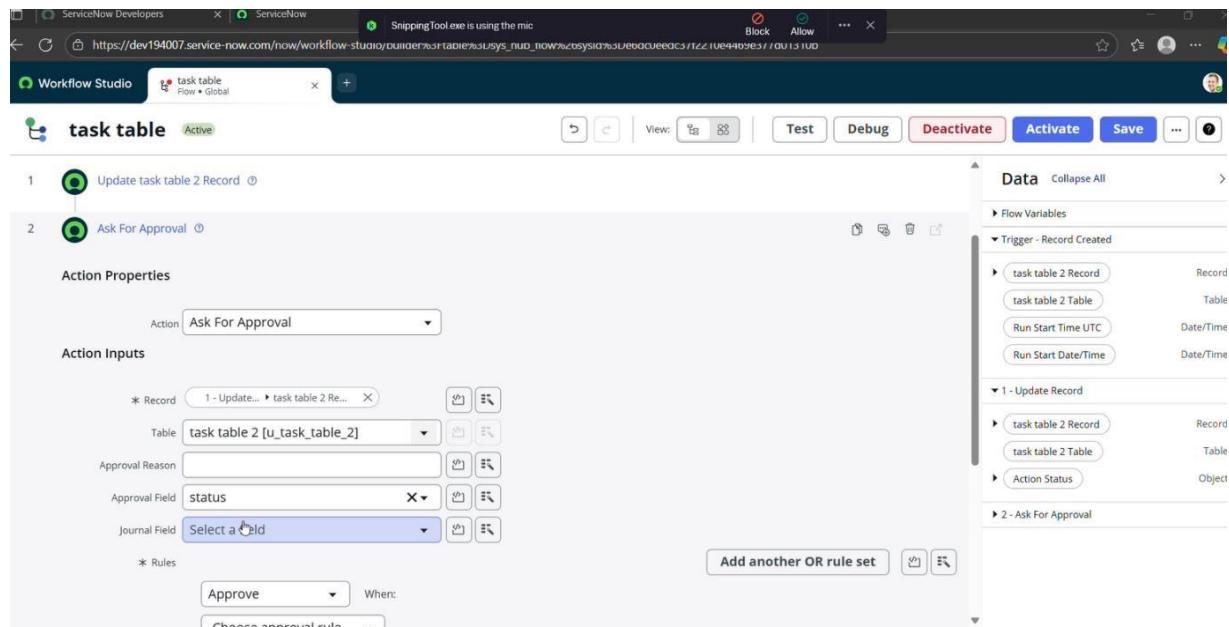
3. Click on Flow Designer under Process Automation.

4. After opening Flow Designer Click on new and select Flow.

5. Under Flow properties Give Flow Name as “task table”.

6. Application should be Global.

7. Click build flow.



next step:

1. Click on Add a trigger

2. Select the trigger in that Search for “create record” and select that.

3. Give the table name as “task table”.

4. Give the Condition as Field: status Operator: is Value: in progress

Field: comments Operator: is Value: feedback

Field: assigned to Operator: is Value: bob

5. After that click on Done.

Next step:

1. Click on Add an action.

2. Select action in that, search for “update records”.

3. In Record field drag the fields from the data navigation from Right Side (Data pill)

4. Table will be auto assigned after that

5. Add fields as “status” and value as “completed”

6. Click on Done.

The screenshot shows the ServiceNow Workflow Studio interface. A workflow rule named 'task table' is being edited. The left pane displays the rule's configuration with fields for Approval Reason, Approval Field (set to 'status'), and Journal Field (set to 'Select a field'). The 'Rules' section contains an 'OR' rule set with conditions for 'Approve' and 'All users approve'. The right pane shows the 'Data' navigation panel with various objects like 'task table 2 Record', 'task table 2 Table', and 'Action Status' listed under sections such as 'Trigger - Record Created' and '1 - Update Record'.

Next step:

1. Now under Actions.
2. Click on Add an action.
3. Select action in that, search for “ask for approval”.
4. In Record field drag the fields from the data navigation from Right side
5. Table will be auto assigned after that
6. Give the approve field as “status”
7. Give approver as alice p
8. Click on Done.
9. Go to application navigator search for task table.
10. It status field is updated to completed
11. Go to application navigator and search for my approval
12. Click on my approval under the service desk.
13. Alice p got approval request then right click on requested then select approved

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	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	

Conclusion:

This approach provides a streamlined system for managing projects by defining roles, applying access restrictions, and organizing workflows. It helps the team collaborate effectively, improves accountability, simplifies task tracking, and ensures successful project delivery.