

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

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Team size:3

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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 contains 'User'. 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. There are also checkboxes for 'Web service access only' and 'Internal Integration User'. At the bottom, there are 'Update', 'Set Password', and 'Delete' buttons, along with a 'Related Links' section containing 'View linked accounts', 'View Subscriptions', and 'Reset a password'.

Create one more user:

7. Create another user with the following details
8. Click on submit

The screenshot shows the ServiceNow classic interface for editing a user profile. The title bar says "User - Bob p". The main form contains fields for 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, and Photo (Click to add...). There are also checkboxes for Password needs reset, Locked out, Active (checked), Web service access only, and Internal Integration User. At the bottom, there are buttons for Update, Set Password, and Delete.

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:

Photo: Click to add...

Active:

Web service access only:

Internal Integration User:

Update Set Password Delete

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.

Group - New Record

Name: project team

Manager:

Description:

Submit

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.

Role - project member

Name: project member

Application: Global

Elevated privilege:

Description:

Update Delete

Contains Roles Applications with Role Modules with Role Custom Tables

for text Search

Role = project member

Contains

No records to display

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 'naan mudhalvan login - Search', 'Student', 'developer servicenow.com - Search', 'ServiceNow Developers', and 'New Record | Role | ServiceNow'. The main title is 'Role - New Record'. The 'Name' field is populated with 'team member'. The 'Application' dropdown is set to 'Global'. The 'Elevated privilege' checkbox is unchecked. The 'Description' field is empty. At the bottom left is a 'Submit' button.

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

Servicenow - https://dev194007.service-now.com/nav/ui/classic/params/target/sys_db_object.do?sys_id=1%26sys_is_list=true%26sys_target=3Dsys_db_object%26sysparm_checked_items=3D

Table - New Record

Name: u_project_table

Create module:

Create mobile module:

Add module to menu: -- Create new --

New menu name: project table

Extends table:

Remote Table:

Columns Controls Application Access

Table Columns: for text

Column label	Type	Reference	Maxlength	Default value	Display
project id				false	false
project name				false	false
project manager				false	false

+ s|

8. Click on submit

ServiceNow Developers | New Record | Table | ServiceNow

servicenow All Favorites History Workspaces Admin Table - New Record Search

Name: u_task_laure_2 Extends table: Create module: Create mobile module: Add module to menu: -- Create new -- New menu name: task table 2 Remote Table:

Columns Controls Application Access

Table Columns Column label Search

	Column label	Type	Reference	Max length	Default value	Display
X	Updated by	String	(empty)	40		false
X	Updates	Integer	(empty)	40		false
X	Updated	Date/Time	(empty)	40		false
X	Sys ID		(empty)	32		false
X			(empty)	40		false
X			(empty)	40		false
+ 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 Table - New Record interface. At the top, there are tabs for 'Table' and 'New Record'. Below the tabs, there is a search bar and a toolbar with various icons. 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
taskid	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 two buttons: 'Submit' and 'Cancel'. Below the table, there is a section titled 'Related Links'.

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

The screenshot shows the ServiceNow user profile for 'User - alice p'. The top navigation bar includes links for All, Favorites, History, Workspaces, Admin, and a search bar. Below the header, there are fields for Locked out (unchecked), Active (checked), Business phone, Mobile phone, and a Photo placeholder. A 'Related Links' section lists /view_linked_accounts, /view_Subscriptions, and /reset_a_password. The 'Entitled Custom Tables' section has tabs for Roles (selected), Groups (1), Delegates, Subscriptions, and User Client Certificates. Under the Roles tab, there is a table with columns: Role, State, Inherited, and Inheritance Count. The table is currently empty, displaying '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.

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.

The screenshot shows the ServiceNow User edit screen. The user ID is bob. The first name is bob and the last name is p. The title is blank. The department is also blank. The email is bob@gmail.com and the identity type is Human. The language is set to -- None --. The calendar integration is Outlook, the time zone is System (America/Los_Angeles), and the date format is System (yyyy-MM-dd). The business phone and mobile phone fields are empty. The photo field has a placeholder "Click to add...". There are checkboxes for "Password needs reset", "Locked out", and "Active" (which is checked). Below the form, there are buttons for "Update", "Set Password", and "Delete". A "Related Links" section includes "New linked accounts", "New Subscriptions", and "Reset a password". At the bottom, tabs for "Entitled Custom Tables", "Roles", "Groups (1)", "Delegates", "Subscriptions", and "User Client Certificates" are visible. The "Groups (1)" tab is selected. The bottom navigation bar includes "Actions on selected rows...", "New", and "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

The screenshot shows the ServiceNow Application Menu edit screen for the "project table" application. The menu title is "Application Menu - project table". The "Roles" section contains "u_project_table_user". The "Category" is set to "Custom Applications". The "Text" field is empty. The "Hint" and "Description" fields are also empty. At the bottom, there are buttons for "Update" and "Delete". A "Modules" tab is selected. The bottom navigation bar includes "Actions on selected rows...", "New", and "Edit...".

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 interface. At the top, there's a navigation bar with tabs like 'All', 'Favorites', 'History', 'Workspaces', and 'Admin'. The main title is 'Access Controls'. Below the title, it says 'Access Control New record'. A warning message at the top 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 form fields include:

- * Type: record
- Operation: write
- Decision Type: Allow If
- Application: Global
- Active: checked
- Advanced: unchecked
- Admin overrides: checked
- Protection policy: None
- * Name: *
- Description: (empty text area)
- Applies To: (with buttons for 'Add Filter Condition' and 'Add OR Clause')

A section titled 'Conditions' is visible below the main form, but it appears 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

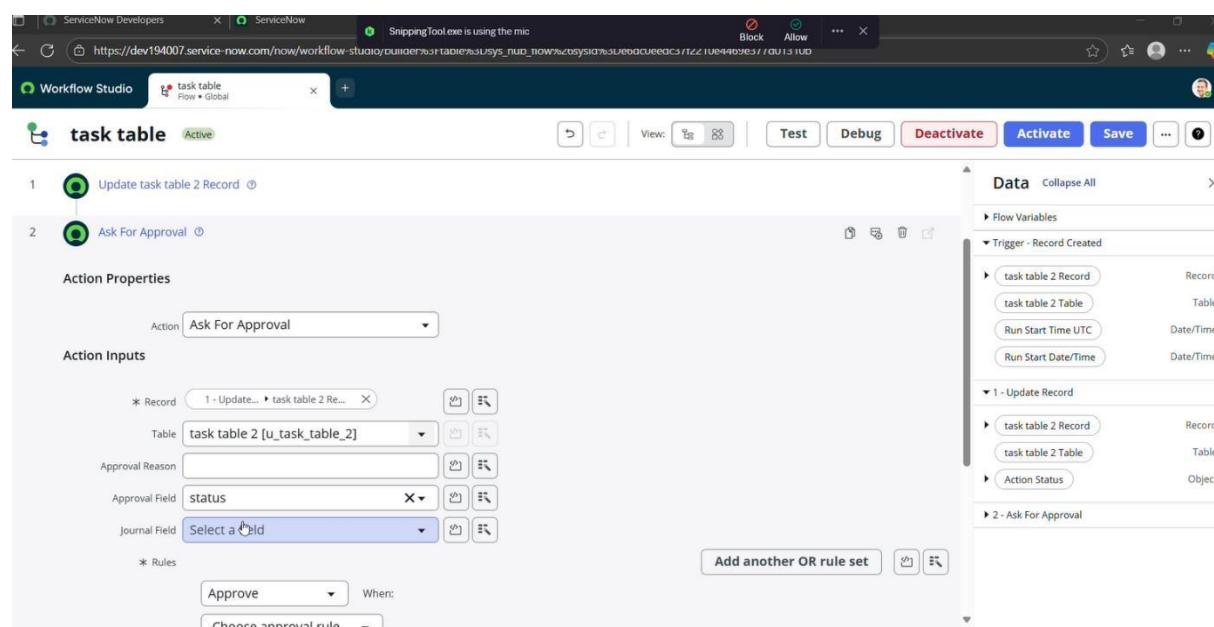
3. Click on Flow Designer under Process Automation.

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:

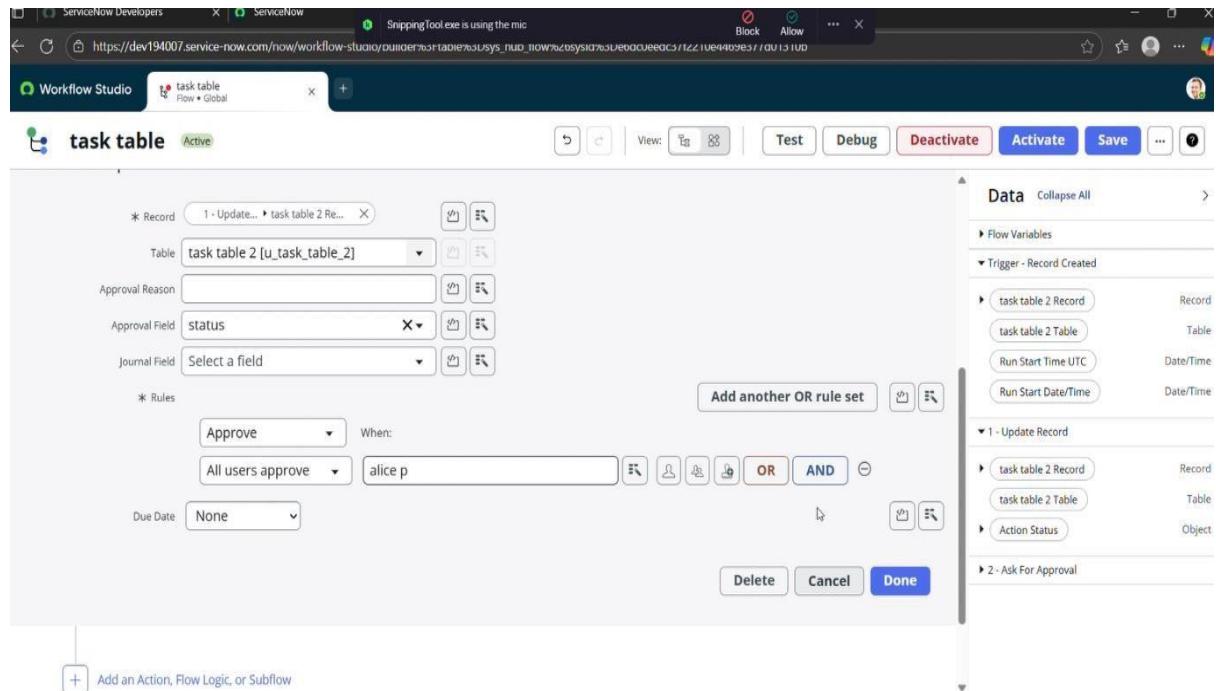
1. Click on Add an action.

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.



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
<input type="checkbox"/>	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

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.