

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

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Team size:4

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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

User - Alice p

User ID alice	Email alice@gmail.com
First name Alice	Language ... None --
Last name p	Calendar integration Outlook
Title 	Time zone System (America/Los_Angeles)
Department 	Date format System (yyyy-MM-dd)
	Business phone
	Mobile phone
Photo Click to add...	
Password needs reset <input type="checkbox"/>	
Locked out <input type="checkbox"/>	
Active <input checked="" type="checkbox"/>	
Web service access only <input type="checkbox"/>	
Internal Integration User <input type="checkbox"/>	

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

Entitled Custom Tables Roles Groups Delegates Subscriptions 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 interface. The User ID is set to 'bob'. Other fields include First name ('Bob'), Last name ('p'), Email ('bob@gmail.com'), Language ('-- None --'), Calendar integration ('Outlook'), Time zone ('System (America/Los_Angeles)'), Date format ('System (yyyy-MM-dd)'), Business phone, and Mobile phone. The 'Active' checkbox is checked. Below the form, there are 'Related Links' for 'View linked accounts', 'View Subscriptions', and 'Reset a password'. At the bottom, there are tabs for 'Entitled Custom Tables', 'Roles', 'Groups', 'Delegates', 'Subscriptions', and 'User Client Certificates'. The 'Groups' tab is selected.

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' and 'Description' fields are empty. The 'Group email' and 'Parent' fields have search input boxes. A 'Submit' button is located at the bottom left.

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' field is set to 'Global'. The 'Contains Roles' tab is selected, showing a search bar with 'for text' and a search button. Below it, a table lists a single record: 'Role = project member'. The 'No records to display' message is visible at the bottom.

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 tabs for All, Favorites, History, Workspaces, and Admin. The current page is titled "Role - New Record". The main form has the following fields:

- Name: team member
- Application: Global
- Elevated privilege:
- Description: (A large, empty text input field.)

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

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

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

servicenow All Favorites History Workspaces Admin Table - New Record

Name: u_project_table

Create module:

Extends table:

Create mobile module:

Add module to menu: -- Create new --

New menu name: project table

Remote Table:

Columns Controls Application Access

Table Columns: for text Search

Dictionary Entries

	Column label	Type	Reference	Max length	Default value	Display
X	project id				false	
X	project name				false	
X	project manager				false	
+	s#					

8. Click on submit

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

servicenow All Favorites History Workspaces Admin Table - New Record

Name: u_task_table_2

Create module:

Extends table:

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

Dictionary Entries

	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 interface for creating a new table. 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, there are "Submit" and "Cancel" buttons.

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

Business phone

Mobile phone

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 Groups (1) Delegates Subscriptions User Client Certificates

Role Search Edit...

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

Active

Business phone:

Mobile phone:

Photo: Click to add...

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

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

Role	State	Inherited	Inheritance Count
u_project_table_user	Active	false	
u_task_table_2_user	Active	false	

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 > bob p | User | ServiceNow

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 Custom Tables 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

Application Menu - project table

Search

Update Delete

Application Menu
project table

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

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

Hint

Description

Update Delete

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 'Access Controls' page in ServiceNow. The 'Type' field is set to 'record', 'Operation' to 'write', 'Decision Type' to 'Allow If', 'Application' to 'Global', and 'Active' is checked. The 'Protection policy' dropdown is set to '-- None --'. 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.' Below the form, there is a 'Conditions' section 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.

The screenshot shows the ServiceNow Workflow Studio interface. The flow is named "task table". It contains two steps: "Update task table 2 Record" and "Ask For Approval". The "Action Properties" section for the second step is open, showing the "Ask For Approval" action selected. The "Action Inputs" section includes fields for Record (task table 2 Record), Table (task table 2 [u_task_table_2]), Approval Reason, Approval Field (status), and Journal Field (Select a field). The right panel displays the flow's Data and Trigger sections. The Data section shows variables like "task table 2 Record", "task table 2 Table", "Run Start Time UTC", and "Run Start Date/TIME". The Trigger section shows "Trigger - Record Created" with "task table 2 Record" and "task table 2 Table" as inputs.

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 conditions and actions. 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'. The 'Actions' section at the bottom lists 'Delete', 'Cancel', and 'Done' buttons.

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

The screenshot shows a ServiceNow application window titled "Approvals". The top navigation bar includes "servicenow", "All", "Favorites", "History", "Workspaces", "Approvals", "Search", and "Actions on selected rows...". The main content area displays a table of approvals with the following columns: State, Approver, Comments, Approval for, and Created. A search bar at the top of the table allows filtering by State, Approver, Comments, Approval for, and Created. The table lists 664 entries, with page 1 of 20 currently selected. The first entry in the list is highlighted, showing the state "Approved" and the approver "alice p".

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