

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



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**Team Size** : 5

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## **Project Statement:**

This project focuses on creating a structured project and task management system within the ServiceNow platform. It involves setting up users, groups, roles, custom tables, access controls, and automated workflows. The system allows seamless collaboration between different roles, such as a project manager (Alice) and a team member (Bob), enabling proper task assignments, approvals, and status tracking in a secure and organized manner.

## **Objective:**

The objective is to build a role-based access control system that manages how users interact with project and task data. It includes designing custom tables, configuring modules, assigning users to groups and roles, and setting up workflows that automate actions like updating task status and requesting approvals. The goal is to simulate a real-world team structure that enhances communication, accountability, and workflow efficiency.

## **Skills:**

This project requires hands-on knowledge of the ServiceNow platform, particularly in creating users, groups, roles, and tables. It also requires understanding how to configure Access Control Lists (ACLs) to secure data, and how to use Flow Designer to automate task updates and approvals. In addition to technical skills, basic workflow design, logical thinking, and testing using user impersonation are essential to ensure the system works as intended.



Guided Project

Project Workspace



### Optimizing User, Group, And Role Management With Access Control And Workflows

Users

Groups

Roles

Table

Assign Users To Groups

Assign Roles To Users

Application Access

Access Control List

Flow

Conclusion

## Optimizing User, Group, And Role Management With Access Control And Workflows

### Problem Statement:

In a small project management team consisting of a Project Manager (Alice) and a Team Member (Bob), there is a need to efficiently manage project tasks and ensure accountability throughout the project lifecycle. The current system lacks clear role definitions, access controls, and a structured workflow, leading to confusion regarding task assignments and progress tracking.

## Step 1 → USER

### 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 left sidebar contains a navigation menu with categories like Configuration, Password Reset, Organization, System Security, and User Administration. The main area is titled 'User - alice p' and contains a form with the following fields:

- User ID:  (highlighted with a red box)
- First name:
- Last name:
- Title:
- Department:
- Language:
- Calendar integration:
- Time zone:
- Date format:
- Business phone:
- Mobile phone:
- Photo: [Click to add...](#)

Below the form, there are 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', along with a 'Related Links' section containing links for '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

## Step 2 → Groups

### 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

## Step 3 → Rolse

### 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 ServiceNow interface for creating or editing a role. The left sidebar contains a navigation menu with categories like System Definition, System Mailboxes, Administration, System Security, and User Administration. The main content area is titled 'Role - project member'. It includes a form with the following fields: 'Name' (project member), 'Application' (Global), and 'Description'. There are 'Update' and 'Delete' buttons. Below the form is a 'Related Links' section with a link to 'Run Point Scan'. A tabbed interface shows 'Contains Roles' as the active tab, displaying a search bar and a message 'No records to display'.

### Create one more role:

7. Create another role with the following details : Team member
8. Click on submit

## Step 4→ Table

### 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

The screenshot shows the ServiceNow interface for creating a new role. The left sidebar contains the navigation menu with categories like System Definition, System Mailboxes, Administration, System Security, Users and Groups, Reports, Groups Membership, User Administration, Workspace Experience, Forms, and UI Action Groups. The main content area is titled 'Role - team member' and includes a search bar, 'Update', and 'Delete' buttons. The form fields are: Name (team member), Application (Global), Elevated privilege (unchecked), and Description (empty). Below the form are 'Update' and 'Delete' buttons. The 'Related Links' section shows 'Run Point Scan'. The 'Contains Roles' tab is selected, showing a search bar and a table with no records.

8. Click on submit



**servicenow** All Favorites History Workspaces **Table - New Record** Search

Table New record

\* Name  Create module ☒

Extends table  Create mobile module ☒

Add module to menu -- Create new --

New menu name

Columns Controls Application Access

Table Columns for text Search

Dictionary Entries	Column label	Type	Reference	Max length	Default value	Display
<input checked="" type="checkbox"/>	project id	Integer				false
<input checked="" type="checkbox"/>	project name	String				false
<input checked="" type="checkbox"/>	project manger	String				false
<input checked="" type="checkbox"/>	start date	Date				false
<input checked="" type="checkbox"/>	end date	Date				false
<input checked="" type="checkbox"/>	status	Choice				false
<input checked="" type="checkbox"/>	description	String				false

## Create one more table:

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

10. Click on submit.

**servicenow** All Favorites History Workspaces **Table - task table 2** Search

Table task table 2

Table Columns for text Search

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	Sys ID (GUID)	(empty)	32		false
	Created by	String	(empty)	40		false
	Created	Date/Time	(empty)	40		false
<input checked="" type="checkbox"/>	task id	Integer				false
<input checked="" type="checkbox"/>	task name	String				false
<input checked="" type="checkbox"/>	assigned to	String				false
<input checked="" type="checkbox"/>	due date	Date				false
<input checked="" type="checkbox"/>	status	Choice				false
<input checked="" type="checkbox"/>	comments	String				false

1 to 6 of 6 New

Delete Update Delete All Records

## Step 5 → Assign Users To Groups

### Assign users to project team group

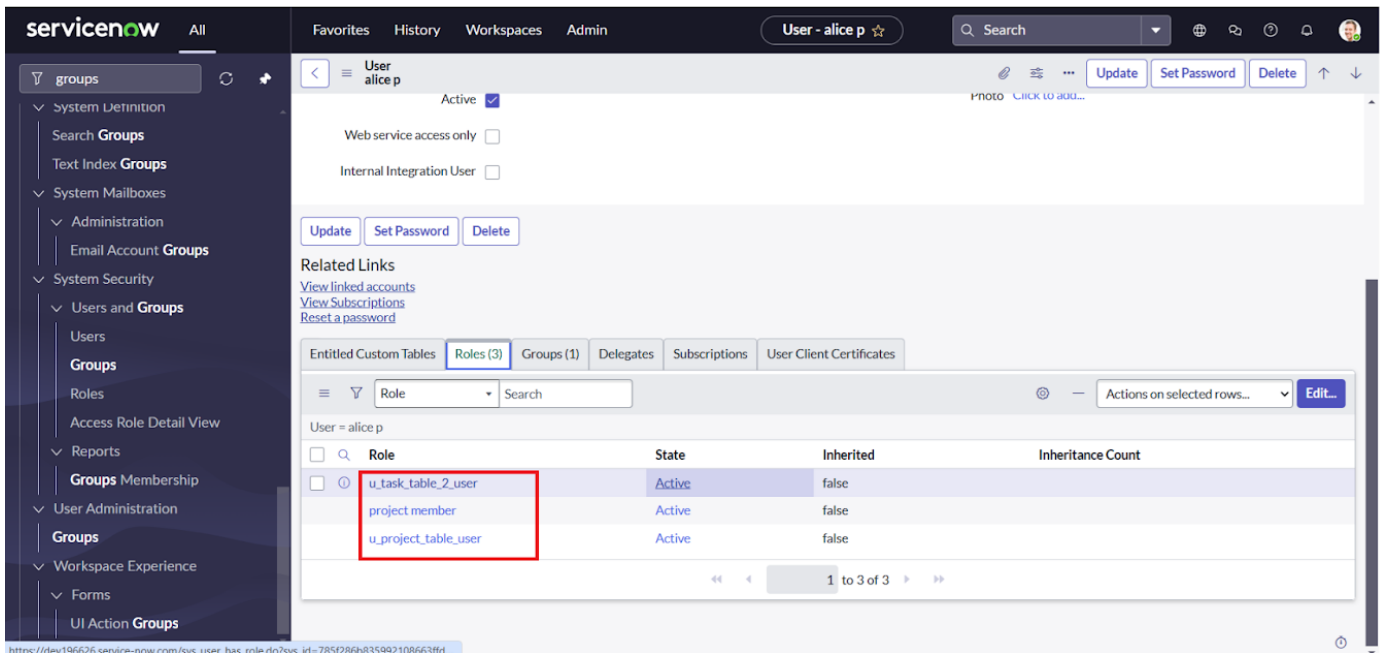
1. Open service now.
2. Click on All >> search for groups
3. Select tables under system definition
4. Select the project team group
5. Under group members
6. Click on edit
7. Select alice p and bob p and save

The screenshot displays the ServiceNow interface for the 'Group - project team' configuration. The left sidebar shows the 'groups' search results. The main content area has tabs for 'Roles' and 'Group Members (2)'. The 'Group Members (2)' tab is active, showing a table with two users: 'Bob p' and 'alice p'. Both users are highlighted with a red box. The table has columns for 'User' and 'Actions on selected rows...'. The bottom of the table shows '1 to 2 of 2'.

## Step 6 → Assign Roles to Users

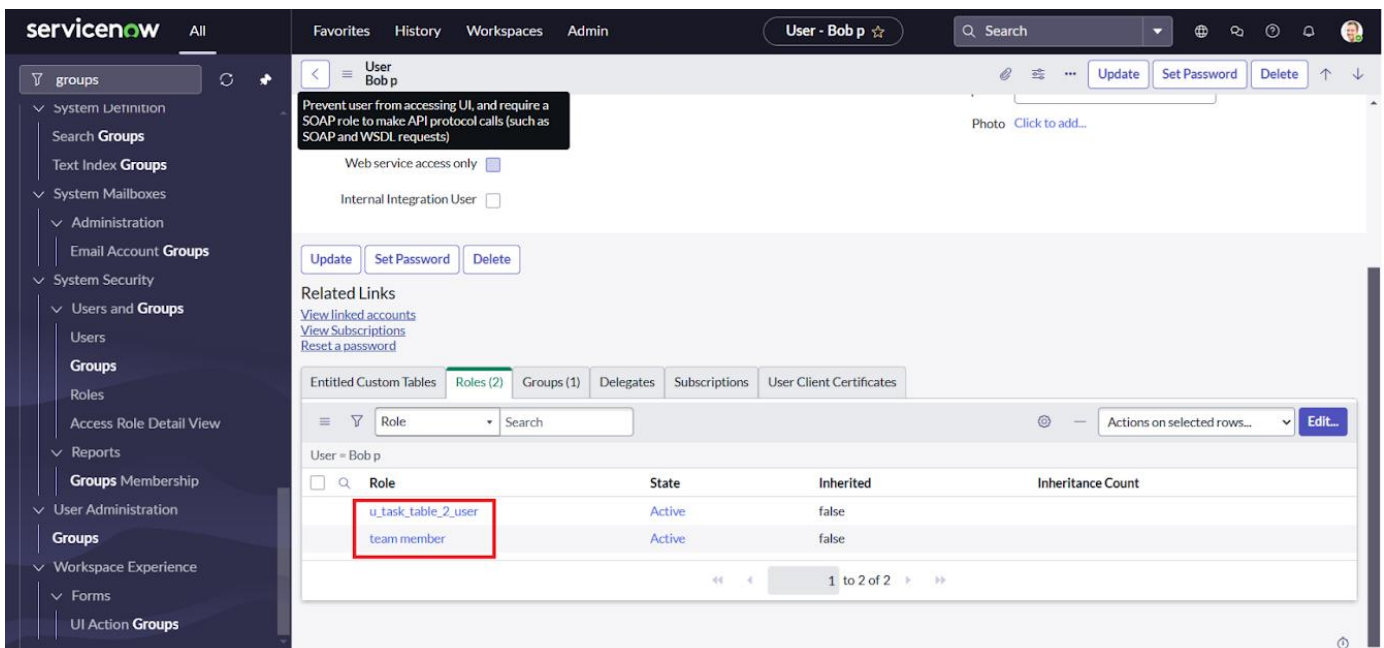
### Assign Roles To Alice User

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.



## 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.



## Step 7 → Application Access

### Assign table access to application

1. while creating a table it automatically create a 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 'Application Menu - project table' configuration page in ServiceNow. The page has a dark header with the ServiceNow logo and navigation links. The main content area is light blue and contains several sections for configuring the application menu. The 'Title' field is set to 'project table'. The 'Application' dropdown is set to 'Global'. The 'Active' checkbox is checked. A note states: 'Restricts access to the specified roles. Otherwise, all users can view the application menu when it is active.' The 'Roles' section shows 'project member' selected. A note states: 'Specifies the menu category, which defines the navigation menu style. The default value is Custom Applications.' The 'Category' dropdown is set to 'Custom Applications'. A note states: 'The text that appears in a tooltip when a user points to this application menu'. The 'Hint' and 'Description' fields are empty. At the bottom, there are 'Update' and 'Delete' buttons. A watermark 'Activate Windows' is visible in the bottom right corner.

The screenshot shows the 'Application Menu - task table 2' configuration page in ServiceNow. The page has a dark header with the ServiceNow logo and navigation links. The main content area is light blue and contains several sections for configuring the application menu. The 'Title' field is set to 'task table 2'. The 'Application' dropdown is set to 'Global'. The 'Active' checkbox is checked. A note states: 'Restricts access to the specified roles. Otherwise, all users can view the application menu when it is active.' The 'Roles' section shows 'u\_task\_table\_2\_user, project member, team member' selected. A note states: 'Specifies the menu category, which defines the navigation menu style. The default value is Custom Applications.' The 'Category' dropdown is set to 'Custom Applications'. A note states: 'The text that appears in a tooltip when a user points to this application menu'. The 'Hint' and 'Description' fields are empty. At the bottom, there are 'Update' and 'Delete' buttons. A watermark 'Activate Windows' is visible in the bottom right corner.

## Step 8 → Access Control List

### 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
6. Fill the following details to create a new ACL

The screenshot shows the 'Access Control - New Record' form in ServiceNow. At the top, there's a navigation bar with 'servicenow' logo, tabs for 'All', 'Favorites', 'History', and 'Admin', and a search bar. Below the navigation bar, there's a warning message: 'Warning: A role, security attribute, data condition, or script is required to properly secure access with this ACL.' The form fields are organized into sections. The 'Basic' section includes 'Type' (record), 'Operation' (write), 'Decision Type' (Allow If), 'Application' (Global), 'Active' (checked), and 'Advanced' (unchecked). The 'Protection policy' section shows 'None' and a 'fields' button. The 'Name' field is 'task table 2 [u\_task\_table\_2]' and the 'status' field is 'status'. The 'Description' field is empty. The 'Applies To' section shows 'No. of records matching the condition: 1' and buttons for 'Add Filter Condition' and 'Add "OR" Clause'. Below these are dropdowns for 'choose field', 'oper', and 'value'. At the bottom, there's a 'Conditions' section with a message: 'Access Control Rules have two decision types, and these types will behave differently depending on conditions.'

servicenow All Favorites History Admin : Access Control - New Record ☆ Search

< Access Control New record Submit

Warning: A role, security attribute, data condition, or script is required to properly secure access with this ACL.

\* Type record ⓘ Application Global ⓘ

\* Operation write ⓘ Active ☒

Decision Type Allow If Advanced ☐

Admin overrides ☒

Protection policy -- None -- fields

\* Name task table 2 [u\_task\_table\_2] status

Description

Applies To No. of records matching the condition: 1

Add Filter Condition Add "OR" Clause

-- choose field -- -- oper -- -- value --

Conditions Activate Windows Go to Settings to activate Windows.

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

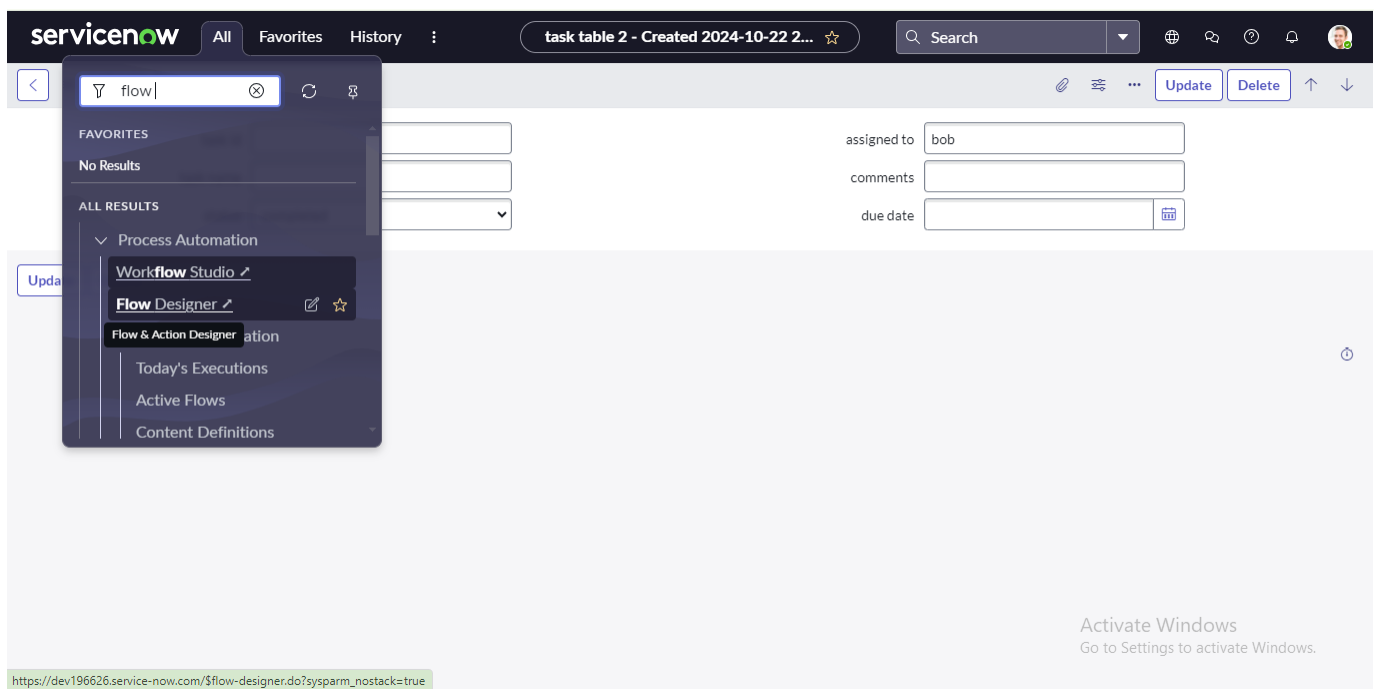
7. Scroll down under requires role
8. Double click on insert a new row
9. Give task table and team member role
10. Click on submit
11. Similarly create 4 acl for the following fields



## Step 9 → Flow

### 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.



Workflow Studio

task table Flow

Homepage Operations Integrations

Playbooks **Flows** Subflows Actions Decision tables

Flows 39  
Last refreshed just now

Name	Application	Status	Active	Update
Benchmark Recommendation Evaluator	Benchmarks Spoke	Published	true	2024-09-23 04:23:59
Business process approval flow	Global	Published	true	2020-09-23 04:23:59
Change - Cloud Infrastructure - Authorize	Global	Published	true	2020-11-11 07:08:05
Change - Emergency - Authorize	Global	Published	true	2020-10-06 05:39:49
Change - Emergency - Implement	Global	Published	true	2020-09-23 05:06:26
Change - Emergency - Review	Global	Published	true	2020-10-27 04:18:08
Change - Normal - Assess	Global	Published	true	2020-10-06 05:37:05
Change - Normal - Authorize	Global	Published	true	2020-10-06 05:38:35
Change - Normal - Implement	Global	Published	true	2020-09-23 04:23:59

Pick up where you left off

task table  
Last updated: 14 min. ago by Syst...

Create Flow Data  
Last updated: 5 months ago by Sy...

Steps  
Last updated: 5 months ago by Sy...

Latest updates

- System Administrator modified task table 14 min. ago
- System Administrator modified Create Flow Data 5 months ago
- System Administrator modified Steps Settings to activate Windows. 5 months ago

Workflow Studio

task table Flow

Operations

New Flow Flow

### Let's get the details for your flow

Flow name \*  
task table

Description  
Describe your flow.

Application \*  
Global

> Show additional properties

Activate Windows  
Go to Settings to activate Windows

Cancel 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

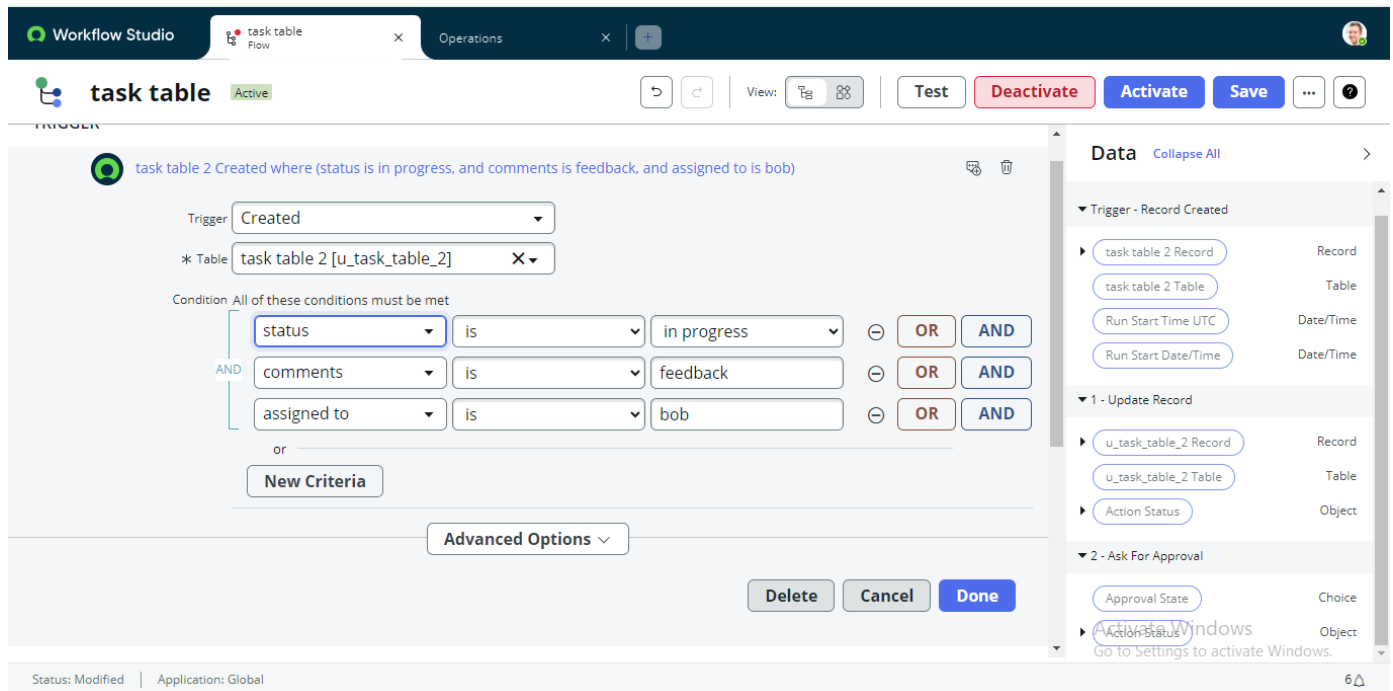


feedback

Field : comments Operator :is Value :

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.

Workflow Studio interface showing the configuration for the 'Update Record' action. The action is set to 'Update Record' with record 'Trigger - Re... > task table 2 R...', table 'task table 2 [u\_task\_table\_2]', and field 'status' set to 'completed'. The right sidebar shows the data navigation pane with fields like 'task table 2 Record', 'task table 2 Table', 'Run Start Time UTC', and 'Run Start Date/Time'.

## 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.

Workflow Studio interface showing the configuration for the 'Ask For Approval' action. The action is set to 'Ask For Approval' with record '1 - Upda... > u\_task\_table\_2 R...', table 'task table 2 [u\_task\_table\_2]', and approval field 'status'. The right sidebar shows the data navigation pane with fields like 'task table 2 Record', 'task table 2 Table', 'Run Start Time UTC', and 'Run Start Date/Time'.

- 9.Go to application navigator search for task table.
- 10.It status field is updated to completed

servicenow

AllFavoritesHistory

task table 2 - Created 2024-10-22 2...

Search

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

UpdateDelete

task id

assigned to

task name

comments

status

completed

due date

Update

Delete

Activate Windows  
Go to Settings to activate Windows.

- 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

servicenow

AllFavoritesHistoryWorkspaces

Approvals

Search

ApprovalsCreatedSearch

Actions on selected rows...

All

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

1 to 20 of 664

Go to Settings to activate Windows.

## Conclusion

This scenario highlights a structured approach to project management, showcasing the roles of Alice and Bob within a defined workflow. With Alice's oversight and Bob's execution, the team effectively collaborates to ensure project success. The use of tables organizes key information, facilitating easy tracking of projects, tasks, and progress updates. Overall, this system promotes accountability, enhances communication, and leads to the successful completion of projects.