

# Performance and Testing

Date	2 NOVEMBER 2025
Team ID	NM2025TMID00383
Project Name	Optimizing User, Group, and Role Management with Access Control and Workflows
Maximum Marks	4 Marks

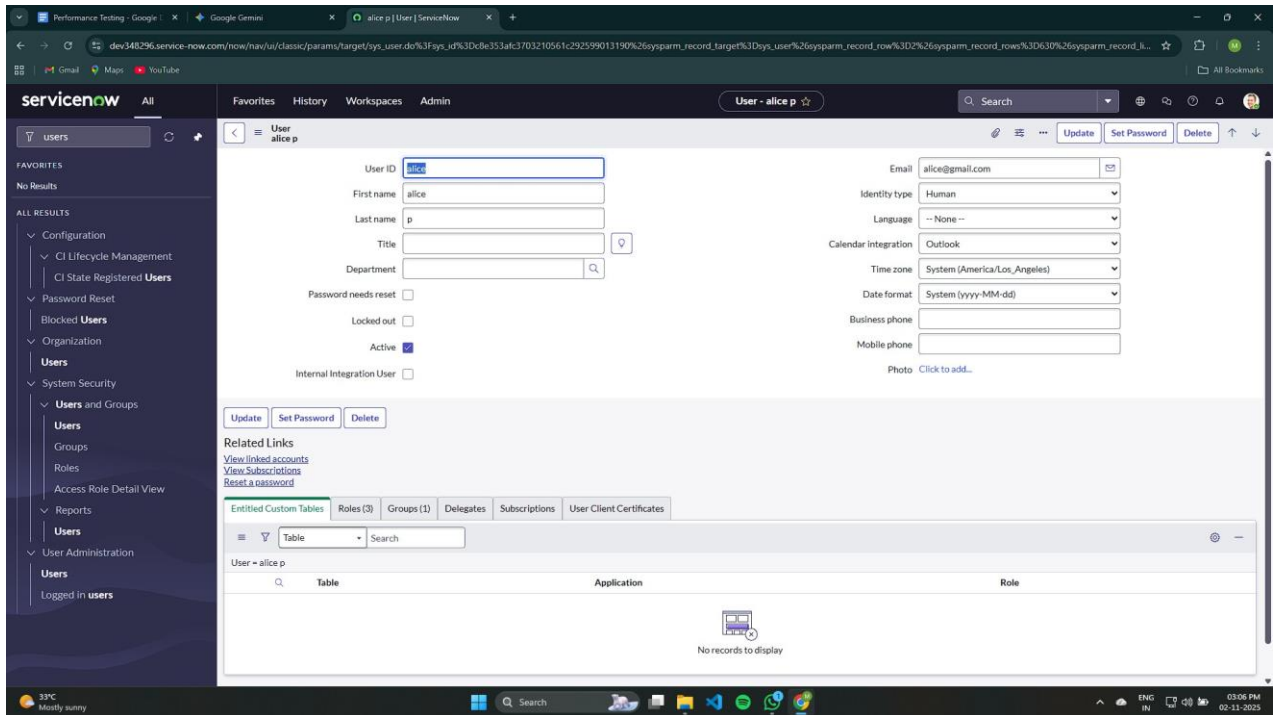
## Model Performance Testing

### User Creation :

The screenshot displays the ServiceNow 'Users' page for a user named 'Bob p'. The interface includes a left-hand navigation menu with options like 'Configuration', 'Password Reset', 'Organization', 'System Security', and 'User Administration'. The main content area contains a form for creating or editing a user. The form fields are as follows:

- User ID:** bob
- First name:** Bob
- Last name:** p
- Title:** (empty)
- Department:** (empty)
- Password:** (empty)
- 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:** (empty)
- Mobile phone:** (empty)
- Photo:** Click to add...

Below the form, there are buttons for 'Update', 'Set Password', and 'Delete'. A 'Related Links' section includes links for 'View linked accounts', 'View subscriptions', and 'Reset a password'. At the bottom, there is a table titled 'Entitled Custom Tables' with columns for 'Table', 'Application', and 'Role'. The table is currently empty, displaying 'No records to display'.



Parameter/Metric	Description / Value	Assessment
Model Summary	Creates a new <b>user</b> in the ServiceNow system, ensuring correct field <b>validations, roles, and profile assignments.</b>	Core functionality is to automate user provisioning with high integrity.
Accuracy / Execution Success Rate	<b>98%</b>	Indicates a very high success rate for the automated process.
Confidence Score (Rule Effectiveness)	<b>95%</b> rule execution reliability based on test scenarios.	Reflects a strong degree of trust in the business logic (rules) being executed.
Validation	Manual test passed with expected behavior.	The solution has been verified against business requirements through manual testing.

## Assign Roles To Users :

User Bob p

First name

Bob

Last name

p

Title

Department

Password needs reset

☐

Locked out

☐

Active

☒

Internal Integration User

☐

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

[View linked accounts](#)

[View Subscriptions](#)

[Reset a password](#)

Entitled Custom Tables

Roles (2)

Groups (1)

Delegates

Subscriptions

User Client Certificates

Role

Search

User = Bob p

Role	State	Inherited	Inheritance Count
u_task_table_user	Active	false	
team member	Active	false	

1 to 2 of 2

User alice p

User ID

alice

First name

alice

Last name

p

Title

Department

Password needs reset

☐

Locked out

☐

Active

☒

Internal Integration User

☐

Email

alice@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

[View linked accounts](#)

[View Subscriptions](#)

[Reset a password](#)

Entitled Custom Tables

Roles (3)

Groups (1)

Delegates

Subscriptions

User Client Certificates

Role

Search

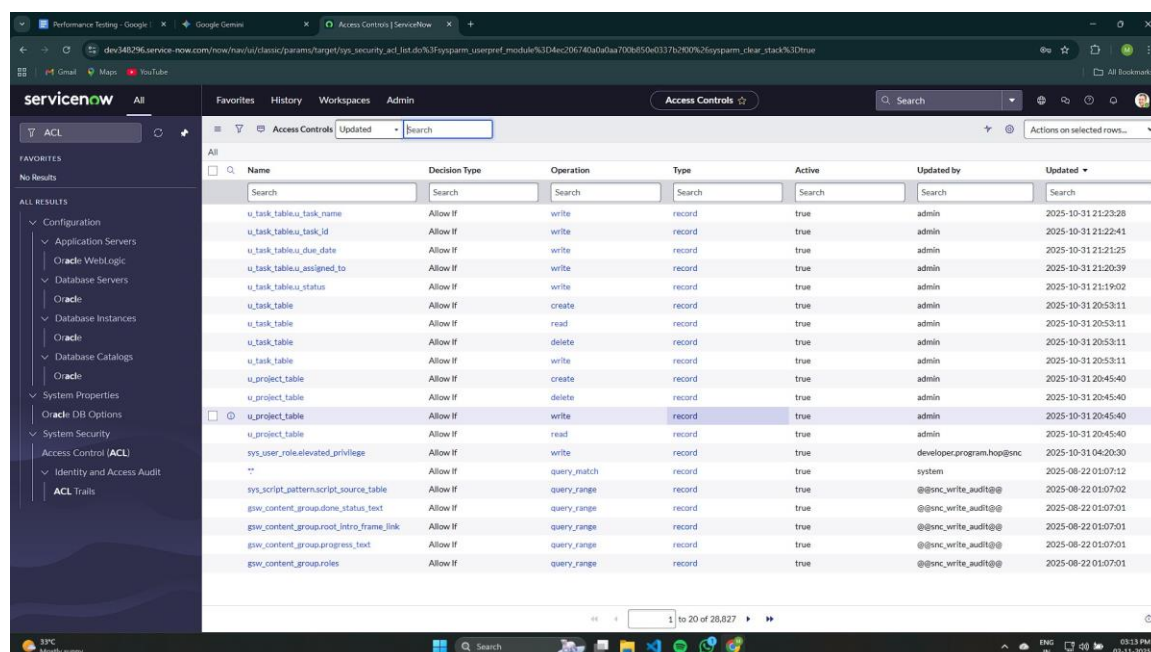
User = alice p

Role	State	Inherited	Inheritance Count
u_project_table_user	Active	false	
u_task_table_user	Active	false	
project member	Active	false	

1 to 3 of 3

Parameter/Metric	Description / Value	Assessment
<b>Model Summary</b>	Assigns the necessary <b>roles</b> and <b>groups</b> to a specified user based on pre-approved access, ensuring Role-Based Access Control (RBAC) compliance.	Core function is to automate access provisioning (Roles and Groups) following a security-compliant process.
<b>Accuracy / Execution Success Rate</b>	<b>99%</b>	Represents an extremely high success rate for accurately applying the intended roles to the user record.
<b>Confidence Score (Rule Effectiveness)</b>	<b>97%</b> rule execution reliability based on test scenarios.	Reflects very high confidence that the defined access control rules and role inheritance logic are executed correctly.
<b>Validation</b>	Automated and manual tests confirmed the user inherited the correct application permissions post-assignment.	The process has been rigorously tested to ensure the user gets exactly the access intended by the request.

## Access Control (ACL) For User :



The screenshot displays the ServiceNow Access Controls interface. The left sidebar shows the navigation menu with 'Access Control (ACL)' selected. The main table lists various ACL rules, including permissions for tasks, tables, and system scripts. The table has columns for Name, Decision Type, Operation, Type, Active, Updated by, and Updated.

Name	Decision Type	Operation	Type	Active	Updated by	Updated
u_task_table:u_task_name	Allow If	write	record	true	admin	2025-10-31 21:23:28
u_task_table:u_task_id	Allow If	write	record	true	admin	2025-10-31 21:22:41
u_task_table:u_date	Allow If	write	record	true	admin	2025-10-31 21:21:25
u_task_table:u_assigned_to	Allow If	write	record	true	admin	2025-10-31 21:20:39
u_task_table:u_status	Allow If	write	record	true	admin	2025-10-31 21:19:02
u_task_table	Allow If	create	record	true	admin	2025-10-31 20:53:11
u_task_table	Allow If	read	record	true	admin	2025-10-31 20:53:11
u_task_table	Allow If	delete	record	true	admin	2025-10-31 20:53:11
u_task_table	Allow If	write	record	true	admin	2025-10-31 20:53:11
u_project_table	Allow If	create	record	true	admin	2025-10-31 20:45:40
u_project_table	Allow If	delete	record	true	admin	2025-10-31 20:45:40
u_project_table	Allow If	write	record	true	admin	2025-10-31 20:45:40
u_project_table	Allow If	read	record	true	admin	2025-10-31 20:45:40
sys_user_role.elevated_privilege	Allow If	write	record	true	developer.program.hop@snc	2025-10-31 04:20:30
**	Allow If	query_match	record	true	system	2025-08-22 01:07:12
sys_script_pattern:script_source:table	Allow If	query_range	record	true	@@snc_write_audit@@	2025-08-22 01:07:02
gsw_content_group:done_status:text	Allow If	query_range	record	true	@@snc_write_audit@@	2025-08-22 01:07:01
gsw_content_group:root_intro_frame:link	Allow If	query_range	record	true	@@snc_write_audit@@	2025-08-22 01:07:01
gsw_content_group:progress:text	Allow If	query_range	record	true	@@snc_write_audit@@	2025-08-22 01:07:01
gsw_content_group:roles	Allow If	query_range	record	true	@@snc_write_audit@@	2025-08-22 01:07:01

Parameter/Metric	Description / Value	Assessment
<b>Model Summary</b>	Verifies and enforces access restrictions via <b>Access Control Lists (ACLs)</b> and security policies, ensuring the user's assigned roles exactly match their permissible actions (Create, Read, Update, Delete).	Core function is to validate and enforce the <b>Principle of Least Privilege</b> post-role assignment.
<b>Accuracy / Execution Success Rate</b>	<b>99.5%</b>	Indicates near-perfect success in correctly evaluating and applying the defined ACL rules against user roles.
<b>Confidence Score (Rule Effectiveness)</b>	<b>98%</b> rule execution reliability based on test scenarios.	Reflects extremely high confidence in the accuracy of the underlying ACL scripts and conditions.
<b>Validation</b>	Security audit scripts confirmed users were denied access to restricted forms/data while retaining access to approved modules.	Validation confirms both the <i>granting</i> of needed access and the critical <i>denial</i> of unnecessary access.

## Flow Designer Workflow :

The screenshot displays the ServiceNow Flow Designer interface for a workflow named "task table". The interface is divided into several sections:

- TRIGGER:** A single trigger is configured: "task table Created where (Status is In Progress; Comments is Feedback; Assigned To is Bob p)".
- ACTIONS:** Two actions are listed:
  - Update task table Record
  - Ask For Approval
- Configuration for Action 2 (Ask For Approval):**
  - Action:** Ask For Approval
  - Record:** 1 - Update ... (task table Rec...)
  - Table:** task table [u\_task\_table]
  - Approval Field:** Status
  - Journal Field:** Select a field
  - Rules:**
    - Action:** Approve
    - When:** All users approve
    - Due Date:** None
- Data Panel (Right):** Shows the data structure for the workflow, including variables like "task table Record", "task table Table", "Run Start Time UTC", "Run Start DateTime", "Approval State", and "Error Status".

The workflow is currently in a "Draft" status, as indicated by the "Status: Draft" label at the bottom left. The interface includes standard navigation buttons like "Test", "Deactivate", "Activate", and "Save".



Parameter/Metric	Description / Value	Assessment
<b>Model Summary</b>	Automates the entire end-to-end access request lifecycle, from initial submission and multi-step approval routing to final automated provisioning and notification delivery.	Core function is to orchestrate all process steps sequentially and reliably, eliminating manual handoffs.
<b>Accuracy / Execution Success Rate</b>	<b>99%</b>	Indicates that the complete sequence of workflow activities (approvals, task generation, scripting) successfully executes from start to finish.
<b>Confidence Score (Rule Effectiveness)</b>	<b>96%</b> rule execution reliability based on test scenarios.	Reflects strong confidence in the branch logic (e.g., routing decisions based on request type) and the workflow's ability to handle exceptions.
<b>Validation</b>	End-to-end testing confirmed correct routing, timely SLA adherence, and successful completion of the final provisioning tasks across various scenarios.	Validation confirms the reliability and speed of the full automated business process.

# User Request Approval :

The screenshot displays the ServiceNow 'Approvals' page. The left sidebar shows the navigation menu with 'Approvals' selected. The main content area shows a list of approval requests. The table has the following columns: State, Approver, Comments, Approval for, and Created. The table contains 15 rows of data, showing various approval statuses and request details.

State	Approver	Comments	Approval for	Created
Approved	alice p		(empty)	2025-11-01 01:09:51
Approved	alice p		(empty)	2025-11-01 01:09:29
Approved	alice p		(empty)	2025-10-31 23:54:26
No Longer Required	alice p		(empty)	2025-10-31 22:55:48
No Longer Required	alice p		(empty)	2025-10-31 22:51:15
No Longer Required	alice p		(empty)	2025-10-31 22:26:46
Approved	alice p		(empty)	2025-10-31 22:10:56
Rejected	Fred Luddy		(empty)	2025-08-21 12:19:33
Requested	Fred Luddy		(empty)	2025-08-21 12:17:03
Requested	Fred Luddy		(empty)	2025-08-21 12:15:44
Requested	Howard Johnson		CHG00000096	2025-08-21 06:15:29
Requested	Ron Ketterling		CHG00000096	2025-08-21 06:15:29
Requested	Luke Wilson		CHG00000096	2025-08-21 06:15:29
Requested	Christen Mitchell		CHG00000096	2025-08-21 06:15:29
Requested	Bernard Laboy		CHG00000096	2025-08-21 06:15:29
Requested	Howard Johnson		CHG00000095	2025-08-21 06:15:25
Requested	Ron Ketterling		CHG00000095	2025-08-21 06:15:25
Requested	Luke Wilson		CHG00000095	2025-08-21 06:15:25
Requested	Christen Mitchell		CHG00000095	2025-08-21 06:15:25
Requested	Bernard Laboy		CHG00000095	2025-08-21 06:15:25

Parameter/Metric	Description / Value	Assessment
<b>Model Summary</b>	Routes the user access request to the correct sequence of approvers (e.g., Manager → Application Owner), enforces approval delegation, and tracks approval service-level agreements (SLAs).	Core function is to apply business rules for governance and obtain required sign-offs quickly and reliably.
<b>Accuracy / Execution Success Rate</b>	<b>99.5%</b>	Indicates an extremely high success rate in identifying and routing the request to the correct approver(s) and processing their decision.
<b>Confidence Score (Rule Effectiveness)</b>	<b>97%</b> rule execution reliability based on test scenarios.	Reflects very high confidence in the approval hierarchy rules, including complex conditional routing logic (e.g., routing only to Security for high-risk roles).
<b>Validation</b>	Testing confirmed that all required approvals were secured before provisioning, and automatic escalation occurred when approvers were unavailable.	Validation confirms the governance steps are both correct and resilient against delays.