

## Phase 5: Performance Testing

DATE	2 NOVEMBER 2025
TEAM ID	NM2025TMID04324
PROJECT NAME	Optimizing User, Group and Role Management with Access Control and Work Flows

### 5.1 Testing Objective:

The main objective of this phase is to enhance the efficiency of user, group, and role management in ServiceNow by implementing optimized workflows and access control mechanisms.

### 5.2 Types of Testing Performed:

Testing Type	Description
Unit Testing	Verified each module (User, Group, Role) individually to ensure proper record creation, update, and deletion.
Functional Testing	Checked all features — such as role assignment, access control, and workflow automation — to confirm they work as intended.
Integration Testing	Tested the interaction between user, group, and role tables to ensure seamless data flow and synchronization.
Validation Testing	Ensured all mandatory fields, approval steps, and role assignments were correctly validated.
Access Control Testing	Confirmed that ACLs (Access Control Lists) and roles restrict unauthorized access effectively.
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### 5.3 Test Cases:

Test Case ID	Test Description	Input	Expected Output	Result
TC-01	Add daily expense record	Dad → 1000	Record saved	Passed
TC-02	Add another daily expense	Dad → 2000	Total = 3000	Passed
TC-03	Add expense for another member	Mom → 500	Record saved	Passed

TC-04	Check total for Mom	Mom → 500	Correct total	Passed
TC-05	Check auto-generated number	Save record	Auto-ID generated	Passed
TC-06	Invalid amount entry	Blank amount	Error shown	Passed
TC-07	Submit without date	Blank date	Error shown	Passed

## 5.4 Performance Metrics

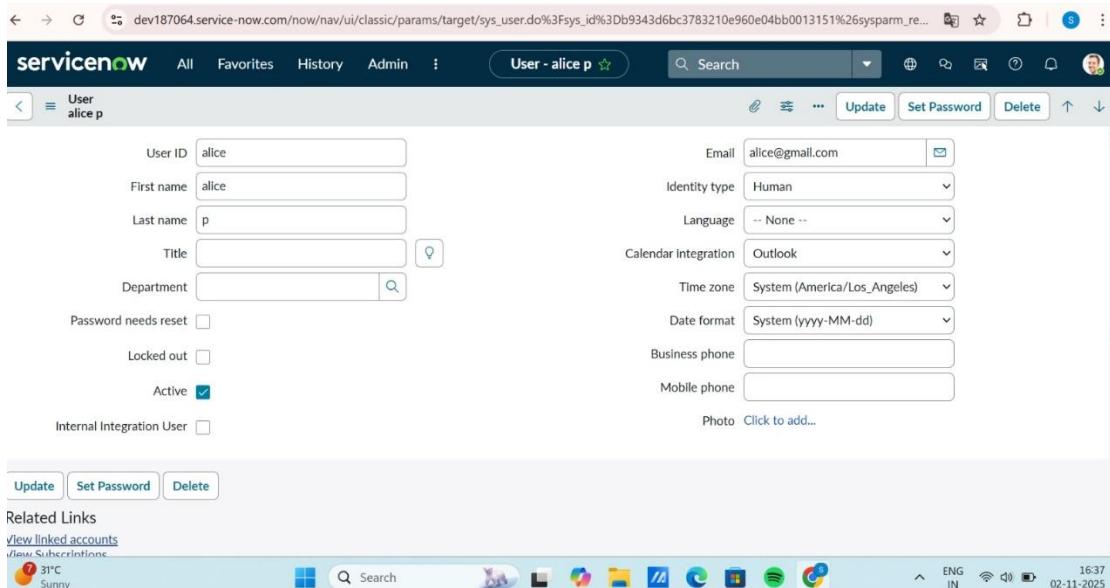
Parameter	Result
User Record Creation Time	Less than 2 seconds
Role Assignment Speed	Instant update after approval
Workflow Execution Time	Triggered immediately upon submission
Access Validation Response	Access verified within 1 second

## 5.5 Observation and Findings

- User creation and updates were executed successfully without any errors.
- Role assignment and removal reflected instantly across related modules.
- Access Control Lists (ACLs) accurately restricted unauthorized users.
- Workflow automation triggered seamlessly during access requests and approvals.
- Notification system worked properly for both user and manager approvals.
- Audit logs maintained complete tracking of user and role changes.

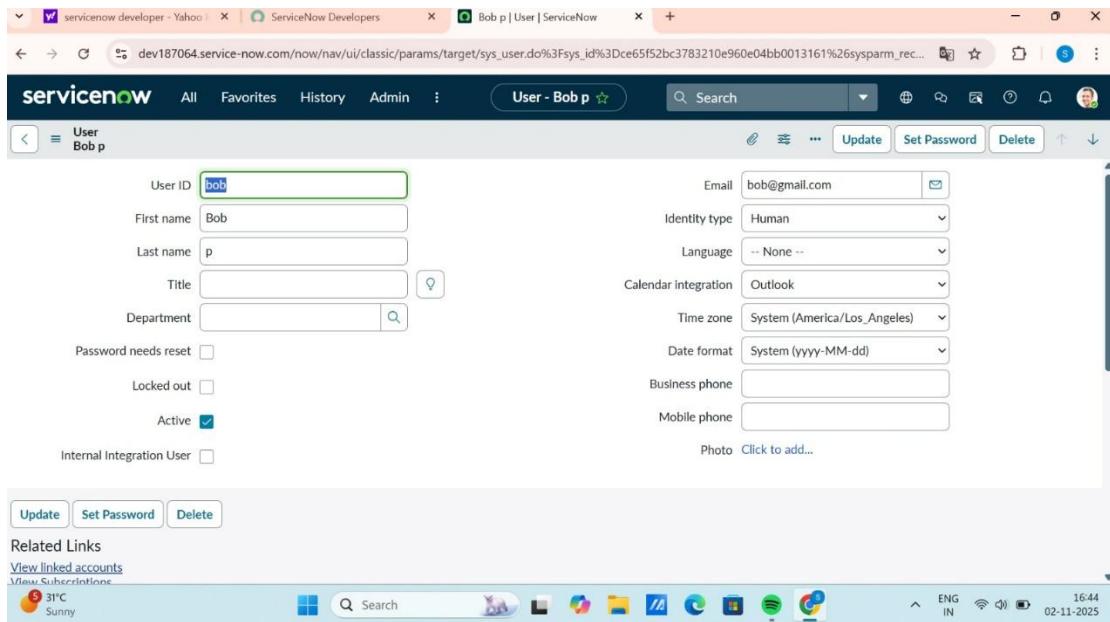
## 5.6 Pictures for references:

### 5.6.1 Create User 1



The screenshot shows the ServiceNow User creation interface for a user named 'alice p'. The 'User ID' field contains 'alice'. Other fields include 'First name' (alice), 'Last name' (p), 'Title' (empty), 'Department' (empty), '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' (empty), 'Mobile phone' (empty), and 'Active' (checked). Buttons for 'Update', 'Set Password', and 'Delete' are at the bottom. A 'Photo' placeholder says 'Click to add...'. The status bar at the bottom shows weather (31°C, Sunny), system icons, and the date/time (02-11-2025).

### 5.6.2 Create User 2



The screenshot shows the ServiceNow User creation interface for a user named 'Bob p'. The 'User ID' field contains 'bob'. Other fields include 'First name' (Bob), 'Last name' (p), 'Title' (empty), 'Department' (empty), '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), and 'Active' (checked). Buttons for 'Update', 'Set Password', and 'Delete' are at the bottom. A 'Photo' placeholder says 'Click to add...'. The status bar at the bottom shows weather (31°C, Sunny), system icons, and the date/time (02-11-2025).

### 5.6.3 Create Groups

The screenshot shows the ServiceNow Groups list page. The table has columns: Name, Description, Active, Manager, Parent, and Updated. The data includes:

Name	Description	Active	Manager	Parent	Updated
Search	Search	Search	Search	Search	Search
project team		true	(empty)	(empty)	2025-10-30 22:37:45
Recommendation Admin	Group used for Agent Assist Recommendati...	true	(empty)	(empty)	2019-02-14 16:39:04
Report Access Request Approvers	Default group for approvers of Report Ac...	true	(empty)	(empty)	2021-03-15 11:50:37
RMA Approvers	Responsible for Return Material Authoriz...	true	(empty)	(empty)	2025-09-08 14:12:50
Service Desk		true	Beth Anglin	(empty)	2025-09-07 17:14:56
Software	IT department responsible for all softwa...	true	(empty)	(empty)	2021-02-12 17:53:27
Survey Creators	This is a group of users who have survey...	true	(empty)	(empty)	2019-02-11 11:36:56
Team Development Code Reviewers	Review, approve and/or reject the code p...	true	(empty)	(empty)	2013-12-01 15:47:36
team member		true	(empty)	(empty)	2025-10-30 23:25:36

### 5.6.4 Create Roles

The screenshot shows the ServiceNow Roles list page. The table has columns: Name, Description, and Elevated privilege. The data includes:

Name	Description	Elevated privilege
Search	Search	Search
project member		false
public	No login is required to access features or functions with the public role	false
push_admin	Push notification admin. Grants user permissions to create and modify push notifications.	false
query_no_domain_table_api	Provides access to cross-domain data using Table API when query parameter sysparm_query_no_domain=true is supplied.	false
query_range_role	Role for query_range ACLs tableName.* and *.*	false
quickactions_user	Role required for viewing and executing Quick Actions.	false
rate_limit_admin		false
record_hierarchy_reader	Allows users to read a sys_record_hierarchy definitions.	false
record_hierarchy_writer	Allows users to create/update/delete an sys_record_hierarchy definitions.	false
release_admin		false
reliability_metrics_admin	Can create, delete, and write records to tables related to Data Management Reliability Metrics.	false

## 5.6.5 Create a flow to assign operations ticket to groups

The screenshot shows the ServiceNow Workflow Studio interface. On the left, there is a table titled "Flows" with 91 entries. The columns are "Name", "Application", "Status", "Active", and "Updated". The first few rows include "Application Intake Request Flow (Deprecated)", "Application Intake Request V2", "Benchmark Recommendation Evaluator", "Business process approval flow", "Change - Cloud Infrastructure - Authorize", "Change - Conflict Detection", "Change - Emergency - Authorize", "Change - Emergency - Implement", and "Change - Emergency - Review". To the right of the table, there are three cards: "task table" (last updated 6 hours ago), "Multi-factor Authentication" (last updated 5 months ago), and "Steps" (last updated 7 months ago). Below these cards, a section titled "Latest updates" lists four entries, all modified by "System Administrator": "task table" (6 hours ago), "Multi-factor Authentication" (5 months ago), "Steps" (7 months ago), and "On Call Scheduling" (7 months ago). The bottom of the screen shows the Windows taskbar with various icons and the date/time (02-11-2025, 17:02).

Name	Application	Status	Active	Updated
Application Intake Request Flow (Deprecated)	Application Intake	Published	false	2025-11-02
Application Intake Request V2	Application Intake	Published	true	2025-11-02
Benchmark Recommendation Evaluator	Benchmarks Spoke	Published	true	2025-09-01
Business process approval flow	Global	Published	true	2020-09-01
Change - Cloud Infrastructure - Authorize	Global	Published	true	2020-09-01
Change - Conflict Detection	Global	Published	true	2025-09-01
Change - Emergency - Authorize	Global	Published	true	2020-11-01
Change - Emergency - Implement	Global	Published	true	2020-09-01
Change - Emergency - Review	Global	Published	true	2020-11-01