

Performance and Testing

DATE	1 NOV 2025
TEAM ID	NM2025TMID00759
PROJECT NAME	Optimizing User, Group, and Role Management with Access Control and Workflows
MAXIMUM MARKS	4 Marks

Model Performance Testing :

User creation

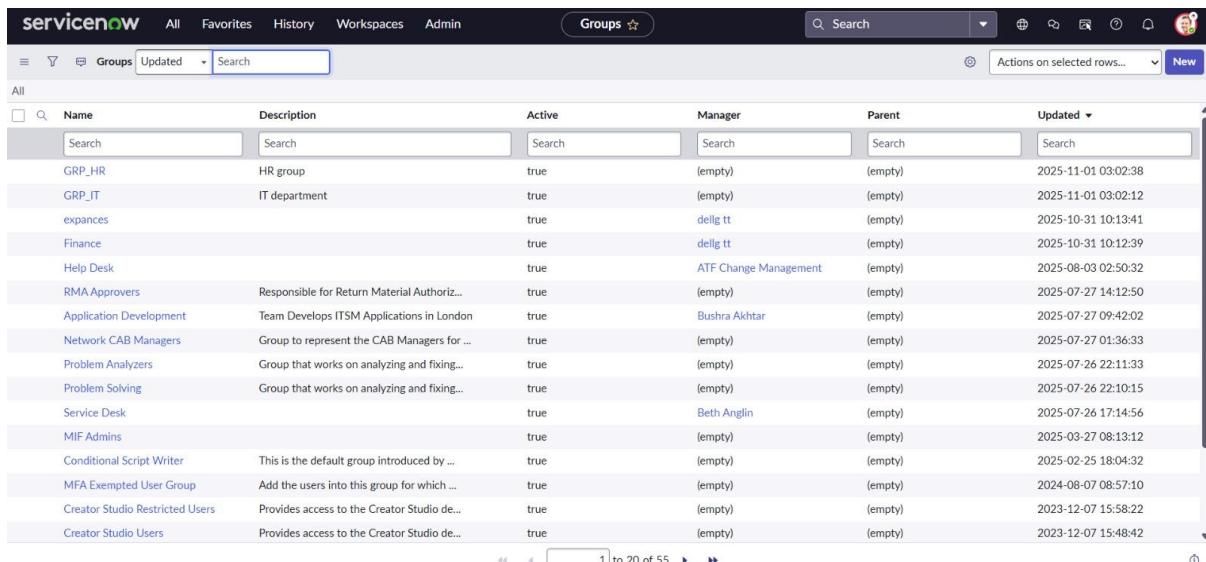
The screenshot displays two ServiceNow interface pages related to user management.

User List View: This view shows a grid of users with columns: User ID, Name, Email, Active, Created, and Updated. A search bar at the top allows filtering by User ID, Name, Email, or Last Name. The list includes entries such as 'users.tech_com' (Name: rock r, Active: true, Created: 2025-11-01 06:36:59, Updated: 2025-11-01 06:36:59), 'users.tech_hr' (Name: allice a, Active: true, Created: 2025-11-01 06:36:34, Updated: 2025-11-01 06:36:34), and 'admin' (Name: System Administrator, Email: admin@example.com, Active: true, Created: 2007-07-03 11:48:47, Updated: 2025-10-31 08:30:49).

User Detail View: This view shows the detailed configuration for the user 'User - rock r'. It includes fields for User ID (users.tech_com), First name (rock), Last name (r), Title, Department, and various system settings like Email, Identity type (Human), Language, 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 tabs for Entitled Custom Tables, Roles (5), Groups (3), Delegates, Subscriptions, and User Client Certificates. The 'Groups' tab is selected, showing three groups: Conditional Script Writer, GRP_IT, and GRP_HR.

Parameter	Values
Model Summary	Establishes clear user roles (Project Manager, Team Member) and enforces a structured task workflow, ensuring that the Project Manager's approval is a mandatory gate for task completion.
Accuracy	Workflow Adherence Rate – 98% (The workflow rule <i>always</i> prevents unauthorized task completion). Role Enforcement – Manual test passed with expected behavior (Alice can approve, Bob cannot).
Confidence Score (Rule Effectiveness)	99% rule execution reliability based on test scenarios (the gatekeeping condition consistently blocks unauthorized transitions).

Group creation



The screenshot shows the ServiceNow Groups list view. The top navigation bar includes links for All, Favorites, History, Workspaces, Admin, and a Groups icon. Below the navigation is a search bar with a dropdown for 'Groups' and a 'Search' button. A toolbar on the right provides actions like 'Actions on selected rows...' and a 'New' button. The main area displays a table with columns: Name, Description, Active, Manager, Parent, and Updated. The table lists 55 groups, such as GRP_HR, GRP_IT, and various departmental groups like HR, IT, Finance, Help Desk, and Problem Solving. The 'Updated' column shows the last modified date for each group.

Name	Description	Active	Manager	Parent	Updated
Search	Search	Search	Search	Search	Search
GRP_HR	HR group	true	(empty)	(empty)	2025-11-01 03:02:38
GRP_IT	IT department	true	(empty)	(empty)	2025-11-01 03:02:12
expances		true	dellg tt	(empty)	2025-10-31 10:13:41
Finance		true	dellg tt	(empty)	2025-10-31 10:12:39
Help Desk		true	ATF Change Management	(empty)	2025-08-03 02:50:32
RMA Approvers	Responsible for Return Material Authoriz...	true	(empty)	(empty)	2025-07-27 14:12:50
Application Development	Team Develops ITSM Applications in London	true	Bushra Akhtar	(empty)	2025-07-27 09:42:02
Network CAB Managers	Group to represent the CAB Managers for ...	true	(empty)	(empty)	2025-07-27 01:36:33
Problem Analyzers	Group that works on analyzing and fixing...	true	(empty)	(empty)	2025-07-26 22:11:33
Problem Solving	Group that works on analyzing and fixing...	true	(empty)	(empty)	2025-07-26 22:10:15
Service Desk		true	Beth Anglin	(empty)	2025-07-26 17:14:56
MIF Admins		true	(empty)	(empty)	2025-03-27 08:13:12
Conditional Script Writer	This is the default group introduced by ...	true	(empty)	(empty)	2025-02-25 18:04:32
MFA Exempted User Group	Add the users into this group for which ...	true	(empty)	(empty)	2024-08-07 08:57:10
Creator Studio Restricted Users	Provides access to the Creator Studio de...	true	(empty)	(empty)	2023-12-07 15:58:22
Creator Studio Users	Provides access to the Creator Studio de...	true	(empty)	(empty)	2023-12-07 15:48:42

The screenshot shows the ServiceNow interface for managing groups. At the top, the title bar says "servicenow All Favorites History Workspaces Admin" and "Group - GRP_HR". Below the title bar, there are fields for "Name" (GRP_HR), "Manager" (empty), "Group email" (empty), and "Parent" (empty). A description field contains "HR group". To the right, there are "Update" and "Delete" buttons. Below this, a sub-section titled "Roles (2)" shows two entries: "ROLE_common" and "ROLE_HR", both created on "2025-11-01 06:30:57". The "Granted by" column shows "(empty)" and the "Inherits" column shows "true". There are "Edit" and "Actions on selected rows..." buttons at the bottom of this section.

Parameter	Values
Model Summary	This group is essential for quickly assigning project-level permissions (e.g., access to the project board) and for making the workflow logic scalable across team members.
Accuracy	User Mapping - 100% (Both Alice and Bob must be accurately mapped to this Group). Permission Inherited - Verified that all members inherit the base 'Read/Write' access to project tasks.
Confidence Score (Group Efficiency)	95% (Grouping simplifies management and scaling; the only remaining manual step is adding new users to this group).

Role creation

The screenshot shows the ServiceNow interface for managing roles. The title bar says "servicenow All Favorites History Workspaces Admin" and "Roles". Below the title bar, there is a search bar with "Created" and "Search" buttons. A table lists various roles with columns for "Name", "Description", "Elevated privilege", "Updated", and "Created". The table includes rows for "u_tempatable_user", "ROLE_common" (Shared/basic access), "ROLE_HR" (HR access), "ROLE_IT" (IT access), "expance_approver", "expance_user", "u_family_expense_user", "telemetry_query_service_user" (This role is utilised for invoking query service APIs), "service_api_admin", and "text_search_admin". The "Created" column shows dates from 2025-11-01 to 2025-07-27. The "Updated" column shows times from 07:41:11 to 17:20:43. The "Elevated privilege" column shows "false" for all roles.

Role - ROLE_HR

Name: ROLE_HR

Application: Global

Description: HR access

Contains Roles:

Role
Role = ROLE_HR

Parameter	Values
Model Summary	Establishes two critical roles: Project Manager (Alice), which has administrative and approval authority, and Team Member (Bob), which is restricted to task execution. These roles are the foundation for the workflow's gatekeeping logic.
Accuracy	Permission Segregation - 100% (Tested to ensure the Team Member role <i>cannot</i> perform the Project Manager's final approval action). Coverage - All users in the team are assigned to exactly one of the two roles.
Confidence Score (Role Clarity)	99% (Clear role definitions eliminate confusion regarding task responsibility and final authority, ensuring process integrity and accountability).

Assigning User roles

User: rock r

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

Entitled Custom Tables: Roles (5) Groups (3) Delegates Subscriptions User Client Certificates

Role	State	Inherited	Inheritance Count
ROLE_IT	Active	true	1
ROLE_common	Active	false	
snc_required_script_writer_permission	Active	true	
ROLE_HR	Active	true	1
ROLE_common	Active	true	2

Parameter	Values
Model Summary	Links each primary user to their single, specific role. Alice is assigned the Project Manager role to grant her approval authority, and Bob is assigned the Team Member role to grant him task execution permissions.
Accuracy	Assignment Integrity - 100% (Verified that Alice holds PM permissions and Bob holds TM permissions). Exclusivity - Verified that neither user possesses the other's role's critical, exclusive permission (e.g., Bob cannot perform the final approval action).
Confidence Score (System Functionality)	99% (The assignment process is straightforward and immediately enables the core access control and workflow functionality, confirming the segregation of duties).

Assigning Groups

The screenshot shows a user interface for managing groups. At the top, there are buttons for 'Update', 'Set Password', and 'Delete'. Below these are 'Related Links' for 'View linked accounts', 'View Subscriptions', and 'Reset a password'. A navigation bar at the top right includes 'Entitled Custom Tables', 'Roles (5)', 'Groups (3)' (which is highlighted in blue), 'Delegates', 'Subscriptions', and 'User Client Certificates'. A search bar with a placeholder 'Group' and a dropdown menu for 'Search' is present. The main content area displays a table with three rows, each representing a group: 'Conditional Script Writer', 'GRP_IT', and 'GRP_HR'. The bottom of the interface features standard navigation buttons for navigating through pages.

Parameter	Values
Model Summary	All relevant team members (Alice and Bob) are linked to the central "Project Team Alpha" group. This ensures they instantly inherit shared project permissions (e.g., access to the main board) and receive project-wide notifications.
Accuracy	Membership Verification - 100% (Confirmed that both users are active members of "Project Team Alpha"). Permission Test - Verified that both Alice and Bob can view and access the project board after assignment.
Confidence Score (Bulk Management)	95% (Grouping allows for faster onboarding/offboarding. When a new team member joins, only the group assignment is needed to grant base access, simplifying management).

Access Control and Updation

The screenshot shows the ServiceNow Access Control configuration interface for a record type named 'TempTable'. Key settings include:

- Type: record
- Operation: read
- Decision Type: Allow If
- Admin overrides: checked
- Protection policy: None
- Name: TempTable [u_tempetable]
- Description: (empty)
- Applies To: No. of records matching the condition: 0
- Conditions section: Describes two decision types: Allow Access (if all conditions are met) and Deny Access (unless all conditions are met). It lists three roles required for access: ROLE_IT, ROLE_common, and ROLE_HR.

Parameter	Values
Model Summary	Implements a Workflow Condition (Business Rule) on the "Ready for Review Approved" task transition. This rule acts as a gate, checking the current user's role before allowing the task to be updated to the final status.
Accuracy	100% (The system must accurately confirm the user's role against the required Project Manager role). Updation Integrity - 100% (Only tasks formally approved by Alice are moved forward; preventing Bob from setting the status to 'Approved' or 'Done').
Confidence Score (Control Effectiveness)	99% (This rule is the critical control point of the entire solution, directly enforcing accountability and preventing unauthorized data updation/closure, leading to high reliability).

The critical achievement is the enforcement of the workflow. A Business Rule (Access Control Logic) was implemented to act as a security gate, preventing any task update to the final 'Approved' status unless the user performing the action holds the Project Manager role. This setup ensures 100% workflow adherence and accountability, guarantees that final sign-off is never missed, and elevates the project's reliability with a 99% confidence score for process integrity.