

Streamlining Ticket Assignment for Efficient Support Operations

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Abstract

Efficient ticket management plays a crucial role in maintaining smooth IT support operations. In most organizations, tickets are manually assigned to respective departments, which often leads to delays and inefficiencies.

This project, "**Streamlining Ticket Assignment for Efficient Support Operations,**" aims to automate the ticket assignment process using **ServiceNow**, a cloud-based IT Service Management (ITSM) platform.

By creating users, groups, roles, and automation flows, the system intelligently routes incoming tickets to the appropriate team (e.g., Certificate Issues or Platform Issues) based on the type of problem. This reduces manual intervention, improves response time, and ensures faster issue resolution.

The project demonstrates how automation in service management enhances overall operational efficiency and user satisfaction.

Tasks Done with Explanation:

1. User Creation

In ServiceNow, users represent individuals who raise or handle tickets.

We created multiple users such as **admin**, **certificate_team_user**, and **platform_team_user** using the *User Administration* module.

Each user has attributes like name, email, department, and assigned roles.

2. Group Creation

Groups were created to categorize users based on their function.

We made two groups:

- **Certificate Group:** Handles certificate-related issues.
- **Platform Group:** Handles platform-related issues.
These groups help in routing tickets to the correct team.

3. Role Creation

Roles define access permissions for each group or user.

We created roles such as:

- **cert_role** → Access to certificate issues.
- **plat_role** → Access to platform issues.
Roles were assigned to the respective groups to manage visibility and actions.

4. Table Creation

A custom table named **Operations_Related** was created to store ticket data. The table includes fields such as:

- Ticket ID
- Issue Type
- Description
- Assigned Group
- Status

This table acts as the database for ticket operations.

5. Adding Choices

In the *Issue Type* field of the table, choice options were added:

- Login Issue
- 404 Error
- Certificate Issue
- Platform Issue

These predefined choices help in categorizing the ticket correctly.

6. Assigning Roles and Users to Groups

Each user was assigned to their corresponding group:

- Certificate user → Certificate Group
- Platform user → Platform Group

The admin user retains full access for monitoring.

7. Assigning Roles to Tables

Roles were linked to the **Operations_Related** table to restrict access:

- Certificate Group → Can view certificate tickets
- Platform Group → Can view platform tickets

This ensures security and proper segregation of work.

8. Creating ACL (Access Control List)

Access Control Lists were configured to:

- Allow users to read/write data related only to their group.

- Prevent unauthorized access to other group tickets.
This improves data security and operational control.

9. Creating Flows (Automation)

Two automation flows were created using **Flow Designer**:

- **Flow 1:** Automatically assigns tickets with “Certificate Issue” to the Certificate Group.
- **Flow 2:** Automatically assigns tickets with “Platform Issue” to the Platform Group.
The flow triggers when a new record is inserted into the Operations_Related table.

10. Testing the Automation

After saving the flow, test tickets were raised with different issue types. Results confirmed that the flows worked correctly — each ticket was automatically assigned to the right group without manual intervention.

Screenshots

Step 1: Create Users

1. Open ServiceNow.
2. In the left navigation panel, click **All** → **Search Users**.
3. Select **Users under System Security**.

User ID	Name	Email	Active	Created	Updated
(empty)			true	2025-10-25 03:21:10	2025-10-25 03:21:10
abel.tuter	Abel Tuter	abel.tuter@example.com	true	2012-02-17 19:04:52	2025-10-24 14:27:33
abraham.lincoln	Abraham Lincoln	abraham.lincoln@example.com	true	2013-07-23 17:15:54	2025-10-24 14:27:35
adela.cervantsz	Adela Cervantsz	adela.cervantsz@example.com	true	2012-02-17 19:04:50	2025-10-24 14:27:31
aileen.mottern	Aileen Mottern	aileen.mottern@example.com	true	2012-02-17 19:04:49	2025-10-24 14:27:33
alejandra.prenatt	Alejandra Prenatt	alejandra.prenatt@example.com	true	2012-02-17 19:04:52	2025-10-24 14:27:31
alejandro.mascall	Alejandro Mascall	alejandro.mascall@example.com	true	2012-02-17 19:04:52	2025-10-24 14:27:35
alene.rabeck	Alene Rabeck	alene.rabeck@example.com	true	2012-02-17 19:04:53	2025-10-24 14:27:35
alfonso.griglen	Alfonso Griglen	alfonso.griglen@example.com	true	2012-02-17 19:04:51	2025-10-24 14:27:31
alissa.mountjoy	Alissa Mountjoy	alissa.mountjoy@example.com	true	2012-02-17 19:04:52	2025-10-24 14:27:33
allan.schwantd	Allan Schwantd	allan.schwantd@example.com	true	2012-02-17 19:04:53	2025-10-24 14:27:35
allie.pumphrey	Allie Pumphrey	allie.pumphrey@example.com	true	2012-02-17 19:04:52	2025-10-24 14:27:35

4. Click **New**.
5. Fill the required user details such as:
 - User ID

- First Name
- Last Name
- Email
- Department

The screenshot shows the ServiceNow User creation page. The left side displays basic user information: User ID (manne.niranjan), First name (Manne), Last name (Niranjan), Title (empty), Department (empty), Password needs reset (unchecked), Locked out (unchecked), Active (checked), and Internal Integration User (unchecked). The right side displays advanced settings: Email (niranjanreddymanne2507@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), and Mobile phone (empty). At the bottom are Update, Set Password, and Delete buttons.

6. Click **Submit**.
7. Repeat the same to create another user.
 - Example:
 - **User 1:** Katherine Pierce
 - **User 2:** Manne Niranjan

Step 2: Create Groups

1. In the left navigation panel, click All → Search Groups.
2. Select **Groups** under System Security.

The screenshot shows the ServiceNow Groups search results table. The columns are: Name, Description, Active, Manager, Parent, and Updated. The table lists various groups:

Name	Description	Active	Manager	Parent	Updated
Analytics Settings Managers	Group for all people who have the Ana...	true	(empty)	(empty)	2020-03-17 04:39:14
App Engine Admins	Users who can review and approve tasks r...	true	(empty)	(empty)	2021-06-28 12:12:44
App Engine Studio User Limited	Users who are able to edit applications ...	true	(empty)	(empty)	2022-09-29 07:23:25
App Engine Studio Users	Users who are able to access App Engine ...	true	(empty)	(empty)	2020-04-16 09:51:20
Application Development	Team Develops ITSM Applications in London	true	Bushra Akhtar	(empty)	2025-08-21 09:42:02
ATF Service Level Management Group		true	(empty)	(empty)	2019-07-13 09:01:15
ATF_TestGroup_Network	ATF_TestGroup_Network	true	(empty)	(empty)	2018-08-30 01:35:11
ATF_TestGroup_ServiceDesk	ATF_TestGroup_ServiceDesk	true	(empty)	(empty)	2018-08-30 01:35:35
Business Application Registration Approv...	Approval group for Business Application ...	true	(empty)	(empty)	2020-07-28 21:02:26
CAB Approval	CAB approvers	true	(empty)	(empty)	2011-09-30 09:30:34
Capacity Mgmt		true	(empty)	(empty)	2023-12-24 17:40:19
Catalog Request Approvers > \$1000	This is the group of users that need to ...	true	(empty)	(empty)	2021-01-21 17:11:42

3. Click **New**.

4. Fill the group details such as:

- o Name: *Certificates*
- o Description: Handles certificate-related issues

Created	Role	Granted by	Inherits
2025-10-25 03:24:03	certification_role	(empty)	true

5. Click Submit.

6. Create one more group:

- o Name: *Platform*
- o Description: Handles platform-related issues

Step 3: Create Roles

1. Navigate to All → Search Roles.

2. Select Roles under System Security.

Name	Description	Elevated privilege
action_category_creator	Allows creation of action and subflow categories.	false
action_designer	action designer role enables users to launch Action Designer	false
activity_admin	Can create, edit, publish or delete wf_element_provider	false
activity_creator	This role give workflow users the ability to create custom orchestration activities in the workflow canvas.	false
actsub_admin	Activity Subscriptions Administrator role	false
actsub_user	Activity Subscriptions User role	false
admin	The System Administrator role. This role has access to all system features, functions, and data, regardless of security constraints. "Grant this privilege carefully!" If you have sensitive information, such as HR records, that you need to protect, you must create a custom "admin" role for that area and train a person authorized to see those records to act as the administrator	false
agent_admin	Can download and administer the system's built-in agent	false
agent_security_admin	Manages security of the MID Server.	false
agent_workspace_user	Users of the Agent Workspace application, may navigate to the URL for that application	false
aisa_admin	Can configure AI Search Assist	false
aria_admin	All search administrator	false

3. Click New.

4. Fill the details:

- o Role Name: *Certification_Role*
- o Description: Role for certificate-related support team

The screenshot shows the ServiceNow interface for creating a new role. The top navigation bar includes 'All', 'Favorites', 'History', 'Admin', and a search bar. The title bar says 'Role - certification'. The main form has fields for 'Name' (set to 'certification'), 'Application' (set to 'Global'), and 'Elevated privilege' (unchecked). The 'Description' field contains 'Can work Certification tasks'. Below the form are 'Update' and 'Delete' buttons. A 'Related Links' section includes a 'Run Point Scan' button. A 'Contains Roles (1)' tab is selected, showing a single entry: 'Role = certification' with 'Contains' checked and 'cmdb_read' listed under it. Other tabs include 'Applications with Role (1)', 'Modules with Role', and 'Custom Tables'. A search bar and a toolbar with 'Actions on selected rows...' are at the bottom.

5. Click Submit.

6. Create another role:

- o Role Name: *Platform_Role*
- o Description: Role for platform support team

Step 4: Create a Table

1. Navigate to All → Search Tables.
2. Select Tables under System Definition.
3. Click New.

The screenshot shows the ServiceNow 'Tables' page. The top navigation bar includes 'All', 'Favorites', 'History', 'Workspaces', and a search bar. The title bar says 'Tables'. The main area displays a table of system tables with columns: 'Label', 'Name', 'Extends table', 'Extensible', and 'Updated'. The table lists various tables like 'adaptive_auth_event', 'agent_assist_recommendation', etc., all created on 2025-08-21. A 'New' button is located at the bottom right of the table area.

Label	Name	Extends table	Extensible	Updated
Adaptive Authentication Event	adaptive_auth_event	(empty)	false	2025-08-21 23:25:36
Agent Assist Recommendation	agent_assist_recommendation	Application File	false	2025-08-21 23:27:32
MID Server File	agent_file	(empty)	false	2025-08-21 23:04:53
Record Producer Configuration	aisa_rp_config	Application File	false	2025-08-21 23:32:39
Search Actions	aisa_ui_action	Application File	false	2025-08-21 23:32:39
AI Search ACL Overrides	ais_acl_overrides	Application File	false	2025-08-21 22:40:09
AI Search Active Table Ingestion Tracker	ais_active_table_ingestion_tracker	(empty)	false	2025-08-21 22:40:07
AI Search Async Genius Result	ais_async_genius_result	(empty)	false	2025-08-21 22:40:13
AI Search Async Request	ais_async_request	(empty)	false	2025-08-21 22:40:13
AI Search Child Table	ais_child_table	Application File	false	2025-08-21 22:40:11
AI Search Configuration Attribute	ais_configuration_attribute	(empty)	false	2025-08-21 22:40:06
AI Search Connection	ais_connection	(empty)	false	2025-08-21 22:40:13
AI Search Country To Search Language	ais_country_to_search_language	Application File	false	2025-08-21 22:40:13

4. Fill the details:

- o Label: *Operations Related*

- o Check **Create Module** and **Create Mobile Module**.
- o Under “New Menu Name”: *Operations Related*.

The screenshot shows the ServiceNow interface for creating a new table named "Operations related". The top navigation bar includes "servicenow", "All", "Favorites", "History", and a search bar. Below the header, there are buttons for "Delete", "Update", and "Delete All Records". A message box at the top states: "A table is a collection of records in the database. Each record corresponds to a row in a table, and each field on a record corresponds to a column on that table. Applications use tables and records to manage data and processes. [More Info](#)". The main area displays the table structure with columns for "Label" (Operations related) and "Name" (u_operations_related). The application is set to "Global". Below this, the "Table Columns" section lists three columns: "Updates" (Integer), "Updated by" (String), and "Updated" (Date/Time). The "Dictionary Entries" table shows the same three columns with their respective types and properties.

Column label	Type	Reference	Max length	Default value	Display
Updates	Integer	(empty)	40		false
Updated by	String	(empty)	40		false
Updated	Date/Time	(empty)	40		false

5. Add columns:

- o Issue
- o Assigned to Group
- o Description

6. Click Submit.

Step 5: Create Choices for the “Issue” Field

1. Open the **Operations Related** table.
2. Click on **Form Design**.
3. Locate the field **Issue** → Click on **Edit Choices**.

The screenshot shows the "Dictionary Entry - issue" configuration screen. The top navigation bar includes "servicenow", "All", "Favorites", "History", and a search bar. Below the header, there are buttons for "Create Choice List", "Delete Column", "Update", and "Search". A message box at the top provides instructions for managing dictionary entries. The main configuration area includes fields for "Table" (Operations related [u_operations_related]), "Type" (Choice), "Column label" (issue), and "Column name" (u_issue). To the right, settings for "Active" (checked), "Function field" (unchecked), "Read only" (unchecked), "Mandatory" (unchecked), and "Display" (unchecked) are shown. At the bottom, a "Choice List Specification" section indicates "Dropdown with -- None --".

4. Add the following values:

- Unable to login to platform
- 404 Error
- Regarding Certificates
- User Expired

The screenshot shows the ServiceNow interface for a 'Dictionary Entry - issue' record. The top navigation bar includes 'servicenow', 'All', 'Favorites', 'History', and a search bar. Below the header, there are buttons for 'Create Choice List', 'Delete Column', and 'Update'. The main content area displays a table titled 'Choices' with columns: Label, Value, Language, Sequence, Inactive, and Updated. The table contains four rows with labels: 'unable to login to platform', '404 error', 'regarding user expired', and 'regarding certificates'. All entries have a value of 'a', 'b', 'c', or 'd' respectively, and are in English ('en'). The 'Inactive' column shows values like '1 false' and '3 false'. The 'Updated' column shows dates from 2025-10-27 08:03:39 to 2025-10-27 08:03:54.

Label	Value	Language	Sequence	Inactive	Updated
unable to login to platform	a	en	1	false	2025-10-27 08:03:39
404 error	b	en	2	false	2025-10-27 08:03:45
regarding user expired	c	en	3	false	2025-10-27 08:03:49
regarding certificates	d	en	3	false	2025-10-27 08:03:54

5. Click **Update** to save.

Step 6: Assign Roles & Users to Certificate Group

1. Go to **All** → **Search Groups** → Open *Certificates* group.
2. Under **Group Members**, click **Edit**.
3. Select **Katherine Pierce** and click **Save**.

The screenshot shows the ServiceNow interface for a 'User - Katherine Pierce' record. The top navigation bar includes 'servicenow', 'All', 'Favorites', 'History', and a search bar. Below the header, there are buttons for 'Update', 'Set Password', and 'Delete'. The main content area displays a form with various user details. The 'User ID' field is set to 'Katherine Pierce'. Other fields include 'First name' (Katherine), 'Last name' (Pierce), 'Title' (empty), 'Department' (empty), 'Email' (empty), '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 a 'Photo' placeholder with a link to 'Click to add...'. There are also checkboxes for 'Password needs reset', 'Locked out', and 'Active' (which is checked). At the bottom of the form are buttons for 'Update', 'Set Password', and 'Delete'.

4. Under **Roles**, click **Edit**.
5. Add **Certification_Role** and click **Save**.

Roles (1)	Group Members (2)	Groups
<input type="button" value="Created"/> <input type="text" value="Search"/> Actions on selected rows... <input type="button" value="Edit.."/>		
Group = certificates		
Created	Role	Granted by
2025-10-25 03:24:03	certification_role	(empty)
<< < > >> 1 to 1 of 1		

Step 7: Assign Roles & Users to Platform Group

1. Go to All → Search Groups → Open *Platform* group.
2. Under Group Members, click Edit.

The screenshot shows the 'Group - platform' edit screen in ServiceNow. The 'Name' field is set to 'platform'. The 'Manager' field is populated with 'Manne Nirajan'. The 'Description' field is empty. On the right side, there are buttons for 'Update' and 'Delete'.

3. Select **Manne Nirajan** and click Save.
4. Under Roles, click Edit.

The screenshot shows the 'User - Manne Nirajan' edit screen in ServiceNow. The user's first name is 'Manne' and last name is 'Niranjan'. The 'Active' checkbox is checked. On the right side, there are fields for 'Email', 'Identity type', 'Language', 'Calendar integration', 'Time zone', 'Date format', 'Business phone', and 'Mobile phone'. Below these, there is a 'Photo' section with a 'Click to add...' link. At the bottom, there are buttons for 'Update', 'Set Password', and 'Delete'.

5. Add **Platform_Role** and click Save.

Step 8: Assign Role to Table

1. Go to All → Search Tables → Open *Operations Related* table.
2. Click Application Access tab.
3. Click on **u_operations_related (Read)** operation.

- Click on your profile icon (top right) → **Elevate Role** → select **Security Admin** → Click **Update**.

The screenshot shows the ServiceNow interface with a modal dialog titled "Elevate role". Inside the dialog, under "AVAILABLE ROLES", the checkbox for "security_admin" is checked. Below it, a description states: "Grant modification access to High Security Settings, allow user to modify the Access Control List". At the bottom of the dialog are "Cancel" and "Update" buttons. In the background, there's a table titled "Table - Operations related" with columns like "Label", "Name", "Type", "Reference", "Max length", and "Default value". On the right side, a sidebar displays the user profile of "System Administrator" with options like "Profile", "Preferences", "Keyboard shortcuts", "Impersonate user", "Elevate role", "Printer friendly version", and "Log out".

- Under **Requires Role**, click **Insert a new row** → Add:

- *Platform_Role*
- *Certification_Role*

- Click **Update**.

- Repeat the same for **Write Operation**.

Step 9: Create ACL (Access Control List)

- Go to All → Search **ACL**.
- Select **Access Control (ACL)** under **System Security**.
- Click **New**.
- Fill the details for field-level or table-level access.
- Under **Requires Role**, click **Insert a new row** and add **admin** role.

The screenshot shows the ServiceNow "Access Control" creation form. The "Type" field is set to "record" and "Operation" to "create". The "Decision Type" is "Allow If". The "Application" is set to "Global". The "Active" checkbox is checked. The "Admin overrides" checkbox is checked. Below these settings, there are fields for "Protection policy" (set to "None"), "Name" (a dropdown menu), "Description" (a text area), and "Applies To" (a field containing "Not a valid table name"). There are also buttons for "Add Filter Condition" and "Add 'OR' Clause". A warning message at the top says: "Warning: A role, security attribute, data condition, or script is required to properly secure access with this ACL."

6. Click **Submit**.

7. Repeat and create 4 ACLs for the required fields in your table.

Step 10: Create Flow to Assign Certificate Tickets Automatically

1. Go to All → Search **Flow Designer**.

2. Click **Flow Designer** → **New Flow**.

The screenshot shows the Workflow Studio interface with the title bar "Workflow Studio" and a tab "New Flow". Below the title bar, there are tabs for "Homepage", "Operations", and "Integrations". A navigation bar includes "Playbooks", "Flows" (which is selected), "Subflows", "Actions", and "Decision tables". A search bar shows "Flows 70" and "Last refreshed just now". To the right, there is a "New" button with a dropdown menu. The dropdown menu has options: "Playbook" (disabled), "Flow" (selected), "Subflow", "Action", and "Decision table". A tooltip "Pick up where you left off" is visible. The main area displays a table of flows:

Name	Application	Status	Active
Admin Deployment Approval Flow Error Notifier	App Engine Studio	Published	true
Admin Install App to Production Environment Flow Error Notifier	App Engine Studio	Published	true
Application Intake Request Flow	Application Intake	Published	true

3. In Flow Properties:

- Name: *Regarding Certificates*
- Application: *Global*
- Run User: *System User*

4. Click **Submit**.

The screenshot shows the "Let's get the details for your flow" form. On the left, there is a preview of the flow structure with various nodes and connections. On the right, the form fields are:

- Flow name * ○
- Application * ○
- Description ○
- Protection ○
- Run as ○

At the bottom right are "Cancel" and "Build flow" buttons.

5. Click **Add a Trigger** → Select **Create or Update a Record**.

6. Table: *Operations Related*

7. Condition:

- Field: *Issue*
- Operator: *is*
- Value: *Regarding Certificates*

8. Click **Done**.

9. Click **Add Action** → Search **Update Record**.

The screenshot shows the ServiceNow dictionary entry interface for creating a new column named 'issue'. The 'Table' dropdown is set to 'Operations related [u_operatio...]' and the 'Type' dropdown is set to 'Choice'. The 'Column label' is 'issue' and the 'Column name' is 'u_issue'. The 'Application' is 'Global' and 'Active' is checked. Other settings like 'Function field', 'Read only', 'Mandatory', and 'Display' are also visible.

10. In the record field, select:

- Table: *Operations Related*
- Field: *Assigned to Group*
- Value: *Certificates*

11. Click **Done** → **Save** → **Activate**.

Step 11: Create Flow to Assign Platform Tickets Automatically

1. Go to **All** → **Flow Designer** → **New Flow**.
2. Flow Name: *Regarding Platform*
3. Application: *Global*
4. Run User: *System User*
5. Click **Add a Trigger** → **Create or Update a Record**.

6. Table: *Operations Related*

7. Conditions:

- Issue **is** “Unable to login to platform”
- Issue **is** “404 Error”
- Issue **is** “User Expired”

8. Click **Done**.

9. Add Action → **Update Record**:

- Field: *Assigned to Group*
- Value: *Platform*

10. Click **Done** → **Save** → **Activate**.

Step 12: Test the Flow

1. Open **Operations Related** → Click **New Record**.

2. Enter:

- Issue: *404 Error*
- Description: *User unable to access portal*

The screenshot shows a ServiceNow interface for creating a new record. The title bar says "servicenow" and the current table is "Choice - unable to login to platform". The form has the following fields:

* Table	Operations related [u_operation...]	Sequence	1
* Element	u_issue	Inactive	<input type="checkbox"/>
* Language	en		
* Label	unable to login to platform		
* Value	a		
Dependent value			
Hint			

At the bottom are "Update" and "Delete" buttons.

3. Click **Submit**.

4. The record should automatically be assigned to the **Platform Group**.
5. Similarly, test with issue “Regarding Certificates” → Assigned to **Certificates Group**.

✓ Step 13: Verify the Automation

- Check that each issue type routes correctly.
- Confirm group assignment in ticket details.
- Ensure no manual routing is required.

Conclusion

- The implementation of the automated ticket routing system in ServiceNow has streamlined support operations at ABC Corporation. The automation of ticket assignment has significantly reduced manual errors, optimized team workload, and improved customer satisfaction. This system ensures tickets are routed efficiently and resolved promptly, resulting in enhanced operational productivity.

Future Enhancement

- Implement AI/ML-based ticket routing to automatically analyze and assign tickets based on keywords, issue history, and workload.
- Introduce priority-based assignment to ensure high-priority issues are resolved faster.
- Add a real-time analytics dashboard to monitor ticket trends, resolution times, and team performance.
- Integrate email and chatbot support so users can raise or check tickets through multiple communication channels.
- Develop a mobile-friendly version or app to allow support teams to handle tickets anytime, anywhere.