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1. Problem Statement

Manual ticket assignment consumes valuable time and often leads to inefficiencies. Support agents spend effort categorising and forwarding issues rather than resolving them. As organisations scale, this approach becomes unsustainable.

The project proposes an automated ticket routing system within ServiceNow that can instantly identify the issue type and assign the ticket to the relevant team.

2. Abstract

In modern IT environments, organisations handle thousands of service requests daily through help desks or support systems. Manual ticket assignment leads to inefficiencies, delays, and human errors, often resulting in poor service quality and reduced productivity.

This project, titled “Streamlining Ticket Assignment for Efficient Support Operations,” aims to automate the entire ticket routing process using ServiceNow, a powerful IT Service Management (ITSM) tool.

By leveraging Flow Designer, custom tables, roles, and groups, the system automatically assigns each incoming ticket to the appropriate support group based on the issue type. The result is a seamless, automated workflow that reduces response time, improves resolution efficiency, and enhances customer satisfaction.

The project demonstrates how ServiceNow’s automation capabilities can transform IT support management into a smart, efficient, and reliable system without human intervention.

3. Introduction

In large organisations, technical support teams handle numerous tickets daily — ranging from login issues and access requests to system errors and certificate expirations. Typically, a support administrator manually assigns these tickets to the correct department or support team. This manual approach often leads to:

- Misrouted tickets
- Delayed responses
- Repetitive workload for support teams
- Reduced productivity

ServiceNow provides a platform to overcome these issues by automating workflows. Through its Flow Designer, tickets can be automatically categorised and assigned to the correct group instantly after creation.

This project focuses on building such an automated workflow that intelligently routes tickets to either the Platform Team or the Certificates Team, depending on the issue type entered by the user.

4. Objectives

The main objectives of this project are:

1. To automate the support ticket assignment process.
2. To minimise human errors and delays in routing tickets.
3. To enhance productivity and reduce response time.
4. To utilize ServiceNow's Flow Designer for automation.
5. To ensure security and role-based access for support staff.
6. To improve the overall operational efficiency of the support system.

5. Methodology

The implementation of this project is carried out in several structured steps:

Step 1: Creating Users

- Navigate to: All → Users → New
- Create users such as Katherine Pierce and Manne Niranjana.
- Assign them specific roles and save.

Step 2: Creating Groups

- Navigate to: All → Groups → New
- Create groups:
 - Platform Team
 - Certificates Team
- Submit the groups.

Step 3: Creating Roles

- Navigate to: All → Roles → New
- Create roles:
 - Platform_Role
 - Certificate_Role
- Assign each role to its corresponding group.

Step 4: Creating a Custom Table

- Go to: System Definition → Tables → New

- Label: Operations Related
- Check:
 - Create Module
 - Create Mobile Module
- Add the following fields:
 - Issue (choice field)
 - Description
 - Assigned Group
 - Priority

Choices for the “Issue” field:

- Unable to log in to the platform
- 404 Error
- Regarding Certificates
- User Expired

Step 5: Assigning Users and Roles

- Assign Katherine Pierce to the *Certificates Team* and give her *Certificate_Role*.
- Assign Manne Niranjana to *Platform Team* and give him *Platform_Role*.

Step 6: Setting Access Controls (ACLs)

- Navigate to: System Security → Access Control (ACL)
- Create ACLs for the *Operations Related* table.
- Assign appropriate roles and ensure secure data access.

Step 7: Designing the Flow

- Navigate to: Flow Designer → New Flow
- Create two flows:

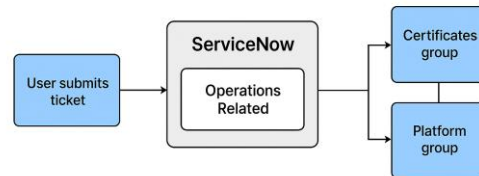
Flow 1: Regarding Certificates

- Trigger: When a record is created or updated in Operations Related
- Condition: Issue is “Regarding Certificates”
- Action: Update record → Assign to group Certificates

Flow 2: Platform Issues

- Trigger: When a record is created or updated in Operations Related
- Conditions:
 - Issue is “Unable to login to platform”
 - Issue is “404 Error”
 - Issue is “User Expired”
- Action: Update record → Assign to group Platform

Streamlining Ticket Assignment for Efficient Support Operations



Step 8: Testing

- Create sample records in the Operations Related table.
- Observe that the system automatically assigns tickets to the correct group.

6. Architecture Diagram

Below is the workflow architecture of the automation system

Flow Explanation:

1. A user submits a new support ticket.
2. The record is stored in the *Operations Related* table.
3. The *Flow Designer* triggers upon record creation.
4. The issue type is evaluated.
5. The system automatically assigns the ticket to the respective group.
6. The assigned group receives the notification and starts working on the issue.

7. Workflow Explanation

Manual Workflow (Before Automation):

- User raises a ticket manually.
- Admin reviews and forwards to the appropriate team.
- Time delay due to manual routing.

Automated Workflow (After Implementation):

- User raises a ticket.
- The Flow Designer automatically triggers.

- The issue type determines the group.
- The ticket is instantly assigned to the right team.

This automation significantly reduces ticket handling time and eliminates the need for administrators to manually route tickets.

8. Benefits of Automation

1. Speed: Automatic routing reduces ticket resolution time.
2. Accuracy: Tickets are assigned to the correct teams with no manual errors.
3. Productivity: Support staff focus on solving issues instead of sorting them.
4. Transparency: Each ticket is traceable and visible to authorised users.
5. Scalability: The process can handle large volumes of tickets

9. Results and Outcomes

After implementation, the system successfully:

- Eliminated manual ticket routing.
- Improved team coordination.
- Reduced human errors.
- Achieved faster ticket resolutions.
- Enhanced service delivery quality.

This clearly demonstrates the efficiency and reliability of ServiceNow's automation features in real-world IT service management.

10. Future Scope

- Integrate AI/ML models to predict issue categories automatically.
- Add notification triggers for SLA (Service Level Agreements).
- Expand automation for other departments such as HR or Finance.
- Generate automatic reports on ticket volume and performance.

11. Appendix

1. Create User

The screenshot shows the 'User - New Record' form in ServiceNow. The form is divided into two main sections: 'User' and 'Email'. The 'User' section includes fields for 'User ID' (filled with 'mniranjan@123'), 'First name' (filled with 'Manne'), 'Last name' (filled with 'Nirangan'), 'Title' (empty), 'Department' (empty), 'Password needs reset' (checkbox), 'Locked out' (checkbox), 'Active' (checkbox, checked), and 'Internal Integration User' (checkbox). The 'Email' section includes fields for 'Email' (filled with 'manne.n@abc.com'), 'Identity type' (dropdown, 'Human'), 'Language' (dropdown, '-- None --'), 'Calendar integration' (dropdown, 'Outlook'), 'Time zone' (dropdown, 'System (America/Los_Angeles)'), 'Date format' (dropdown, 'System (yyyy-MM-dd)'), 'Business phone' (empty), 'Mobile phone' (empty), and 'Photo' (link to 'Click to add...'). A 'Submit' button is located at the bottom left. Below the form, there are 'Related Links' for 'View linked accounts' and 'View Subscriptions'. A blue banner at the top of the form area states: 'To set up the User's password, save the record and then click Set Password.'

2. Create Groups

The screenshot shows the 'Group - New Record' form in ServiceNow. The form includes fields for 'Name' (filled with 'certificates'), 'Manager' (filled with 'katherine Pierce'), 'Description' (filled with 'Handles certificate related issues'), 'Group email' (empty), and 'Parent' (empty). A 'Submit' button is located at the bottom left. A red circle with the number '1' is placed next to the 'Description' field. The form is titled 'Group - New Record' and has a 'Submit' button at the top right.

3. Create Role

The screenshot shows the ServiceNow interface for creating a role. The role name is 'certificate_role' and the application is 'Global'. The description is 'Role for certificate team'. The 'Elevated privilege' checkbox is unchecked. Below the description, there are tabs for 'Contains Roles', 'Applications with Role', 'Modules with Role', and 'Custom Tables'. The 'Contains Roles' tab is active, showing a search bar and a table with no records displayed.

Name: certificate_role Application: Global

Description: Role for certificate team

Elevated privilege: ☐

Update Delete

Contains Roles Applications with Role Modules with Role Custom Tables

Role = certificate_role

Contains

No records to display

4. Create a Table and Assign the operations

The screenshot shows the ServiceNow interface for the 'operations related' table. The table has columns for Column label, Type, Reference, Max length, Default value, and Display. The table contains several entries, including 'Assigned to group', 'Assigned to user', 'Comment', 'Created', 'Created by', 'Issue', 'Name', 'Priority', 'Service request No', 'Sys ID', 'Ticket raised Date', 'Updated', 'Updated by', and 'Updates'.

| Column label | Type | Reference | Max length | Default value | Display |
|--------------------|---------------|-----------|------------|--------------------------------------|---------|
| Assigned to group | Reference | Group | 32 | | false |
| Assigned to user | Reference | User | 32 | | false |
| Comment | String | (empty) | 50 | | false |
| Created | Date/Time | (empty) | 40 | | false |
| Created by | String | (empty) | 40 | | false |
| Issue | Choice | (empty) | 40 | | false |
| Name | String | (empty) | 40 | | false |
| Priority | String | (empty) | 40 | | false |
| Service request No | String | (empty) | 40 | javascript:getNextObjNumberPadded(); | false |
| Sys ID | Sys ID (GUID) | (empty) | 32 | | false |
| Ticket raised Date | Date/Time | (empty) | 40 | | false |
| Updated | Date/Time | (empty) | 40 | | false |
| Updated by | String | (empty) | 40 | | false |
| Updates | Integer | (empty) | 40 | | false |

Delete Update Delete All Records

The screenshot shows the ServiceNow interface for the 'Dictionary Entry - Issue' page. The page has a 'Choice' dropdown menu set to 'Dropdown with -- None --'. Below the dropdown, there are tabs for 'Access Controls (1)', 'Choices (4)', 'Attributes', and 'Labels (1)'. The 'Choices' tab is active, showing a table with columns for Label, Value, Language, Sequence, Inactive, and Updated. The table contains four entries: 'regarding certificates', 'unable to login to platform', '404 error', and 'regarding user expired'.

Choice: Dropdown with -- None --

Create Choice List Delete Column Update

Related Links

Show Table Run Point Scan Advanced view

Access Controls (1) Choices (4) Attributes Labels (1)

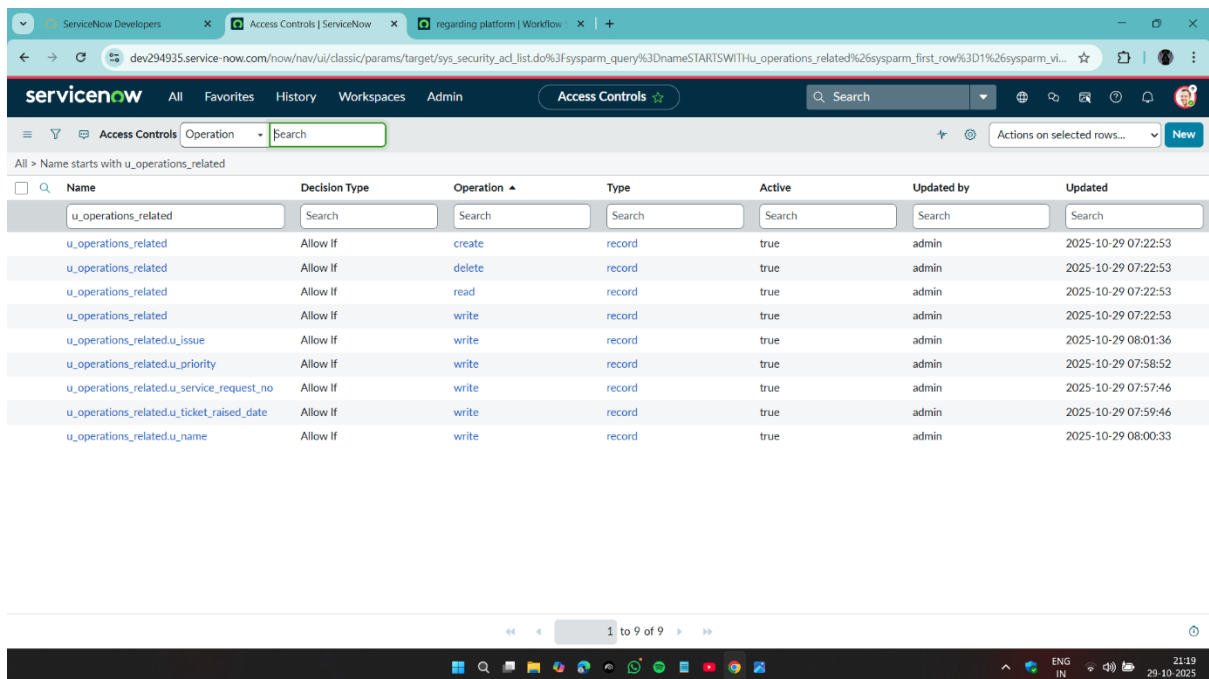
Choices

| Label | Value | Language | Sequence | Inactive | Updated |
|-----------------------------|-------|----------|----------|----------|---------------------|
| regarding certificates | a | en | 1 | false | 2025-10-29 08:14:34 |
| unable to login to platform | b | en | 2 | false | 2025-10-29 08:14:39 |
| 404 error | c | en | 3 | false | 2025-10-29 08:14:42 |
| regarding user expired | d | en | 4 | false | 2025-10-29 08:14:45 |

Insert a new row...

1 to 4 of 4

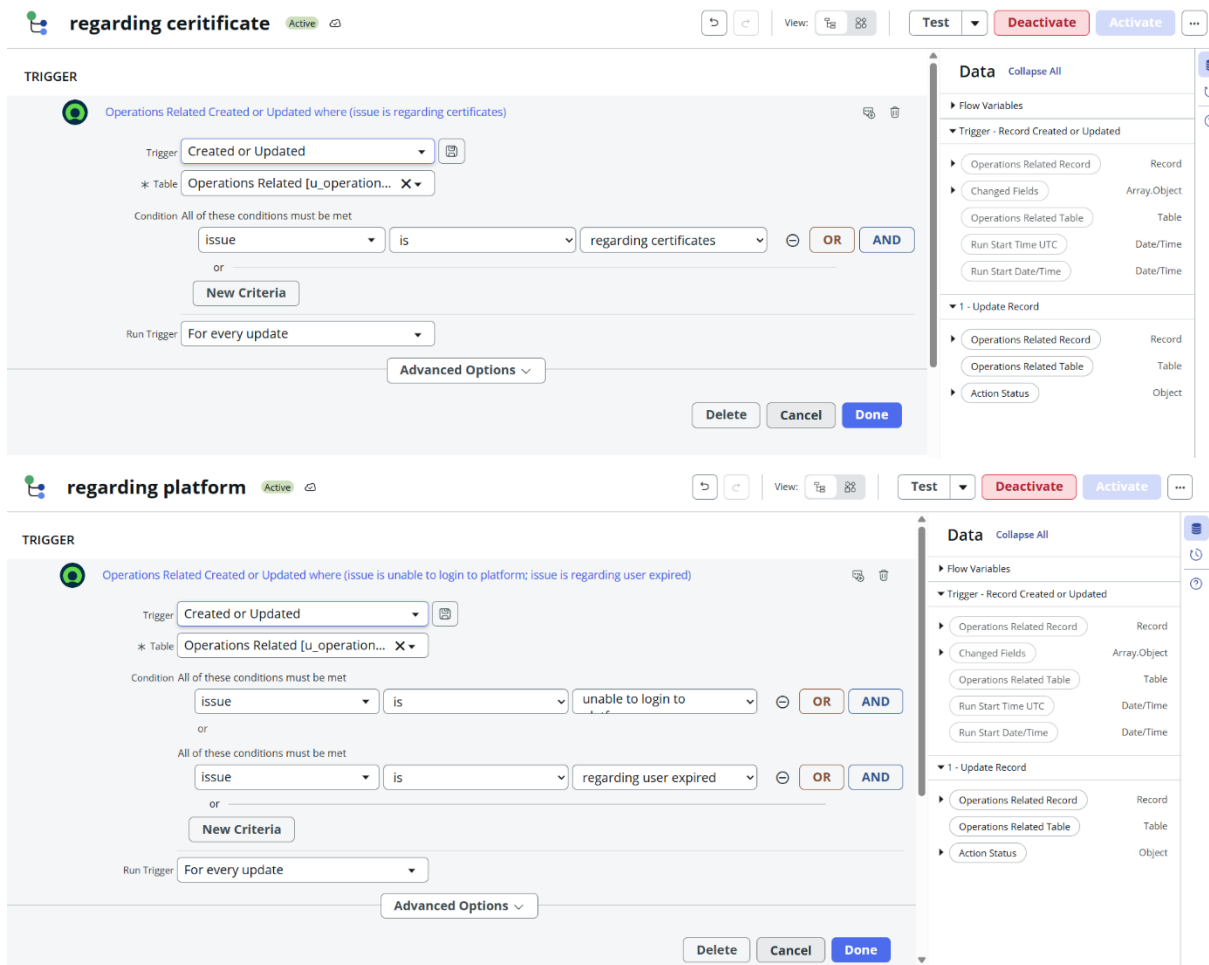
5. Assign Access Control



The screenshot shows the ServiceNow Access Controls interface. The top navigation bar includes 'ServiceNow Developers', 'Access Controls | ServiceNow', and 'regarding platform | Workflow'. The main header has 'Access Controls' and a search bar. Below the header, there's a filter 'All > Name starts with u_operations_related'. The table lists rules with columns: Name, Decision Type, Operation, Type, Active, Updated by, and Updated. The rules are for 'u_operations_related' with various operations like create, delete, read, and write, all set to 'Allow If' and 'record' type, and are active.

| Name | Decision Type | Operation | Type | Active | Updated by | Updated |
|---|---------------|-----------|--------|--------|------------|---------------------|
| u_operations_related | Search | Search | Search | Search | Search | Search |
| u_operations_related | Allow If | create | record | true | admin | 2025-10-29 07:22:53 |
| u_operations_related | Allow If | delete | record | true | admin | 2025-10-29 07:22:53 |
| u_operations_related | Allow If | read | record | true | admin | 2025-10-29 07:22:53 |
| u_operations_related | Allow If | write | record | true | admin | 2025-10-29 07:22:53 |
| u_operations_related.u_issue | Allow If | write | record | true | admin | 2025-10-29 08:01:36 |
| u_operations_related.u_priority | Allow If | write | record | true | admin | 2025-10-29 07:58:52 |
| u_operations_related.u_service_request_no | Allow If | write | record | true | admin | 2025-10-29 07:57:46 |
| u_operations_related.u_ticket_raised_date | Allow If | write | record | true | admin | 2025-10-29 07:59:46 |
| u_operations_related.u_name | Allow If | write | record | true | admin | 2025-10-29 08:00:33 |

6. Create Flow for Certificate and Platform



The screenshot shows two flow designer triggers in ServiceNow. The first trigger is 'regarding certificate' and the second is 'regarding platform'. Both are set to 'Created or Updated' and 'For every update'. The conditions for both are 'issue is regarding certificates' and 'issue is regarding user expired'. The 'Data' panel on the right shows the flow variables for each trigger.

regarding certificate (Active)

TRIGGER

Operations Related Created or Updated where (issue is regarding certificates)

Trigger: Created or Updated

* Table: Operations Related [u_operation... X]

Condition All of these conditions must be met

issue is regarding certificates

Run Trigger: For every update

Advanced Options

Data

- Flow Variables
- Trigger - Record Created or Updated
 - Operations Related Record: Record
 - Changed Fields: Array/Object
 - Operations Related Table: Table
 - Run Start Time UTC: Date/Time
 - Run Start Date/Time: Date/Time
- 1 - Update Record
 - Operations Related Record: Record
 - Operations Related Table: Table
 - Action Status: Object

regarding platform (Active)

TRIGGER

Operations Related Created or Updated where (issue is unable to login to platform; issue is regarding user expired)

Trigger: Created or Updated

* Table: Operations Related [u_operation... X]

Condition All of these conditions must be met

issue is unable to login to platform

or

All of these conditions must be met

issue is regarding user expired

Run Trigger: For every update

Advanced Options

Data

- Flow Variables
- Trigger - Record Created or Updated
 - Operations Related Record: Record
 - Changed Fields: Array/Object
 - Operations Related Table: Table
 - Run Start Time UTC: Date/Time
 - Run Start Date/Time: Date/Time
- 1 - Update Record
 - Operations Related Record: Record
 - Operations Related Table: Table
 - Action Status: Object

7. Test assign

| Name | Assigned to group | Assigned to user | Comment | Issue | Priority | Service request No | Ticket raised Date |
|------|-------------------|------------------|---|------------------------|----------|--------------------|--------------------|
| abc | certificates | (empty) | not working properly | regarding certificates | | | (empty) |
| mini | Platform | (empty) | | regarding user expired | | | (empty) |
| jino | certificates | (empty) | issue with certificate | regarding certificates | | | (empty) |
| jins | certificates | (empty) | certificate chain failing on jins@gmail.com | regarding certificates | High | | (empty) |

12. Conclusion

The Streamlining Ticket Assignment System effectively automates the ticket routing process within ServiceNow. The project showcases how a simple but powerful workflow can replace manual intervention, improve service efficiency, and deliver faster issue resolution.

This project proves that automation through ServiceNow’s native tools like Flow Designer and ACLs can significantly optimise support operations and reduce overhead. It stands as a practical example of how ITSM solutions can modernise enterprise support systems.