STREAMLINING TICKET ASSIGNMENT FOR EFFICIENT SUPPORT OPERATIONS

INTRODUCTION

a) Project overview

Streamlining ticket assignment involves automating and optimizing how support tickets are routed to the right agents or teams. This improves the speed, accuracy, and overall quality of customer support operations.

Overall, streamlined ticket assignment boosts support efficiency, improves service quality, and enhances the customer experience.

b) Purpose

streamlining ticket assignment is to enhance the efficiency, accuracy, and responsiveness of support opertions.To create a more organized, responsive, and high-performing support system.

IDEATION PHASE

Problem Statement

The objective of this initiative is to implement an automated system for ticket routing at ABC Corporation, aimed at improving operational efficiency by accurately assigning support tickets to the appropriate teams. This solution aims to reduce delays in issue resolution, enhance customer satisfaction, and optimize resource utilization within the support department.

Challenges Faced:

- Tickets may be logged under the wrong category or subcategory.
- Lack of well-defined criteria for assigning tickets to agents or teams.
- Dependence on human discretion to assign tickets.
- Some agents may be overloaded while others are underutilized.

objective:

This solution aims to reduce delays in issue resolution, enhance customer satisfaction, and optimize resource utilization within the support department.

REQUIREMENT ANALYSIS

Team Id. :LTVIP2025TMID30946

Project Name: Streamlining ticket assignment for efficient support operations

a) **Solution Requirements:**

FR No.	Functional Requirements	Sub Requirement
FR-1	Users	Create Users: ● A Users may be update, create and manage users profiles with roles.
FR-2	Groups	Create Groups: ● In this we add two groups Certificate group and platform group.
FR-3	Roles	Create Roles: ● In this roles are assigned to users or groups to determine what actions they can perform.
FR-4	Table	Create Tables: ● Table contains rows and columns ● We can create custom table. ● In this system creates 6 default columns.
FR-5	Assign Roles & Users To Groups	Users are added to functional or support groups (e.g., Network Support, HR Helpdesk). Roles define permissions; assigning them to a group gives all its users the ability to perform specific actions.
FR-6	Assign Role To Table	Assigning roles to tables is an important mechanism used to control who can access, view, modify, or manage data stored in specific tables (such as incidents, service

		requests, tasks, etc.).
FR-7	Create ACL	Create ACL: ● Create ACL rules using the write operations.
FR-8	Flow	Create Flow: ● Create a flow to automate user/group ● In this we add certificate group and platform group. ● In this we add regarding certificate.

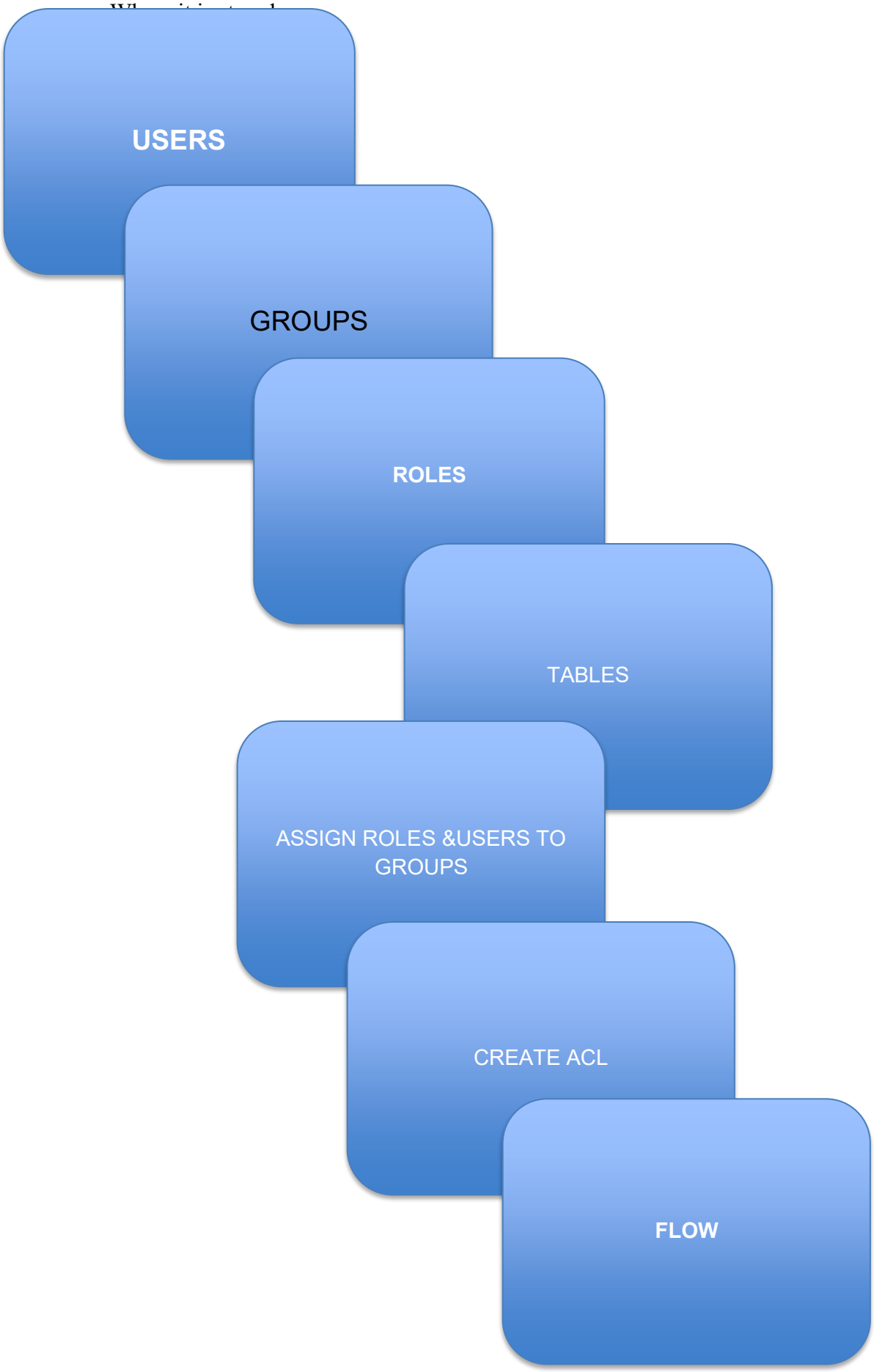
Non-functional Requirements:

FR No.	**Non-Functional Requirements**	**Description**
NFR-1	Usability	Easy-to-navigate interfaces for agents and admins.
NFR-2	Security	Ensure role-based access control (e.g., only certain users can assign/reassign tickets
NFR-3	Reliability	Ensure consistent and correct ticket assignments without unexpected failures.
NFR-4	Performance	The system should assign or suggest ticket assignments in real-time or near-real-time
NFR-5	Availability	The system should be available 99.9% of the time (or higher, depending on SLA).
NFR-6	Scalability	They Should support increasing numbers of users, agents, and tickets without performance degradation

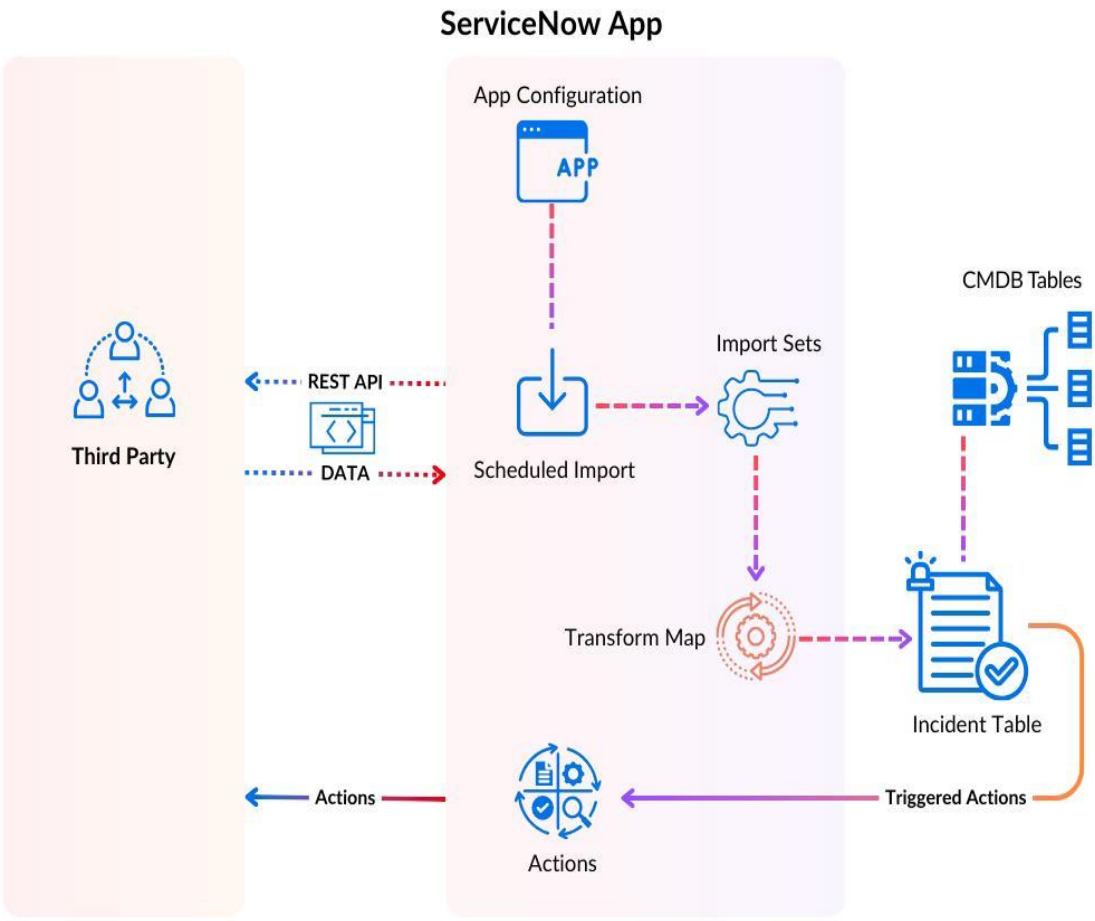
Data Flow Diagram:

A data Flow Diagram is a graphical representation used to show how data moves Through a system. It illustrates :

- Where data comes from
- How it is proceed


USERS
GROUPS
ROLES
TABLES
ASSIGN ROLES &USERS TO GROUPS
CREATE ACL
FLOW

Technology stack



Service Now uses a multi-instance architecture, meaning each customer has a separate application instance and database. This ensures:

- Data isolation and security
- 2
- High availability and performance

PROJECT DESIGN

Proposed Solution

S.No	Parameter	Description
1.	Problem Statement	In many support organizations, the process of assigning tickets to the appropriate support agents is often manual, inefficient, and inconsistent.
2.	Idea	The core idea is to develop and implement an intelligent, automated ticket assignment system that enhances the speed, accuracy, and fairness of assigning support tickets
3.	Novelty	The novelty in this approach lies in combining AI-driven decision-making, real-time agent profiling, and predictive analytics to automate and optimize ticket assignment beyond traditional static rule-based methods.
4.	Social Impact	Faster and more accurate ticket resolution leads to improved customer experiences**.**
5	Business Model	Deliver faster, smarter, and more accurate ticket assignment using AI and automation.
6.	Scalability of the solution	The proposed solution for streamlining ticket assignment is highly scalable, meaning it can effectively grow and adapt to increasing operational demands without compromising performance or efficiency.

Streamlining ticket assignment for efficient support operations

MILESTONE 1: Users

PURPOSE:

Assigning specific roles helps define who can create, assign, view, or resolve tickets

USES:

Users can be tagged with specific skills or expertise.Users can be grouped by departments (IT, HR, Finance).

Activity 1: Create Users

STEPS:

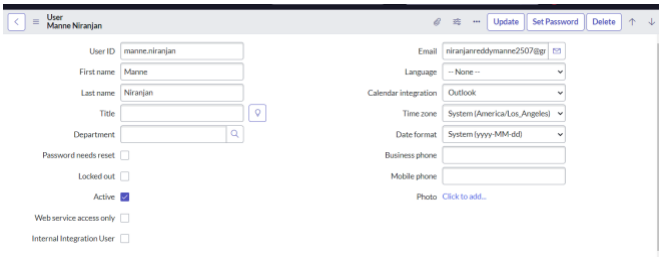
1)Open service now.

2)Click on All >> search for users

3)Select Users under system security

4)Click on new

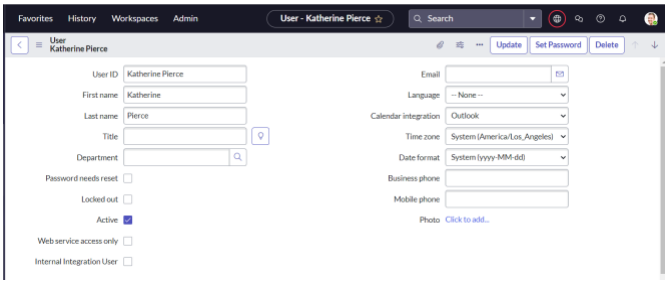
5)Fill the following details to create a new user.



6) Click on Submit.

Create one more user :

7)Create another user with the following details:



8) Click on Submit

MILESTONE 2:Groups

Activity 1: Create Groups

PURPOSE:

Groups can represent departments like IT Support, HR, Billing, or Technical Support.Groups can be formed based on expertise (e.g., Network Team, Software Team).

USES:

Groups allow you to assign tickets directly to departments (e.g., IT, HR, Billing), ensuring quicker resolution by the right team.

Activity 1: Create Groups

STEPS:

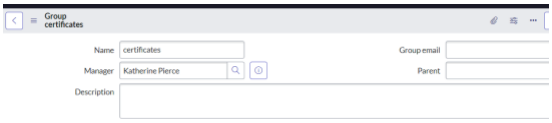
1) Open service now.

2)Click on All >> search for groups

3)Select groups under system Security

4)Click on new

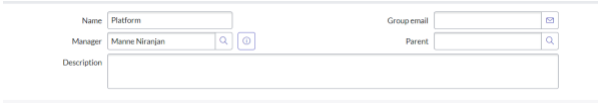
5)Fill the following details to create a new group



6)Click on submit

Create one more group:

7)Create another group with the following details



8) Click on Submit

MILESTONE 3:Roles

PURPOSE:

Roles help automatically assign tickets to the appropriate agent or group based on predefined conditions (e.g., issue type, priority, or keywords).

USES:

Automates decision-making, such as who can close a ticket or change priority.

Activity 1: Create Roles

STEPS:

1)Open service now.

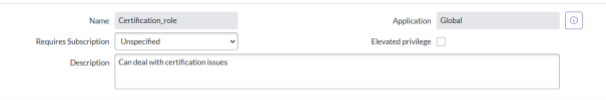
2)Click on All >> search for roles

3) Select roles under system security

4) Click on new

5)Fill the following details to create a

new role

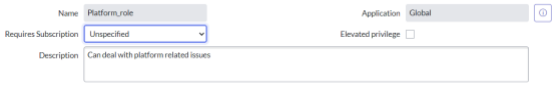


6) Click on submit

Create one more role:

7) Create another role with the

following details



8) Click on Submit

MILESTONE 4:Table

PURPOSE:

Creating tables in a ticketing system or support operations tool is crucial for organizing, managing, and displaying structured data clearly.

USES :

Show group names, roles, assigned tickets, and performance metrics for effective team management.

Activity 1 : Create Table

STEPS:

1)Open service now.

2)Click on All >> search for tables

3)Select tables under system definition

4)Click on new

5)Fill the following details to create a

New table

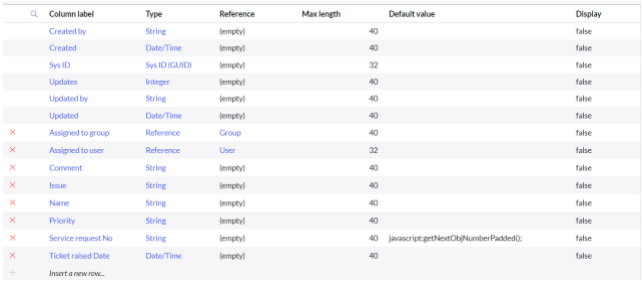
Label : Operations related

Check the boxes Create module &Create

mobile module

6) Under new menu name :Operation Related

7)Under table columns give the Columns



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

8)Click on submit

Create choices for the issue filed by

Using form design

Choices are

unable to login to platform

404 error

regarding certificates

regarding user expired

MILESTONE 5: Assign Roles & Users to Groups

PURPOSE:

Assigning roles and users to certificate groups helps manage access, skills, and responsibilities in a structured and secure way. This is particularly useful in environments where certifications or verified skills are critical to resolving specific types of tickets (e.g., compliance, technical issues, or industry standards).

USES:

Users in specific certificate groups can be given exclusive access to certain ticket types or customer information.

Activity 1: Assign Roles & Users to Certificate Group

STEPS:

1) Open service now.

2)Click on All >> search for tables

3)elect tables under system definitions

4)Select the certificates group

5)Under group members

6)Click on edit

7)Select Katherine Pierce and save

8)Click on roles

9)Select Certification_role and save

Activity 2: Assign Roles & Users to Platform Group

STEPS:

1)Open service now.

2)Click on All >> search for tables

3) Select tables under system definition

4)Select the platform group

5)Under group members

6)Click on edit

7)Select Manne Niranjan and save

8)Click on roles

MILESTONE 6: Assign Role to Table

PURPOSE:

Ensure that only authorized roles can view, modify, or assign tickets.Separate ticket data logically based on roles or teams.

USES:

Automatically assign new tickets to users in roles defined in the table (e.g., assign all hardware tickets to users with “Hardware Technician” role).

Activity 1: Assign Role to Table

STEPS:

1) Open service now.

2)Click on All >> search for tables

3)Select operations related table

4)Click on the Application Access

5)Click on u_operations_related Operation

6)lick on the profile on top right side

7)Click on elevate role

8)Click on security admin and click on Update

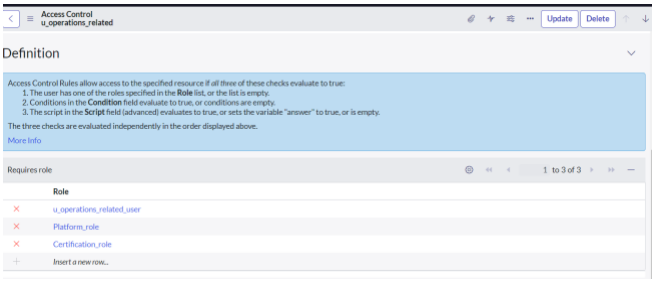
9)Under Requires role

10)Double click on insert a new row

11)Give platform role

12) And add certificate role

13)Click on update



14)Click on u_operations_related write Operations

15)Under Requires role

16)Double click on insert a new row

17)Give platform role

18)And add certificate role.

MILESTONE 7: Create ACL

PURPOSE:

Restrict access to sensitive or irrelevant ticket data.Control who can perform actions like update, resolve, escalate, or delete tickets.

USES:

Define which users or roles can read, write, create, or delete ticket records in specific tables.

Activity 1: Create ACL

STEPS :

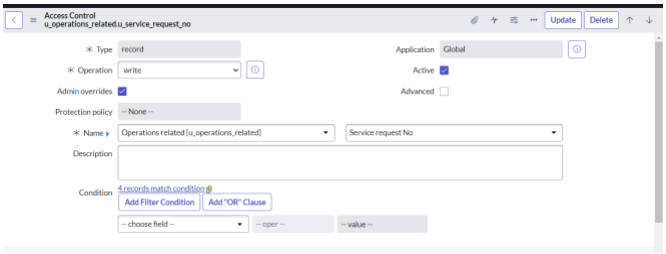
1)Open service now.

2)Click on All >> search for ACL

3)Select Access Control(ACL) under System Security

4)Click on new

5) Fill the following details to create a new ACL



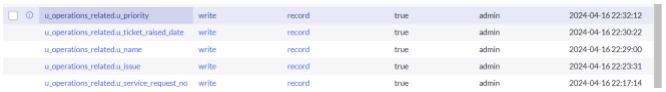
6)Scroll down under requires role

7)Double click on insert a new row

8)Give admin role

9)Click on submit

10)Similarly create 4 acl for the following details



MILESTONE 8: Flow

PURPOSE:

Creating a flow (often in tools like ServiceNow Flow Designer, Jira Automation, or other ITSM platforms) is essential in streamlining ticket assignment for efficient support operations. A flow defines a sequence of automated actions triggered by specific conditions — making the ticketing process faster, more reliable, and consistent.

USES:

Start countdown timers, escalate overdue tickets, or notify leads when SLA breaches are near.

Activity 1: Create a Flow to Assign operations ticket to certificate group

STEPS:

1) Open service now.

2)Click on All >> search for Flow Designer

3) Click on Flow Designer under Process Automation

4)After opening Flow Designer Click on new and select flow

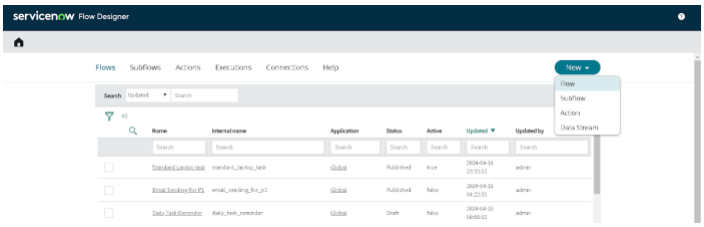
5)Under Flow properties Give Flow name as “Regarding Certificate”

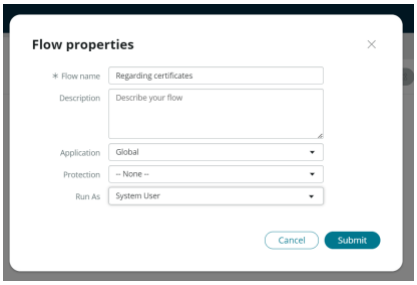
6)Application should be Global.

7)Select Run user as “ System user ” from that

choice

8) Click on Submit.





1)Click on Add a trigger

2)Select the trigger in that Search for “create or update a record” select that

3)Give the table name as

Operations Related.

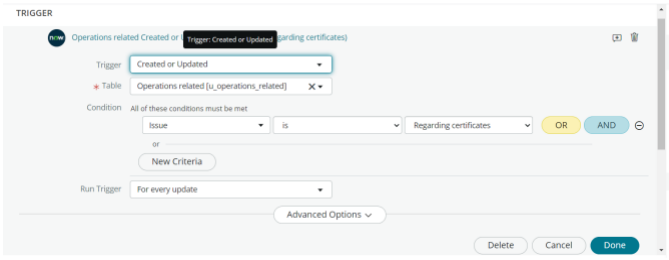
4)Give the Condition as

Field : issue

Operator : is

Value : Regrading Certificates

5)After that click on Done



6)Now under Actions.

7)Click on Add an action.

8)Select action in that search for

“Update record”

9)In Record field drag the fields

from the fields left side

10)Table will be auto assigned After that

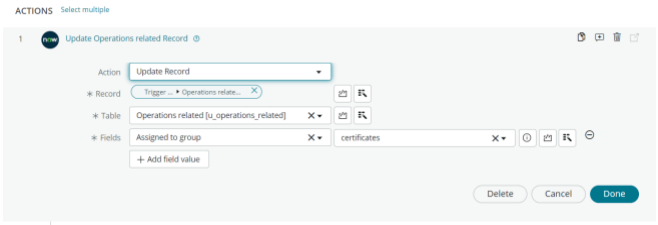
11)Give the field as “ Assigned group

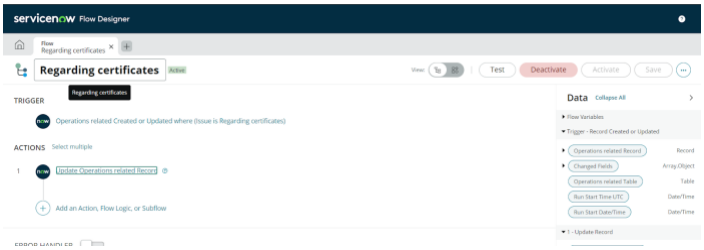
12)Give value as “ Certificates ”

13)Click on Done.

14)Click on Save to save the Flow

15)Click on Activate.





Activity 2: Create a Flow to Assign

Operations tickets to platform group

STEPS:

1) Open service now.

2)Click on All >> search for Flow Designer

3) Click on Flow Designer under process

Automation

4)After opening Flow Designer Click on

new and select flow

5)Under Flow properties Give

Flow name as “Regarding Certificate”

6)Application should be Global

7)Select Run user as " System user from

that choice.

8) Click on Submit.

1)Click on Add a trigger

2)Select the trigger in that Search for "create or update a record" and select that.

3)Give the table name as Operations related

4)Give the Condition as

Field : issue

Operator : is

Value : Unable to login to platform

5)Click on New Criteria

Field : issue

Operator : is

Value : 404 Error

6)Click on New Criteria

Field : issue

Operator : is

Value : Regrading

7)After that click on Done.

8)Now under Actions.

9)Click on Add an action.

10)Select action in that search for " Update Record ".

11)In Record field drag the fields from the data navigation from left side

12)Table will be auto assigned after that

13)Give the field as " Assigned to group ".

14)Give value as " Platform ".

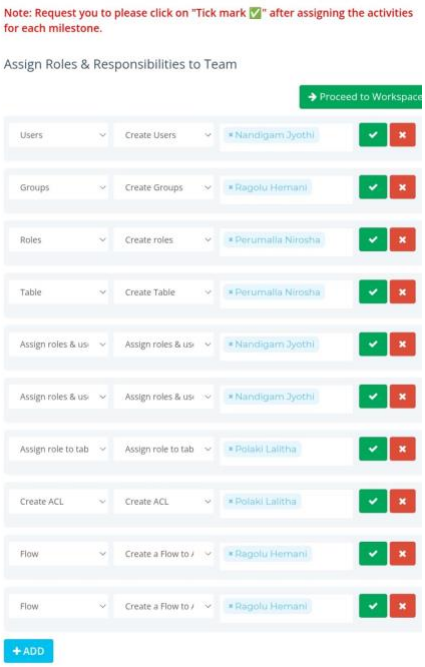
15)Click on Done.

16)Click on Save to save the Flow.

17)Click on Activate.

PROJECT PLANNING & SCHEDULING

a) Project Planning



Functional Requirements	**User**	**No.of Activity**	**Team members**
Users	Key users include end users, support agents, group managers, and admins. User stories focus on submitting tickets, auto-assignment	1	N.Jyothi
Groups	Support groups are created to handle specific ticket categories. This ensures tickets are automatically routed	1	R.Hemani
Roles	Roles control access and actions in ServiceNow, allowing users to perform tasks based on their responsibilities	1	P.Nirosha
Tables	Tables store ticket and user data, enabling automated assignment and efficient	1	P.Nirosha

	tracking		
Assign Roles and users to Groups	Assigning roles and users to groups ensures proper access and responsibility, enabling efficient ticket	2	N.Jyothi
Assign Roles to Tables	Assigning roles to tables controls user access, ensuring secure and efficient handling of ticket data in ServiceNow.	1	P.Lalitha
Create ACL	Creating ACLs ensures that only authorized users can view or modify specific ticket data	1	P.Lalitha
Flow	The flow ensures tickets are automatically assigned, resolved, and closed	2	R.Hemani

FUNCTIONAL & PERFORMANCE TESTING

a) Performance Testing:

MILESTONE 8: Flow

Activity 1: Create a Flow to Assign operations ticket to group

STEPS:

1) Open service now.

2)Click on All >> search for Flow Designer

3) Click on Flow Designer under Process Automation

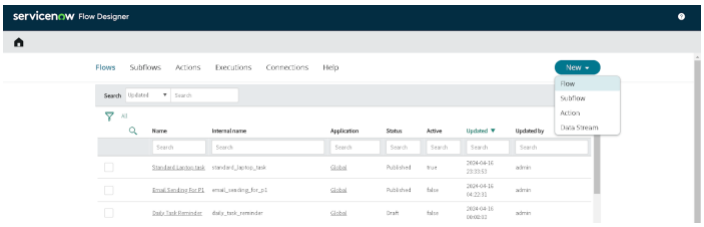
4)After opening Flow Designer Click on new and select flow

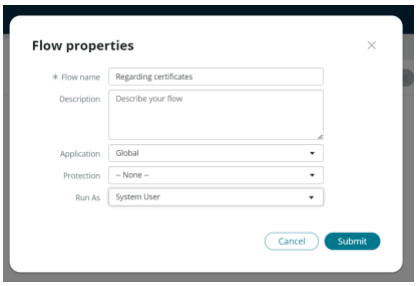
5)Under Flow properties Give Flow name as “Regarding Certificate”

6)Application should be Global.

7)Select Run user as “ System user ” from that choice

8) Click on Submit.





1)Click on Add a trigger

2)Select the trigger in that Search for “create or update a record” select that

3)Give the table name as

Operations Related.

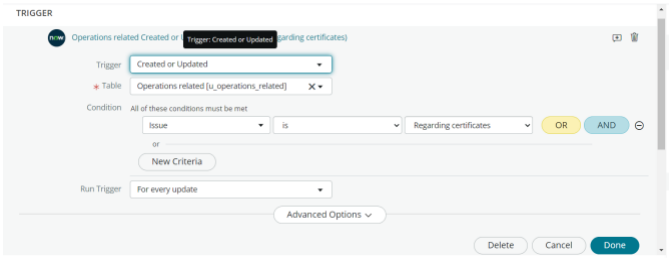
4)Give the Condition as

Field : issue

Operator : is

Value : Regrading Certificates

5)After that click on Done



6)Now under Actions.

7)Click on Add an action.

8)Select action in that search for

“Update record”

9)In Record field drag the fields

from the fields left side

10)Table will be auto assigned After that

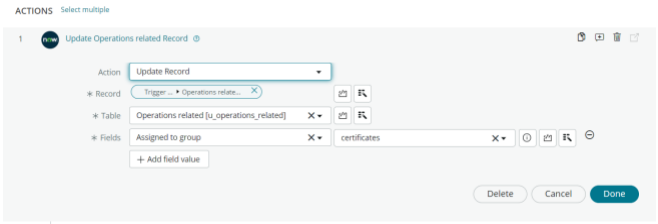
11)Give the field as “ Assigned group

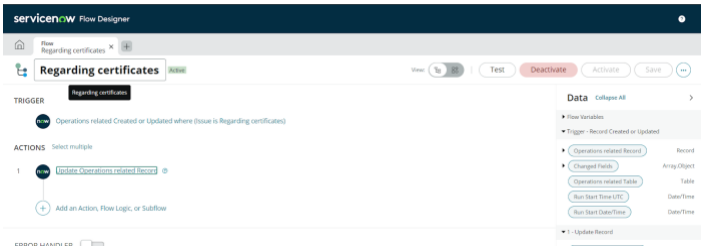
12)Give value as “ Certificates ”

13)Click on Done.

14)Click on Save to save the Flow

15)Click on Activate.





Activity 2: Create a Flow to Assign operations ticket to group

STEPS:

1) Open service now.

2)Click on All >> search for Flow Designer

3) Click on Flow Designer under process Automation

4)After opening Flow Designer Click on new and select flow

5)Under Flow properties Give Flow name as “Regarding Certificate”

6)Application should be Global

7)Select Run user as “ System user from that choice.

8) Click on Submit.

1)Click on Add a trigger

2)Select the trigger in that Search for “create or update a record” and select that.

3)Give the table name as Operations related

4)Give the Condition as

Field : issue

Operator : is

Value : Unable to login to platform

5)Click on New Criteria

Field : issue

Operator : is

Value : 404 Error

6)Click on New Criteria

Field : issue

Operator : is

Value : Regrading

7)After that click on Done.

8)Now under Actions.

9)Click on Add an action.

10)Select action in that search for " Update Record ".

11)In Record field drag the fields from the data navigation from left side

12)Table will be auto assigned after that

13)Give the field as " Assigned to group ".

14)Give value as " Platform ".

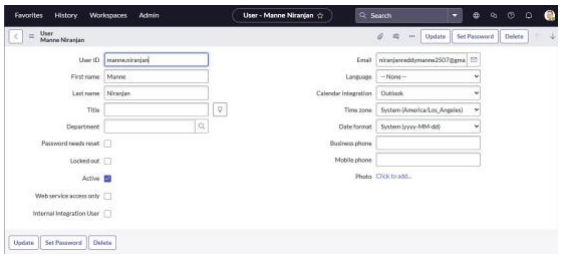
15)Click on Done.

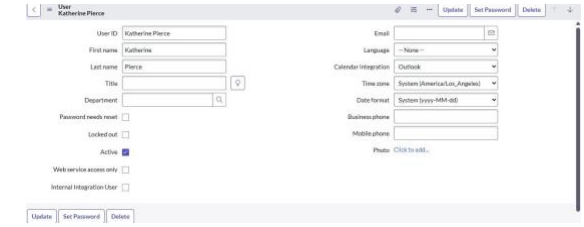
16)Click on Save to save the Flow.

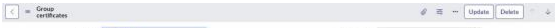
17)Click on Activate.

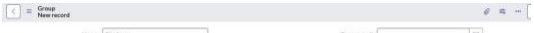
RESULTS

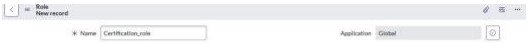
a) Output Screenshot:

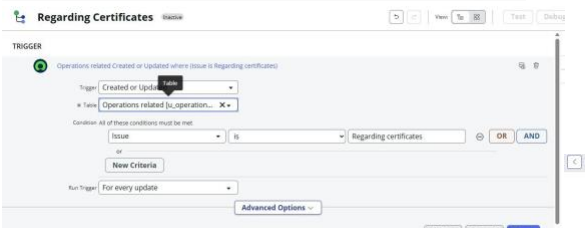



User
Katherine Pierce
Update
Set Password
Delete
User ID
Katherine Pierce
First name
Katherine
Last name
Pierce
Title
Department
Password needs reset
Locked out
Active
Web service access only
Internal Integration User
Email
Language
-- None --
Calendar integration
Outlook
Time zone
System (America/Los_Angeles)
Date format
System (yyyy-MM-dd)
Business phone
Mobile phone
Photo
Click to add...
Update
Set Password
Delete


Group
certificates
Update
Delete
Name
certificates
Manager
Katherine Pierce
Description
Group email
Parent


Group
New record
Name
Platform
Manager
Manne Niranjan
Description
Group email
Parent


Role
New record
Name
Certification_role
Application
Global
Elevated privilege
Description
Can deal with certification issues


Regarding Certificates
Inactive
TRIGGER
Operations related Created or Updated where (issue is Regarding certificates)
Trigger
Created or Updated
Table
Operations related [u_operation...
Condition
All of these conditions must be met
issue
is
Regarding certificates
OR
AND
or
New Criteria
Run Trigger
For every update
Advanced Options
Delete
Cancel
Done


Role
New record
Name
Platform_role
Application
Global
Elevated privilege
Description
Can deal with related issues

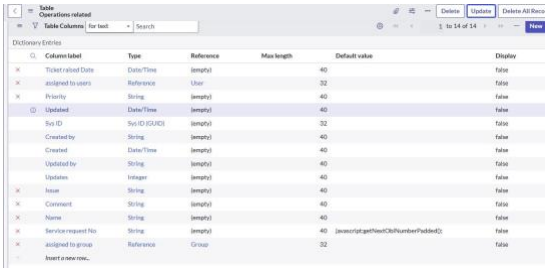
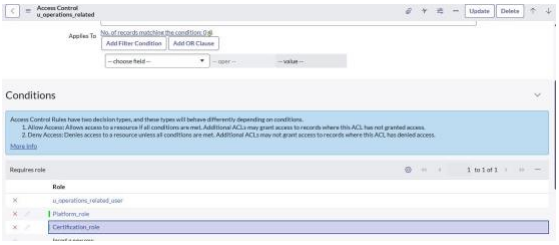
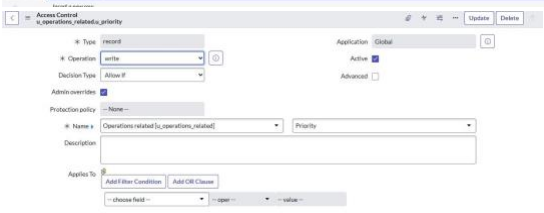
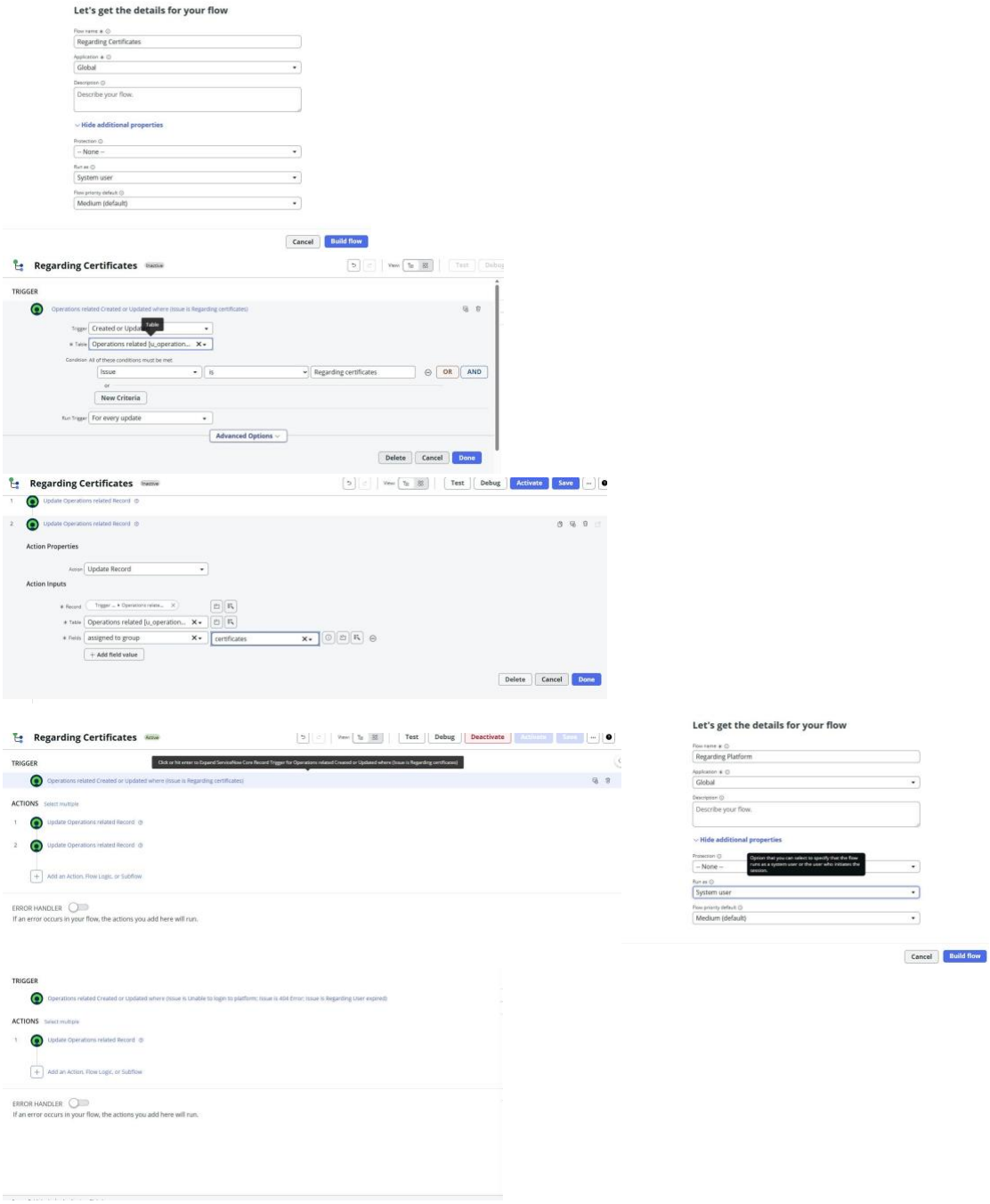


Table
Operations related
Delete
Update
Delete All Reco
Table Columns
for text
Search
1 to 14 of 14
New
Dictionary Entries
Column label
Type
Reference
Max length
Default value
Display
Ticket raised Date
Date/Time
(empty)
40
false
assigned to users
Reference
User
32
false
Priority
String
(empty)
40
false
Updated
Date/Time
(empty)
40
false
Sys ID
Sys ID (GUID)
(empty)
32
false
Created by
String
(empty)
40
false
Created
Date/Time
(empty)
40
false
Updated by
String
(empty)
40
false
Updates
Integer
(empty)
40
false
Issue
String
(empty)
40
false
Comment
String
(empty)
40
false
Name
String
(empty)
40
false
Service request No
String
(empty)
40
javascript:getNextObjNumberPadded();
false
assigned to group
Reference
Group
32
false
Insert a new row...


Access Control
u_operations_related
Update
Delete
Applies To
No. of records matching the condition: 0
Add Filter Condition
Add OR Clause
-- choose field --
-- oper --
-- value --
Conditions
Access Control Rules have two decision types, and these types will behave differently depending on conditions.
1. Allow Access: Allows access to a resource if all conditions are met. Additional ACLs may grant access to records where this ACL has not granted access.
2. Deny Access: Denies access to a resource unless all conditions are met. Additional ACLs may not grant access to records where this ACL has denied access.
More info
Requires role
1 to 1 of 1
Role
u_operations_related_user
Platform_role
Certification_role


Access Control
u_operations_related.u_priority
Update
Delete
Type
record
Application
Global
Operation
write
Active
Decision Type
Allow If
Advanced
Admin overrides
Protection policy
-- None --
Name
Operations related [u_operations_related]
Priority
Description
Applies To
Add Filter Condition
Add OR Clause
-- choose field --
-- oper --
-- value --



ADVANTAGES & DISADVANTAGES

Advantages:

Streamlining ticket assignment in support operations offers numerous advantages that improve both operational efficiency and customer satisfaction.

1. **Faster Response Times**

Automated ticket assignment ensures that issues are directed to the right person or team immediately.

Reduces delays caused by manual triaging.

2. **Improved Customer Satisfaction**

Quicker resolutions and fewer hand-offs mean customers get timely support.Enhances overall customer experience and loyalty.

3. **Better Resource Utilization**

Assigns tickets based on agent availability, skill level, or workload.Ensures even workload distribution and prevents agent burnout.

Disadvantages

streamlining ticket assignment offers many benefits, there are also some potential disadvantages or challenges to consider:

1. Over-Reliance on Automation

Automated systems may misclassify or misroute tickets if rules or AI models are not properly trained or maintained.Lack of human judgment can lead to incorrect prioritization.

2. **Reduced Flexibility**

Rigid assignment rules may prevent dynamic handling of complex or unusual cases.Agents may not have the autonomy to reassign or escalate easily.

3.High Upfront Costs

Implementing advanced ticketing systems (e.g., AI-driven or rule-based routing) may require significant investment in software, training, and infrastructure.

CONCLUSION

The implementation of the automated ticket routing system at ABC Corporation has been a significant success. By leveraging the capabilities of ServiceNow, we have streamlined the process of assigning support tickets to the appropriate teams, addressing the challenges of manual routing, and ensuring timely resolution of issues.Streamlining ticket assignment is a crucial step toward enhancing the overall efficiency of support operations. By automating and optimizing how support tickets are categorized, prioritized, and routed, organizations can ensure faster response times, improved accuracy, and higher customer satisfaction. It reduces manual workload, minimizes human errors, and allows support teams to focus more on resolution than on task distribution. Ultimately, a well-designed ticket assignment system contributes to smoother workflows, better resource utilization, and a more agile and scalable support infrastructure.