K.S.K COLLEGE OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

STREAMLINING TICKET ASSIGNMENT FOR EFFICIENT SUPPORT OPERATIONS

Team ID : NM2025TMID06666

Team Size : 4

Team Leader : ABINAYA S [821022104002]

Team member : DEVASENA N [821022104011]

Team member : LEENA M [821022104026]

Team member : SARMITHA M [821022104044]

PROBLEM STATEMENT:

In many organizations, support tickets are manually assigned to agents, leading to uneven workload distribution, delayed resolutions, and customer dissatisfaction. There is a need for an automated and efficient system to manage and assign tickets intelligently. In many customer support operations, ticket assignment is often manual, inefficient, and prone to delays or errors. Support agents may be overloaded or underutilized due to uneven ticket distribution, leading to slower response times, reduced customer satisfaction, and higher operational costs. The lack of an intelligent, automated system for assigning tickets based on priority, category, and agent expertise results in poor resource utilization and inconsistent service quality.

OBJECTIVE:

To develop a smart ticket management system that automates and optimizes ticket assignment to support agents, reducing response time and improving customer satisfaction.

1. **To automate ticket assignment** using predefined rules or AI-based algorithms to reduce manual workload and human error.
2. **To ensure quick and accurate routing** of support tickets to the most suitable agents or departments based on skill set, availability, and priority.
3. **To minimize response and resolution times** by optimizing the ticket distribution process.
4. **To enhance customer satisfaction** through faster issue handling and consistent support quality.
5. **To improve team productivity and workload balance** by evenly distributing tickets among agents.
6. **To provide data-driven insights** on ticket flow, agent performance, and operational efficiency through analytics and reporting tools.

7. **To integrate ticketing tools** (like Zendesk, Freshdesk, or ServiceNow) with automated assignment workflows for seamless operations.
8. **To establish measurable KPIs** (e.g., first response time, resolution rate, and SLA compliance) for continuous process improvement.

METHODOLOGY:

1. **Problem Identification:**
   The existing ticket assignment process was analyzed to identify issues such as manual delays, uneven workload distribution, and slow response times.
2. **Data Collection:**
   Historical support data, including ticket categories, response times, agent performance, and customer feedback, was gathered from the existing support system.
3. **Process Analysis:**
   The workflow of current ticket management was mapped to understand bottlenecks and inefficiencies in ticket routing and resolution.
4. **Automation Design:**
   Automated rules and algorithms were developed to assign tickets based on priority, issue type, agent skill, and workload balance. Machine learning or rule-based logic was applied where suitable.
5. **System Integration:**
   The automation module was integrated with the existing helpdesk or CRM software (e.g., Zendesk, Freshdesk, or ServiceNow) to enable seamless operation.
6. **Testing and Validation:**
   The new ticket assignment process was tested with real-time data to measure accuracy, speed, and workload distribution. Adjustments were made based on initial results.
7. **Performance Evaluation:**
   Key performance indicators (KPIs) such as first response time,

resolution time, SLA compliance, and customer satisfaction were monitored before and after implementation.

8. **Continuous Improvement:**
   Feedback from support agents and customers was used to refine the system and enhance efficiency over time.

Enhance Operational Efficiency:

Minimize manual intervention and reduce the average ticket resolution

time by ensuring balanced workload distribution among agents.

1.Scalability and Adaptability:
Design the system to easily scale with increasing ticket volumes and adapt to changing business needs or team structures.

2.Improve Customer Experience:
Ensure timely responses and faster issue resolution, thereby increasing customer satisfaction and retention rates.

3.Data-Driven Insights:
Collect and analyze ticket assignment and resolution data to identify performance trends, workload bottlenecks, and opportunities for process improvement.

SKILLS:

- ServiceNow Catalog Item Creation
- UI Policies & UI Actions
- Update Set Management
- Testing & Deployment

- Team Collaboration

TASK INITIATION:

The project **"Streamlining Ticket Assignment for Efficient Support Operations"** was initiated to enhance support efficiency by automating the ticket assignment process. The team identified key problems in manual ticket handling such as delays and uneven workload.

Technologies and tools were selected, and responsibilities were divided among members. A clear plan was created to guide the design, development, and testing phases, forming a strong base for successful project completion.

FEATURES:

Automated Ticket Assignment: Automatically routes tickets to the appropriate support team or agent based on category, priority, and impact. **Dynamic Workflow:** Uses ServiceNow workflows to handle ticket creation, assignment, and resolution efficiently.

Role-Based Access Control: Ensures data security and access control through user roles and group permissions.

Real-Time Notifications: Sends instant updates to agents and users about ticket status changes and assignments.

SLA Monitoring: Tracks service level agreements to ensure timely responses and escalations when needed.

Reporting and Analytics: Provides insights into ticket volume, team performance, and resolution trends.

Improved User Experience: Offers a streamlined and transparent support process for both users and technicians.

Modules Implemented :

The project “Streamlining Ticket Assignment for Efficient Support Operations” was developed on the ServiceNow platform and implemented through a structured modular approach. Each module played a vital role in building an automated, role-based ticket assignment system. The following modules were created and configured during the project development:

1. User Creation:

● Different users were created in ServiceNow to represent employees, support agents, and administrators, enabling role-based access and workflow execution.

2. Group Creation:

● Support groups were configured to organize users according to their departments and areas of responsibility (e.g., IT Support, Network Team,
Hardware Support).

3. Role Management:

● Custom roles were defined to manage permissions and control access to specific ServiceNow features, ensuring security and accountability.

4. Table Creation:

● Custom tables were designed to store and manage ticket data efficiently, allowing automation rules and workflows to process incidents dynamically.

5. Role and User Assignment:

● Roles were assigned to appropriate groups and users to control access rights and determine who can view, modify, or resolve tickets.

6. Table Role Assignment:

● Permissions were granted to ensure that only authorized groups could interact with the ticket table, maintaining data integrity and security.

7. Access Control List (ACL):

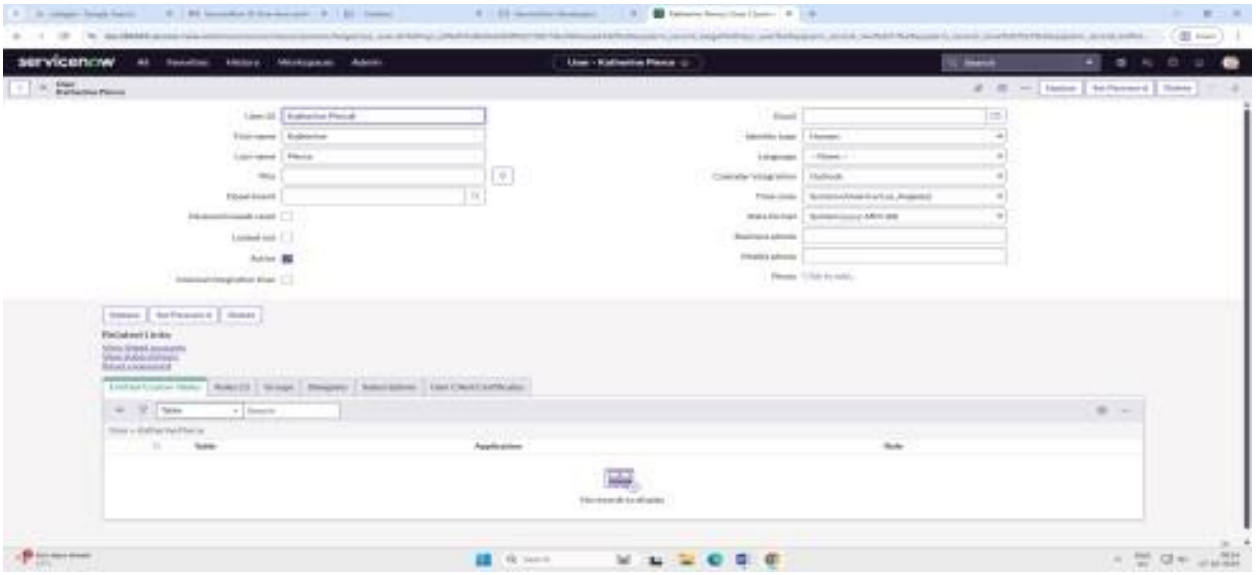
● ACL rules were created to manage and restrict user access to data based on roles and responsibilities.

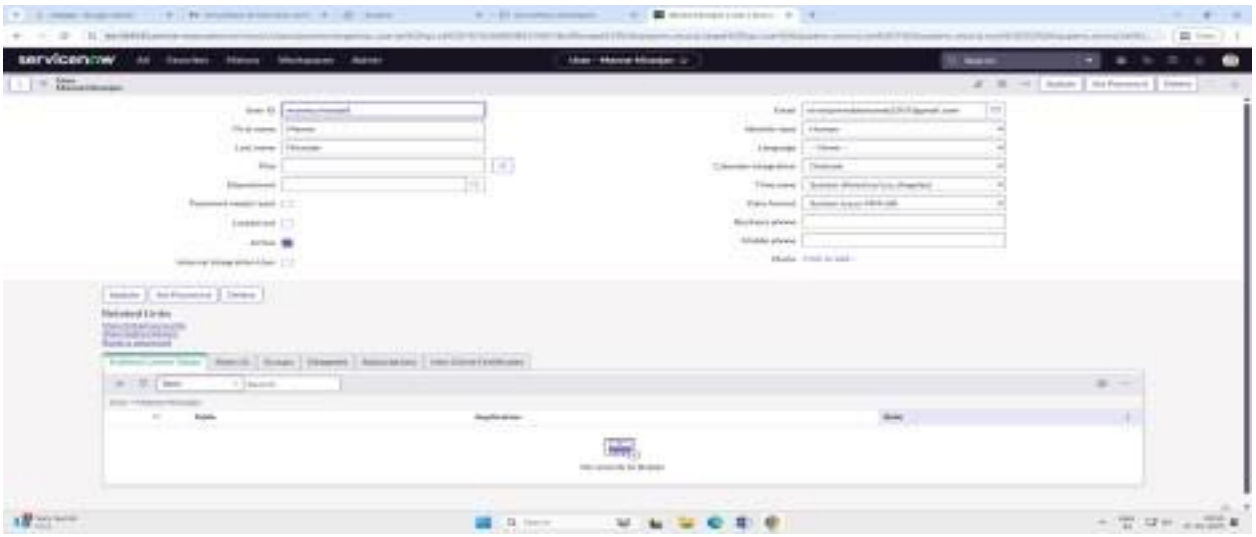
8. Flow & Outputs:

● The final flow automated the entire ticket assignment process. When a new ticket is created, it is automatically analyzed and routed to the appropriate support group or agent. Notifications and SLA monitoring ensure timely resolution and complete visibility.

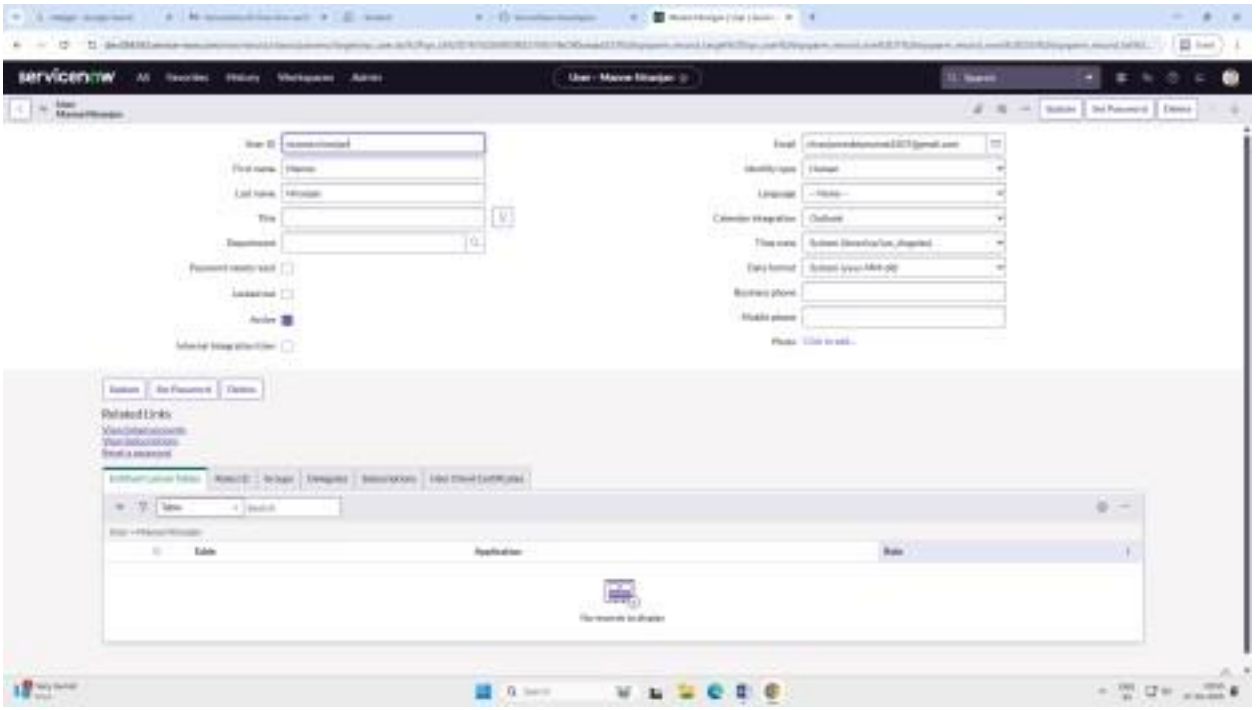
IMPLEMENTATION STEPS:

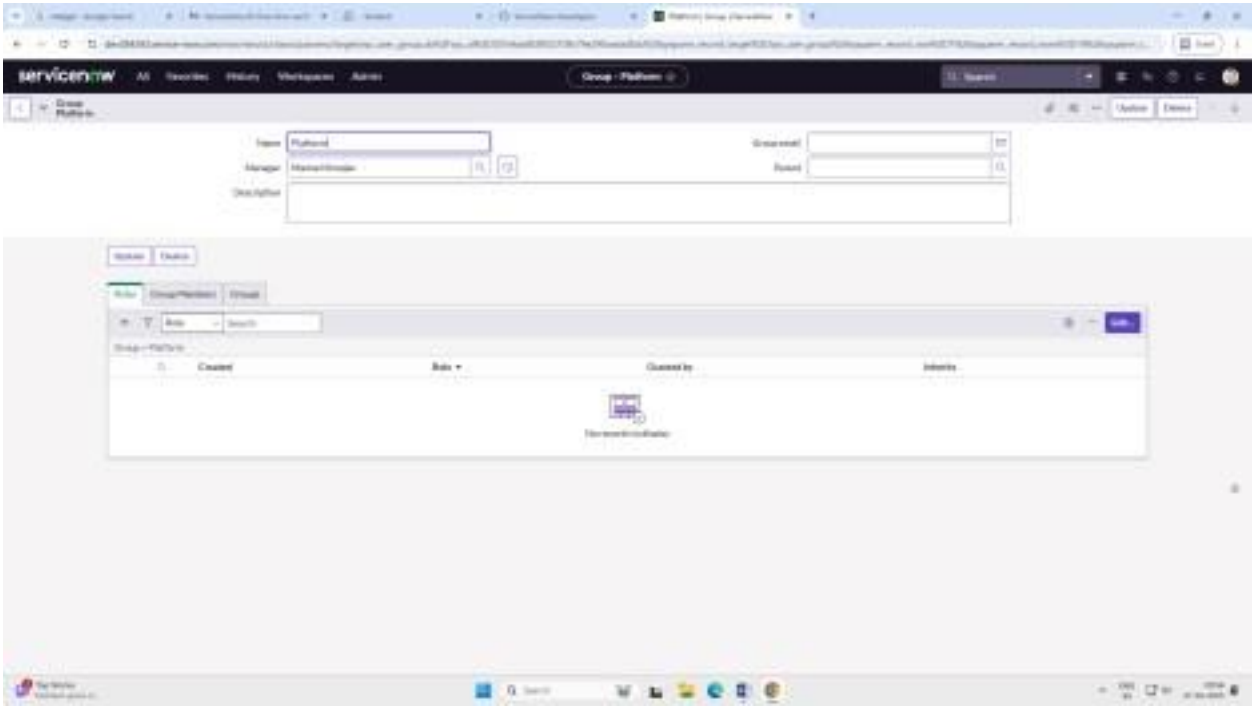
STEP 1: CREATE USERS



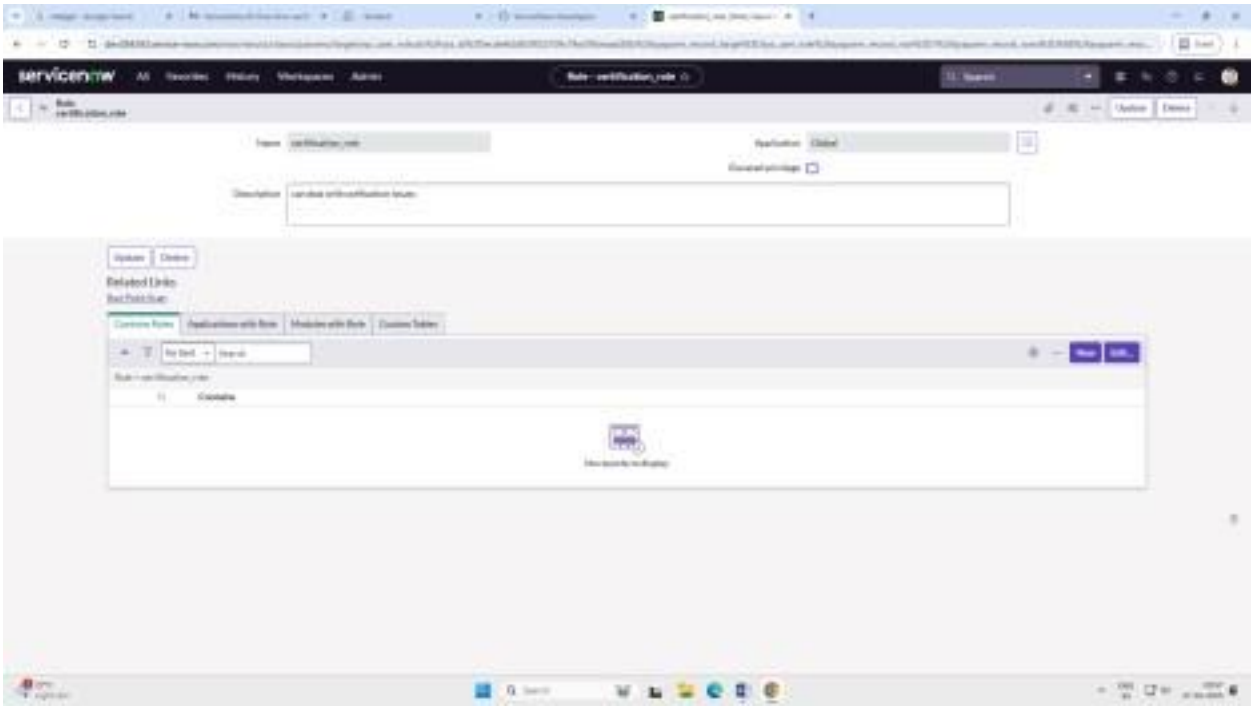


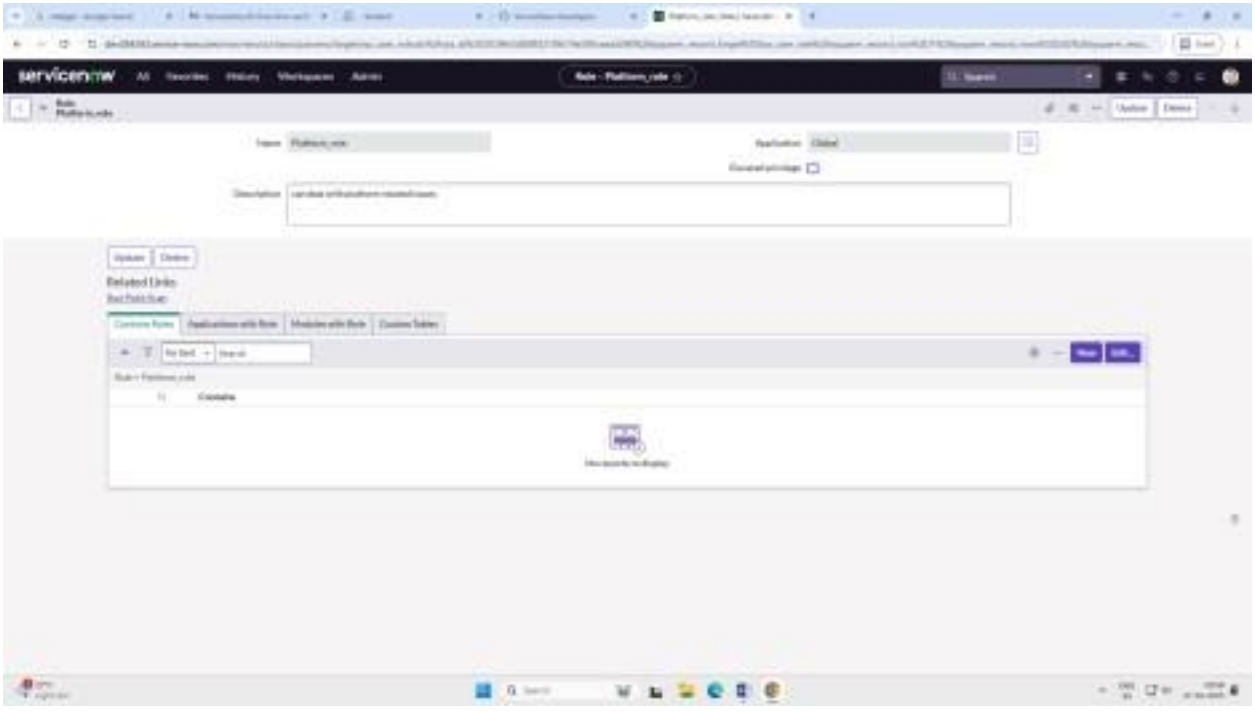
STEP 2: CREATE GROUPS



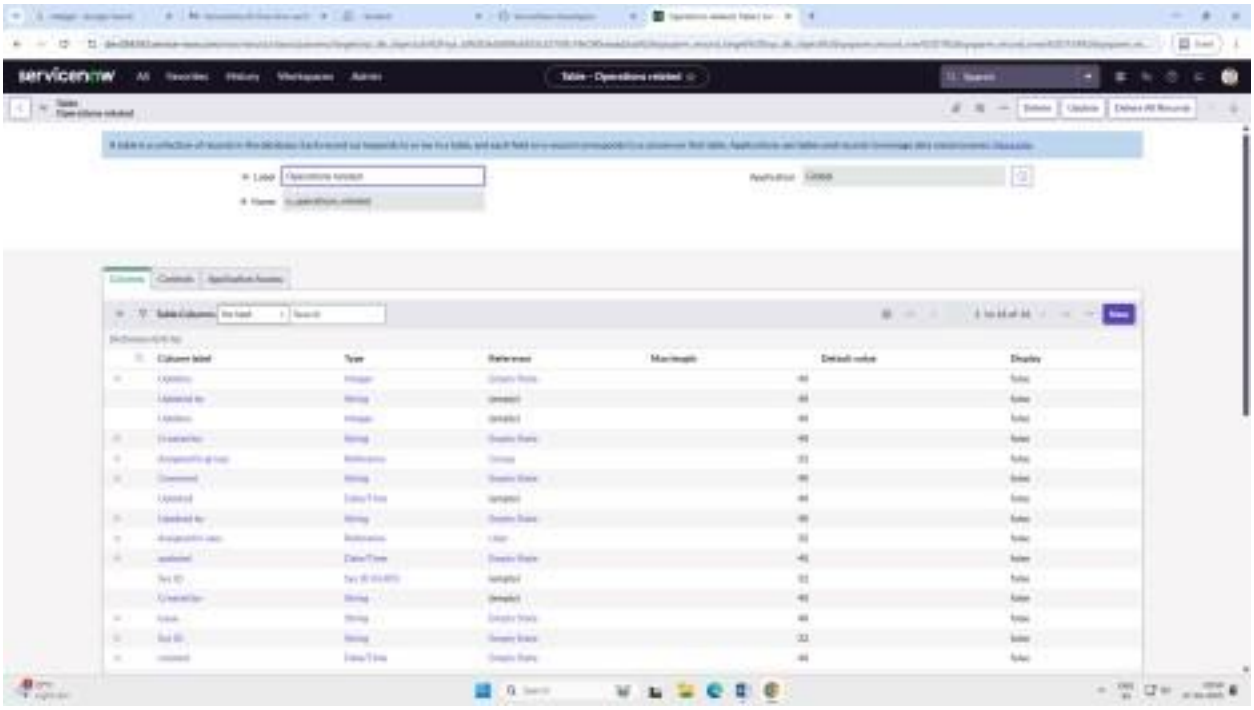


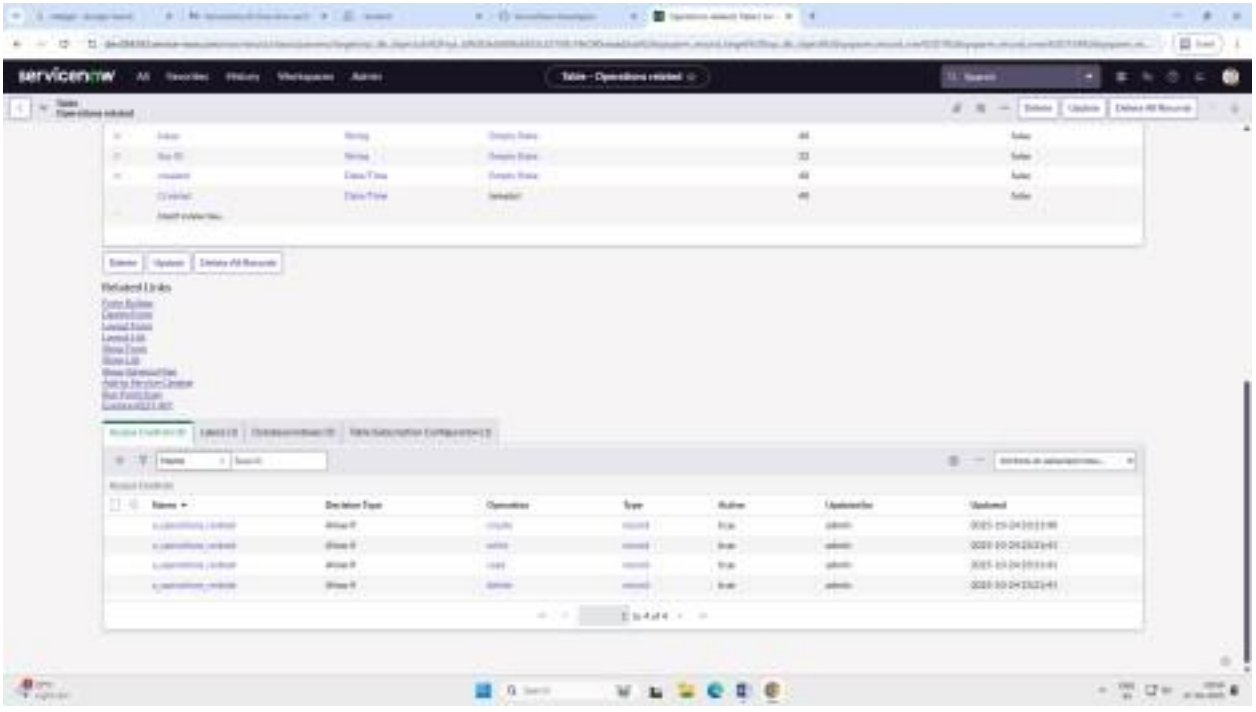
STEP 3: CREATE ROLES



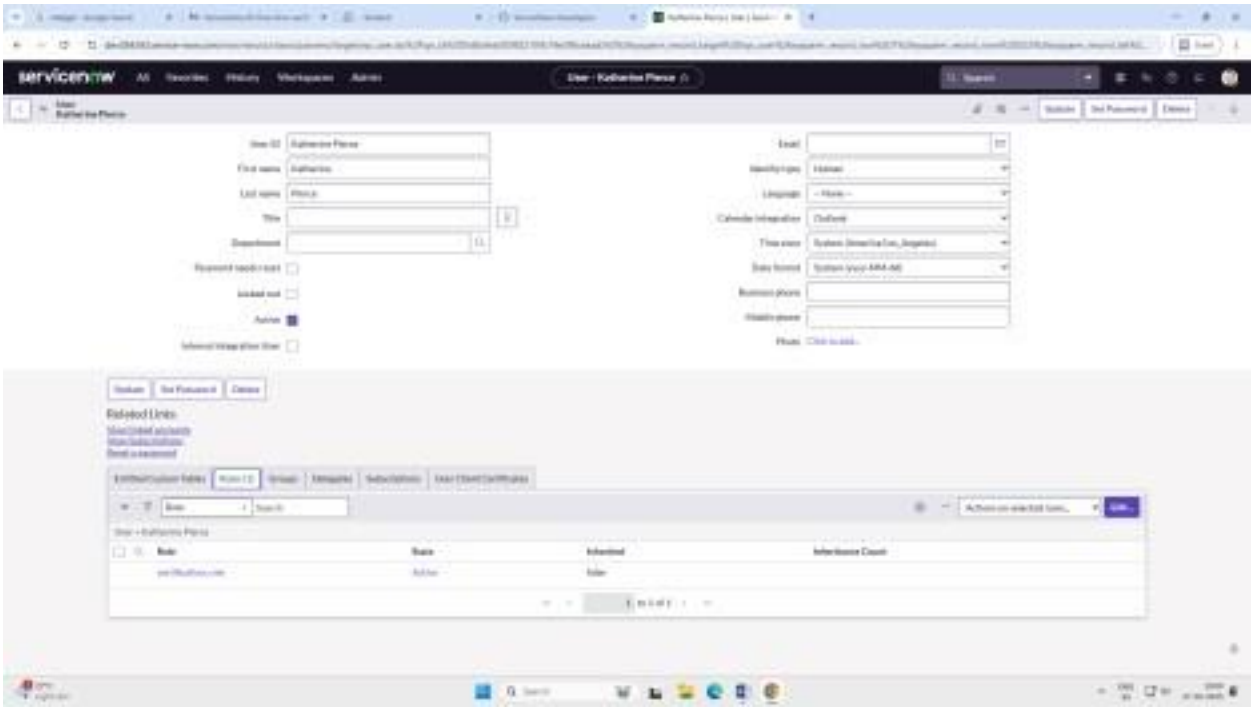


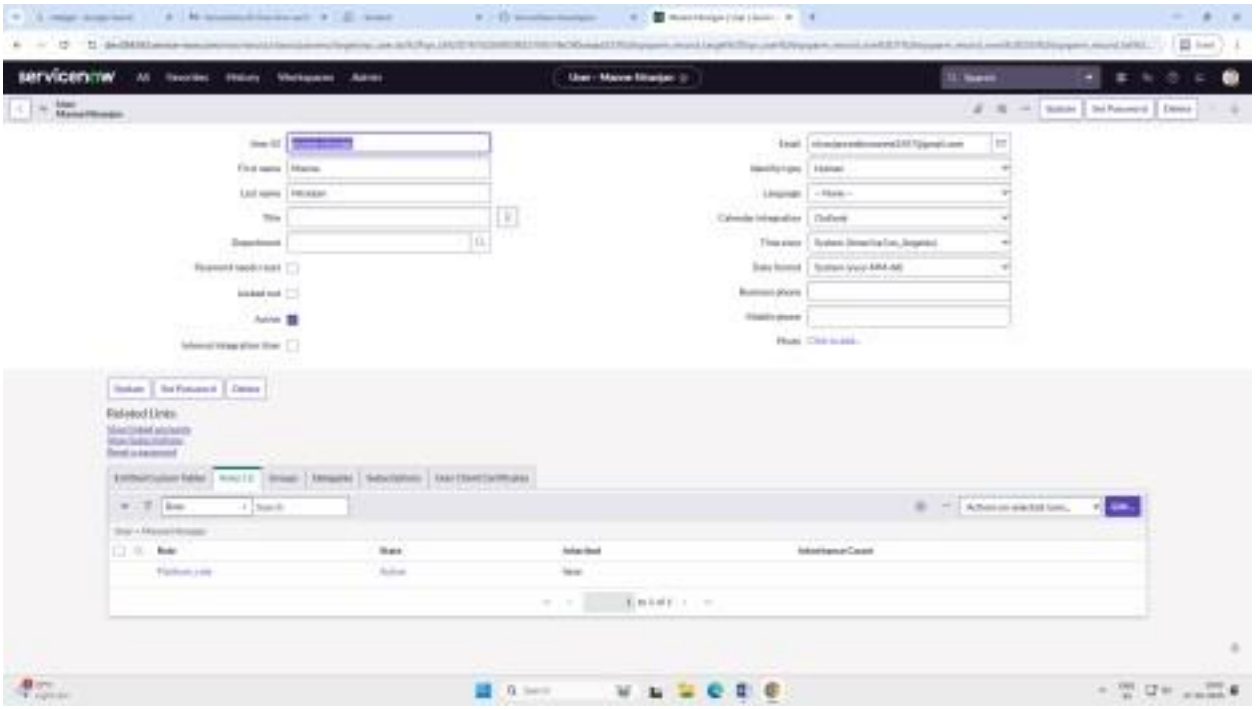
STEP 4: CREATE TABLES



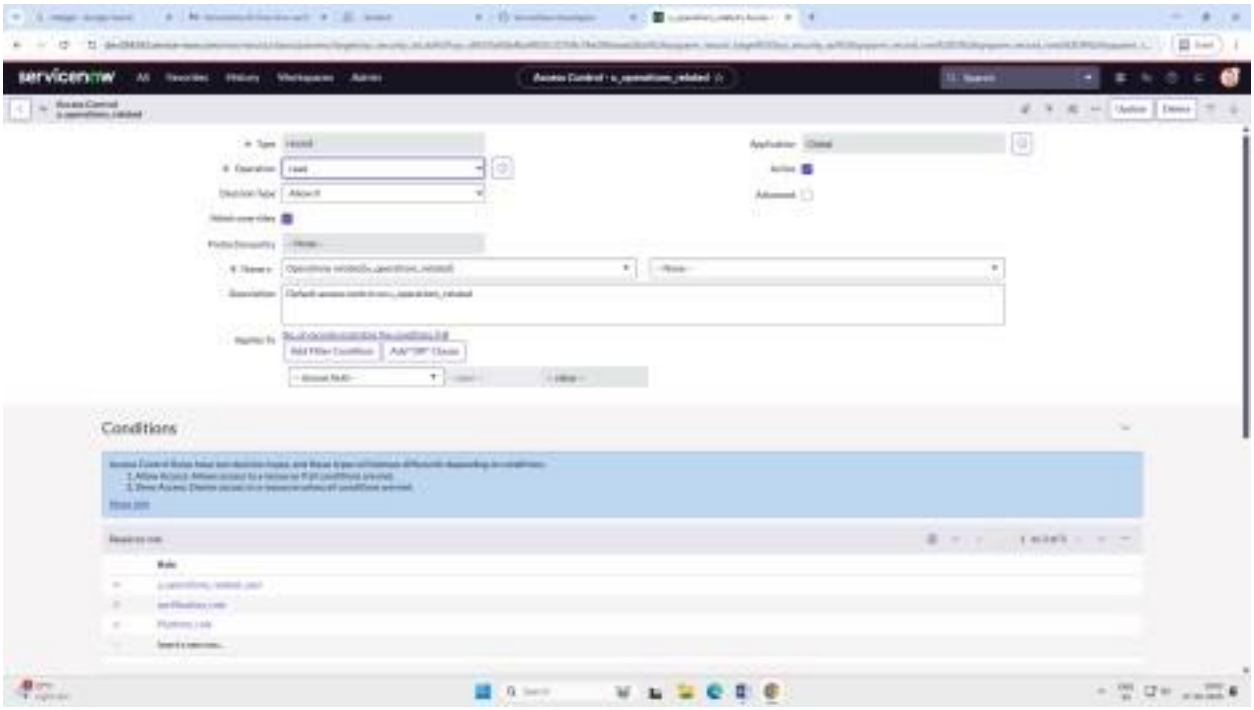


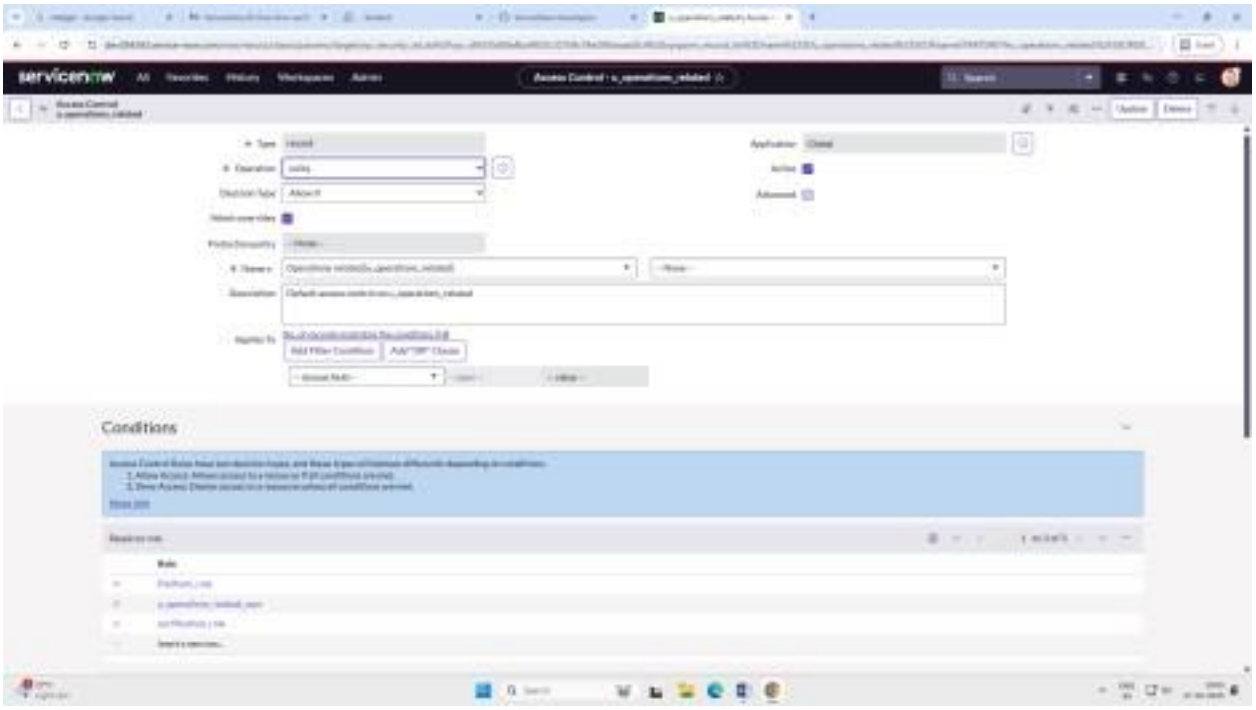
STEP 5: ASSIGN ROLES & USERS TO GROUPS



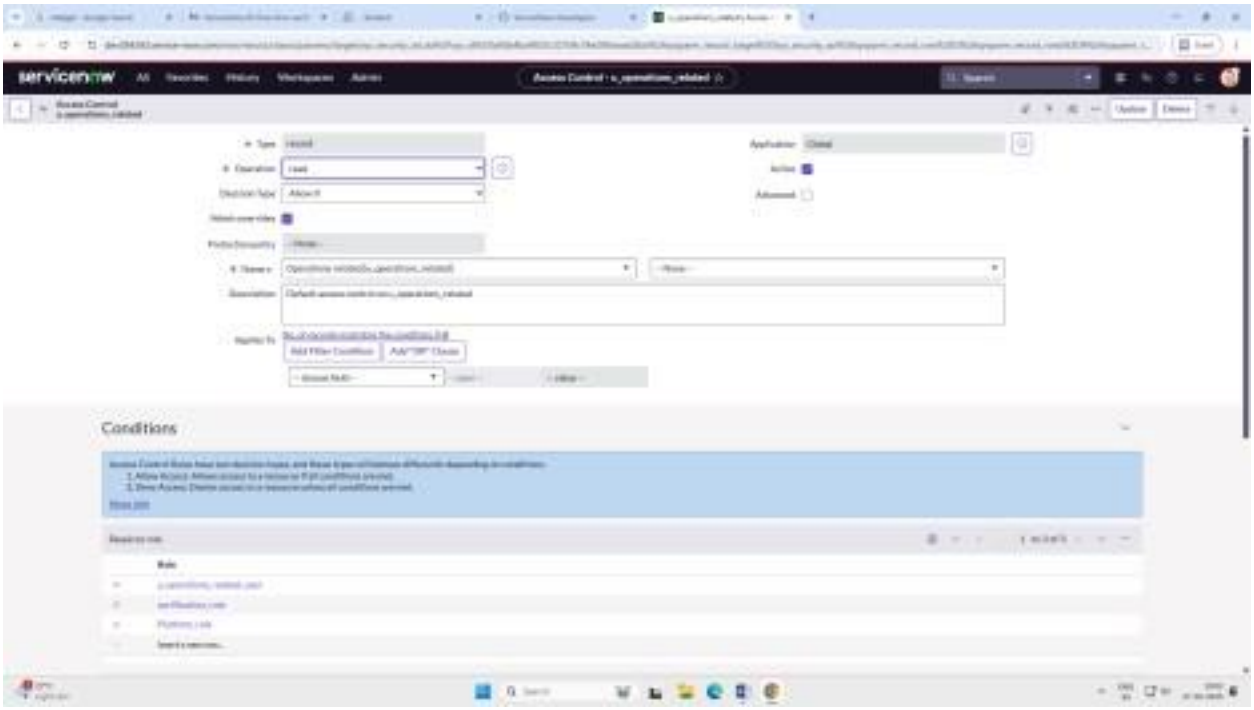


STEP 6: ASSIGN ROLES TO TABLE

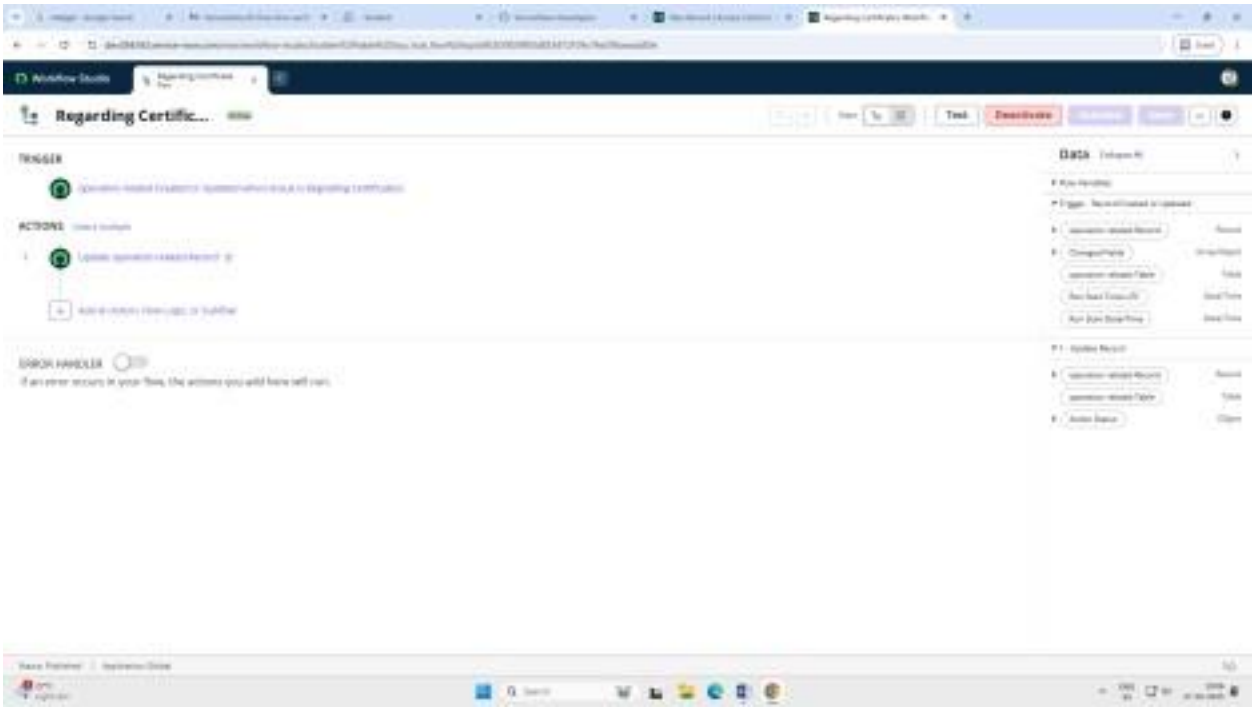


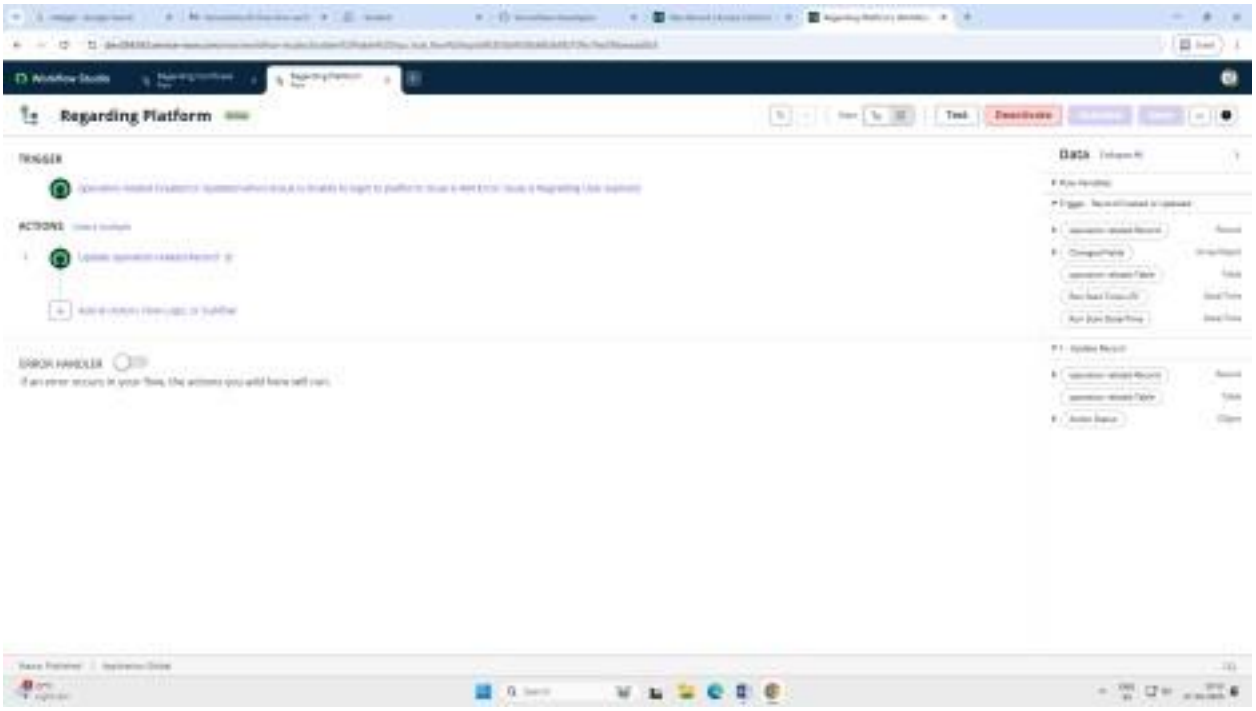


STEP 7: CREATE ACL



STEP 8: FLOW & OUTPUTS





Outcome :

The project successfully automates the entire ticket assignment process, reducing manual workload and improving service efficiency. It ensures that each ticket is handled by the right team, minimizes delays, and maintains SLA compliance. The automation enhances productivity, transparency, and customer satisfaction by providing real-time updates and balanced task distribution among agents.

1. **Reduced ticket resolution time** through faster and more accurate ticket routing.
2. **Improved customer satisfaction levels** due to timely and efficient support responses.
3. **Balanced workload distribution** among support agents, minimizing burnout and improving performance.
4. **Enhanced operational efficiency** through automation of manual ticket assignment tasks.
5. **Better visibility into support performance** via real-time analytics and reporting dashboards.
6. **Increased first-contact resolution rate** as tickets reach the most qualified agents immediately.
7. **Optimized resource utilization** by matching ticket complexity with agent expertise.
8. **Continuous process improvement** driven by insights from data and performance metrics.

Conclusion:

The project “Streamlining Ticket Assignment for Efficient Support Operations” effectively demonstrates how automation can improve IT service management using the ServiceNow platform. By eliminating manual ticket routing, it ensures faster resolution times, efficient workload management, and consistent service quality. This implementation showcases the power of workflow automation and smart assignment logic in achieving operational excellence and better end-user experience.