Automated Network Request Management in ServiceNow
FINAL REPORT

1. INTRODUCTION

1.1 Project Overview

Automated Network Request Management in ServiceNow is a platform-based solution designed to automate the lifecycle of network-related service requests such as VPN access, network device requests, and connectivity services. The system leverages ServiceNow's Service Catalog, Flow Designer, approvals, and notifications to replace manual, email-based processes with standardized workflows.

This project focuses on improving operational efficiency, reducing human errors, and enhancing transparency in network service delivery through automation.

1.2 Purpose

The purpose of this project is to streamline and standardize network request handling by implementing an automated, rule-driven workflow in ServiceNow that ensures faster request fulfillment, policy compliance, and better user experience.

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2. IDEATION PHASE

2.1 Problem Statement

Traditional network request handling relies heavily on manual processes such as emails, spreadsheets, and phone calls, leading to delays, lack of tracking, inconsistent approvals, and higher chances of errors. There is a need for a centralized, automated system to manage network service requests efficiently.

2.2 Empathy Map Canvas

- **Users Think:** Requests take too long to get approved
- **Users Feel:** Frustrated due to lack of status visibility
- **Users Say:** "I don't know who is handling my request"
- **Users Do:** Follow up via emails and calls
- **Pain Points:** Delays, rework, manual tracking
- **Gains:** Faster approvals, transparency, automation

2.3 Brainstorming

Ideas explored included automated catalog items, approval-based workflows, conditional form fields, SLA tracking, and automated notifications. ServiceNow was selected due to its robust ITSM capabilities and low-code automation features.

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3. REQUIREMENT ANALYSIS

3.1 Customer Journey Map

1. User submits a network request via Service Catalog
2. Request goes through manager/network team approvals
3. Automated tasks are generated
4. Network team fulfills the request
5. User receives completion notification

3.2 Solution Requirement

1. Service Catalog for network requests
2. Dynamic forms with conditional fields
3. Automated approval routing
4. Workflow automation using Flow Designer
5. Email notifications at each stage
6. Request tracking and visibility

3.3 Data Flow Diagram

User → Service Catalog Form → Approval Engine → Flow Designer Automation → Task Assignment → Completion Notification

3.4 Technology Stack

- **Platform:** ServiceNow
- **Modules Used:** Service Catalog, Flow Designer, Approvals
- **Scripting:** Business Rules, UI Policies
- **Database:** ServiceNow Tables
- **Notifications:** Email Notifications

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4. PROJECT DESIGN

4.1 Problem Solution Fit

The proposed ServiceNow solution directly addresses inefficiencies in manual network request handling by providing automation, standardization, and real-time visibility.

4.2 Proposed Solution

The solution includes a custom Service Catalog item for network requests, automated approval workflows, conditional UI behavior, task creation for fulfillment teams, and automated notifications.

4.3 Solution Architecture

- Frontend: Service Catalog Form
- Logic Layer: UI Policies, Business Rules
- Automation Layer: Flow Designer
- Backend: ServiceNow Tables
- Output: Notifications & Request Status Tracking

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5. PROJECT PLANNING & SCHEDULING

5.1 Project Planning

Requirement Analysis & Planning

- Gathered business requirements for network request automation
- Identified stakeholders, approval flows, and service scope
- Defined project milestones and timelines

Backend Development & Configuration

- Implemented approval workflows using Flow Designer
- Configured Business Rules for data handling and automation
- Set up task creation and assignment logic

UI/UX Customization

- Improved form usability and layout
- Applied conditional logic for better user interaction
- Ensured consistency with ServiceNow UI standards

Testing & Validation

- Performed functional testing for request submission and approvals
- Validated workflow execution and task assignment
- Tested email notifications and error scenarios

Deployment & Documentation

- Deployed the solution to the target environment
- Prepared technical and user documentation
- Demonstrated the working solution to stakeholders

6. FUNCTIONAL AND PERFORMANCE TESTING

6.1 Performance Testing

- Verified request submission and approval speed
- Ensured workflows executed without delays
- Tested multiple concurrent requests
- Validated email notification delivery

All workflows performed within acceptable response times.

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7. RESULTS

7.1 Output Screenshots

- Service Catalog Network Request Form
- Approval Workflow
- Task Assignment View
- Request Status Tracking
- Email Notification Screens

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8. ADVANTAGES & DISADVANTAGES

Advantages

- Reduced manual effort
- Faster request fulfillment
- Improved transparency
- Standardized approval process
- Better user satisfaction

Disadvantages

- Initial configuration complexity
- Requires ServiceNow licensing
- Limited customization without scripting

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9. CONCLUSION

The Automated Network Request Management system successfully demonstrates how ServiceNow can be used to automate IT service processes. The solution improves efficiency, reduces errors, and enhances end-user experience by replacing manual workflows with automated, policy-driven processes.

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10. FUTURE SCOPE

- Integration with CMDB
- SLA and KPI dashboards
- AI-powered request categorization
- Mobile access via ServiceNow app
- Auto-assignment using machine learning

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11. APPENDIX

GitHub & Project Demo Link

https://github.com/Yuvasree-M/Automated-Network-Request-Management-in-ServiceNow