Technical Blueprint

Automated Network Request Management – ServiceNow

1. Introduction

This technical blueprint explains the architectural design, automation logic, data structure, and approval mechanisms used to implement the Automated Network Request Management solution in ServiceNow.

The solution utilizes Service Catalog capabilities, Flow Designer automation, custom database tables, and role-based approvals to deliver a scalable, secure, and compliant system.

2. Flow Designer Automation

2.1 Workflow Overview

The automation is built using ServiceNow Flow Designer and is triggered whenever a user submits a network request through the service catalog.

Trigger Event:

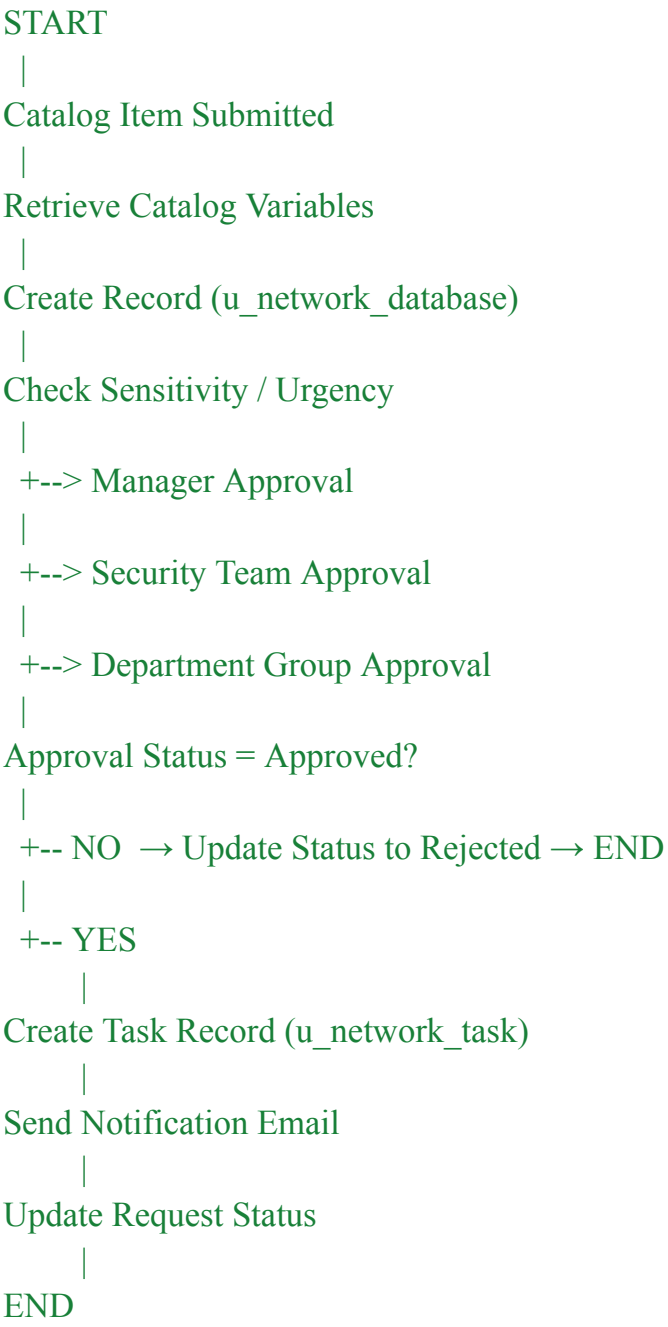
- Network Request catalog item submission

Core Actions Used:

- Retrieve catalog variables
- Create or update records
- Request approvals

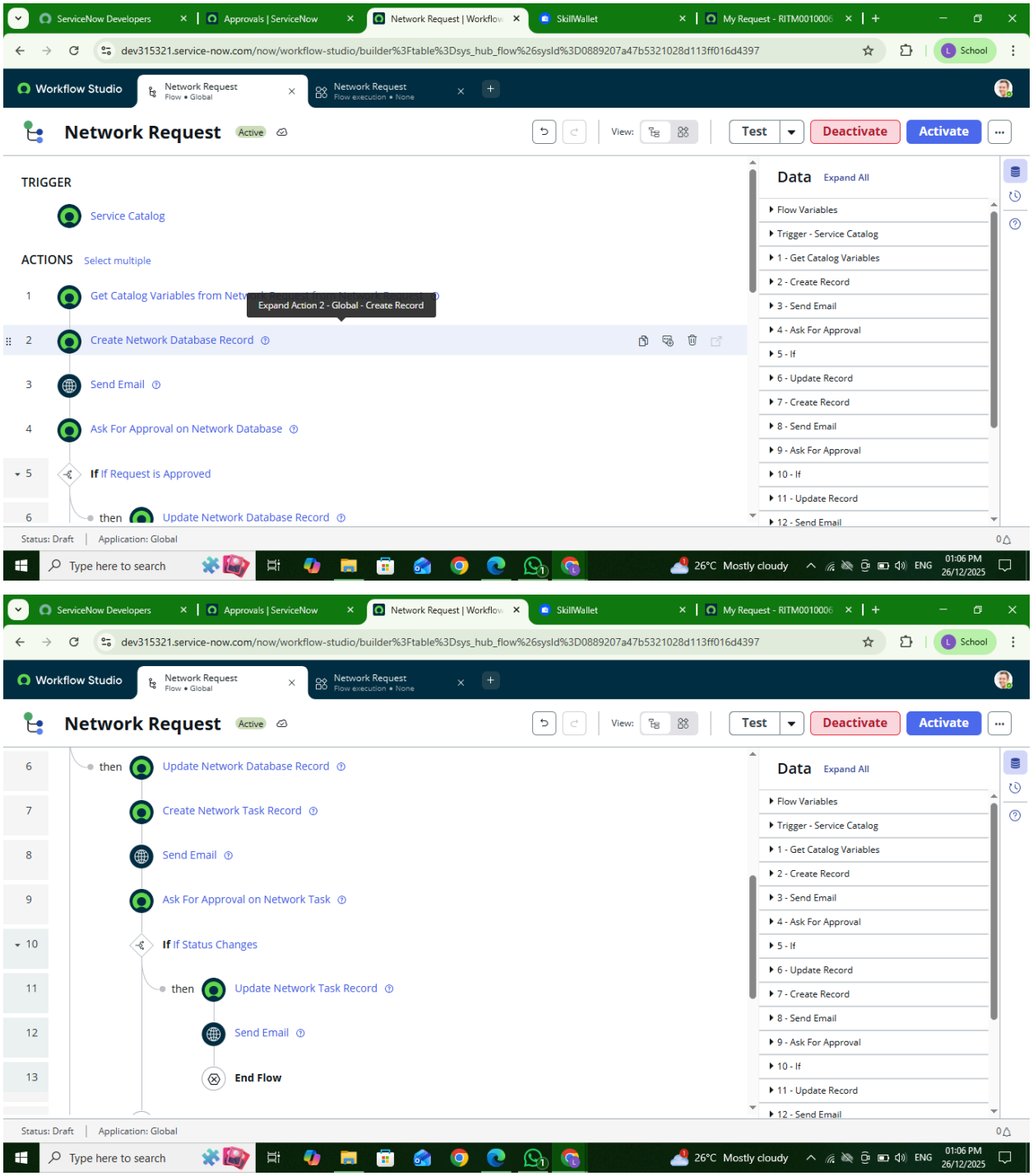
- Apply conditional logic
- Send notification emails

2.2 Process Flow Diagram



2.3 Workflow Description

The automation dynamically collects input values, evaluates decision conditions, routes approval requests accordingly, and updates system records automatically without manual intervention.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SkillWallet
My Request - RITM0010006
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School
Workflow Studio
Network Request
Flow • Global
Network Request
Flow execution • None
Network Request
Active
View:
Test
Deactivate
Activate
TRIGGER
Service Catalog
ACTIONS
Select multiple
1 Get Catalog Variables from Network
Expand Action 2 - Global - Create Record
2 Create Network Database Record
3 Send Email
4 Ask For Approval on Network Database
5 If If Request is Approved
6 then Update Network Database Record
Data
Expand All
Flow Variables
Trigger - Service Catalog
1 - Get Catalog Variables
2 - Create Record
3 - Send Email
4 - Ask For Approval
5 - If
6 - Update Record
7 - Create Record
8 - Send Email
9 - Ask For Approval
10 - If
11 - Update Record
12 - Send Email
Status: Draft
Application: Global
Type here to search
26°C Mostly cloudy
ENG
01:06 PM
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School
Workflow Studio
Network Request
Flow • Global
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Flow execution • None
Network Request
Active
View:
Test
Deactivate
Activate
6 then Update Network Database Record
7 Create Network Task Record
8 Send Email
9 Ask For Approval on Network Task
10 If If Status Changes
11 then Update Network Task Record
12 Send Email
13 End Flow
Data
Expand All
Flow Variables
Trigger - Service Catalog
1 - Get Catalog Variables
2 - Create Record
3 - Send Email
4 - Ask For Approval
5 - If
6 - Update Record
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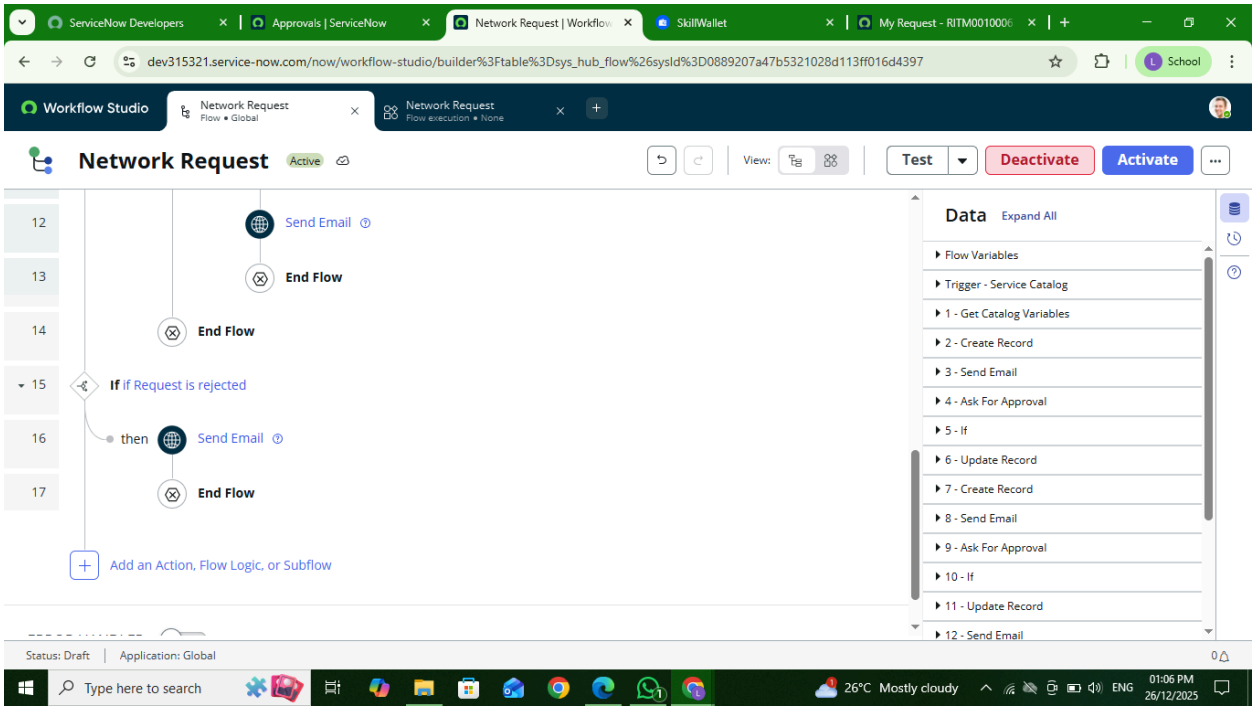

3. Variable-to-Field Mapping Design

3.1 Mapping Strategy

Catalog inputs provided by the user are transferred into structured database fields using Flow Designer actions.

Actions Used:

- Get Catalog Variables
- Create Record / Update Record

3.2 Mapping Flow

Catalog Variables

|

v
Retrieve Inputs
|
v
Map Values to Fields
|
v
u_network_database Table

3.3 Sample Mapping Table

Catalog Variable	Target Table	Target Field
Request Type	u_network_database	u_request_type
Justification	u_network_database	u_justification
Portal Details	u_network_database	u_portal_details
Urgency	u_network_database	u_urgency
Requested For	u_network_database	u_requested_for

4. Custom Table Design

4.1 u_network_database (Main Request Table)

Purpose:
Stores all submitted network requests for tracking, approval processing, and reporting.

Field Name	Type	Description

u_request_number	String	Unique request ID
u_request_type	Choice	Type of request
u_justification	String	Business reason
u_portal_details	String	Related application
u_urgency	Choice	Priority level
u_status	Choice	Current request status
u_requested_for	Reference (User)	Request owner
u_approval_state	Choice	Approval status

4.2 u_network_task (Execution Task Table)

Purpose:
Maintains task-level details created after approval.

Field Name	Type	Description
u_task_number	String	Task identifier
u_parent_request	Reference	Linked request
u_assigned_group	Reference	Assigned support group
u_task_status	Choice	Task progress
u_work_notes	String	Execution remarks

5. Approval Logic Configuration

5.1 Decision Rules

Approval routing depends on request characteristics:

- **Standard Requests** → Manager Approval
- **Security-Sensitive Requests** → Network Security Approval
- **Department-Specific Requests** → Group-Level Approval

5.2 Approval Validation Logic

```
Request Submitted
    |
    v
Approval Check
    |
    +--> Approved → Continue Processing
    |
    +--> Rejected → Update Status & Notify User
```

This ensures no request advances without proper authorization.

6. Portal Integration

6.1 Service Portal Usage

- Standard ServiceNow Service Portal (/sp) is used
- Network Request catalog item is accessible to users
- No custom widgets are required

6.2 User Interaction Flow

User Login
|
Service Portal
|
Search "Network Request"
|
Complete Form
|
Submit Request
|
Email Notification Sent

7. Security and Access Control

- Default ACLs are applied to all custom tables
- Role-based access ensures controlled permissions for:
    - Read
    - Write
    - Approval actions
- Sensitive fields are protected from unauthorized access

8. Technical Advantages

✔ Modular and scalable design
✔ Structured data management
✔ Dynamic approval routing
✔ Reduced manual effort
✔ Audit-ready implementation

9. Summary

This technical blueprint outlines a robust and scalable implementation of an Automated Network Request Management system in ServiceNow.
By combining Flow Designer automation, structured data modeling, and controlled access, the solution supports enterprise-grade efficiency, governance, and scalability.