

Automated Network Request Management In ServiceNow

Network Service Request Automation in ServiceNow

Project Overview

This project delivers a robust, automated solution for managing network-related service requests within the ServiceNow platform. It empowers end users to initiate network service requests via a self-service portal, streamlining the entire lifecycle from submission to fulfillment. By leveraging ServiceNow's native capabilities—such as catalog items, workflows, and notifications—the system ensures efficient, accurate, and scalable request handling.

Objectives

- Simplify the submission process for network service requests.
- Automate approval and fulfillment workflows to reduce manual effort.
- Provide transparency and accountability through real-time updates and reporting.
- Optionally integrate with network automation tools for zero-touch provisioning.

Key Features

Feature	Description
Custom Service Catalog	Tailored catalog items for common network requests (e.g., VLAN creation, firewall rule changes).
Dynamic Forms	Context-aware forms that adapt based on request type, ensuring relevant data capture.
Automated Approval Workflows	Conditional workflows based on request sensitivity, department, or requester role.
Tool Integration (Optional)	API-based integration with orchestration platforms or scripts for automated provisioning.
Real-Time Notifications	Email and in-platform alerts for request status changes, approvals, and task assignments.
Reporting & Analytics	Dashboards tracking request volume, resolution time, SLA compliance, and bottlenecks.

Technical Architecture

- **Platform:** ServiceNow (ITSM module)
- **Components:**
 - Service Catalog
 - Flow Designer / Workflow Editor
 - Notification Engine
 - Approval Rules
 - Scripted REST APIs (for integrations)
- **Optional Tools:**
 - Ansible, Cisco DNA Center, or custom Python scripts for network automation

Workflow Summary

1. **Request Submission**
User selects a catalog item and fills out a dynamic form.

2. **Validation & Approval**
Request is validated and routed through an automated approval chain.
3. **Task Assignment**
Fulfillment tasks are auto-assigned to network technicians or automation tools.
4. **Fulfillment & Closure**
Request is fulfilled manually or via integration, and closed with feedback.
5. **Notifications & Reporting**
Stakeholders receive updates; metrics are logged for analysis.

Benefits

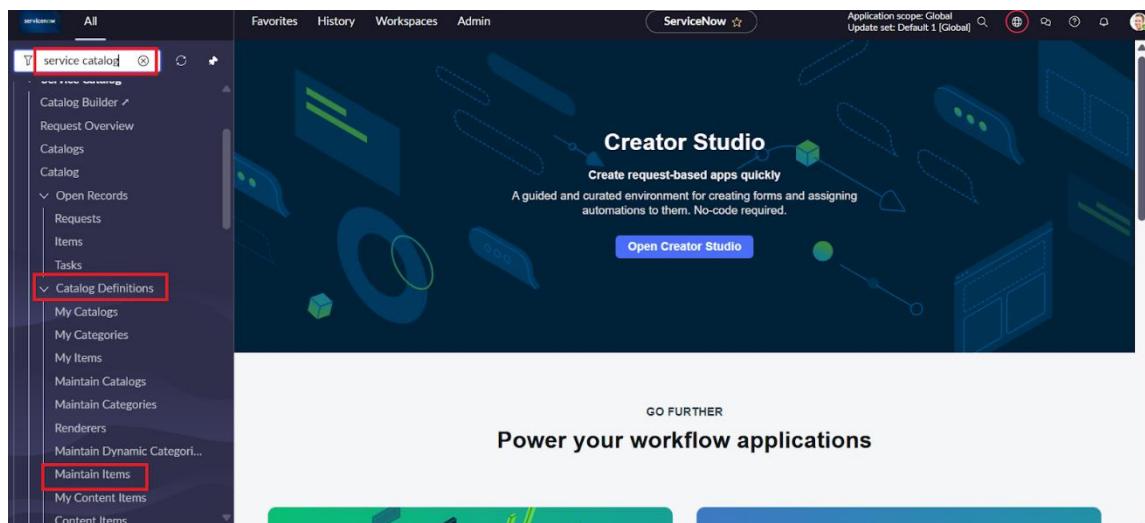
- Reduces turnaround time for network requests
- Minimizes human error through automation
- Enhances user experience with transparency and responsiveness
- Supports scalability and future integration with orchestration platforms

Future Enhancements

- AI-based request classification and routing
- Chatbot integration for conversational request submission
- Predictive analytics for capacity planning and SLA forecasting

Creation Of Service Catalog

1. Navigate to Application navigator
2. Click on All >> search for Service Catalog
3. Under Service Catalog>> Maintain items
4. Click on New
5. Fill the details >> Name— Network Request
6. Select Catalog>> Service Catalog
7. Select Category>> Network
8. Fill the Short Description as Network request Management
9. Click on Save.



Screenshot of the Catalog Items list view and a detailed view of a catalog item.

Catalog Items List View:

Name	Short description	Active	Roles	Catalogs	Category	Price	Type	Updated
Samsung Galaxy S7 Edge	Samsung Galaxy S7 Edge	true		Service Catalog	Mobiles	\$669.99	Item	03/04/2025 12:25:20
AITS College	testing record Producers	true		Technical Catalog	Services	\$0.00	Item	27/03/2025 20:05:40
Apple iPhone 15 (128 GB) - Black		true		Service Catalog	Mobiles	\$61,500.00	Item	27/03/2025 19:35:38
Smart Bridge Laptop Request	Laptop Request for End User	true		Service Catalog	Services	\$0.00	Item	10/02/2025 15:46:15
TestCatalog		true		Service Catalog	Services	\$0.00	Item	31/01/2025 16:04:28
Reboot Windows Server	Reboot a Windows Server (after patching ...)	true		Service Catalog	Server Standard Changes	\$0.00	Item	10/11/2024 11:52:19
Decommission local office Domain Controller	Decommission a server from use including...	true		Service Catalog	Server Standard Changes	\$0.00	Item	10/11/2024 11:52:19
Change VLAN on a Cisco switchport	Change the port of a Cisco switch to a n...	true		Service Catalog	Network Standard Changes	\$0.00	Item	10/11/2024 11:52:19

Catalog Item Detail View (Network Request):

Name: Network Request

Catalogs: Service Catalog

Category: Networks and Connectivity

State: -- None --

Checked out: -- None --

Owner: System Administrator

Application: Global

Active:

Fulfillment automation level: Unspecified

Short description: Network Services Request

Description:

Variables Configuration

Open the catalog item just created.

Scroll down to the **Variables** related list and click **New** to create form fields.

1. Select Variables type as Single, Multi line text, reference, choices etc as per requirement
2. Catalog item– Network Request
3. Order–100,200,300,,,
4. Question– provide the variable label
5. Name–provide the variables name(used for scripting)
6. Tooltip– this will appear when cursor overed on the field
7. Example text – this will suggest what we need to enter on the field.
8. Mandatory, Read-Only– need to configure on demand
9. Auto populate– need to select dependent variable, apply dot walking to get selected value.
10. Click on Save or Submit.

The screenshot shows the Oracle Service Catalog interface. At the top, there are tabs for Variables (10), Variable Sets (1), Catalog UI Policies (2), Catalog Client Scripts, Available For, Not Available For, Categories (1), Catalogs (1), and Catalog Data Lookup Definitions. Below the tabs, there are buttons for Related Articles, Related Catalog Items, and Assigned Topics. A search bar and a toolbar with actions like Actions on selected rows... and New are also present.

Catalog item = Network Request

A table lists variables for the Network Request catalog item:

Type	Read only	Question	Name	Order	Created
Container Start	false	Service Details	service_details	200	16/05/2025 10:18:39
Multiple Choice	false	Is this a new network connection or a re...	is_this_a_new_network_connection_or_a_re...	300	16/05/2025 10:20:58
Single Line Text	false	If this is a relocation, Please provide ...	if_this_is_a_relocation_please_provide_y...	310	16/05/2025 10:30:16
Single Line Text	false	If this is a relocation, Please provide ...	if_this_is_a_relocation_please_provide_y...	320	16/05/2025 10:32:30
Container Start	false	Location & Devices Type	location_devices_type	400	16/05/2025 10:44:43
Single Line Text	false	Please provide address here	please_provide_address_here	410	16/05/2025 10:45:42
Select Box	false	Type of devices	type_of_devices	420	16/05/2025 12:04:43
Single Line Text	false	Provide device details	provide_device_details	430	16/05/2025 12:09:16
Container Start	false	Additional Information	additional_information	500	16/05/2025 12:26:49
Single Line Text	false	If any, Please write here	if_any.Please_write_here	510	16/05/2025 12:28:09

Below the table, a specific variable is selected: "Please provide address here". The configuration screen shows:

- Type:** Single Line Text (highlighted)
- Catalog item:** Network Request
- Order:** 410
- Properties:** Active (checked), Mandatory (unchecked), Read only (unchecked), Hidden (unchecked)

The "Question" tab of the configuration screen contains:

- * Question: Please provide address here
- * Name: please_provide_address_here
- Conversational label: (empty)
- Tooltip: (empty)
- Example Text: Please provide address here

Variables Types

1. Is this a New connection or Relocation? >> **Choice** >> **New/ Relocation/None**
2. If this is a relocation, Please provide your relocated address here>>**String**
3. Types of devices>> **Choice**>> **Laptop/Mobiles/Others**
4. Please provide address here>>**String**
5. Provide device details here>> **String**
6. If anything else, please specify>> **String**

Variable Set Configuration

- To enhance form usability:
 - Navigate to the **Variable Sets** (optional).
 - Follow the same procedure as we used for Variables Creation, for the variable set as well.
 - Apply variable sets to the catalog item.

Variables Types

1. Opened on behalf of >> Reference>> reference to user table
2. Email Id >> Single line text >> Auto populate by Opened on behalf of variable.

3. User name >> Single line text >> Auto populate by Opened on behalf of variable.
4. Phone Number >> Single line text >> Auto populate by Opened on behalf of variable.
5. Proof of Document >> Attachment

The screenshot displays three stacked configuration pages from the Oracle Service Cloud interface:

- Variable Set Requester information:** Shows a variable set with a title of "Requester information", internal name "requester_information", and an order of 100. It is of type "Single Row". The "Layout" is set to "2 Columns Wide, one side, then thru". A red box highlights the "Title" field.
- Catalog UI Policies:** Shows a table of policies. One policy has a name of "opened_on_behalf_of" and an order of 100. A red box highlights the "Name" field.
- Catalog item Network Request:** Shows a table of catalog items. One item has a name of "opened_on_behalf_of" and an order of 100. A red box highlights the "Name" field.

Catalog UI Policy Configuration

Scenario: If user selects types of devices is **Others**, then Please specify field should populate.

Procedure:

1. Navigate to catalog items
2. Open Network Request item
3. In related list, we have Catalog UI policy
4. Click on New button to configure New UI policy
5. Select Applies to as Catalog item
6. Select catalog item as Network Request
7. Provide short description, if required
8. Apply condition>> **types of devices is others**
9. Click on save, after saving the form will get UI policy actions in the related list
10. Click on New button to configure new UI Policy action, and Select the variable which we want to display on condition
11. Make Visible True as per our requirement
12. Update the UI Policy and Test the same on Catalog form.

Catalog Item Network Request

Related Links: Item Diagnostic, Show VA render type, Run Point Scan, [SN Utils] Versions (35)

Variables (10) Variable Sets (1) Catalog UI Policies (2) Catalog Client Scripts Available For Not Available For Categories (1) Catalogs (1) Catalog Data Lookup Definitions

Related Articles Related Catalog Items Assigned Topics

Order Search Actions on selected rows... New

Catalog item = Network Request

Short description	Catalog Conditions	Conditions	Reverse if false	On load	Inherit	Updated	Order
Types of devices is others	IO:684b7ca183ad6a5022f7e630ceaad3b4=4^EQ	true	true	false	16/05/2025 12:12:05	100	
Relocation fields hiding	IO:a153aced832d6a5022f7e630ceaad3fd=2^EQ	true	true	false	16/05/2025 10:38:49	100	

1 to 2 of 2

Catalog UI Policy
Types of devices is others

Applies to: A Catalog Item Network Request

Application: Global Active:

When to Apply Script

Catalog UI policy actions are applied only if all the following conditions are met:

1. The catalog UI policy is Active
2. The items in the Conditions field evaluate to true
3. The field specified in the catalog UI policy is present on the specified catalog item

Catalog Conditions: Add Filter Condition, Add OR Clause

type_of_devices is Others

Applies on a Catalog Item view: Applies on Catalog Tasks: Applies on Requested Items:

Apply the catalog UI policy actions when the form is loaded or when the user changes values on the form

On load:

The screenshot shows the 'Catalog UI Policy Actions' screen. At the top, there is a search bar and a 'New' button. Below the header, a table lists a single policy action:

Name	Read only	Mandatory	Visible	Order
provide_device_details	Leave alone	Leave alone	True	100

Below the table, a message states: 'UI policy actions specify exactly what actions to take on a specified field. The conditions specified in the UI policy determine when these actions are triggered.' A 'More Info' link is provided.

The 'provide_device_details' entry is expanded, showing its details:

- Catalog Item:** Network Request
- Variable name:** provide_device_details
- Order:** 100
- Application:** Global
- Mandatory:** Leave alone
- Visible:** True (highlighted with a red box)
- Read only:** Leave alone
- Value action:** Leave alone
- Field message type:** None

At the bottom of the expanded view, there are 'Update' and 'Delete' buttons.

Creation Of Table

- **Navigate to:** System Definition > Tables.
- Click **New** to create a new table.
- **Fill in Table Information:**
 - **Name:** Name of the table -----
 - **Label:** Backend name of the table-----
 - **Auto-generate schema:** Leave it checked if you'd like ServiceNow to auto-generate schema fields.
- Click **Submit** to create the table.

The screenshot shows the ServiceNow search interface. The search bar at the top contains the text "tables". The sidebar on the left is titled "All" and includes sections for "System Clone", "Clone Definition", "Exclude Tables", "System Definition" (which is expanded), and "Tables & Columns". The "Tables" section under "System Definition" is also highlighted in a red box. The main content area features a dark blue background with the text "Creator Studio" and "Create request-based apps quickly".

The screenshot shows the ServiceNow Tables view. The top navigation bar includes tabs for "Tables View: Tables" (which is selected and highlighted in a red box), "Updated", and "Search". Below the navigation is a search bar with the placeholder "All > Update name is not empty". The main area displays a table of tables, with columns for "Label", "Name", "Application", "Extends table", "Extensible", and "Updated". The table lists various Task Intelligence Admin-related tables. The "New" button in the top right corner is also highlighted in a red box.

Label	Name	Application	Extends table	Extensible	Updated
Task Intelligence Admin Context	sn_ti_admin_context	Task Intelligence Admin Console	Application File	false	24/04/2025 16:01:36
Task Intelligence Admin Statistic	sn_ti_admin_statistic	Task Intelligence Admin Console	Application File	false	24/04/2025 16:01:35
Task Intelligence Admin Step	sn_ti_admin_step	Task Intelligence Admin Console	Application File	false	24/04/2025 16:01:35
Task Intelligence Admin Landing Card	sn_ti_admin_landing_card	Task Intelligence Admin Console	Application File	false	24/04/2025 16:01:35
Task Intelligence Admin Task Card	sn_ti_admin_task_card	Task Intelligence Admin Console	Application File	false	24/04/2025 16:01:34
Task Intelligence Admin Score Type	sn_ti_admin_model_score_type	Task Intelligence Admin Console	Application File	false	24/04/2025 16:01:34
Task Intelligence Admin Model	sn_ti_admin_model	Task Intelligence Admin Console	(empty)	false	24/04/2025 16:01:33
Task Intelligence Admin Feature	sn_ti_admin_feature	Task Intelligence Admin Console	Application File	false	24/04/2025 16:01:32
Task Intelligence Admin Template	sn_ti_admin_template	Task Intelligence Admin Console	Application File	false	24/04/2025 16:01:32

The screenshot shows the ServiceNow Table edit screen for "Network DataBase Table". The top navigation bar includes tabs for "Table" and "View: Tables". The main form has fields for "Label" (set to "Network DataBase Table") and "Name" (set to "u_user_database_table"). The "Label" field is highlighted in a red box. The bottom right corner shows application details: "Application: Global" and "Remote Table".

The screenshot shows the ServiceNow Table Columns view for the "u_user_database_table". The top navigation bar includes tabs for "Columns", "Controls", and "Application Access". The main area displays a table of columns, with columns for "Column label", "Column name", "Type", "Reference", "Max length", "Default value", and "Display". The "Column label" column is highlighted in a red box. The table lists several columns such as "Request Number", "Assignment Group", "Created", "Created by", "Customer Document", and "Sys ID".

Column label	Column name	Type	Reference	Max length	Default value	Display
Request Number	u_request_number	String	(empty)	40		false
Assignment Group	u_assignment_group	Reference	Group	32		false
Created	sys_created_on	Date/Time	(empty)	40		false
Created by	sys_created_by	String	(empty)	40		false
Customer Document	u_customer_document	String	(empty)	40		false
Sys ID	sys_id	Sys ID (GUID)	(empty)	32		false

Creation Of Fields

In ServiceNow, fields are created at the **table** level. To create a field, you first need to identify the table where the field will reside.

1. In the **Application Navigator** (left-side panel), type **Tables** in the search bar.
2. Under **System Definition**, click **Tables**. This will take you to a list of all tables in the system.

Select the Table to Add the Field

- From the list of tables, search for and select the **table** you want to add a field to. For example, if you want to add a field to the **Network database** table:

1. Type "Network database" in the search box or scroll through the list.
2. Click on the **Network database** table name. You'll now see a list of all fields (columns) associated with the **Network database** table.

Open the Table's Columns

- After selecting the table, you'll be brought to a view that lists all the columns (fields) that currently exist on that table.
- To create a new field (column), go to the **Columns** tab (this is where all fields for the selected table are listed).

Create a New Field

1. In the **Columns** tab, click the **New** button located at the top-right corner of the page to create a new field.
2. You'll now be prompted with a form where you need to define the new field. The following fields need to be filled out:

Table Columns							
	Column label	Column name	Type	Reference	Max length	Default value	Display
x	Request Number	u_request_number	String	(empty)	40		false
x	Assignment Group	u_assignment_group	Reference	Group	32		false
	Created	sys_created_on	Date/Time	(empty)	40		false
	Created by	sys_created_by	String	(empty)	40		false
x	Customer Document	u_customer_document	String	(empty)	40		false
	Sys ID	sys_id	Sys ID (GUID)	(empty)	32		false
	Updates	sys_mod_count	Integer	(empty)	40		false
x	Assigned to	u_assigned_to	Reference	User	32		false
x	Device Details	u_device_details	String	(empty)	40		false
x	Date of Enquiry	u_date_of_enquiry	Date	(empty)	40		false
x	Customer Address	u_customer_address	String	(empty)	40		false
	Updated by	sys_updated_by	String	(empty)	40		false
x	Work Status	u_approval_state	String	(empty)	40		false
x	Requested For	u_requested_for	String	(empty)	40		false

Define Field Properties

Fill in the following details for your new field:

1. Column Label (Field Label)

- **Description:** This is the name that will be displayed on the forms, lists, and records.
- **Example:** Customer Name

2. Column Name

- **Description:** This is the internal name of the field and is auto-generated based on the column label. It should be unique for each field. Do not manually edit this unless necessary.
- **Example:** customer_name
- **Description:** The type of field determines the kind of data it will store. You need to choose the correct type based on the data you want to store (e.g., text, number, date, etc.). Some of the most common types include:

- o **String:** For short text values (e.g., name, description).
- o **Integer:** For numbers without decimals (e.g., age, number of items).
- o **Choice:** A dropdown list of options.
- o **Reference:** A field that links to another table (e.g., linking to a User table).
- o **Boolean:** A true/false checkbox.
- o **Date:** For a date picker field.
- o **Date/Time:** For both date and time.
- **Example:** String, Choice, Reference

3. Max Length (Optional)

- **Description:** If you are creating a string-type field, you can specify the maximum length of the text allowed.
- **Example:** 255 characters (default length for a string field).

4. Mandatory

- **Description:** Check this box if the field should be required when creating or updating records.
- **Example:** For a "Customer Name" field, this might be required.

5. Default Value (Optional)

- **Description:** You can set a default value for the field if desired. This value will appear automatically when creating a new record.
- **Example:** Set the default value to "New Customer" for a "Customer Name" field.

6. Read-Only

- **Description:** Check this box if the field should be read-only (users cannot modify its value). This is commonly used for calculated or system-generated fields.
- **Example:** "Created Date" or "Record Number".

7: Save the Field

- Once you've configured all the necessary field properties, click **Submit** or **Save** to create the field.
- After saving, ServiceNow will create the new field and add it to the list of columns for the selected table.

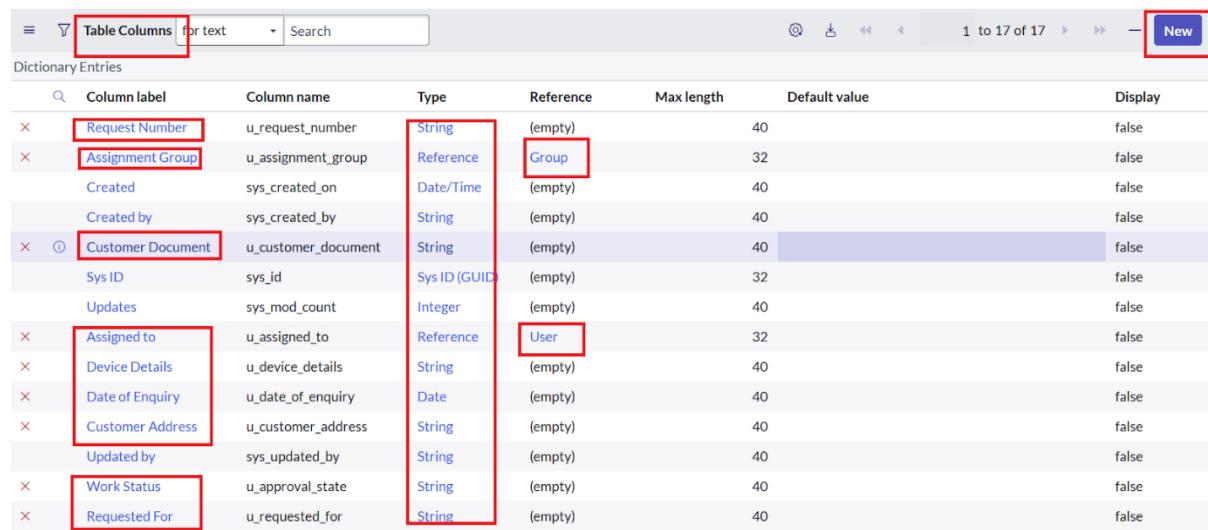


Table Columns							
	Column label	Column name	Type	Reference	Max length	Default value	Display
Dictionary Entries							
×	Request Number	u_request_number	String	(empty)	40		false
×	Assignment Group	u_assignment_group	Reference	Group	32		false
	Created	sys_created_on	Date/Time	(empty)	40		false
	Created by	sys_created_by	String	(empty)	40		false
×	Customer Document	u_customer_document	String	(empty)	40		false
	Sys ID	sys_id	Sys ID (GUID)	(empty)	32		false
	Updates	sys_mod_count	Integer	(empty)	40		false
×	Assigned to	u_assigned_to	Reference	User	32		false
×	Device Details	u_device_details	String	(empty)	40		false
×	Date of Enquiry	u_date_of_enquiry	Date	(empty)	40		false
×	Customer Address	u_customer_address	String	(empty)	40		false
	Updated by	sys_updated_by	String	(empty)	40		false
×	Work Status	u_approval_state	String	(empty)	40		false
×	Requested For	u_requested_for	String	(empty)	40		false

Add The Field To A Form (Optional)

After creating the field, you may want to add it to a form so that users can view or update it.

1. To do this, navigate to **System UI > Forms** in the application navigator.
2. Select the **form** you want to modify (e.g., Incident form).
3. Open the **Form Designer** (click on the "Design" icon).
4. From the **Field Navigator** on the left side, search for the new field you created.
5. Drag the field onto the form layout where you want it to appear.
6. Click **Save** or **Publish** to apply the changes.

The screenshot shows the ServiceNow Form Designer interface for a 'Network Task Table' form. On the left, there are several input fields: 'Task Number' (NTT0001035), 'Database Number', 'Request Number', 'Description', and 'Work Notes'. A context menu is open at the top right, with 'Configure' and 'Form Layout' highlighted with red boxes. The 'Form Layout' option is expanded, showing options like 'Form Builder', 'Form Design', 'Create Favorite', 'Copy URL', 'Copy sys_id', and 'Reload form'. To the right of the menu, there's a preview area showing the form layout with various fields and sections.

The screenshot shows the 'Configuring Network Task Table form' dialog. It has two main panes: 'Available' on the left and 'Selected' on the right. The 'Available' pane contains fields like 'Assigned to [+]', 'Assignment Group [+]', 'Created', 'Updated', 'Updated by', 'Updates', 'Requested For', 'Approval Status', and 'Work Status'. The 'Selected' pane contains fields like 'Task Number', 'Database Number', 'Request Number', 'Description', 'Work Notes', 'Activities (filtered)', and 'Contextual Search Results'. Between the panes are arrows for moving fields between them. At the bottom are 'Cancel' and 'Save' buttons.

Test the New Field

- Go to a record in the table where the field was added (e.g., create a new incident or record).
- Check if the new field appears on the form.
- Verify the field behaves as expected (e.g., required, read-only, etc.).

Key Field Types in ServiceNow:

- **String:** Short text input (e.g., a name, description).
- **Integer:** Whole numbers.
- **Choice:** Dropdown list with predefined options.
- **Reference:** A reference field to another table (e.g., referencing an **User** table).

- **Date:** A date picker.
- **Date/Time:** A combination of date and time.
- **Boolean:** Checkbox (True/False).
- **Currency:** Currency field with monetary values.

Additional Tips:

- **Field Data Types:** Make sure you choose the correct field type based on the type of data you want to store (e.g., Text, Integer, Date).
- **UI Policies/Client Scripts:** These can be used to make fields visible, read-only, or mandatory based on certain conditions.
- **Naming Conventions:** Follow proper naming conventions for field labels and column names to maintain consistency.

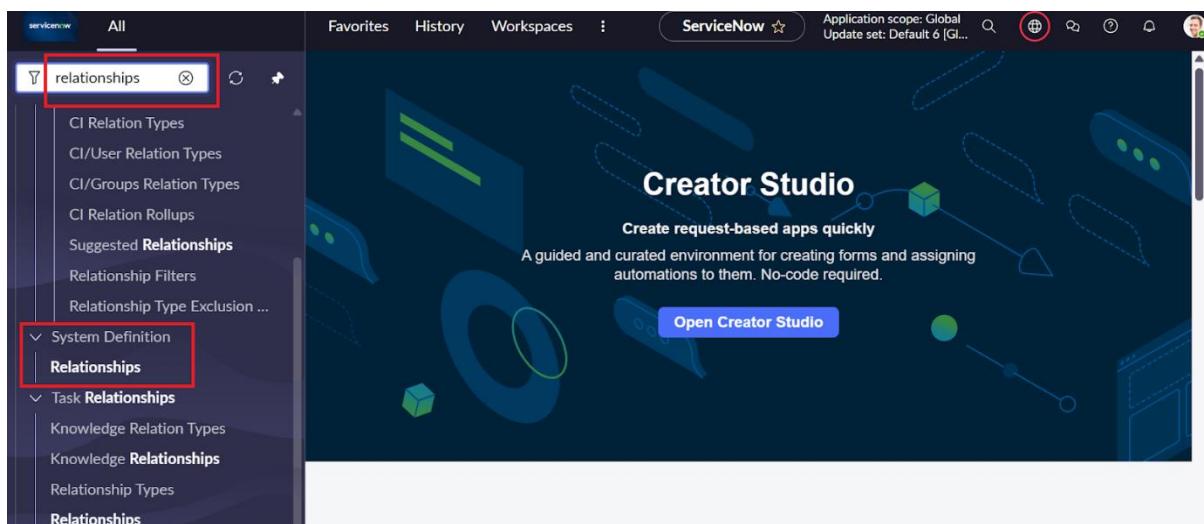
Request Approvals Creation(Related List)

Request Approvals Creation(Related List)

Creation Of Related List

Navigate to **System Definition > Relationships**.

- Click **New** to create a new relationship.
- Fill in the following details:
 - o **Name:** Approval Request
 - o **Applies to Table :** Network Database table.
 - o **Queries from Table :** Sysapprovals table.
 - o **Active:** Make sure it's set to **True**.
- Save the relationship.



The screenshot shows the Relationship Manager interface. At the top, there's a search bar and a 'New' button. Below is a table listing various relationships:

Name	Advanced	Apply to	Applies to table	Queries from table	Insert callback	Query from	Query w...
Inactive MIF Trust Profile Items	false		Application Trust Profiles [sn_mif_application_trust_profile]	Trust Profile Item [sn_mif_trust_profile_item]			(function refineQu parent) [..]
Active MIF Trust Profile Items	false		Application Trust Profiles [sn_mif_application_trust_profile]	Trust Profile Item [sn_mif_trust_profile_item]			(function refineQu parent) [..]
Translated Messages	false		Process Definition [sys_pd_process_definition]	Message [sys_ui_message]			(function refineQu parent) [..]
Descriptive elements for Input	false		Input [sys_sg_input]	Descriptive element [sys_sg_descriptive_element]			(function refineQu parent) [..]
Descriptive elements for Section	false		Input Form Section [sys_sg_parameter_section]	Descriptive element [sys_sg_descriptive_element]			(function refineQu parent) [..]
Access Controls	false		Script Include [sys_script_include]	Access Control [sys_security_acl]			(function refineQu parent) [..]

Below the table, a specific relationship named 'Request Approvals' is selected. Its details are shown in a modal-like window:

- Name:** Request Approvals
- Advanced:**
- Applies to table:** Network DataBase Table [u_use...]
- Queries from table:** Approval [sysapproval_approver]

A note at the bottom says: "Script refines the query in current that will populate the related list. For more information about it, its parameters and control variables, see [the documentation](#). See also the article about the [extended form of the script](#)".

At the bottom, there's a code editor with ECMAScript 2021 (ES12) mode turned on, containing the following code:

```

Query with < />  Turn on ECMAScript 2021 (ES12) mode ⓘ
(function refineQuery(current, parent) {
    // Add your code here, such as current.addQuery(field, value);
    current.addQuery('source_table', parent.getTableName());
    current.addQuery('document_id', parent.sys_id);
    // current.addQuery('state', '!=', 'not_required');
})(current, parent);

```

Adding Related List To The Table

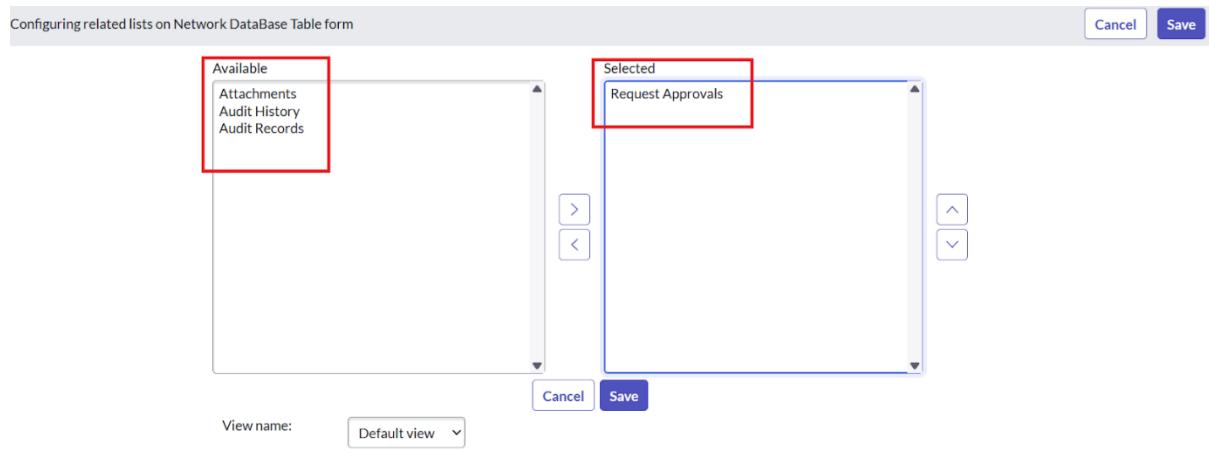
You can create a **Related List** on a form to display the related records. This helps in easily viewing the relationships between records.

- Navigate to **Form Designer** for the table where you want to show related records.
- Add a **Related List** widget to the form.
- Select the **Related List** you want to show

The screenshot shows the Form Designer interface for a 'Network DataBase Table' record with ID NET0001043. The record details are:

- Database Number: NET0001043
- Request Number: REQ0010042
- Created: 23/05/2025 12:05:06
- Requested For: Abraham Lincoln
- Date of Enquiry: 23/05/2025
- Customer Address: gf
- Special Instructions: Special Instructions

A context menu is open on the right side of the screen, with the 'Configure' and 'Related Lists' options highlighted with red boxes.



Related Links

Overview Of Flows, Actions In Flow Designer

Flow Designer Overview

Flow Designer allows you to automate business processes by designing, testing, and implementing flows that automate tasks, approvals, notifications, and more, across different ServiceNow applications.

Key Features:

- **No-code interface** for building automation.
- **Reusable Flow Actions** to create modular components.
- Ability to automate processes **across multiple tables** and **integrate with other systems**.
- **Conditional logic**, approvals, notifications, and integrations can be easily included in your flows.
- Full integration with **ServiceNow Orchestration** for complex automation.

Navigating To Flow Designer

To access **Flow Designer**:

- Go to **Flow Designer** by typing Flow Designer in the left-hand application navigator, or navigate through **All > Flow Designer**

Flow Designer Components

Key Components in Flow Designer:

1. Triggers:

- o **Record Trigger:** Runs when a record is created, updated, or deleted in a specific table.
- o **Scheduled Trigger:** Runs at a specific time interval or on a schedule.
- o **Custom Event:** Triggered by custom events.

2. Actions:

- o Actions define what happens when the flow is triggered. Common actions include:

- § **Create Record:** Create a new record in a table.
- § **Update Record:** Modify an existing record.
- § **Send Notification:** Send an email, SMS, or other notifications.
- § **Run Script:** Execute custom scripts for advanced logic.

3. Data Pills:

- o These are dynamic references to data from records or previous steps in the flow. They are used to populate action inputs.

4. Conditions & Decisions:

- o Conditions help in making decisions in a flow based on data, which can control the flow's behavior (e.g., send an approval notification if a specific condition is met).

5. Flow Logic:

- o Includes decision points, loops, and waits for conditions to add complex logic to the flow.

Creating A Flow In Flow Designer

Steps to Create a Flow:

1. Open Flow Designer:

- o Go to **Flow Designer > Flows**.

2. Click on New:

- o This will start the process of creating a new flow.

3. Define Flow Properties:

- o **Name:** Provide a name for your flow - Network Request.
- o **Table/Application:** Choose the target table/application for the flow –Application–Service Catalog.
- o **Trigger:** Define when this flow should run when a request is created.
- o **Description:** Optional but helpful for understanding the purpose of the flow.

4. Set a Trigger:

- o The **Trigger** defines when the flow is initiated. Common triggers include:

- § **Record Created:** When a record is created in a specific table.
- § **Record Updated:** When a record is updated.
- § **Scheduled:** When a flow should run on a schedule.
- § **Custom Event:** Triggered by a custom event (e.g., a certain event happening in the system).
- o Select the relevant trigger for your flow (when a **Request** record is created).

Adding Actions

- o After defining the trigger, you can add **actions** that will be executed when the flow is triggered. Some common actions include:

1. Get Catalog Variables:

- In ServiceNow Flow Designer, the "Get Catalog Variables" action is used to retrieve values from a catalog item or record producer request. This action is especially helpful when you need to use user-inputted variables (from a catalog item) within a flow
- **How to Use “Get Catalog Variables” in Flow Designer**
 1. Open Flow Designer
 2. Navigate to: Flow Designer ? Create or open a flow.
 3. Ensure the Trigger is Catalog-Based
 4. Choose a trigger like Catalog Item Requested or Catalog Task Created.
 5. Add Action ? Get Catalog Variables
 6. Click + under your trigger or previous action.
 7. Choose Action ? "**Get Catalog Variables**".
 8. Select the record input (Requested Item [sc_req_item]) from the Data pill.
 9. Set the Catalog item– Network Request
 10. You'll typically input the Requested Item Record from the trigger.

Use Output Variables

The output will include all the catalog variables submitted with the request.

2. Create Record:

- In ServiceNow Flow Designer, the "Create Record" action is used to create a new record in any table (e.g., Incident, Task, Custom Table, etc.) during the execution of a flow.
- This is one of the most powerful and commonly used actions in Flow Designer, allowing you to automate the creation of tasks, incidents, change requests, approvals, and more.

How to Use "Create Record" in Flow Designer

1. Open or Create a Flow:

- o Go to **Flow Designer** (Flow Designer > Designer)
- o Open an existing flow or click **New**.

2. Add a Trigger (if needed):

- o e.g., **Record Created**, **Catalog Item Requested**, etc.

3. Add Action ? "Create Record"

- o Click the "+" under the trigger or another action.
- o Select **Action ? Search for "Create Record"**.

4. Configure the Action:

- o **Table:** Select the table where you want the new record created (Network database table).
- o **Fields:** Set the field values you want on the new record using static values, data pills, or dynamic inputs.

3. Send Email Action:

- The "**Send Email**" action in ServiceNow Flow Designer allows you to send customized emails as part of an automated flow. It's commonly used to notify users, groups, or stakeholders based on triggers like catalog submissions, record changes, task updates, and more.

How to Use "Send Email" in Flow Designer

- Open or Create a Flow**
 - Go to **Flow Designer** (Flow Designer > Designer)
 - Open an existing flow or click **New**.
- Add a Trigger**
 - Examples: **Catalog Item Requested, Record Updated, Incident Created**, etc.
- Add Action ? "Send Email"**
 - Click the "+" button under the trigger or previous action.
 - Select **Action** ? Search for and select "**Send Email**".
- Configure Email Details**
 - To:** Choose one or more recipients (Users, Groups, Emails). You can use:
 - Data Pills —> Requested For.Caller.email
 - Static email addresses
 - Subject:** Write a subject line. Your Request has been Created
 - Body:** Enter the message body using:
 - Plain text
 - HTML formatting
 - Dynamic data pills (like variables, record fields)
- (Optional) Add CC or BCC**
 - Available in the action settings if needed.
- Save and Test the Flow**

4. Ask for Approval

- In ServiceNow Flow Designer, the "**Ask for Approval**" action is used to request approval from one or more users or groups as part of an automated process. It's commonly used in flows for change requests, catalog items, onboarding, and custom workflows where decisions are required.

How to Use "Ask for Approval" in Flow Designer

- Open a Flow**
 - Go to: **Flow Designer** ? Open or create a flow.
- Add Action ? Ask for Approval**
 - Click + and select **Action**.
 - Search for and select "**Ask for Approval**".
 - Select Table/Record– Network Database table.
- Configure the Approval**
 - Who Needs to Approve?**

- **Users:** Select specific users (static or from data pills like Requested For, Manager, etc.)
- **Groups:** Assign to a group. The first responder usually determines the outcome unless changed. I.e group manager.

B. Approval Record

- You must associate the approval with a record, typically the trigger record like:
 - Custom Table Record

C. Approval Details

- **Short Description:** The approvers will see the request."

4. Use the Outcome

- The action outputs an **Approval State** will be like approved, rejected, or skipped.

5. Flow Logics:

- In ServiceNow Flow Designer, **Flow Logic** actions are used to **control the flow's path** based on conditions, iterations, or specific structure. They help you make decisions, loop through data, wait for conditions, and handle errors.

Using of If Condition:

- Click the "+" below your previous step (like the approval).
- Choose "Flow Logic" ? "If".

1. Set the Condition in the If block:

- Click "Add Condition"
- Choose a data pill (such as Approval State, variables.reason, or any field).
- Set your condition.

2. Add Actions Inside the If Block

- Inside the **If (true)** block, add actions like:
- Create a New table record/Update an existing record

3. Save and Test:

- After configuring the flow, click **Save** and then **Test** the flow to ensure it behaves as expected.
- You can test the flow using sample data or by triggering it manually.

4. Activate the Flow:

Once you've tested the flow and everything looks good, you can **activate** the flow so that it starts running based on the defined trigger

Testing And Debugging Flows

Steps to Test and Debug a Flow:

- 1. Testing:**
 - After creating a flow, you can test it by triggering the flow manually or creating a test record that matches your trigger conditions.
- 2. Debugging:**
 - Use the **Flow Execution Logs** to debug and track the flow's execution.
 - Go to **Flow Designer > Flows**, select the flow, and review execution logs to identify any issues.

Best Practices For Flow Designer

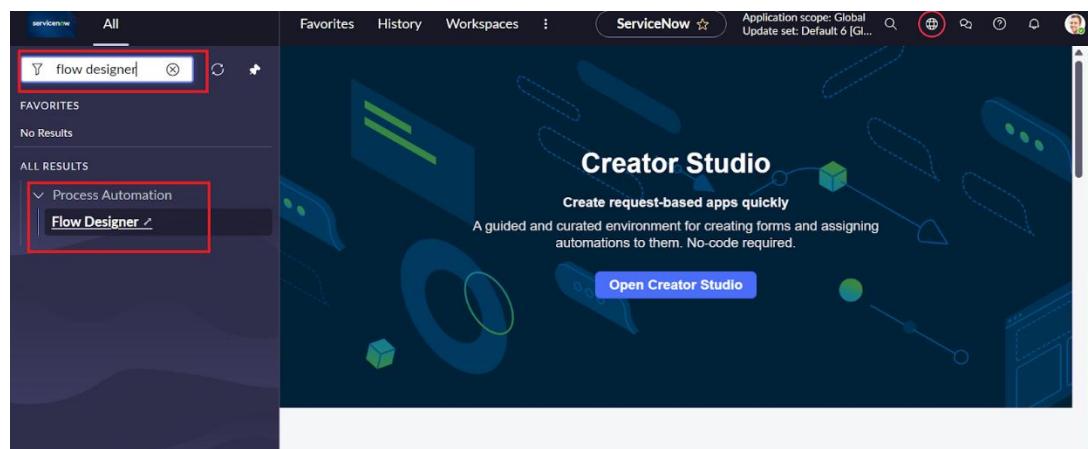
- **Use Subflows:** For reusable processes, you can create subflows that are called from other flows. This reduces duplication.
- **Keep Flows Simple:** Avoid overly complex flows. Break up large processes into smaller, more manageable subflows.
- **Error Handling:** Make sure your flows are capable of handling errors gracefully.
- **Naming Conventions:** Use clear, consistent naming conventions for flows, actions, and subflows.
- **Testing:** Always test your flow thoroughly before activating it in a production environment.

Creation & Implementation Of Flows, Actions In Flow Designer

Creation & Implementation of flows, Actions in Flow Designer

Creation Of Flow

1. Navigate to Flow designer home page
2. Click on New to create a new flow
3. Provide flow name as **Network Request**
4. Provide description of flow
5. Click on Build flow.



A screenshot of the Workflow Studio interface. At the top, there is a navigation bar with a "Workflow Studio" icon and a "New" button highlighted with a red box. Below the navigation bar, there are tabs for "Homepage", "Operations", and "Integrations", with "Homepage" being the active tab. There are also tabs for "Playbooks", "Flows", "Subflows", "Triggers", "Actions", and "Decision tables", with "Decision tables" being the active tab. In the center, there is a table titled "Decision tables" with 14 entries. The first entry is "Allow Access Policy". To the right of the table, there is a "New" button with a dropdown menu open, showing options: "Playbook" (highlighted with a red box), "Flow" (highlighted with a red box), "Subflow", "Trigger", "Action", and "Decision table".

Let's get the details for your flow

Flow name * ⓘ
Network Request

Application * ⓘ
Global

Description ⓘ
This flow is using for the automatic approvals and actions using flow designer action|

> Show additional properties

Cancel **Build flow**

Configuring Trigger

1. Click on (+) Icon to Configure the Trigger
2. Select Trigger as Application >> Service catalog
3. Click on **Done**.

Configuring Actions

Click on Actions button to configure new action

1. **Get Catalog Variables**
 - Click on Action, search for Get Catalog Variables
 - Select Get Catalog Variables
 - Action Inputs>> Trigger>>service catalog>>Requested Item
 - Template catalog items >> Select table >> Network Request
 - Select the Required Variables and Move to the selected area.
 - Click on done

1. **Get Catalog Variables from Network Request**

Action Properties

Action: Get Catalog Variables

Action Inputs

* Submitted Request [Requested Item ...] Trigger -> Requested Item ... X

Select one or more values from the Template Catalog Items and Variable Sets, and select the required Catalog Variables to generate output data pills. You cannot choose the same Catalog Variable from multiple Template Catalog Items and Variable Sets.

* Template Catalog Items and Variable Sets [Catalog Items and Variable Sets]

Network Request X v

Catalog Variables	Available	Selected
	email_id user_name phone number	opened_on_behalf_of please_provide_address_her type_of_devices

2. Create Record

- Select action as Create Record
- Select table as Network Database
- Click on Add fields button to configure the fields
- Configure the Required fields as shown in the below picture
- Click on done

2. **Create User DataBase Table Record**

Action Properties

Action: Create Record

Action Inputs

* Table: Network DataBase Table [u_u] Trigger - Service Catalog > Requested Item Record > Request > Number

* Fields	Request Number	X	Trigger - Service Catalog > Requested Item Record > Request > Number
	Requested For	X	1 - Get Catalog Va... ▶ ... ▶ Num... X
	Work Status	X	New
	Assignment Group	X	Network
	Date of Enquiry	X	Trigger - Service Catalog > Requested Item Record > Date of Enquiry
	Device Details	X	1 - Get Catalog Va... ▶ ... ▶ type_of_dev... X
	Customer Address	X	1 - G... ▶ please_provide_addr... X

+ Add field value

3. Send Email

- Select action as Send Email

- Select target record >> Create record>> network database table
- Table will be selected automatically
- Configure To, CC, BCC as per our requirements(select static/dynamic)
- Provide Subject & Body as shown in the below picture
- Click on done

Action Properties

Action: Send Email

Action Inputs

Target Record: 2 - C... ▶ User DataBase Table... X

Table: Network DataBase Table [u_user...]

Include Watermark: 1 - Get Catalog Variables > opened_on_behalf_of > Email

* To: 1 - Get Catalog Va... ▶ ... ▶ Em... X

CC: 2 - Create Record ▶ ... ▶ Email X

Network Request Active

Subject: Request has been Created

Body:

Hello 2 - Create ... ▶ ... ▶ Requested ... , 2 - Create Record > User DataBase Table Record > Request Number

We have been received your request with request number: 2 - Creat... ▶ ... ▶ Request Nu...

Sorry for the Inconvenience and Your request will resolved with in 2 Business working days.

Thanks for contacting us.

Network Team.

4. Ask for approvals

- Select action as Ask for Approval
- Select target record >> Create record>> network database table
- Provide Approval Reason>> Waiting for approval

- Configure approval rules>> Approve, reject, approve/reject
- Select approvals as Anyone approves, everyone approves etc.
- We can select approvals like static/dynamic as shown below
- Click on done

Network Request Active

Action Ask For Approval

Action Inputs

* Record 2 - C... ▶ User DataBase Table... X (i) (E)

Table Network DataBase Table [u_user...] (i) (E)

Approval Reason Waiting for approval (i) (E)

Approval Field Select a field (i) (E)

Journal Field Select a field (i) (E)

* Rules

Approve When: Anyone approves (i) (E)

2 - Create Rec... ▶ ... ▶ Manag... X (i) (E)

(i) (i) (i) OR A

Add another OR

5.

Flow Logic

- Select action as flow logic and Select If condition
- Apply condition >> Ask for approvals state is **Approved/Rejected** as per requirement
- Click on done

5 If

Condition Label: If Request is Approved

* Condition 1: 4 - Ask For Ap... ▶ Approval St... X (i) Approved (i) or and X

Add another condition set(OR)

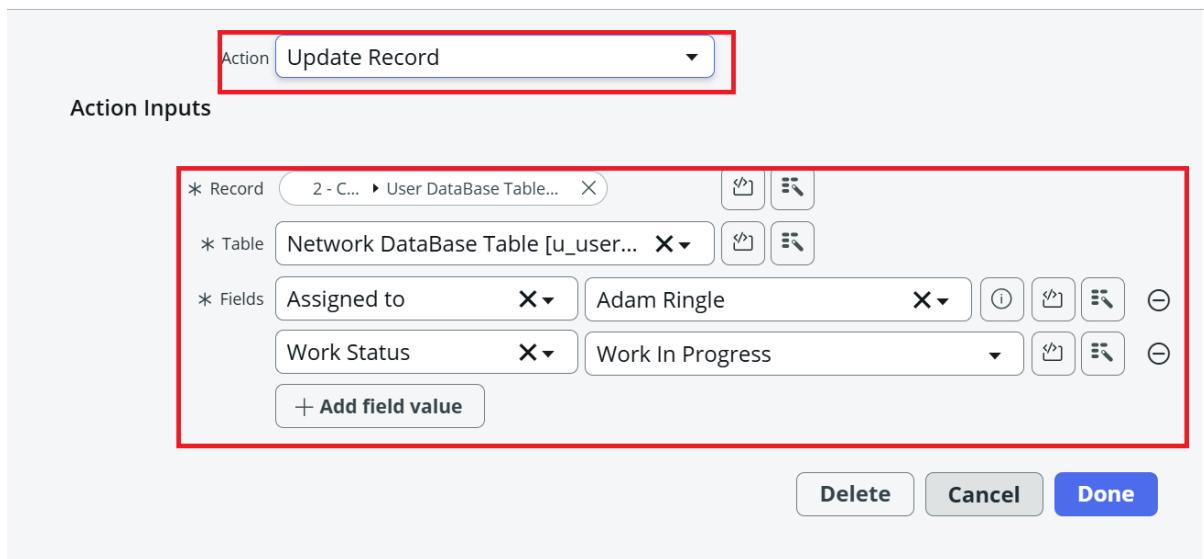
Delete Cancel Done

6.

Update Record

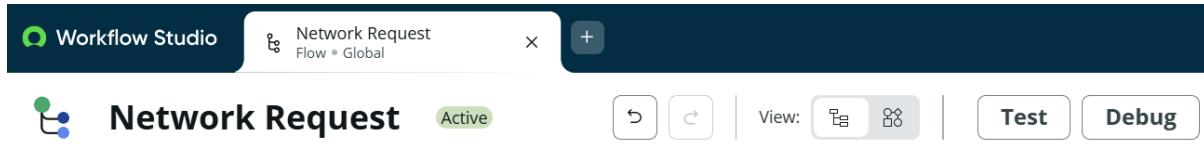
- Select action as Update Record
- Select record as >> create record>> network database
- Table will be selected automatically
- Configure the fields as per requirement, as shown in below

- Click on done



Note: Configure the other actions and Logics as shown in the flow chart.

Flow Chart



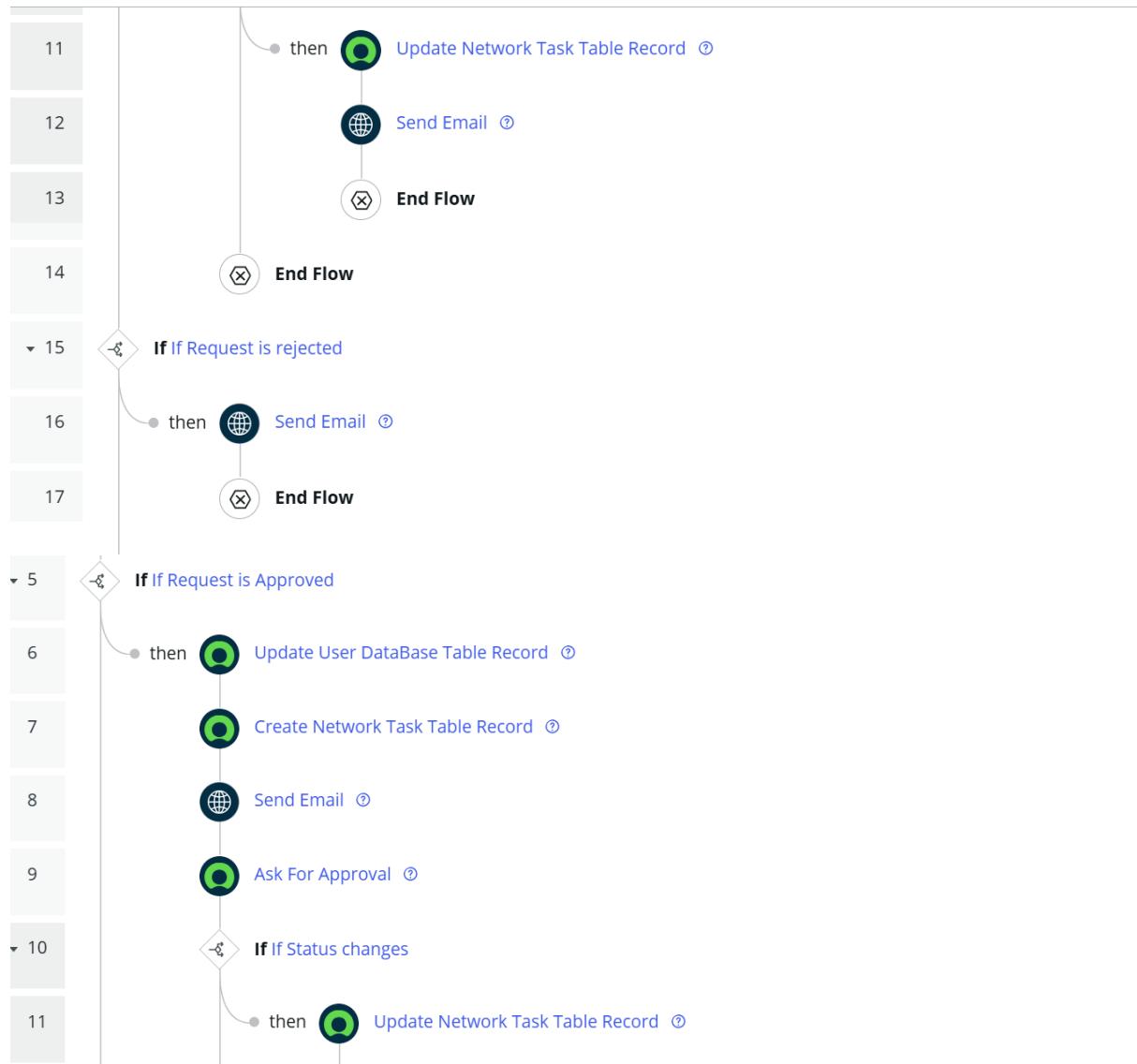
TRIGGER



Service Catalog

ACTIONS Select multiple

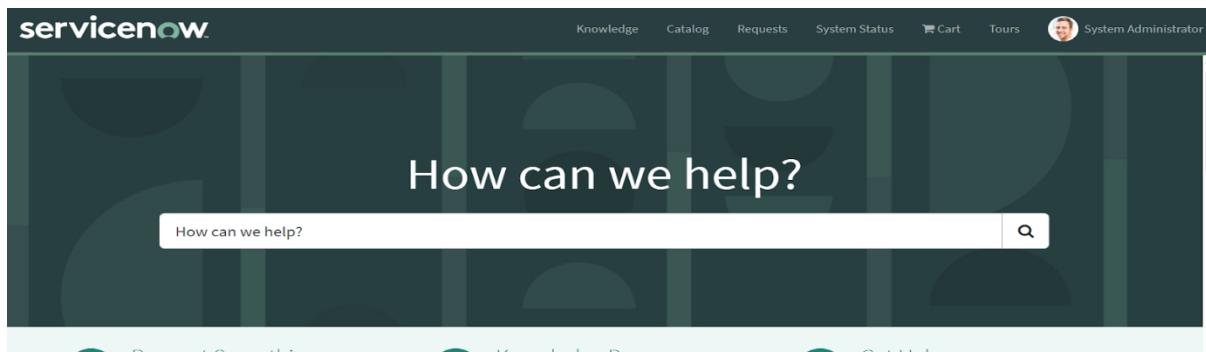
- 1 Get Catalog Variables from Network Request ②
- 2 Create User DataBase Table Record ②
- 3 Send Email ②
- 4 Ask For Approval ②
- 5 If If Request is Approved



Testing In Service Portal(End User)

Procedure:

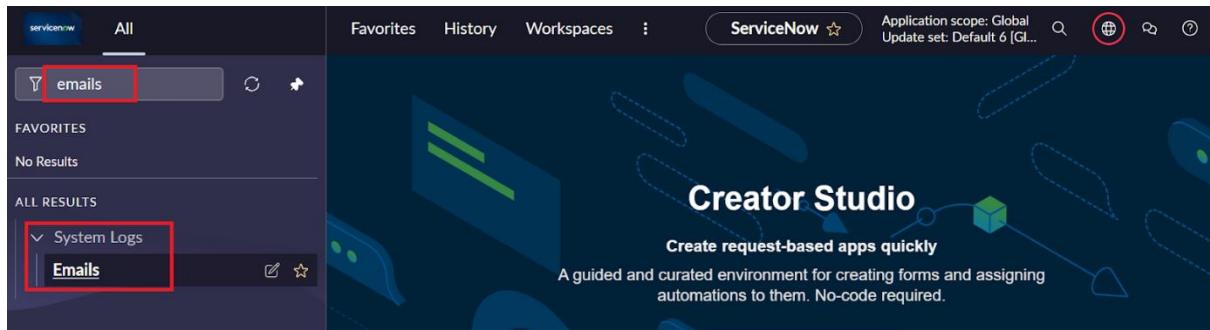
1. Login to ServiceNow PDI
2. Copy the Instance domain ex: <https://dev190678.service-now.com>.
3. Paste the URL in the Next tab and add Prefix SP to the URL. ex: <https://dev190678.service-now.com/sp>.
4. Search for **Network Requests**.
5. Fill the required details and click on submit
6. New Requests will be generated with request numbers and users will get particular emails on the same.

A screenshot of the "Network Request" form. The "Requester information" section is highlighted with a red box. To the right, a sidebar shows quantity set to 1, delivery time of 0 days, and two buttons: "Add to Cart" and "Save as Draft". A prominent green "Order Now" button is also highlighted with a red box. A small note at the bottom asks if it's a new network connection or relocation.A screenshot of the "Request Summary" table. The top row contains submission details: "Submitted: 27/05/2025 09:19:17", "Request Number: REQ0010043", and "Estimated Delivery: 27/05/2025". The table has columns for Item, Delivery Date, Stage, Price (each), Quantity, and Total. A single row for "Network Request" is shown, with its "Delivery Date" field highlighted with a red box. The total value is listed as "Total: \$0.00".

Testing Emails

Procedure:

1. Login to ServiceNow PDI
2. System logs>> emails
3. Apply filter>> created on today
4. Search with To, BCC, CC, Subject to get to know what are the emails triggered on the particular request.



	Created	Recipients	Copied	Blind copied	Subject	Type	User ID
	Search	Search	Search	Search	Search	Search	Search
	27/05/2025 09:19:20	admin@example.com			Request REQ0010043 was approved	send-ready	(empty)
	27/05/2025 09:19:20	abraham.lincoln@example.com bow.ruggeri@example.com			Request has been Created	send-ready	(empty)
	27/05/2025 09:19:20	admin@example.com			Request REQ0010043 was created	send-ready	(empty)

Preview Email

Hello Abraham Lincoln,

We have been received your request with request number: REQ0010043,

Sorry for the Inconvenience and Your request will resolved with in 2 Business working days.

Thanks for contacting us.

Network Team.

Testing With Custom Tables

Procedure:

1. Login to ServiceNow PDI
2. System definition >> Tables>> Network database/Network Task
3. After request is generated, Database and task tables fields are automatically filled by the flow designer configurations
4. Observe the Approvals requests and Changing of States of tables carefully

Network DataBase Tables

All

Request Number	Requested For	Work Status	Created
REQ0010043	Abraham Lincoln	New	27/05/2025 09:19:20
REQ0010042	Abraham Lincoln	New	23/05/2025 12:05:06
REQ0010026	Abraham Lincoln	approved	16/05/2025 17:19:41
REQ0010025	Adam Ringle	requested	16/05/2025 17:18:15
REQ0010024	Abel Tuter (architect)	New	16/05/2025 17:00:01
REQ0010023	0a3371ab8391225022f7e630ceaad33a	New	16/05/2025 16:58:47
REQ0010022	System Administrator	New	16/05/2025 16:52:33

Network DataBase Table
NET0001044

Database Number	NET0001044	Work Status	New
Request Number	REQ0010043	Assignment Group	Network
Created	27/05/2025 09:19:20	Assigned to	
Requested For	Abraham Lincoln	Device Details	Laptop
Date of Enquiry	27/05/2025		
Customer Address			
Special Instructions	Special Instructions		
	<input type="button" value="Post"/>		

Activities: 1

System Administrator

Field changes • 27/05/2025 09:19:20

Assignment Group	Network
Database Number	NET0001044
Date of Enquiry	27/05/2025
Request Number	REQ0010043
Requested For	Abraham Lincoln

Request Approvals

Approvals

State	Approver	Comments	Approval for	Created
Requested	Bow Ruggeri	(empty)		27/05/2025 09:19:20

Network Task Tables

Task Number	Approval Status	Assigned to	Database Number	Request Number	Work Status	Created
NTT0001037	Requested	Adam Ringle	NET0001044	REQ0010043	Work In Progress	27/05/2025 09:25:27
NTT0001034	Approved	Adam Ringle	NET0001040	REQ0000001	Completed	23/05/2025 08:54:13
NTT0001033	Approved	Adam Ringle	NET0001039	REQ0010041	Completed	22/05/2025 15:14:16
NTT0001032	Approved	Adam Ringle	NET0001038	REQ0010040	Completed	22/05/2025 14:51:19
NTT0001031	Approved	Adam Ringle	NET0001037	REQ0000001	Completed	22/05/2025 12:56:55

Network Task Table
NTT0001037

Task Number	NTT0001037	Requested For	Abraham Lincoln
Database Number	NET0001044	Approval Status	Requested
Request Number	REQ0010043	Work Status	Work In Progress
		Assigned to	Adam Ringle

Description:

Work Notes: Work Notes

Activities: 1 System Administrator

Approval Status	Requested
Assigned to	Adam Ringle
Database Number	NET0001044
Request Number	REQ0010043
Requested For	Abraham Lincoln
Task Number	NTT0001037
Work Status	Work In Progress

Field changes • 27/05/2025 09:25:27

Network Task Table
NTT0001037

① Approved Network Task Table: NTT0001037

Task Number	NTT0001037	Requested For	Abraham Lincoln
Database Number	NET0001044	Approval Status	Approved
Request Number	REQ0010043	Work Status	Completed
		Assigned to	Adam Ringle

Description: Task has been completed Successfully

Work Notes: Work Notes

Activities: 2 System Administrator

Approval Status	Approved was Requested
Work Status	Completed was Work In Progress

Field changes • 27/05/2025 09:27:26

All > Created on Today

Emails Subject Search Actions on selected rows...

Created	Recipients	Copied	Blind copied	Subject	Type	User ID
27/05/2025 09:19:20	admin@example.com			Request REQ0010043 was approved	send-ready	(empty)
27/05/2025 09:19:20	abraham.lincoln@example.com	bow.ruggeri@example.com		Request has been Created	send-ready	(empty)
27/05/2025 09:25:27	adam.ringle@acme.com		abraham.lincoln@example.com	Request has been processed	send-ready	(empty)
27/05/2025 09:27:26	abraham.lincoln@example.com	adam.ringle@acme.com		Request has been Resolved	send-ready	(empty)
27/05/2025 09:19:20	admin@example.com			Request REQ0010043 was created	send-ready	(empty)

Preview Email

Hello Abraham Lincoln,

Your ticket has been resolved, thanks for contacting us.

Thank you.

Conclusion:

The Network Request Management system in ServiceNow automates request intake, routing, and fulfillment. Through dynamic forms, role-based approvals, and email notifications, it ensures transparency and efficiency. Optional automation integration further reduces manual workload and risk, enabling faster and more reliable network operations.