

# Data Architecture Document

## Purpose of Data Architecture

The purpose of this document is to define the data model, table structure, and relationships used in the **Automated Network Request Management System** developed on the ServiceNow platform.

The data architecture ensures that all network-related requests are stored in a **structured, secure, scalable, and auditable manner**, enabling efficient automation, reporting, and compliance.

## Overview of Custom Tables

To manage all network service requests, a custom table named **Network Database** has been created. This table acts as the **central data repository** for all network-related service catalog requests.

Table - 1 Network Database

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## Custom Table: u\_network\_database

The **u\_network\_database** table stores all critical information related to a network request, including:

- Requester details
- Device or service information
- Assignment and approval details

- Work status and fulfillment progress

Records are automatically created and updated through **Flow Designer automation** when a catalog item is submitted.

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## Field Properties

### Reference Fields

- Assigned To → References **sys\_user**
- Assignment Group → References **sys\_user\_group**

### Choice Fields

- Work Status → Used to maintain standardized request states such as *New, Approved, In Progress, Completed, Rejected*

### System Fields

- Sys ID, Created, Created By, Updated, Updated By
- System-generated and read-only

### Mandatory Fields

- Request Number
  - Work Status
  - Assigned To (based on workflow stage)
- 

## Table Relationships

The custom table integrates with native ServiceNow tables:

- **User Table (sys\_user)** – for requester and assignment tracking
- **Group Table (sys\_user\_group)** – for routing requests to fulfillment teams

These relationships enable:

- Role-based access control
- Proper accountability
- Seamless integration with ServiceNow task management

## Data Flow Overview

1. User submits a network request via Service Catalog
2. Catalog variables are captured by Flow Designer
3. Data is mapped into **u\_network\_database**
4. Approval and fulfillment updates modify the record
5. Final status is stored for reporting and audit purposes

**Table - 2 Network Task**

Table Columns						
Label	Network task	Application	Global			
Name	u_network_task	Remote Table				
Extends table	Task					
<div>Columns</div> <div>Controls</div> <div>Application Access</div>						
<div>Table Columns</div> <div>for test</div> <div>Search</div> <div>1 to 20 of 72</div> <div>New</div>						
Column label	Type	Reference	Max length	Default value	Display	Column name
Delivery task	Reference	Execution Plan Task	32		false	delivery_task
Upon reject	String	(empty)	40	cancel	false	upon_reject
Actual start	Date/Time	(empty)	40		false	work_start
Rejection goto	Reference	Task	32		false	rejection_goto
Expected start	Date/Time	(empty)	40		false	expected_start
Service	Reference	Service	32		false	business_service
Approval history	Journal	(empty)	4,000		false	approval_history
Location	Reference	Location	32		false	location
Updated	Date/Time	(empty)	40		false	sys_updated_on
Service offering	Reference	Offering	32		false	service_offering
Urgency	Integer	(empty)	40	3	false	urgency
Watch list	List	User	4,000		false	watch_list
Configuration item	Reference	Configuration item	32		false	cnmdb_ci
Business duration	Duration	(empty)	40		false	business_duration
User input	User input	(empty)	4,000		false	user_input
Active	True/False	(empty)	40	true	false	active
Additional comments	Journal input	(empty)	4,000		false	comments
Opened	Date/Time	(empty)	40	javascript:gs.nowDateTime()	false	opened_at

## Conclusion

The data architecture ensures a **clean, scalable, and auditable system**.

By leveraging a custom table integrated with ServiceNow's native data model, the solution supports automation, transparency, and ITSM best practices.