

Data Architecture

Purpose of Data Architecture

- This document explains the data design and table structure implemented for the **Automated Network Request Management** application in ServiceNow.
- The data architecture is designed to securely store network request information in an organized and traceable manner, enabling smooth automation, monitoring, and reporting across the request lifecycle.

Overview of Custom Tables

- A dedicated custom table named **Network Request Repository** has been created to manage all network-related service requests.
- This table serves as the primary data source for storing information submitted through the Service Catalog and used by backend automation processes.

Attribute	Description
Table Label	Network Request Repository
Table Name	u_network_database
Application Scope	Global
Usage	Stores structured data captured from network service requests

Custom Table: u_network_database

- The **u_network_database** table contains all key information related to network requests such as requester details, system or device information, assignment data, and request progress status.

Records in this table are created and updated automatically through **Flow Designer** when users submit network requests via the Service Catalog.

A table is a collection of records in the database. Each record corresponds to a row in a table, and each field on a record corresponds to a column on that table. Applications use tables and records to manage data and processes. [More Info](#)

* Label: Network Database
* Name: u_network_database

Application: Global
Remote Table:
Customer location:

Column label	Type	Reference	Max length	Default value	Display
Work Status	String	(empty)	40	false	false
Updated by	String	(empty)	40	false	false
Updates	Integer	(empty)	40	false	false
Customer Address	String	(empty)	40	false	false
Date of Enquiry	Date/Time	(empty)	40	false	false
Updated	Date/Time	(empty)	40	false	false
Request Number	String	(empty)	40	false	false
Assignment Group	Reference	Group	32	false	false
Device Details	String	(empty)	40	false	false
Assigned to	Reference	User	32	false	false
Requested for	String	(empty)	40	false	false
Sys ID	Sys ID (GUID)	(empty)	32	false	false
Created by	String	(empty)	40	false	false
Customer Document	String	(empty)	40	false	false
Created	Date/Time	(empty)	40	false	false
manager	Reference	User	32	false	false
Insert a new row...					

Delete | Update | Delete All Records

Related Links: Form Builder, Design Form, Layout Form, Layout List, Show Form, Show List, Show Schema Map, Add to Service Catalog, Run Point Scan, Explore REST API

Access Controls (4) | Security Data Filters | Labels (1) | Database Indexes (4) | Table Subscription Configuration (1)

Name	Decision Type	Operation	Type	Active	Updated by	Updated
u_network_database	Allow If	write	record	true	admin	2025-12-16 21:39:26
u_network_database	Allow If	delete	record	true	admin	2025-12-16 21:39:26
u_network_database	Allow If	read	record	true	admin	2025-12-16 21:39:25
u_network_database	Allow If	create	record	true	admin	2025-12-16 21:39:25

Figure 1: Network Request Repository (u_network_database) structure in ServiceNow

Field Characteristics

- **Reference Fields:**
 - Assigned To → Linked to the **User (sys_user)** table

- Assignment Group → Linked to the **Group (sys_user_group)** table
- **Choice Fields:**
 - Work Status is configured as a choice field to maintain consistent and standardized status values across all requests
- **System-Generated Fields:**
 - Fields such as Sys ID, Created On, Created By, and Updated On are automatically maintained by ServiceNow and cannot be edited
- **Required Fields:**
 - Request ID
 - Work Status
 - Assigned To (mandatory at specific workflow stages)

Table Relationships

- The **u_network_database** table is integrated with standard ServiceNow tables to support seamless operations:
- **User Table (sys_user):**
Used to identify requesters and assigned personnel
- **Group Table (sys_user_group):**
Used to route requests to the appropriate network support teams

These relationships help achieve:

- Controlled access based on user roles
- Clear ownership and responsibility
- Smooth integration with ServiceNow task and assignment workflows

Data Flow Overview

1. A user raises a network request through the Service Catalog

2. Input values are captured by Flow Designer
3. Data is mapped and stored in the **u_network_database** table
4. Records are automatically updated during approval and fulfilment stages
5. Final request status is saved for reporting and auditing purposes.

Conclusion

- The data architecture implemented for the Automated Network Request Management system provides a reliable, scalable, and well-structured data foundation.
- By leveraging a custom table integrated with ServiceNow's core user and group tables, the solution supports efficient automation, accurate tracking, and alignment with ITSM best practices.