

# Data Architecture

## Purpose of Data Architecture

The purpose of this document is to describe the data model and table structure used in the *Automated Network Request Management* application developed in ServiceNow.

The data architecture ensures that all network-related requests are stored in a structured, secure, and auditable format to support automation, reporting, and tracking.

## Overview of Custom Tables

To store and manage network request information, a custom table named **Network Database** has been created.

Attribute	Value
<b>Table Label</b>	Network Database
<b>Table Name</b>	<code>u_network_database</code>
<b>Application Scope</b>	Global
<b>Purpose</b>	Store structured data captured from Service Catalog network requests

This table acts as the central data repository for all network service requests submitted through the ServiceNow Service Catalog.

## ***Custom Table: u\_network\_database***

The u\_network\_database table stores all essential details related to network requests, including requester information, device details, assignment details, and work status.

The table is populated automatically through Flow Designer automation when a catalog item is submitted.

The screenshot shows the ServiceNow Table Definition screen for the 'u\_network\_database' table. At the top, there are fields for 'Label' (Network Database), 'Name' (u\_network\_database), 'Customer Address' (Network Database), and 'Extends table' (dropdown). On the right, there are options for 'Application' (Global), 'Create module' (checked), 'Create mobile module' (checked), 'Add module to menu' (dropdown set to '-- Create new --'), 'New menu name' (text input), and 'Remote Table' (checkbox). Below this is a large table titled 'Dictionary Entries' showing columns like 'Column label', 'Type', 'Reference', 'Max length', 'Default value', and 'Display'. The table lists various fields such as Updated, Device Details, Assigned to, Date of Enquiry, Customer Address, Request Number, Sys ID, Created by, Created, Work Status, Assignment Group, Updates, Requested For, Customer Document, and Updated by. Most fields have a type of String or Date/Time, and many have empty reference values. The 'Display' column shows most entries as false except for 'Updated' and 'Created' which are true. At the bottom of the table view are 'Delete', 'Update', and 'Delete All Records' buttons.

Figure 1: Network Database (u\_network\_database) table structure in ServiceNow

### ***Field Properties***

- Reference Fields:
  - Assigned To → References User table
  - Assignment Group → References Group table
- Choice Field:
  - Work Status is a choice field to maintain standardized request status values

- System Fields:
    - Fields like Sys ID, Created, Created By, Updated are system-generated and read-only
  - Mandatory Fields:
    - Request Number
    - Work Status
    - Assigned To (based on workflow stage)
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## **Table Relationships**

The u\_network\_database table maintains relationships with existing ServiceNow tables:

- **User Table (sys\_user)**  
Used for requester and assignment references.
- **Group Table (sys\_user\_group)**  
Used to route requests to appropriate fulfillment teams.

These relationships ensure:

- Role-based access control
  - Proper assignment and accountability
  - Seamless integration with ServiceNow task management
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## **Data Flow Overview**

1. User submits a **network request** via Service Catalog
2. Catalog variables are captured using **Flow Designer**
3. Data is mapped and stored in **u\_network\_database**

4. Records are updated automatically as approvals and fulfillment progress
  5. Final status is recorded for tracking and reporting
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## **Conclusion**

The data architecture of the Automated Network Request Management system ensures a **clean, scalable, and auditable data structure.**

By using a custom table integrated with ServiceNow's native user and group tables, the system supports efficient automation, reliable tracking, and compliance with IT service management best practices.