

# Data Architecture Document

## Purpose of Data Architecture

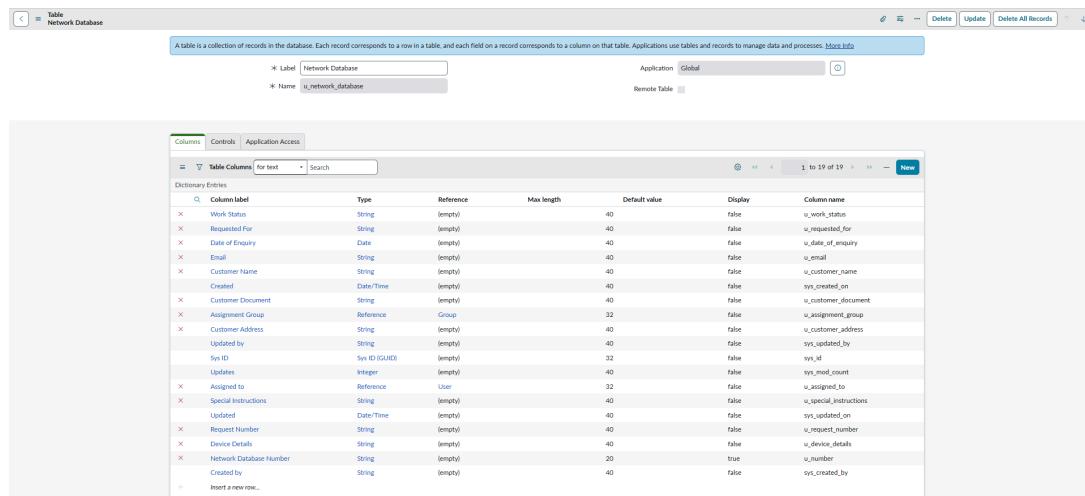
The purpose of this document is to define the data model, table structure, and relationships used in the **Automated Network Request Management System** developed on the ServiceNow platform.

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**



A screenshot of the ServiceNow Table view for the 'u\_network\_database' table. The table has 19 rows of data. The columns are: Column Label, Type, Reference, Max length, Default value, Display, and Column name. The data includes fields like Work Status, Requested For, Date of Enquiry, Email, Customer Name, Created, Customer Document, Assignment Group, Customer Address, Updated by, Sys ID, Updates, Assigned to, Special Instructions, Updated, Request Number, Device Details, Network Database Number, and Created by. The 'Column name' column lists names such as u\_work\_status, u\_requested\_for, u\_date\_of\_enquiry, u\_email, u\_customer\_name, sys\_created\_on, u\_customer\_document, u\_assignment\_group, u\_customer\_address, sys\_updated\_by, sys\_id, sys\_mod\_count, u\_assigned\_to, u\_special\_instructions, sys\_updated\_on, u\_request\_number, u\_device\_details, u\_number, and sys\_created\_by.

Column Label	Type	Reference	Max length	Default value	Display	Column name
Work Status	String	(empty)	40	false	false	u_work_status
Requested For	String	(empty)	40	false	false	u_requested_for
Date of Enquiry	Date	(empty)	40	false	false	u_date_of_enquiry
Email	String	(empty)	40	false	false	u_email
Customer Name	String	(empty)	40	false	false	u_customer_name
Created	Date/Time	(empty)	40	false	false	sys_created_on
Customer Document	String	(empty)	40	false	false	u_customer_document
Assignment Group	Reference	Group	32	false	false	u_assignment_group
Customer Address	String	(empty)	40	false	false	u_customer_address
Updated by	String	(empty)	40	false	false	sys_updated_by
Sys ID	Sys ID (GUID)	(empty)	32	false	false	sys_id
Updates	Integer	(empty)	40	false	false	sys_mod_count
Assigned to	Reference	User	32	false	false	u_assigned_to
Special Instructions	String	(empty)	40	false	false	u_special_instructions
Updated	Date/Time	(empty)	40	false	false	sys_updated_on
Request Number	String	(empty)	40	false	false	u_request_number
Device Details	String	(empty)	40	false	false	u_device_details
Network Database Number	String	(empty)	20	true	false	u_number
Created by	String	(empty)	40	false	false	sys_created_by

## 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)
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## 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

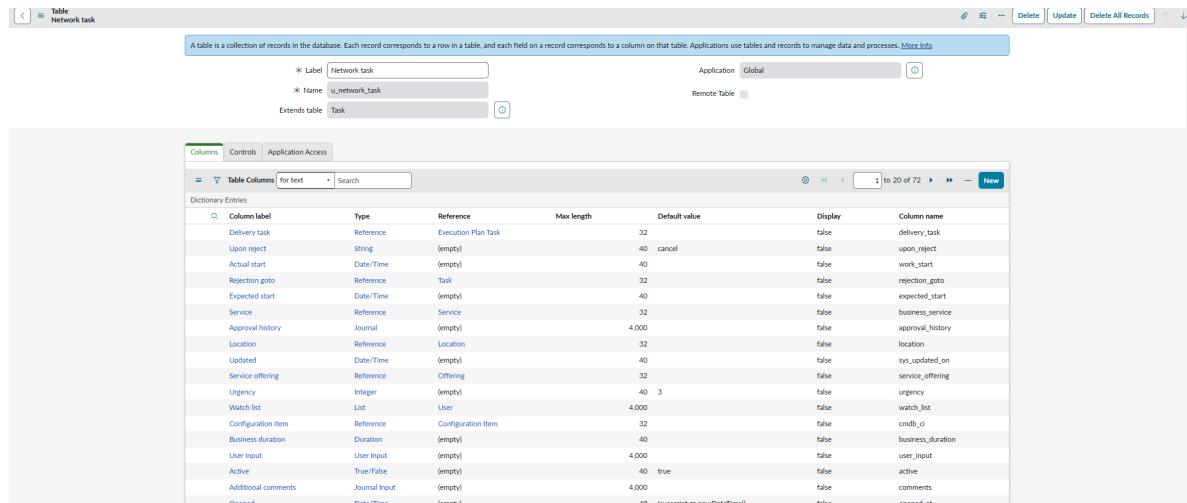
These relationships enable:

- 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**



The screenshot shows the ServiceNow Table view for the 'u\_network\_task' table. At the top, there are fields for Label ('Network task'), Name ('u\_network\_task'), and Application ('Global'). Below this is a 'Dictionary Entries' section containing a table of columns with their details:

Column label	Type	Reference	Max length	Default value	Display	Column name
Delivery task	Reference	Execution Plan Task	32	false	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	cmdb_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.