Database Schema Documentation for ShushiDb

# Overview

The ShushiDb system is designed to manage clients, users, plants, and devices, with roles and alarms integrated into the system. The schema is structured with relational tables supporting scalability and maintaining data integrity.

# Entity Relationship Diagram (ERD)

- Entities: Clients, Users, Roles, Plants, Devices, Device Tags, Plant Units, Alarms.  
- Relationships: Clients are associated with Users, Plants, and Devices. Users can be mapped to Plants and Units. Devices are mapped to Plants and monitored via tags. Alarm and event notifications are handled separately.

# Tables and Structure

## 1. Client Table (m\_client)

This table stores the client information.  
  
Fields:  
- id (uuid): Primary key.  
- name (varchar): Client's name.  
- email (varchar): Client's email address.  
- address (text): Client's address.  
- phone (varchar): Client's phone number.  
- created\_dt (timestamp): Creation timestamp.  
- created\_by (uuid): ID of the user who created the client.  
- modified\_dt (timestamp): Last modification timestamp.  
- modified\_by (uuid): ID of the user who modified the record.  
- isactive (boolean): Status indicator (default: true).  
  
Indexes:  
- idx\_client\_name: Index on the name field.  
- idx\_client\_email: Index on the email field.  
- idx\_client\_phone: Index on the phone field.

## 2. Role Table (m\_role)

Defines the roles that users can assume in the system.  
  
Fields:  
- id (uuid): Primary key.  
- name (varchar): Role name.  
- normalized\_name (varchar): Normalized role name.

## 3. User Table (m\_user)

Contains user-related information for clients.  
  
Fields:  
- id (uuid): Primary key.  
- client\_id (uuid): Foreign key referencing m\_client.  
- name (text): Full name of the user.  
- gender (varchar): Gender of the user.  
- email (varchar): Email of the user.  
- phone (varchar): Phone number of the user.  
- date\_of\_birth (date): Date of birth.  
- password\_salt (bytea): Salt for the user’s password.  
- created\_dt (timestamp): Creation timestamp.  
- created\_by (uuid): ID of the creator.  
- modified\_dt (timestamp): Last modification timestamp.  
- modified\_by (uuid): ID of the last modifier.  
- isactive (boolean): Status (default: true).  
  
Indexes:  
- idx\_user\_name: Index on the user's name.  
- idx\_user\_email: Index on the email.  
- idx\_user\_phone: Index on the phone number.

## 4. User Role Mapping Table (user\_role)

This table handles the mapping of users to roles.  
  
Fields:  
- user\_id (uuid): Foreign key referencing m\_user.  
- role\_id (uuid): Foreign key referencing m\_role.

## 5. Plant Type Table (m\_plant\_type)

Defines different types of plants.  
  
Fields:  
- id (uuid): Primary key.  
- type (varchar): Plant type name.  
- description (text): Description of the plant type.  
- created\_dt (timestamp): Creation timestamp.  
- created\_by (uuid): Creator of the plant type.  
- modified\_dt (timestamp): Last modification timestamp.  
- modified\_by (uuid): Modifier ID.  
- isactive (boolean): Active status (default: true).