Entity Relationship Diagram (ERD)

Work Locations and Office Addresses with Related Models

Overview

This ERD shows the relationships between work locations, office addresses, and their connections to clients and helpers.

Visual ERD (Mermaid Diagram)

```
erDiagram
    office_addresses ||--o{ work_locations : "serves (1:N)"
    work_locations ||--o{ clients : "has (1:N)"
    work_locations ||--o{ helpers : "has (1:N)"

    office_addresses {
        INTEGER id PK
        STRING name
        STRING street
        STRING building_number
        STRING zip_code
        STRING city
        STRING email "nullable"
        STRING tel "nullable"
        DATE created_at
        DATE updated_at
    }

    work_locations {
        SMALLINT id PK
        JSONB city_name
        STRING certificate_activation_code
        BOOLEAN is_active
        STRING bounding_box "nullable"
        STRING ik
        INTEGER flyer_num
        INTEGER serving_office_id FK
        DATE created_at
        DATE updated_at
        DATE deleted_at "nullable"
    }

    clients {
        INTEGER id PK
        SMALLINT work_location FK "nullable"
    }

    helpers {
        INTEGER id PK
        SMALLINT work_location FK "nullable"
    }
```

Entity: `office_addresses`

Description: Physical office addresses for JUHI offices

Field	Type	Constraints	Description
`id`	INTEGER	PK, AUTO_INCREMENT	Primary key
`name`	STRING(100)	NOT NULL	Office name (e.g., “Berlin Office”)
`street`	STRING(100)	NOT NULL	Street name
`building_number`	STRING(50)	NOT NULL	Building number
`zip_code`	STRING(10)	NOT NULL	ZIP code
`city`	STRING(100)	NOT NULL	City name
`email`	STRING(320)	NULLABLE	Email address
`tel`	STRING(50)	NULLABLE	Telephone number
`created_at`	DATE	NOT NULL	Creation timestamp
`updated_at`	DATE	NOT NULL	Update timestamp

Relationships: - `hasMany` → `work_locations` (via `serving_office_id`)

Entity: `work_locations`

Description: Work location cities/regions served by JUHI

Field	Type	Constraints	Description
`id`	SMALLINT	PK, AUTO_INCREMENT	Primary key
`city_name`	JSONB	NOT NULL	City name in multiple languages `{de: "Berlin", en: "Berlin"}`
`certificate_activation_code`	STRING(50)	NOT NULL	Certificate activation code
`is_active`	BOOLEAN	NOT NULL, DEFAULT true	Whether location is active
`bounding_box`	STRING(100)	NULLABLE	Bounding box coordinates “west,south,east,north”
`ik`	STRING(50)	NOT NULL	Insurance number (work-location-specific)

Field	Type	Constraints	Description
`flyer_num`	INTEGER	NOT NULL	Flyer number (work-location-specific)
`serving_office_id`	INTEGER	NOT NULL, FK → `office_addresses.id`	Office that serves this work location
`created_at`	DATE	NOT NULL	Creation timestamp
`updated_at`	DATE	NOT NULL	Update timestamp
`deleted_at`	DATE	NULLABLE	Soft delete timestamp

Relationships: - `belongsTo` → `office_addresses` (via `serving_office_id`) - `hasMany` → `clients` (via `work_location`) - `hasMany` → `helpers` (via `work_location`)

Foreign Key Constraints: - `serving_office_id`: `ON UPDATE CASCADE`, `ON DELETE RESTRICT`

Entity: `clients`

Description: Client records with work location assignment

Field	Type	Constraints	Description
`id`	INTEGER	PK, AUTO_INCREMENT	Primary key
`work_location`	SMALLINT	NULLABLE, FK → `work_locations.id`	Work location assigned to client
…	…	…	(Other client fields)

Relationships: - `belongsTo` → `work_locations` (via `work_location`) - *Note: Association not yet defined in model, but FK exists*

Foreign Key Constraints: - `work_location`: References `work_locations.id` (nullable)

Entity: `helpers`

Description: Helper records with work location assignment

Field	Type	Constraints	Description
`id`	INTEGER	PK, AUTO_INCREMENT	Primary key
`work_location`	SMALLINT	NULLABLE, FK →	Work location assigned to

Field	Type	Constraints	Description
		`work_locations.id`	helper
…	…	…	(Other helper fields)

Relationships: - `belongsTo` → `work_locations` (via `work_location`) - *Note: Association not yet defined in model, but FK exists*

Foreign Key Constraints: - `work_location`: References `work_locations.id` (nullable)

Relationship Summary

```
office_addresses (1) ──────< (many) work_locations
                                       │
                                       │ serving_office_id
                                       │
                                       ├──< (many) clients
                                       │    work_location (FK)
                                       │
                                       └──< (many) helpers
                                            work_location (FK)
```

Cardinality

1. **office_addresses → work_locations**
   - One office address can serve many work locations
   - Each work location belongs to exactly one office address
   - Relationship: **1:N** (One-to-Many)
2. **work_locations → clients**
   - One work location can have many clients
   - Each client can belong to one work location (nullable)
   - Relationship: **1:N** (One-to-Many, optional)
3. **work_locations → helpers**
   - One work location can have many helpers
   - Each helper can belong to one work location (nullable)
   - Relationship: **1:N** (One-to-Many, optional)

Notes

1. **Missing Associations**: The `client` and `helper` models currently have `work_location` foreign key columns but the Sequelize associations (`belongsTo`) are not yet defined in the model files. These should be added for proper ORM functionality.

2. **Soft Deletes**:

   - `work_locations` uses soft deletes (`deleted_at`)
   - `office_addresses` does NOT use soft deletes
3. **Data Flow**:

   - Office addresses are the top-level entity
   - Work locations reference office addresses

- Clients and helpers reference work locations

Generated: January 27, 2026