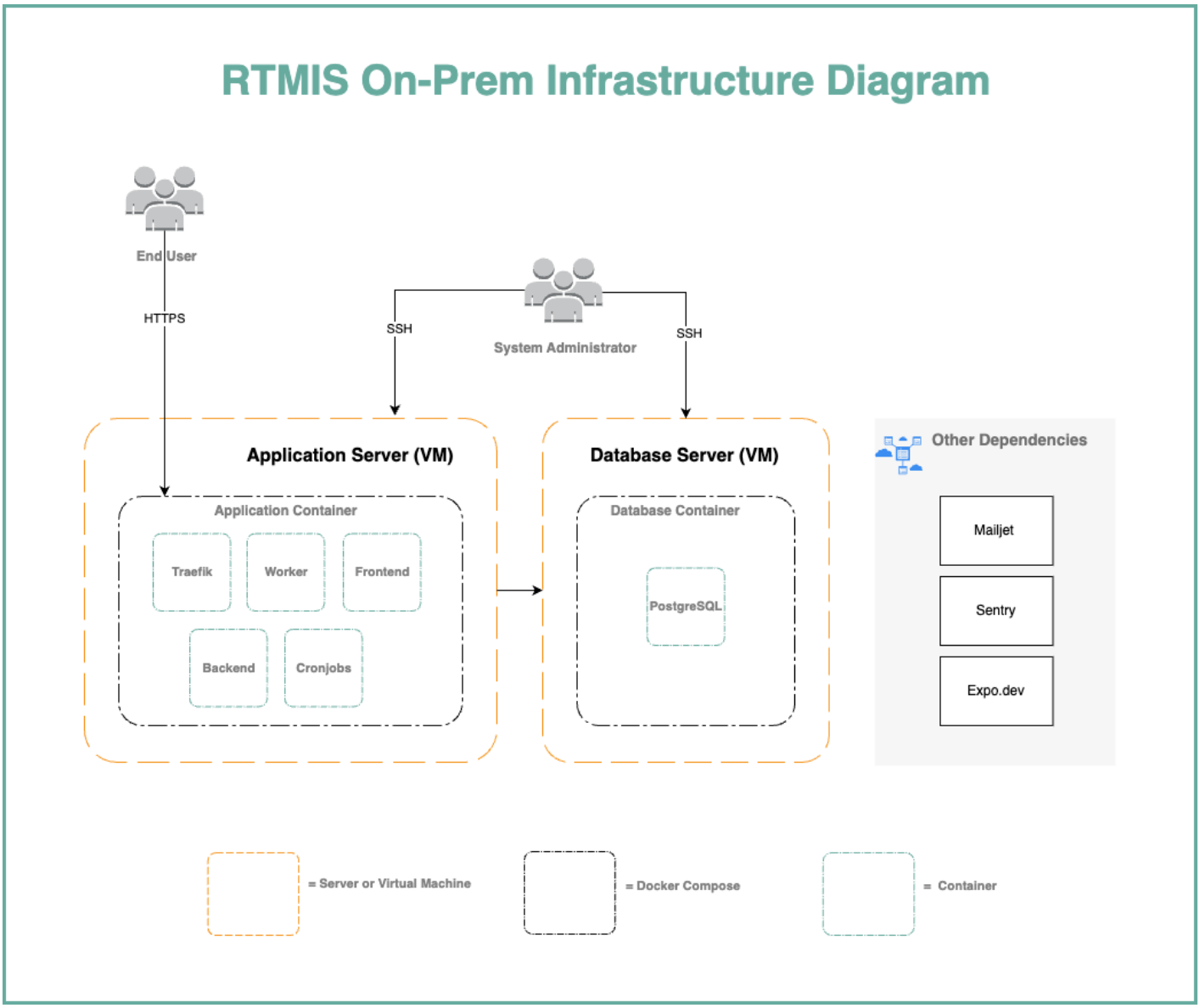
RTMIS Self-Host Installation Guide

Installation Guide

Below step is for self-host or on-prem installation process. Please follow Developer-Guide to setup the development environement.

Infrastructure Diagram



System Requirements

Application Server

- **CPU:** 2 GHz Dual Core Processor
- **Memory:** 4 GiB
- **Storage:** 25 GiB or more Disk Space
- **Operating System:** Ubuntu Server 22.04 - x86_64 (AMD/Intel)
- **IP:** 1 public IP (plus 1 private IP if the database server in private IP)

Database Server

- **CPU:** 2 GHz Dual Core Processor
- **Memory:** 4 GiB

- **Storage:** 25 GiB or more Disk Space
- **Operating System:** Ubuntu Server 22.04 - x86_64 (AMD/Intel)
- **IP:** 1 private or public IP

Prerequisite

- **Servers:** Application and database servers provisioned as specified above
- **Domain:** Domain or Subdomain which pointed to the server's public IP
- **Docker Engine:** 20.10 or above
- **Git:** 2.39 or above
- **3rd Party Service Providers:**
  - Mailjet: Mail delivery service
  - Sentry: Error tracking
  - Github Account: Code repository and CI/CD tool platform
  - Expo: Mobile application build service

Preparation

Note: The following guide is an example installation on **Ubuntu and Debian based systems**. You need the below depedencies installed both on **Application Server** and **Database Server**.

Install Docker Engine

1. Install Docker engine:

   ```
   sudo curl -L https://get.docker.com | sudo sh
   ```

2. Manage Docker for a non-root user.

   ```
   sudo usermod -aG docker $USER
   exit
   ```

3. The above `exit` command will close your terminal session. Please log back in to the previous user before continuing to the next steps.

Install Git Version Control

The RTMIS uses git as version control. Therefore it is better to install git to make it easier to retrieve updates instead download the repository zip.

```
sudo apt install git
```

Install Database Server

Execute the commands below on the server allocated for the **database** server.

Clone the Repository

```
cd ~
mkdir src
cd src
git clone https://github.com/unicefkenya/rtmis.git .
```

Environment Variable Setup

Install text editor to be able to edit `.env` file

```
sudo apt install nano
```

or

```
sudo apt install vim
```

Go to the repository directory, then edit the environment

```
cd deploy
cp db.env.template db.env
vim db.env
```

Example Environment:

```
POSTGRES_PASSWORD=<<your postgres user's password>>


# Ensure the values below match those in the app.env file in the application.
DB_USER=<<your rtmis db user>>
DB_PASSWORD=<<your postgresql password>>
DB_SCHEMA=<<your rtmis schema name>>
```

Run the Database Server

```
docker compose -f docker-compose.db.yml up -d
```

Install Application Server

Execute the commands below on the server allocated for the **application** server.

Clone the Repository

```
cd ~
mkdir src
cd src
git clone https://github.com/unicefkenya/rtmis.git .
```

Environment Variable Setup

Install text editor to be able to edit `.env` file

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sudo apt install nano
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```

Go to the repository directory, then edit the environment

```
cd deploy
cp app.env.template app.env
vim app.env
```

Example environment variables:

```
DB_HOST=<<your postgresql ip>>
DB_PASSWORD=<<your postgresql password>>
DB_SCHEMA=<<your rtmis schema name>>
DB_USER=<<your rtmis db user>>
POSTGRES_PASSWORD=<<your postgres user's password>>
DEBUG="False"
DJANGO_SECRET=<<your Django secret key>>
MAILJET_APIKEY=<<your mailjet api key from mailjet portal>>
MAILJET_SECRET=<<your mailjet api secret from mailjet portal>>
WEBDOMAIN=<<your exposed domain url, example : https://rtmis.akvo.org>>
APK_UPLOAD_SECRET=<<your apk upload secret>>
```

```
STORAGE_PATH="./storage"
SENTRY_DSN="<<your sentry DSN for BACKEND>>"
TRAEFIK_CERTIFICATESRESOLVERS_MYRESOLVER_ACME_EMAIL=<<administrator email for Letsencrypt registration>>
```

Build the Documentation

```
CI_COMMIT=initial docker compose -f docker-compose.documentation-build.yml up
```

Build the Frontend

```
CI_COMMIT=initial docker compose -f docker-compose.frontend-build.yml up
```

Run the Application

```
docker compose -f docker-compose.app.yml up -d --build
```

Data Seeding for Initial Data

Once the app is started, we need to populate the database with the initial data set. The required initial dataset are:

1. Seed administration
2. Seed super admin
3. Seed form
4. Seed organization

```
docker compose -f docker-compose.app.yml exec backend ./seeder.prod.sh
```

Cheatsheets

Manual Update the Application

Execute the command below on the application server to update the application with the latest codes and re-deploy to the application server:

```
$ cd deploy/
$ ./manual_update.sh
```

Restart the Application

Execute the command below on the application server to restart the application container:

```
$ cd deploy/
$ ./restart_app.sh
```

Clear Nginx Cache

Execute the command below on the application server:

```
$ docker compose -f docker-compose.app.yml exec -u root frontend sh -c "rm -rf /var/tmp/cache/*"
```

Remove Form

Execute the command below on the application server.

Login to container:

```
$ docker compose -f docker-compose.app.yml exec backend sh
```

After logged in, execute belo commands:

```
$ python manage.py shell
> from api.v1.v1_forms.models import Forms
> f = Forms.objects.filter(name="Short HH").first()
> f.delete()
```

Exit from the container and execute below command: Execute the command below on the application server

```
$ docker compose -f docker-compose.app.yml exec -u root frontend sh -c "rm -rf /var/tmp/cache/*"
```

Execute the Cronjob Manually

Execute the command below on the application server to triggering the cronjob manually.

```
$ docker compose -f docker-compose.app.yml exec backend-cron ./job.sh
```

Generate Django Secret

```
$ python3 -c 'import secrets; print(secrets.token_hex(60))'
```

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