

# Mr. MoneyBags v1.x – Ubuntu 24.04 LTS Server Deployment Guide

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## 1. Overview & Prerequisites

Mr. MoneyBags (MMB) is a Node.js + PostgreSQL web application served behind Nginx. These instructions assume:

- Ubuntu 24.04 LTS minimal/server install
- DNS A/AAAA record for the site (e.g. `accounting.example.org`)
- A **sudo-enabled** user (e.g. your login user)
- Outbound internet access for apt / git / certbot

### Quick facts

Component	Purpose	Runs as
Node 20.x	API backend (port 3000 internal)	<code>mrmb</code> system user
Nginx	HTTPS termination, static file hosting, proxy <code>/api/</code> to Node	<code>www-data</code>
PostgreSQL	Application database (can be local or external)	<code>postgres</code>

### 6.4 Database Setup Modes (Installer)

The one-shot installer (`deployment/ubuntu24/install.sh`) supports optional database setup via `--db=MODE`:

- `skip` (default): No DB operations
- `create`: Create role & database only (`database/setup-database.sql`)

- `schema` : Role/DB + schema only (no sample data) – empty DB recommended for AccuFund imports
- `full` : Role/DB + schema + built-in sample data ( `database/db-init.sql` )
- `macdump` : Schema + Mac test dataset ( `database/sample-data-mac-export.sql` )
- `principle` : Schema + The Principle Foundation dataset ( `database/load-principle-foundation-data.js` )

Examples:

```
# Empty schema only (prepare for AccuFund import later)
sudo ./deployment/ubuntu24/install.sh --db=schema

# Full schema + built-in sample data
sudo ./deployment/ubuntu24/install.sh --db=full

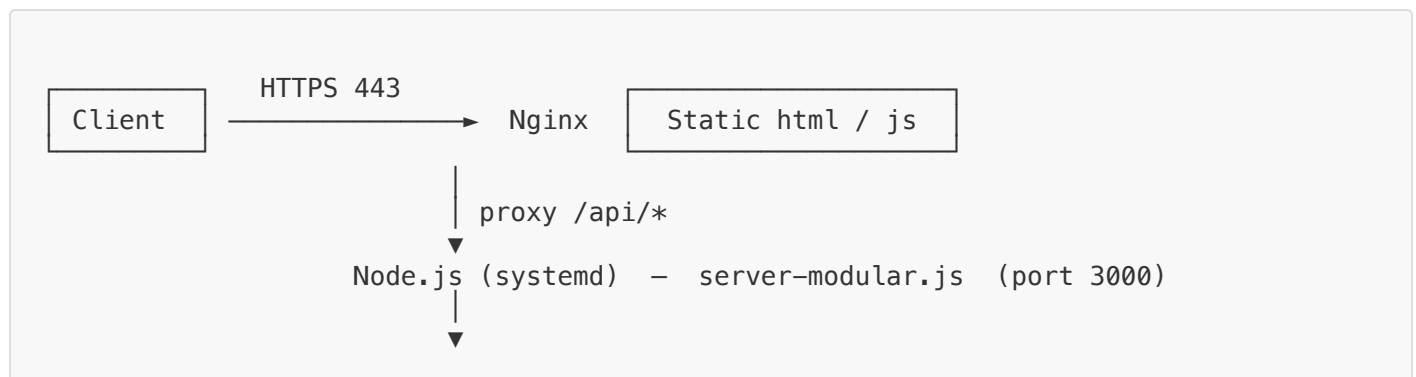
# Schema + Mac test dataset
sudo ./deployment/ubuntu24/install.sh --db=macdump

# Schema + Principle Foundation dataset
sudo ./deployment/ubuntu24/install.sh --db=principle
```

Notes:

- The installer will install/start local PostgreSQL if required for `create` , `schema` , or `full` modes.
- If `/opt/mr-moneybags/.env` exists, it will read `PGHOST` , `PGPORT` , `PGDATABASE` , `PGUSER` , `PGPASSWORD` to target a remote DB.
- You may combine `--db` with other flags such as `--domain` , `--repo` , `--branch` , `--app-dir` , and `--user` .

## 2. Reference Architecture



PostgreSQL

- **Nginx** serves all static assets from `$APP_DIR` and proxies `/api/` to Node.
- **Node** runs as an unprivileged user under systemd with secure cookie + trust-proxy.
- **PostgreSQL** may live on the same host or another server (set `DATABASE_URL` ).

### 3. Variable Cheat-Sheet

Variable	Example value	Description
<code>DOMAIN</code>	<code>accounting.example.org</code>	Fully-qualified domain served by Nginx / TLS
<code>APP_DIR</code>	<code>/opt/mr-moneybags</code>	Directory where the repo is cloned
<code>RUN_USER</code>	<code>mrmb</code>	Unix user that runs Node
<code>SERVICE_NAME</code>	<code>mr-moneybags</code>	systemd unit name

You can override these in the one-shot installer ( `deployment/ubuntu24/install.sh` ).

### 4. Step-by-Step Deployment

#### 4.1 Update System

```
sudo apt update && sudo apt upgrade -y
```

#### 4.2 Install Node 20.x LTS, Git, Nginx, UFW

```
curl -fsSL https://deb.nodesource.com/setup_20.x | sudo bash -
sudo apt install -y nodejs git nginx ufw
```

#### 4.3 Create Service User & Application Directory

```
sudo useradd -m -r -s /bin/bash mrmb
sudo mkdir -p /opt/mr-moneybags
sudo chown mrmb:mrmb /opt/mr-moneybags
```

## 4.4 Obtain Source Code

```
sudo -u mrmb git clone --branch main https://github.com/OWNER/REPO.git /opt/mr
```

(Substitute **OWNER/REPO** and **branch** as required.)

## 4.5 Environment Configuration

```
cd /opt/mr-moneybags
sudo -u mrmb cp .env.example .env
sudo -u mrmb nano .env          # fill SESSION_SECRET, DATABASE_URL, etc.
```

Key variables:

- `SESSION_SECRET` – long random string
- `DATABASE_URL` – `postgres://user:pass@host:5432/db`
- `CORS_ORIGINS` – leave blank for same-origin

## 4.6 Install Node Dependencies

```
cd /opt/mr-moneybags
sudo -u mrmb npm install --omit=dev
# rebuild native bcrypt if needed
sudo -u mrmb npm rebuild bcrypt --build-from-source
```

## 4.7 Install & Enable systemd Unit

```
sudo cp deployment/ubuntu24/mr-moneybags.service /etc/systemd/system/mr-moneyb
sudo systemctl daemon-reload
sudo systemctl enable --now mr-moneybags
```

If you changed `APP_DIR` or `RUN_USER`, edit the unit file accordingly.

## 4.8 Configure Nginx Site

```
sudo cp deployment/ubuntu24/nginx/mr-moneybags.conf /etc/nginx/sites-available
sudo sed -i "s/accounting.example.org/ACCOUNTING.DOMAIN.TLD/g" /etc/nginx/site
sudo ln -sf /etc/nginx/sites-available/mr-moneybags.conf /etc/nginx/sites-enab
sudo nginx -t && sudo systemctl reload nginx
```

## 4.9 Obtain TLS Certificate (Let's Encrypt)

```
sudo apt install -y certbot python3-certbot-nginx
sudo certbot --nginx -d accounting.example.org
```

Certificates are auto-renewed via systemd timers.

## 4.10 Firewall Rules

```
sudo ufw allow OpenSSH
sudo ufw allow 'Nginx Full'
sudo ufw --force enable
```

## 4.11 Verify Deployment

```
# Service status
sudo systemctl status mr-moneybags

# Logs (Ctrl-C to quit)
sudo journalctl -u mr-moneybags -f

# Health check
curl -k https://accounting.example.org/api/health
```

Expected JSON:

```
{
  "status": "OK",
  "message": "Server running",
  "version": "9.0.0"
}
```

## 5. Maintenance

Task	Command
Pull latest code	<code>sudo -u mrmb git -C /opt/mr-moneybags pull</code>
Reinstall deps	<code>sudo -u mrmb npm install --omit=dev</code>
Restart service	<code>sudo systemctl restart mr-moneybags</code>
Follow logs	<code>sudo journalctl -u mr-moneybags -f</code>

### Rolling back

```
sudo -u mrmb git -C /opt/mr-moneybags checkout <previous-commit>
sudo systemctl restart mr-moneybags
```

(Optionally tag stable releases so you can `git checkout v1.0.3`.)

## 6. Appendix

### 6.1 One-Shot Installer

Instead of manual steps you can run:

```
sudo bash deployment/ubuntu24/install.sh
```

Edit the variables at the top of the script (`DOMAIN`, `GIT_URL`, etc.) before running.

The script performs every step above: packages, user, clone, install, systemd, Nginx, UFW.

### 6.2 Local PostgreSQL Quick-Setup

```
sudo apt install -y postgresql
sudo -u postgres psql <<'SQL'
CREATE USER mrmb_user WITH PASSWORD 'STRONG_PASSWORD';
CREATE DATABASE mrmb_db OWNER mrmb_user;
GRANT ALL PRIVILEGES ON DATABASE mrmb_db TO mrmb_user;
```

```
\q
SQL
```

Set in `.env`:

```
DATABASE_URL=postgresql://mrm_b_user:STRONG_PASSWORD@localhost:5432/mrm_b_db
```

Restart:

```
sudo systemctl restart mr-moneybags
```

6.3 File Locations Summary

Path	Purpose
<code>/opt/mr-moneybags</code>	Application code & static files
<code>/opt/mr-moneybags/.env</code>	Environment variables
<code>/etc/systemd/system/mr-moneybags.service</code>	systemd unit
<code>/etc/nginx/sites-available/mr-moneybags.conf</code>	Nginx site
<code>/var/www/letsencrypt</code>	ACME HTTP-01 challenges

Happy accounting! 🚀