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

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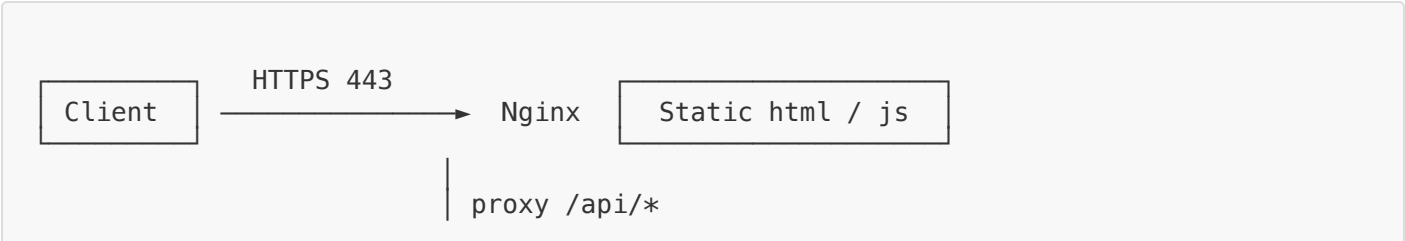
1. Overview & Prerequisites

Mr. MoneyBags (MMB) is a Node.js + PostgreSQL web application served behind Nginx. These instructions assume:
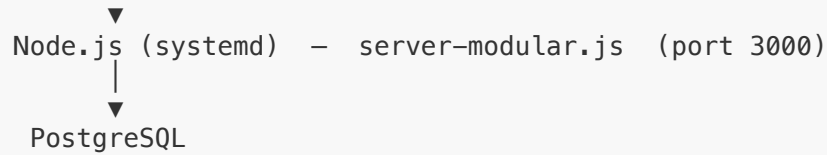
- Ubuntu 24.04 LTS minimal/server install
- DNS A/AAAA record for the site (e.g. `accounting.example.org`)
- A **sudo-enabled** user (e.g. your login user)
- Outbound internet access for apt / git / certbot

Quick facts

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

2. Reference Architecture

```
  ┌──────────┐   HTTPS 443            ┌─────────────────────┐
  │  Client  │ ─────────────→  Nginx  │  Static html / js   │
  └──────────┘                        └─────────────────────┘
                                  │
                                  │ proxy /api/*
```

```
                          ▼
            Node.js (systemd)  —  server-modular.js  (port 3000)
                          |
                          ▼
                    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
`DOMAIN`	`accounting.example.org`	Fully-qualified domain served by Nginx / TLS
`APP_DIR`	`/opt/mr-moneybags`	Directory where the repo is cloned
`RUN_USER`	`mrmb`	Unix user that runs Node
`SERVICE_NAME`	`mr-moneybags`	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	`sudo -u mrmb git -C /opt/mr-moneybags pull`
Reinstall deps	`sudo -u mrmb npm install --omit=dev`
Restart service	`sudo systemctl restart mr-moneybags`
Follow logs	`sudo journalctl -u mr-moneybags -f`

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://mrmb_user:STRONG_PASSWORD@localhost:5432/mrmb_db
```

Restart:

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

6.3 File Locations Summary

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

Happy accounting! 🚀