■ Panduan Deploy Flask (Kapster Absen) di AWS EC2

1. Setup Server & Install Dependencies

- Launch EC2 (Ubuntu 22.04), buka port 22 (SSH), 80 (HTTP), 443 (HTTPS).
- Update system:
sudo apt update && sudo apt upgrade -y
- Install packages:
sudo apt install -y python3-venv python3-dev mysql-server nginx git
- Clone repo:
git clone /srv/kapster-absen
- Buat virtualenv & install requirements:
cd /srv/kapster-absen
python3 -m venv .venv
source .venv/bin/activate
pip install -r requirements.txt

2. Setup MySQL

- Masuk MySQL root:
sudo mysql
- Buat database + user:
CREATE DATABASE kapster_db;
CREATE USER 'kenny'@'localhost' IDENTIFIED WITH mysql_native_password BY 'password';
GRANT ALL PRIVILEGES ON kapster_db.* TO 'kenny'@'localhost';
FLUSH PRIVILEGES;
- Import schema:
mysql -u kenny -p kapster_db < schema.sql

3. File .env

Buat file /srv/kapster-absen/.env isi minimal:
SECRET_KEY=
DATABASE_URL=mysql+pymysql://kenny:password@127.0.0.1:3306/kapster_db
SQLALCHEMY_DATABASE_URI=mysql+pymysql://kenny:password@127.0.0.1:3306/kapster_db
DB_HOST=127.0.0.1
DB_PORT=3306
DB_NAME=kapster_db
DB_USER=kenny
DB_PASSWORD=password
ADMIN_BOOTSTRAP=1
ADMIN_USERNAME=admin
ADMIN_PASSWORD=admin123
ADMIN_NAME=Owner
TIMEZONE=Asia/Jakarta

4. Systemd Service untuk Gunicorn

File: /etc/systemd/system/kapster.service

```
[Unit]
Description=Gunicorn instance for Kapster
After=network.target

[Service]
User=ubuntu
WorkingDirectory=/srv/kapster-absen
EnvironmentFile=/srv/kapster-absen/.env
ExecStart=/srv/kapster-absen/.venv/bin/gunicorn --workers 3 --bind 127.0.0.1:8000 wsgi:application

[Install]
WantedBy=multi-user.target
```

Commands:
```
sudo systemctl daemon-reload
sudo systemctl enable kapster
sudo systemctl start kapster
```

5. Nginx Reverse Proxy

File: /etc/nginx/sites-available/kapster

```
server {
listen 80;
server_name _;

location / {
proxy_pass http://127.0.0.1:8000;
proxy_set_header Host $host;
proxy_set_header X-Real-IP $remote_addr;
proxy_set_header X-Forwarded-For $proxy_add_x_forwarded_for;
proxy_set_header X-Forwarded-Proto $scheme;
}
}
```

Commands:
```
sudo ln -s /etc/nginx/sites-available/kapster /etc/nginx/sites-enabled/
sudo rm -f /etc/nginx/sites-enabled/default
sudo nginx -t && sudo systemctl reload nginx
```

6. Tes Aplikasi

- Cek Gunicorn:
curl -I http://127.0.0.1:8000
- Cek via Nginx:
curl -I http://127.0.0.1/
- Harus redirect ke /login
- Login di browser pakai:

user: admin
pass: admin123

7. HTTPS (Opsional)

- Install certbot:
sudo apt install -y certbot python3-certbot-nginx
- Dapatkan sertifikat:
sudo certbot --nginx -d yourdomain.com -d www.yourdomain.com

8. Tips Debugging

- Cek logs:
sudo journalctl -u kapster -e --no-pager -n 50
- Restart service:
sudo systemctl restart kapster
sudo systemctl restart nginx
- Pastikan DATABASE_URL kebaca:
systemctl show kapster | grep DATABASE_URL
- Hapus file .db biar ga fallback ke SQLite:
find . -maxdepth 2 -name "*.db" -delete