

Django App Deploy on Render — Step-by-Step Guide

We'll deploy using:

- Django
- PostgreSQL
- Gunicorn
- Render

Platform:

- [Render](#)
-

1. Prepare Your Django Project

Install Required Packages

Inside your project:

```
pip install gunicorn whitenoise psycopg2-binary dj-database-url
```

Create requirements.txt

```
pip freeze > requirements.txt
```

Create Procfile

Create file named:

```
Procfile
```

Add:

```
web: gunicorn projectname.wsgi
```

Replace `projectname` with your Django project folder name.

Example:

```
web: gunicorn mysite.wsgi
```

2. Configure settings.py

Import Modules

Add at top:

```
import os
import dj_database_url
from pathlib import Path
```

Allowed Hosts

```
ALLOWED_HOSTS = ['*']
```

Later you can restrict domain.

Static Files

Add:

```
STATIC_URL = '/static/'
STATIC_ROOT = os.path.join(BASE_DIR, 'staticfiles')
```

WhiteNoise Middleware

In MIDDLEWARE:

```
'whitenoise.middleware.WhiteNoiseMiddleware',
```

Put it near top:

```
MIDDLEWARE = [  
    'django.middleware.security.SecurityMiddleware',  
    'whitenoise.middleware.WhiteNoiseMiddleware',  
]
```

Database Config

Replace DATABASES with:

```
DATABASES = {  
    'default': dj_database_url.config(  
        default='sqlite:///db.sqlite3',  
        conn_max_age=600  
    )  
}
```

3. Create runtime.txt (Optional)

```
python-3.12.3
```

4. Push Code to GitHub

Create Git repo:

```
git init  
git add .  
git commit -m "initial commit"
```

Create repository on:

- [GitHub](#)

Push code:

```
git remote add origin YOUR_GITHUB_REPO_URL
git push -u origin main
```

5. Create PostgreSQL Database on Render

Login:

- [Render Dashboard](#)

Then:

1. New +
2. PostgreSQL
3. Create Database

After creation copy:

- Internal Database URL
-

6. Create Web Service

Inside Render:

1. New +
 2. Web Service
 3. Connect GitHub repo
 4. Select Django project repo
-

7. Configure Deployment Settings

Build Command

```
pip install -r requirements.txt && python manage.py collectstatic --noinput  
&& python manage.py migrate
```

Start Command

```
gunicorn projectname.wsgi
```

Example:

```
gunicorn mysite.wsgi
```

8. Add Environment Variables

In Render dashboard → Environment

Add:

Secret Key

```
SECRET_KEY=your_secret_key
```

Debug

```
DEBUG=False
```

Database URL

```
DATABASE_URL=postgres_internal_url
```

Paste DB URL copied earlier.

9. Update settings.py for Environment Variables

Install dotenv:

```
pip install python-dotenv
```

Add:

```
from dotenv import load_dotenv
load_dotenv()
```

Replace secret key:

```
SECRET_KEY = os.getenv("SECRET_KEY")
```

Replace debug:

```
DEBUG = os.getenv("DEBUG") == "True"
```

10. Deploy

Click:

Create Web Service

Render will:

- install packages
 - run migrations
 - collect static files
 - start Gunicorn
-

11. Open Your App

After successful deploy:

```
https://your-app-name.onrender.com
```

Common Errors

Static files not loading

Check:

```
STATIC_ROOT  
WhiteNoise  
collectstatic
```

DisallowedHost Error

Add:

```
ALLOWED_HOSTS = ['your-app-name.onrender.com']
```