Development and Deployment with WSGI in Django


By Gustavo Narea.
Who's speaking?

- Gustavo.
- Works for Web 2.0 company.
- Repoze and TurboGears core developer.
- Believes in WSGI above all else.
What's WSGI?

- Python “standard”.
- Like CGI, at the Python level.
- Useful for development too.
- Makes possible framework-independent components.
- Established for more than 6 years.
Where is Django?

Request

Middleware X (ingress)

Middleware Y (ingress)

Middleware Z (ingress)

Django

Response

Middleware X (egress)

Middleware Y (egress)

Middleware Z (egress)
twod.wsgi

- One goal: Improve Django's WSGI support.
- Won't break existing applications.
- Stable, no known bugs.
- First release very soon.
- Hopefully merged into a future Django release.
- Testers and contributors are welcome!
Things you can do now
Use PasteDeploy config files

- Suitable for configuration, unlike Python code.
- Complement or replace (your choice) settings.py
- Widely used.
- INI format.
- Extremely flexible.
- Wave goodbye to `DJANGO_SETTINGS_MODULE`!
Run initialisation code

- One-off code when the application has started up.
- Before any import from Django or your application.
- Or right after your application has been set up.
Use WSGI middleware

- Not only for deployment.
- Can be configured in INI files or Python code.
Get a better development server

- `manage runserver` is OK, but Paste's rocks.
- It's multi-threaded.
- Can serve your application in different modes.
- Can serve your media.
- Often used in deployment too!
Mount applications

- Serve Trac as a Django view.
- Or the PHP-powered WordPress!
- Filter the input they get.
- Filter the response they return.
- Mount them on-the-fly.
- Single Sign-On for free!
Write functional tests with WebTest

- More reliable replication of production environment.
- More features.
- Can parse HTML, XML and JSON responses.
- Can fill out forms and submit them.
- twod.wsgi has a Nose plugin for WSGIified Django applications.
Get more from requests

- Request objects now have way more members.
- They come from WebOb.
- HttpRequest members still available.
- A real proxy to the WSGI environment.
- Short-cuts to standard HTTP request headers.
Expose the URL arguments

- `/posts/hello-world` has one routing argument (e.g., `post_slug="hello-world"`).
- Dispatchers in Web frameworks should make them available in the request.
- Django does thanks to `twod.wsgi`.
- Useful for generic, 3rd party libraries.
Let's get practical
What's next?

- Check if there's anything for you in the Paste project (pythonpaste.org).
- Or Repoze (repoze.org).
- Spread the word about it!
Thank you!

- Slides will be published on http://dev.2degreesnetwork.com/
- twod.wsgi Web site: http://packages.python.org/twod.wsgi/
- Development Web site: http://bitbucket.org/2degrees/twod.wsgi/
- Follow @2degrees on identi.ca.