Session 4:
Preparing for takeoff

Xander Warszawski

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0

Contents of last session

1. Accounts app
2. Auto generated model diagram
3. Emails
4. Integrating payments using Mollie

1

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Contents of this session

1. Deploy checklist
2. Performance
3. Sentry

2

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1. Deploy checklist

Deploy checklist

1. Execute: **docker-compose exec web python manage.py check --deploy**
    1. A couple of issues will pop up:
        1. SECURE_HSTS_SECONDS
        2. SECURE_SSL_REDIRECT
        3. SECRET_KEY
        4. SESSION_COOKIE_SECURE
        5. CSRF_COOKIE_SECURE
        6. DEBUG

4

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4

Git checkpoint

1. Create new feature branch

5

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Solve the issues

1. Update **config/settings/base.py**

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config/settings/base.py

```
SECURE_SSL_REDIRECT = env.bool("DJANGO_SECURE_SSL_REDIRECT", default=True)
SECURE_HSTS_SECONDS = env.int("DJANGO_SECURE_HSTS_SECONDS", default=2592000)
SECURE_HSTS_INCLUDE_SUBDOMAINS = env.bool("DJANGO_SECURE_HSTS_INCLUDE_SUBDOMAINS", default=True)
SECURE_HSTS_PRELOAD = env.bool("DJANGO_SECURE_HSTS_PRELOAD", default=True)
SESSION_COOKIE_SECURE = env.bool("DJANGO_SESSION_COOKIE_SECURE", default=True)
CSRF_COOKIE_SECURE = env.bool("DJANGO_CSRF_COOKIE_SECURE", default=True)
```

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Solve the issues

1. Update **config/settings/base.py**
2. Update **docker-compose.yml**

8

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docker-compose.yml

```
depends_on:
  - db
environment:
  - "DJANGO_SECRET_KEY=<value>"
  - "DJANGO_DEBUG=True"
  - "DJANGO_SECURE_SSL_REDIRECT=False"
  - "DJANGO_SECURE_HSTS_SECONDS=0"
  - "DJANGO_SECURE_HSTS_INCLUDE_SUBDOMAINS=False"
  - "DJANGO_SECURE_HSTS_PRELOAD=False"
  - "DJANGO_SESSION_COOKIE_SECURE=False"
  - "DJANGO_CSRF_COOKIE_SECURE=False"
```

9

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9

Solve the issues

1. Update **config/settings/base.py**
2. Update **docker-compose.yml**
3. Update **DJANGO_SECRET_KEY** in **docker-compose-prod.yml**:
   1. Generate DJANGO_SECRET_KEY using:
      1. docker-compose exec web python –c "import secrets; print(secrets.token_urlsafe(38))"
4. Execute: **docker-compose –f docker-compose-prod.yml up –d --build**
5. Execute: **docker-compose exec web python manage.py check --deploy**
6. Also: pip install **gunicorn** & freeze

10

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10

Git checkpoint

1. Commit changes
2. Create PR

11

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11

Questions?

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2. Performance

Git checkpoint

1. Create new feature branch

14

14

Django debug toolbar

1. Pip install **django-debug-toolbar** & freeze
2. Update **config/settings/base.py**

15

15

config/settings/base.py

```
import socket

INSTALLED_APPS = [
    …
    'debug_toolbar',
    …
]

MIDDLEWARE = [
    …
    'debug_toolbar.middleware.DebugToolbarMiddleware'
]

hostname, _, ips = socket.gethostbyname_ex(socket.gethostname())
INTERNAL_IPS = [ip[:-1] + "1" for ip in ips]
```

16

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16

Django debug toolbar

1. Pip install **django-debug-toolbar** & freeze
2. Update **config/settings/base.py**
3. Update **config/urls.py**

17

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17

config/urls.py

```python
if settings.DEBUG:
    import debug_toolbar

    urlpatterns = [
        path("__debug__/", include(debug_toolbar.urls))
    ] + urlpatterns
```

18

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18

Django debug toolbar important features

- **History**: history of called endpoints
- **Versions**: versions of Django, Python and installed apps
- **Time**: timeline of page load
- **Settings**: Django settings
- **Request**: info about this request
- **SQL**: info on executed queries to load this page
  - **Query**
  - **Query Plan**
  - **Execution Time**
- **Static files**: info on used static files
- **Templates**: used templates + context data

19

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19

Git checkpoint

1. Commit changes
2. Create PR

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20

20

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21

21

3. Sentry

22

Git checkpoint

1. Create new feature branch

23

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Sentry setup

1. Go to: https://sentry.io/
2. Create account
3. Create project:
    1. Select Django
    2. Other settings you can tweak later
    3. Follow guide on Sentry (also the zero div)
        1. Freeze pip
        2. Create SENTRY_DSN environment variable
        3. Wrap sentry_sdk.init in a if checking if DSN is filled in
            1. To make sure tests aren't slowed down by useless init of Sentry

24

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Sentry features

- Issues:
    - Shows info on user, client, cookies … → useful side conditions for error resolving
    - Pinpoints at which exact code line the error occurred
- Performance:
    - Apdex:
        - Open standard for measuring software performance based on expected user satisfaction
        - 0: No users satisfied; 1: All users satisfied
        - Based on configured goal time: settings > projects > [this project] > performance > RTT
    - Single event data:
        - Waterfall with SQL; sort of a remote Django Debug Toolbar

25

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25

Git checkpoint

1. Commit changes
2. Create PR

26

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26

Questions?

27

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27