

Django – Installation

This tutorial will guide you to set up a private Django environment in the “daw” server. (Substitute ‘9999’ with your student number)

Step 0: Login to the daw server

```
a9999@australia:~$ ssh a9999@10.10.23.183
```

Step 1: Create a virtual environment

```
a9999@daw:~$ virtualenv -p /usr/bin/python2.7 djangoenv
```

To activate the virtual environment run the following command

```
a9999@daw:~$ source ~/djangoenv/bin/activate
```

Step 2: Install Django

To install Django type the following command:

```
(djangoenv) a9999@daw:~$ pip install django==1.8.6 flup paste
```

To install the `mysql` driver type the following command:

```
(djangoenv) a9999@daw:~$ pip install mysql-python
```

To install the `gunicorn` web server type the following command:

```
(djangoenv) a9999@daw:~$ pip install gunicorn
```

Step 3: Installation Verification

Now set up your test project `django_project`:

```
(djangoenv) a9999@daw:~$ cd public_html
```

```
(djangoenv)a9999@daw:~/public_html$ django-admin.py startproject django_project
```

Step 4a: Start the `gunicorn` web server

```
(djangoenv)a9999@daw:~$ cd ~/public_html/django_project
```

```
(djangoenv)a9999@daw:~/public_html/django_project $ gunicorn -b  
10.10.23.183:9999 django_project.wsgi
```

Step 4b: (alternate) Start the default web server

```
(djangoenv)a9999@daw:~$ cd ~/public_html/django_project
```

```
(djangoenv)a9999@daw:~/public_html/django_project $ python manage.py runserver  
10.10.23.183:9999
```

Step 5: Start the browser*

Now open your browser and type the following address text box.
Verify if everything is setup correctly

```
http://10.10.23.183:9999
```

Step 6: Deactivate the virtual environment

When you are finished get out of the virtual environment

```
(djangoenv)a9999@daw:~$ deactivate
```

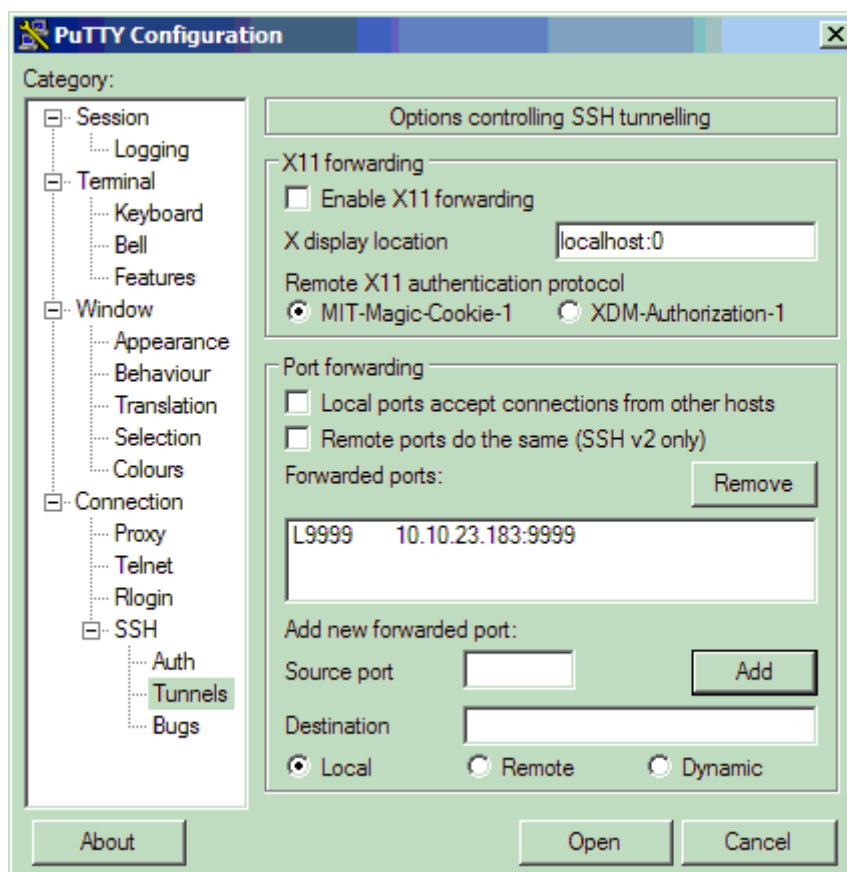
*IMPORTANT NOTE

If you are working from home, the IP 10.10.23.183 is not accessible because it is a private IP. You have to login to the UALG network using the UALG **VPN service** or activate a **ssh tunnel**:

- In the linux environment

```
user@laptop:~$ ssh -L 9999:10.10.23.183:9999 a9999@ssh.deei.fct.ualg.pt
```

- In the windows environment using PuTTY



Now open your browser and type the following address text box.
Verify if everything is setup correctly

```
http://localhost:9999
```

Step 7: Setup the database

(Substitute '9999' with your student number)

```
(djangoenv)a9999@daw:~/public_html/django_project/django_project$ vi settings.py
```

```
DATABASES = {
    'default': {
        'ENGINE': 'django.db.backends.mysql',
        'NAME': 'db_a9999',
        'USER': 'a9999',
        'PASSWORD': 'MyPassord',
        'HOST': '10.10.23.183',
        'PORT': '3306',
    }
}
```

Step 8: (OPTIONAL) Setup Django running without the virtual environment

(Substitute '9999' with your student number and 'django_project' with the name of your project)

To change all the django_project directories to 755 (-rwxr-xr-x):

```
a9999@daw:~/public_html/$ find django_project -type d -exec chmod 755 {} \;
```

To change all the django_project files to 644 (-rw-r--r--):

```
a9999@daw:~/public_html/$ find django_project -type f -exec chmod 644 {} \;
```

To change all the djangoenv directories to 755 (-rwxr-xr-x):

```
a9999@daw:~$ chmod a+rx ~/djangoenv
a9999@daw:~$ find ~/djangoenv -type d -exec chmod 755 {} \;
a9999@daw:~$ find ~/djangoenv/bin -type f -exec chmod 755 {} \;
```

To change all the files to 644 (-rw-r--r--):

```
a9999@daw:~$ find ~/djangoenv -type f -exec chmod 644 {} \;
```

Create a folder called "django" under the public_html folder

```
a9999@daw:~$ mkdir ~/public_html/django
a9999@daw:~$ chmod a+rx ~/public_html/django
```

Create a fcg-bin folder under the public_html folder

```
a9999@daw:~$ mkdir ~/public_html/fcgi-bin
a9999@daw:~$ chmod a+rx ~/public_html/fcgi-bin
```

Create a .htaccess file inside public_html/django with the following contents

```
a9999@daw:~$ cd ~/public_html/django
a9999@daw:~/public_html/django$ nano .htaccess
```

```
RewriteEngine On
# The following lines are for FastCGI:

RewriteCond %{REQUEST_FILENAME} !-f
RewriteRule ^(.*)$ /~a9999/fcgi-bin/dispatch.fcgi/$1 [QSA,L]
```

```
a9999@daw:~/public_html/django$ chmod a+r .htaccess
```

Create a dispatch.fcgi file inside public_html/fcgi-bin with the following contents

```
a9999@daw:~$ cd ~/public_html/fcgi-bin
a9999@daw:~/public_html/fcgi-bin$ nano dispatch.fcgi

#!/users/a9999/djangoenv/bin/python
import sys, os
# Add a custom Python path.
sys.path.insert(0, "/users/a9999/public_html/django_project")
# Set the DJANGO_SETTINGS_MODULE environment variable.
os.environ['DJANGO_SETTINGS_MODULE'] = "django_project.settings"
from django.core.servers.fastcgi import runfastcgi
runfastcgi(method="threaded", daemonize="false")
```

```
a9999@daw:~/public_html/fcgi-bin$ chmod a+rx dispatch.fcgi
```

Now open your browser and type the following address text box.
Verify if everything is setup correctly

```
http://all.deei.fct.ualg.pt/~a9999/django
```