

## LetsEncrypt & Nginx Proxy

На уже созданном сервере через Vscale я проверила, что там установлен docker и docker-compose и создала папочку, в которую поместила docker-compose-файл.

```
root@pit-server: /projects
root@pit-server:~# docker -v
Docker version 20.10.7, build f0df350
root@pit-server:~# docker-compose -v
docker-compose version 1.29.2, build 5becea4c
root@pit-server:~# mkdir /projects
root@pit-server:~# cd projects
-bash: cd: projects: No such file or directory
root@pit-server:~# cd /projects
root@pit-server:/projects# nano docker-compose.yaml
root@pit-server:/projects# ls
docker-compose.yaml
```

Содержимое docker-compose-файла я составляла в VS Code, и оно было следующим:

```
C: > My Files > Учеба > ПИТ > docker-compose.yaml
1  version: '2'
2
3  services:
4    nginx-proxy:
5      image: nginxproxy/nginx-proxy
6      ports:
7        - "80:80"
8        - "443:443"
9      volumes:
10       - /var/run/docker.sock:/tmp/docker.sock:ro
11
12    whoami:
13      image: jwilder/whoami
14      environment:
15        - VIRTUAL_HOST=whoami1.elkinagalina.ru
16
17    whoami2:
18      image: jwilder/whoami
19      environment:
20        - VIRTUAL_HOST=whoami2.elkinagalina.ru
```

Затем с помощью команды docker-compose up я запустила можно сказать build данного проекта. После завершения «билда» docker остановил выполнение сервера nginx-проху.

```
root@pit-server: /projects
root@pit-server:/projects# docker-compose up
Creating network "projects_default" with the default driver
Pulling nginx-proxy (nginxproxy/nginx-proxy:...)
latest: Pulling from nginxproxy/nginx-proxy
b4d181a07f80: Pull complete
edb81c9bc1f5: Pull complete
b21fed559b9f: Pull complete
03e6a2452751: Pull complete
b82f7f888feb: Pull complete
5430e98eba64: Pull complete
9a2f05200e2c: Pull complete
465249c52e32: Pull complete
36b1fdc2d078: Pull complete
07bd50185310: Pull complete
771b3aabd31d: Pull complete
7a3179cc97e3: Pull complete
Digest: sha256:cf0b870376483e8bfef9452a33b4e85a1bbda80f312ae94058ffa08e5482e8ef
Status: Downloaded newer image for nginxproxy/nginx-proxy:latest
Pulling whoami (jwilder/whoami:...)
latest: Pulling from jwilder/whoami
605ce1bd3f31: Pull complete
6f87ebbce1a4: Pull complete
42dfabe11397: Pull complete
Digest: sha256:c621c699e1becc851a27716df9773fa9a3f6bccb331e6702330057a688fd1d5a
Status: Downloaded newer image for jwilder/whoami:latest
Creating projects_nginx-proxy_1 ...
Creating projects_whoami_1 ...
Creating projects_whoami2_1 ...
Killed
```

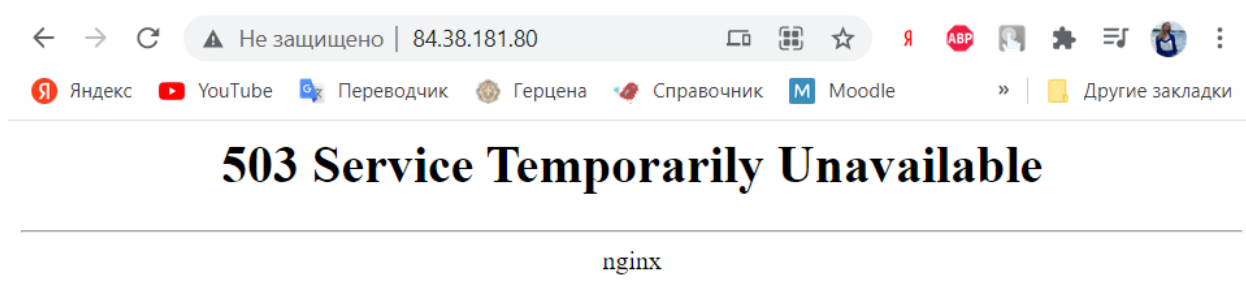
Затем я снова ввела предыдущую команду и у меня запустился прокси-сервер.

```
root@pit-server: /projects
root@pit-server:/projects# docker-compose up
projects_nginx-proxy_1 is up-to-date
projects_whoami2_1 is up-to-date
projects_whoami_1 is up-to-date
Attaching to projects_nginx-proxy_1, projects_whoami2_1, projects_whoami_1
nginx-proxy_1 | WARNING: /etc/nginx/dhparam/dhparam.pem was not found. A pre-generated dhparam.pem will be used for now while a new one
nginx-proxy_1 | is being generated in the background. Once the new dhparam.pem
nginx-proxy_1 | is in place, nginx will be reloaded.
nginx-proxy_1 | forego | starting dockergen.1 on port 5000
nginx-proxy_1 | forego | starting nginx.1 on port 5100
nginx-proxy_1 | nginx.1 | 2021/07/01 17:06:34 [notice] 25#25: using the "epoll" event method
nginx-proxy_1 | nginx.1 | 2021/07/01 17:06:34 [notice] 25#25: nginx/1.21.0
nginx-proxy_1 | nginx.1 | 2021/07/01 17:06:34 [notice] 25#25: built by gcc
nginx-proxy_1 | nginx.1 | 2021/07/01 17:06:34 [notice] 25#25: OS: Linux 5.4
nginx-proxy_1 | nginx.1 | 2021/07/01 17:06:34 [notice] 25#25: getrlimit(RLIMIT_NOFILE): 1048576:1048576
nginx-proxy_1 | nginx.1 | 2021/07/01 17:06:34 [notice] 25#25: start worker
nginx-proxy_1 | nginx.1 | 2021/07/01 17:06:34 [notice] 25#25: start worker
nginx-proxy_1 | dockergen.1 | 2021/07/01 17:06:34 Generated '/etc/nginx/conf.d/default.conf' from 3 containers
nginx-proxy_1 | dockergen.1 | 2021/07/01 17:06:34 Running 'nginx -s reload'
nginx-proxy_1 | nginx.1 | 2021/07/01 17:06:34 [notice] 25#25: signal 1 (SIGHUP) received from 34, reconfiguring
nginx-proxy_1 | nginx.1 | 2021/07/01 17:06:34 [notice] 25#25: reconfiguring
nginx-proxy_1 | nginx.1 | 2021/07/01 17:06:34 [notice] 25#25: using the "epoll" event method
nginx-proxy_1 | nginx.1 | 2021/07/01 17:06:34 [notice] 25#25: start worker
nginx-proxy_1 | nginx.1 | 2021/07/01 17:06:34 [notice] 25#25: start worker
nginx-proxy_1 | dockergen.1 | 2021/07/01 17:06:34 Watching docker events
nginx-proxy_1 | dockergen.1 | 2021/07/01 17:06:34 Contents of /etc/nginx/conf.d/default.conf did not change. Skipping notification 'nginx -s reload'
nginx-proxy_1 | nginx.1 | 2021/07/01 17:06:34 [notice] 30#30: gracefully shutting down
nginx-proxy_1 | nginx.1 | 2021/07/01 17:06:34 [notice] 30#30: exiting
nginx-proxy_1 | nginx.1 | 2021/07/01 17:06:34 [notice] 30#30: exit
nginx-proxy_1 | nginx.1 | 2021/07/01 17:06:35 [notice] 25#25: signal 17 (SIGCHLD) received from 30
nginx-proxy_1 | nginx.1 | 2021/07/01 17:06:35 [notice] 25#25: worker process 30 exited with code 0
nginx-proxy_1 | nginx.1 | 2021/07/01 17:06:35 [notice] 25#25: signal 29 (SIGIO) received
nginx-proxy_1 | 2021/07/01 17:06:37 [notice] 41#41: signal process started
nginx-proxy_1 | nginx.1 | 2021/07/01 17:06:37 [notice] 25#25: signal 1 (SIGHUP) received from 41, reconfiguring
nginx-proxy_1 | nginx.1 | 2021/07/01 17:06:37 [notice] 25#25: reconfiguring
nginx-proxy_1 | nginx.1 | 2021/07/01 17:06:37 [notice] 25#25: using the "epoll" event method
nginx-proxy_1 | nginx.1 | 2021/07/01 17:06:37 [notice] 25#25: start worker
```

Как можно видеть выше, на сервере было очень много ошибок, которые были исправлены прокси-сервером, чтобы была стабильная работа.

Затем, чтобы проверить работу сервера, я перешла по своему доменному адресу `whoami1.elkinagalina.ru`, однако никаких результатов не смогла увидеть. У меня остается та же проблема, что и в прошлой лабораторной работе: домен не работает.

Однако если переходить на сайт через ip-адрес, то мы увидим работающий (почти) сервер.



Сейчас сервер на «главной» странице действительно ничего не показывает и не должен. Однако сам сервер показывает нам записи обращений к нему.

```
whoami2_1 | Listening on :8000
whoami_1 | Listening on :8000
nginx-proxy_1 | nginx.1 | 84.38.181.80 46.158.46.177 - - [01/Jul/2021:17:09:31 +0000] "GET / HTTP/1.1" 503 592 "-" "Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/91.0.4472.124 Safari/537.36" "-"
nginx-proxy_1 | nginx.1 | 84.38.181.80 46.158.46.177 - - [01/Jul/2021:17:09:31 +0000] "GET /favicon.ico HTTP/1.1" 503 592 "http://84.38.181.80/" "Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/91.0.4472.124 Safari/537.36" "-"
```

Так как сейчас я не могу обратиться к своему доменному имени, чтобы продемонстрировать работу сервера, я переделала `docker-compose`-файл, чтобы каждый из «приложений» работал на своем порту.

```
root@pit-server: /projects
GNU nano 4.8 docker-compose.yml Modified
version: '2'

services:
  nginx-proxy:
    image: nginxproxy/nginx-proxy
    ports:
      - "80:80"
      - "443:443"
    volumes:
      - /var/run/docker.sock:/tmp/docker.sock:ro

  whoami:
    image: jwilder/whoami
    expose:
      - "1231"
    environment:
      - VIRTUAL_HOST=whoami1.elkinagalina.ru
      - VIRTUAL_PORT=1231

  whoami2:
    image: jwilder/whoami
    expose:
      - "4561"
    environment:
      - VIRTUAL_HOST=whoami2.elkinagalina.ru
      - VIRTUAL_PORT=4561
```

Но, к сожалению, это не принесло результатов. Поддомены (как и сам домен) все еще не работают.

Далее я переделала docker-compose-файл (каким образом, можно посмотреть [ЗДЕСЬ](#)) и получила результат в виде работы letsencrypt на своем сервере:

```
root@pit-server: /projects
nginx-proxy-le | Reloading nginx proxy (9481518ad52e184708e5da059dd9be5b2724d20b
94236e8fab066756abd92a87)...
nginx-proxy_1 | nginx.1 | 2021/07/01 17:57:42 [notice] 25#25: signal 1 (SIG
HUP) received from 86, reconfiguring
nginx-proxy_1 | nginx.1 | 2021/07/01 17:57:42 [notice] 25#25: reconfiguring
nginx-proxy-le | 2021/07/01 17:57:42 Contents of /etc/nginx/conf.d/default.conf
did not change. Skipping notification ''
nginx-proxy-le | 2021/07/01 17:57:42 [notice] 86#86: signal process started
nginx-proxy_1 | nginx.1 | 2021/07/01 17:57:42 [notice] 25#25: using the "ep
oll" event method
nginx-proxy_1 | nginx.1 | 2021/07/01 17:57:42 [notice] 25#25: start worker
processes
nginx-proxy_1 | nginx.1 | 2021/07/01 17:57:42 [notice] 25#25: start worker
process 87
nginx-proxy_1 | nginx.1 | 2021/07/01 17:57:42 [notice] 65#65: gracefully sh
utting down
nginx-proxy_1 | nginx.1 | 2021/07/01 17:57:42 [notice] 65#65: exiting
nginx-proxy_1 | nginx.1 | 2021/07/01 17:57:42 [notice] 65#65: exit
nginx-proxy_1 | nginx.1 | 2021/07/01 17:57:42 [notice] 25#25: signal 17 (SI
GCHLD) received from 65
nginx-proxy_1 | nginx.1 | 2021/07/01 17:57:42 [notice] 25#25: worker proces
s 65 exited with code 0
nginx-proxy_1 | nginx.1 | 2021/07/01 17:57:42 [notice] 25#25: signal 29 (SI
GIO) received
nginx-proxy-le | 2021/07/01 17:57:42 Generated '/app/letsencrypt_service_data' f
rom 4 containers
nginx-proxy-le | 2021/07/01 17:57:42 Running '/app/signal_le_service'
nginx-proxy-le | 2021/07/01 17:57:42 Watching docker events
nginx-proxy-le | 2021/07/01 17:57:42 Contents of /app/letsencrypt_service_data d
id not change. Skipping notification '/app/signal_le_service'
nginx-proxy-le | Sleep for 3600s
nginx-proxy_1 | nginx.1 | 2021/07/01 17:58:04 [notice] 25#25: signal 1 (SIG
HUP) received from 107, reconfiguring
nginx-proxy_1 | nginx.1 | 2021/07/01 17:58:04 [notice] 25#25: reconfiguring
nginx-proxy-le | This is going to take a long time
nginx-proxy-le | Info: Diffie-Hellman group creation complete, reloading nginx.
nginx-proxy-le | Reloading nginx proxy (9481518ad52e184708e5da059dd9be5b2724d20b
94236e8fab066756abd92a87)...
nginx-proxy-le | 2021/07/01 17:58:04 Contents of /etc/nginx/conf.d/default.conf
did not change. Skipping notification ''
nginx-proxy-le | 2021/07/01 17:58:04 [notice] 107#107: signal process started
nginx-proxy_1 | nginx.1 | 2021/07/01 17:58:04 [notice] 25#25: using the "ep
oll" event method
nginx-proxy_1 | nginx.1 | 2021/07/01 17:58:04 [notice] 25#25: start worker
processes
nginx-proxy_1 | nginx.1 | 2021/07/01 17:58:04 [notice] 25#25: start worker
process 108
nginx-proxy_1 | nginx.1 | 2021/07/01 17:58:05 [notice] 87#87: gracefully sh
utting down
nginx-proxy_1 | nginx.1 | 2021/07/01 17:58:05 [notice] 87#87: exiting
nginx-proxy_1 | nginx.1 | 2021/07/01 17:58:05 [notice] 87#87: exit
nginx-proxy_1 | nginx.1 | 2021/07/01 17:58:05 [notice] 25#25: signal 17 (SI
GCHLD) received from 87
nginx-proxy_1 | nginx.1 | 2021/07/01 17:58:05 [notice] 25#25: worker proces
s 87 exited with code 0
nginx-proxy_1 | nginx.1 | 2021/07/01 17:58:05 [notice] 25#25: signal 29 (SI
GIO) received
```

Однако, в связи с тем, что домен не работает, letsencrypt не может выдать сертификат безопасности моему «сайту», поэтому переход по ссылке с https началом невозможен.