# Traefik proxy

docker pull traefik

Plik: traefik.yaml

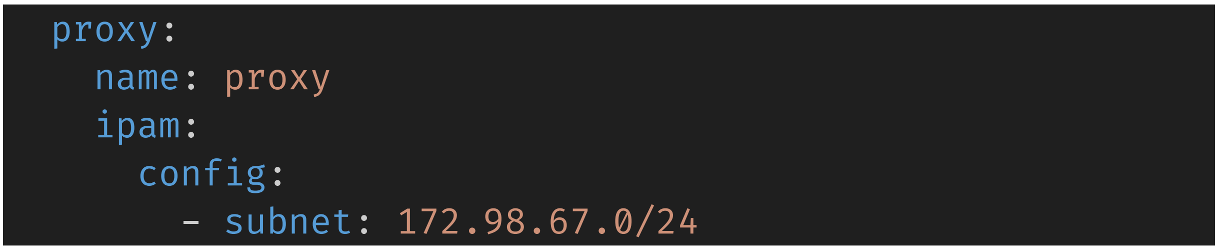
```
api:
  dashboard: true
  insecure: true

entryPoints:
  web:
    address: :80
  websecure:
    address: :443

certificatesResolvers:
  staging:
    acme:
      email: darekhoma1337@gmail.com
      storage: /etc/traefik/certs/acme.json
      caServer: "https://acme-staging-
v02.api.letsencrypt.org/directory"
      httpChallenge:
        entryPoint: web
  localhost:
    acme:
      email: darekhoma1337@gmail.com
      storage: /etc/traefik/certs/acme.json
      dnsChallenge:
        provider: duckdns
  production:
    acme:
      email: darekhoma1337@gmail.com
      storage: /etc/traefik/certs/acme.json
      httpChallenge:
        entryPoint: web

providers:
```

```yaml
  docker:
    exposedByDefault: false
  file:
    directory: /etc/traefik
    watch: true
```

Plik: docker-compose.yaml dla Traefika

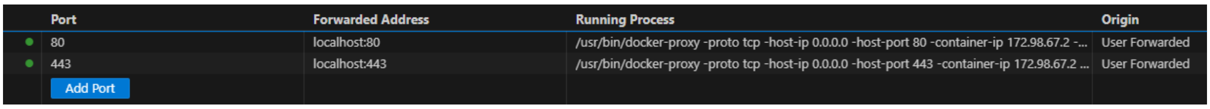
```yaml
services:
  traefik:
    container_name: traefik
    hostname: traefik
    image: traefik:latest
    restart: always
    ports:
      - "80:80"
      - "443:443"
    volumes:
      - /var/run/docker.sock:/var/run/docker.sock:ro
      -
./traefik/traefik.yaml:/etc/traefik/traefik.yaml:ro
      - ./traefik/conf/:/etc/traefik/conf/
      - ./traefik/certs/:/etc/traefik/certs/
    networks:
      - proxy
    environment:
      - DUCKDNS_TOKEN={key}
    labels:
      traefik.enable: true
      traefik.docker.network: proxy
      traefik.http.routers.traefik.entrypoints: web
      traefik.http.routers.traefik.rule:
Host(`traefik.localhost`)
      traefik.http.services.traefik.loadbalancer.server
.port: 8080
      traefik.http.routers.traefik.service:
api@internal

networks:
```

Dariusz Homa, Informatyka Techniczna, semestr IV, gr. 3



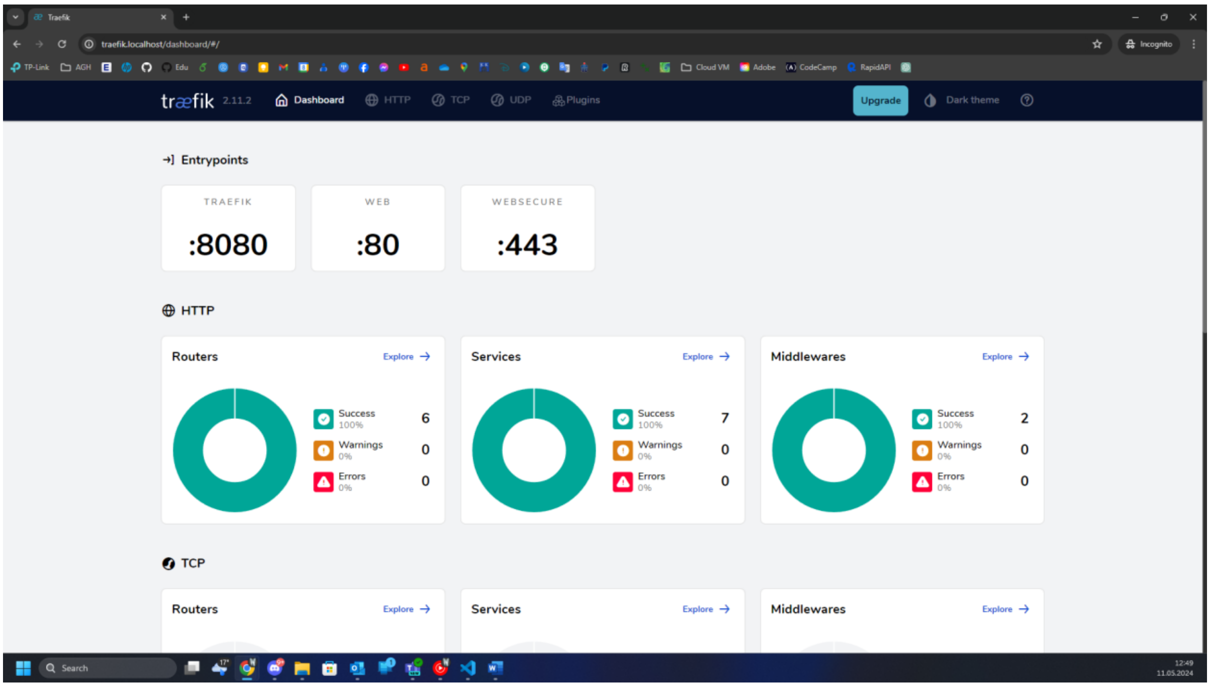
```yaml
  proxy:
    name: proxy
    ipam:
      config:
        - subnet: 172.98.67.0/24
```

Przekierowanie portów w Visual Studio Code



| | Port | Forwarded Address | Running Process | Origin |
|---|---|---|---|---|
| ● | 80 | localhost:80 | /usr/bin/docker-proxy -proto tcp -host-ip 0.0.0.0 -host-port 80 -container-ip 172.98.67.2 -... | User Forwarded |
| ● | 443 | localhost:443 | /usr/bin/docker-proxy -proto tcp -host-ip 0.0.0.0 -host-port 443 -container-ip 172.98.67.2 ... | User Forwarded |
| | Add Port | | | |

Dashboard działa



Entrypoints

| TRAEFIK | WEB | WEBSECURE |
|---|---|---|
| :8080 | :80 | :443 |

HTTP

| | Routers | Services | Middlewares |
|---|---|---|---|
| Success | 6 (100%) | 7 (100%) | 2 (100%) |
| Warnings | 0 (0%) | 0 (0%) | 0 (0%) |
| Errors | 0 (0%) | 0 (0%) | 0 (0%) |

TCP

Routers Explore → Services Explore → Middlewares Explore →

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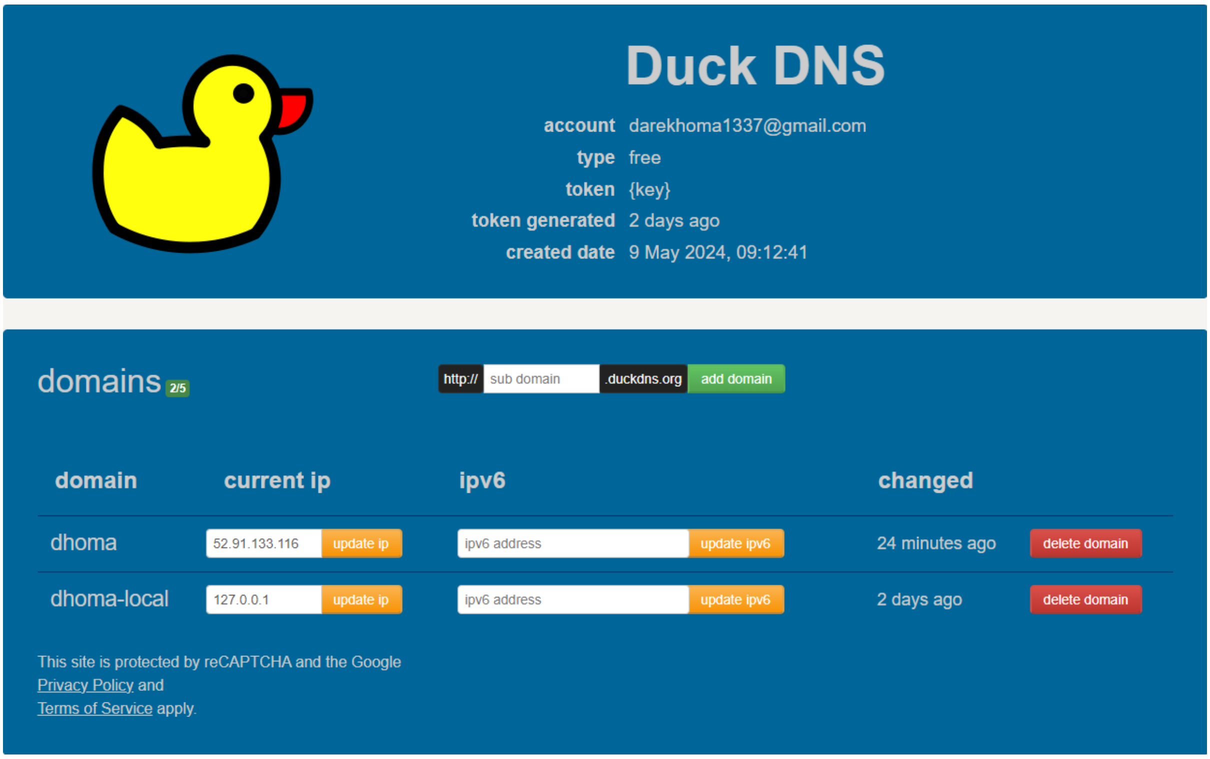
## DuckDNS domains



# Duck DNS

account darekhoma1337@gmail.com
type free
token {key}
token generated 2 days ago
created date 9 May 2024, 09:12:41

domains 2/5

http:// sub domain .duckdns.org add domain

| domain | current ip | | ipv6 | | changed | |
|---|---|---|---|---|---|---|
| dhoma | 52.91.133.116 | update ip | ipv6 address | update ipv6 | 24 minutes ago | delete domain |
| dhoma-local | 127.0.0.1 | update ip | ipv6 address | update ipv6 | 2 days ago | delete domain |

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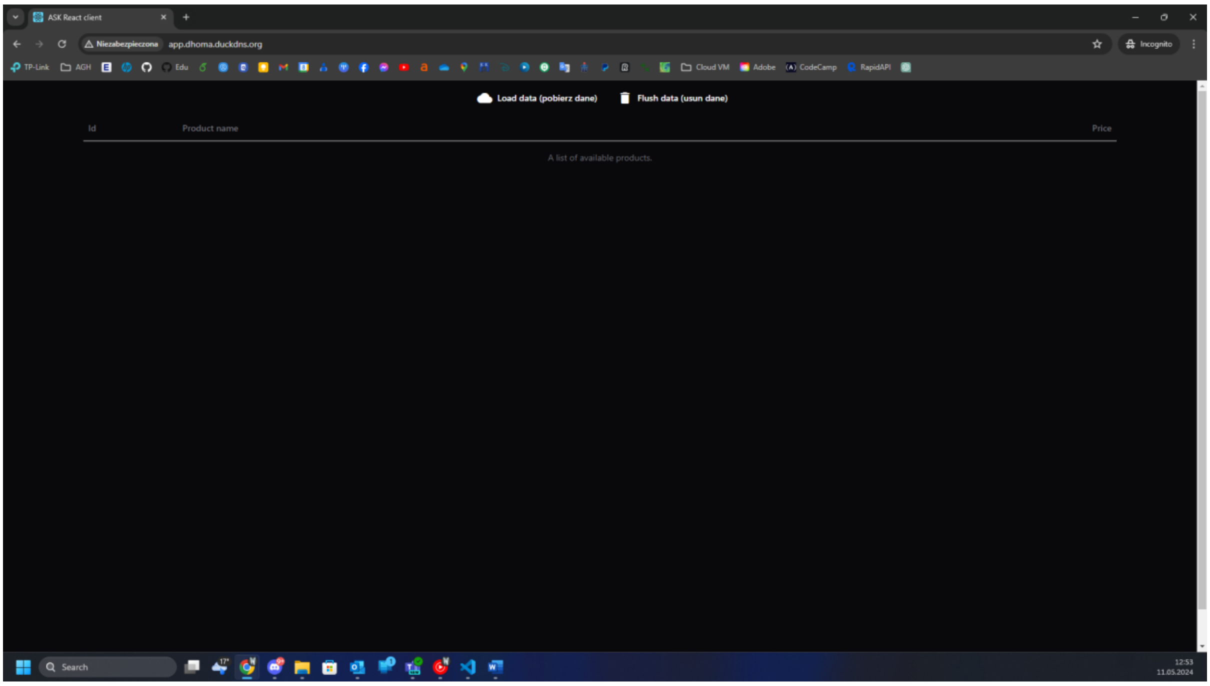
## Serwis dostępny publicznie - React client

Zmiany w pliku compose.prod.yaml

```yaml
services:
  react:
    container_name: react
    image: nginx-react:0.1
    environment:
      NGINX_ENVSUBST_OUTPUT_DIR: "/etc/nginx/nginx.conf"
    labels:
      traefik.enable: true
      traefik.docker.network: proxy
      traefik.http.routers.react.entrypoints: web
      traefik.http.routers.react.rule: Host(`app.dhoma.duckdns.org`)
    networks:
      - proxy
```

```yaml
networks:
  proxy:
    name: proxy
    external: true
```



| Id | Product name | Price |
|---|---|---|

A list of available products.

## Serwis dostępny lokalnie – phpMyAdmin

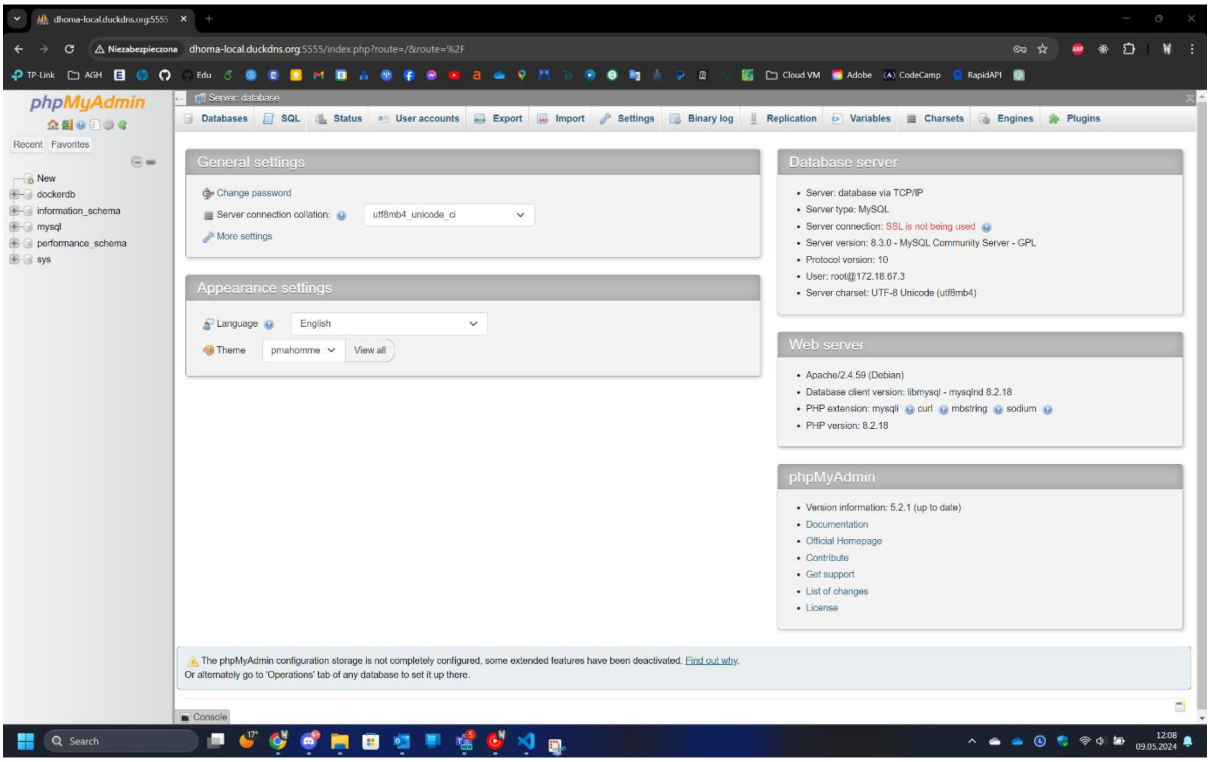
docker pull phpmyadmin

Stworzenie dodatkowej sieci:

```yaml
database:
    name: database
    ipam:
      config:
        - subnet: 172.18.67.0/24
```

Plik: docker-compose.yaml

```yaml
services:
  phpmyadmin:
    container_name: phpmyadmin
    hostname: phpmyadmin
    depends_on:
      - db
    image: phpmyadmin:latest
    restart: always
    environment:
      PMA_HOST: database
    labels:
      traefik.enable: true
      traefik.docker.network: proxy
      traefik.http.routers.phpmyadmin.entrypoints: web
      traefik.http.routers.phpmyadmin.rule:
Host(`dhoma-local.duckdns.org`)
    networks:
      - database
      - proxy
```



General settings

- Change password
- Server connection collation: utf8mb4_unicode_ci
- More settings

Appearance settings

- Language: English
- Theme: pmahomme · View all

Database server

- Server: database via TCP/IP
- Server type: MySQL
- Server connection: SSL is not being used
- Server version: 8.3.0 - MySQL Community Server - GPL
- Protocol version: 10
- User: root@172.18.67.3
- Server charset: UTF-8 Unicode (utf8mb4)

Web server

- Apache/2.4.59 (Debian)
- Database client version: libmysql - mysqlnd 8.2.18
- PHP extension: mysqli curl mbstring sodium
- PHP version: 8.2.18

phpMyAdmin

- Version information: 5.2.1 (up to date)
- Documentation
- Official Homepage
- Contribute
- Get support
- List of changes
- License

The phpMyAdmin configuration storage is not completely configured, some extended features have been deactivated. Find out why.
Or alternately go to 'Operations' tab of any database to set it up there.

12:08
09.05.2024

## SSL Offloading with Traefik

Do odpowiednich serwisów należy dodać etykiety tj.:

phpmyadmin:

```
labels:
      traefik.enable: true
      traefik.docker.network: proxy
      traefik.http.routers.phpmyadmin.entrypoints: web, websecure
      traefik.http.routers.phpmyadmin.rule: Host(`dhoma-local.duckdns.org`)
      traefik.http.routers.phpmyadmin.tls: true
      traefik.http.routers.phpmyadmin.tls.certresolver: localhost
"traefik.http.routers.phpmyadmin.tls.domains[0].main": dhoma-local.duckdns.org
```

React:

```
traefik.enable: true
      traefik.docker.network: proxy
      traefik.http.routers.react.entrypoints: web
      traefik.http.routers.react.rule: Host(`app.dhoma.duckdns.org`)
      traefik.http.services.react.loadbalancer.server.port: 80
      traefik.http.routers.react.tls: true
      traefik.http.routers.react.tls.certresolver: production
      "traefik.http.routers.react.tls.domains[0].main": dhoma.duckdns.org
      "traefik.http.routers.react.tls.domains[0].sans": "*.dhoma.duckdns.org"
```

Na stronie traefika w zakładce routers zobaczymy, że nasze routery korzystają z TLS.

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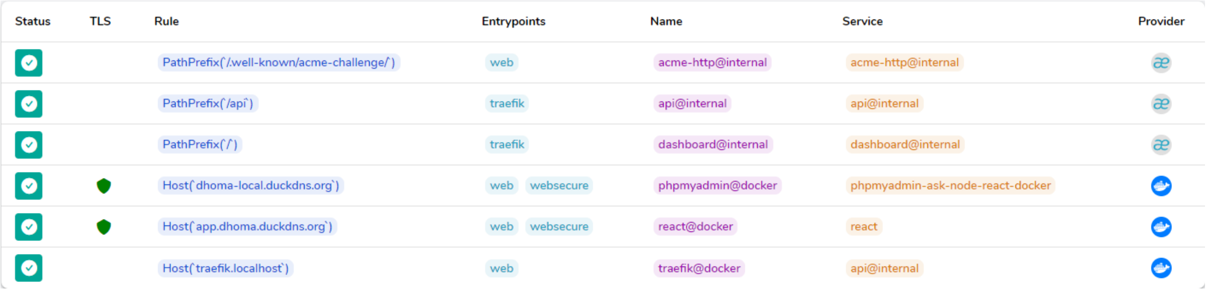
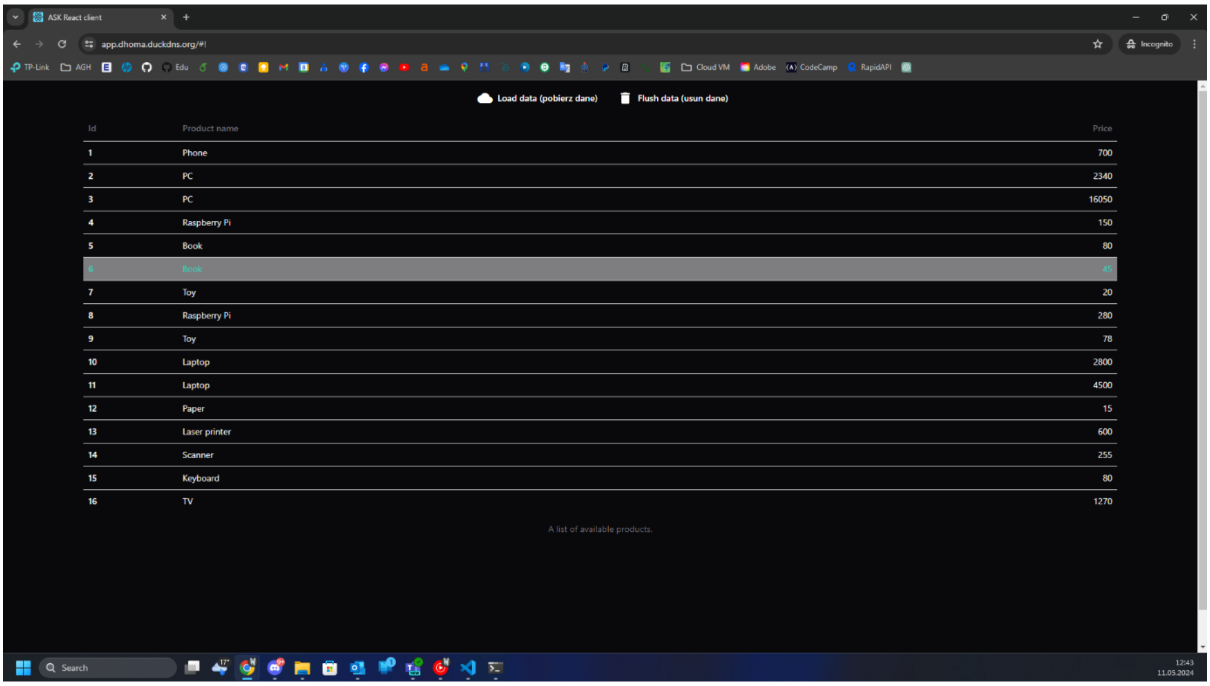


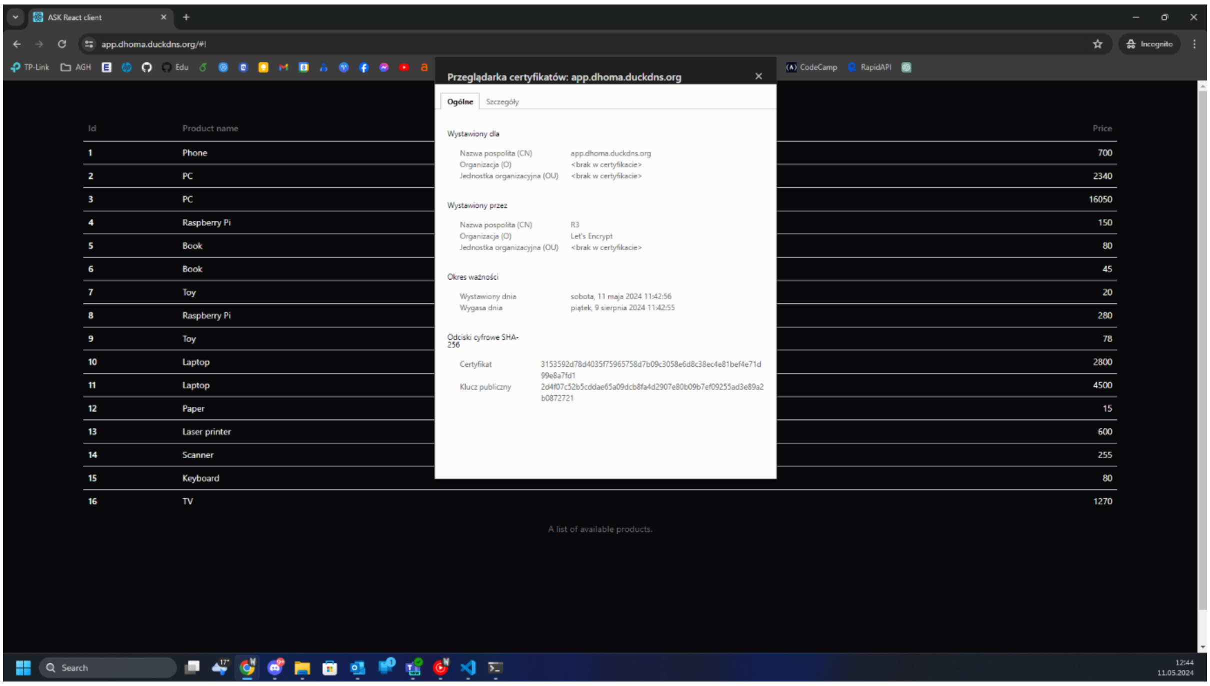
| Status | TLS | Rule | Entrypoints | Name | Service | Provider |
|---|---|---|---|---|---|---|
| ✓ | | PathPrefix(`/.well-known/acme-challenge/`) | web | acme-http@internal | acme-http@internal | |
| ✓ | | PathPrefix(`/api`) | traefik | api@internal | api@internal | |
| ✓ | | PathPrefix(`/`) | traefik | dashboard@internal | dashboard@internal | |
| ✓ | ● | Host(`dhoma-local.duckdns.org`) | web websecure | phpmyadmin@docker | phpmyadmin-ask-node-react-docker | |
| ✓ | ● | Host(`app.dhoma.duckdns.org`) | web websecure | react@docker | react | |
| ✓ | | Host(`traefik.localhost`) | web | traefik@docker | api@internal | |

Do aplikacji możemy się łączyć przez protokół HTTPS.



| Id | Product name | Price |
|---|---|---|
| 1 | Phone | 700 |
| 2 | PC | 2340 |
| 3 | PC | 16050 |
| 4 | Raspberry Pi | 150 |
| 5 | Book | 80 |
| 6 | Book | 45 |
| 7 | Toy | 20 |
| 8 | Raspberry Pi | 280 |
| 9 | Toy | 78 |
| 10 | Laptop | 2800 |
| 11 | Laptop | 4500 |
| 12 | Paper | 15 |
| 13 | Laser printer | 600 |
| 14 | Scanner | 255 |
| 15 | Keyboard | 80 |
| 16 | TV | 1270 |

A list of available products.



Przeglądarka certyfikatów: app.dhoma.duckdns.org

Ogólne | Szczegóły

Wystawiony dla

| | |
|---|---|
| Nazwa pospolita (CN) | app.dhoma.duckdns.org |
| Organizacja (O) | <brak w certyfikacie> |
| Jednostka organizacyjna (OU) | <brak w certyfikacie> |

Wystawiony przez

| | |
|---|---|
| Nazwa pospolita (CN) | R3 |
| Organizacja (O) | Let's Encrypt |
| Jednostka organizacyjna (OU) | <brak w certyfikacie> |

Okres ważności

| | |
|---|---|
| Wystawiony dnia | sobota, 11 maja 2024 11:42:56 |
| Wygasa dnia | piątek, 9 sierpnia 2024 11:42:55 |

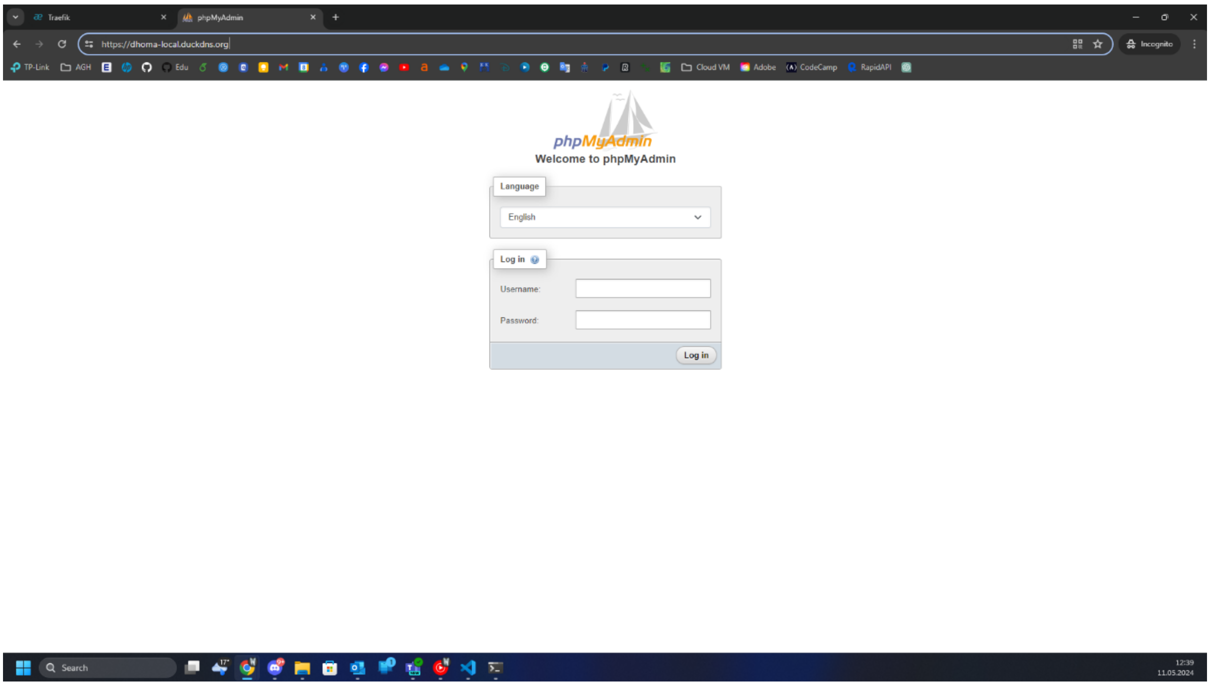
Odciski cyfrowe SHA-256

| | |
|---|---|
| Certyfikat | 3153592d78d4035f75965758d7b09c3058e6d8c38ec4e81bef4e71d99e8a7fd1 |
| Klucz publiczny | 2d4f07c52b5cddae65a09dcb8fa4d2907e80b09b7ef09255ad3e89a2b0872721 |

| Id | Product name | Price |
|---|---|---|
| 1 | Phone | 700 |
| 2 | PC | 2340 |
| 3 | PC | 16050 |
| 4 | Raspberry Pi | 150 |
| 5 | Book | 80 |
| 6 | Book | 45 |
| 7 | Toy | 20 |
| 8 | Raspberry Pi | 280 |
| 9 | Toy | 78 |
| 10 | Laptop | 2800 |
| 11 | Laptop | 4500 |
| 12 | Paper | 15 |
| 13 | Laser printer | 600 |
| 14 | Scanner | 255 |
| 15 | Keyboard | 80 |
| 16 | TV | 1270 |

A list of available products.

Dariusz Homa, Informatyka Techniczna, semestr IV, gr. 3



https://dhoma-local.duckdns.org

phpMyAdmin

Welcome to phpMyAdmin

Language

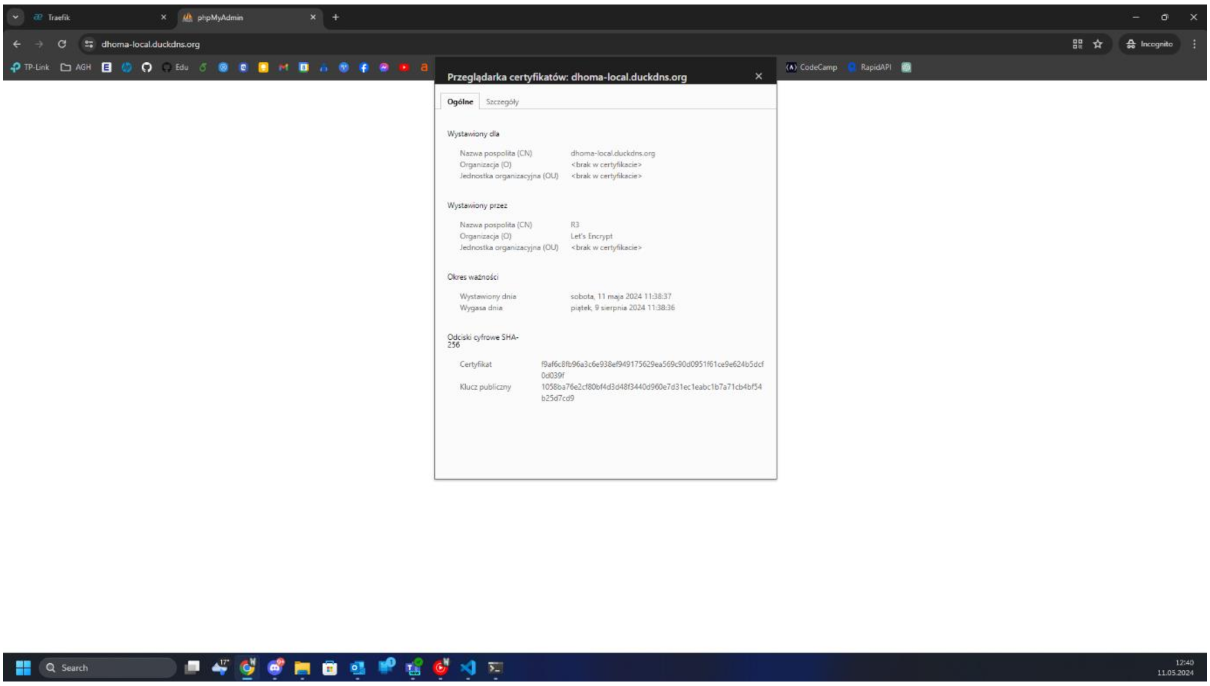
English

Log in

Username:

Password:

Log in



dhoma-local.duckdns.org

Przeglądarka certyfikatów: dhoma-local.duckdns.org

Ogólne | Szczegóły

Wystawiony dla

| | |
|---|---|
| Nazwa pospolita (CN) | dhoma-local.duckdns.org |
| Organizacja (O) | <brak w certyfikacie> |
| Jednostka organizacyjna (OU) | <brak w certyfikacie> |

Wystawiony przez

| | |
|---|---|
| Nazwa pospolita (CN) | R3 |
| Organizacja (O) | Let's Encrypt |
| Jednostka organizacyjna (OU) | <brak w certyfikacie> |

Okres ważności

| | |
|---|---|
| Wystawiony dnia | sobota, 11 maja 2024 11:38:37 |
| Wygasa dnia | piątek, 9 sierpnia 2024 11:38:36 |

Odciski cyfrowe SHA-256

| | |
|---|---|
| Certyfikat | f9af6c8fb96a3c6e938ef949175629ea569c90d0951f61ce9e624b5dcf0d039f |
| Klucz publiczny | 1058ba76e2cf80bf4d3d48f3440d960e7d31ec1eabc1b7a71cb4bf54b25d7cd9 |

Przydzielenie certyfikatu domenie dhoma-localhost.duckdns.org wymaga skorzystania z DNS challenge.

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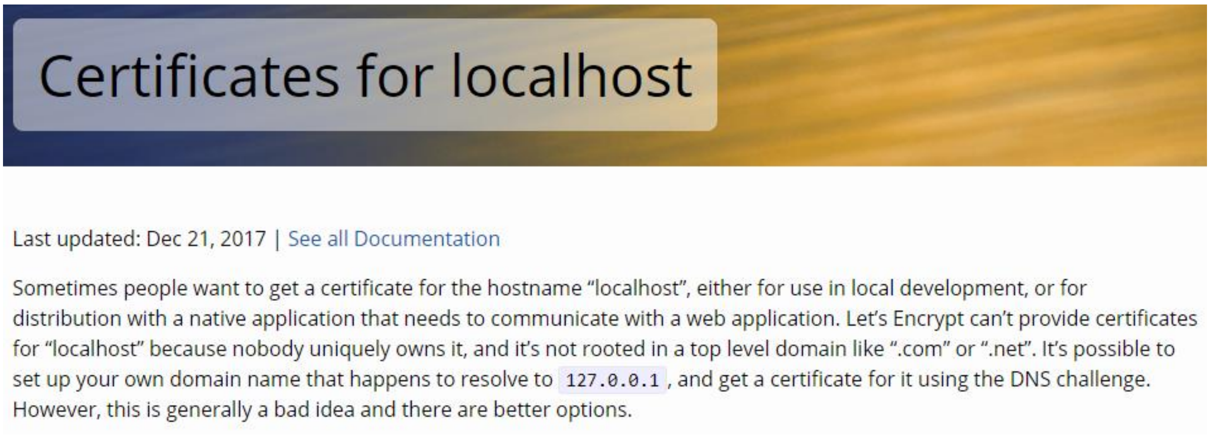

# Certificates for localhost

Last updated: Dec 21, 2017 | See all Documentation

Sometimes people want to get a certificate for the hostname “localhost”, either for use in local development, or for distribution with a native application that needs to communicate with a web application. Let’s Encrypt can’t provide certificates for “localhost” because nobody uniquely owns it, and it’s not rooted in a top level domain like “.com” or “.net”. It’s possible to set up your own domain name that happens to resolve to `127.0.0.1`, and get a certificate for it using the DNS challenge. However, this is generally a bad idea and there are better options.