

??

???????????? Main Web ?? Nginx ?????????????????

1. ????????? Reverse Proxy ???
 ????????????????? Reverse Proxy ????????????????????? IP ???
2. ?????? Let's Encrypt ??? SSL ?????????
 Main Web -----[HTTP]----- Reverse Proxy -----[HTTPS]----- Client
3. ?????????
 ? Main Web ????????????????? Reverse Proxy ? HTTP ??
 ? Reverse Proxy ????????????????? HTTPS
4. ?? docker ??? Reverse Proxy ????? Lets Encrypt ?????

Reverse Proxy with Nginx

?? docker-compose.yml

version: "2"

services:

nginx-proxy:

restart: always

image: nginx

container_name: nginx-proxy

ports:

- "80:80"

- "443:443"

volumes:

- "/docker_vol/nginx-proxy/etc-nginx/conf.d:/etc/nginx/conf.d"

- "/docker_vol/cert-letsencrypt:/etc/letsencrypt"

- "/docker_vol/data-letsencrypt:/data/letsencrypt"

????????

mkdir -p /docker_vol/nginx-proxy/etc-nginx/conf.d

mkdir -p /docker_vol/cert-letsencrypt

mkdir -p /docker_vol/data-letsencrypt

?? Nginx ???

/docker_vol/nginx-proxy/etc-nginx/conf.d/proxy.conf

server {

listen 80;

server_name www.your.domain;

location / {

proxy_pass http://your-main-web-ip;

proxy_set_header Host \$host;

proxy_set_header X-Real-IP \$remote_addr;

```

proxy_set_header X-Forwarded-For $proxy_add_x_forwarded_for;
proxy_set_header X-Forwarded-Proto $scheme;
}
}

```

TIP:

- http://your-main-web-ip ???????? IP ??
- ?????????????????????? 80 port ??

??nginx-proxy ?? (?? docker-compose)

???????????????????? containers

#> docker-compose up -d

??????????

#> docker-compose ps

Name	Command	State	Ports
nginx-proxy	nginx -g daemon off;	Up	0.0.0.0:443->443/tcp, 0.0.0.0:80->80/tcp

TIPs?

???????????????????? proxy.conf ????????????????????? proxy.conf ??????????

Reverse Proxy ????

?? nginx-proxy ?????????????????? http://reverse-proxy-ip ?????????????????????

Lets Encrypt

?? Reverse Proxy ??????? docker ???? Let's Encrypt ?????? Reverse Proxy ????

?????

1. ?????????????? www.your.domain
2. ??????? DNS ?????? A/AAAAA ?????? Reverse Proxy ?? IP

?????????

1. ??????????????
2. ?3????????????????

Cronjob:

```
0 0 */15 * * docker run -it --rm -v "/docker_vol/cert-letsencrypt:/etc/letsencrypt" -v "/docker_vol/
data-letsencrypt:/data/letsencrypt" deliverous/certbot renew --webroot --webroot-path=/data/
letsencrypt && docker-compose kill -s HUP nginx-proxy
```

TIP:

```
- ?????? 60 ?????????????????? 90 ??
- ?????????? domain?????????????????
- ?????????? log ? /docker_vol/log-letsencrypt/letsencrypt.log
```

?????????

```
-----
Processing /etc/letsencrypt/renewal/r13.osslab.tw.conf
-----
```

```
Cert is due for renewal, auto-renewing...
Plugins selected: Authenticator webroot, Installer None
Renewing an existing certificate
Performing the following challenges:
http-01 challenge for r13.osslab.tw
Using the webroot path /data/letsencrypt for all unmatched domains.
Waiting for verification...
Cleaning up challenges
```

```
-----
new certificate deployed without reload, fullchain is
/etc/letsencrypt/live/r13.osslab.tw/fullchain.pem
-----
```

```
The following certs were successfully renewed:
/etc/letsencrypt/live/r13.osslab.tw/fullchain.pem (success)
```

?? Reverse Proxy ?? SSL with Letsencrypt

???????????????????? Reverse Proxy ??? SSL ??????

```
?? /docker_vol/nginx-proxy/etc-nginx/conf.d/proxy.conf
????????
```

```
listen 443; #?????? 80 ?? 443
```

...

```
# SSL Settings
ssl on;
ssl_certificate /etc/letsencrypt/live/www.your.domain/fullchain.pem;
```

```
ssl_certificate_key /etc/letsencrypt/live/www.your.domain/privkey.pem;
```

```
ssl_session_timeout 5m;
```

```
ssl_protocols TLSv1 TLSv1.1 TLSv1.2; # omit SSLv3 because of POODLE (CVE-2014-3566)
```

```
ssl_ciphers
```

```
'ECDHE-ECDSA-CHACHA20-POLY1305:ECDHE-RSA-CHACHA20-POLY1305:ECDHE-ECDSA-AES128-GCM-SHA256:ECDH
```

```
ssl_prefer_server_ciphers on;
```

```
?? nginx-proxy ??
```

```
docker-compose stop
```

```
docker-compose start
```

FAQ

Q: ??????????

Currently, the `renew` verb is capable of either renewing all installed certificates that are due to be renewed or renewing a single certificate specified by its name. If you would like to renew specific certificates by their domains, use the `certonly` command instead. The `renew` verb may provide other options for selecting certificates to renew in the future.

A: ?????????????????????????????????

```
#> docker run -it --rm \
-v "/docker_vol/cert-letsencrypt:/etc/letsencrypt" \
-v "/docker_vol/data-letsencrypt:/data/letsencrypt" \
-v "/docker_vol/log-letsencrypt:/var/log/letsencrypt" \
deliverous/certbot \
renew \
--webroot --webroot-path=/data/letsencrypt
```

NOTE?????? -d your.domain.com