

# CertBot and Let's Encrypt

## Running Locally

### Installing

```
> wget https://dl.eff.org/certbot-auto
```

```
> chmod a+x ./certbot-auto
```

```
> ./certbot-auto -n --install-only
```

### Running certbot-auto to generate a certificate

```
> ./certbot-auto certonly
```

## Installing with NGINX in a Docker Container

### Build an image with certbot installed

```
> vi Dockerfile
```

```
FROM debian:buster

# Installation de NGINX et dnsmasq
RUN apt-get update
RUN apt-get install nginx curl dnsmasq -y
RUN apt-get install -y wget
RUN apt-get install -y apache2-utils
RUN apt-get install -y python-minimal

# Création du dossier contenant les certificats
RUN mkdir /etc/nginx/certificates

# Volumes
VOLUME /etc/nginx/sites-enabled
VOLUME /etc/nginx/certificates

# Copie des fichiers de configuration
COPY confs/nginx.conf /etc/nginx/
COPY confs/proxy.conf /etc/nginx/conf.d/

RUN apt-get install -y certbot
RUN apt-get install -y python-certbot-nginx

# Exposition du port
EXPOSE 80 443

# Add command
CMD ["nginx", "-g", "daemon off;"]
HEALTHCHECK CMD curl --fail http://localhost || exit 1
```

```
> docker build -t jmehan/nginx .
```

.

### Create a container from the image

```
> vi buildDocker.sh
```

```

CONTAINER=proxy
IMAGE=jmeha/nginx
DIR=`pwd -P`

docker stop $CONTAINER
docker rm $CONTAINER
#docker rmi $IMAGE

docker run -d \
--net host \
--name $CONTAINER \
--restart=always \
-v $DIR/conf:/etc/nginx/sites-enabled \
-v $DIR/conf.d:/etc/nginx/conf.d \
-v $DIR/letsencrypt:/etc/letsencrypt \
--health-cmd='curl --fail https://wiki.jmeha.com || exit 1' \
$IMAGE

docker logs -f $CONTAINER

```

> ./buildDocker.sh

#### View logs to see if our container started properly

> docker logs -f proxy

#### Execute certbot-auto to create our cert

> docker exec -it proxy /usr/bin/certbot --nginx

```

Saving debug log to /var/log/letsencrypt/letsencrypt.log
Plugins selected: Authenticator nginx, Installer nginx

Which names would you like to activate HTTPS for?
- - - - -
1: creativeattitude.com
...
- - - - -

Select the appropriate numbers separated by commas and/or spaces, or leave input
blank to select all options shown (Enter 'c' to cancel):

```

#### Renewing Certificates

**Script:** renewAllCerts.sh

### renewAllCerts.sh

```
#!/bin/bash

set -e

DOMAINS=(
  "bcs.jmeha.com"
  "www.jmeha.com"
)

for d in ${DOMAINS[*]}; do
  echo "*** Renewing - $d"
  docker exec -it proxy /usr/bin/certbot --nginx -n -d $d
done

echo "**** ALL DONE ****"
```

## References

Reference	URL
Getting Started	<a href="https://letsencrypt.org/getting-started/">https://letsencrypt.org/getting-started/</a>
*Using Certbot Auto	<a href="https://certbot.eff.org/docs/install.html#certbot-auto">https://certbot.eff.org/docs/install.html#certbot-auto</a>
Certbot User Guide	<a href="https://certbot.eff.org/docs/using.html#certbot-commands">https://certbot.eff.org/docs/using.html#certbot-commands</a>