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# Create a Self-Signed Certificate for NGINX on macOS

 [Nginx](#)  Jul 18, 2020  Viewed 1.9K  Comments 0

In order to develop better, sometimes we need to configure https in our own local environment. This guide describes how to create a Self-Signed Certificate for NGINX on macOS.

## 1. Create openssl.cnf

Copy a `openssl.cnf` to the current directory:

```
cp /System/Library/OpenSSL/openssl.cnf openssl.cnf
```

Add the following 2 lines at the end of `openssl.cnf`. `test.cpming.top` is resolved to `127.0.0.1` in the file of `/private/etc/hosts`. It can be another domain, such as `localhost`.

```
[v3_ca]
subjectAltName = DNS:test.cpming.top
```

## 2. Create the SSL Certificate

Create the requisite directories:

```
mkdir -p /usr/local/etc/ssl/private
```

```
mkdir -p /usr/local/etc/ssl/certs
```

Create a key and certificate pair:

```
sudo openssl req \
  -x509 -nodes -days 365 -newkey rsa:2048 \
  -subj "/CN=test.cpming.top" \
  -config openssl.cnf \
  -keyout /usr/local/etc/ssl/private/self-signed.key \
  -out /usr/local/etc/ssl/certs/self-signed.crt
```

## 3. Create a Diffie-Hellman Key Pair

```
sudo openssl dhparam -out /usr/local/etc/ssl/certs/dhparam.pem 128
```

## 4. Configure Nginx

Configure a server in `nginx.conf`, enable ports 80 and 443. Restart the NGINX server.

```
server {  
    listen      80;  
    listen      443 ssl;  
    server_name test.cpming.com;  
  
    ssl_certificate      /usr/local/etc/ssl/certs/self-signed.crt;  
    ssl_certificate_key  /usr/local/etc/ssl/private/self-signed.key;  
  
    ssl_protocols        TLSv1 TLSv1.1 TLSv1.2;  
    ssl_ciphers           HIGH:!aNULL:!MD5;  
    ssl_dhparam /usr/local/etc/ssl/certs/dhparam.pem;  
    ...  
}
```

## 5. Add the self-signed certificate to the trusted root store

Navigate to `http://test.cpming.top`. Because the certificate I created isn't signed by one of the system's trusted certificate authorities, I am greeted with a big warning sign and the admonition Your connection is not private. To remedy this, I add the self-signed certificate to the trusted root store. Run the following command.

```
sudo security add-trusted-cert \  
-d -r trustRoot \  
-k /Library/Keychains/System.keychain /usr/local/etc/ssl/certs/self-signed.crt
```

📅 Updated Jul 18, 2020

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