

## MODUL 7

### Keamanan Layanan Web (SSL)

Wyne Habsari/L200160080

1. Instalasi OpenSSL

```
root@wyne-VirtualBox:/home/wyne# apt-get install openssl ssl-cert
```

2. Cek lokasi folder SSL

```
root@wyne-VirtualBox:/# cd etc/apache2
root@wyne-VirtualBox:/etc/apache2# ls
apache2.conf      envvars           mods-enabled      sites-enabled
conf-available    magic             ports.conf        ssl
conf-enabled      mods-available    sites-available
```

Jika belum ada buat folder dengan nama ssl untuk menyimpan sertifikat SSL, dengan perintah #mkdir ssl

3. Aktifkan mod SSL dan restart service apache2

```
root@wyne-VirtualBox:/etc/apache2# a2enmod ssl
root@wyne-VirtualBox:/etc/apache2# service apache2 restart
```

4. Request sertifikat SSL, letakkan pada folder /etc/apache2/ssl yang sudah dibuat sebelumnya

```
root@wyne-VirtualBox:/home/wyne# openssl req -x509 -nodes -days 36
5 -newkey rsa -keyout /etc/apache2/ssl/apache.key -out /etc/apache
2/ssl/apache.crt
```

Jika sertifikat sukses dibuat, akan muncul beberapa form yang harus diisi seperti berikut ini

```
Country Name (2 letter code) [AU]:ID
State or Province Name (full name) [Some-State]:Jawa Tengah
Locality Name (eg, city) []:Surakarta
Organization Name (eg, company) [Internet Widgits Pty Ltd]:Univers
itas Muhammadiyah Surakarta
Organizational Unit Name (eg, section) []:Informatika
Common Name (e.g. server FQDN or YOUR name) []:www.wyne.com
Email Address []:wyne@wyne.com
```

Cek lokasi sertifikat tersebut

```
root@wyne-VirtualBox:/# cd etc/apache2/ssl/
root@wyne-VirtualBox:/etc/apache2/ssl# ls
apache.crt  apache.key
```

5. Konfigurasi apache2 untuk menggunakan SSL secara default

Untuk menghindari kesalahan konfigurasi, ada baiknya file default-ssl.conf di backup terlebih dahulu

```
root@wyne-VirtualBox:/etc/apache2# cd sites-available/
root@wyne-VirtualBox:/etc/apache2/sites-available# cp default-ssl.
conf default-ssl-backup.conf
root@wyne-VirtualBox:/etc/apache2/sites-available# ls
000-default.conf  default-ssl-backup.conf  default-ssl.conf
```

Jika sudah dibackup selanjutnya konfigurasi file default-ssl.conf yang asli

```
GNU nano 2.5.3      File: default-ssl.conf

<IfModule mod_ssl.c>
    <VirtualHost _default_:443>
        ServerAdmin wyne@wyne.com
        ServerName www.wyne.com
        ServerAlias www.wyne.com

        DocumentRoot /var/www/html

        # A self-signed (snakeoil) certificate can be creat$
        # the ssl-cert package. See
        # /usr/share/doc/apache2/README.Debian.gz for more $
        # If both key and certificate are stored in the sam$
        # SSLCertificateFile directive is needed.
        SSLCertificateFile      /etc/apache2/ssl/apache.crt
        SSLCertificateKeyFile   /etc/apache2/ssl/apache.key
```

6. Aktifkan virtualhost untuk SSL

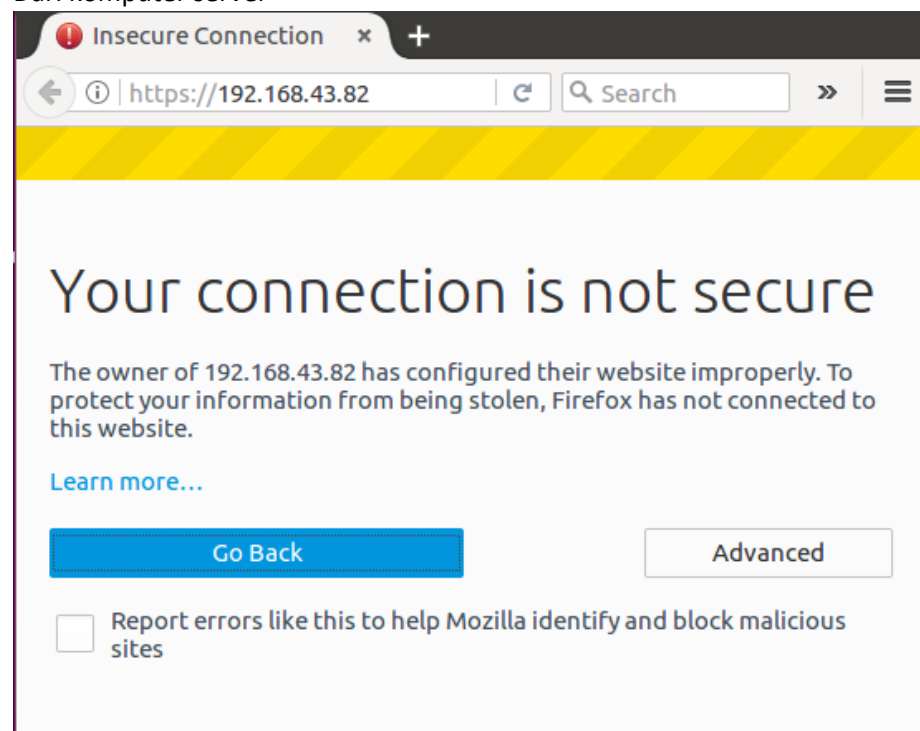
```
root@wyne-VirtualBox:/etc/apache2/sites-available# a2ensite default-ss
l.conf
```

Restart apache2

```
root@wyne-VirtualBox:/etc/apache2/sites-available# service apache2 rel
oad
```


7. Tes melalui web browser


Dari komputer server



## Cek dari komputer client

⚠ Not secure | <https://192.168.43.82>

HP Connected  Create SSL Certifica...



### Your connection is not private

Attackers might be trying to steal your information from **192.168.43.82** (for example, passwords, messages, or credit cards). [Learn more](#)


NET::ERR\_CERT\_AUTHORITY\_INVALID


☐ Help improve Safe Browsing by sending some [system information and page content](#) to Google. [Privacy policy](#)

Advanced

Back to safety

⚠ Not secure | <https://192.168.43.82>

HP Connected  Create SSL Certifica...

  
ubuntu

## Apache2 Ubuntu Default Page

It works!

This is the default welcome page used to test the correct operation of the Apache2 server after installation on Ubuntu systems. It is based on the equivalent page on Debian, from which the Ubuntu Apache packaging is derived. If you can read this page, it means that the Apache HTTP server installed at this site is working properly. You should **replace this file** (located at `/var/www/html/index.html`) before continuing to operate your HTTP server.

If you are a normal user of this web site and don't know what this page is about, this probably means that the site is currently unavailable due to maintenance. If the problem persists, please contact the site's administrator.

Configuration Overview

Ubuntu's Apache2 default configuration is different from the upstream default configuration, and split into several files optimized for interaction with Ubuntu tools. The configuration system is **fully documented in `/usr/share/doc/apache2/README.Debian.gz`**. Refer to this for the full documentation. Documentation for the web server itself can be found by accessing the **manual** if the `apache2-doc` package was installed on this server.

The configuration layout for an Apache2 web server installation on Ubuntu systems is as follows:

```
/etc/apache2/
|-- apache2.conf
|   |-- ports.conf
|-- mods-enabled
|   |-- *.load
|   |-- *.conf
|-- conf-enabled
```