Cmpt 470 - Assignment 5

Due: Dec 8, 2018. Midnight.

Overview

In this assignment, you will be installing a (somewhat) secure Apache server on a docker image. There are two main components for the assignment. Installing a self-signed SSL certificate, and creating groups and permissions for the files:

Server

Begin by searching for a public image on docker hub that runs Apache. You may also start by pulling the Ubuntu image as shown in class and installing Apache manually. The resource "Apache on Ubuntu Linux" should provide you with the overall architecture of Apache file system and where the config files are located.
To get started on the server setup, have a look at the "Creating self-signed certificate" link provided. This guide provides the general steps you will need to follow to self-sign certificates on your server.
Create two folders "web1" and "web2" under your root directory. Both should listen for HTTPs requests. Create a different webpage under each directory; they don't have to be extravagant. For example, you can display the words
`welcome to web1` and
`welcome to web2`
to differentiate the two pages.

Authentication

We will now add some basic authentication to our two folders. A basic authentication can be set up by using a .htaccess file (stored in each folder) to override the defaults (which is no authentication). Create two groups grp1, and grp2 with the following users:

User	Password	Group
as1	1234	grp1
rp2	5678	grp1
<your_sfu_computing_ID>	<your_sfu_student_number>	grp1
ts3	4321	grp2
we4	8765	grp2
Bn5	9999	grp2
<your_sfu_computing_ID>	<your_sfu_student_number>	grp2

Configure the server so that only grp1 can access the *web1* folder and only grp2 can access the *web2* folder, using basic authentication.

Submission

If you have not done so already, sign up for an account on docker hub and push your completed image onto the hub. In your submission, please include a textfile containing your image name (i.e. bobbyctchan/myimage:latest). We will be envoking the commands:

```
docker pull <your_image_name>
docker --rm -d -p 443:443 <your_image_name>
```

then navigating to https://localhost/web1 and https://localhost/web2 to check your work

Marking Scheme

Image properly pushed to Docker hub, SSL certificate installed: 5 Marks
web1 and web2 folders set up properly: 5 Marks

THE END