Infrasturcture et réseau

Server Linux

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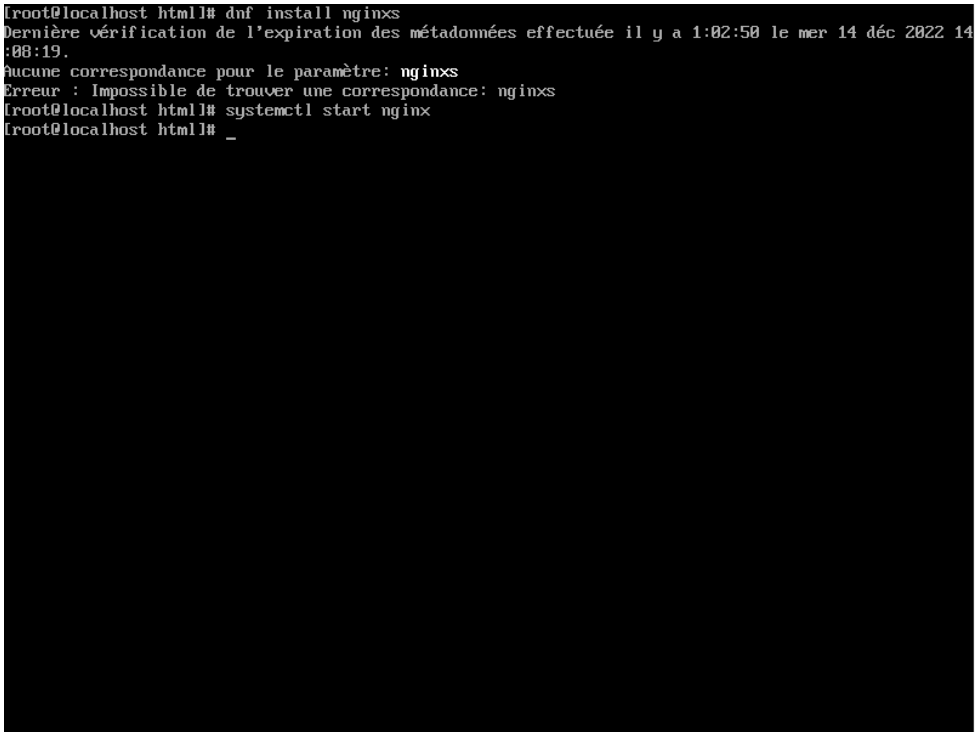
1.0 Linux Web Server

« They are more choices on Linux that on Windows to serve Web pages. • The Apache HTTP Server (apache) is a free and open-source crossplatform web server software, released under the terms of Apache License 2.0. Apache is developed and maintained by an open community of developers under the auspices of the Apache Software Foundation. • Nginx is a web server that can also be used as a reverse proxy, load balancer, mail proxy and HTTP cache. The software was created by Igor Sysoev and publicly released in 2004. Nginx is free and open-source software, released under the terms of the 2-clause BSD license. A large fraction of web servers use NGINX, often as a load balancer. As of January 2021, Netcraft estimated that Apache served 24.63% of the million busiest websites, while Nginx served 23.21% and Microsoft is in third place at 6.85%. »

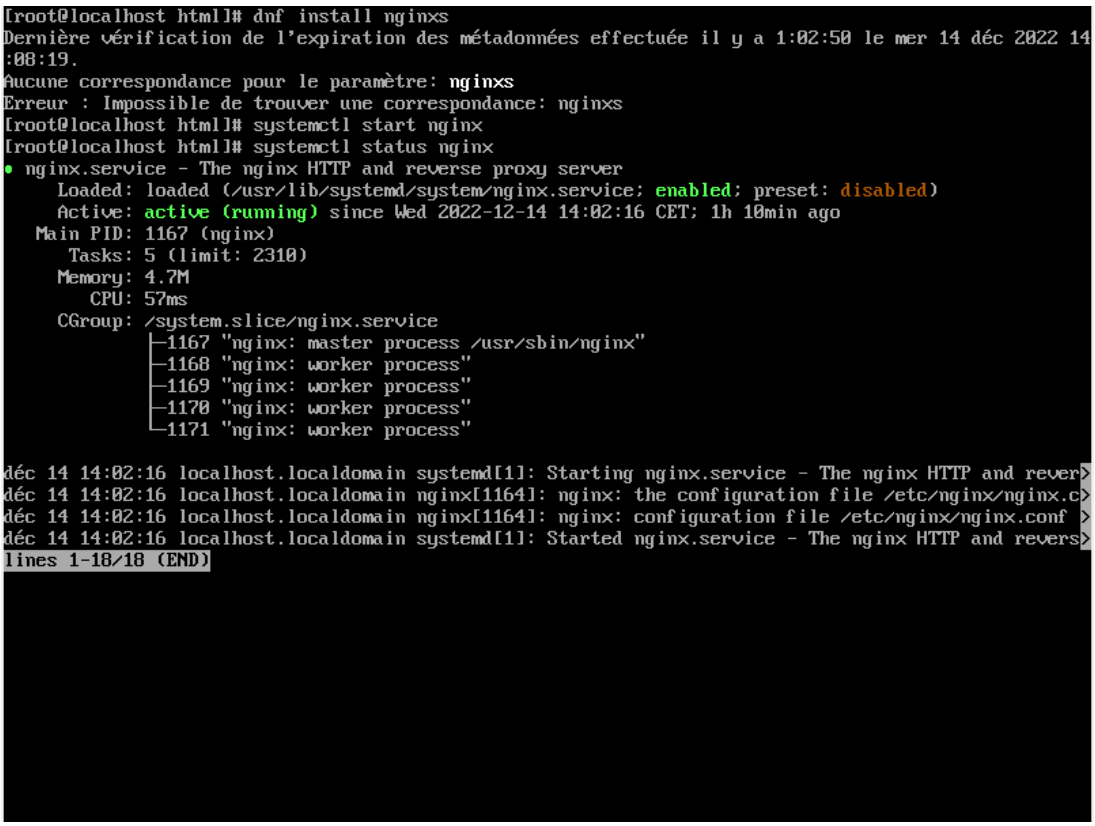
1.1 Install

We will install nginx. For this we will use the command: sudo dnf install nginx

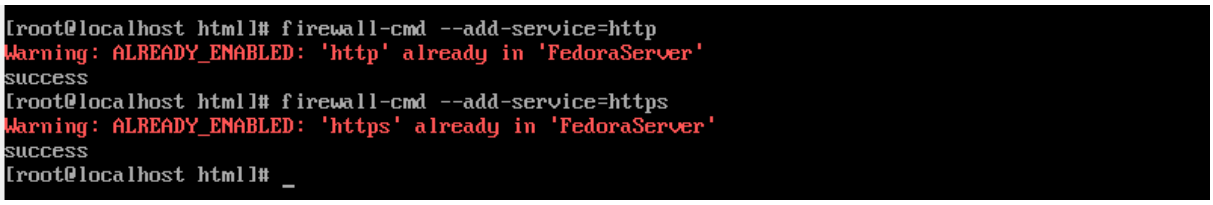


we will start nginx with the command: sudo systemctl start nginx

To check if we have activated it, we use the command: sudo systemctl status nginx



The firewall-cmd --add-service=http command adds the HTTP service to the list of services allowed by the system firewall. This means that the firewall will allow incoming connections to the HTTP service on the server.



1.2 Create site on :80

To modify my index.html file, we enter the following command:
nano/usr/share/nginx/html/index.html

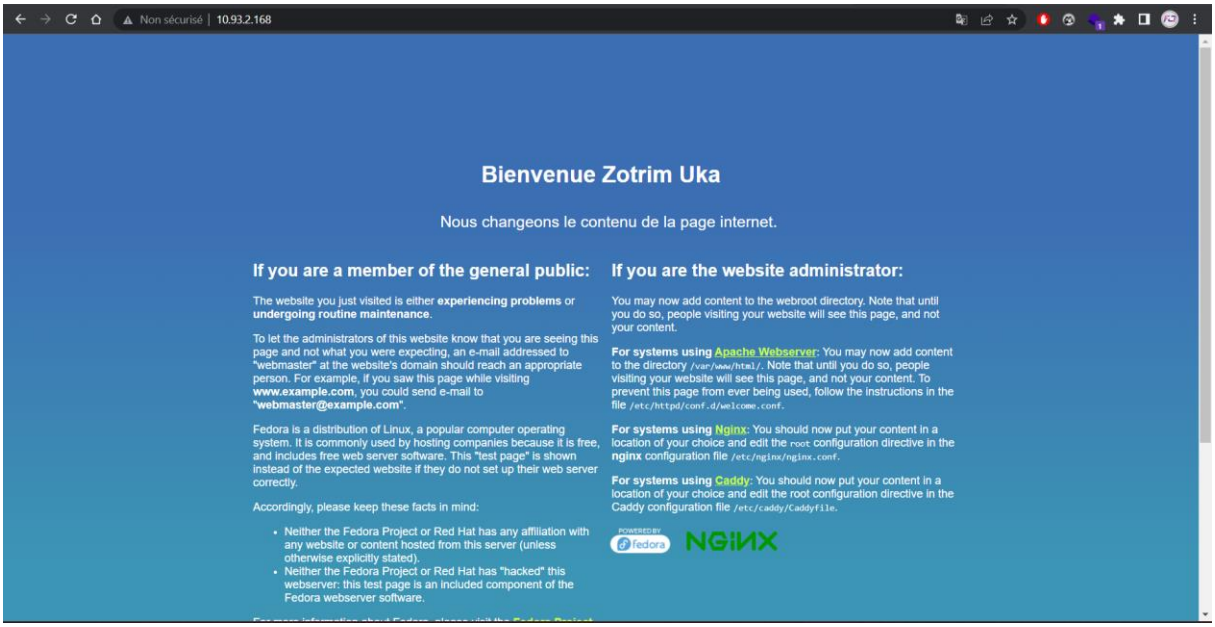
```
[root@pc-315 html]# nano /usr/share/nginx/html/index.html_
```

We modify the file including the text.

```
 GNU nano 6.4                                    index.html
    .col-sm-12 {
      width: 100%;
    }
    h1 {
      padding: 0 !important;
    }
  }


 </style>
 </head>
 <body>
   <h1>Bienvenue Zotrim Uka</h1>

   <div class='row'>

     <div class='col-sm-12 col-md-6 col-md-6 '></div>
         <p class="summary">Nous changeons le contenu de la page internet.</p>
     </div>

     <div class='col-sm-12 col-md-6 col-md-6 col-md-offset-12'>


       <div class='section'>
         <h2>If you are a member of the general public:</h2>

         <p>The website you just visited is either <strong>experiencing
         problems</strong> or <strong>undergoing routine maintenance</strong>.</p>

         <p>To let the administrators of this website know that you are
         seeing this page and not what you were expecting, an e-mail
         addressed to "webmaster" at the website's domain should reach
         an appropriate person. For example, if you saw this page while visiting


[root@localhost html]# nano index.html
```

To be able to access our site through our IP address, we must enter the following command: ifconfig

```
   Main PID: 1167 (nginx)
      Tasks: 5 (limit: 2310)
     Memory: 4.7M
        CPU: 57ms
     CGroup: /system.slice/nginx.service
             ├─1167 "nginx: master process /usr/sbin/nginx"
             ├─1168 "nginx: worker process"
             ├─1169 "nginx: worker process"
             ├─1170 "nginx: worker process"
             └─1171 "nginx: worker process"

déc 14 14:02:16 localhost.localdomain systemd[1]: Starting nginx.service - The nginx HTTP and rever>
déc 14 14:02:16 localhost.localdomain nginx[1164]: nginx: the configuration file /etc/nginx/nginx.c>
déc 14 14:02:16 localhost.localdomain nginx[1164]: nginx: configuration file /etc/nginx/nginx.conf >
déc 14 14:02:16 localhost.localdomain systemd[1]: Started nginx.service - The nginx HTTP and revers>

[root@localhost html]# systemctl enable nginx.service
[root@localhost html]# ifconfig
enp0s3: flags=4163<UP,BROADCAST,RUNNING,MULTICAST>  mtu 1500
        inet 10.93.2.168  netmask 255.255.0.0  broadcast 10.93.255.255
        inet6 fe80::a00:27ff:fe1f:5b02  prefixlen 64  scopeid 0x20<link>
        ether 08:00:27:1f:5b:02  txqueuelen 1000  (Ethernet)
        RX packets 6632  bytes 7866585 (7.5 MiB)
        RX errors 0  dropped 0  overruns 0  frame 0
        TX packets 2318  bytes 689654 (673.4 KiB)
        TX errors 0  dropped 0 overruns 0  carrier 0  collisions 0

lo: flags=73<UP,LOOPBACK,RUNNING>  mtu 65536
        inet 127.0.0.1  netmask 255.0.0.0
        inet6 ::1  prefixlen 128  scopeid 0x10<host>
        loop  txqueuelen 1000  (Boucle locale)
        RX packets 0  bytes 0 (0.0 B)
        RX errors 0  dropped 0  overruns 0  frame 0
        TX packets 0  bytes 0 (0.0 B)
        TX errors 0  dropped 0 overruns 0  carrier 0  collisions 0

[root@localhost html]# _
```



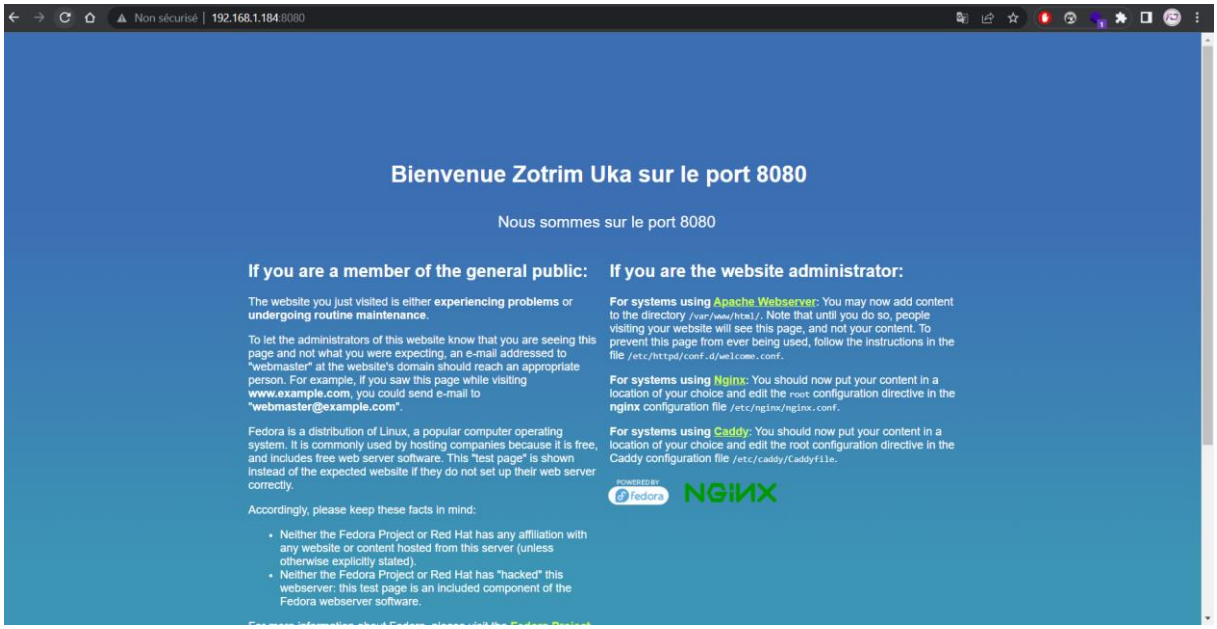
1.3 Create a site on :8080

To start, I duplicated the HTML file with the command: cp -r file copyNameFile

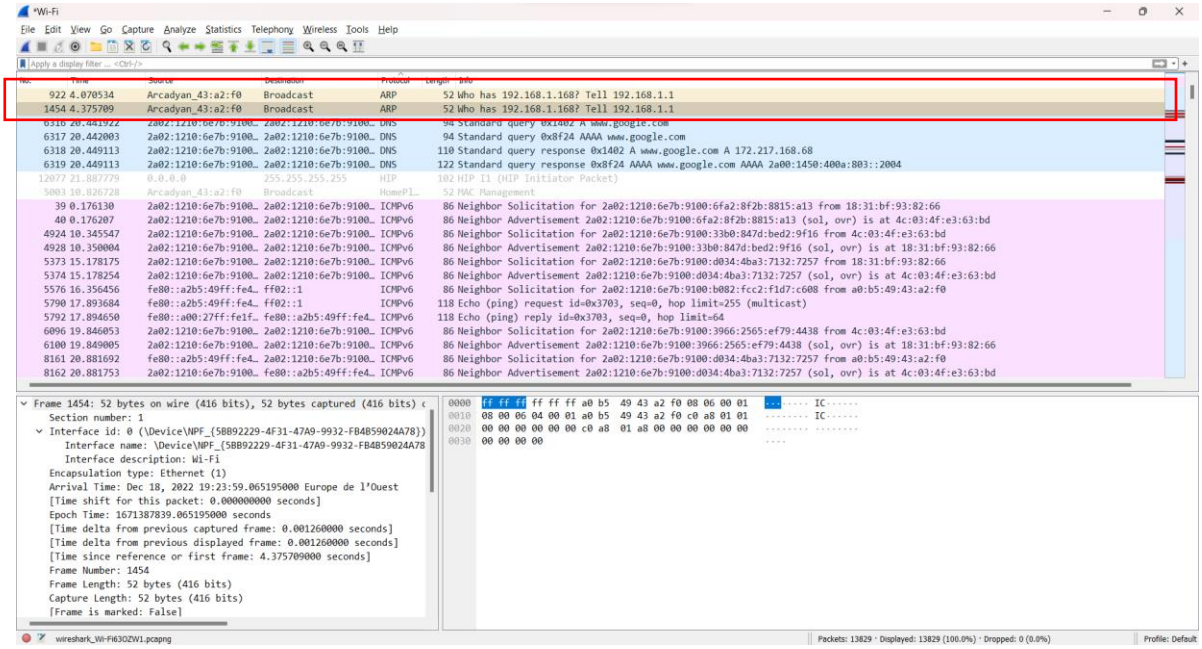
```
[root@pc-315 nginx]# cp -r html htmlPort8080_
```

Then I went to the nginx server configuration file and changed the port 80 to port 8080. I also changed the name of the folder in the root.

```
 GNU nano 6.4                                  /etc/nginx/nginx.conf
    default_type        application/octet-stream;

    # Load modular configuration files from the /etc/nginx/conf.d directory.
    # See http://nginx.org/en/docs/ngx_core_module.html#include
    # for more information.
    include /etc/nginx/conf.d/*.conf;

    server {
        listen       8080;
        listen       [::]:80;
        server_name  _;
        root         /usr/share/nginx/html8080;

        # Load configuration files for the default server block.
        include /etc/nginx/default.d/*.conf;

        error_page 404 /404.html;
        location = /404.html {
        }

        error_page 500 502 503 504 /50x.html;
        location = /50x.html {
        }
    }

# Settings for a TLS enabled server.
#
#    server {
#        listen       443 ssl http2;
#        listen       [::]:443 ssl http2;
#        server_name  _;
#        root         /usr/share/nginx/html;
#

[root@pc-315 etc]# nano /etc/nginx/nginx.conf_
```



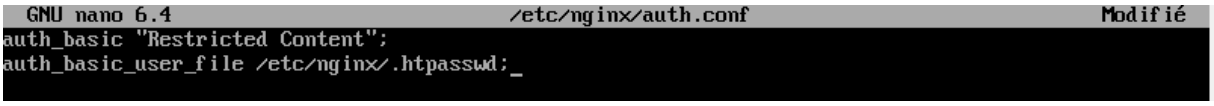
2. From your workstation, test the availability of your site with putty and/or a browser, capturing or not with Wireshark.



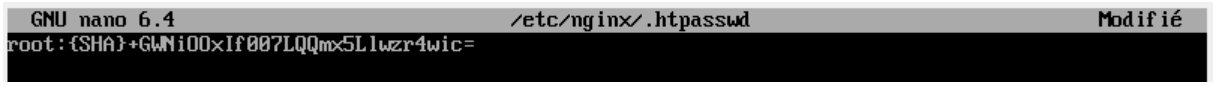
2.0 Authenticated access (optional)

To protect a folder from its contents. You must perform the following steps. First, create a configuration file in the "nginx" configuration directory:

Then we will enter the data and the path to the hidden file ".htpasswd" which will contain sensitive data:

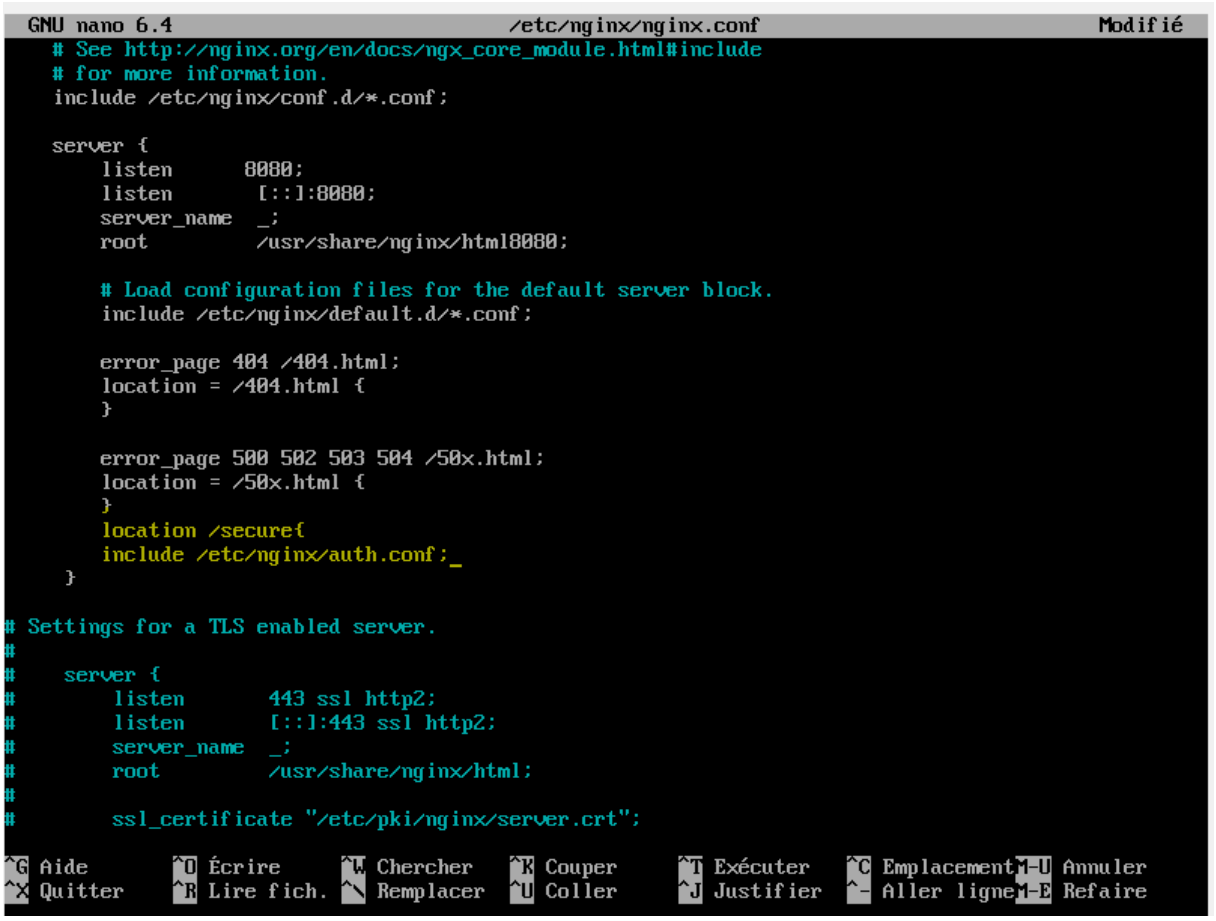


Using online tools, we can encrypt the password by adding these lines of code. I chose to use the SHA-1 hash function for this



Pour terminer, nous devons apporter une modification à la configuration du serveur nginx afin de créer une route qui mène à un dossier protégé.

And add these lines for the 'secure' route



Then we need to restart the nginx service to consider the changes

```
[root@localhost ~]# systemctl restart nginx.service
```

To make these changes, we will have to navigate to the root of the web application and add a new folder named "secure". Then we will copy the file "index.html" into this folder and change the title tag to HTML.

```
[root@localhost ~]# cd /usr/share/nginx/html/
```

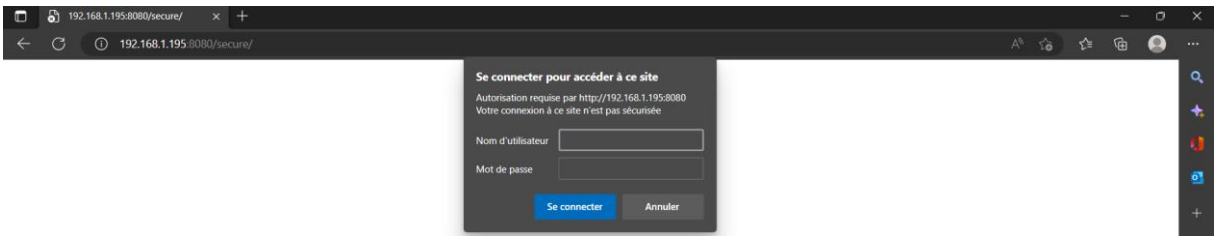
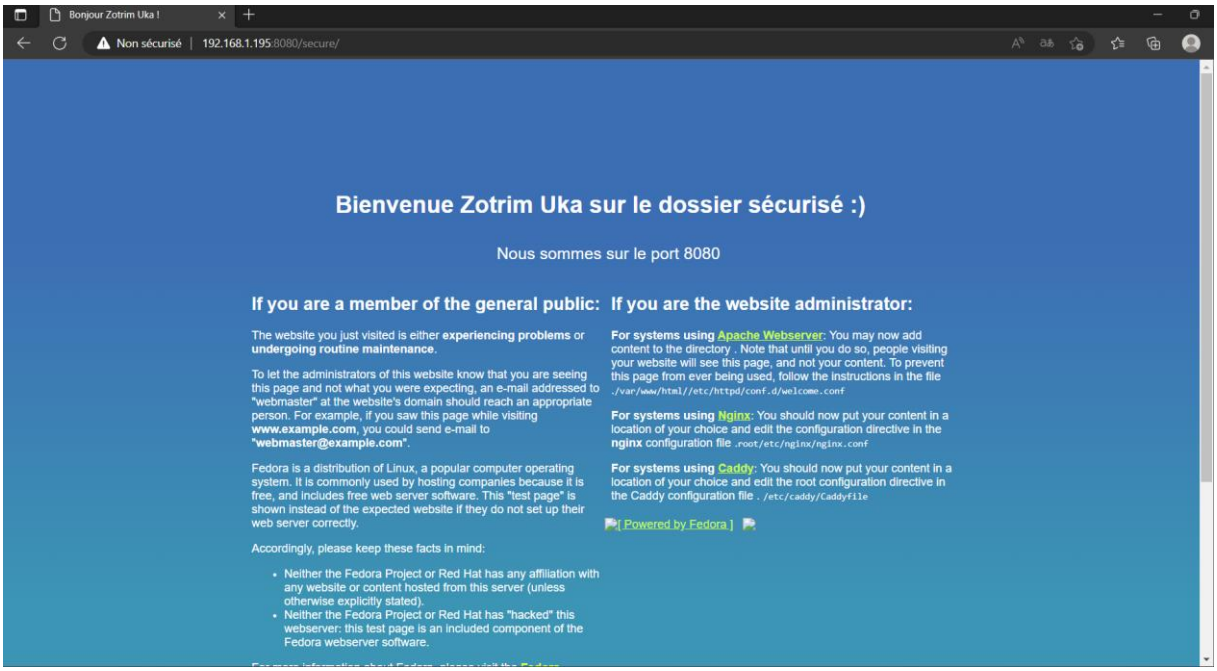
```
root@localhost html]# mkdir secure
```

```
[root@localhost html]# cp index.html secure/index.html
```

I changed the title of the page, so you can see the change

```
GNU nano 6.4                        index.html                          Modifié
  }
  .col-sm-12 {
    width: 100%;
  }
  h1 {
    padding: 0 !important;
  }
}


</style>
</head>
<body>
  <h1>Bienvenue Zotrim Uka site sécurisé - Secure directory </h1>

  <div class='row'>

    <div class='col-sm-12 col-md-6 col-md-6 '></div>
        <p class="summary">Nous sommes sur le port 80</p>
    </div>

    <div class='col-sm-12 col-md-6 col-md-6 col-md-offset-12'>


      <div class='section'>
        <h2>If you are a member of the general public:</h2>

      <ul>
        <li>Neither the Fedora Project or Red Hat has any
        affiliation with any website or content hosted from this
        server (unless otherwise explicitly stated).</li>

        <li>Neither the Fedora Project or Red Hat has "hacked"

^G Aide       ^O Écrire     ^W Chercher   ^K Couper     ^T Exécuter   ^C Emplacement M-U Annuler
^X Quitter    ^R Lire fich. ^\ Remplacer  ^U Coller     ^J Justifier  ^_ Aller ligne M-E Refaire
```

We can use this step to check if the route is protected.



We have secured a file