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ITON1748

9/22/20

Lab 5

1. Yum- I used the commands "yum search httpd" and "yum list |grep httpd". The search command shows the package name and description for the Apache Web Server, the grep command shows the available installs for the package.

2. Installing package- I typed "yum install httpd" to install the Apache server. To run the package I typed "systemctl start httpd" and to ensure it was running I typed "systemctl status httpd".

```
                           root@server11:~                            ×
File  Edit  View  Search  Terminal  Help
 mod_http2-1.11.3-3.module_el8.2.0+307+4d18d695.x86_64

Complete!
[root@server11 ~]# systemctl start httpd
[root@server11 ~]# systemctl status httpd
● httpd.service - The Apache HTTP Server
   Loaded: loaded (/usr/lib/systemd/system/httpd.service; disabled; vendor pres>
   Active: active (running) since Tue 2020-09-22 10:32:15 EDT; 10s ago
     Docs: man:httpd.service(8)
 Main PID: 289514 (httpd)
   Status: "Running, listening on: port 80"
    Tasks: 213 (limit: 4863)
   Memory: 22.1M
   CGroup: /system.slice/httpd.service
           ├─289514 /usr/sbin/httpd -DFOREGROUND
           ├─289515 /usr/sbin/httpd -DFOREGROUND
           ├─289516 /usr/sbin/httpd -DFOREGROUND
           ├─289517 /usr/sbin/httpd -DFOREGROUND
           └─289518 /usr/sbin/httpd -DFOREGROUND

Sep 22 10:32:14 server11.example.com systemd[1]: Starting The Apache HTTP Serve>
Sep 22 10:32:15 server11.example.com systemd[1]: Started The Apache HTTP Server.
Sep 22 10:32:15 server11.example.com httpd[289514]: Server configured, listenin>
lines 1-18/18 (END)
```
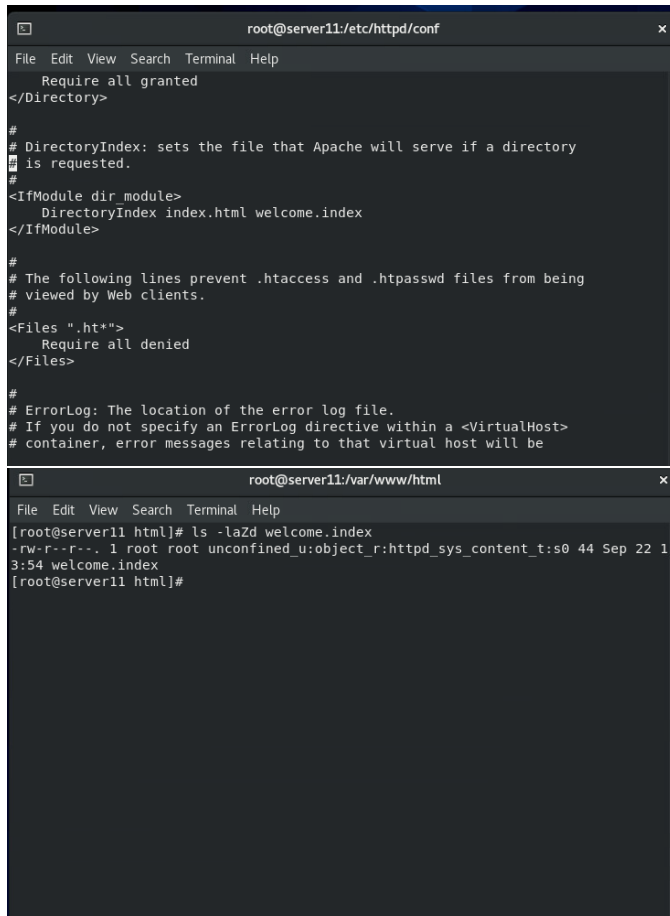
3. Using Yum- I used the command "yum groups list hidden", I then typed "yum info 'basic web server'. After ensuring Apache was a part of this package, I typed "yum groupinstall 'basic web server'.


```
                           root@server11:~                            ×
File  Edit  View  Search  Terminal  Help
Is this ok [y/N]: y
Downloading Packages:
Running transaction check
Transaction check succeeded.
Running transaction test
Transaction test succeeded.
Running transaction
  Preparing        :                                                  1/1
  Installing       : mod_ssl-1:2.4.37-21.module_el8.2.0+382+15b0afa8.x86_   1/3
  Installing       : mod_fcgid-2.3.9-16.el8.x86_64                          2/3
  Installing       : httpd-manual-2.4.37-21.module_el8.2.0+382+15b0afa8.n   3/3
  Running scriptlet: httpd-manual-2.4.37-21.module_el8.2.0+382+15b0afa8.n   3/3
  Verifying        : httpd-manual-2.4.37-21.module_el8.2.0+382+15b0afa8.n   1/3
  Verifying        : mod_fcgid-2.3.9-16.el8.x86_64                          2/3
  Verifying        : mod_ssl-1:2.4.37-21.module_el8.2.0+382+15b0afa8.x86_   3/3
Installed products updated.

Installed:
  httpd-manual-2.4.37-21.module_el8.2.0+382+15b0afa8.noarch
  mod_fcgid-2.3.9-16.el8.x86_64
  mod_ssl-1:2.4.37-21.module_el8.2.0+382+15b0afa8.x86_64

Complete!
[root@server11 ~]#
```

4. Permissions- I used the command "ls -laZd" to view the permissions and the SELinux associated with the Apache main config file and the document root.


```
                      root@server11:/etc/httpd/conf                        ×
File  Edit  View  Search  Terminal  Help
[root@server11 conf]# ls -laZd /etc/httpd/conf/httpd.conf
-rw-r--r--. 1 root root system_u:object_r:httpd_config_t:s0 11899 Jun  8 16:12 /
etc/httpd/conf/httpd.conf
[root@server11 conf]# ls -laZd /var/www/html
drwxr-xr-x. 2 root root system_u:object_r:httpd_sys_content_t:s0 6 Jun  8 16:16
/var/www/html
[root@server11 conf]#
```

5. Configuration- By using "vi httpd.conf" I was able to edit the configuration file. I added welcome.index to the Directory Index field. After this is typed the command "ls -laZd wlcome.index" to view the permissions/SELinux. The file was changed to from "system" to "unconfined".
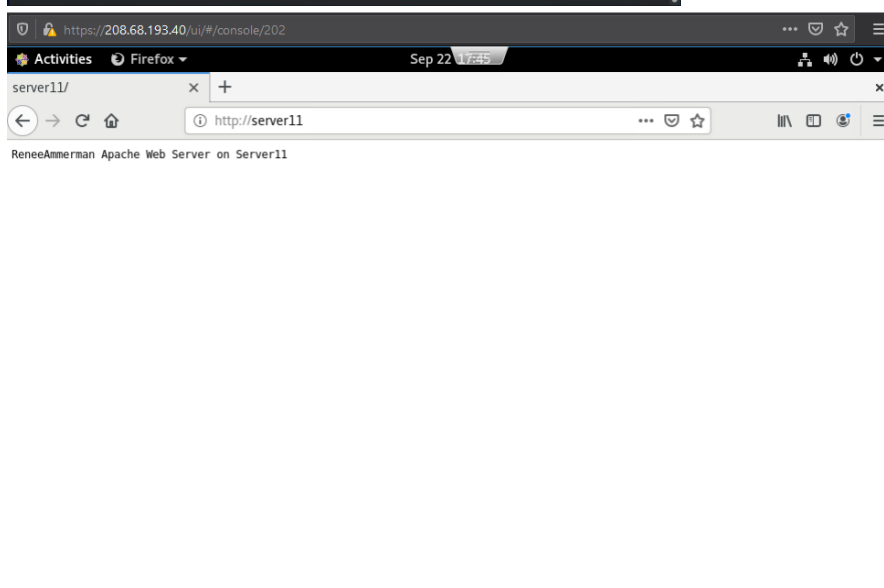
6. Configuration- I created the "/web" directory using "mkdir /web", I copied the "welcome.index" file to the /web directory using "cp /var/www/html/welcome.index /web". The SELinux is different than step 4 because it has changed the type to default. The /web directory has the same permissions as the /var/www/html directory. I went back to the configuration file and added /web to the Document root, and added a directory block for /web. I went back to the web browser and it did display the home page. I used "getenforce" to get the SELinux status. I displayed the homepage again in the web browser.
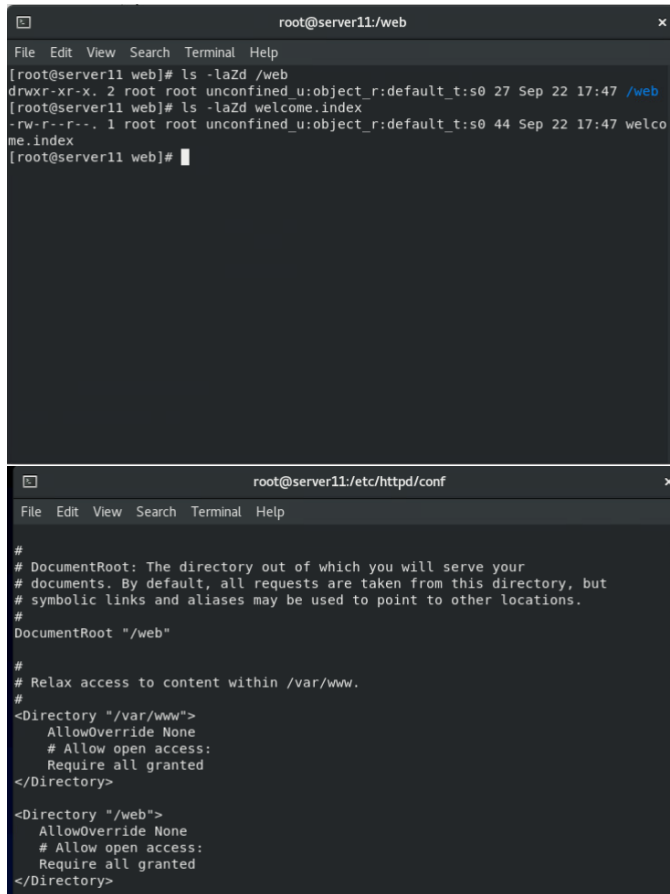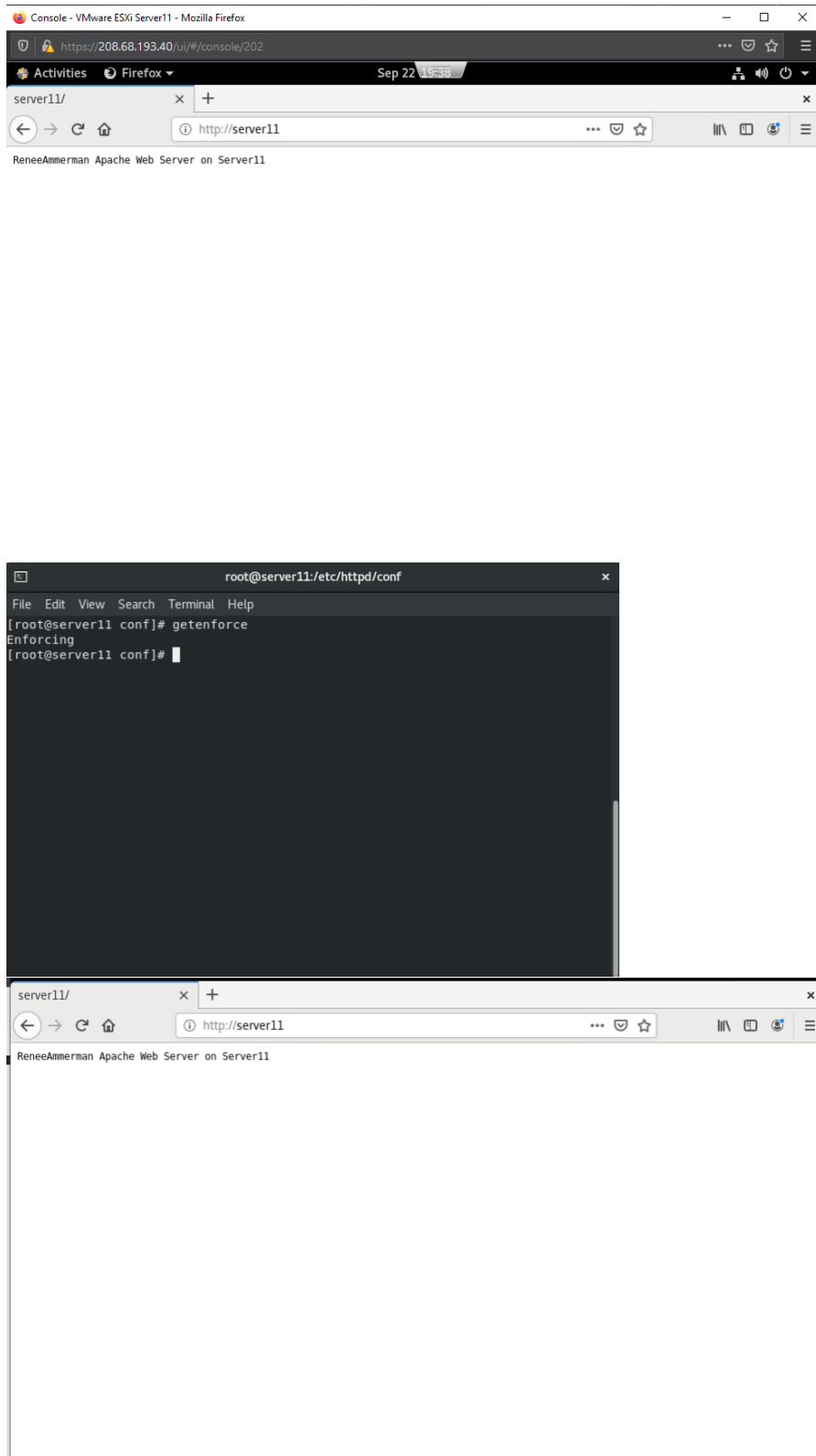
```
                          root@server11:/web                          ×

File  Edit  View  Search  Terminal  Help
[root@server11 web]# ls -laZd /web
drwxr-xr-x. 2 root root unconfined_u:object_r:default_t:s0 27 Sep 22 17:47 /web
[root@server11 web]# ls -laZd welcome.index
-rw-r--r--. 1 root root unconfined_u:object_r:default_t:s0 44 Sep 22 17:47 welco
me.index
[root@server11 web]# █
```

```
                     root@server11:/etc/httpd/conf                     ×

File  Edit  View  Search  Terminal  Help

#
# DocumentRoot: The directory out of which you will serve your
# documents. By default, all requests are taken from this directory, but
# symbolic links and aliases may be used to point to other locations.
#
DocumentRoot "/web"

#
# Relax access to content within /var/www.
#
<Directory "/var/www">
    AllowOverride None
    # Allow open access:
    Require all granted
</Directory>

<Directory "/web">
    AllowOverride None
    # Allow open access:
    Require all granted
</Directory>
```

https://208.68.193.40/ui/#/console/202

Activities   Firefox ▾   Sep 22

server11/   ×   +

← → C ⌂   ⓘ http://server11

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root@server11:/etc/httpd/conf   ×

File Edit View Search Terminal Help

```
[root@server11 conf]# getenforce
Enforcing
[root@server11 conf]# 
```

server11/   ×   +

← → C ⌂   ⓘ http://server11

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7. Client- I typed "curl http://server11/welcome.index" , It returned the contents of the welcome.index file.

```
root@server11:/etc/httpd/conf

File   Edit   View   Search   Terminal   Help

[root@server11 conf]# curl http://server11/welcome.index
ReneeAmmerman Apache Web Server on Server11
[root@server11 conf]#
```