

What's New x updates-from-local x Sunbeam x Thunderbird — Dow x New Tab x Help Keep Thunder x 28_haproxy_linux.pdf x

Not secure | 192.168.0.51/ditiss/cosa/linux_administration/assignments/administration_assignments/28_haproxy_linux.pdf

28_hap

```
sunbeam@server:~$ cat /etc/haproxy/haproxy.cfg
# See terminal which passes in the terminal

frontend main
    bind *:80
    default_backend app

# static backend for serving up images, stylesheets and such
backend static
    balance roundrobin
    server static 127.0.0.1:4331 check

# round robin balancing between the various backends
backend app
    balance roundrobin
    server server1 192.168.59.150:80 check
    server server2 192.168.59.151:80 check
-- INSERT --
```

ad balancer)

h machines

nes (1 Server machine, 2 client)

achine, install and configure **httpd** service

ow webpage

age.

er using this client's IP.

- Second client will show webpage
- *This is second webpage.*
- verify on browser using this client's IP.
- On **Server** machine install and configure **haproxy** service.
- Check the output by using **curl** of haproxy server's IP.
- On windows machine's browser give IP address of **haproxy** server machine, and check the output.

Expected Output: It should show, both webpage after refresh.

Type here to search

02:46 PM 03-11-2023

100

On windows machine, and ch

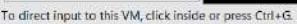
figure **httpd** service

haproxy service.

- On windows machine's browser give IP address of **haproxy server** machine, and check the output.

Expected Output: It should show, both webpage after refresh.

After completing this assignment.



```
sunbeam@server~$
login as: sunbeam
sunbeam@192.168.59.147's password:
Web console: https://server:9090/ or https://192.168.59.147:9090/

Last login: Thu Oct 19 09:37:07 2023
[sunbeam@server ~]$
[sunbeam@server ~]$
[sunbeam@server ~]$ sudo rpm -q haproxy
-bash: sudo: command not found
[sunbeam@server ~]$ sudo rpm -q haproxy
[sudo] password for sunbeam:
package haproxy is not installed
[sunbeam@server ~]$
[sunbeam@server ~]$ cd /etc/yum.repos.d
[sunbeam@server yum.repos.d]$ sudo rm *
[sunbeam@server yum.repos.d]$ sudo wget http://192.168.0.51/base-lan.repo
--2023-11-03 14:17:13-- http://192.168.0.51/base-lan.repo
Connecting to 192.168.0.51:80... connected.
HTTP request sent, awaiting response... 200 OK
Length: 183
Saving to: 'base-lan.repo'

base-lan.repo      100%[=====] 183 --.-KB/s  in 0s

2023-11-03 14:17:13 (28.9 MB/s) - 'base-lan.repo' saved [183/183]

[sunbeam@server yum.repos.d]$ sudo wget http://192.168.0.51/updates-lan.repo
--2023-11-03 14:17:22-- http://192.168.0.51/updates-lan.repo
Connecting to 192.168.0.51:80... connected.
HTTP request sent, awaiting response... 200 OK
Length: 179
Saving to: 'updates-lan.repo'

updates-lan.repo  100%[=====] 179 --.-KB/s  in 0s

2023-11-03 14:17:22 (24.5 MB/s) - 'updates-lan.repo' saved [179/179]

[sunbeam@server yum.repos.d]$ sudo yum install haproxy -y
Fedora 37 - x86_64 | DITISS - SunBeam 50 MB/s | 68 MB 00:01
Fedora 37 - x86_64 - Updates | DITISS - SunBeam 35 MB/s | 40 MB 00:01
Last metadata expiration check: 0:00:13 ago on Friday 03 November 2023 02:18:04 PM.
Dependencies resolved.
=====
Package      Architecture Version      Repository    Size
-----
Installing:
haproxy      x86_64      2.6.15-1.fc37 updates-lan   2.3 M
=====

Transaction Summary

```

```

sunbeam@server:~$ ls
sunbeam@server ~$ sudo rpm -q haproxy
[sudo] password for sunbeam:
haproxy-2.6.15-1.fc37.x86_64
sunbeam@server ~$
sunbeam@server ~$
sunbeam@server ~$ sudo vim /etc/haproxy/haproxy.cfg
sunbeam@server ~$ sudo systemctl enable haproxy
[sudo] password for sunbeam:
Created symlink /etc/systemd/system/multi-user.target.wants/haproxy.service → /usr/lib/systemd/system/haproxy.service.
sunbeam@server ~$ sudo systemctl start haproxy
sunbeam@server ~$ sudo systemctl status haproxy
● haproxy.service - HAProxy Load Balancer
   Loaded: loaded (/usr/lib/systemd/system/haproxy.service; enabled; preset:
   Active: active (running) since Fri 2023-11-03 14:47:23 IST; 37s ago
   Process: 1381 ExecStartPre=/usr/sbin/haproxy -f $CONFIG -f $CFGDIR -c -q $C
   Main PID: 1383 (haproxy)
      Tasks: 3 (limit: 4607)
     Memory: 5.3M
        CPU: 45ms
    CGroup: /system.slice/haproxy.service
            └─1383 /usr/sbin/haproxy -Ws -f /etc/haproxy/haproxy.cfg -f /etc/h
              └─1385 /usr/sbin/haproxy -Ws -f /etc/haproxy/haproxy.cfg -f /etc/h

Nov 03 14:47:23 server systemd[1]: Starting haproxy.service - HAProxy Load Balanc
Nov 03 14:47:23 server haproxy[1383]: [NOTICE] (1383) : haproxy version is 2.6
Nov 03 14:47:23 server haproxy[1383]: [NOTICE] (1383) : path to executable is
Nov 03 14:47:23 server haproxy[1383]: [ALERT] (1383) : config : parsing [/etc
Nov 03 14:47:23 server haproxy[1383]: [NOTICE] (1383) : New worker (1385) for
Nov 03 14:47:23 server haproxy[1383]: [NOTICE] (1383) : Loading success.
Nov 03 14:47:23 server haproxy[1385]: [WARNING] (1385) : Server static/static
Nov 03 14:47:23 server haproxy[1385]: [ALERT] (1385) : backend 'static' has
Nov 03 14:47:23 server systemd[1]: Started haproxy.service - HAProxy Load Balanc
Nov 03 14:47:24 server haproxy[1385]: [WARNING] (1385) : Server app/server1 is
sunbeam@server ~$
sunbeam@server ~$
sunbeam@server ~$
sunbeam@server ~$ sudo firewall-cmd --add-service=haproxy --permanent
Error: INVALID_SERVICE: Zone 'FedoraServer': 'haproxy' not among existing servic
es
sunbeam@server ~$
sunbeam@server ~$ curl localhost
<html>This is default website! </html>
sunbeam@server ~$
sunbeam@server ~$ curl localhost
<html>This is website 2</html>
sunbeam@server ~$ sudo firewall-cmd --add-service=http --permanent
[sudo] password for sunbeam:
success

```

```
sunbeam@server:~$ systemctl status haproxy.service
● haproxy.service - HAProxy Load Balancer
   Loaded: loaded (/usr/lib/systemd/system/haproxy.service; enabled; preset:
   Active: active (running) since Fri 2023-11-03 14:47:23 IST; 37s ago
     Process: 1381 ExecStartPre=/usr/sbin/haproxy -f $CONFIG -f $CFGDIR -c -q $C
   Main PID: 1383 (haproxy)
      Tasks: 3 (limit: 4607)
     Memory: 5.3M
        CPU: 45ms
    CGroup: /system.slice/haproxy.service
            └─1383 /usr/sbin/haproxy -Ws -f /etc/haproxy/haproxy.cfg -f /etc/h
              1385 /usr/sbin/haproxy -Ws -f /etc/haproxy/haproxy.cfg -f /etc/h

Nov 03 14:47:23 server systemd[1]: Starting haproxy.service - HAProxy Load Bal
Nov 03 14:47:23 server haproxy[1383]: [NOTICE] (1383) : haproxy version is 2.3
Nov 03 14:47:23 server haproxy[1383]: [NOTICE] (1383) : path to executable is
Nov 03 14:47:23 server haproxy[1383]: [ALERT] (1383) : config : parsing [/etc
Nov 03 14:47:23 server haproxy[1383]: [NOTICE] (1383) : New worker (1385) for
Nov 03 14:47:23 server haproxy[1383]: [NOTICE] (1383) : Loading success.
Nov 03 14:47:23 server haproxy[1385]: [WARNING] (1385) : Server static/static
Nov 03 14:47:23 server haproxy[1385]: [ALERT] (1385) : backend 'static' has
Nov 03 14:47:23 server systemd[1]: Started haproxy.service - HAProxy Load Bal
Nov 03 14:47:24 server haproxy[1385]: [WARNING] (1385) : Server app/server1 is
[sunbeam@server ~]$
[sunbeam@server ~]$
[sunbeam@server ~]$
[sunbeam@server ~]$ sudo firewall-cmd --add-service=haproxy --permanent
Error: INVALID_SERVICE: None 'FedoraServer': 'haproxy' not among existing servic
es
[sunbeam@server ~]$
[sunbeam@server ~]$ curl localhost
<h1>This is default website! </h1>
[sunbeam@server ~]$
[sunbeam@server ~]$ curl localhost
<h1>This is website 2</h1>
[sunbeam@server ~]$ sudo firewall-cmd --add-service=http --permanent
[sudo] password for sunbeam:
success
[sunbeam@server ~]$ sudo firewall-cmd --reload
success
[sunbeam@server ~]$ curl localhost
<h1>This is default website! </h1>
[sunbeam@server ~]$ curl localhost
<h1>This is website 2</h1>
[sunbeam@server ~]$ curl localhost
<h1>This is default website! </h1>
[sunbeam@server ~]$ curl localhost
<h1>This is website 2</h1>
[sunbeam@server ~]$ curl localhost
<h1>This is default website! </h1>
[sunbeam@server ~]$
```

```
sunbeam@client~  
login as: sunbeam  
sunbeam@192.168.59.150's password:  
Web console: https://client:9090/ or https://192.168.59.150:9090/  
  
Last login: Thu Nov  2 11:06:12 2023 from 192.168.59.1  
[sunbeam@client ~]$  
[sunbeam@client ~]$ sudo rpm -q httpd  
[sudo] password for sunbeam:  
httpd-2.4.57-1.fc37.x86_64  
[sunbeam@client ~]$ sudo systemctl stop httpd  
[sunbeam@client ~]$ sudo systemctl status httpd  
* httpd.service - The Apache HTTP Server  
   Loaded: loaded (/usr/lib/systemd/system/httpd.service; enabled; preset: disabled)  
   Active: failed (Result: exit-code) since Fri 2023-11-03 10:34:44 IST; 4h 12m ago  
     Docs: man:httpd.service(8)  
  Process: 959 ExecStart=/usr/sbin/httpd $OPTIONS -DFOREGROUND (code=exited, status=1/FAILURE)  
    Main PID: 959 (code=exited, status=1/FAILURE)  
      Status: "Reading configuration..."  
      CPU: 68ms  
  
Nov 03 10:34:43 client systemd[1]: Starting httpd.service - The Apache HTTP Server:  
Nov 03 10:34:44 client httpd[959]: AH00558: httpd: Could not reliably determine the server's fully qualified domain name, using 127.0.0.1  
Nov 03 10:34:44 client httpd[959]: (13)Permission denied: AH00072: make_sock: could not bind to address 0.0.0.0:80  
Nov 03 10:34:44 client httpd[959]: (13)Permission denied: AH00072: make_sock: could not bind to address 0.0.0.0:443  
Nov 03 10:34:44 client httpd[959]: no listening sockets available, shutting down  
Nov 03 10:34:44 client httpd[959]: AH00015: Unable to open logs  
Nov 03 10:34:44 client systemd[1]: httpd.service: Main process exited, code=exited, status=1/FAILURE  
Nov 03 10:34:44 client systemd[1]: httpd.service: Failed with result 'exit-code'.  
Nov 03 10:34:44 client systemd[1]: Failed to start httpd.service - The Apache HTTP Server.  
[sunbeam@client ~]$  
[sunbeam@client ~]$  
[sunbeam@client ~]$  
[sunbeam@client ~]$ sudo systemctl start httpd  
Job for httpd.service failed because the control process exited with error code.  
See "systemctl status httpd.service" and "journalctl -xeu httpd.service" for details.  
[sunbeam@client ~]$ ls /var/www/html/  
index.html  
[sunbeam@client ~]$ sudo vim /var/www/html/index.html  
[sunbeam@client ~]$  
[sunbeam@client ~]$ sudo journalctl -xeu httpd  
Nov 03 14:50:15 client httpd[1359]: AH00015: Unable to open logs  
Nov 03 14:50:15 client systemd[1]: httpd.service: Main process exited, code=exited, status=1/FAILURE  
Subject: Unit process exited  
Defined-By: systemd  
Support: https://lists.freedesktop.org/mailman/listinfo/systemd-devel  
An ExecStart= process belonging to unit httpd.service has exited.  
The process' exit code is 'exited' and its exit status is 1.
```



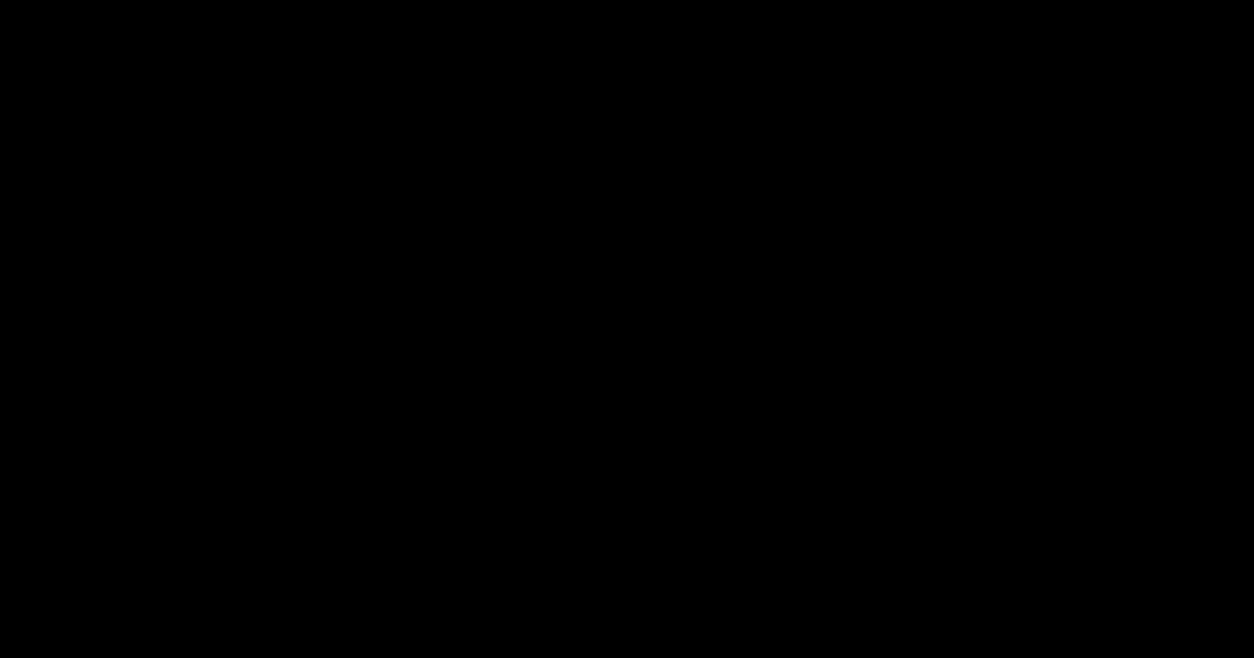
```
sunbeam@client~  
<h1>This is default website! </h1>  
  
"/var/www/html/index.html" 1L, 35B
```



```
sunbeam@client~$  
Nov 03 14:50:15 client httpd[1359]: AH00015: Unable to open logs  
Nov 03 14:50:15 client systemd[1]: httpd.service: Main process exited, code=exited, status=1/5  
Subject: Unit process exited  
Defined-By: systemd  
Support: https://lists.freedesktop.org/mailman/listinfo/systemd-devel  
An ExecStart= process belonging to unit httpd.service has exited.  
The process' exit code is 'exited' and its exit status is 1.  
Nov 03 14:50:15 client systemd[1]: httpd.service: Failed with result 'exit-code'.  
Subject: Unit failed  
Defined-By: systemd  
Support: https://lists.freedesktop.org/mailman/listinfo/systemd-devel  
The unit httpd.service has entered the 'failed' state with result 'exit-code'.  
Nov 03 14:50:15 client systemd[1]: Failed to start httpd.service - The Apache HTTP Server.  
Subject: A start job for unit httpd.service has failed  
Defined-By: systemd  
Support: https://lists.freedesktop.org/mailman/listinfo/systemd-devel  
A start job for unit httpd.service has finished with a failure.  
The job identifier is 1601 and the job result is failed.  
[sunbeam@client ~]$  
[sunbeam@client ~]$ sudo systemctl start httpd  
Job for httpd.service failed because the control process exited with error code.  
See "systemctl status httpd.service" and "journalctl -xeu httpd.service" for details.  
[sunbeam@client ~]$ sudo vim /etc/httpd/conf/httpd.conf  
[sunbeam@client ~]$  
[sunbeam@client ~]$  
[sunbeam@client ~]$  
[sunbeam@client ~]$  
[sunbeam@client ~]$  
[sunbeam@client ~]$ sudo systemctl start httpd  
[sunbeam@client ~]$ curl http://localhost  
^C  
[sunbeam@client ~]$ curl http://localhost  
<h1>This is default website! </h1>  
[sunbeam@client ~]$ sudo vim /var/www/html/index.html  
[sudo] password for sunbeam:  
[sunbeam@client ~]$
```

```
sunbeam@client~$ login as: sunbeam
sunbeam@192.168.59.151's password:
Web console: https://client:9090/ or https://192.168.59.151:9090/

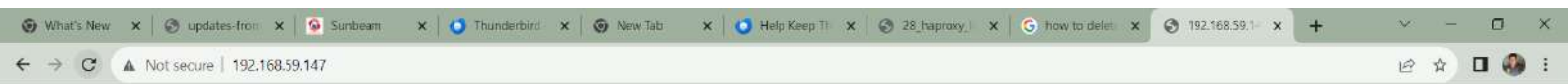
Last login: Fri Nov  3 15:00:40 2023 from 192.168.59.1
[sunbeam@client ~]$ history
 1 clear
 2 ip a
 3 clear
 4 hostname
 5 ip a
 6 passwd sunbeam
 7 exit
 8 clear
 9 sudo vim /etc/issue
10 hostnamectl hostname server
11 init 6
12 init 0
13 hostnamectl hostname client
14 init 6
15 init 0
16 history
[sunbeam@client ~]$
[sunbeam@client ~]$ sudo rpm -q httpd
[sudo] password for sunbeam:
httpd-2.4.57-1.fc37.x86_64
[sunbeam@client ~]$
[sunbeam@client ~]$ sudo systemctl status httpd
o httpd.service - The Apache HTTP Server
   Loaded: loaded (/usr/lib/systemd/system/httpd.service; disabled; preset: disabled)
   Active: inactive (dead)
     Docs: man:httpd.service(8)
[sunbeam@client ~]$
[sunbeam@client ~]$
[sunbeam@client ~]$ sudo vim /etc/httpd/conf/httpd.conf
[sunbeam@client ~]$ sudo vim /etc/httpd/conf/httpd.conf
[sunbeam@client ~]$ sudo vim /var/www/html/index.html
[sunbeam@client ~]$ sudo firewall-cmd --add-service=http --permanent
Warning: ALREADY_ENABLED: http
success
[sunbeam@client ~]$ sudo firewall-cmd --reload
success
[sunbeam@client ~]$ sudo systemctl start httpd
[sunbeam@client ~]$ sudo systemctl status httpd
● httpd.service - The Apache HTTP Server
   Loaded: loaded (/usr/lib/systemd/system/httpd.service; disabled; preset: disabled)
   Active: active (running) since Fri 2023-11-03 15:12:28 IST; 7s ago
     Docs: man:httpd.service(8)
   Main PID: 1119 (httpd)
   Status: "Started, listening on: port 80"
```



The screenshot shows a terminal window with a black background. The prompt is `sunbeam@client~`. The command `<h1>This is website </h1>` has been entered and is highlighted in green. The command is preceded by a series of tilde characters (~) on the left side of the terminal.

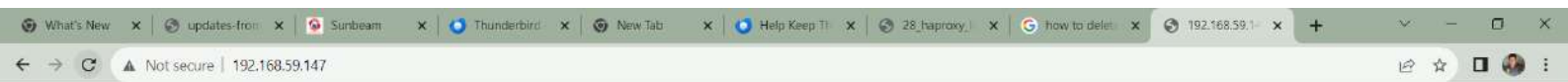
Task 1: `var/www/html/index.html` 1L, 27B

```
sunbeam@client~$  
Nov 03 14:50:15 client httpd[1359]: AH00015: Unable to open logs  
Nov 03 14:50:15 client systemd[1]: httpd.service: Main process exited, code=exited, status=1/5  
Subject: Unit process exited  
Defined-By: systemd  
Support: https://lists.freedesktop.org/mailman/listinfo/systemd-devel  
An ExecStart= process belonging to unit httpd.service has exited.  
The process' exit code is 'exited' and its exit status is 1.  
Nov 03 14:50:15 client systemd[1]: httpd.service: Failed with result 'exit-code'.  
Subject: Unit failed  
Defined-By: systemd  
Support: https://lists.freedesktop.org/mailman/listinfo/systemd-devel  
The unit httpd.service has entered the 'failed' state with result 'exit-code'.  
Nov 03 14:50:15 client systemd[1]: Failed to start httpd.service - The Apache HTTP Server.  
Subject: A start job for unit httpd.service has failed  
Defined-By: systemd  
Support: https://lists.freedesktop.org/mailman/listinfo/systemd-devel  
A start job for unit httpd.service has finished with a failure.  
The job identifier is 1601 and the job result is failed.  
[sunbeam@client ~]$  
[sunbeam@client ~]$ sudo systemctl start httpd  
Job for httpd.service failed because the control process exited with error code.  
See "systemctl status httpd.service" and "journalctl -xeu httpd.service" for details.  
[sunbeam@client ~]$ sudo vim /etc/httpd/conf/httpd.conf  
[sunbeam@client ~]$  
[sunbeam@client ~]$  
[sunbeam@client ~]$  
[sunbeam@client ~]$  
[sunbeam@client ~]$  
[sunbeam@client ~]$ sudo systemctl start httpd  
[sunbeam@client ~]$ curl http://localhost  
^C  
[sunbeam@client ~]$ curl http://localhost  
<h1>This is default website! </h1>  
[sunbeam@client ~]$ sudo vim /var/www/html/index.html  
[sudo] password for sunbeam:  
[sunbeam@client ~]$ sudo vim /var/www/html/index.html  
[sunbeam@client ~]$ sudo systemctl start httpd  
[sunbeam@client ~]$ curl http://localhost  
<h1>This is first webpage </h1>  
[sunbeam@client ~]$ curl http://localhost  
<h1>This is first webpage </h1>  
[sunbeam@client ~]$
```



This is first webpage





This is second webpage.

