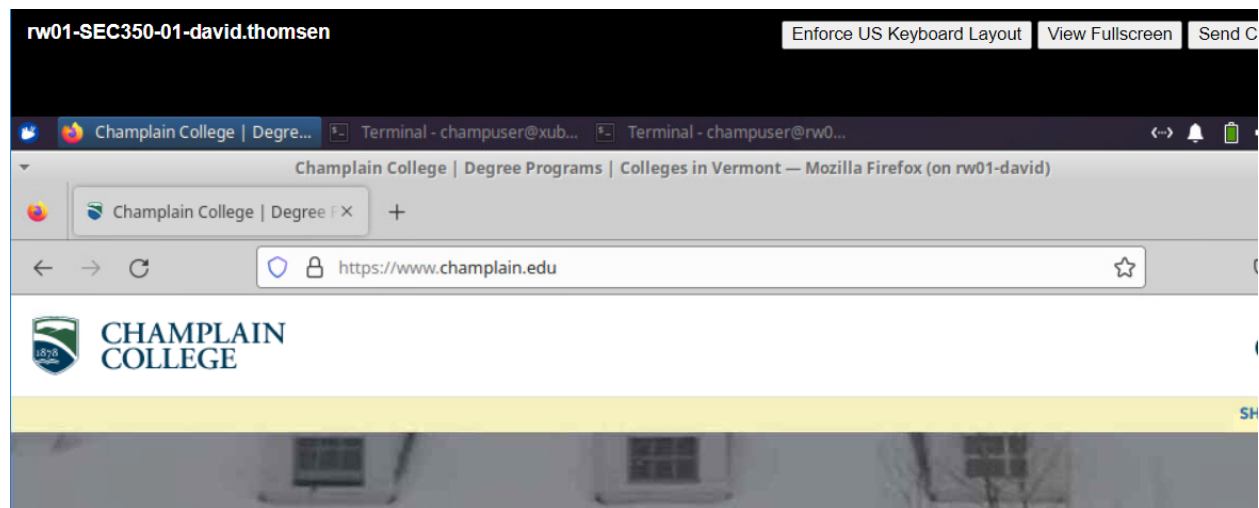
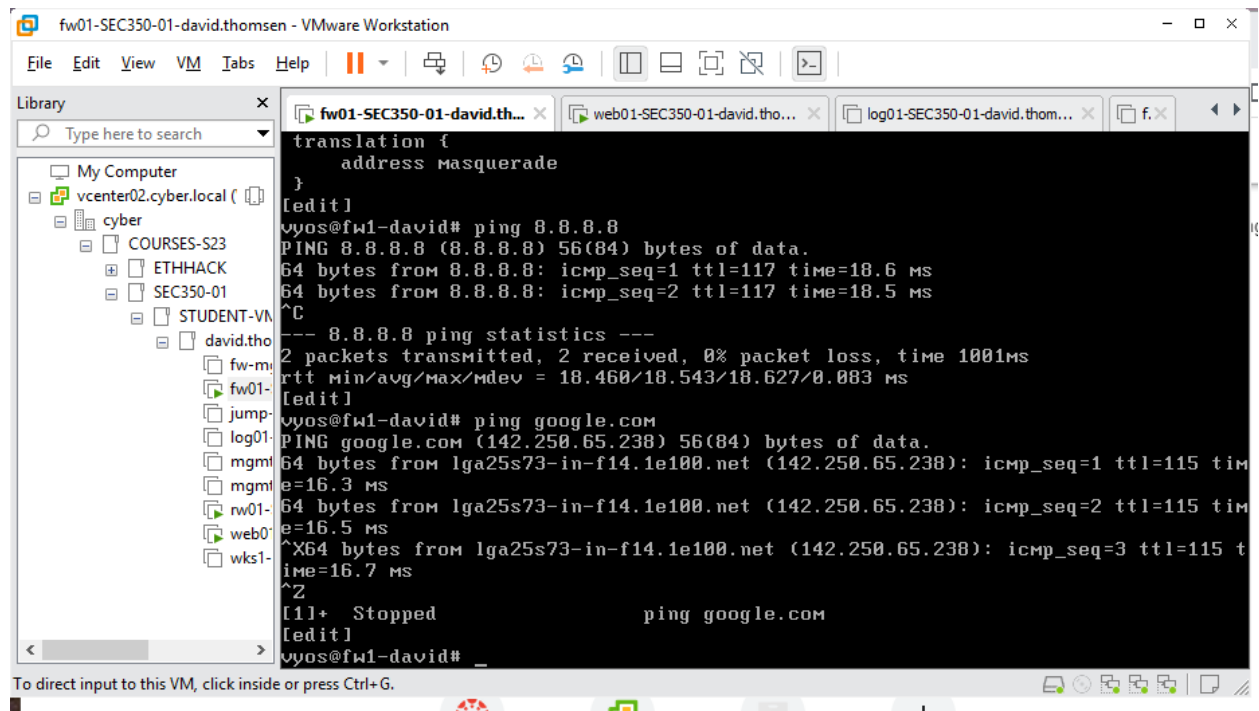


Deliverable 1: Using rw01's web browser, go to champlain.edu. Take a screenshot that shows your vsphere console name and your browser window similar to the following screenshot.



Deliverable 2. Successfully ping google.com and provide a screenshot similar to the one below.



Deliverable 3: Provide a screenshot of a successful ping from web01 to 8.8.8.8 followed by a failed DNS lookup for google.com

```
[david@web01-thomsen ~]$ ping 8.8.8.8
PING 8.8.8.8 (8.8.8.8) 56(84) bytes of data.
64 bytes from 8.8.8.8: icmp_seq=1 ttl=116 time=18.5 ms
64 bytes from 8.8.8.8: icmp_seq=2 ttl=116 time=18.9 ms
^C
--- 8.8.8.8 ping statistics ---
2 packets transmitted, 2 received, 0% packet loss, time 1002ms
rtt min/avg/max/mdev = 18.495/18.676/18.857/0.181 ms
[david@web01-thomsen ~]$ ping google.com
ping: google.com: Name or service not known
[david@web01-thomsen ~]$ _
```

Deliverable 4: Submit a successful ping to google.com from web01, and make sure your hostname is correct as well.

```
[david@web01-thomsen ~]$ ping 8.8.8.8
PING 8.8.8.8 (8.8.8.8) 56(84) bytes of data.
64 bytes from 8.8.8.8: icmp_seq=1 ttl=116 time=18.7 ms
64 bytes from 8.8.8.8: icmp_seq=2 ttl=116 time=18.5 ms
64 bytes from 8.8.8.8: icmp_seq=3 ttl=116 time=18.4 ms
64 bytes from 8.8.8.8: icmp_seq=4 ttl=116 time=18.4 ms
^C
--- 8.8.8.8 ping statistics ---
4 packets transmitted, 4 received, 0% packet loss, time 3005ms
rtt min/avg/max/mdev = 18.388/18.497/18.685/0.148 ms
[david@web01-thomsen ~]$ ping google.com
PING google.com (142.250.65.174) 56(84) bytes of data.
64 bytes from lga25s71-in-f14.1e100.net (142.250.65.174): icmp_seq=1 ttl=114 time=16.1 ms
64 bytes from lga25s71-in-f14.1e100.net (142.250.65.174): icmp_seq=2 ttl=114 time=16.3 ms
64 bytes from lga25s71-in-f14.1e100.net (142.250.65.174): icmp_seq=3 ttl=114 time=16.4 ms
64 bytes from lga25s71-in-f14.1e100.net (142.250.65.174): icmp_seq=4 ttl=114 time=16.3 ms
^C
--- google.com ping statistics ---
4 packets transmitted, 4 received, 0% packet loss, time 3004ms
rtt min/avg/max/mdev = 16.065/16.266/16.388/0.151 ms
[david@web01-thomsen ~]$ _
```

Deliverable 5: Submit a screenshot of your ifconfig followed by a successful ping to google.com from log01

```
log01-SEC350-01-david.thomsen Enforce US Keyboard Layout View Fullscreen Send Ctrl+Alt+Delete

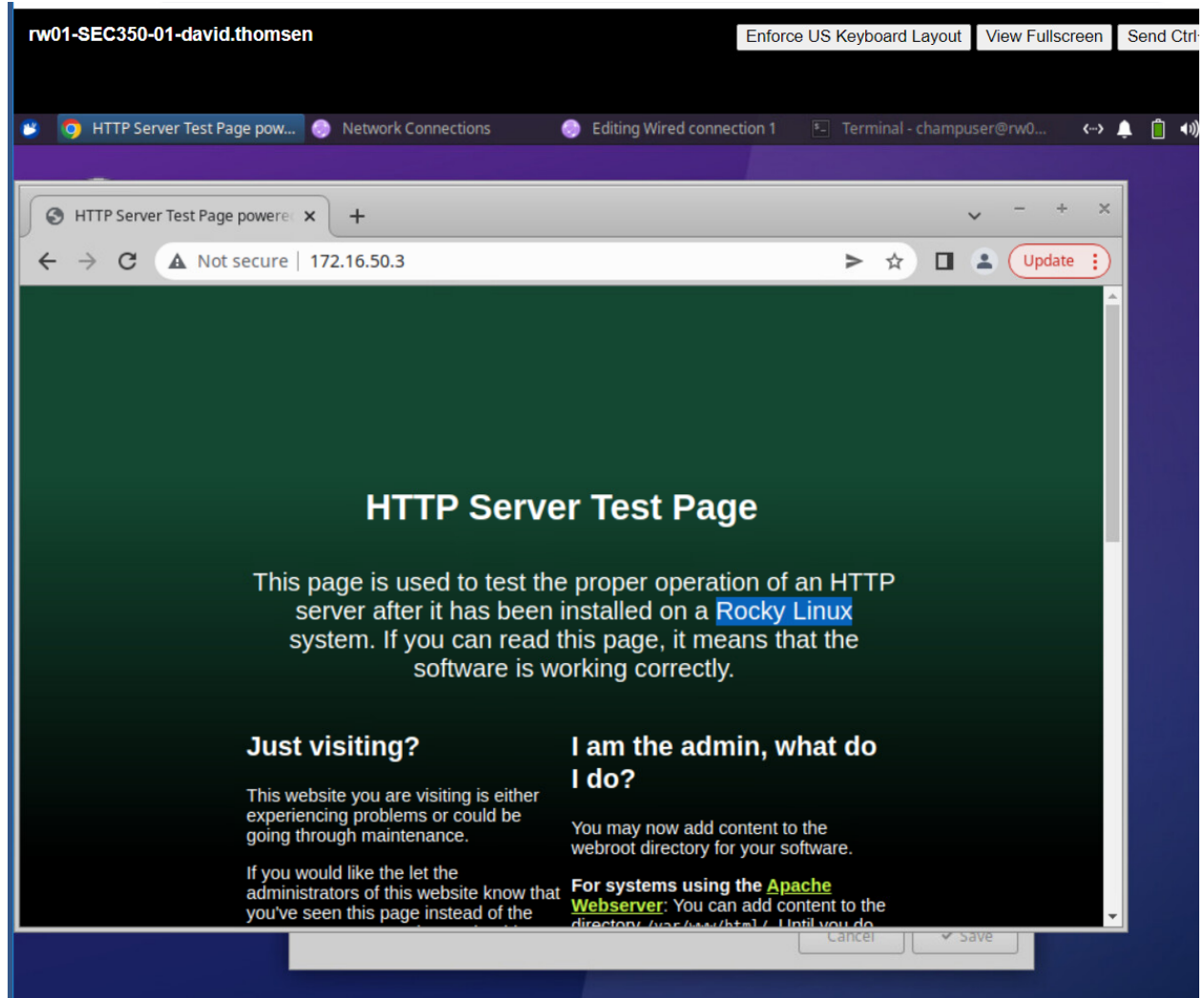
[david@log01-david ~]# ifconfig
ens192: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 172.16.50.5 netmask 255.255.255.248 broadcast 172.16.50.7
    inet6 fe80::250:56ff:fe01:6ed8 prefixlen 64 scopeid 0x20<link>
    ether 00:50:56:a1:6e:d8 txqueuelen 1000 (Ethernet)
    RX packets 109971 bytes 152639117 (145.5 MiB)
    RX errors 0 dropped 4 overruns 0 frame 0
    TX packets 46885 bytes 3138502 (2.9 MiB)
    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 (Local Loopback)
    RX packets 98 bytes 8852 (8.6 KiB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 98 bytes 8852 (8.6 KiB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

[david@log01-david ~]# ping -c1 google.com
PING google.com (142.250.65.174) 56(84) bytes of data.
64 bytes from lga25s71-in-f14.1e100.net (142.250.65.174): icmp_seq=1 ttl=114 time=15.8 ms

--- google.com ping statistics ---
1 packets transmitted, 1 received, 0% packet loss, time 0ms
rtt min/avg/max/mdev = 15.806/15.806/15.806/0.000 ms
[david@log01-david ~]# _
```

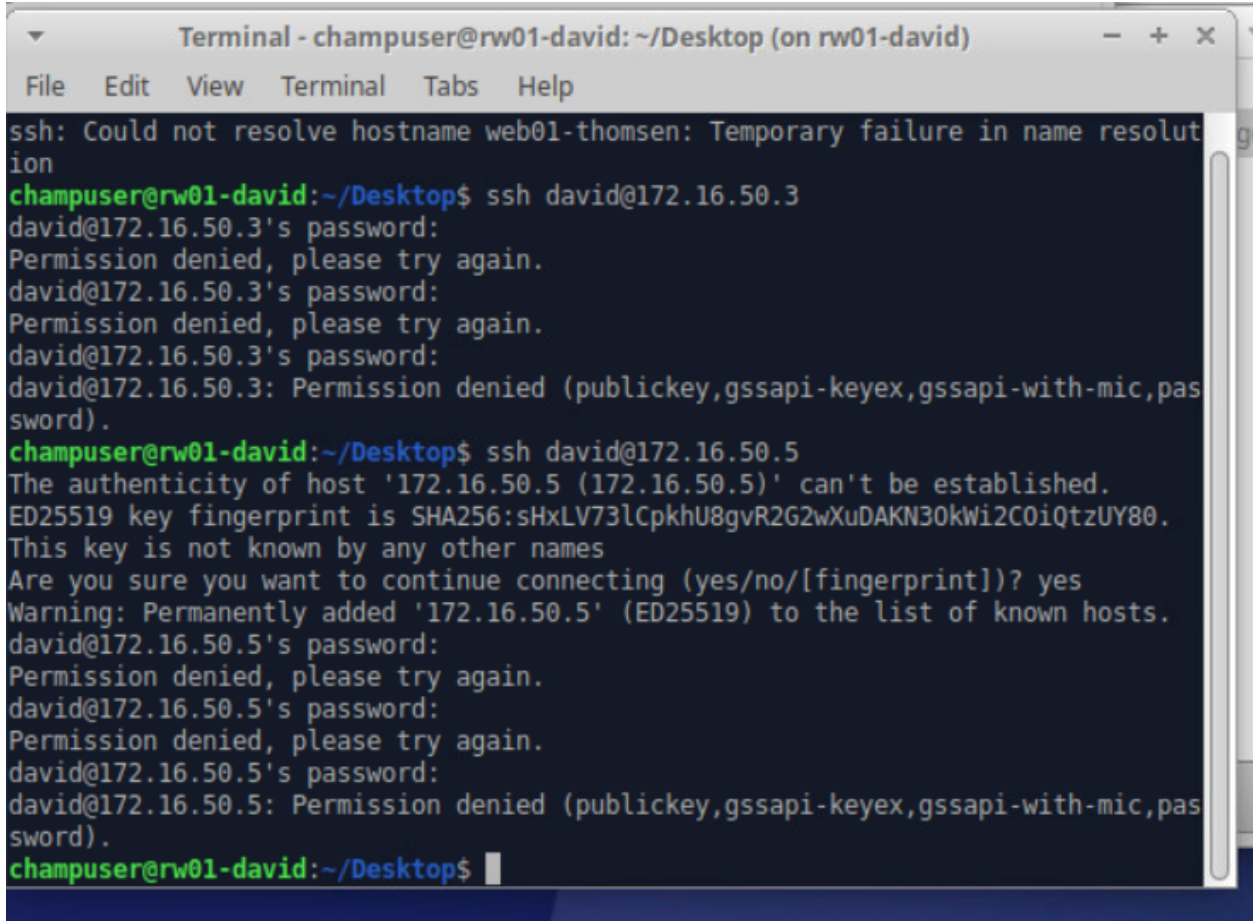
Deliverable 6: Submit a screenshot showing rw01 successfully browsing the test page on your httpd server.



Deliverable 7: Take a screenshot that shows the test message arriving in log01's /var/log/messages file from web01. It should look like the last line:

```
[david@log01-david ~]$ sudo tail -f /var/log/messages
Jan 22 18:35:42 log01-david rsyslogd[28687]: imjournal: journal files changed, reloading... [v8.210
2.0-10.e18 try https://www.rsyslog.com/e/0 ]
Jan 22 18:43:57 log01-david systemd[1]: Stopping System Logging Service...
Jan 22 18:43:57 log01-david rsyslogd[28687]: [origin software="rsyslogd" swVersion="8.2102.0-10.e18
x-pid="28687" x-info="https://www.rsyslog.com"] exiting on signal 15.
Jan 22 18:43:58 log01-david systemd[1]: rsyslog.service: Succeeded.
Jan 22 18:43:58 log01-david systemd[1]: Stopped System Logging Service.
Jan 22 18:43:58 log01-david systemd[1]: Starting System Logging Service...
Jan 22 18:43:58 log01-david rsyslogd[28711]: [origin software="rsyslogd" swVersion="8.2102.0-10.e18
x-pid="28711" x-info="https://www.rsyslog.com"] start
Jan 22 18:43:58 log01-david systemd[1]: Started System Logging Service.
Jan 22 18:43:58 log01-david rsyslogd[28711]: imjournal: journal files changed, reloading... [v8.210
2.0-10.e18 try https://www.rsyslog.com/e/0 ]
Jan 22 18:45:51 web01-thomsen test[29920]: TESTFROMWEB01TOLOG01
```

Deliverable 8: Provide a screenshot that shows this layered ssh session. It should look similar to this:



```
Terminal - champuser@rw01-david: ~/Desktop (on rw01-david)
File Edit View Terminal Tabs Help
ssh: Could not resolve hostname web01-thomsen: Temporary failure in name resolution
champuser@rw01-david:~/Desktop$ ssh david@172.16.50.3
david@172.16.50.3's password:
Permission denied, please try again.
david@172.16.50.3's password:
Permission denied, please try again.
david@172.16.50.3's password:
david@172.16.50.3: Permission denied (publickey,gssapi-keyex,gssapi-with-mic,password).
champuser@rw01-david:~/Desktop$ ssh david@172.16.50.5
The authenticity of host '172.16.50.5 (172.16.50.5)' can't be established.
ED25519 key fingerprint is SHA256:sHxLV73lCpKhU8gvR2G2wXuDAKN30kWi2C0iQtzUY80.
This key is not known by any other names
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added '172.16.50.5' (ED25519) to the list of known hosts.
david@172.16.50.5's password:
Permission denied, please try again.
david@172.16.50.5's password:
Permission denied, please try again.
david@172.16.50.5's password:
david@172.16.50.5: Permission denied (publickey,gssapi-keyex,gssapi-with-mic,password).
champuser@rw01-david:~/Desktop$
```

I was unable to get the SSH connection to work properly but will continue poking it tomorrow to see if I can get it to work properly. I am unable to locate the permission that is denying the connection.

```
Terminal - david@log01-david:~ (on rw01-david)
File Edit View Terminal Tabs Help

champuser@rw01-david:~/Desktop$ ssh david@172.16.50.3
The authenticity of host '172.16.50.3 (172.16.50.3)' can't be established.
ED25519 key fingerprint is SHA256:gNLU2/UlErIG58sgqzLmHzQE77SzA0Z2wJ4UtWiVU3Y.
This key is not known by any other names
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added '172.16.50.3' (ED25519) to the list of known hosts.
david@172.16.50.3's password:
Activate the web console with: systemctl enable --now cockpit.socket

Last login: Mon Jan 23 10:44:47 2023 from 172.16.50.2
[david@web01-thomsen ~]$ ssh david@172.16.50.3
The authenticity of host '172.16.50.3 (172.16.50.3)' can't be established.
ECDSA key fingerprint is SHA256:YmVozvfUiNADiA6alves5rgaHsi9nONKp4SfBdNTes.
Are you sure you want to continue connecting (yes/no/[fingerprint])? ^[C
[david@web01-thomsen ~]$ ssh david@172.16.50.5
The authenticity of host '172.16.50.5 (172.16.50.5)' can't be established.
ECDSA key fingerprint is SHA256:EKCM3ggFsmNEZvWa30NpvjlecdLYzpLXwTmhLEK1+xs.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added '172.16.50.5' (ECDSA) to the list of known hosts.
david@172.16.50.5's password:
Activate the web console with: systemctl enable --now cockpit.socket

Last login: Sun Jan 22 17:42:12 2023
[david@log01-david ~]$
```

A WORKING SSH!! Had to edit the static route set on rw01.

Deliverable 9. VYOS Tech Journal Entry. Create a standalone article on vyos. Make sure you document those commands used during this course of this lab like setting the hostname, interfaces, gateway,dns, nat and dns forwarding Provide a link.

<https://github.com/dthomsen116/SEC-350/wiki/VYOS-Tech-Journal-Entry>

Deliverable 10. syslog Tech Journal Entry Take notes on the configuration steps necessary to create a syslog server and a syslog client. Provide a link.

<https://github.com/dthomsen116/SEC-350/wiki/Lab-1.1-Routing-and-DMZ>