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Professor Torres

3/21

IT 145

Lab 8

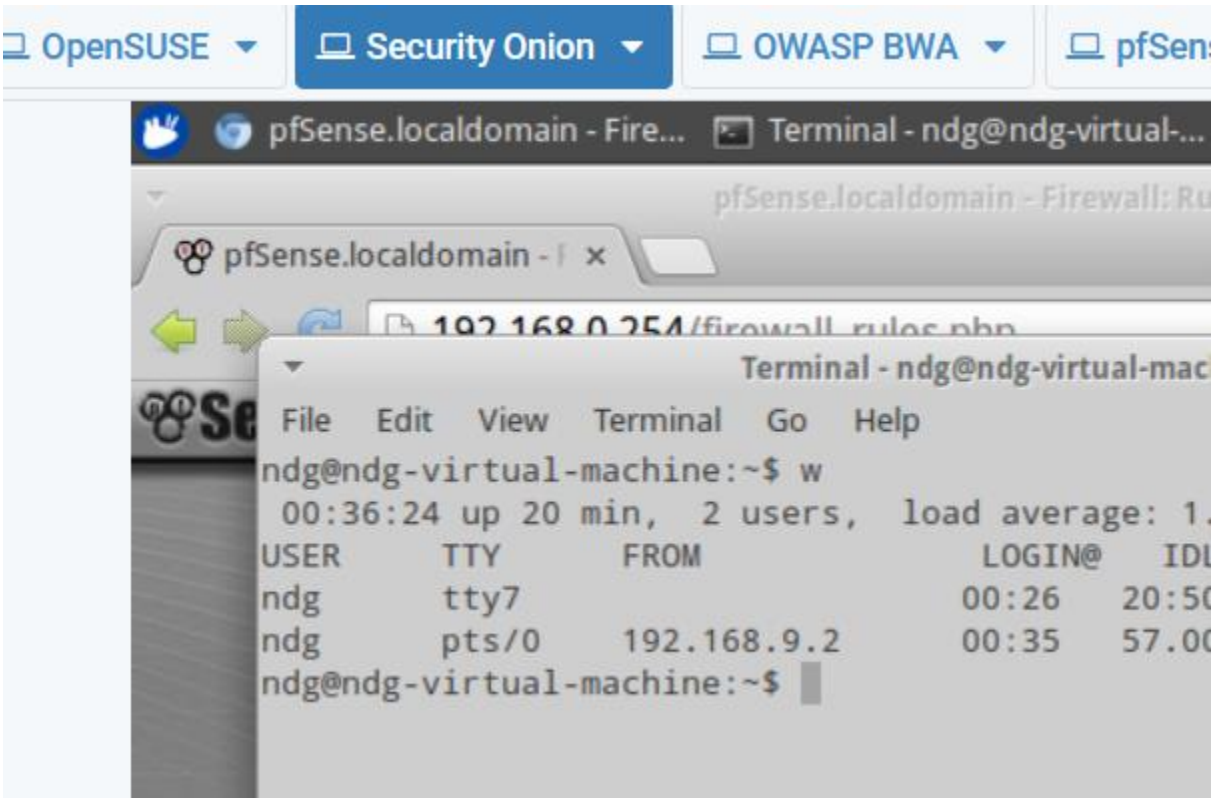
Part A:

- Log on to Netlab: NDG Ethical Hacking- Lab 01

- Tunneling. On your kali box, **after the setup,** we are going to do some tunneling/port forwarding. Kali (our hacker) cannot ping anything. Kali can only SSH to security onion. We will be tunneling everything via SSH so that -from kali i can access web interfaces, etc. This will be one of the trickiest labs yet. ***Take your time***. Chart out what you need to do.

- 99.9999 of the commands needed to complete this lab are done on kali (our hacker) NDG Ethical Hacking- Lab 01
- **SETUP**: Change pfSense rules. Test that you can only access Security Onion via SSH,
- Make sure that you cannot ping or access anything else from Kali
- Also: setup NAT SSH to Security Onion, in WAN rules pointing to Security Onion,
- there should only be one rule (your SSH), delete the other rules

Made the NAt ssh rule the only rule and was able to connect and not ping

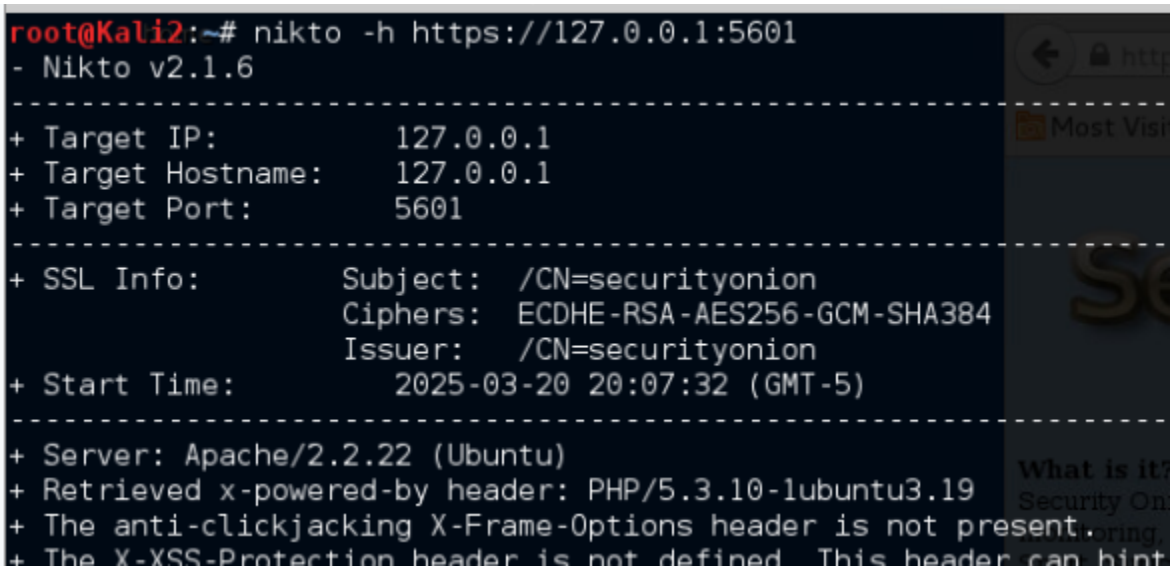


- and finally add a user in Security Onion (student/hacker)

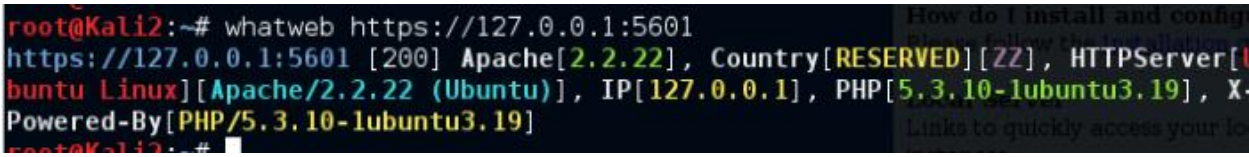
```
root@ndg-virtual-machine:/home/ndg# adduser student
adduser: The user `student' already exists.
root@ndg-virtual-machine:/home/ndg# adduser student1
Adding user `student1' ...
Adding new group `student1' (1004) ...
Adding new user `student1' (1003) with group `student1' ..
Creating home directory `/home/student1' ...
Copying files from `/etc/skel' ...
Enter new UNIX password:
Retype new UNIX password:
passwd: password updated successfully
Changing the user information for student1
Enter the new value, or press ENTER for the default
        Full Name []:
        Room Number []:
        Work Phone []:
        Home Phone []:
        Other []:
Is the information correct? [Y/n]
root@ndg-virtual-machine:/home/ndg#
```

- From kali, tunnel security onion web interface via port 22- access on kali
  Took some tiral and error but was able to get in.

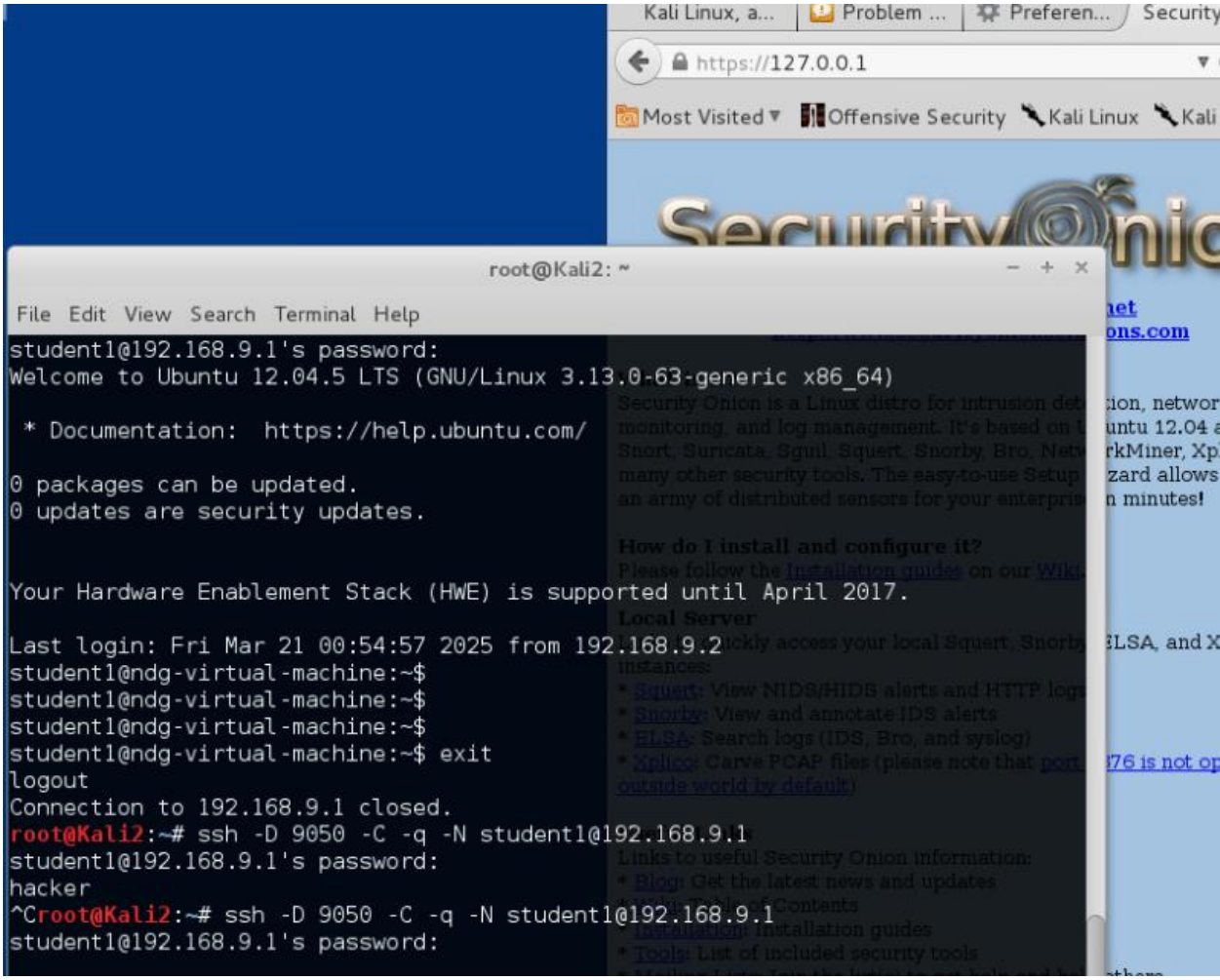
- From kali run Nikto via localhost after establishing tunnel to port 443



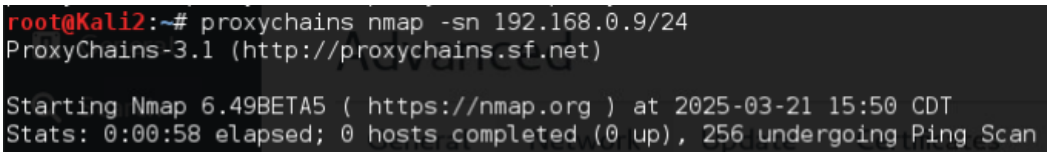
- From kali run whatweb via localhost after establishing tunnel to port 443



- From kali use dynamic port forwarding and sox proxy to tunnel via port 22 (access browser via ip of security onion and openSUSU)
  I was able to eventually get this to work aswell, had to add proxy in Iceweasle settings.



- after setting up sox proxy, use proxychains to scan for live host
  After setting up proxychains conf file we can run commands lie this to go throught the proxy



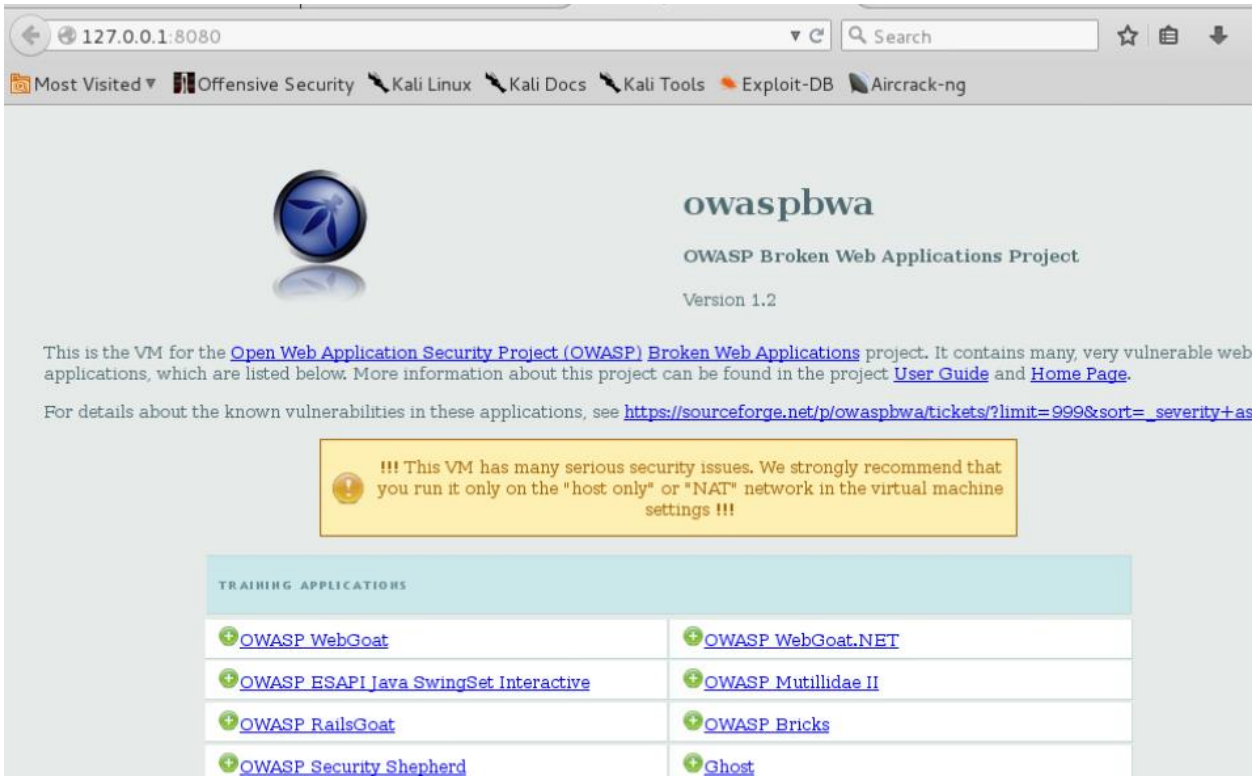
- after setting up sox proxy, use proxychains with whatweb against security onion and openSUSE

```
root@Kali2:~# proxychains whatweb -v https://192.168.0.100
ProxyChains-3.1 (http://proxychains.sf.net)
|D-chain|-<>-127.0.0.1:9050-<><>-192.168.0.100:443-<><>-OK
https://192.168.0.100/ [200]
https://192.168.0.100 [200] Apache[2.2.22], Country[RESERVED][ZZ], HTTPServer[Ubuntu Linux][Apache/2.2.22 (
u)], IP[192.168.0.100], PHP[5.3.10-1ubuntu3.19], X-Powered-By[PHP/5.3.10-1ubuntu3.19]
URL     : https://192.168.0.100
Status : 200
   Apache
        Description: The Apache HTTP Server Project is an effort to develop and
                     maintain an open-source HTTP server for modern operating
                     systems including UNIX and Windows NT. The goal of this
                     project is to provide a secure, efficient and extensible
                     server that provides HTTP services in sync with the current
                     HTTP standards.
        Website    : http://httpd.apache.org/
        Version    : 2.2.22 (from HTTP Server Header)
```

```
root@Kali2:~# proxychains whatweb -v https://192.168.0.2
ProxyChains-3.1 (http://proxychains.sf.net)
|D-chain|-<>-127.0.0.1:9050-<><>-192.168.0.2:443-<--timeout
https://192.168.0.2 ERROR: Connection refused - connect(2) for "192.168.0.2" port 443
root@Kali2:~# proxychains whatweb -v http://192.168.0.2
ProxyChains-3.1 (http://proxychains.sf.net)
|D-chain|-<>-127.0.0.1:9050-<><>-192.168.0.2:80-<><>-OK
http://192.168.0.2 ERROR: uninitialized constant Class::HTTPBadResponse
root@Kali2:~#
```

- set up a tunnel that allows you to view OWASP webpage in kali via security onion. **(tricky one, look at network diagram)**
-

```
~# ssh -L 8080:192.168.68.12:80 student@192.168.0.100
```



- using the above configuration, execute whatweb to OWASP and Nikto against OWASP

```
root@Kali2:~# whatweb -v http://127.0.0.1:8080
http://127.0.0.1:8080/ [200]
http://127.0.0.1:8080 [200] Apache[2.2.14][mod_mono/2
hon/3.3.1,mod_ssl/2.2.14,proxy_html/3.0.1], Country[R
untu Linux][Apache/2.2.14 (Ubuntu) mod_mono/2.4.3 PHP
```

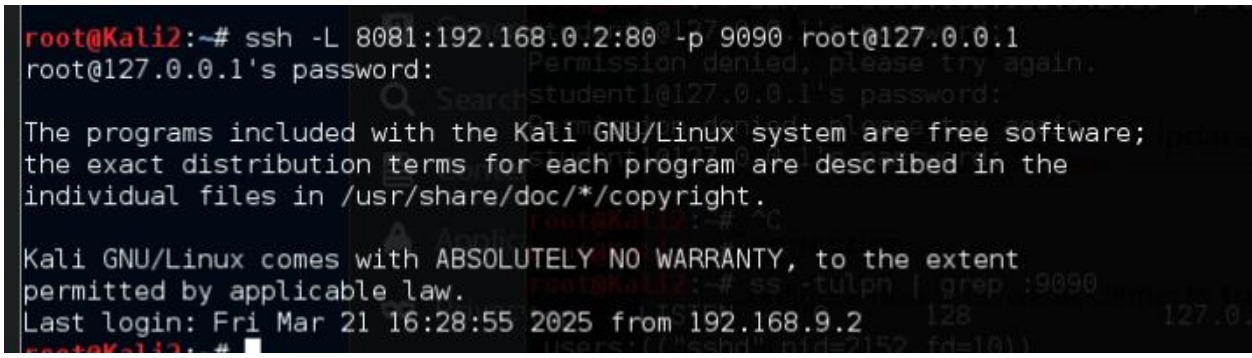
```
root@Kali2:~# nikto -h http://127.0.0.1:8080
- Nikto v2.1.6
---------------------------------------------------------
+ Target IP:          127.0.0.1
+ Target Hostname:    127.0.0.1
+ Target Port:        8080
+ Start Time:         2025-03-21 16:13:29 (GMT-5)
---------------------------------------------------------
+ Server: Apache/2.2.14 (Ubuntu) mod_mono/2.4.3 PHP
```

- From kali tunnel openSUSE web interface via port 22- access on kali

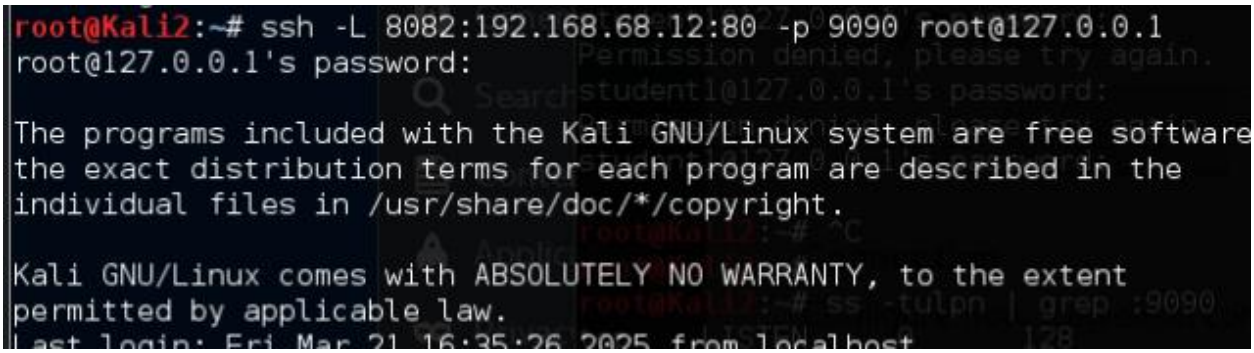
```
root@Kali2:~# ssh -R 9090:127.0.0.1:22 root@192.168.9.2
root@192.168.9.2's password:
The programs included with the Kali GNU/Linux system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Kali GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent
permitted by applicable law.
root@Kali2:~# ss -tulpn | grep :9090
tcp    LISTEN     0      128          127.0.0.1:9090                *:*
 users:(("sshd",pid=2051,fd=10))
tcp    LISTEN     0      128                ::1:9090             :::*
 users:(("sshd",pid=2051,fd=9))
root@Kali2:~#
```

- From security onion- ssh to kali (outbound connection) **(another tricky one, use your diagram)**. For the next three connections, you are executing your command on the **victim** machine. You can than access the victim from your kali (hacker box)
- port forward the web-browser from security onion to kali
  This just would not worK?
- port forward the openSUSU web browser from security onion to kali



- port forward the OWASP web browser from security onion to kali



Also for all of these it was not letting me actually view the websites after I let it sit for a while? I'm not sure but I gave up on troubleshooting after two separate lab attempts.

*****tcpdump all of your connections. See if you can understand the strange output.*****

-On the 12 steps above, what tcpdump command would you use on each of the assignments above in order to capture relevant data

I would use tcpdump with the post associated with my tunnel forward.

8081 or 8082

Part B:

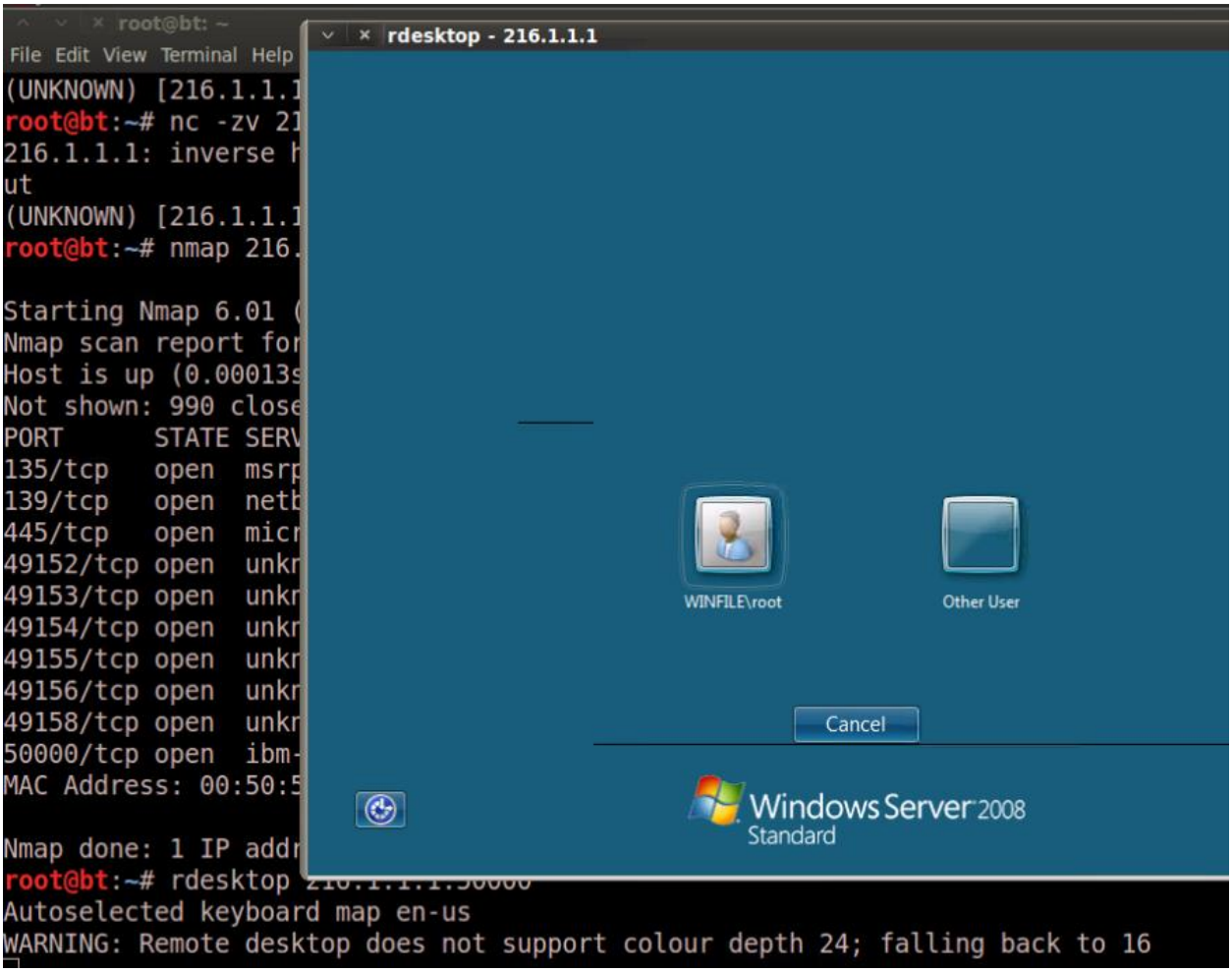
Netlab: NISGTC Network Security Setup:

- On the Windows 2008 Firewall, open up port 50000 point the firewall to port 50000 on 192.168.1.200 -the Windows 8 box has this port closed
- On the Windows 2008 Firewall, open up port 50001 point the firewall to port 50001 on 192.168.1.200 -the Windows 8 box has this port closed
- On the Windows 2008 and the Windows 8- disable the firewall
- On the Windows 2008 and the Windows 8 enable RDP
- On the Backtrack internal, add the user hacker with password student

- On the Backtrack internal, run the following command as root: dpkg-reconfigure openssh-server (ensure SSH is running)

  I added all of these settings! Trust!

Try to implement the following: ***Take your time***. Chart out what you need to do.
A. Connect to 192.168.1.100 via RDP from the external systems--> rdesktop 216.1.1.1:50000
Took me a few hours working with others and trying to find alternate methods, but we got it to work



B. Connect to 192.168.1.50 via SSH from the external system--> SSH hacker@216.1.1.1 -p50001

```
root@bt:~# ssh hacker@216.1.1.1 -p 50002
hacker@216.1.1.1's password:
Linux bt 3.2.6 #1 SMP Fri Feb 17 10:40:05 EST 2012 i686 GNU/Linux

  System information as of Fri Mar 21 20:35:25 EDT 2025

  System load:  0.0                Processes:           108
  Usage of /:   58.0% of 19.06GB   Users logged in:     1
  Memory usage: 12%                IP address for eth2: 192.168.1.50
  Swap usage:   0%

  => There is 1 zombie process.

  Graph this data and manage this system at https://landscape.canonical.co

The programs included with the Ubuntu system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
applicable law.

hacker@bt:~$ whoami
hacker
hacker@bt:~$ pwd
/home/hacker
```

C. From Backtrack external, try to scan 192.168.1.100, 200 and 50

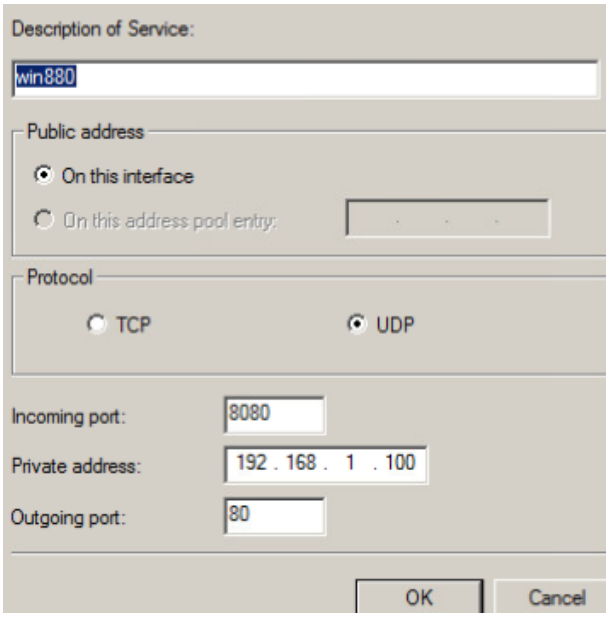
Works!

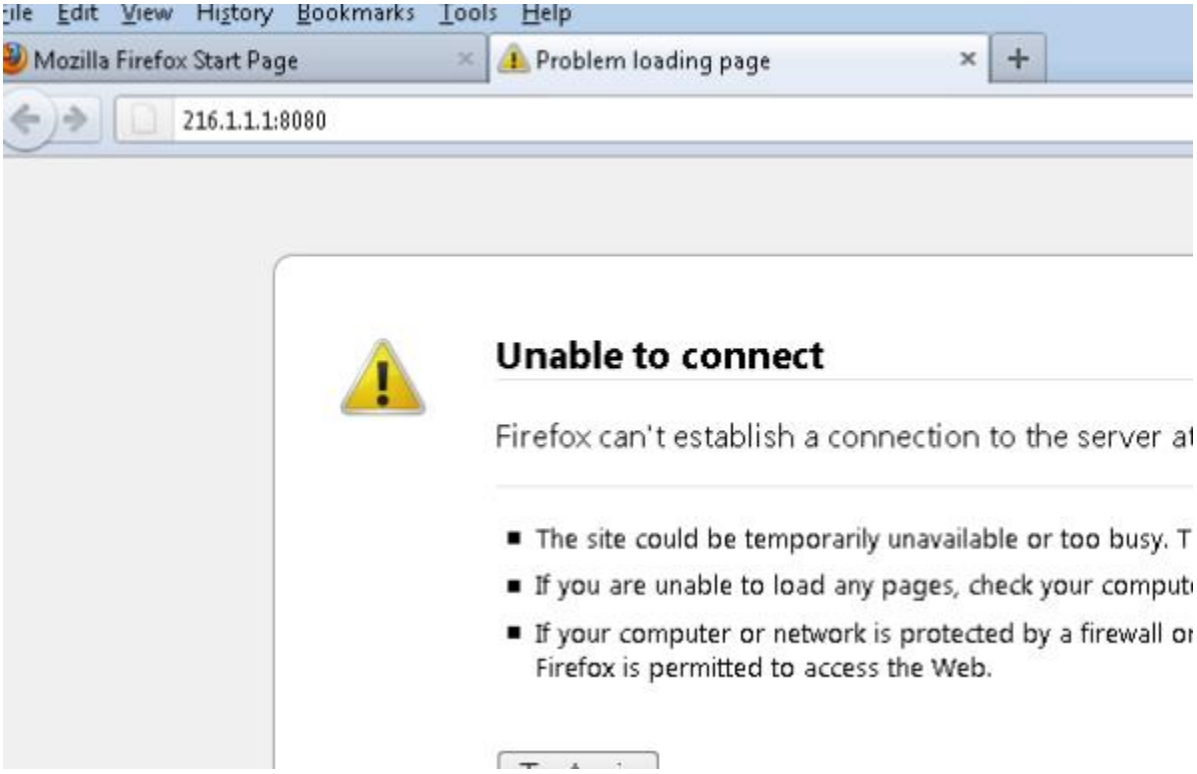
```
Starting Nmap 6.01 ( http://nmap.org ) at 2025-03-21 20:36 EDT
Nmap scan report for 192.168.1.1
Host is up (0.00032s latency).
Nmap scan report for 192.168.1.50
Host is up (0.000052s latency).
Nmap scan report for 192.168.1.100
Host is up (0.00022s latency).
Nmap scan report for 192.168.1.175
Host is up (0.00045s latency).
Nmap scan report for 192.168.1.200
Host is up (0.00037s latency).
```

D. From the Windows 7 external box, try to do the below **"at the same time"**:

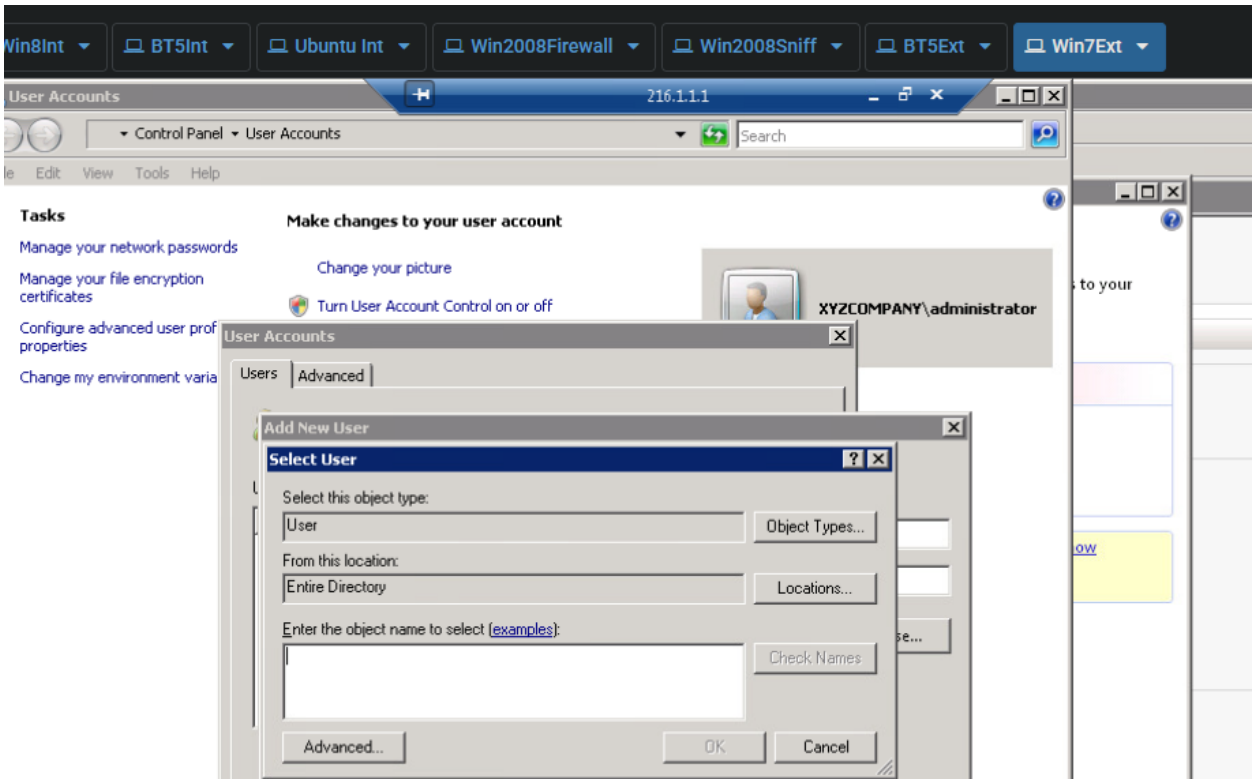
- access the windows 2008 web interface

  Even with correct rules this would not work.

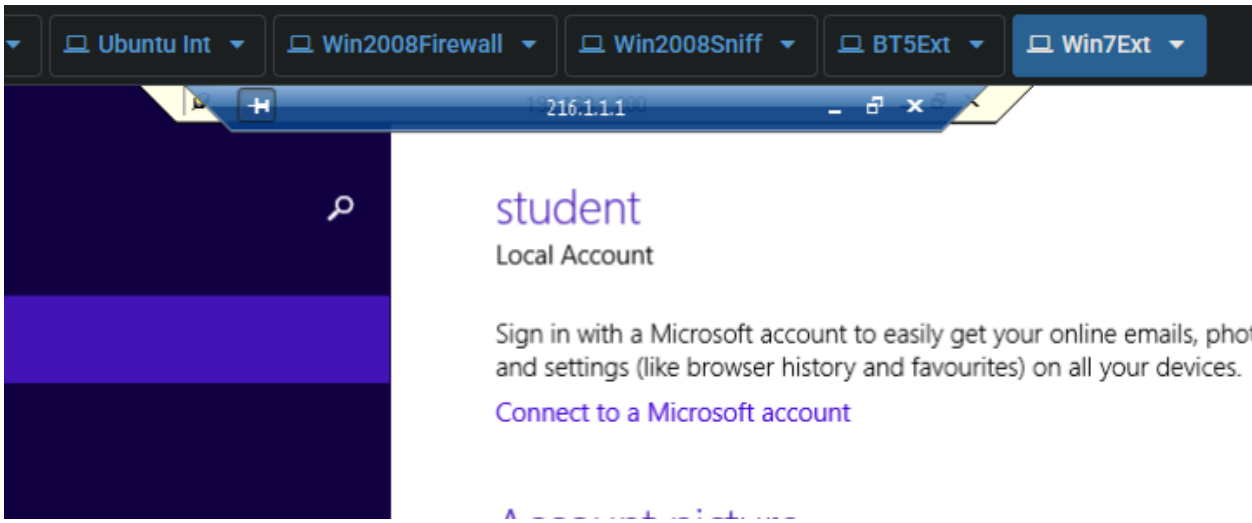




- access the windows 2008 RDP

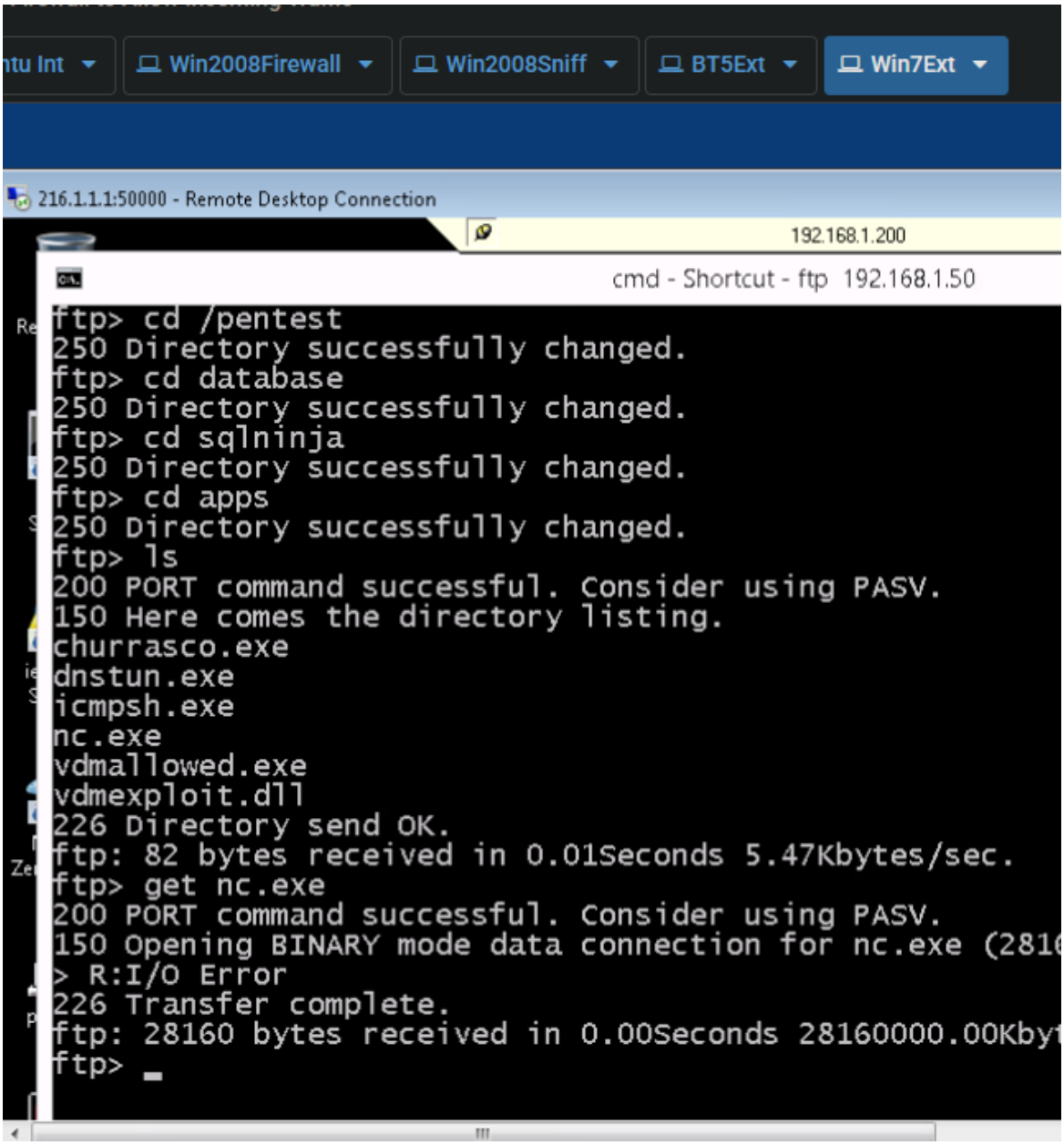


- access the windows 8 via RDP



- access the backtrack internal ftp server and copy nc.exe from BT-internal to you windows 7 box

I ftp in and grab the file


ntu Int
Win2008Firewall
Win2008Sniff
BT5Ext
Win7Ext
216.1.1.1:50000 - Remote Desktop Connection
192.168.1.200
cmd - Shortcut - ftp 192.168.1.50
ftp> cd /pentest
250 Directory successfully changed.
ftp> cd database
250 Directory successfully changed.
ftp> cd sqlninja
250 Directory successfully changed.
ftp> cd apps
250 Directory successfully changed.
ftp> ls
200 PORT command successful. Consider using PASV.
150 Here comes the directory listing.
churrasco.exe
dnstun.exe
icmpsh.exe
nc.exe
vdmallowed.exe
vdmexploit.dll
226 Directory send OK.
ftp: 82 bytes received in 0.01Seconds 5.47Kbytes/sec.
ftp> get nc.exe
200 PORT command successful. Consider using PASV.
150 Opening BINARY mode data connection for nc.exe (281
> R:I/O Error
226 Transfer complete.
ftp: 28160 bytes received in 0.00Seconds 28160000.00Kby
ftp>