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Subject: SL Lab

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Experiment No:1

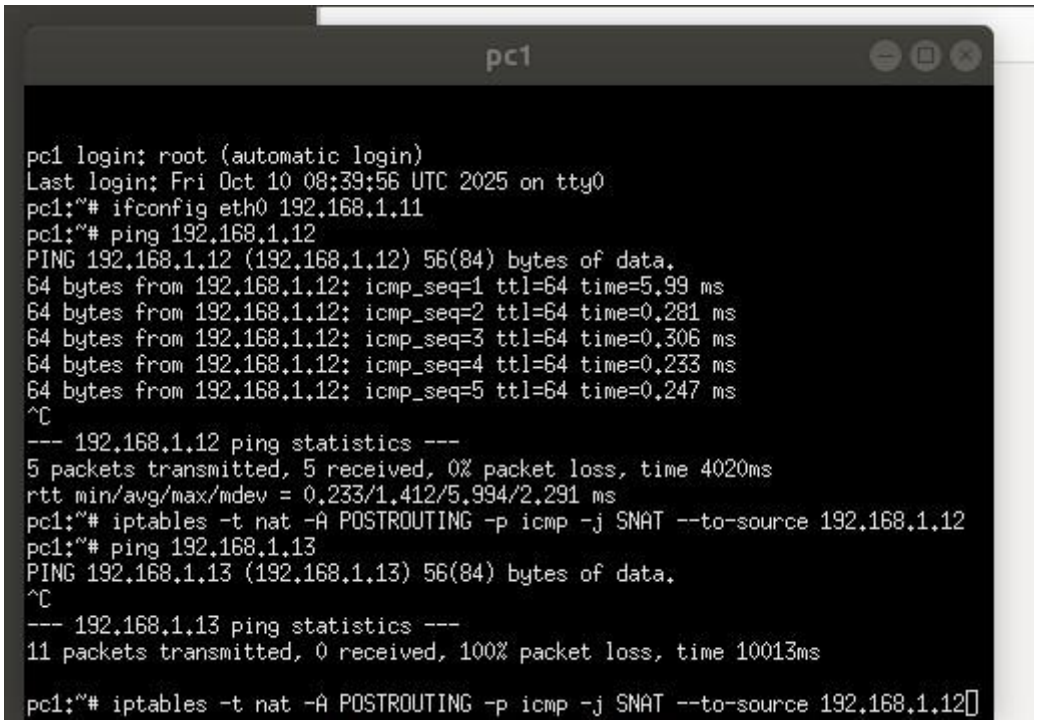
Aim: To study IP spoofing and ARP spoofing over a local area network

Output:

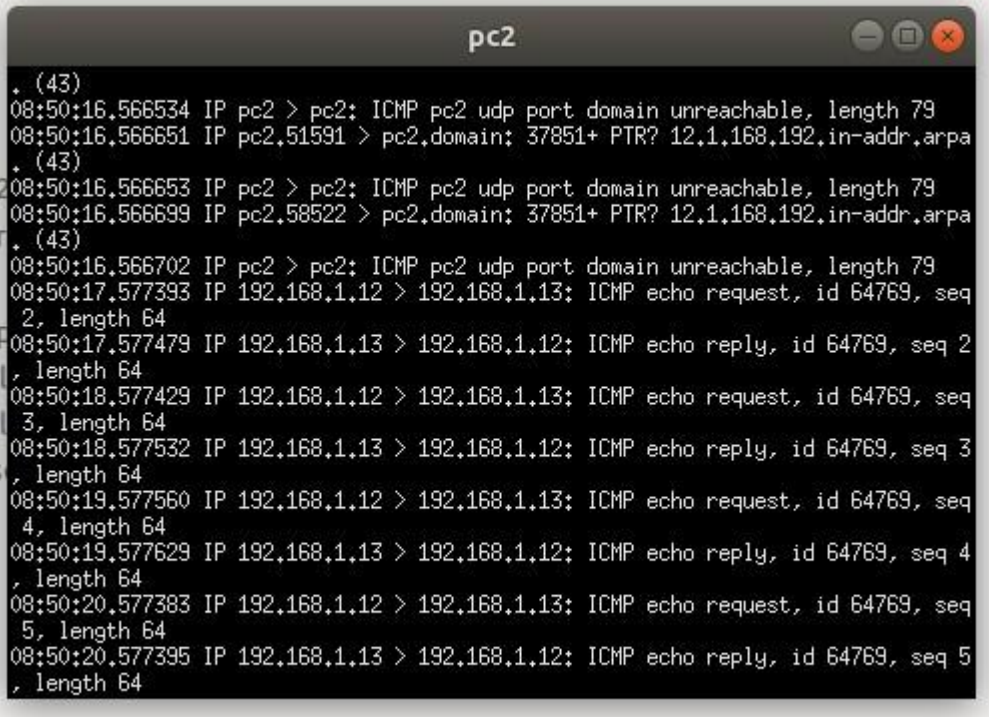
```
apsit@apsit-HP-280-Pro-G6-Microtower-PC:~/Ritesh$  tar -xjSf netkit-2.8.tar.bz2
apsit@apsit-HP-280-Pro-G6-Microtower-PC:~/Ritesh$  tar -xjSf netkit-filesystem-i386-F5.2.tar.bz2
apsit@apsit-HP-280-Pro-G6-Microtower-PC:~/Ritesh$ tar -xjSf netkit-kernel-i386-K2.8.tar.bz2
apsit@apsit-HP-280-Pro-G6-Microtower-PC:~/Ritesh$ export NETKIT_HOME=/home/Ritesh/netkit
apsit@apsit-HP-280-Pro-G6-Microtower-PC:~/Ritesh$ export MANPATH=:$NETKIT_HOME/man
apsit@apsit-HP-280-Pro-G6-Microtower-PC:~/Ritesh$ export PATH=$NETKIT_HOME/bin:$PATH
apsit@apsit-HP-280-Pro-G6-Microtower-PC:~/Ritesh$  cd netkit
apsit@apsit-HP-280-Pro-G6-Microtower-PC:~/Ritesh/netkit$ export PATH=/home/vishal/Downloads/netkit/bin:
apsit@apsit-HP-280-Pro-G6-Microtower-PC:~/Ritesh/netkit$ export PATH=/home/vishal/Downloads/netkit/bin:$PATH
apsit@apsit-HP-280-Pro-G6-Microtower-PC:~/Ritesh/netkit$ ./check_configuration.sh
>  Checking path correctness... ./check_configuration.sh: 35: check_configuration.d/01-check_path.sh: grep: not found
passed.
>  Checking environment... failed!
```

```
apsit@apsit-HP-280-Pro-G6-Microtower-PC:~/Ritesh/netkit$ export PATH=/home/apsit/Ritesh/netkit/bin:/usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin:/sbin:/bin
apsit@apsit-HP-280-Pro-G6-Microtower-PC:~/Ritesh/netkit$ export MANPATH=$MANPATH::/home/apsit/Ritesh/netkit/man
apsit@apsit-HP-280-Pro-G6-Microtower-PC:~/Ritesh/netkit$ which grep
/bin/grep
apsit@apsit-HP-280-Pro-G6-Microtower-PC:~/Ritesh/netkit$ grep --version
grep (GNU grep) 3.1
Copyright (C) 2017 Free Software Foundation, Inc.
License GPLv3+: GNU GPL version 3 or later <http://gnu.org/licenses/gpl.html>.
This is free software: you are free to change and redistribute it.
There is NO WARRANTY, to the extent permitted by law.

Written by Mike Haertel and others, see <http://git.sv.gnu.org/cgit/grep.git/tree/AUTHORS>.
apsit@apsit-HP-280-Pro-G6-Microtower-PC:~/Ritesh/netkit$ ./check_configuration.sh
>  Checking path correctness... passed.
>  Checking environment... passed.
>  Checking for availability of man pages... passed.
>  Checking for proper directories in the PATH... passed.
>  Checking for availability of auxiliary tools:
        awk           : ok
        basename      : ok
        date          : ok
        dirname       : ok
        find          : ok
        getopt        : ok
        grep          : ok
        head          : ok
        id            : ok
        kill          : ok
        ls            : ok
        lsof          : ok
        ps            : ok
        readlink      : ok
        wc            : ok
        port-helper   : ok
        tunctl        : ok
        uml_mconsole  : ok
        uml_switch    : ok
passed.
>  Checking for availability of terminal emulator applications:
        xterm         : found
        konsole       : not found
        gnome-terminal : found
```

```
[ READY ] Congratulations! Your Netkit setup is now complete!
          Enjoy Netkit!
apsit@apsit-HP-280-Pro-G6-Microtower-PC:~/Ritesh/netkit$ vstart pc1 -eth0=A
vstart: In command line "/home/apsit/Ritesh/netkit/bin/vstart pc1 -eth0=A"
Too many arguments: -eth0=A
Use /home/apsit/Ritesh/netkit/bin/vstart --help to get help.
apsit@apsit-HP-280-Pro-G6-Microtower-PC:~/Ritesh/netkit$ vstart pc1 -eth0=A
vstart: In command line "/home/apsit/Ritesh/netkit/bin/vstart pc1 -eth0=A"
Too many arguments: -eth0=A
Use /home/apsit/Ritesh/netkit/bin/vstart --help to get help.
apsit@apsit-HP-280-Pro-G6-Microtower-PC:~/Ritesh/netkit$ vstart pc1 -eth0=A


============= Starting virtual machine "pc1" =============
   Kernel:     /home/apsit/Ritesh/netkit/kernel/netkit-kernel
   Modules:    /home/apsit/Ritesh/netkit/kernel/modules
   Memory:     32 MB
   Model fs:   /home/apsit/Ritesh/netkit/fs/netkit-fs
   Filesystem: /home/apsit/Ritesh/netkit/pc1.disk (new)
   Hostfs at:  /home/apsit
   Boot cmd:   "th0=A"

Running ==> xterm -e /home/apsit/Ritesh/netkit/kernel/netkit-kernel modules=/home/apsit/Ritesh/netkit/kernel/modules name=pc1 title=pc1 umid=pc1 mem=36M ubd0=/home/apsit
/Ritesh/netkit/pc1.disk,/home/apsit/Ritesh/netkit/fs/netkit-fs root=98:1 uml_dir=/home/apsit/.netkit/mconsole hosthome=/home/apsit exec="th0=A" quiet con0=fd:0,fd:1 con1
=null SELINUX_INIT=0
apsit@apsit-HP-280-Pro-G6-Microtower-PC:~/Ritesh/netkit$ vstart pc2 -eth0=A


============= Starting virtual machine "pc2" =============
   Kernel:     /home/apsit/Ritesh/netkit/kernel/netkit-kernel
   Modules:    /home/apsit/Ritesh/netkit/kernel/modules
   Memory:     32 MB
   Model fs:   /home/apsit/Ritesh/netkit/fs/netkit-fs
   Filesystem: /home/apsit/Ritesh/netkit/pc2.disk (new)
   Hostfs at:  /home/apsit
   Boot cmd:   "th0=A"

Running ==> xterm -e /home/apsit/Ritesh/netkit/kernel/netkit-kernel modules=/home/apsit/Ritesh/netkit/kernel/modules name=pc2 title=pc2 umid=pc2 mem=36M ubd0=/home/apsit
/Ritesh/netkit/pc2.disk,/home/apsit/Ritesh/netkit/fs/netkit-fs root=98:1 uml_dir=/home/apsit/.netkit/mconsole hosthome=/home/apsit exec="th0=A" quiet con0=fd:0,fd:1 con1
=null SELINUX_INIT=0
apsit@apsit-HP-280-Pro-G6-Microtower-PC:~/Ritesh/netkit$ vstart pc3 -eth0=A
```



pute_64.pdf


pc2
. (43)
08:50:16.566534 IP pc2 > pc2: ICMP pc2 udp port domain unreachable, length 79
08:50:16.566651 IP pc2.51591 > pc2.domain: 37851+ PTR? 12.1.168.192.in-addr.arpa
. (43)
08:50:16.566653 IP pc2 > pc2: ICMP pc2 udp port domain unreachable, length 79
08:50:16.566699 IP pc2.58522 > pc2.domain: 37851+ PTR? 12.1.168.192.in-addr.arpa
. (43)
08:50:16.566702 IP pc2 > pc2: ICMP pc2 udp port domain unreachable, length 79
08:50:17.577393 IP 192.168.1.12 > 192.168.1.13: ICMP echo request, id 64769, seq 2, length 64
08:50:17.577479 IP 192.168.1.13 > 192.168.1.12: ICMP echo reply, id 64769, seq 2, length 64
08:50:18.577429 IP 192.168.1.12 > 192.168.1.13: ICMP echo request, id 64769, seq 3, length 64
08:50:18.577532 IP 192.168.1.13 > 192.168.1.12: ICMP echo reply, id 64769, seq 3, length 64
08:50:19.577560 IP 192.168.1.12 > 192.168.1.13: ICMP echo request, id 64769, seq 4, length 64
08:50:19.577629 IP 192.168.1.13 > 192.168.1.12: ICMP echo reply, id 64769, seq 4, length 64
08:50:20.577383 IP 192.168.1.12 > 192.168.1.13: ICMP echo request, id 64769, seq 5, length 64
08:50:20.577395 IP 192.168.1.13 > 192.168.1.12: ICMP echo reply, id 64769, seq 5, length 64

pc3
--- 192.168.1.11 ping statistics ---
3 packets transmitted, 3 received, 0% packet loss, time 2010ms
rtt min/avg/max/mdev = 0.264/0.703/1.510/0.571 ms
pc3:~# ifconfig
eth0 Link encap:Ethernet HWaddr 2e:fe:a2:81:23:ce
inet addr:192.168.1.13 Bcast:192.168.1.255 Mask:255.255.255.0
inet6 addr: fe80::2cfe:a2ff:fe81:23ce/64 Scope:Link
UP BROADCAST RUNNING MULTICAST MTU:1500 Metric:1
RX packets:37 errors:0 dropped:0 overruns:0 frame:0
TX packets:17 errors:0 dropped:0 overruns:0 carrier:0
collisions:0 txqueuelen:1000
RX bytes:2420 (2.3 KiB) TX bytes:1322 (1.2 KiB)
Interrupt:5
lo Link encap:Local Loopback
inet addr:127.0.0.1 Mask:255.0.0.0
inet6 addr: ::1/128 Scope:Host
UP LOOPBACK RUNNING MTU:16436 Metric:1
RX packets:2 errors:0 dropped:0 overruns:0 frame:0
TX packets:2 errors:0 dropped:0 overruns:0 carrier:0
collisions:0 txqueuelen:0
RX bytes:100 (100.0 B) TX bytes:100 (100.0 B)
pc3:~# ping 192.168.1.11

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Conclusion:

In this experiment, we learnt and understood to implement IP spoofing and ARP spoofing over a local area network