

CYSE 270: Linux System for Cybersecurity

Lab 11 – Basic Network Configurations

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(jason@kali)-[~]
$ ifconfig
eth0: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 10.0.2.15 netmask 255.255.255.0 broadcast 10.0.2.255
    inet6 fd17:625c:f037:2:bbeb:d50f:4b57:d69 prefixlen 64 scopeid 0<global>
    inet6 fd17:625c:f037:2:a00:27ff:fe5a:386c prefixlen 64 scopeid 0<global>
    inet6 fe80::a00:27ff:fe5a:386c prefixlen 64 scopeid 0<link>
    ether 08:00:27:5a:38:6c txqueuelen 1000 (Ethernet)
    RX packets 13 bytes 4259 (4.1 KiB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 38 bytes 5854 (5.7 KiB)
    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 0<host>
    loop txqueuelen 1000 (Local Loopback)
    RX packets 8 bytes 480 (480.0 B)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 8 bytes 480 (480.0 B)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

(jason@kali)-[~]
$ route -n
Kernel IP routing table
Destination Gateway Genmask Flags Metric Ref Use Iface
0.0.0.0 10.0.2.2 0.0.0.0 UG 100 0 0 eth0
10.0.2.0 0.0.0.0 255.255.255.0 U 100 0 0 eth0

(jason@kali)-[~]
$ ip route
default via 10.0.2.2 dev eth0 proto dhcp src 10.0.2.15 metric 100
10.0.2.0/24 dev eth0 proto kernel scope link src 10.0.2.15 metric 100

(jason@kali)-[~]
$ netstat -t
Active Internet connections (w/o servers)
Proto Recv-Q Send-Q Local Address Foreign Address State

(jason@kali)-[~]
$ netstat -tuln
Active Internet connections (only servers)
Proto Recv-Q Send-Q Local Address Foreign Address State

(jason@kali)-[~]
$ ping -c 10 ubuntu.com
PING ubuntu.com (185.125.190.29) 56(84) bytes of data:
64 bytes from website-content-cache-3.ps5.canonical.com (185.125.190.29): icmp_seq=1 ttl=255 time=91.8 ms
64 bytes from website-content-cache-3.ps5.canonical.com (185.125.190.29): icmp_seq=2 ttl=255 time=92.7 ms
64 bytes from website-content-cache-3.ps5.canonical.com (185.125.190.29): icmp_seq=3 ttl=255 time=96.2 ms
64 bytes from website-content-cache-3.ps5.canonical.com (185.125.190.29): icmp_seq=4 ttl=255 time=91.5 ms
64 bytes from website-content-cache-3.ps5.canonical.com (185.125.190.29): icmp_seq=5 ttl=255 time=101 ms
64 bytes from website-content-cache-3.ps5.canonical.com (185.125.190.29): icmp_seq=6 ttl=255 time=101 ms
64 bytes from website-content-cache-3.ps5.canonical.com (185.125.190.29): icmp_seq=7 ttl=255 time=91.6 ms
64 bytes from website-content-cache-3.ps5.canonical.com (185.125.190.29): icmp_seq=8 ttl=255 time=108 ms
64 bytes from website-content-cache-3.ps5.canonical.com (185.125.190.29): icmp_seq=9 ttl=255 time=106 ms
64 bytes from website-content-cache-3.ps5.canonical.com (185.125.190.29): icmp_seq=10 ttl=255 time=97.2 ms

— ubuntu.com ping statistics —
10 packets transmitted, 10 received, 0% packet loss, time 9011ms
rtt min/avg/max/mdev = 91.522/97.692/108.368/5.847 ms

(jason@kali)-[~]
$ host www.odu.edu
www.odu.edu has address 35.170.140.174

(jason@kali)-[~]
$
```

```
(jason@jcart098)-[~]
$ cat /etc/hostname
jcart098

(jason@jcart098)-[~]
$ cat /etc/resolv.conf
# Generated by NetworkManager
nameserver 10.0.2.3
nameserver fd17:625c:f037:2::3

(jason@jcart098)-[~]
$
```

Task B:

```
(jason@jcart098)-[~]
$ ifconfig
eth0: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 192.168.10.125 netmask 255.255.255.0 broadcast 192.168.10.255
    inet6 2600:8805:2709:1700:a00:27ff:fe5a:386c prefixlen 64 scopeid 0<global>
    inet6 2600:8805:2709:1700::4403 prefixlen 128 scopeid 0<global>
    inet6 fe80::a00:27ff:fe5a:386c prefixlen 64 scopeid 0<link>
    inet6 2600:8805:2709:1700:a250:1522:1072:9739 prefixlen 64 scopeid 0<global>
    ether 08:00:27:5a:38:6c txqueuelen 1000 (Ethernet)
    RX packets 99 bytes 58028 (56.6 KiB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 91 bytes 41763 (40.7 KiB)
    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 0<host>
    loop txqueuelen 1000 (Local Loopback)
    RX packets 8 bytes 480 (480.0 B)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 8 bytes 480 (480.0 B)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

(jason@jcart098)-[~]
$ route -n
Kernel IP routing table
Destination Gateway Genmask Flags Metric Ref Use Iface
0.0.0.0 192.168.10.1 0.0.0.0 UG 100 0 0 eth0
192.168.10.0 0.0.0.0 255.255.255.0 U 100 0 0 eth0

(jason@jcart098)-[~]
$ netstat -t
Active Internet connections (w/o servers)
Proto Recv-Q Send-Q Local Address Foreign Address State

(jason@jcart098)-[~]
$ ping -c 10 ubuntu.com
PING ubuntu.com (2620:2d:4000:1::28) 56 data bytes
64 bytes from website-content-cache-3.canonical.com (2620:2d:4000:1::28): icmp_seq=1 ttl=51 time=92.3 ms
64 bytes from website-content-cache-3.canonical.com (2620:2d:4000:1::28): icmp_seq=2 ttl=51 time=90.7 ms
64 bytes from website-content-cache-3.canonical.com (2620:2d:4000:1::28): icmp_seq=3 ttl=51 time=89.0 ms
64 bytes from website-content-cache-3.canonical.com (2620:2d:4000:1::28): icmp_seq=4 ttl=51 time=96.9 ms
64 bytes from website-content-cache-3.canonical.com (2620:2d:4000:1::28): icmp_seq=5 ttl=51 time=90.7 ms
64 bytes from website-content-cache-3.canonical.com (2620:2d:4000:1::28): icmp_seq=6 ttl=51 time=88.5 ms
64 bytes from website-content-cache-3.canonical.com (2620:2d:4000:1::28): icmp_seq=7 ttl=51 time=88.9 ms
64 bytes from website-content-cache-3.canonical.com (2620:2d:4000:1::28): icmp_seq=8 ttl=51 time=85.7 ms
64 bytes from website-content-cache-3.canonical.com (2620:2d:4000:1::28): icmp_seq=9 ttl=51 time=91.7 ms
64 bytes from website-content-cache-3.canonical.com (2620:2d:4000:1::28): icmp_seq=10 ttl=51 time=94.5 ms

— ubuntu.com ping statistics —
10 packets transmitted, 10 received, 0% packet loss, time 9373ms
rtt min/avg/max/mdev = 85.692/90.891/96.865/3.021 ms

(jason@jcart098)-[~]
$ host www.odu.edu
www.odu.edu has address 35.170.140.174
```

Jason Carter

```
(jason@jcart098)-[~]  
$ cat /etc/hostname  
jcart098  
  
(jason@jcart098)-[~]  
$ cat /etc/resolv.conf  
# Generated by NetworkManager  
nameserver 68.105.28.11  
nameserver 68.105.29.11  
nameserver 68.105.28.12  
# NOTE: the libc resolver may not support more than 3 nameservers.  
# The nameservers listed below may not be recognized.  
nameserver 2001:578:3f::30  
nameserver 2001:578:3f:1::30  
  
(jason@jcart098)-[~]  
$
```