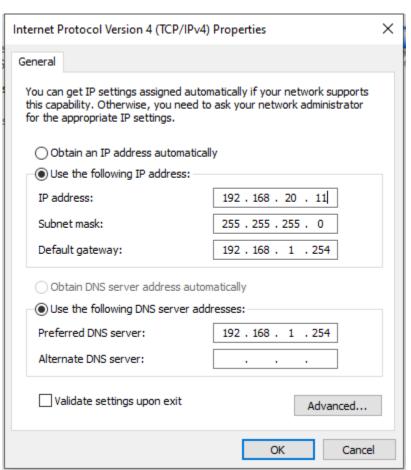
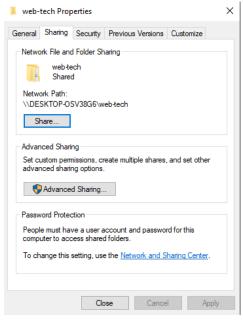
Lab 2: Output

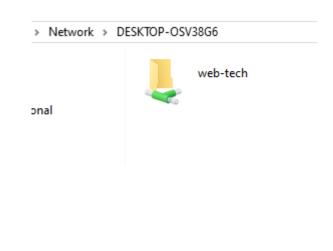
Configuring the IP of computer in windows client

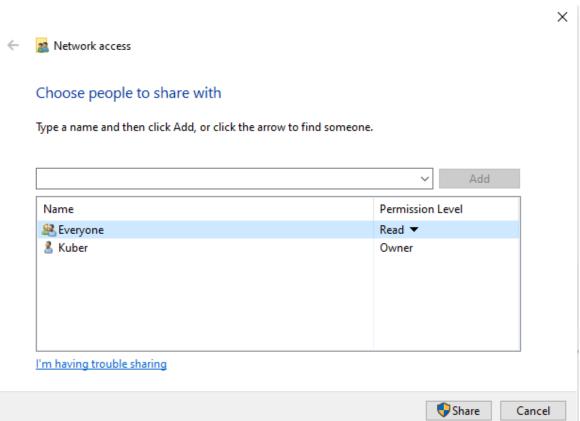


Lab 3: Output

Create basic network and share files and folders.







Lab 4: Output

Conneting a simple peer to peer network.

```
C:\Users\user>ping 192.168.1.254

Pinging 192.168.1.254 with 32 bytes of data:
Reply from 192.168.1.254: bytes=32 time=7ms TTL=64
Reply from 192.168.1.254: bytes=32 time=7ms TTL=64
Reply from 192.168.1.254: bytes=32 time=4ms TTL=64
Reply from 192.168.1.254: bytes=32 time=4ms TTL=64

Ping statistics for 192.168.1.254:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 4ms, Maximum = 7ms, Average = 5ms
```

Lab 5: Outputs

Demonstation of some commands in Linux

ipconfig

```
onworks@onworks-Standard-PC-i440FX-PIIX-1996:-$ ip link
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN mode DEFAULT group default qlen 1000
link/loopback 80:00:00:00:00:00 brd 60:00:00:00:00:00
2: ens3: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc pfifo_fast state UP mode DEFAULT group default
qlen 1000
link/ether 52:54:00:12:34:56 brd ff:ff:ff:ff:
```

Is

```
onworks@onworks-Standard-PC-1440FX-PIIX-1996:/$ ls
bin cdrom etc initrd.img lib media opt root sbin srv [17] var vmlinuz.old
boot dev home initrd.img.old lost+found mnt proc run snap sys usr vmlinuz
```

ifconfig

route -v

```
onworks@onworks-Standard-PC-i440FX-PIIX-1996:-$ route -v
Kernel IP routing table
Destination
                 Gateway
                                                                         Use Iface
                                  Genmask
                                                    Flags Metric Ref
default
                 10.0.2.2
                                  0.0.0.0
                                                    UG
                                                          188
                                                                            0 ens3
10.0.2.0
link-local
                                  255.255.255.0
                                                           100
                                                                  0
                                                   U
                                                                            0 ens3
                                  255.255.0.0
                                                           1000
                                                                  8
                                                                            0 ens3
```

hostname

```
onworks@onworks-Standard-PC-1440FX-PIIX-1996:-$ hostname
onworks-Standard-PC-1440FX-PIIX-1996
```

hostnamectl

```
onworks@onworks-Standard-PC-i440FX-PIIX-1996:-$ hostnamectl
Static hostname: onworks-Standard-PC-i440FX-PIIX-1996
Icon name: computer-vm
Chassis: vm
Machine ID: 8c8594cc7367425397827773779827e5
Boot ID: f966d709dd2b486d8d4a5498bbc9d359
Virtualization: qemu
Operating System: Ubuntu 16.04.6 LTS
Kernel: Linux 4.15.0-50-generic
Architecture: x86
```

Lab 6: Outputs

Demonstation of some commands in Windows

ipconfig

```
:\Users\user>ipconfig
Windows IP Configuration
Ethernet adapter Ethernet:
   Media State . . . . . . . . . . . . . . Media disconnected Connection-specific DNS Suffix . :
Unknown adapter Local Area Connection 2:
   Media State . . . . . . . . . : Media disconnected Connection-specific DNS Suffix . :
 Jnknown adapter Local Area Connection 3:
   Media State . . . . . . . . . : Media disconnected Connection-specific DNS Suffix . :
Ethernet adapter VirtualBox Host-Only Network:
    Connection-specific DNS Suffix .:
   Connection-specific DNS Suffix : :
Link-local IPv6 Address . . . : fe80::ff5a:7508:9454:2d4b%15
IPv4 Address . . . . : 192.168.56.1
Subnet Mask . . . . : 255.255.255.0
Default Gateway . . . . :
 Inknown adapter Local Area Connection:
   Media State . . . . . . . . . : Media disconnected Connection-specific DNS Suffix . :
Wireless LAN adapter Local Area Connection* 1:
   Media State . . . . . . . . . : Media disconnected Connection-specific DNS Suffix . :
Wireless LAN adapter Local Area Connection* 2:
   Media State . . . . . . . . . : Media disconnected Connection-specific DNS Suffix . :
Wireless LAN adapter Local Area Connection* 11:
   Media State . . . . . . . . . : Media disconnected Connection-specific DNS Suffix . :
Wireless LAN adapter Wi-Fi:
   Connection-specific DNS Suffix .:
IPv6 Address. . . . . . . . . : 2403:3800:321f:ce1f:32dc:2073:fe72:1b32
Temporary IPv6 Address. . . . : 2403:3800:321f:ce1f:bd87:e4f7:f3c7:75a1
```

ping

```
C:\Users\user>ping 192.168.1.254

Pinging 192.168.1.254 with 32 bytes of data:
Reply from 192.168.1.254: bytes=32 time=7ms TTL=64
Reply from 192.168.1.254: bytes=32 time=7ms TTL=64
Reply from 192.168.1.254: bytes=32 time=4ms TTL=64
Reply from 192.168.1.254: bytes=32 time=4ms TTL=64

Ping statistics for 192.168.1.254:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 4ms, Maximum = 7ms, Average = 5ms
```

tracert

```
C:\Users\user>tracert 8.8.8.8
Tracing route to dns.google [8.8.8.8]
over a maximum of 30 hops:
        3 ms
                                dsldevice.lan [192.168.1.254]
                22 ms
                          1 ms
                 3 ms
 2
        2 ms
                          2 ms
                                100.89.208.1
                4 ms
 3
        3 ms
                          4 ms
                                lt-1-0-0.4004.mbaluwatar1.subisu.net.np [116.66.193.
        7 ms
                 5 ms
                         10 ms
                                116.66.193.93
 4
 5
        7 ms
                 7 ms
                         6 ms
                                61.95.165.141
 6
      45 ms
                38 ms
                         43 ms
                                116.119.68.99
                39 ms
       39 ms
                         45 ms
                                72.14.205.196
       53 ms
                45 ms
                         50 ms
                                216.239.43.133
 8
                         47 ms
      45 ms
                45 ms
                                142.250.233.145
 g
 10
       37 ms
                46 ms
                         36 ms dns.google [8.8.8.8]
Trace complete.
C:\Users\user>
```

netstat -ano

```
:\Users\user>netstat
Active Connections
 Proto Local Address
                               Foreign Address
                                                     State
        127.0.0.1:49668
                               kubernetes:49669
                                                     ESTABLISHED
 TCP
 TCP
        127.0.0.1:49669
                               kubernetes:49668
                                                     ESTABLISHED
 TCP
        127.0.0.1:52751
                               kubernetes:52752
                                                     ESTABLISHED
 TCP
        127.0.0.1:52752
                               kubernetes:52751
                                                     ESTABLISHED
 TCP
        127.0.0.1:52753
                               kubernetes:52754
                                                     ESTABLISHED
                               kubernetes:52753
 TCP
        127.0.0.1:52754
                                                     ESTABLISHED
 TCP
        127.0.0.1:52757
                               kubernetes:52758
                                                     ESTABLISHED
        127.0.0.1:52758
                               kubernetes:52757
 TCP
                                                     ESTABLISHED
                               kubernetes:52760
 TCP
        127.0.0.1:52759
                                                     ESTABLISHED
                               kubernetes:52759
 TCP
        127.0.0.1:52760
                                                     ESTABLISHED
 TCP
        127.0.0.1:55234
                               kubernetes:55235
                                                     ESTABLISHED
 TCP
        127.0.0.1:55235
                               kubernetes:55234
                                                     ESTABLISHED
 TCP
        127.0.0.1:55264
                               kubernetes:49350
                                                     TIME_WAIT
                                                     TIME_WAIT
 TCP
        127.0.0.1:60335
                               kubernetes:49350
                               kubernetes:49350
 TCP
        127.0.0.1:61210
 TCP
        127.0.0.1:61211
                               kubernetes:49350
                                                     TIME WAIT
 TCP
        127.0.0.1:61212
                               kubernetes:wsd
                                                     TIME_WAIT
 TCP
        127.0.0.1:62312
                               kubernetes:49350
                                                     TIME_WAIT
                                                     TIME_WAIT
        127.0.0.1:62337
 TCP
                               kubernetes:49350
 TCP
        127.0.0.1:62338
                               kubernetes:49350
                                                     TIME_WAIT
 TCP
        127.0.0.1:62339
                               kubernetes:49350
                                                     TIME_WAIT
 TCP
        127.0.0.1:62340
                               kubernetes:49350
                                                     TIME_WAIT
        127.0.0.1:62341
                               kubernetes:49350
                                                     TIME WAIT
 TCP
 TCP
        127.0.0.1:62342
                               kubernetes:49350
                                                     TIME_WAIT
                                                     TIME_WAIT
 TCP
        127.0.0.1:62343
                               kubernetes:49350
 TCP
        127.0.0.1:62344
                               kubernetes:49350
 TCP
        127.0.0.1:62345
                               kubernetes:49350
                                                     TIME WAIT
                               kubernetes:49350
 TCP
        127.0.0.1:62346
                                                     TIME_WAIT
        192.168.1.69:52454
                               20.239.125.92:https
 TCP
                                                     CLOSE_WAIT
        192.168.1.69:52741
                                                     CLOSE_WAIT
                               23.54.82.211:https
 TCP
 TCP
        192.168.1.69:52743
                               23.54.82.211:https
                                                     CLOSE_WAIT
                                                     CLOSE_WAIT
        192.168.1.69:52765
 TCP
                               20.141.12.34:https
 TCP
        [::1]:61213
                               DESKTOP-OSV38G6:wsd
        TCP
```

nslookup

```
C:\Users\user>nslookup 8.8.8.8
Server: UnKnown
Address: fe80::1
Name: dns.google
Address: 8.8.8.8
```

#arp -a

```
C:\Users\user>arp -a
Interface: 192.168.56.1 --- 0xf
 Internet Address
                       Physical Address
                                              Type
 192.168.56.255
                       ff-ff-ff-ff-ff
                                             static
 224.0.0.22
                       01-00-5e-00-00-16
                                             static
 224.0.0.251
                       01-00-5e-00-00-fb
                                             static
 224.0.0.252
                       01-00-5e-00-00-fc
                                             static
 239.255.255.250
                       01-00-5e-7f-ff-fa
                                             static
```

route

```
::\Users\user>route print
 ------
Interface List
1.....Software Loopback Interface 1
IPv4 Route Table
 Active Routes:
                                                  Interface Metric
127.0.0.1 331
127.0.0.1 331
Network Destination
                      Netmask
                                      Gateway
 On-link
On-link
                                                   127.0.0.1
                                                192.168.56.1
192.168.56.1
                                     On-link
                                     On-link
                                                               281
                                     On-link
                                                 192.168.56.1
 224.0.0.0 240.0.0.0
224.0.0.0 240.0.0.0
255.255.255.255 255.255.255
255.255.255.255 255.255.255
                                     On-link
On-link
                                                127.0.0.1
192.168.56.1
                                                               331
                                                               281
                                                192.168.56.1
                                     On-link
                                                               281
 ersistent Routes:
 None
IPv6 Route Table
Active Routes:
If Metric Network Destination
1 331 ::1/128 On-lin
15 281 fe80::/64 On-lin
15 281 fe80::ff5a:7508:9454:2d4b/128
                               On-link
                              On-link
     331 ff00::/8
                               On-link
     281 ff00::/8
                               On-link
ersistent Routes:
 None
```

net view

```
C:\Users\user>net view
System error 6118 has occurred.
The list of servers for this workgroup is not currently available
```

getmac -v

```
C:\Users\user>getmac /v

Connection Name Network Adapter Physical Address

Transport Name

Wi-Fi Qualcomm Athero D0-53-49-2C-C5-F7 Media disconnected

Ethernet Realtek PCIe Gb F0-76-1C-79-17-C6 Media disconnected

Bluetooth Netwo Bluetooth Devic D0-53-49-2D-22-EF Media disconnected

Local Area Conn Windscribe VPN 00-FF-E8-A1-16-FF Media disconnected

VirtualBox Host VirtualBox Host 0A-00-27-00-00-0F \ Device\Tcpip_(961EA504-3836-4ACF-8E2B-BECF28138FE8}

Local Area Conn TAP-Windows Ada 00-FF-22-F6-C7-B1 Media disconnected
```

pathping

```
Tracing route to dns.google [8.8.8.8]

over a maximum of 30 hops:

0 DESKTOP-OSV3866 [192.168.1.69]

1 dsldevice.lan [192.168.1.254]

2 100.89.208.1

3 lt-1-0-0.4004.mbaluwatarl.subisu.net.np [116.66.193.157]

4 116.66.193.93

5 61.95.165.141

6 116.119.68.99

7 72.14.205.196

8 216.239.43.133

9 142.250.233.145

10 dns.google [8.8.8.8]

Computing statistics for 250 seconds...
```

system info

```
C:\Users\user>systeminfo
      Host Name:
                                                                                                                                                                                                                                                       DESKTOP-OSV38G6
                                                                                                                                                                                                                                                     Microsoft Windows 10 Pro
10.0.19045 N/A Build 19045
Microsoft Corporation
Standalone Workstation
Multiprocessor Free
    OS Name:
OS Version:
OS Manufacturer:
    os Manuration:
OS Configuration:
OS Build Type:
Registered Owner:
Registered Organization:
        Product ID:
Original Install Date:
                                                                                                                                                                                                                                                       00330-80000-00000-AA258
                                                                                                                                                                                                                                                       10/29/2021, 7:24:41 AM
3/14/2024, 1:02:18 AM
      System Boot Time:
System Manufacturer:
                                                                                                                                                                                                                                                     3/14/2024, 1:02:18 AM

Acer

Aspire E5-571

x64-based PC

1 Processor(s) Installed.

[01]: Intel64 Family 6 Model 69 Stepping 1 GenuineIntel ~1700 Mhz

Insyde Corp. V1.26, 12/18/2014
        System Model:
System Type:
              rocessor(s):
    BIOS Version:
      Windows Directory:
System Directory:
                                                                                                                                                                                                                                                       C:\Windows
C:\Windows\system32
                                                                                                                                                                                                                                                     \(\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\tin\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{
        Boot Device:
System Locale:
System Locale:
Input Locale:
Input Locale:
Time Zone:
Total Physical Memory:
Available Physical Memory:
Virtual Memory: Max Size:
Virtual Memory: Available:
Virtual Memory: In Use:
Page File Location(s):
Domain:
Logon Server:
Hotfix(s):
                                                                                                                                                                                                                                                     8,119 MB
3,061 MB
12,087 MB
                                                                                                                                                                                                                                                     5,562 MB
6,525 MB
C:\pagefile.sys
WORKGROUP
                                                                                                                                                                                                                                                   WORKGROUP
\\DESKIOP-OSV3866
31 Hotfix(s) Installed.
[01]: KB5034466
[02]: KB5028853
[03]: KB5000736
[04]: KB5011048
[05]: KB5012170
[06]: KB5015684
[07]: KB5035845
[08]: KB5006753
[09]: KB5007273
[10]: KB5011552
                                                                                                                                                                                                                                          [08]: KB5906753
[09]: KB5907273
[10]: KB5911851
[11]: KB5911851
[12]: KB5914932
[13]: KB5914935
[14]: KB5914935
[14]: KB5914935
[14]: KB5914935
[16]: KB5914993
[17]: KB5918996
[17]: KB5918996
[17]: KB5923974
[21]: KB5923974
[21]: KB5923974
[21]: KB592398
[23]: KB592399
[23]: KB592399
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[27]: KB593139
[27]: KB593139
[27]: KB5931494
[31]: KB5905099
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[34]: KB5905099
[35]: KB5931494
[36]: KB5931494
[37]: KB5931494
[38]: KB5931494
[39]: KB5931494
[30]: K
        Network Card(s):
            Typer-V Requirements:
```