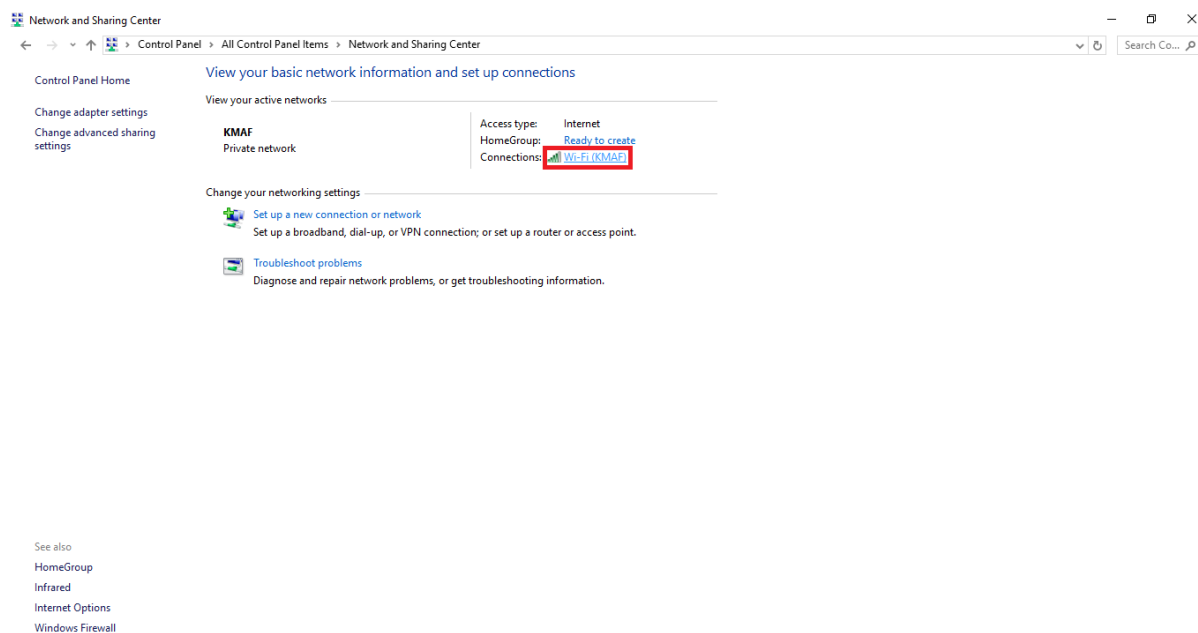
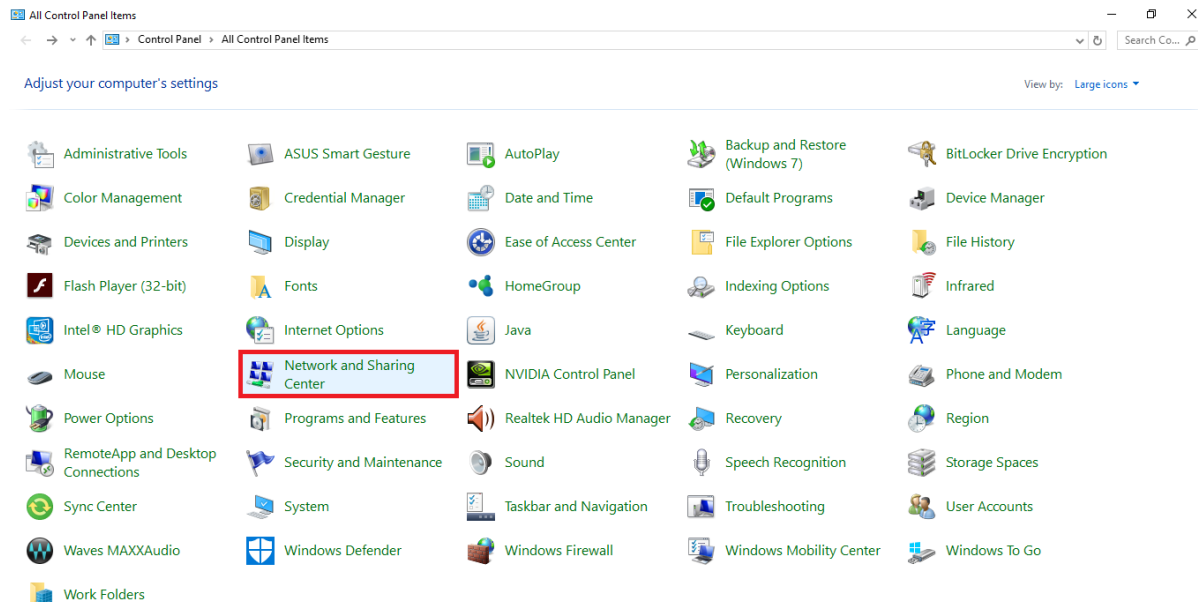


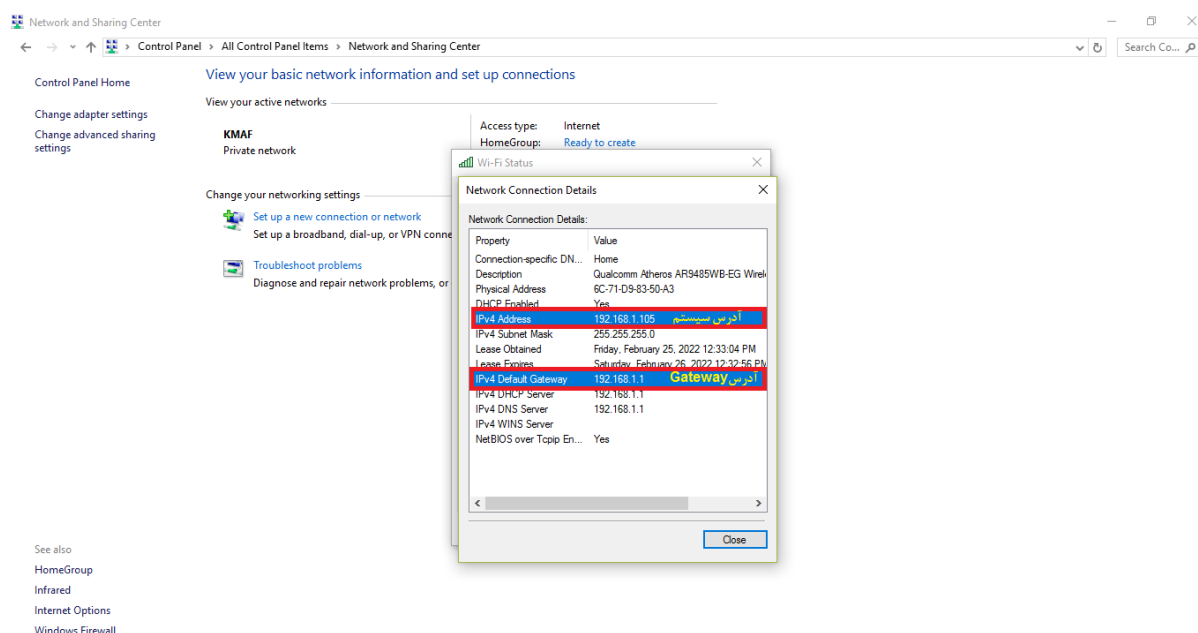
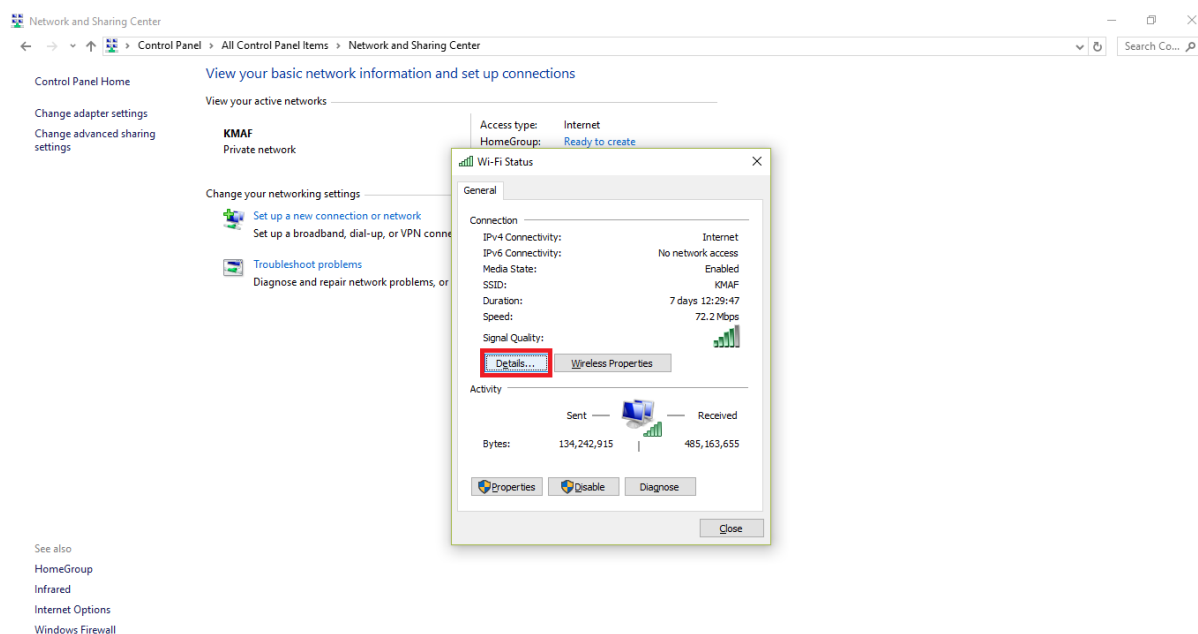
# گزارشکار آزمایش اول آزمایشگاه شبکه های کامپیوتری

## گام اول

هر دو این آدرس ها متعلق به کلاس C هستند.



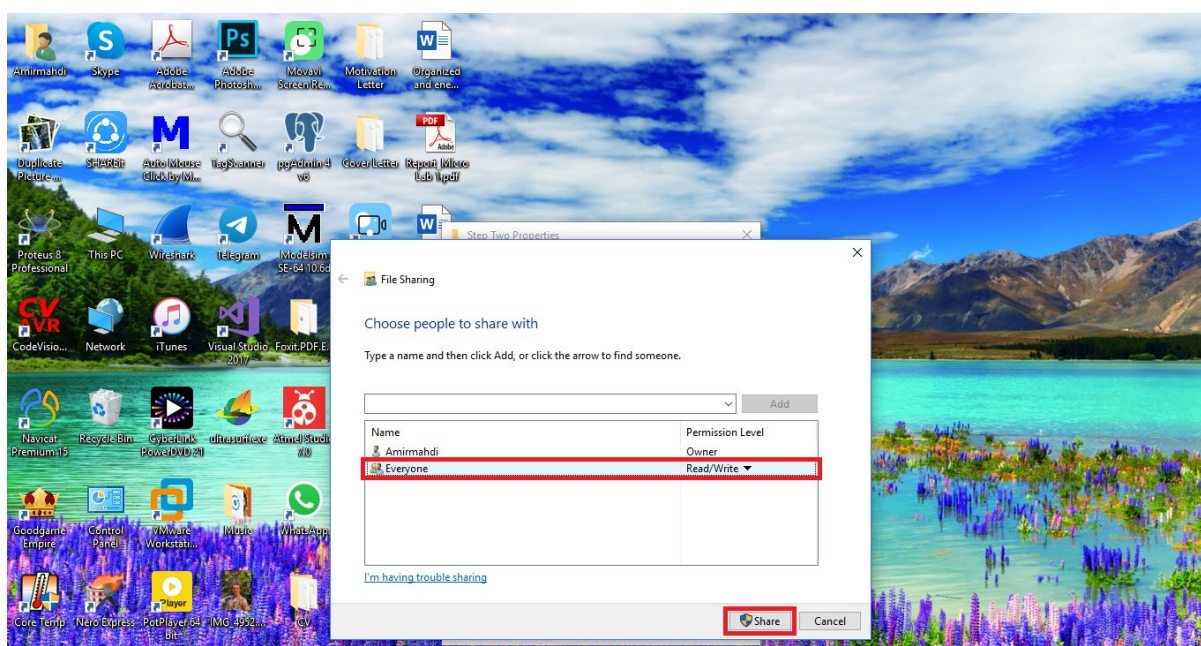
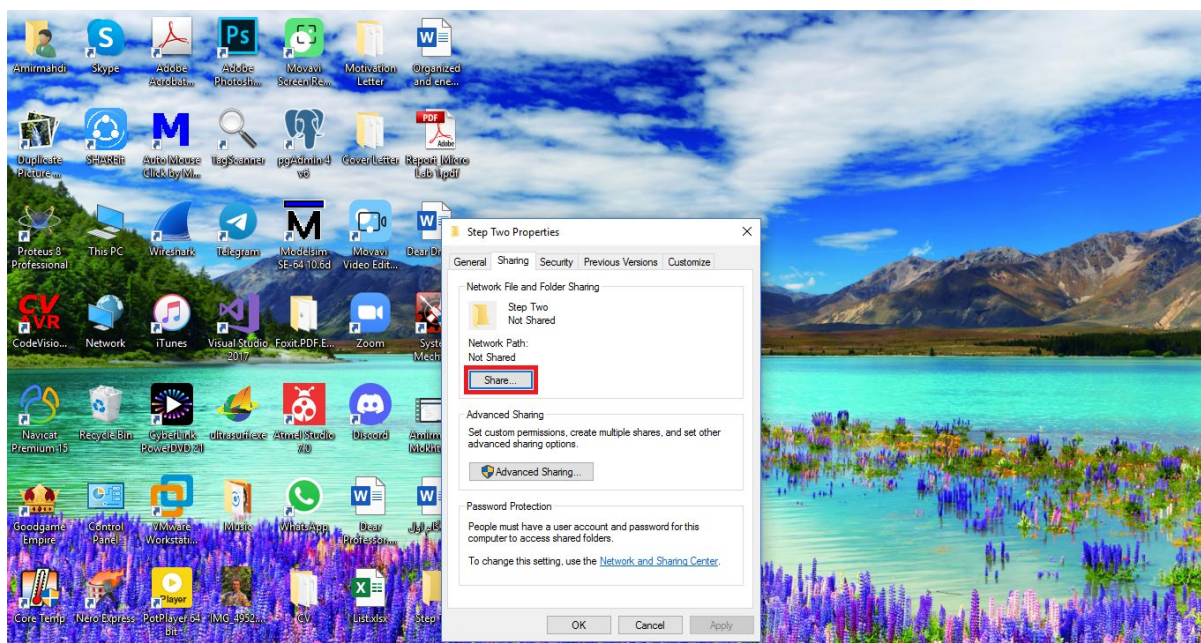
# گزارشکار آزمایش اول آزمایشگاه شبکه های کامپیوتری



# گزارشکار آزمایش اول آزمایشگاه شبکه های کامپیوتری

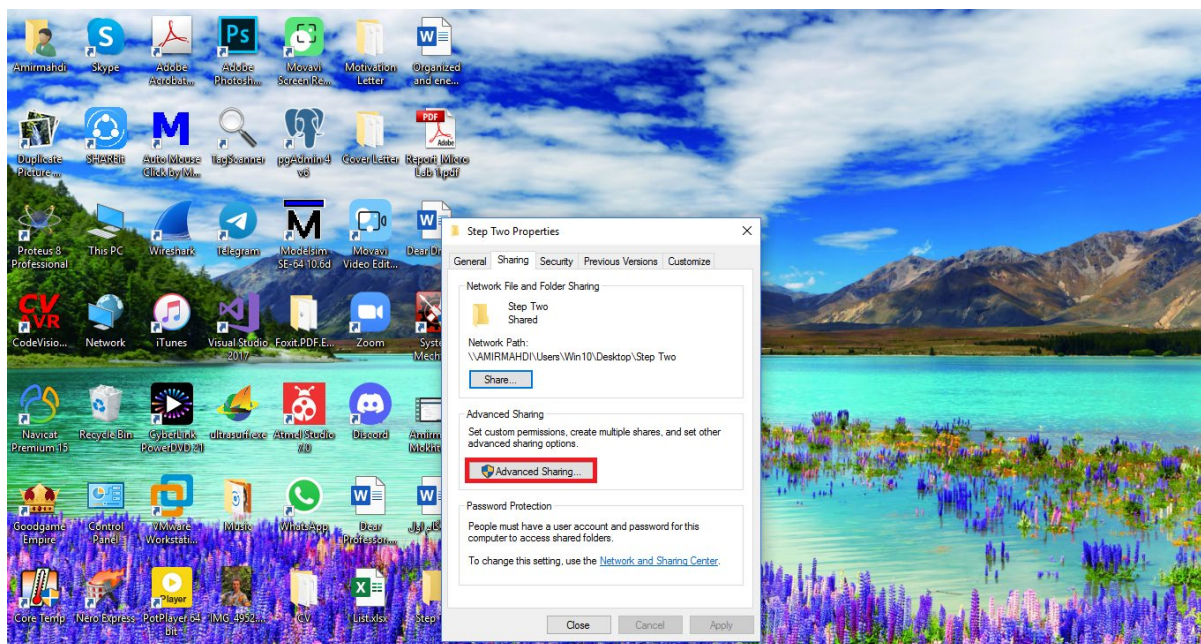
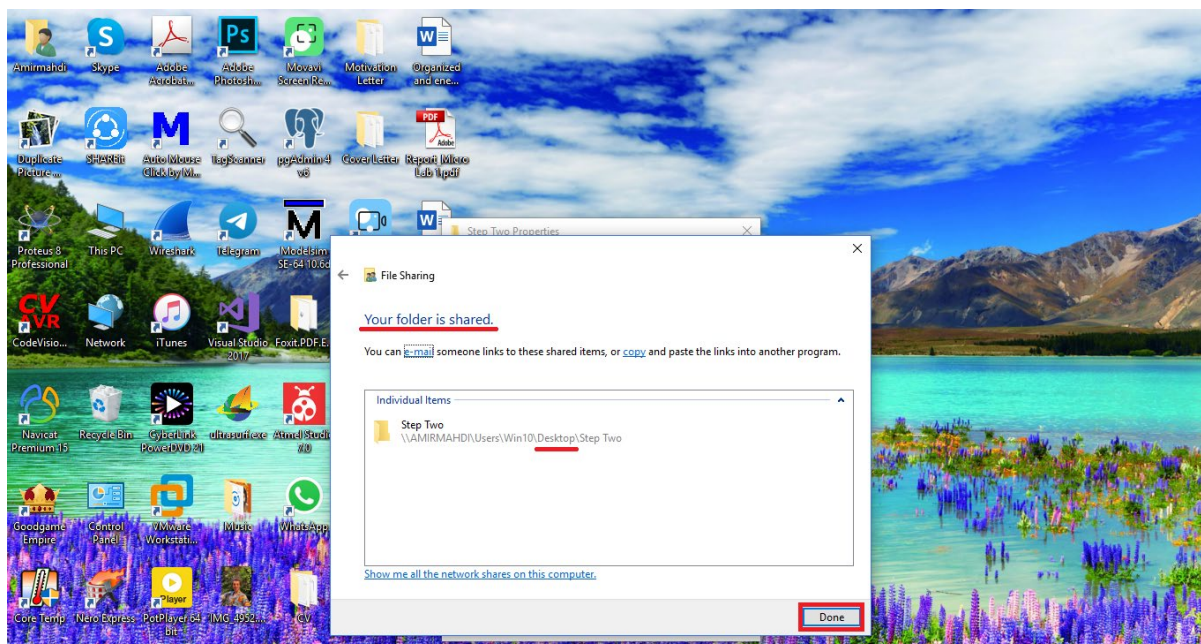
گام دوم

پوشه ای با عنوان Step Two در دسکتاپ ایجاد کردم و طبق مراحل زیر آن را به اشتراک گذاشتم.



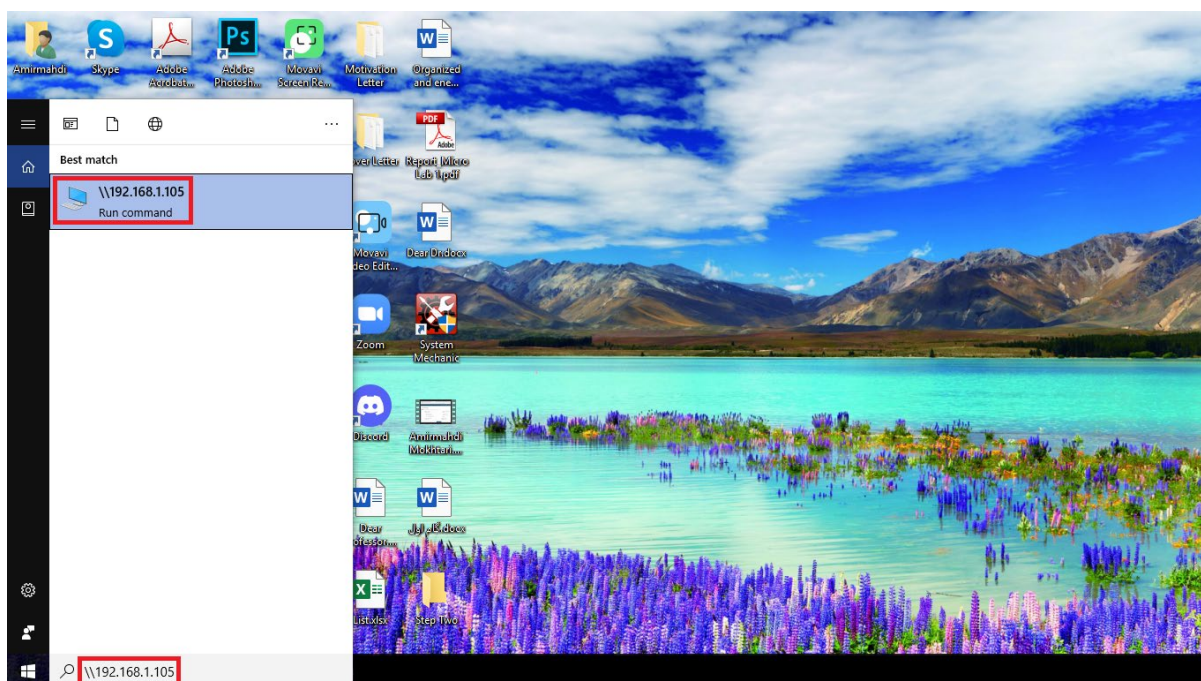
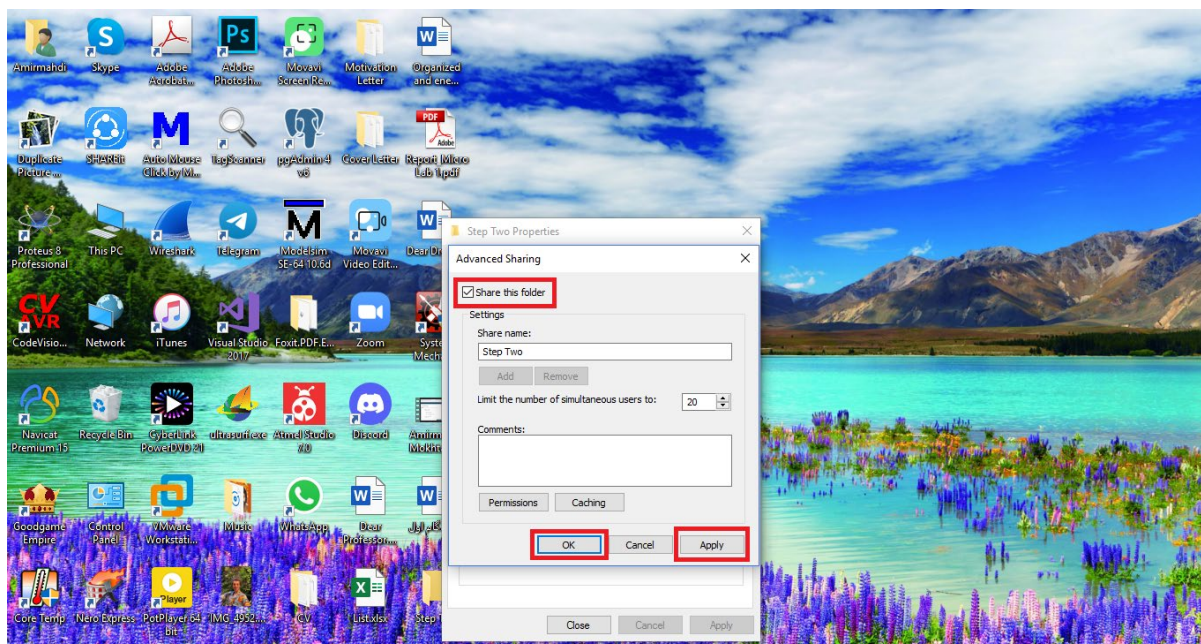


# گزارشکار آزمایش اول آزمایشگاه شبکه های کامپیوتری

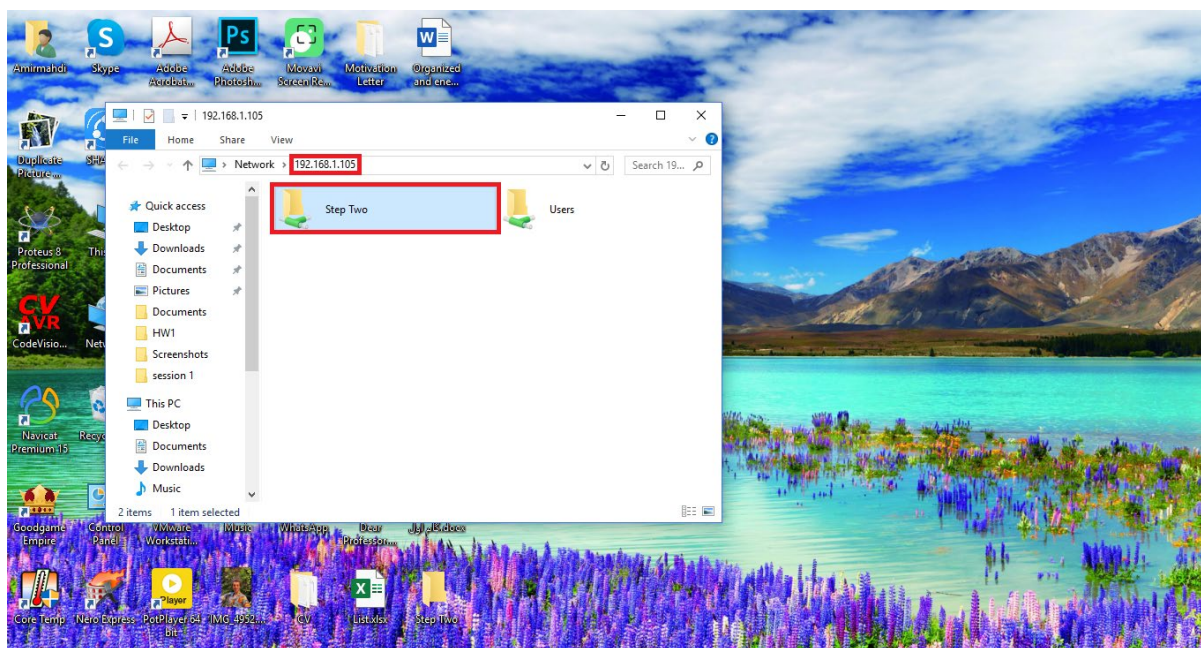




# گزارشکار آزمایش اول آزمایشگاه شبکه های کامپیوتری



## گزارشکار آزمایش اول آزمایشگاه شبکه های کامپیوتری



# گزارش کار آزمایش اول آزمایشگاه شبکه های کامپیوتری

گام سوم

آدرس فیزیکی سیستم:

```
Select Command Prompt
Physical Address. . . . . : 00-50-56-C0-00-08
DHCP Enabled. . . . . : Yes
Autoconfiguration Enabled . . . . . : Yes
Link-local IPv6 Address . . . . . : fe80::29c4:6f1f:a34f:e52b%13(Preferred)
IPv4 Address. . . . . : 192.168.179.1(Preferred)
Subnet Mask . . . . . : 255.255.255.0
Lease Obtained. . . . . : Friday, February 25, 2022 1:52:26 PM
Lease Expires . . . . . : Friday, February 25, 2022 2:22:26 PM
Default Gateway . . . . . :
DHCP Server . . . . . : 192.168.179.254
DHCPv6 IAID . . . . . : 939544662
DHCPv6 Client DUID. . . . . : 00-01-00-01-21-9A-4F-8D-74-D0-2B-BD-FE-F8
DNS Servers . . . . . : fec0:0:0:ffff::1%1
                          fec0:0:0:ffff::2%1
                          fec0:0:0:ffff::3%1
Primary WINS Server . . . . . : 192.168.179.2
NetBIOS over Tcpip. . . . . : Enabled

Wireless LAN adapter Wi-Fi:

Connection-specific DNS Suffix . : Home
Description . . . . . : Qualcomm Atheros AR9485WB-EG Wireless Network Adapter
Physical Address. . . . . : 6C-71-D9-83-50-A3
DHCP Enabled. . . . . : Yes
Autoconfiguration Enabled . . . . . : Yes
IPv4 Address. . . . . : 192.168.1.105(Preferred)
Subnet Mask . . . . . : 255.255.255.0
Lease Obtained. . . . . : Friday, February 25, 2022 1:50:25 PM
Lease Expires . . . . . : Saturday, February 26, 2022 1:50:35 PM
Default Gateway . . . . . : 192.168.1.1
DHCP Server . . . . . : 192.168.1.1
DNS Servers . . . . . : 192.168.1.1
NetBIOS over Tcpip. . . . . : Enabled

Tunnel adapter Local Area Connection* 3:
```

آدرس سرور نام:

```
Select Command Prompt
Physical Address. . . . . : 00-50-56-C0-00-08
DHCP Enabled. . . . . : Yes
Autoconfiguration Enabled . . . . . : Yes
Link-local IPv6 Address . . . . . : fe80::29c4:6f1f:a34f:e52b%13(Preferred)
IPv4 Address. . . . . : 192.168.179.1(Preferred)
Subnet Mask . . . . . : 255.255.255.0
Lease Obtained. . . . . : Friday, February 25, 2022 1:52:26 PM
Lease Expires . . . . . : Friday, February 25, 2022 2:22:26 PM
Default Gateway . . . . . :
DHCP Server . . . . . : 192.168.179.254
DHCPv6 IAID . . . . . : 939544662
DHCPv6 Client DUID. . . . . : 00-01-00-01-21-9A-4F-8D-74-D0-2B-BD-FE-F8
DNS Servers . . . . . : fec0:0:0:ffff::1%1
                          fec0:0:0:ffff::2%1
                          fec0:0:0:ffff::3%1
Primary WINS Server . . . . . : 192.168.179.2
NetBIOS over Tcpip. . . . . : Enabled

Wireless LAN adapter Wi-Fi:

Connection-specific DNS Suffix . : Home
Description . . . . . : Qualcomm Atheros AR9485WB-EG Wireless Network Adapter
Physical Address. . . . . : 6C-71-D9-83-50-A3
DHCP Enabled. . . . . : Yes
Autoconfiguration Enabled . . . . . : Yes
IPv4 Address. . . . . : 192.168.1.105(Preferred)
Subnet Mask . . . . . : 255.255.255.0
Lease Obtained. . . . . : Friday, February 25, 2022 1:50:25 PM
Lease Expires . . . . . : Saturday, February 26, 2022 1:50:35 PM
Default Gateway . . . . . : 192.168.1.1
DHCP Server . . . . . : 192.168.1.1
DNS Servers . . . . . : 192.168.1.1
NetBIOS over Tcpip. . . . . : Enabled

Tunnel adapter Local Area Connection* 3:
```

# گزارشکار آزمایش اول آزمایشگاه شبکه های کامپیوتری

آدرس سیستم به صورت اتوماتیک تنظیم شده است:

```
Select Command Prompt

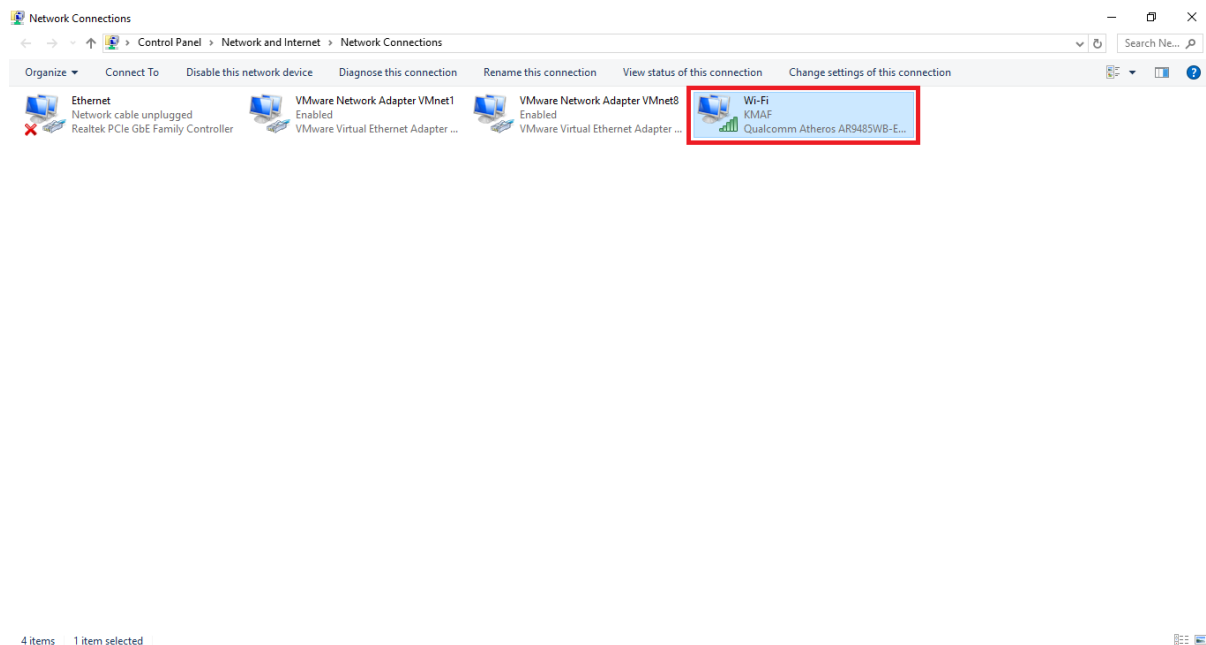
Physical Address. . . . . : 00-50-56-C0-00-08
DHCP Enabled. . . . . : Yes
Autoconfiguration Enabled. . . . . : Yes
Link-local IPv6 Address . . . . . : fe80::29c4:6f1f:a34f:e52b%13(Preferred)
IPv4 Address. . . . . : 192.168.179.1(Preferred)
Subnet Mask . . . . . : 255.255.255.0
Lease Obtained. . . . . : Friday, February 25, 2022 1:52:26 PM
Lease Expires . . . . . : Friday, February 25, 2022 2:22:26 PM
Default Gateway . . . . . :
DHCP Server . . . . . : 192.168.179.254
DHCPv6 IAID . . . . . : 939544662
DHCPv6 Client DUID. . . . . : 00-01-00-01-21-9a-4f-8d-74-d0-2b-bd-fe-f8
DNS Servers . . . . . : fec0:0:0:ffff::1%1
                       : fec0:0:0:ffff::2%1
                       : fec0:0:0:ffff::3%1
Primary WINS Server . . . . . : 192.168.179.2
NetBIOS over Tcpip. . . . . : Enabled

Wireless LAN adapter Wi-Fi:

Connection-specific DNS Suffix . : Home
Description . . . . . : Qualcomm Atheros AR9485WB-EG Wireless Network Adapter
Physical Address. . . . . : 6C-71-D9-83-50-A3
DHCP Enabled. . . . . : Yes
Autoconfiguration Enabled . . . . . : Yes
IPv4 Address. . . . . : 192.168.1.105(Preferred)
Subnet Mask . . . . . : 255.255.255.0
Lease Obtained. . . . . : Friday, February 25, 2022 1:50:25 PM
Lease Expires . . . . . : Saturday, February 26, 2022 1:50:35 PM
Default Gateway . . . . . : 192.168.1.1
DHCP Server . . . . . : 192.168.1.1
DNS Servers . . . . . : 192.168.1.1
NetBIOS over Tcpip. . . . . : Enabled

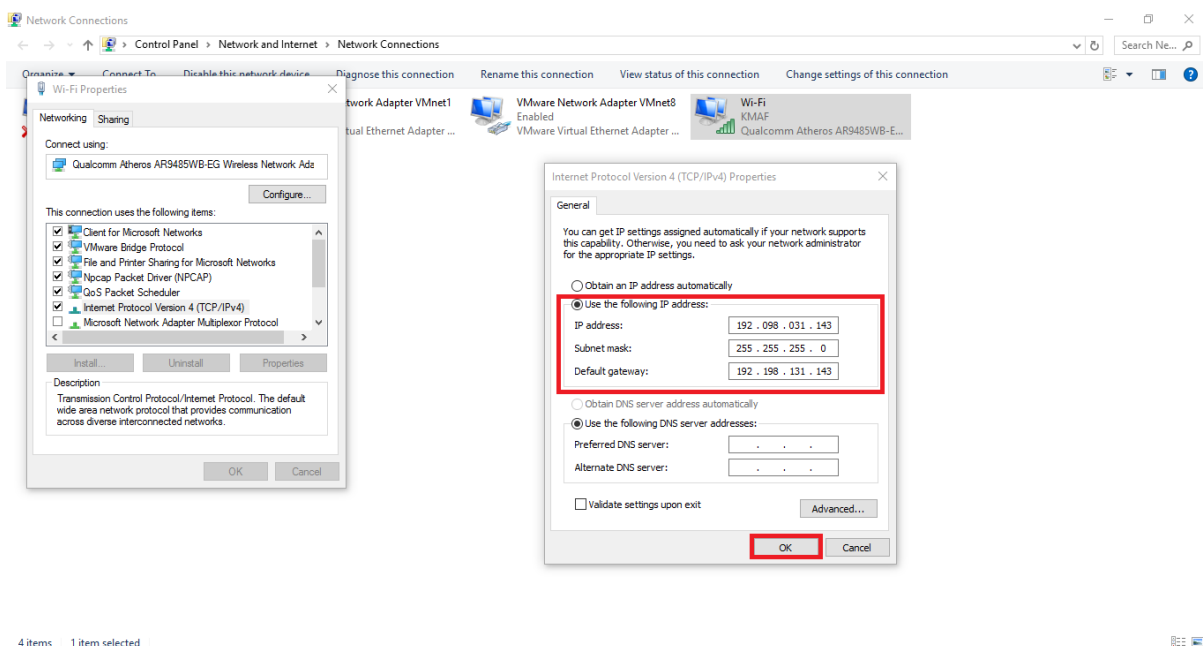
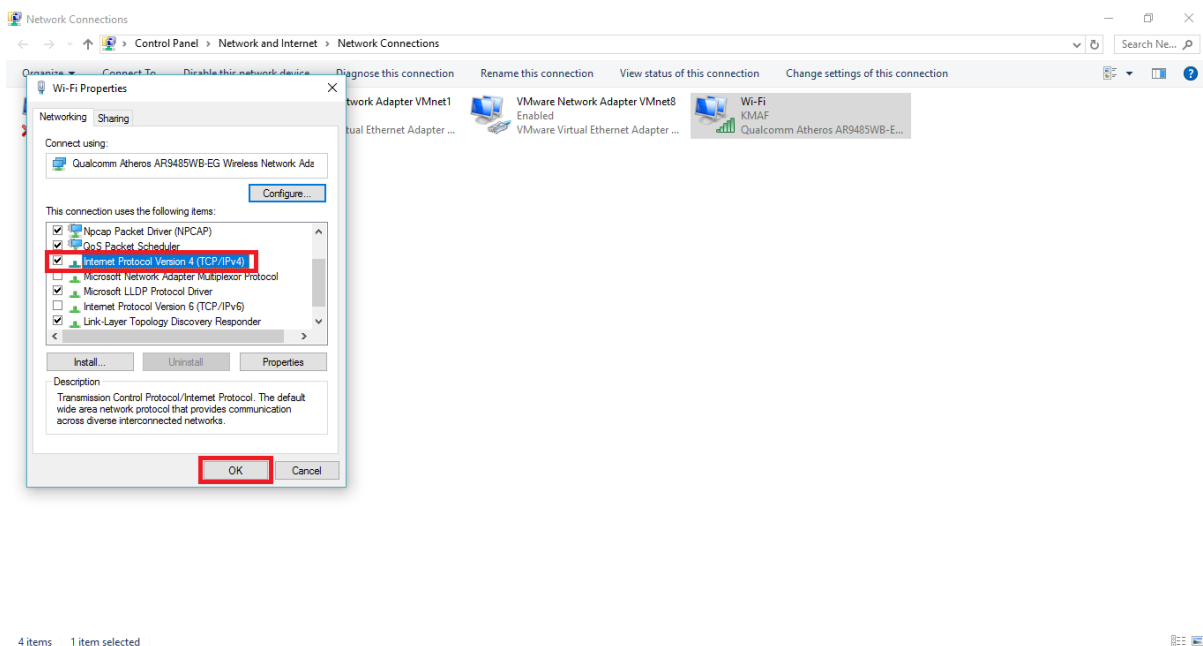
Tunnel adapter Local Area Connection* 3:
```

تغییر حالت تنظیم آدرس سیستم از حالت اتوماتیک به دستی به شیوه گرافیکی:





# گزارشکار آزمایش اول آزمایشگاه شبکه های کامپیوتری



# گزارشکار آزمایش اول آزمایشگاه شبکه های کامپیوتری

جابه جایی آدرس سیستم از حالت اتوماتیک به دستی با موفقیت انجام شد:

```
Select Command Prompt
DHCP Server . . . . . : 192.168.179.254
DHCPv6 IAID . . . . . : 939544662
DHCPv6 Client DUID . . . . . : 00-01-00-01-21-9A-4F-8D-74-D0-2B-BD-FE-F8
DNS Servers . . . . . : fec0:0:0:ffff::1%1
                       : fec0:0:0:ffff::2%1
                       : fec0:0:0:ffff::3%1
Primary WINS Server . . . . . : 192.168.179.2
NetBIOS over Tcpip. . . . . : Enabled

Wireless LAN adapter Wi-Fi:

Connection-specific DNS Suffix . . : 
Description . . . . . : Qualcomm Atheros AR9485WB-EG Wireless Network Adapter
Physical Address . . . . . : 8C-71-D9-83-50-A3
DHCP Enabled. . . . . : No
Autoconfiguration Enabled . . . . . : Yes
IPv4 Address. . . . . : 192.98.31.143(Preferred)
Subnet Mask . . . . . : 255.255.255.0
Default Gateway . . . . . : 192.198.131.143
NetBIOS over Tcpip. . . . . : Enabled

Tunnel adapter Local Area Connection* 3:

Media State . . . . . : Media disconnected
Connection-specific DNS Suffix . . : 
Description . . . . . : Microsoft Teredo Tunneling Adapter
Physical Address. . . . . : 00-00-00-00-00-00-E0
DHCP Enabled. . . . . : No
Autoconfiguration Enabled . . . . . : Yes

Tunnel adapter isatap.{6EBA346F-3AA3-4958-A69F-CFF6FD32EF2D}:

Media State . . . . . : Media disconnected
Connection-specific DNS Suffix . . : 
Description . . . . . : Microsoft ISATAP Adapter #2
```

# گزارشکار آزمایش اول آزمایشگاه شبکه های کامپیوتری

بررسی عملکرد دستور ipconfig/release

```
Subnet Command Prompt
C:\Users\Win10>ipconfig/release

Windows IP Configuration

No operation can be performed on Ethernet while it has its media disconnected.
No operation can be performed on Local Area Connection* 2 while it has its media disconnected.
An error occurred while releasing interface VMware Network Adapter VMnet1 : An address has not yet been associated with the network endpoint.
An error occurred while releasing interface VMware Network Adapter VMnet8 : An address has not yet been associated with the network endpoint.

Ethernet adapter Ethernet:

    Media State . . . . . : Media disconnected
    Connection-specific DNS Suffix . : Home

Wireless LAN adapter Local Area Connection* 2:

    Media State . . . . . : Media disconnected
    Connection-specific DNS Suffix . :

Wireless LAN adapter Local Area Connection* 13:

    Media State . . . . . : Media disconnected
    Connection-specific DNS Suffix . :

Ethernet adapter VMware Network Adapter VMnet1:

    Connection-specific DNS Suffix . :
    Link-local IPv6 Address . . . . . : fe80::85f4:b847:4b53:a55a%2
    Autoconfiguration IPv4 Address. . . : 169.254.165.90
    Subnet Mask . . . . . : 255.255.0.0
    Default Gateway . . . . . :

Ethernet adapter VMware Network Adapter VMnet8:

    Connection-specific DNS Suffix . :
    Link-local IPv6 Address . . . . . : fe80::29c4:6f1f:a34f:e52b%13
    Autoconfiguration IPv4 Address. . . : 169.254.229.43
    Subnet Mask . . . . . : 255.255.0.0
    Default Gateway . . . . . :

Wireless LAN adapter Wi-Fi:

    Connection-specific DNS Suffix . :
    Default Gateway . . . . . :

Tunnel adapter Local Area Connection* 3:

    Connection-specific DNS Suffix . :
    IPv6 Address. . . . . : 2001:0:2851:782c:2093:2775:6809:F849
    Link-local IPv6 Address . . . . . : fe80::2093:2775:6809:F849%10
    Default Gateway . . . . . :

Tunnel adapter isatap.{0763599C-3418-473A-9886-0220C59E8DB5}:

    Media State . . . . . : Media disconnected
    Connection-specific DNS Suffix . :

Tunnel adapter isatap.{6EBA346F-3AA3-4958-A69F-CFF6FD32EF2D}:

    Media State . . . . . : Media disconnected
    Connection-specific DNS Suffix . :

C:\Users\Win10>ipconfig/all

Connection-specific DNS Suffix . :
Description . . . . . : VMware Virtual Ethernet Adapter for VMnet8
Physical Address. . . . . : 00-50-56-C0-00-08
DHCP Enabled. . . . . : Yes
Autoconfiguration Enabled . . . . : Yes
Link-local IPv6 Address . . . . . : fe80::29c4:6f1f:a34f:e52b%13(Preferred)
Autoconfiguration IPv4 Address. . . : 169.254.229.43(Preferred)
Subnet Mask . . . . . : 255.255.0.0
Default Gateway . . . . . :
DHCPv6 IAID . . . . . : 939544662
DHCPv6 Client DUID. . . . . : 00-01-00-01-21-9A-4F-8D-74-D0-2B-BD-FE-F8
DNS Servers . . . . . : fec0:0:0:ffff::1%1
                       : fec0:0:0:ffff::2%1
                       : fec0:0:0:ffff::3%1
NetBIOS over Tcpip. . . . . : Enabled

Wireless LAN adapter Wi-Fi:

    Connection-specific DNS Suffix . :
    Description . . . . . : Qualcomm Atheros AR9485WB-EG Wireless Network Adapter
    Physical Address. . . . . : 6C-71-D9-83-50-A3
    DHCP Enabled. . . . . : Yes
    Autoconfiguration Enabled . . . . : Yes
    Autoconfiguration IPv4 Address. . : 169.254.190.119(Preferred)
    Subnet Mask . . . . . : 255.255.0.0
    Default Gateway . . . . . :
    NetBIOS over Tcpip. . . . . : Enabled

Tunnel adapter Local Area Connection* 3:

    Media State . . . . . : Media disconnected
    Connection-specific DNS Suffix . :
    Description . . . . . : Microsoft Teredo Tunneling Adapter
    Physical Address. . . . . : 00-00-00-00-00-00-E0
    DHCP Enabled. . . . . : No
```



# گزارشکار آزمایش اول آزمایشگاه شبکه های کامپیوتری

بررسی عملکرد دستور ipconfig/renew

```
Select Command Prompt
C:\Users\Win10>ipconfig/renew

Windows IP Configuration

No operation can be performed on Ethernet while it has its media disconnected.
No operation can be performed on Local Area Connection* 2 while it has its media disconnected.
No operation can be performed on Local Area Connection* 13 while it has its media disconnected.

Ethernet adapter Ethernet:

    Media State . . . . . : Media disconnected
    Connection-specific DNS Suffix . : Home

Wireless LAN adapter Local Area Connection* 2:

    Media State . . . . . : Media disconnected
    Connection-specific DNS Suffix . :

Wireless LAN adapter Local Area Connection* 13:

    Media State . . . . . : Media disconnected
    Connection-specific DNS Suffix . :

Ethernet adapter VMware Network Adapter VMnet1:

    Connection-specific DNS Suffix . :
    Link-local IPv6 Address . . . . . : fe80::85f4:b847:4b53:a55a%2
    IPv4 Address. . . . . : 192.168.238.1
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . :

Ethernet adapter VMware Network Adapter VMnet8:

    Connection-specific DNS Suffix . :
    Link-local IPv6 Address . . . . . : fe80::29c4:6f1f:a34f:e52b%13
    IPv4 Address. . . . . : 192.168.179.1
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . :

Wireless LAN adapter Wi-Fi:

    Connection-specific DNS Suffix . : Home
    IPv4 Address. . . . . : 192.168.1.105
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . : 192.168.1.1

Tunnel adapter Local Area Connection* 3:

    Connection-specific DNS Suffix . :
    IPv6 Address. . . . . : 2001:0:2851:782c:2093:2775:6809:f849
    Link-local IPv6 Address . . . . . : fe80::2093:2775:6809:f849%10
    Default Gateway . . . . . :

Tunnel adapter isatap.{0763599C-3418-473A-9886-0220C59E8DB5}:

    Media State . . . . . : Media disconnected
    Connection-specific DNS Suffix . :

Tunnel adapter isatap.{6EBA346F-3AA3-4958-A69F-CFF6FD32EF2D}:

    Media State . . . . . : Media disconnected
    Connection-specific DNS Suffix . :

Tunnel adapter isatap.Home:

    Media State . . . . . : Media disconnected
    Connection-specific DNS Suffix . : Home

    DHCPv6 Client DUID. . . . . : 00-01-00-01-21-9A-4F-8D-74-D0-2B-BD-FE-F8
    DNS Servers . . . . . : fec0:0:0:ffff::1%1
                           fec0:0:0:ffff::2%1
                           fec0:0:0:ffff::3%1
    Primary WINS Server . . . . . : 192.168.179.2
    NetBIOS over Tcpip. . . . . : Enabled

Wireless LAN adapter Wi-Fi:

    Connection-specific DNS Suffix . : Home
    Description . . . . . : Qualcomm Atheros AR9485WB-EG Wireless Network Adapter
    Physical Address. . . . . : 6C-71-D9-83-50-A3
    DHCP Enabled. . . . . : Yes
    Autoconfiguration Enabled . . . . : Yes
    IPv4 Address. . . . . : 192.168.1.105(Preferred)
    Subnet Mask . . . . . : 255.255.255.0
    Lease Obtained. . . . . : Friday, February 25, 2022 3:00:09 PM
    Lease Expires . . . . . : Saturday, February 26, 2022 3:00:40 PM
    Default Gateway . . . . . : 192.168.1.1
    DHCP Server . . . . . : 192.168.1.1
    DNS Servers . . . . . : 192.168.1.1
    NetBIOS over Tcpip. . . . . : Enabled

Tunnel adapter Local Area Connection* 3:

    Connection-specific DNS Suffix . :
    Description . . . . . : Microsoft Teredo Tunneling Adapter
    Physical Address. . . . . : 00-00-00-00-00-00-E0
    DHCP Enabled. . . . . : No
    Autoconfiguration Enabled . . . . : Yes
    IPv6 Address. . . . . : 2001:0:2851:782c:2093:2775:6809:f849(Preferred)
    Link-local IPv6 Address . . . . . : fe80::2093:2775:6809:f849%10(Preferred)
    Default Gateway . . . . . :
    DHCPv6 IAID . . . . . : 167772160
    DHCPv6 Client DUID. . . . . : 00-01-00-01-21-9A-4F-8D-74-D0-2B-BD-FE-F8
```

# گزارشکار آزمایش اول آزمایشگاه شبکه های کامپیوتری

بررسی عملکرد دستور getmac:

```
Command Prompt
C:\Users\Win10>getmac

Physical Address      Transport Name
=====
6C-71-D9-83-50-A3     \Device\NPF{42CCE890-69EF-414E-B09F-709E3C5EDE16}
74-D0-28-B0-FE-F8     Media disconnected
00-50-56-C0-00-01     \Device\NPF{0763599C-3418-473A-9886-0220C59E8DB5}
00-50-56-C0-00-08     \Device\NPF{6EBA346F-3AA3-4958-A69F-CFF6FD32EF2D}
```

# گزارشکار آزمایش اول آزمایشگاه شبکه های کامپیوتری

گام چهارم

```
Command Prompt
C:\Users\Win10>ping 192.168.238.1
آدرس یک ماشین مجازی دیگر در روی سیستم من

Pinging 192.168.238.1 with 32 bytes of data:
Reply from 192.168.238.1: bytes=32 time<1ms TTL=128
Reply from 192.168.238.1: bytes=32 time<1ms TTL=128
Reply from 192.168.238.1: bytes=32 time<1ms TTL=128
Reply from 192.168.238.1: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.238.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\Users\Win10>ping iut.ac.ir

Pinging iut.ac.ir [176.101.52.155] with 32 bytes of data:
Reply from 176.101.52.155: bytes=32 time=56ms TTL=49
Reply from 176.101.52.155: bytes=32 time=48ms TTL=49
Reply from 176.101.52.155: bytes=32 time=50ms TTL=49
Reply from 176.101.52.155: bytes=32 time=48ms TTL=49

Ping statistics for 176.101.52.155:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 48ms, Maximum = 56ms, Average = 50ms

C:\Users\Win10>ping www.google.com

Pinging www.google.com [216.58.209.132] with 32 bytes of data:
Reply from 216.58.209.132: bytes=32 time=66ms TTL=48
Reply from 216.58.209.132: bytes=32 time=65ms TTL=48
Reply from 216.58.209.132: bytes=32 time=64ms TTL=48
Reply from 216.58.209.132: bytes=32 time=70ms TTL=48

Ping statistics for 216.58.209.132:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 64ms, Maximum = 70ms, Average = 66ms
```

همان طور که در تصویر پیداست ، مشکلی برای پینگ گرفتن با گوگل نداشتم به دلیل اینکه اینترنت من متصل بود. اما اگر به هردلیلی به شبکه جهانی اینترنت متصل نمی بودیم، پیغام خطای ناشی از قطعی اینترنت دریافت میکردیم.



# گزارشکار آزمایش اول آزمایشگاه شبکه های کامپیوتری

گام پنجم

```
Command Prompt
C:\Users\Min10>tracert www.google.com

Tracing route to www.google.com [172.217.18.132]
over a maximum of 30 hops:

  0  7 ms  2 ms  4 ms  TP-LINK Home [192.168.1.1]
  1  30 ms 28 ms 25 ms  94.183.160.6
  2  32 ms 30 ms 31 ms  94.183.160.1
  3  x      x      x      Request timed out.
  4  x      x      x      Request timed out.
  5  x      x      x      Request timed out.
  6  x      x      x      Request timed out.
  7  x      x      x      Request timed out.
  8  x      x      x      Request timed out.
  9  x      x      x      Request timed out.
 10 38 ms 35 ms 40 ms 10.201.177.153
 11 44 ms 41 ms 38 ms 10.21.21.22
 12 41 ms 38 ms 39 ms 10.21.211.20
 13 37 ms 40 ms 39 ms 10.21.21.22
 14 76 ms 64 ms 65 ms 213.202.4.172
 15 x      x      x      Request timed out.
 16 x      x      x      Request timed out.
 17 72 ms 74 ms 65 ms 134.0.217.233
 18 68 ms 63 ms 63 ms 213.202.4.171
 19 188 ms 67 ms 63 ms 216.239.41.83
 20 68 ms 61 ms 68 ms 142.251.66.203
 21 66 ms 64 ms 62 ms 172.217.18.132

Trace complete.
C:\Users\Min10>
```

اگر از اینترنت جهانی قطع باشیم از یه جایی به بعد بسته نمیتواند خارج شود و ما با تایم اوت مواجه میشویم، یا گاهی خود Hop ها پورتشان را می بندند، در این شرایط نیز باز با تایم اوت مواجه خواهیم شد. به بیان دیگر اگر خطای Request Timed Out به صورت پایدار یک یا چند خطوط ابتدایی و میانی وجود داشته باشد، و بقیه‌ی فرآیند ادامه پیدا کند، این امر احتمالاً به علت بسته بودن پروتکل – ICMP که جهت اجرای فرایند پینگ مورد استفاده است – در هاپ‌های مربوطه می‌باشد. با توجه به اینکه پکت‌های تست در هر صورت از هاپ‌های مذکور عبور می‌کند، به عنوان وجود مشکل تلقی نمی‌شود.

# گزارشکار آزمایش اول آزمایشگاه شبکه های کامپیوتری

گام ششم

```
Command Prompt - nslookup
C:\Users\Win10>nslookup
Default Server: TP-LINK.Home
Address: 192.168.1.1 سرور نام محلی

> www.google.com
Server: TP-LINK.Home
Address: 192.168.1.1

Non-authoritative answer:
Name: www.google.com
Addresses: 2a00:1450:4018:809::2004
142.250.185.36 سرور نام گوگل

> www.yahoo.com
Server: TP-LINK.Home
Address: 192.168.1.1

Non-authoritative answer:
Name: new-fp-shed.wg1.b.yahoo.com
Addresses: 2a00:1288:110:c305::1:8001
2a00:1288:110:c305::1:8000
87.248.100.215
87.248.100.216 سرور نام های یاهو

Aliases: www.yahoo.com

>
```

# گزارشکار آزمایش اول آزمایشگاه شبکه های کامپیوتری

گام هفتم

جدول اطلاعات arp:

```
Command Prompt
C:\Users\Win10>arp -a

Interface: 192.168.238.1 --- 0x2
Internet Address      Physical Address      Type
192.168.238.254       00-50-56-e0-0f-f8    dynamic
192.168.238.255       ff-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
255.255.255.255       ff-ff-ff-ff-ff-ff    static

Interface: 192.168.1.105 --- 0x9
Internet Address      Physical Address      Type
192.168.1.1           c4-6e-1f-58-10-15    dynamic
192.168.1.255         ff-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
255.255.255.255       ff-ff-ff-ff-ff-ff    static

Interface: 192.168.179.1 --- 0xd
Internet Address      Physical Address      Type
192.168.179.254       00-50-56-fb-2f-b0    dynamic
192.168.179.255       ff-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
255.255.255.255       ff-ff-ff-ff-ff-ff    static

C:\Users\Win10>
```

ثبت آدرس سیستم خود به صورت استاتیک در جدول arp:

```
Administrator: Command Prompt
C:\Windows\system32>arp -s 192.168.1.105 6C-71-D9-83-50-A3
C:\Windows\system32>arp -a

Interface: 192.168.238.1 --- 0x2
Internet Address      Physical Address      Type
192.168.238.254       00-50-56-e0-0f-f8    dynamic
192.168.238.255       ff-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
255.255.255.255       ff-ff-ff-ff-ff-ff    static

Interface: 192.168.1.105 --- 0x9
Internet Address      Physical Address      Type
192.168.1.1           c4-6e-1f-58-10-15    dynamic
192.168.1.105         6c-71-d9-83-50-a3    static
192.168.1.255         ff-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
255.255.255.255       ff-ff-ff-ff-ff-ff    static

Interface: 192.168.179.1 --- 0xd
Internet Address      Physical Address      Type
192.168.179.254       00-50-56-fb-2f-b0    dynamic
192.168.179.255       ff-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
255.255.255.255       ff-ff-ff-ff-ff-ff    static
```



# گزارشکار آزمایش اول آزمایشگاه شبکه های کامپیوتری

حذف آدرس سیستم خود از جدول arp:

```
Administrator: Command Prompt
C:\Windows\system32>arp -d 192.168.1.1
C:\Windows\system32>arp -a

Interface: 192.168.238.1 --- 0x2
Internet Address      Physical Address      Type
192.168.238.254       00-50-56-e0-0f-f8    dynamic
192.168.238.255       ff-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
255.255.255.255       ff-ff-ff-ff-ff-ff    static

Interface: 192.168.1.105 --- 0x9
Internet Address      Physical Address      Type
192.168.1.255         ff-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
255.255.255.255       ff-ff-ff-ff-ff-ff    static

Interface: 192.168.179.1 --- 0xd
Internet Address      Physical Address      Type
192.168.179.254       00-50-56-fb-2f-b0    dynamic
192.168.179.255       ff-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
255.255.255.255       ff-ff-ff-ff-ff-ff    static
```

# گزارشکار آزمایش اول آزمایشگاه شبکه های کامپیوتری

ثبت آدرس سیستم هاست به صورت داینامیک:

```
Administrator: Command Prompt
C:\Windows\system32 arp -d 192.168.1.1
C:\Windows\system32 arp -a

Interface: 192.168.238.1 --- 0x2
Internet Address      Physical Address      Type
192.168.238.254       00-50-56-e0-0f-f8    dynamic
192.168.238.255       ff-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
255.255.255.255       ff-ff-ff-ff-ff-ff    static

Interface: 192.168.1.105 --- 0x9
Internet Address      Physical Address      Type
192.168.1.255         ff-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
255.255.255.255       ff-ff-ff-ff-ff-ff    static

Interface: 192.168.179.1 --- 0xd
Internet Address      Physical Address      Type
192.168.179.254       00-50-56-fb-2f-b0    dynamic
192.168.179.255       ff-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
255.255.255.255       ff-ff-ff-ff-ff-ff    static

C:\Windows\system32 ping 192.168.1.1

Pinging 192.168.1.1 with 32 bytes of data:
Reply from 192.168.1.1: bytes=32 time=9ms TTL=64
Reply from 192.168.1.1: bytes=32 time=11ms TTL=64
Reply from 192.168.1.1: bytes=32 time=12ms TTL=64
Reply from 192.168.1.1: bytes=32 time=39ms TTL=64

Ping statistics for 192.168.1.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 9ms, Maximum = 39ms, Average = 17ms

C:\Windows\system32 arp -a

Interface: 192.168.238.1 --- 0x2
Internet Address      Physical Address      Type
192.168.238.254       00-50-56-e0-0f-f8    dynamic
192.168.238.255       ff-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
255.255.255.255       ff-ff-ff-ff-ff-ff    static

Interface: 192.168.1.105 --- 0x9
Internet Address      Physical Address      Type
192.168.1.1           c4-6e-1f-58-10-15    dynamic
192.168.1.255         ff-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
255.255.255.255       ff-ff-ff-ff-ff-ff    static

Interface: 192.168.179.1 --- 0xd
Internet Address      Physical Address      Type
192.168.179.254       00-50-56-fb-2f-b0    dynamic
192.168.179.255       ff-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
255.255.255.255       ff-ff-ff-ff-ff-ff    static
```

البته توجه داریم که برای افزودن یک رکورد به جدول arp، به صورت داینامیک فقط میتوان به آدرس IP مورد نظر پینگ فرستاد و در این حالت اگر این آدرس در arp cash نباشد، آنگاه یک پیام broadcast در شبکه محلی ارسال میشود تا آدرس mac متناظر با IP داده شده پیدا شود و در این زمان سیستم عامل این رکورد (یعنی IP و mac مذکور) را در cash خود به صورت داینامیک ذخیره می کند.

# گزارشکار آزمایش اول آزمایشگاه شبکه های کامپیوتری

گام هشتم

بررسی دستور netstat در حالت های n:-

```
Administrator: Command Prompt
C:\Windows\system32>netstat -n

Active Connections

Proto Local Address           Foreign Address         State
TCP    127.0.0.1:1543           127.0.0.1:5354          ESTABLISHED
TCP    127.0.0.1:1547           127.0.0.1:5354          ESTABLISHED
TCP    127.0.0.1:1568           127.0.0.1:1613          ESTABLISHED
TCP    127.0.0.1:1613           127.0.0.1:1568          ESTABLISHED
TCP    127.0.0.1:5354           127.0.0.1:1543          ESTABLISHED
TCP    127.0.0.1:5354           127.0.0.1:1547          ESTABLISHED
TCP    192.168.1.105:2116       20.198.162.76:443       ESTABLISHED
TCP    192.168.1.105:2125       142.250.27.188:443      ESTABLISHED

C:\Windows\system32>
```



# گزارشکار آزمایش اول آزمایشگاه شبکه های کامپیوتری

بررسی دستور netstat - a - n

```
Administrator: Command Prompt
C:\Windows\system32\cmd.exe netstat -a -n

Active Connections

Proto Local Address Foreign Address State
TCP 0.0.0.0:135 0.0.0.0:0 LISTENING
TCP 0.0.0.0:443 0.0.0.0:0 LISTENING
TCP 0.0.0.0:445 0.0.0.0:0 LISTENING
TCP 0.0.0.0:902 0.0.0.0:0 LISTENING
TCP 0.0.0.0:912 0.0.0.0:0 LISTENING
TCP 0.0.0.0:1536 0.0.0.0:0 LISTENING
TCP 0.0.0.0:1537 0.0.0.0:0 LISTENING
TCP 0.0.0.0:1538 0.0.0.0:0 LISTENING
TCP 0.0.0.0:1539 0.0.0.0:0 LISTENING
TCP 0.0.0.0:1540 0.0.0.0:0 LISTENING
TCP 0.0.0.0:1542 0.0.0.0:0 LISTENING
TCP 0.0.0.0:5357 0.0.0.0:0 LISTENING
TCP 0.0.0.0:5432 0.0.0.0:0 LISTENING
TCP 127.0.0.1:1001 0.0.0.0:0 LISTENING
TCP 127.0.0.1:1543 127.0.0.1:5354 ESTABLISHED
TCP 127.0.0.1:1547 127.0.0.1:5354 ESTABLISHED
TCP 127.0.0.1:1568 0.0.0.0:0 LISTENING
TCP 127.0.0.1:1568 127.0.0.1:1613 ESTABLISHED
TCP 127.0.0.1:1613 127.0.0.1:1568 ESTABLISHED
TCP 127.0.0.1:1704 0.0.0.0:0 LISTENING
TCP 127.0.0.1:5354 0.0.0.0:0 LISTENING
TCP 127.0.0.1:5354 127.0.0.1:1543 ESTABLISHED
TCP 127.0.0.1:5354 127.0.0.1:1547 ESTABLISHED
TCP 127.0.0.1:8307 0.0.0.0:0 LISTENING
TCP 127.0.0.1:27015 0.0.0.0:0 LISTENING
TCP 127.0.0.1:50911 0.0.0.0:0 LISTENING
TCP 127.0.0.1:50912 0.0.0.0:0 LISTENING
TCP 127.0.0.1:65000 0.0.0.0:0 LISTENING
TCP 192.168.1.105:139 0.0.0.0:0 LISTENING
TCP 192.168.1.105:2116 20.198.162.76:443 ESTABLISHED
TCP 192.168.1.105:2125 142.250.27.188:443 ESTABLISHED
TCP 192.168.1.105:2650 19.66.121.48:443 ESTABLISHED
TCP 192.168.1.105:2651 148.251.160.242:443 ESTABLISHED
TCP 192.168.1.105:2654 52.109.8.19:443 ESTABLISHED
TCP 192.168.1.105:2656 52.113.194.132:443 ESTABLISHED
TCP 192.168.1.105:2657 52.113.194.132:443 ESTABLISHED
TCP 192.168.1.105:2658 52.113.194.132:443 ESTABLISHED
TCP 192.168.1.105:2659 19.78.111.199:443 ESTABLISHED
TCP 192.168.179.1:139 0.0.0.0:0 LISTENING
TCP 192.168.238.1:139 0.0.0.0:0 LISTENING
TCP [::]:135 [::]:0 LISTENING
TCP [::]:443 [::]:0 LISTENING
TCP [::]:445 [::]:0 LISTENING
TCP [::]:1536 [::]:0 LISTENING
TCP [::]:1537 [::]:0 LISTENING
TCP [::]:1538 [::]:0 LISTENING
TCP [::]:1539 [::]:0 LISTENING
TCP [::]:1540 [::]:0 LISTENING
TCP [::]:1542 [::]:0 LISTENING
TCP [::]:5357 [::]:0 LISTENING
TCP [::]:5432 [::]:0 LISTENING
TCP [::]:1544 [::]:0 LISTENING
TCP [::]:8307 [::]:0 LISTENING
UDP 0.0.0.0:500 *:*
UDP 0.0.0.0:3702 *:*
UDP 0.0.0.0:3702 *:*
UDP 0.0.0.0:3702 *:*
UDP 0.0.0.0:3702 *:*
UDP 0.0.0.0:3702 *:*
UDP 0.0.0.0:4500 *:*
UDP 0.0.0.0:5050 *:*
UDP 0.0.0.0:5353 *:*
UDP 0.0.0.0:5353 *:*
UDP 0.0.0.0:5353 *:*
UDP 0.0.0.0:5353 *:*
UDP 0.0.0.0:5353 *:*
UDP 0.0.0.0:5353 *:*
UDP 0.0.0.0:5355 *:*
UDP 0.0.0.0:60030 *:*
UDP 0.0.0.0:61562 *:*
UDP 0.0.0.0:63162 *:*
UDP 0.0.0.0:63164 *:*
UDP 127.0.0.1:1900 *:*
UDP 127.0.0.1:48201 *:*
UDP 127.0.0.1:57676 *:*
UDP 127.0.0.1:57677 *:*
UDP 127.0.0.1:60029 *:*
UDP 127.0.0.1:60960 *:*
UDP 127.0.0.1:60961 *:*
UDP 127.0.0.1:60962 *:*
UDP 127.0.0.1:63160 *:*
UDP 127.0.0.1:63161 *:*
UDP 127.0.0.1:63177 *:*
UDP 127.0.0.1:63978 *:*
UDP 127.0.0.1:65000 *:*
UDP 192.168.1.105:137 *:*
UDP 192.168.1.105:138 *:*
UDP 192.168.1.105:1900 *:*
UDP 192.168.1.105:5353 *:*
UDP 192.168.1.105:60028 *:*
UDP 192.168.179.1:137 *:*
UDP 192.168.179.1:138 *:*
UDP 192.168.179.1:1900 *:*
UDP 192.168.179.1:5353 *:*
UDP 192.168.179.1:60027 *:*
UDP 192.168.238.1:137 *:*
UDP 192.168.238.1:138 *:*
UDP 192.168.238.1:1900 *:*
UDP 192.168.238.1:5353 *:*
UDP 192.168.238.1:60026 *:*
UDP [::]:500 *:*
UDP [::]:3702 *:*
UDP [::]:3702 *:*
UDP [::]:3702 *:*
UDP [::]:3702 *:*
UDP [::]:3702 *:*
UDP [::]:4500 *:*
UDP [::]:5353 *:*
UDP [::]:5353 *:*
UDP [::]:5353 *:*
UDP [::]:5355 *:*
UDP [::]:60031 *:*
UDP [::]:61563 *:*
UDP [::]:63163 *:*
UDP [::]:63165 *:*
UDP [::]:1900 *:*
UDP [::]:5353 *:*
UDP [::]:60025 *:*
UDP [::]:63178 *:*
UDP [fe80::29c4:6f1f:a34f:e52b713]:546 *:*
UDP [fe80::29c4:6f1f:a34f:e52b713]:1900 *:*
UDP [fe80::85f4:b847:4b53:a5a22]:546 *:*
UDP [fe80::85f4:b847:4b53:a5a22]:1900 *:*
```

# گزارشکار آزمایش اول آزمایشگاه شبکه های کامپیوتری

بررسی پروتکل های پشتیبانی شده در دستور `netstat -p`:

```
Select Administrator: Command Prompt
C:\Windows\system32>netstat -h

Displays protocol statistics and current TCP/IP network connections.

NETSTAT [-a] [-b] [-e] [-f] [-n] [-o] [-p proto] [-r] [-s] [-x] [-t] [interval]

-a          Displays all connections and listening ports.
-b          Displays the executable involved in creating each connection or
           listening port. In some cases well-known executables host
           multiple independent components, and in these cases the
           sequence of components involved in creating the connection
           or listening port is displayed. In this case the executable
           name is in [] at the bottom, on top is the component it called,
           and so forth until TCP/IP was reached. Note that this option
           can be time-consuming and will fail unless you have sufficient
           permissions.
-e          Displays Ethernet statistics. This may be combined with the -s
           option.
-f          Displays Fully Qualified Domain Names (FQDN) for foreign
           addresses.
-n          Displays addresses and port numbers in numerical form.
-o          Displays the owning process ID associated with each connection.
-p proto    Shows connections for the protocol specified by proto: proto
           may be any of: TCP, UDP, TCPv6, or UDPv6. If used with the -s
           option to display per-protocol statistics, proto may be any of:
           IP, IPv6, ICMP, ICMPv6, TCP, TCPv6, UDP, or UDPv6.
-q          Displays all connections, listening ports, and bound
           nonlistening TCP ports. Bound nonlistening ports may or may not
           be associated with an active connection.
-r          Displays the routing table.
-s          Displays per-protocol statistics. By default, statistics are
           shown for IP, IPv6, ICMP, ICMPv6, TCP, TCPv6, UDP, and UDPv6;
           the -p option may be used to specify a subset of the default.
-t          Displays the current connection offload state.
-x          Displays NetworkDirect connections, listeners, and shared
           endpoints.
-y          Displays the TCP connection template for all connections.
           Cannot be combined with the other options.
interval   Redisplays selected statistics, pausing interval seconds
           between each display. Press CTRL+C to stop redisplaying
           statistics. If omitted, netstat will print the current
           configuration information once.

C:\Windows\system32>
```

# گزارشکار آزمایش اول آزمایشگاه شبکه های کامپیوتری

گام نهم

تغییر IP سیستم خود به صورت استاتیک به آدرس ۱۹۲.۱۶۸.۵۸.۳:

```
Administrator: Command Prompt
C:\Windows\system32 netsh interface ip set address name="Wi-Fi" static 192.168.58.3 255.255.0 192.168.58.1 1
C:\Windows\system32 ipconfig/all

Windows IP Configuration

Host Name . . . . . : Amirmahdi
Primary Dns Suffix . . . . . :
Node Type . . . . . : Hybrid
IP Routing Enabled. . . . . : No
WINS Proxy Enabled. . . . . : No

Ethernet adapter Ethernet:

Media State . . . . . : Media disconnected
Connection-specific DNS Suffix . : Home
Description . . . . . : Realtek PCIe GbE Family Controller
Physical Address. . . . . : 74-D0-2B-BD-FE-F8
DHCP Enabled. . . . . : Yes
Autoconfiguration Enabled . . . . . : Yes

Wireless LAN adapter Local Area Connection* 2:

Media State . . . . . : Media disconnected
Connection-specific DNS Suffix . :
Description . . . . . : Microsoft Wi-Fi Direct Virtual Adapter
Physical Address. . . . . : 1E-71-D9-83-50-A3
DHCP Enabled. . . . . : Yes
Autoconfiguration Enabled . . . . . : Yes

Wireless LAN adapter Local Area Connection* 13:

Media State . . . . . : Media disconnected
Connection-specific DNS Suffix . :
Description . . . . . : Microsoft Hosted Network Virtual Adapter
Physical Address. . . . . : 4E-71-D9-83-50-A3
DHCP Enabled. . . . . : No
Autoconfiguration Enabled . . . . . : Yes

Ethernet adapter VMware Network Adapter VMnet1:

Connection-specific DNS Suffix . :
Description . . . . . : VMware Virtual Ethernet Adapter for VMnet1
Physical Address. . . . . : 00-50-56-C0-00-01
DHCP Enabled. . . . . : Yes
Autoconfiguration Enabled . . . . . : Yes
Link-local IPv6 Address . . . . . : fe80::85f4:b847:4b53:a55a%2(Preferred)
IPv4 Address. . . . . : 192.168.238.1(Preferred)
Subnet Mask . . . . . : 255.255.255.0
Lease Obtained. . . . . : Friday, February 25, 2022 2:59:58 PM
Lease Expires . . . . . : Friday, February 25, 2022 7:15:34 PM
Default Gateway . . . . . :
DHCP Server . . . . . : 192.168.238.254
DHCPv6 IAID . . . . . : 905990230
DHCPv6 Client DUID. . . . . : 00-01-00-01-21-9A-4F-8D-74-D0-2B-BD-FE-F8
DNS Servers . . . . . : fec0:0:0:ffff::1%1
                        fec0:0:0:ffff::2%1
                        fec0:0:0:ffff::3%1
NetBIOS over Tcpip. . . . . : Enabled

Ethernet adapter VMware Network Adapter VMnet8:

Connection-specific DNS Suffix . :
Description . . . . . : VMware Virtual Ethernet Adapter for VMnet8
Physical Address. . . . . : 00-50-56-C0-00-08
DHCP Enabled. . . . . : Yes
Autoconfiguration Enabled . . . . . : Yes
Link-local IPv6 Address . . . . . : fe80::29c4:6f1f:a34f:e52b%13(Preferred)
IPv4 Address. . . . . : 192.168.179.1(Preferred)
Subnet Mask . . . . . : 255.255.255.0
Lease Obtained. . . . . : Friday, February 25, 2022 3:00:01 PM
Lease Expires . . . . . : Friday, February 25, 2022 7:15:37 PM
Default Gateway . . . . . :
DHCP Server . . . . . : 192.168.179.254
DHCPv6 IAID . . . . . : 939544662
DHCPv6 Client DUID. . . . . : 00-01-00-01-21-9A-4F-8D-74-D0-2B-BD-FE-F8
DNS Servers . . . . . : fec0:0:0:ffff::1%1
                        fec0:0:0:ffff::2%1
                        fec0:0:0:ffff::3%1
Primary WINS Server . . . . . : 192.168.179.2
NetBIOS over Tcpip. . . . . : Enabled

Wireless LAN adapter Wi-Fi:

Connection-specific DNS Suffix . :
Description . . . . . : Qualcomm Atheros AR9485WB-EG Wireless Network Adapter
Physical Address. . . . . : 6C-71-D9-83-50-A3
DHCP Enabled. . . . . : No
Autoconfiguration Enabled . . . . . : Yes
IPv4 Address. . . . . : 192.168.58.3(Preferred)
Subnet Mask . . . . . : 255.255.252.0
Default Gateway . . . . . : 192.168.58.1
NetBIOS over Tcpip. . . . . : Enabled

Tunnel adapter Local Area Connection* 3:

Media State . . . . . : Media disconnected
Connection-specific DNS Suffix . :
Description . . . . . : Microsoft Teredo Tunneling Adapter
Physical Address. . . . . : 00-00-00-00-00-00-E0
DHCP Enabled. . . . . : No
Autoconfiguration Enabled . . . . . : Yes

Tunnel adapter isatap.{42CCE890-69EF-414E-B09F-709E3C5EDE16}:

Media State . . . . . : Media disconnected
Connection-specific DNS Suffix . :
Description . . . . . : Microsoft ISATAP Adapter #2
Physical Address. . . . . : 00-00-00-00-00-00-E0
DHCP Enabled. . . . . : No
Autoconfiguration Enabled . . . . . : Yes

Tunnel adapter isatap.{0763599C-3418-473A-9886-0220C59E0DB5}:

Media State . . . . . : Media disconnected
Connection-specific DNS Suffix . :
Description . . . . . : Microsoft ISATAP Adapter #3
Physical Address. . . . . : 00-00-00-00-00-00-E0
DHCP Enabled. . . . . : No
Autoconfiguration Enabled . . . . . : Yes

Tunnel adapter isatap.{6EBA346F-3AA3-4958-A69F-CFF6FD32EF2D}:

Media State . . . . . : Media disconnected
Connection-specific DNS Suffix . :
Description . . . . . : Microsoft ISATAP Adapter #4
Physical Address. . . . . : 00-00-00-00-00-00-E0
DHCP Enabled. . . . . : No
Autoconfiguration Enabled . . . . . : Yes
```

# گزارشکار آزمایش اول آزمایشگاه شبکه های کامپیوتری

درخواست IP جدیدی از DHCP server:

```
Administrator: Command Prompt
C:\Windows\system32 netsh interface ip set address name="Wi-Fi" DHCP

C:\Windows\system32 ipconfig/all

Windows IP Configuration

Host Name . . . . . : Amirmahdi
Primary Dns Suffix . . . . . :
Node Type . . . . . : Hybrid
IP Routing Enabled. . . . . : No
WINS Proxy Enabled. . . . . : No
DNS Suffix Search List. . . . . : Home

Ethernet adapter Ethernet:

Media State . . . . . : Media disconnected
Connection-specific DNS Suffix . : Home
Description . . . . . : Realtek PCIe GbE Family Controller
Physical Address. . . . . : 74-00-2B-8D-FE-F8
DHCP Enabled. . . . . : Yes
Autoconfiguration Enabled . . . . : Yes

Wireless LAN adapter Local Area Connection* 2:

Media State . . . . . : Media disconnected
Connection-specific DNS Suffix . :
Description . . . . . : Microsoft Wi-Fi Direct Virtual Adapter
Physical Address. . . . . : 1E-71-D9-83-50-A3
DHCP Enabled. . . . . : Yes
Autoconfiguration Enabled . . . . : Yes

Wireless LAN adapter Local Area Connection* 13:

Media State . . . . . : Media disconnected
Connection-specific DNS Suffix . :
Description . . . . . : Microsoft Hosted Network Virtual Adapter
Physical Address. . . . . : 1E-71-D9-83-50-A3
DHCP Enabled. . . . . : No
Autoconfiguration Enabled . . . . : Yes

Ethernet adapter VMware Network Adapter VMnet1:

Connection-specific DNS Suffix . :
Description . . . . . : VMware Virtual Ethernet Adapter for VMnet1
Physical Address. . . . . : 00-50-56-C0-00-01
DHCP Enabled. . . . . : Yes
Autoconfiguration Enabled . . . . : Yes
Link-local IPv6 Address . . . . . : fe80::85f4:b847:4b53:a55a%2(Preferred)
IPv4 Address. . . . . : 192.168.238.1(Preferred)
Subnet Mask . . . . . : 255.255.255.0
Lease Obtained. . . . . : Friday, February 25, 2022 2:59:58 PM
Lease Expires . . . . . : Friday, February 25, 2022 7:15:34 PM
Default Gateway . . . . . :
DHCP Server . . . . . : 192.168.238.254
DHCPv6 IAID . . . . . : 905990230
DHCPv6 Client DUID. . . . . : 00-01-00-01-21-9A-8F-8D-74-D0-2B-8D-FE-F8
DNS Servers . . . . . : fe00:0:0:ffff::1%1
                        fe00:0:0:ffff::2%1
                        fe00:0:0:ffff::3%1
NetBIOS over Tcpip. . . . . : Enabled

Ethernet adapter VMware Network Adapter VMnet8:

Connection-specific DNS Suffix . :
Description . . . . . : VMware Virtual Ethernet Adapter for VMnet8
Physical Address. . . . . : 00-50-56-C0-00-08
DHCP Enabled. . . . . : Yes
Autoconfiguration Enabled . . . . : Yes
Link-local IPv6 Address . . . . . : fe80::29c4:6f1f:a34f:e52b%13(Preferred)
IPv4 Address. . . . . : 192.168.179.1(Preferred)
Subnet Mask . . . . . : 255.255.255.0
Lease Obtained. . . . . : Friday, February 25, 2022 3:00:01 PM
Lease Expires . . . . . : Friday, February 25, 2022 7:15:37 PM
Default Gateway . . . . . :
DHCP Server . . . . . : 192.168.179.254
DHCPv6 IAID . . . . . : 939544662
DHCPv6 Client DUID. . . . . : 00-01-00-01-21-9A-8F-8D-74-D0-2B-8D-FE-F8
DNS Servers . . . . . : fe00:0:0:ffff::1%1
                        fe00:0:0:ffff::2%1
                        fe00:0:0:ffff::3%1
Primary WINS Server . . . . . : 192.168.179.2
NetBIOS over Tcpip. . . . . : Enabled

Wireless LAN adapter Wi-Fi:

Connection-specific DNS Suffix . : Home
Description . . . . . : Qualcomm Atheros AR9485MB-EG Wireless Network Adapter
Physical Address. . . . . : 6C-71-D9-83-50-A3
DHCP Enabled. . . . . : Yes
Autoconfiguration Enabled . . . . : Yes
IPv4 Address. . . . . : 192.168.1.105(Preferred)
Subnet Mask . . . . . : 255.255.255.0
Lease Obtained. . . . . : Friday, February 25, 2022 6:58:29 PM
Lease Expires . . . . . : Saturday, February 26, 2022 6:58:28 PM
Default Gateway . . . . . : 192.168.1.1
DHCP Server . . . . . : 192.168.1.1
DNS Servers . . . . . : 192.168.1.1
NetBIOS over Tcpip. . . . . : Enabled

Tunnel adapter Local Area Connection* 3:

Connection-specific DNS Suffix . :
Description . . . . . : Microsoft Teredo Tunneling Adapter
Physical Address. . . . . : 00-00-00-00-00-00-E0
DHCP Enabled. . . . . : No
Autoconfiguration Enabled . . . . : Yes
IPv6 Address. . . . . : 2001:0:2851:782c:2093:2775:6809:f849(Preferred)
Link-local IPv6 Address . . . . . : fe80::2093:2775:6809:f849%10(Preferred)
Default Gateway . . . . . :
DHCPv6 IAID . . . . . : 167772160
DHCPv6 Client DUID. . . . . : 00-01-00-01-21-9A-8F-8D-74-D0-2B-8D-FE-F8
NetBIOS over Tcpip. . . . . : Disabled

Tunnel adapter isatap.{0763599C-3418-473A-9886-0220C59E8DB5}:

Media State . . . . . : Media disconnected
Connection-specific DNS Suffix . :
Description . . . . . : Microsoft ISATAP Adapter #3
Physical Address. . . . . : 00-00-00-00-00-00-E0
DHCP Enabled. . . . . : No
Autoconfiguration Enabled . . . . : Yes

Tunnel adapter isatap.{6EBA346F-3AA3-4958-A69F-CFF6F032EF20}:

Media State . . . . . : Media disconnected
Connection-specific DNS Suffix . :
Description . . . . . : Microsoft ISATAP Adapter #4
Physical Address. . . . . : 00-00-00-00-00-00-E0
DHCP Enabled. . . . . : No
Autoconfiguration Enabled . . . . : Yes

Tunnel adapter isatap.Home:

Media State . . . . . : Media disconnected
Connection-specific DNS Suffix . : Home
Description . . . . . : Microsoft ISATAP Adapter #5
Physical Address. . . . . : 00-00-00-00-00-00-E0
DHCP Enabled. . . . . : No
Autoconfiguration Enabled . . . . : Yes
```

# گزارشکار آزمایش اول آزمایشگاه شبکه های کامپیوتری

تغییر DNS server خود به صورت استاتیک به ۱۸.۷۲.۰.۳:

```
Administrator: Command Prompt
C:\Windows\system32>netsh interface ip set dns name="Wi-Fi" source=static addr=18.72.0.3 register=none
The configured DNS server is incorrect or does not exist.

C:\Windows\system32>ipconfig/all

Windows IP Configuration

Host Name . . . . . : Amirmahdi
Primary Dns Suffix . . . . . :
Node Type . . . . . : Hybrid
IP Routing Enabled . . . . . : No
WINS Proxy Enabled . . . . . : No
DNS Suffix Search List . . . . . : Home

Ethernet adapter Ethernet:

Media State . . . . . : Media disconnected
Connection-specific DNS Suffix . : Home
Description . . . . . : Realtek PCIe GbE Family Controller
Physical Address. . . . . : 74-00-2B-B0-FE-F8
DHCP Enabled . . . . . : Yes
Autoconfiguration Enabled . . . . . : Yes

Wireless LAN adapter Local Area Connection* 2:

Media State . . . . . : Media disconnected
Connection-specific DNS Suffix . :
Description . . . . . : Microsoft Wi-Fi Direct Virtual Adapter
Physical Address. . . . . : 1E-71-D9-83-50-A3
DHCP Enabled . . . . . : Yes
Autoconfiguration Enabled . . . . . : Yes

Wireless LAN adapter Local Area Connection* 13:

Media State . . . . . : Media disconnected
Connection-specific DNS Suffix . :
Description . . . . . : Microsoft Hosted Network Virtual Adapter
Physical Address. . . . . : 4E-71-D9-83-50-A3
DHCP Enabled . . . . . : No
Autoconfiguration Enabled . . . . . : Yes

Ethernet adapter VMware Network Adapter VMnet1:

Connection-specific DNS Suffix . :
Description . . . . . : VMware Virtual Ethernet Adapter for VMnet1
Physical Address. . . . . : 00-50-56-C0-00-01
DHCP Enabled . . . . . : Yes
Autoconfiguration Enabled . . . . . : Yes
Link-local IPv6 Address . . . . . : fe80::85f4:b847:4b53:a55a%2(Preferred)
IPv4 Address. . . . . : 192.168.238.1(Preferred)
Subnet Mask . . . . . : 255.255.255.0
Lease Obtained . . . . . : Friday, February 25, 2022 2:59:58 PM
Lease Expires . . . . . : Friday, February 25, 2022 7:30:34 PM
Default Gateway . . . . . :
DHCP Server . . . . . : 192.168.238.254
DHCPv6 IAID . . . . . : 905890230
DHCPv6 Client DUID . . . . . : 00-01-00-01-21-9A-4F-8D-74-D0-2B-B0-FE-F8
DNS Servers . . . . . : fec0:0:0:ffff::1%1
                          fec0:0:0:ffff::2%1
                          fec0:0:0:ffff::3%1
NetBIOS over Tcpip. . . . . : Enabled

Ethernet adapter VMware Network Adapter VMnet8:

Connection-specific DNS Suffix . :
Description . . . . . : VMware Virtual Ethernet Adapter for VMnet8
Physical Address. . . . . : 00-50-56-C0-00-08
DHCP Enabled . . . . . : Yes
Autoconfiguration Enabled . . . . . : Yes
Link-local IPv6 Address . . . . . : fe80::29c4:6fff:a34f:a52b%13(Preferred)
IPv4 Address. . . . . : 192.168.179.1(Preferred)
Subnet Mask . . . . . : 255.255.255.0
Lease Obtained . . . . . : Friday, February 25, 2022 3:00:01 PM
Lease Expires . . . . . : Friday, February 25, 2022 7:30:37 PM
Default Gateway . . . . . :
DHCP Server . . . . . : 192.168.179.254
DHCPv6 IAID . . . . . : 939544662
DHCPv6 Client DUID . . . . . : 00-01-00-01-21-9A-4F-8D-74-D0-2B-B0-FE-F8
DNS Servers . . . . . : fec0:0:0:ffff::1%1
                          fec0:0:0:ffff::2%1
                          fec0:0:0:ffff::3%1
Primary WINS Server . . . . . : 192.168.179.2
NetBIOS over Tcpip. . . . . : Enabled

Wireless LAN adapter Wi-Fi:

Connection-specific DNS Suffix . : Home
Description . . . . . : Qualcomm Atheros AR9485WB-EG Wireless Network Adapter
Physical Address. . . . . : 8C-71-D9-83-50-A3
DHCP Enabled . . . . . : Yes
Autoconfiguration Enabled . . . . . : Yes
IPv4 Address. . . . . : 192.168.1.105(Preferred)
Subnet Mask . . . . . : 255.255.255.0
Lease Obtained . . . . . : Friday, February 25, 2022 6:58:29 PM
Lease Expires . . . . . : Saturday, February 26, 2022 6:58:29 PM
Default Gateway . . . . . : 192.168.1.1
DHCP Server . . . . . : 192.168.1.1
DNS Servers . . . . . : 18.72.0.3
NetBIOS over Tcpip. . . . . : Enabled

Tunnel adapter Local Area Connection* 3:

Connection-specific DNS Suffix . :
Description . . . . . : Microsoft Teredo Tunneling Adapter
Physical Address. . . . . : 00-00-00-00-00-00-E0
DHCP Enabled . . . . . : No
Autoconfiguration Enabled . . . . . : Yes
IPv6 Address. . . . . : 2001:0:2851:782c:2093:2775:6809:f849(Preferred)
Link-local IPv6 Address . . . . . : fe80::2093:2775:6809:f849%10(Preferred)
Default Gateway . . . . . :
DHCPv6 IAID . . . . . : 167772160
DHCPv6 Client DUID . . . . . : 00-01-00-01-21-9A-4F-8D-74-D0-2B-B0-FE-F8
NetBIOS over Tcpip. . . . . : Disabled

Tunnel adapter isatap.{076359C-3418-473A-9886-0220C59E80B5}:

Media State . . . . . : Media disconnected
Connection-specific DNS Suffix . :
Description . . . . . : Microsoft ISATAP Adapter #3
Physical Address. . . . . : 00-00-00-00-00-00-E0
DHCP Enabled . . . . . : No
Autoconfiguration Enabled . . . . . : Yes

Tunnel adapter isatap.{6EBA346F-3AA3-4958-A69F-CFF6FD32EF2D}:

Media State . . . . . : Media disconnected
Connection-specific DNS Suffix . :
Description . . . . . : Microsoft ISATAP Adapter #4
Physical Address. . . . . : 00-00-00-00-00-00-E0
DHCP Enabled . . . . . : No
Autoconfiguration Enabled . . . . . : Yes

Tunnel adapter isatap.Home:

Media State . . . . . : Media disconnected
Connection-specific DNS Suffix . : Home
Description . . . . . : Microsoft ISATAP Adapter #5
Physical Address. . . . . : 00-00-00-00-00-00-E0
DHCP Enabled . . . . . : No
Autoconfiguration Enabled . . . . . : Yes
```

# گزارشکار آزمایش اول آزمایشگاه شبکه های کامپیوتری

درخواست DNS server جدیدی از DHCP:

```
Administrator: Command Prompt
C:\Windows\system32 netsh interface ip set dns name="Wi-Fi" source=DHCP

C:\Windows\system32 ipconfig/all

Windows IP Configuration

Host Name . . . . . : Airmahdi
Primary Dns Suffix . . . . . :
Node Type . . . . . : Hybrid
IP Routing Enabled. . . . . : No
WINS Proxy Enabled. . . . . : No
DNS Suffix Search List. . . . . : Home

Ethernet adapter Ethernet:

Media State . . . . . : Media disconnected
Connection-specific DNS Suffix . . : Home
Description . . . . . : Realtek PCIe GbE Family Controller
Physical Address. . . . . : 74-D0-2B-BD-FE-F8
DHCP Enabled. . . . . : Yes
Autoconfiguration Enabled . . . . : Yes

Wireless LAN adapter Local Area Connection* 2:

Media State . . . . . : Media disconnected
Connection-specific DNS Suffix . . :
Description . . . . . : Microsoft Wi-Fi Direct Virtual Adapter
Physical Address. . . . . : 1E-71-D9-83-58-A3
DHCP Enabled. . . . . : Yes
Autoconfiguration Enabled . . . . : Yes

Wireless LAN adapter Local Area Connection* 13:

Media State . . . . . : Media disconnected
Connection-specific DNS Suffix . . :
Description . . . . . : Microsoft Hosted Network Virtual Adapter
Physical Address. . . . . : 4E-71-D9-83-58-A3
DHCP Enabled. . . . . : No
Autoconfiguration Enabled . . . . : Yes

Ethernet adapter VMware Network Adapter VMnet1:

Connection-specific DNS Suffix . . :
Description . . . . . : VMware Virtual Ethernet Adapter for VMnet1
Physical Address. . . . . : 00-50-56-C0-00-01
DHCP Enabled. . . . . : Yes
Autoconfiguration Enabled . . . . : Yes
Link-local IPv6 Address . . . . . : fe80::85f4:b847:4b53:a55a%2(Preferred)
IPv4 Address. . . . . : 192.168.238.1(Preferred)
Subnet Mask . . . . . : 255.255.255.0
Lease Obtained. . . . . : Friday, February 25, 2022 2:59:58 PM
Lease Expires . . . . . : Friday, February 25, 2022 7:45:34 PM
Default Gateway . . . . . :
DHCP Server . . . . . : 192.168.238.254
DHCPv6 IAID . . . . . : 905990230
DHCPv6 Client DUID. . . . . : 00-01-00-01-21-9A-NF-8D-74-D0-2B-BD-FE-F8
DNS Servers . . . . . : fec0:0:0:ffff::1%1
                          fec0:0:0:ffff::2%1
                          fec0:0:0:ffff::3%1
NetBIOS over Tcpip. . . . . : Enabled

Ethernet adapter VMware Network Adapter VMnet8:

Connection-specific DNS Suffix . . :
Description . . . . . : VMware Virtual Ethernet Adapter for VMnet8
Physical Address. . . . . : 00-50-56-C0-00-08
DHCP Enabled. . . . . : Yes
Autoconfiguration Enabled . . . . : Yes
Link-local IPv6 Address . . . . . : fe80::29c4:6f1f:a34f:e52b%13(Preferred)
IPv4 Address. . . . . : 192.168.179.1(Preferred)
Subnet Mask . . . . . : 255.255.255.0
Lease Obtained. . . . . : Friday, February 25, 2022 3:00:01 PM
Lease Expires . . . . . : Friday, February 25, 2022 7:45:37 PM
Default Gateway . . . . . :
DHCP Server . . . . . : 192.168.179.254
DHCPv6 IAID . . . . . : 939544662
DHCPv6 Client DUID. . . . . : 00-01-00-01-21-9A-NF-8D-74-D0-2B-BD-FE-F8
DNS Servers . . . . . : fec0:0:0:ffff::1%1
                          fec0:0:0:ffff::2%1
                          fec0:0:0:ffff::3%1
Primary WINS Server . . . . . : 192.168.179.2
NetBIOS over Tcpip. . . . . : Enabled

Wireless LAN adapter Wi-Fi:

Connection-specific DNS Suffix . . : Home
Description . . . . . : Qualcomm Atheros AR9485WB-EG Wireless Network Adapter
Physical Address. . . . . : 6C-71-D9-83-58-A3
DHCP Enabled. . . . . : Yes
Autoconfiguration Enabled . . . . : Yes
IPv4 Address. . . . . : 192.168.1.105(Preferred)
Subnet Mask . . . . . : 255.255.255.0
Lease Obtained. . . . . : Friday, February 25, 2022 6:58:29 PM
Lease Expires . . . . . : Saturday, February 26, 2022 6:58:29 PM
Default Gateway . . . . . : 192.168.1.1
DHCP Server . . . . . : 192.168.1.1
DNS Servers . . . . . : 192.168.1.1
NetBIOS over Tcpip. . . . . : Enabled

Tunnel adapter Local Area Connection* 3:

Connection-specific DNS Suffix . . :
Description . . . . . : Microsoft Teredo Tunneling Adapter
Physical Address. . . . . : 00-00-00-00-00-00-E0
DHCP Enabled. . . . . : No
Autoconfiguration Enabled . . . . : Yes
IPv6 Address. . . . . : 2001:0:2051:782c:2093:2775:6809:f849(Preferred)
Link-local IPv6 Address . . . . . : fe80::2093:2775:6809:f849%10(Preferred)
Default Gateway . . . . . :
DHCPv6 IAID . . . . . : 167772160
DHCPv6 Client DUID. . . . . : 00-01-00-01-21-9A-NF-8D-74-D0-2B-BD-FE-F8
NetBIOS over Tcpip. . . . . : Disabled

Tunnel adapter isatap. {0763599C-3418-473A-9886-0220C59E8DB5}:

Media State . . . . . : Media disconnected
Connection-specific DNS Suffix . . :
Description . . . . . : Microsoft ISATAP Adapter #3
Physical Address. . . . . : 00-00-00-00-00-00-E0
DHCP Enabled. . . . . : No
Autoconfiguration Enabled . . . . : Yes

Tunnel adapter isatap. {6EBA346F-3AA3-4958-A63F-CFF6FD32EF2D}:

Media State . . . . . : Media disconnected
Connection-specific DNS Suffix . . :
Description . . . . . : Microsoft ISATAP Adapter #4
Physical Address. . . . . : 00-00-00-00-00-00-E0
DHCP Enabled. . . . . : No
Autoconfiguration Enabled . . . . : Yes

Tunnel adapter isatap.Home:

Media State . . . . . : Media disconnected
Connection-specific DNS Suffix . . : Home
Description . . . . . : Microsoft ISATAP Adapter #5
Physical Address. . . . . : 00-00-00-00-00-00-E0
DHCP Enabled. . . . . : No
Autoconfiguration Enabled . . . . : Yes
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