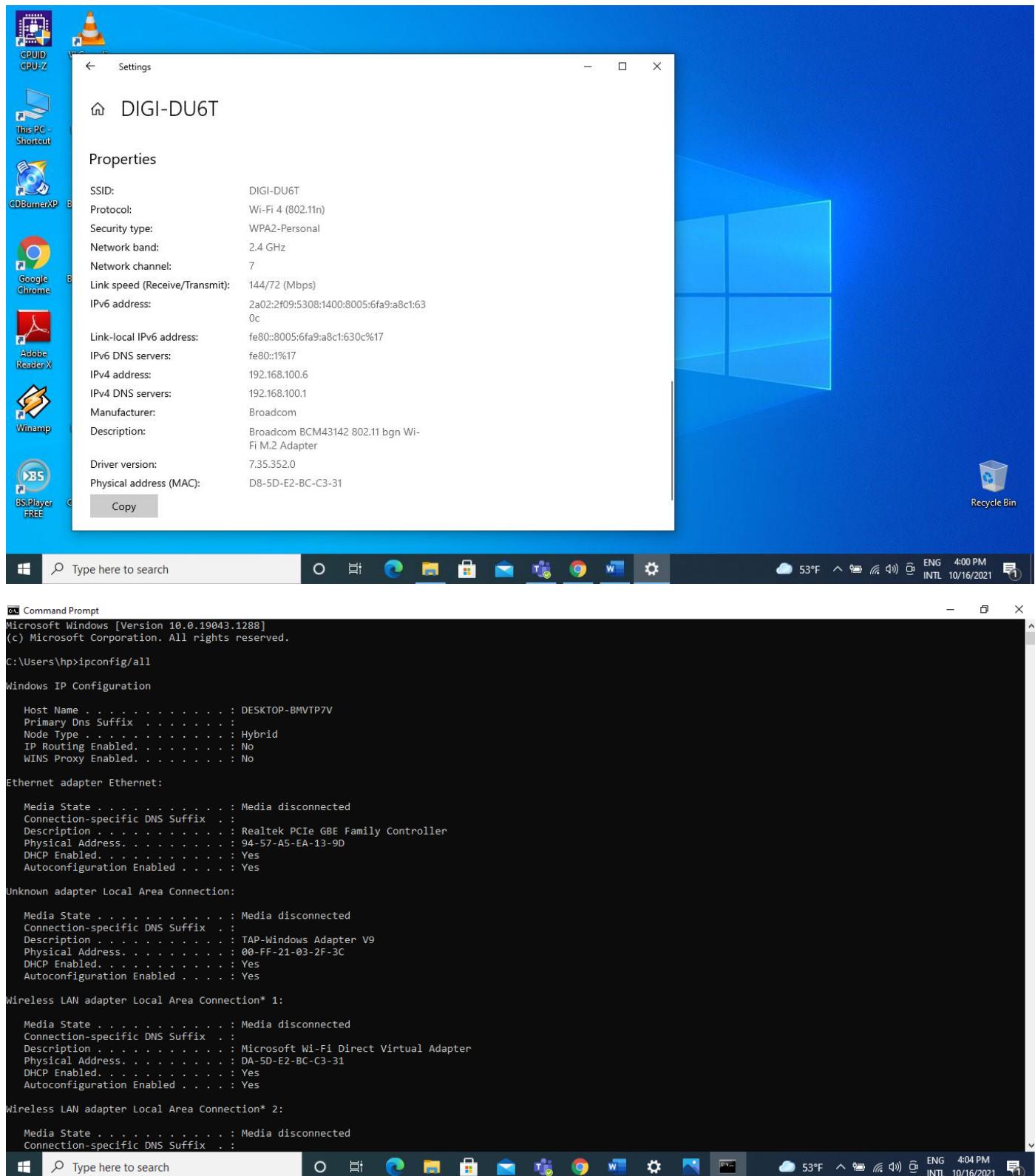


1.



```
Windows Command Prompt

Wireless LAN adapter Local Area Connection* 2:
Media State . . . . . : Media disconnected
Connection-specific DNS Suffix . :
Description . . . . . : Microsoft Wi-Fi Direct Virtual Adapter #2
Physical Address. . . . . : DA-5D-E2-BC-CB-31
DHCP Enabled. . . . . : Yes
Autoconfiguration Enabled . . . . . : Yes

Wireless LAN adapter Wi-Fi:
Connection-specific DNS Suffix . :
Description . . . . . : Broadcom BCM43142 802.11 bgn Wi-Fi M.2 Adapter
Physical Address. . . . . : D8-5D-E2-BC-C3-31
DHCP Enabled. . . . . : Yes
Autoconfiguration Enabled . . . . . : Yes
IPv6 Address . . . . . : 2a02:2f09:5308:1400:8005:6fa9:a8c1:630c(Preferred)
Temporary IPv6 Address. . . . . : 2a02:2f09:5308:1400:d0ef:b9bc:b26a:d201(Preferred)
Link-local IPv6 Address . . . . . : fe80::8005:6fa9:a8c1:630c%17(Preferred)
IPv4 Address . . . . . : 192.168.100.6(Preferred)
Subnet Mask . . . . . : 255.255.255.0
Lease Obtained . . . . . : Friday, October 15, 2021 9:24:12 PM
Lease Expires . . . . . : Tuesday, October 19, 2021 3:02:01 PM
Default Gateway . . . . . : fe80::1%17
                           192.168.100.1
DHCP Server . . . . . : 192.168.100.1
DHCPv6 IAID . . . . . : 299392482
DHCPv6 Client DUID. . . . . : 00-01-00-01-28-CB-7B-EF-94-57-A5-EA-13-9D
DNS Servers . . . . . : fe80::1%17
                           192.168.100.1
NetBIOS over Tcpip. . . . . : Enabled

Ethernet adapter Bluetooth Network Connection:
Media State . . . . . : Media disconnected
Connection-specific DNS Suffix . :
Description . . . . . : Bluetooth Device (Personal Area Network)
Physical Address. . . . . : D8-5D-E2-BC-C3-32
DHCP Enabled. . . . . : Yes
Autoconfiguration Enabled . . . . . : Yes

C:\Users\hp>
```

```
PS C:\Users\hp> tracert

Usage: tracert [-d] [-h maximum_hops] [-j host-list] [-w timeout]
                [-R] [-S srcaddr] [-4] [-6] target_name

Options:
    -d           Do not resolve addresses to hostnames.
    -h maximum_hops Maximum number of hops to search for target.
    -j host-list  Loose source route along host-list (IPv4-only).
    -w timeout   Wait timeout milliseconds for each reply.
    -R           Trace round-trip path (IPv6-only).
    -S srcaddr   Source address to use (IPv6-only).
    -4           Force using IPv4.
    -6           Force using IPv6.

C:\Users\hp>
```

```
cmd Select Command Prompt - netstat
C:\Users\hp>netstat

Active Connections

Proto Local Address          Foreign Address        State
TCP   127.0.0.1:49668        DESKTOP-BMVT7V:49669 ESTABLISHED
TCP   127.0.0.1:49669        DESKTOP-BMVT7V:49668 ESTABLISHED
TCP   127.0.0.1:49676        DESKTOP-BMVT7V:49677 ESTABLISHED
TCP   127.0.0.1:49677        DESKTOP-BMVT7V:49676 ESTABLISHED
TCP   127.0.0.1:50247        DESKTOP-BMVT7V:50248 ESTABLISHED
TCP   127.0.0.1:50248        DESKTOP-BMVT7V:50247 ESTABLISHED
TCP   127.0.0.1:50256        DESKTOP-BMVT7V:50257 ESTABLISHED
TCP   127.0.0.1:50257        DESKTOP-BMVT7V:50256 ESTABLISHED
TCP   127.0.0.1:55080        DESKTOP-BMVT7V:55081 ESTABLISHED
TCP   127.0.0.1:55081        DESKTOP-BMVT7V:55080 ESTABLISHED
TCP   127.0.0.1:57405        DESKTOP-BMVT7V:57406 ESTABLISHED
TCP   127.0.0.1:57406        DESKTOP-BMVT7V:57405 ESTABLISHED
TCP   192.168.100.6:51707    52.113.199.100:https ESTABLISHED
TCP   192.168.100.6:54452    52.114.92.45:https ESTABLISHED
TCP   192.168.100.6:54455    52.114.76.236:https ESTABLISHED
TCP   192.168.100.6:56624    77:https ESTABLISHED
TCP   192.168.100.6:56630    77:https ESTABLISHED
TCP   192.168.100.6:57380    20.199.120.85:https ESTABLISHED
TCP   192.168.100.6:59583    210:https ESTABLISHED
TCP   192.168.100.6:60100    77:https ESTABLISHED
TCP   192.168.100.6:60102    77:https ESTABLISHED
TCP   192.168.100.6:60103    77:https ESTABLISHED
TCP   192.168.100.6:60104    210:https ESTABLISHED
TCP   192.168.100.6:61176    52.109.68.14:https TIME_WAIT
TCP   192.168.100.6:61178    77:https ESTABLISHED
TCP   192.168.100.6:61180    40.79.189.58:https ESTABLISHED
```

```
cmd Command Prompt
Microsoft Windows [Version 10.0.19043.1288]
(c) Microsoft Corporation. All rights reserved.

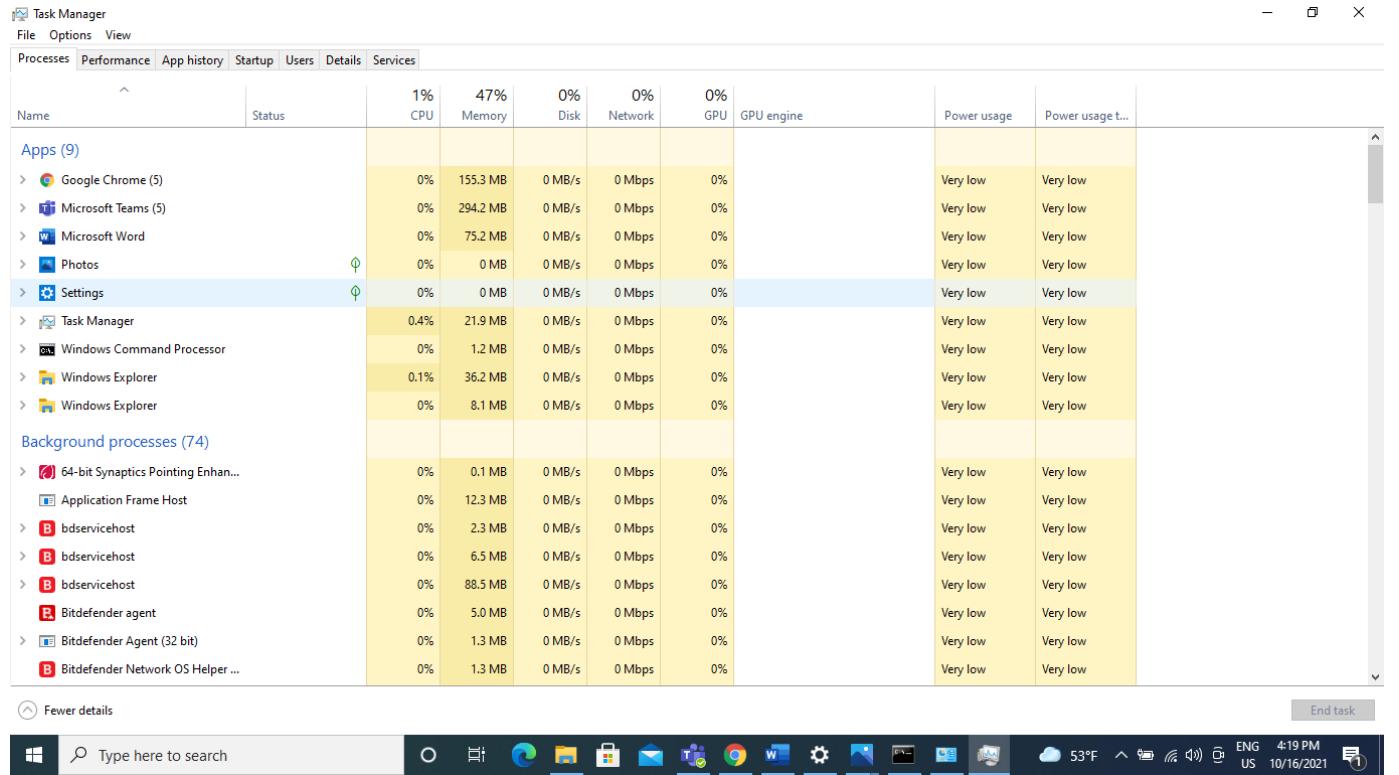
C:\Users\hp>ping

Usage: ping [-t] [-a] [-n count] [-l size] [-f] [-i TTL] [-v TOS]
           [-r count] [-s count] [[-j host-list] | [-k host-list]]
           [-w timeout] [-R] [-S srcaddr] [-c compartment] [-P]
           [-A] [-G] target_name

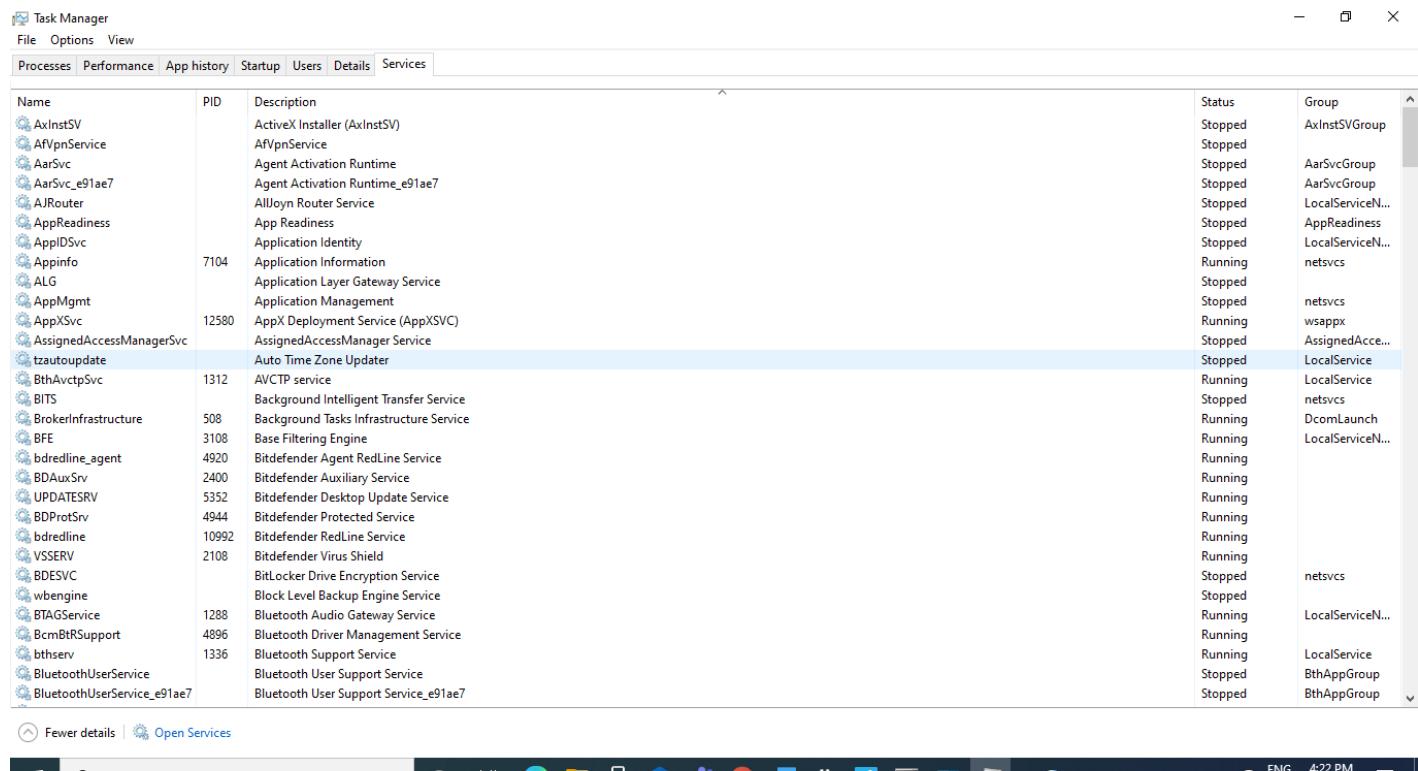
Options:
  -t      Ping the specified host until stopped.
          To see statistics and continue - type Control-Break;
          To stop - type Control-C.
  -a      Resolve addresses to hostnames.
  -n count Number of echo requests to send.
  -l size Send buffer size.
  -f      Set Don't Fragment flag in packet (IPv4-only).
  -i TTL  Time To Live.
  -v TOS  Type Of Service (IPv4-only). This setting has been deprecated
          and has no effect on the type of service field in the IP
          Header.
  -r count Record route for count hops (IPv4-only).
  -s count Timestamp for count hops (IPv4-only).
  -j host-list Loose source route along host-list (IPv4-only).
  -k host-list Strict source route along host-list (IPv4-only).
  -w timeout Timeout in milliseconds to wait for each reply.
  -R      Use routing header to test reverse route also (IPv6-only).
          Per RFC 5095 the use of this routing header has been
          deprecated. Some systems may drop echo requests if
          this header is used.
  -S srcaddr Source address to use.
  -c compartment Routing compartment identifier.
  -P      Ping a Hyper-V Network Virtualization provider address.
  -A      Force using IPv4.
  -G      Force using IPv6.

C:\Users\hp>
```

2.a.



b.



C.

Task Manager

File Options View

Processes Performance App history Startup Users Details Services

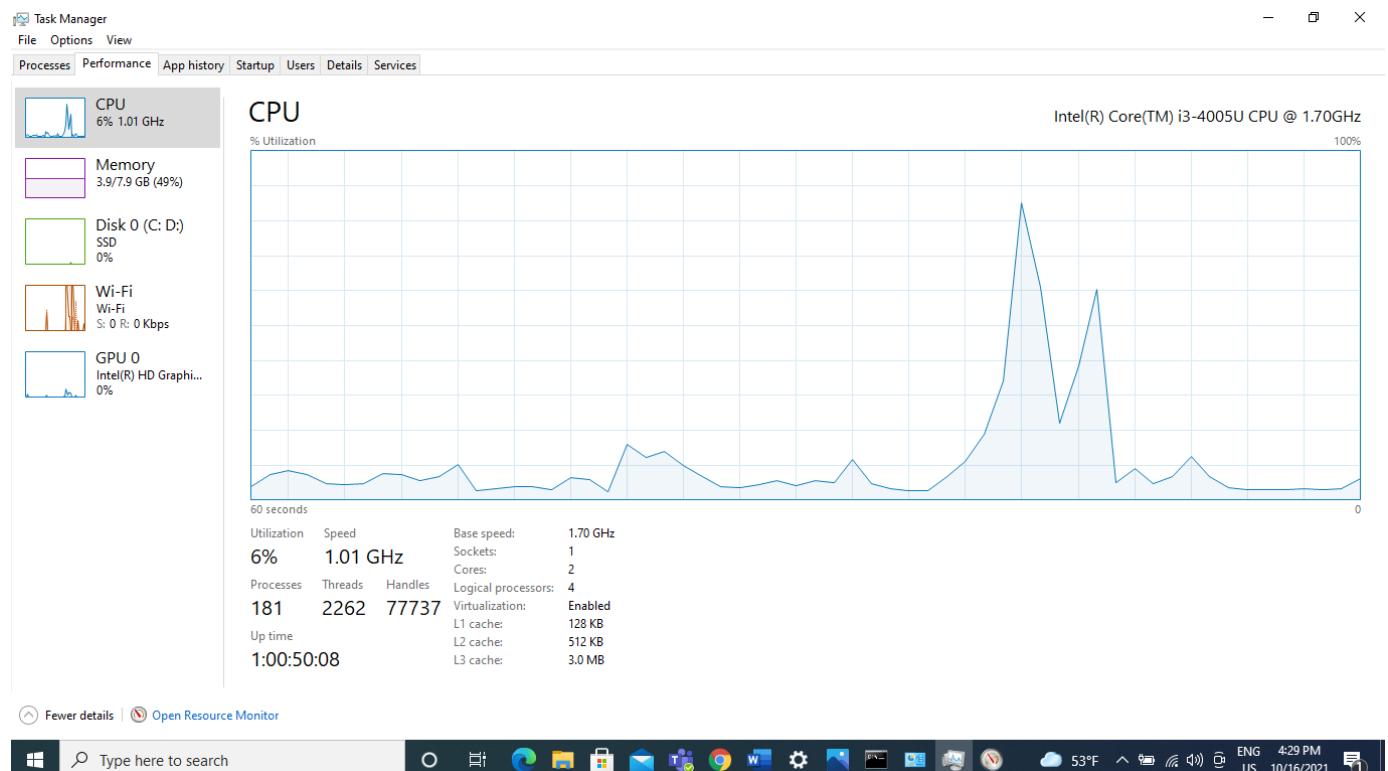
Resource usage since 9/16/2021 for current user account.
Delete usage history

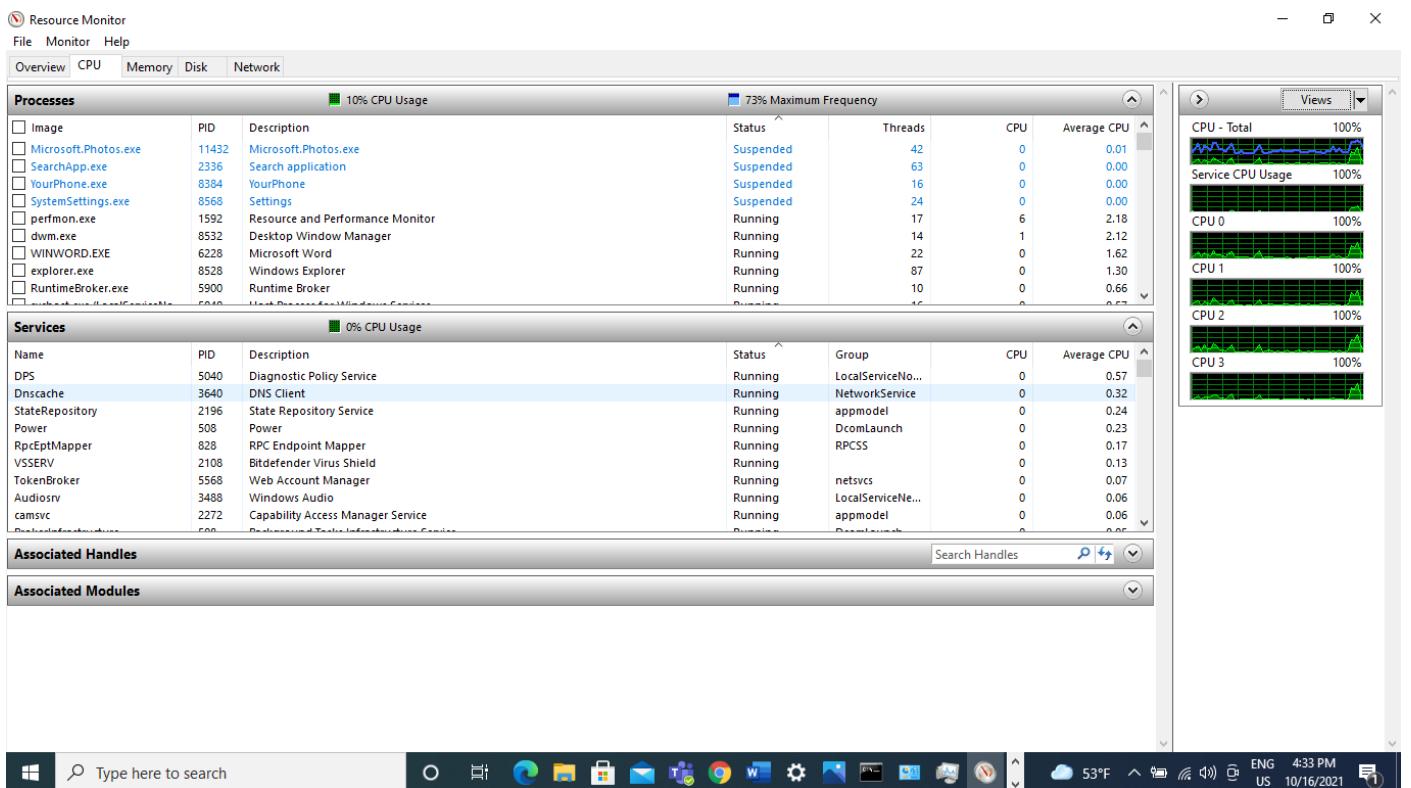
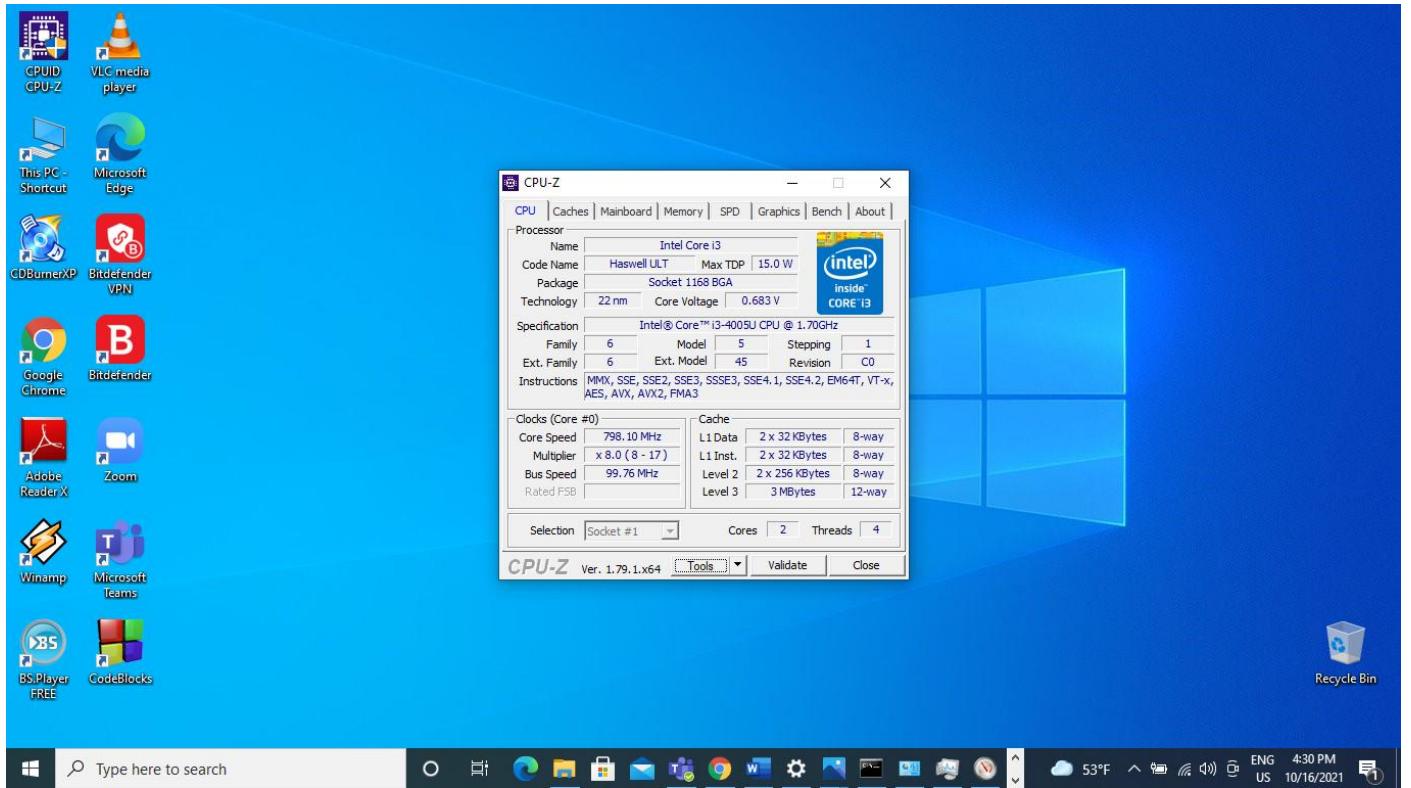
Name	CPU time	Network	Metered network	Tile updates
3D Viewer	0:00:00	0 MB	0 MB	0 MB
Alarms & Clock	0:00:01	0 MB	0 MB	0 MB
Calculator	0:00:00	0 MB	0 MB	0 MB
Camera	0:00:00	0 MB	0 MB	0 MB
Cortana	0:00:00	0 MB	0 MB	0 MB
Feedback Hub	0:00:03	0 MB	0 MB	0 MB
Get Help	0:00:00	0 MB	0 MB	0 MB
Groove Music	0:00:00	0 MB	0 MB	0 MB
Mail and Calendar	0:00:34	0.1 MB	0 MB	0 MB
Maps	0:00:00	0 MB	0 MB	0 MB
Microsoft Edge	0:00:00	0 MB	0 MB	0 MB
Microsoft Photos	0:01:39	0.1 MB	0 MB	0 MB
Microsoft Solitaire Collect...	0:00:00	0 MB	0 MB	0 MB
Microsoft Store	0:00:41	0.5 MB	0 MB	0 MB
Mixed Reality Portal	0:00:00	0 MB	0 MB	0 MB
Movies & TV	0:00:00	0 MB	0 MB	0 MB
Office	0:00:33	0 MB	0 MB	0 MB
OneNote for Windows 10	0:00:00	0.1 MB	0.1 MB	0.1 MB
Paint 3D	0:00:00	0 MB	0 MB	0 MB

Fewer details

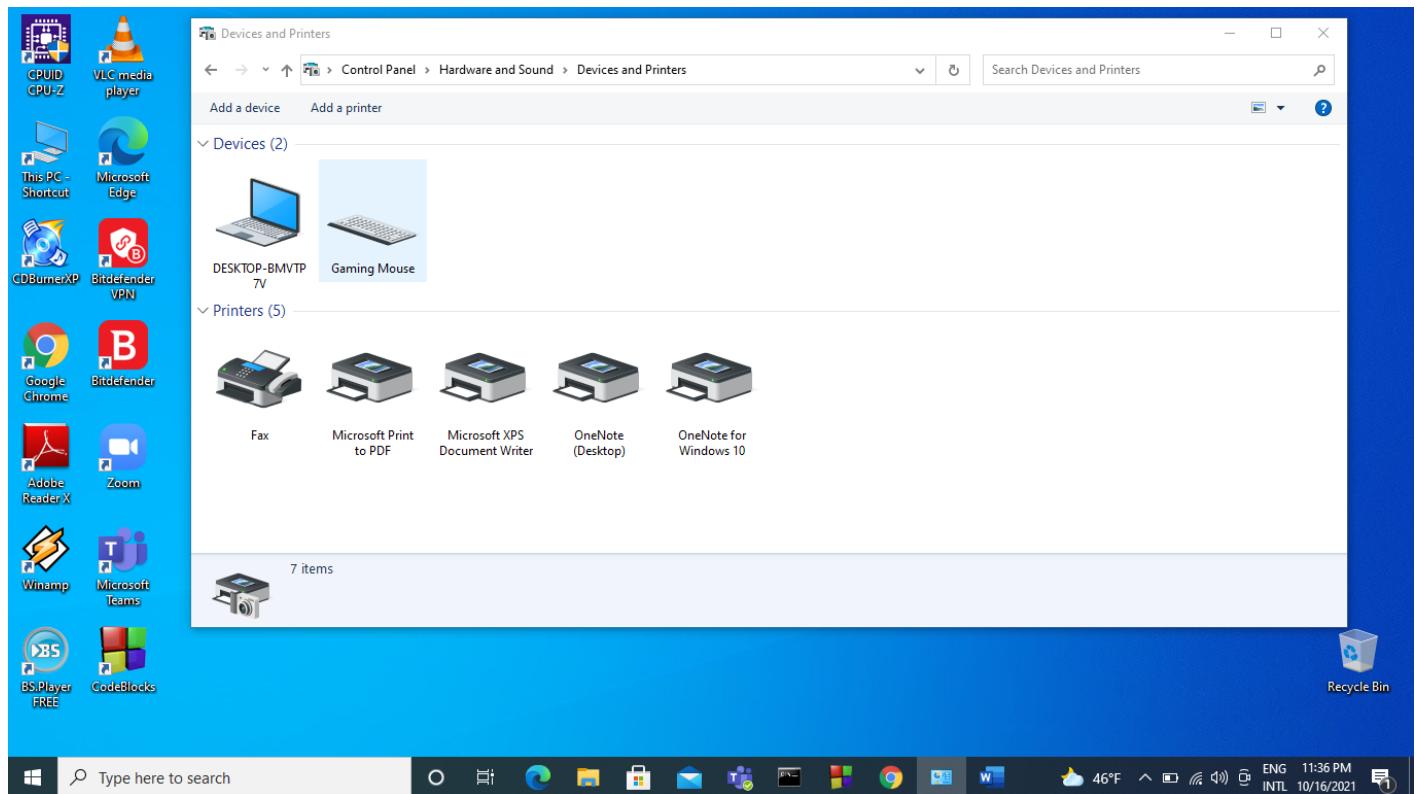
Windows Start button Type here to search Taskbar icons Weather (53°F) Date (10/16/2021) System tray (ENG US 4:25 PM)

d.

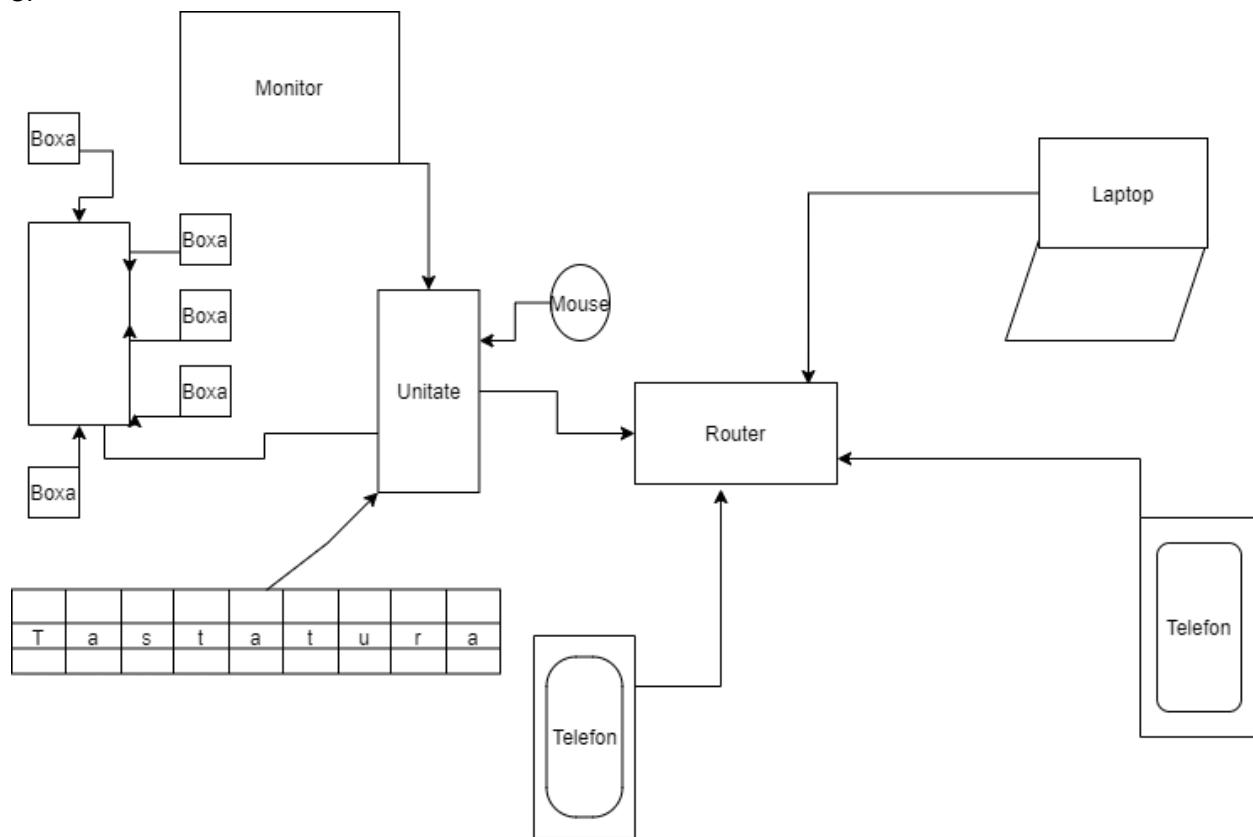




e.



3.



Routerul conectat la Unitate

Router EchoLife HG8121H GPON Terminal

POWER RATING: +12.0 V; 1.0 A

(23S)MAC:04FE8D88EFE6-F2(13)

IP:192.168.100.1

Huawei EchoLife HG8121H, un echipament cu functie de router wireless ce functioneaza direct cu fibra optica.

Este un ONT(Optical Network Terminal) ce isi face treaba fara prea mari probleme. El vine cu doua antene miciute, in partea din spate si cu un conector de fibra ce se monteaza sub ONT. Conectorul de fibra are o parte decupata in router pentru a pozitiona mult mai usor fibra. Porturile sunt, de asemenea, pozitionate si ele tot in partea din spate iar ledurile pentru power, PON, Los, etc sunt pozitionate pe partea de sus a routerului.

WLAN



← Settings

Network

Configure firewall and security settings

Metered connection

If you have a limited data plan and want more control over data usage, make this connection a metered network. Some apps might work differently to reduce data usage when you're connected to this network.

Set as metered connection

Off

If you set a data limit, Windows will set the metered connection setting for you to help you stay under your limit.

[Set a data limit to help control data usage on this network](#)

IP settings

IP assignment:	Automatic (DHCP)
Edit	

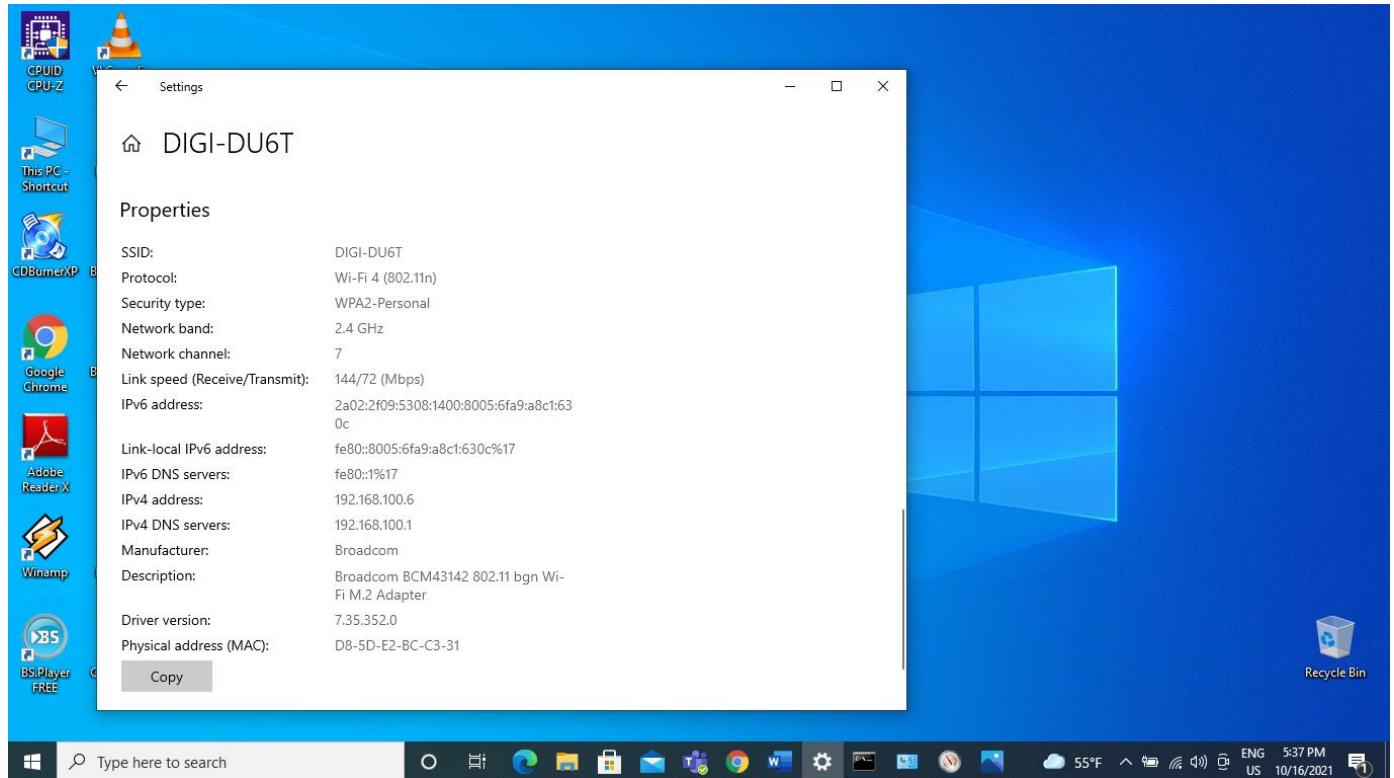
Properties

Link speed (Receive/Transmit):	1000/1000 (Mbps)
IPv6 address:	2602:2f0:5:308:1400:74cb:95a1:6bcc 9af
Link-local IPv6 address:	fe80::74cb:95a1:6bcc:cfa%14
IPv6 DNS servers:	fe80::1%14
IPv4 address:	192.168.100.4
IPv4 DNS servers:	192.168.100.1
Manufacturer:	Realtek
Description:	Realtek PCIe GBE Family Controller
Driver version:	9.1.410.2015
Physical address (MAC):	00-50-99-55-97-70

[Copy](#)



A wireless LAN (WLAN) is a wireless computer network that links two or more devices using wireless communication to form a local area network (LAN) within a limited area such as a home, school, computer laboratory, campus, or office building. This gives users the ability to move around within the area and remain connected to the network.



Laptop

Home

Find a setting

System

Display

Sound

Notifications & actions

Focus assist

Power & sleep

Battery

Storage

Tablet

Multitasking

Projecting to this PC

Shared experiences

About

Your PC is monitored and protected.

See details in Windows Security

This page has a few new settings

Some settings from Control Panel have moved here, and you can copy your PC info so it's easier to share.

Device specifications

Device name	DESKTOP-BMVTP7V
Processor	Intel(R) Core(TM) i3-4005U CPU @ 1.70GHz 1.70 GHz
Installed RAM	8.00 GB
Device ID	6E8CB589-E500-44A9-A281-DD80D0BB242F
Product ID	00330-80000-00000-AA671
System type	64-bit operating system, x64-based processor
Pen and touch	No pen or touch input is available for this display

Related settings

BitLocker settings

Device Manager

Remote desktop

System protection

Advanced system settings

Rename this PC (advanced)

Get help

Give feedback

Windows specifications

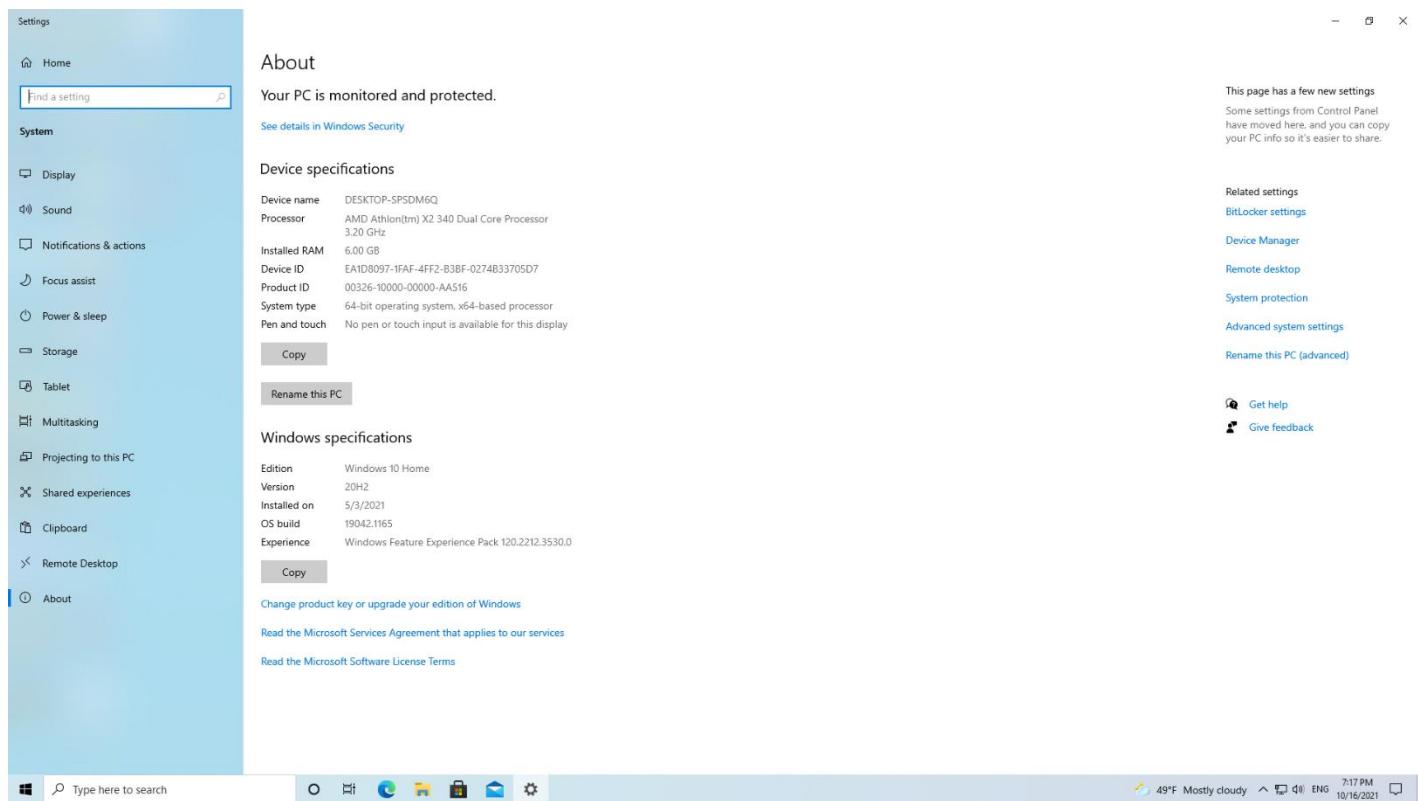
Edition	Windows 10 Pro
Version	21H1
Installed on	9/9/2021
OS build	19043.1288
Experience	Windows Feature Experience Pack 120.2212.3920.0

Type here to search

File Explorer Edge Mail Photos OneDrive Task View Settings Control Panel File History Task Scheduler Task Manager Task View

55°F ENG US 10/16/2021 5:42 PM

PC



Tastatura Marvo Touch Wisdom K636

Scorpion Arachnids

USB interface

Work Voltage: 5 V

Work current: 300 mA

S/N: 20171000472

Mouse Marvo Touch Wisdom

S/N: 20170900194

600/800/1600/3200 DPI

Monitor LG 22M47D-P

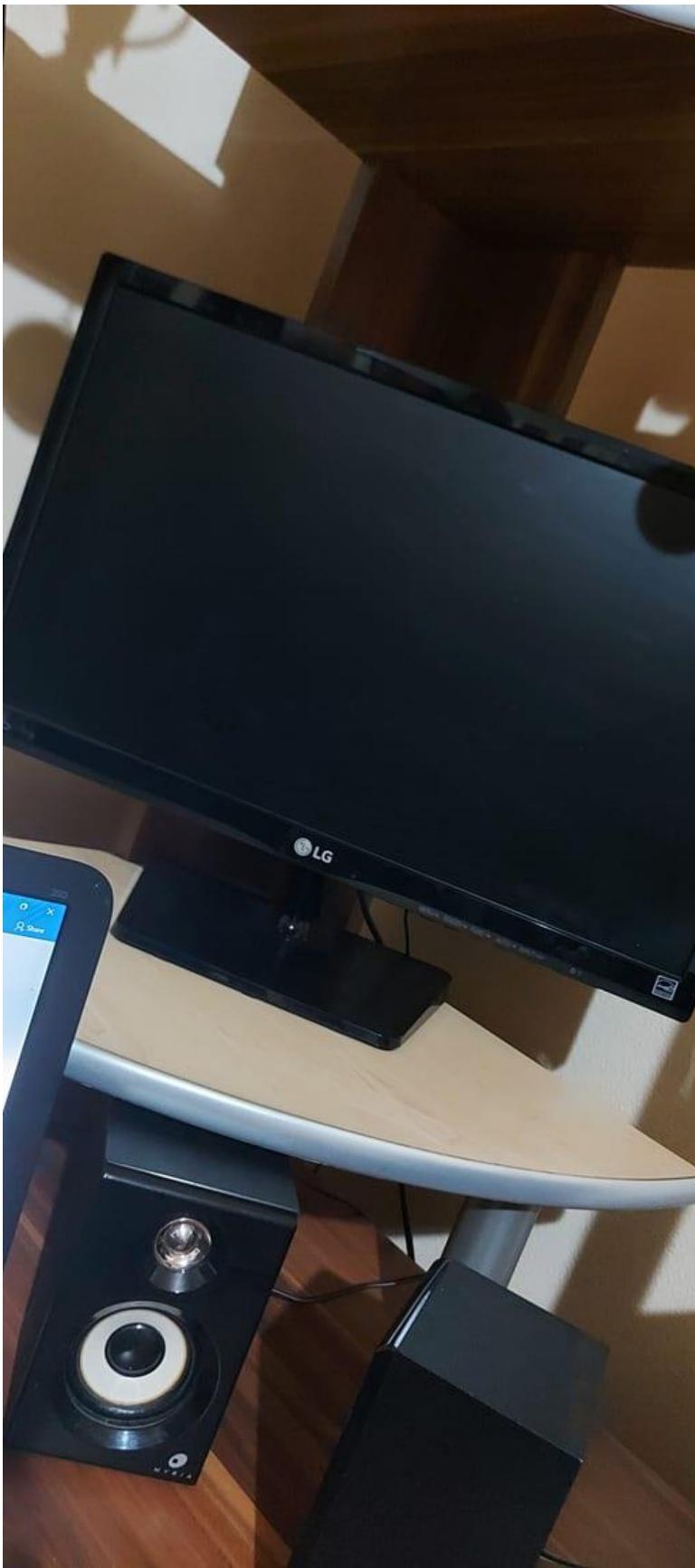
Product Code: 22mMP47D-PA.AEUXJPN

19V 1.2A

Serial No: 506NTGY99231

Model No:22MP47D





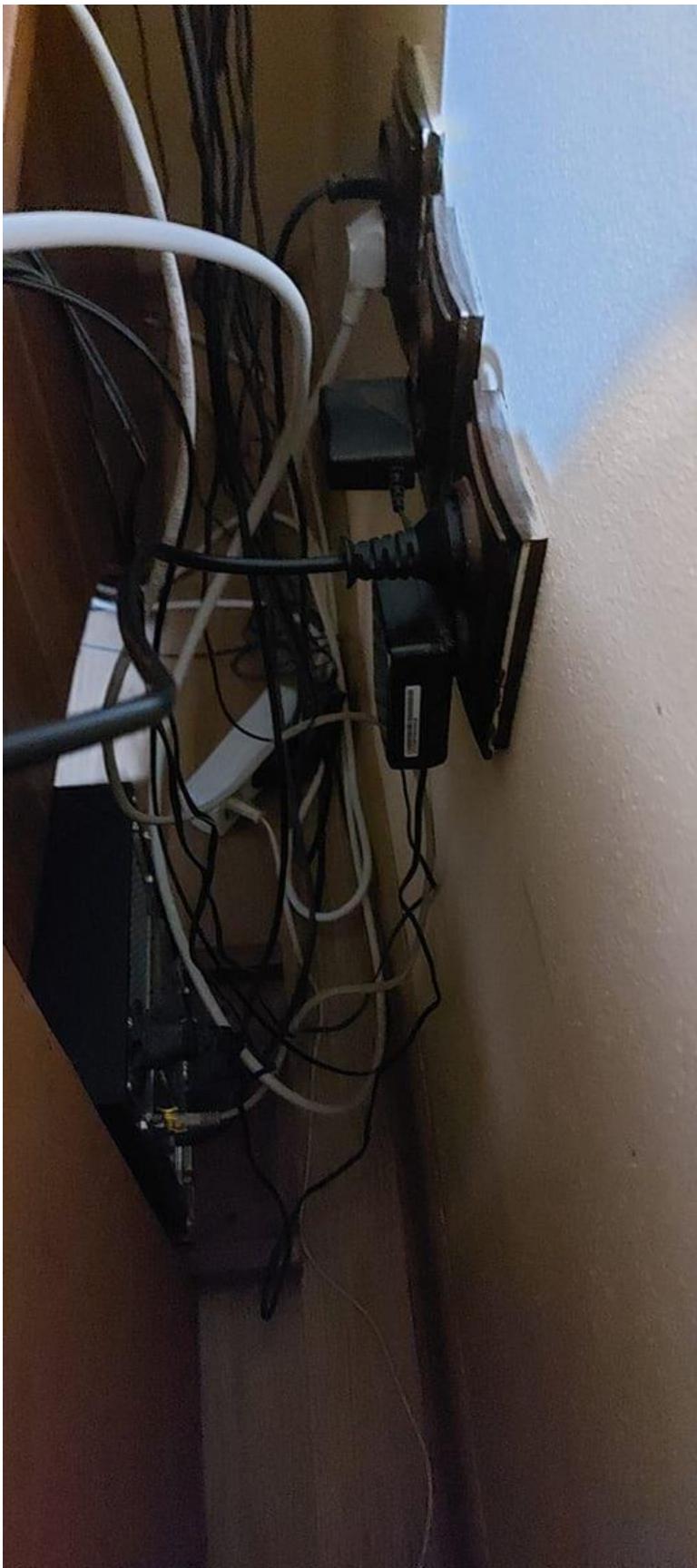
Boxe Myria





Unitate ASUS





2 telefoane Samsung Galaxy A71

17:51

VoIP LTE1 11%

Despre telefon



Galaxy A71

Editare

Număr telefon	Necunoscut
Nume model	Galaxy A71
Număr model	SM-A715F/DS
Număr serie	R58NB4WF5NJ
IMEI (slot 1)	350000028426399
IMEI (slot 2)	359969538426399

Informații stare

Informații juridice

Informații software

17:50



Informații stare

Adresă IP

fe80::d801:c8ff:fe7f:e9ff
192.168.100.34
2a02:2f09:5308:1400:d801:c8ff:fe7f:e9ff
2a02:2f09:5308:1400:cc5b:a76d:f699:cb76

Adresă Wi-Fi MAC

Adresă MAC Wi-Fi telefon

C0:3D:03:D2:F3:11

Adresă Bluetooth

Indisponibil

Adresă MAC Ethernet

Indisponibil

Număr serie

R58NB4WF5NJ

Timp de funcționare

286:43:44

Stare telefon

Oficial

Certificare FCC

FCC ID: A3LSMA715F

Valoare nominală

DC 9 V; 2.77 A

17:50



Informații baterie

Stare baterie

Nu se încarcă

Nivel baterie

9 %

Capacitate baterie

4500 mAh (tipic)

Capacitatea tipică a fost testată de către un terț, în condițiile sale de laborator. Capacitatea tipică reprezintă o medie estimată care ia în calcul diferențele la nivelul capacitatii bateriei între eșantioanele de baterii testate conform standardului IEC 61960. Capacitatea nominală (minimă) este de 4370 mAh. Durata reală a bateriei poate varia în funcție de mediul de rețea, de modelele de utilizare și de alți factori.

17:50



Informații software

Versiune One UI

3.1

Versiune Android

11

Actualizare de sistem Google Play

1 august 2021

Versiune bandă de bază

A715FXXU6BUH1

Versiune nucleu

4.14.190-21840848-abA715FXXU6BUH1

#1 Thu Aug 5 17:29:49 KST 2021

Număr versiune

RP1A.200720.012.A715FXXU6BUH1

Starea SE pentru Android

Enforcing

SEPF_SM-A715F_11_0010

Thu Aug 05 17:30:32 2021

Versiune Knox

Knox 3.7

Knox API level 33

TIMA 4.1.0

Versiune software furnizor de servicii

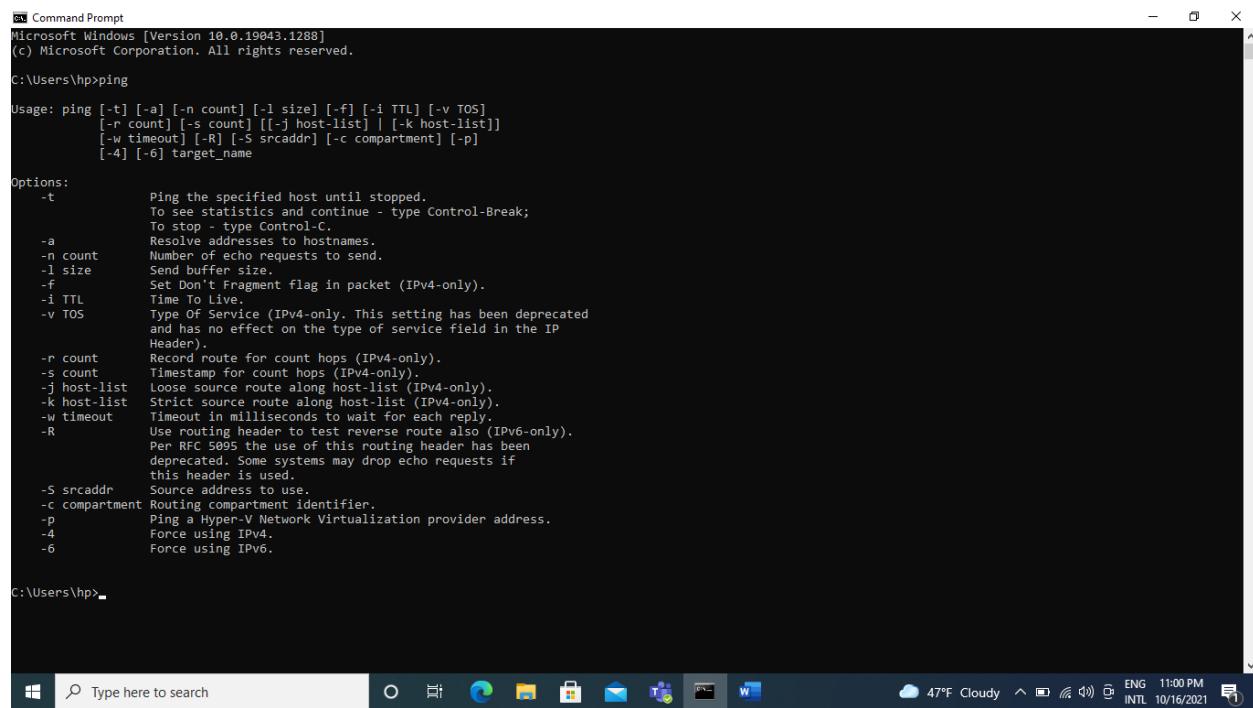
SAOMC_SM-A715F_OXM_ROM_RR_0007

ROM/ROM,ROM/ROM

Vers. software securitate

ASKS v4.0 Release 20200806

C.



```
Microsoft Windows [Version 10.0.19043.1288]
(c) Microsoft Corporation. All rights reserved.

C:\Users\hp>ping

Usage: ping [-t] [-n count] [-l size] [-f] [-i TTL] [-v TOS]
           [-r count] [-s count] [[-j host-list] | [-k host-list]]
           [-w timeout] [-R] [-S srcaddr] [-c compartment] [-p]
           [-4] [-6] target_name

Options:
  -t          Ping the specified host until stopped.
              To see statistics and continue - type Control-Break;
              To stop - type Control-C.
  -a          Resolve addresses to hostnames.
  -n count    Number of echo requests to send.
  -l size     Send buffer size.
  -f          Set Don't Fragment flag in packet (IPv4-only).
  -i TTL      Time To Live.
  -v TOS      Type Of Service (IPv4-only). This setting has been deprecated
              and has no effect on the type of service field in the IP
              Header.
  -r count    Record route for count hops (IPv4-only).
  -s count    Timestamp for count hops (IPv4-only).
  -j host-list Loose source route along host-list (IPv4-only).
  -k host-list Strict source route along host-list (IPv4-only).
  -w timeout  Timeout in milliseconds to wait for each reply.
  -R          Use routing header to test reverse route also (IPv6-only).
              Per RFC 5095 the use of this routing header has been
              deprecated. Some systems may drop echo requests if
              this header is used.
  -S srcaddr  Source address to use.
  -c compartment Routing compartment identifier.
  -p          Ping a Hyper-V Network Virtualization provider address.
  -4          Force using IPv4.
  -6          Force using IPv6.

C:\Users\hp>
```

4.1

1. $1600 \times 1200 \text{ px}$
 Adressum 3 bit / px
~~Rotat = 56 Kbps~~
 ~~$1600 \cdot 1200 \cdot 3 = 15 \text{ Mbit}$~~
 ~~$R = \frac{C}{t} \Rightarrow t = \frac{C}{R} = \frac{15 \text{ Mbit}}{56 \text{ Kbps}} = \frac{15000 \text{ Kbit}}{56 \text{ Kbps}}$~~
 ~~$264,85 \text{ s}$~~
 $R = \frac{C}{t} \Rightarrow t = \frac{15 \text{ Mbit}}{1 \text{ Mbit/s}} = 15 \text{ s}$
 $R = \frac{C}{t} \Rightarrow t = \frac{15 \text{ Mbit}}{10 \text{ Mbit/s}} = 1,5 \text{ s}$
 $R = \frac{C}{t} \Rightarrow t = \frac{15 \text{ Mbit}}{100 \text{ Mbit/s}} = 0,15 \text{ s}$
 $R = \frac{C}{t} \Rightarrow t = \frac{15 \text{ Mbit}}{10^3 \text{ Mbit/s}} = 0,015 \text{ s}$
 ~~$\frac{15 \text{ Mbit}}{1000 \text{ Mbit/s}} = 0,015 \text{ s}$~~

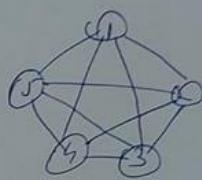
4.2

5 eclips.

4 tipos de Hausmura

$t = 100 \text{ ms}$

6^{ta} hipótesi:



$$C_5^2 = \frac{5!}{3!2!} = \frac{4 \cdot 5}{1 \cdot 2} = 10.$$

$[4^{10}, 100 \text{ ms}]$