

Panduan Pengecekan Jaringan ITB

Persiapan :

- Lakukan pengecekan menggunakan PC yang terkoneksi internet via jaringan kabel.
- PC yang digunakan untuk pengecekan harus dinyalakan selama 24 jam minimal 1 minggu.
- PC yang digunakan harus dapat melakukan ping ke DNS ITB: yaitu IP 167.205.22.123 atau 167.205.23.1

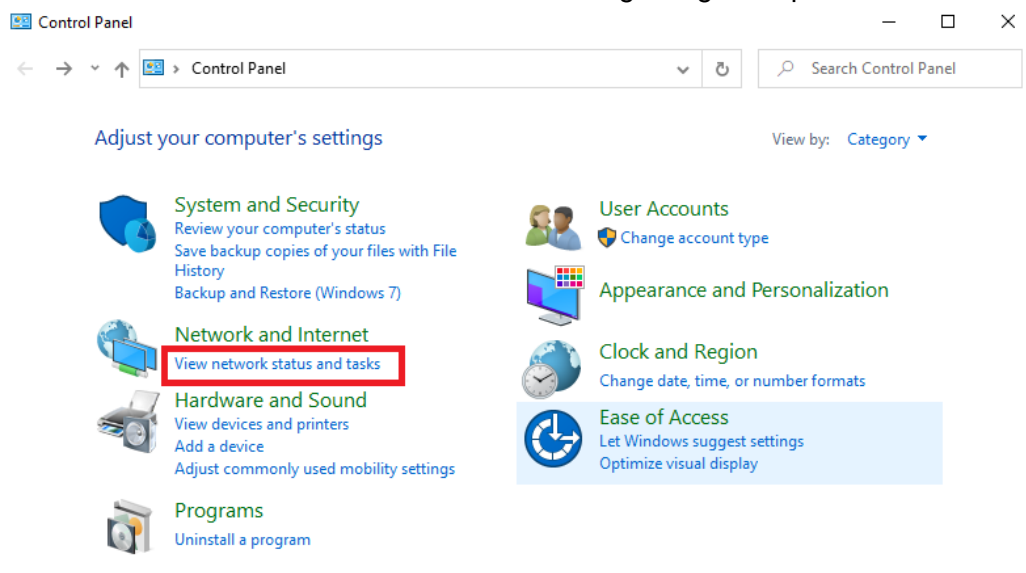
Kegiatan :

- **Setting IP Address**
- **Cek IP Address**
- **Traceroute / tracert**
- **Iperf**

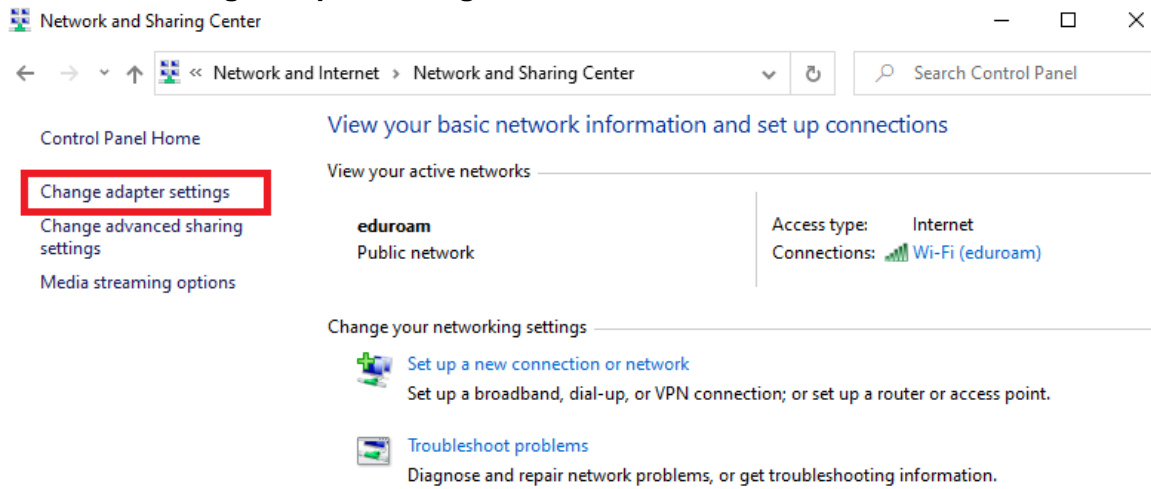
Panduan Pengecekan Jaringan ITB:

1. Setting IP Address di Windows

- Buka aplikasi “**Control Panel**” :
Pilih “view network status and tasks” untuk mengkonfigurasi ip address.



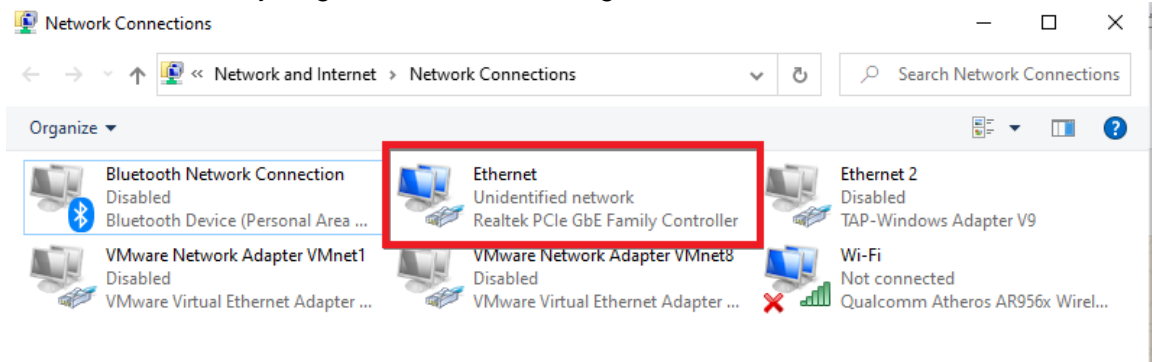
- Pilih menu “change adapter settings”



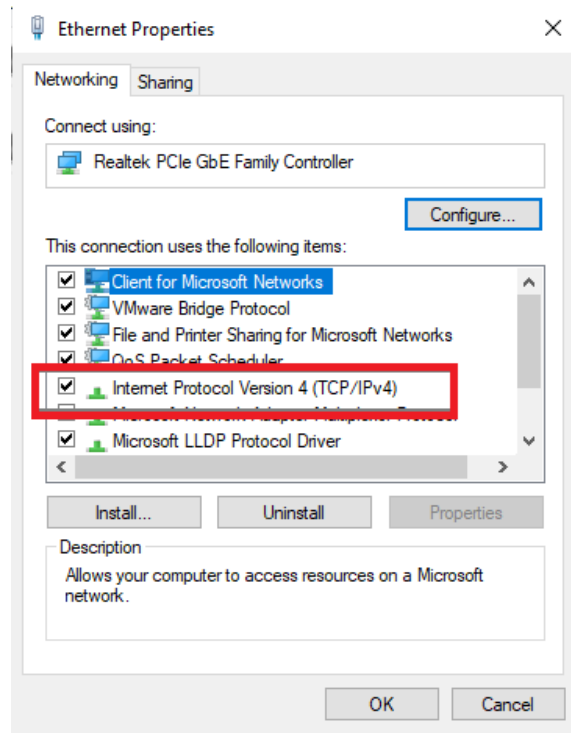
- Kemudian Pilih network adapter “Ethernet “ untuk konfigurasi ip address.

Catatan:

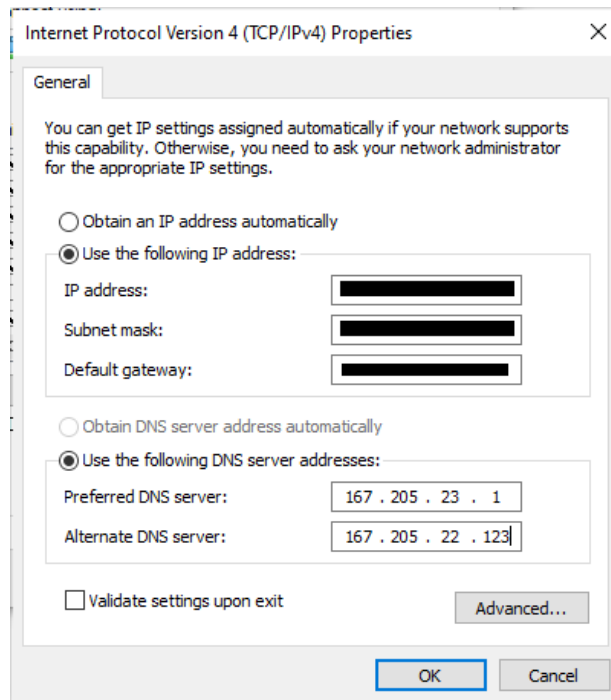
- Pastikan kabel jaringan sudah tersambung.



- Pilih menu “**TCP/IPv4**” untuk menkonfigurasi ip address ipv4.

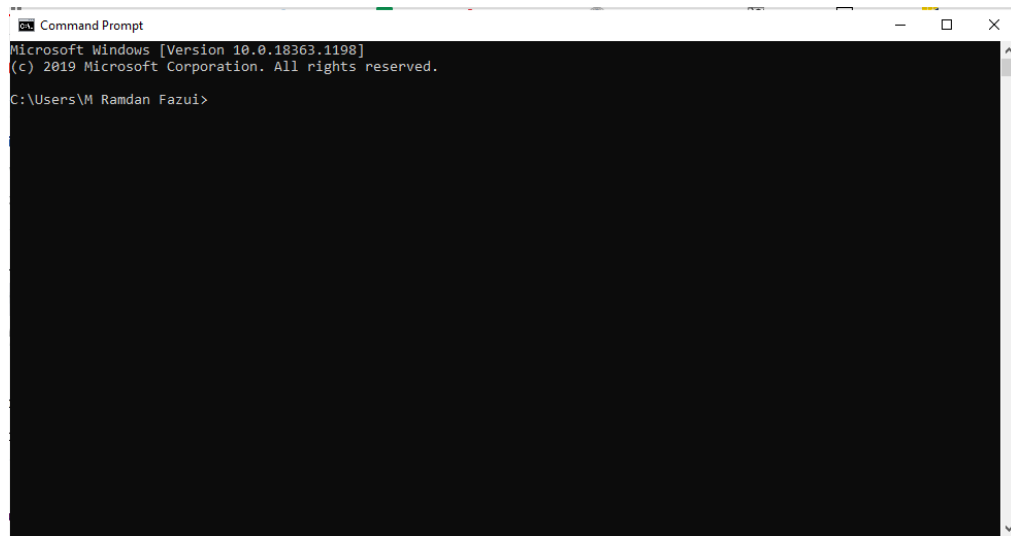


- **Setting ip address**
d disesuaikan dengan jaringannya masing-masing.
 - Ip address : xxxx.xxxx.xxxx.xxxx
 - Subnet mask : xxxx.xxxx.xxxx.xxxx
 - Gateway : xxxx.xxxx.xxxx.xxxx
 - DNS Server : 167.205.23.1
167.205.22.123



2. Cek IP Address

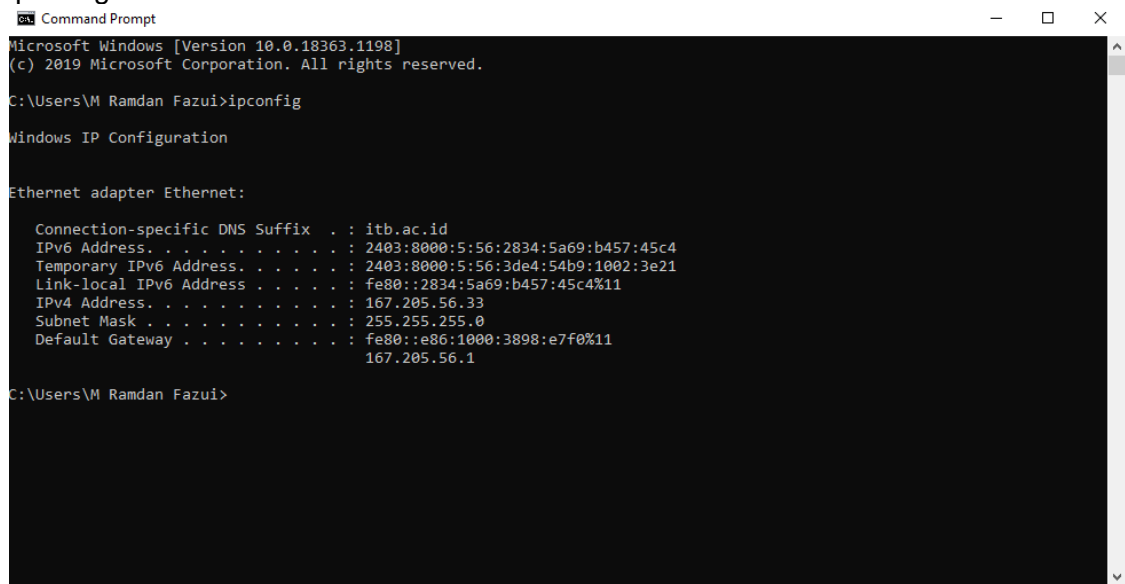
- Buka command prompt pada windows.



```
Command Prompt
Microsoft Windows [Version 10.0.18363.1198]
(c) 2019 Microsoft Corporation. All rights reserved.

C:\Users\M Ramdan Fazui>
```

- Masukkan perintah:
ipconfig



```
Command Prompt
Microsoft Windows [Version 10.0.18363.1198]
(c) 2019 Microsoft Corporation. All rights reserved.

C:\Users\M Ramdan Fazui>ipconfig

Windows IP Configuration

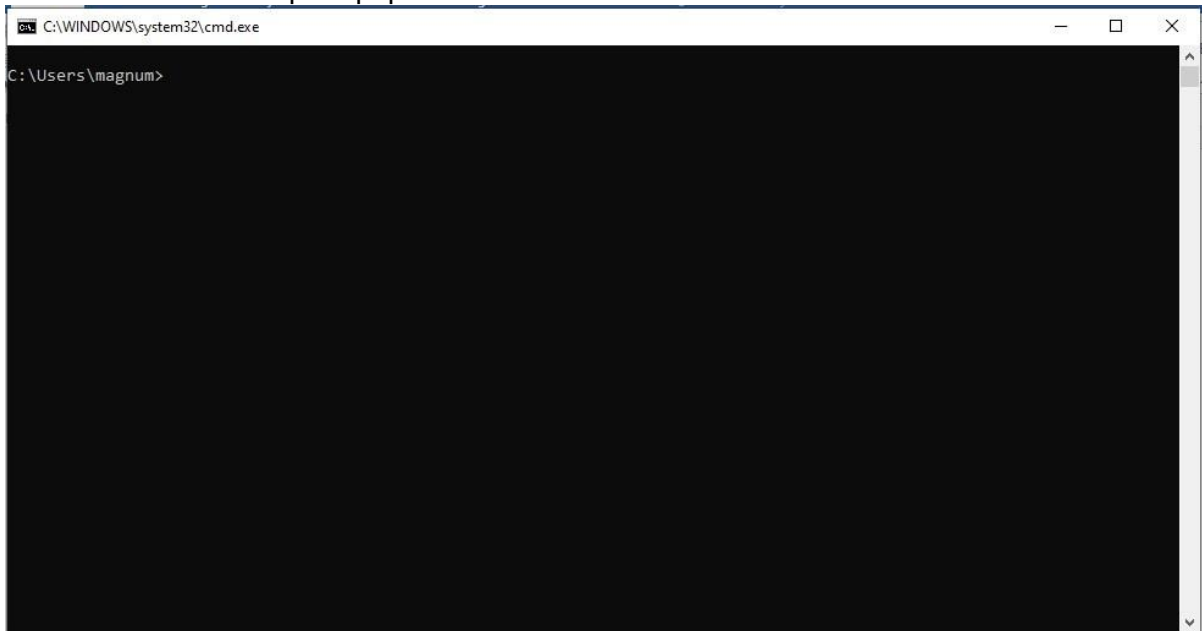
Ethernet adapter Ethernet:

    Connection-specific DNS Suffix . : itb.ac.id
    IPv6 Address. . . . . : 2403:8000:5:56:2834:5a69:b457:45c4
    Temporary IPv6 Address. . . . . : 2403:8000:5:56:3de4:54b9:1002:3e21
    Link-local IPv6 Address . . . . . : fe80::2834:5a69:b457:45c4%11
    IPv4 Address. . . . . : 167.205.56.33
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . : fe80::e86:1000:3898:e7f0%11
    167.205.56.1

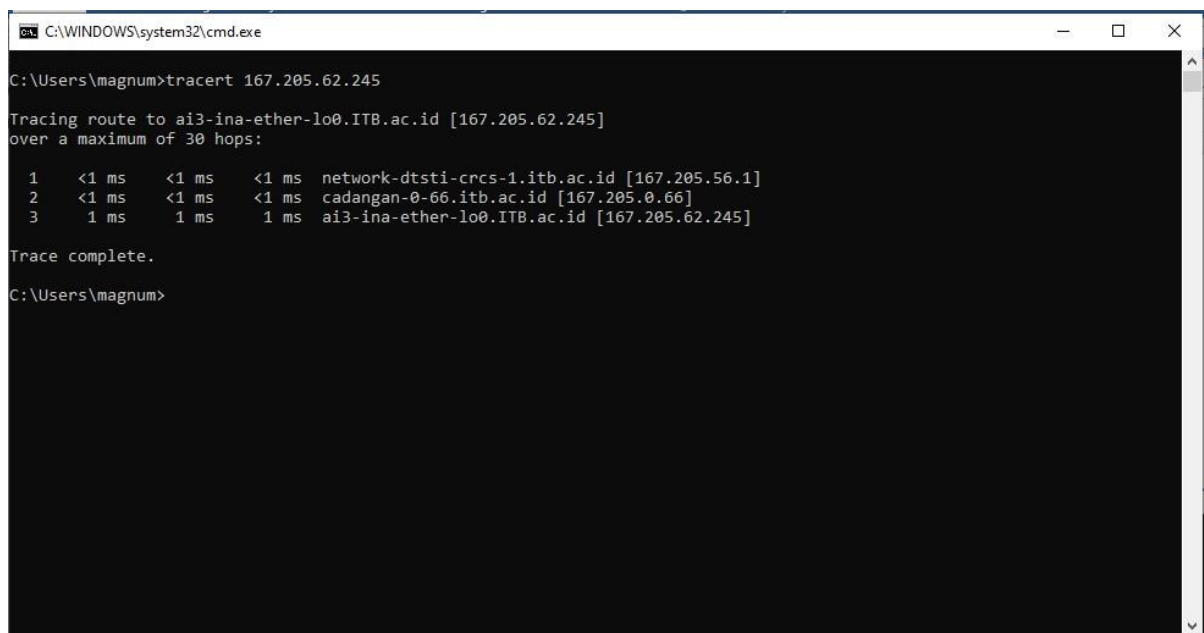
C:\Users\M Ramdan Fazui>
```

3. Traceroute

- Buka command prompt pada windows



- Masukkan perintah :
tracert 167.205.62.245



- Masukan perintah :
tracert 10.205.64.1

```
C:\Users\magnum>tracert 10.205.64.1

Tracing route to 10.205.64.1 over a maximum of 30 hops

  0  <1 ms    <1 ms    <1 ms    network-dtsti-crcs-1.itb.ac.id [167.205.56.1]
  1  <1 ms    <1 ms    <1 ms    cadangan-0-66.itb.ac.id [167.205.0.66]
  2   1 ms     1 ms     1 ms     10.205.23.2
  3   1 ms     1 ms     <1 ms    10.205.64.1

Trace complete.

C:\Users\magnum>
```

4. Iperf

Download software iperf versi 32 bit atau 64 bit

- download iperf 64bit : <https://iperf.fr/download/windows/iperf-3.1.3-win64.zip>
- download iperf 32bit : <https://iperf.fr/download/windows/iperf-3.1.3-win32.zip>

installasi :

- a. extract aplikasi iperf pada direktori yang di inginkan

iperf-3.1.3-win64	17/11/2020 13:27	File folder	
iperf-3.1.3-win64 (1)	17/11/2020 13:26	WinRAR ZIP archive	1.365 KB

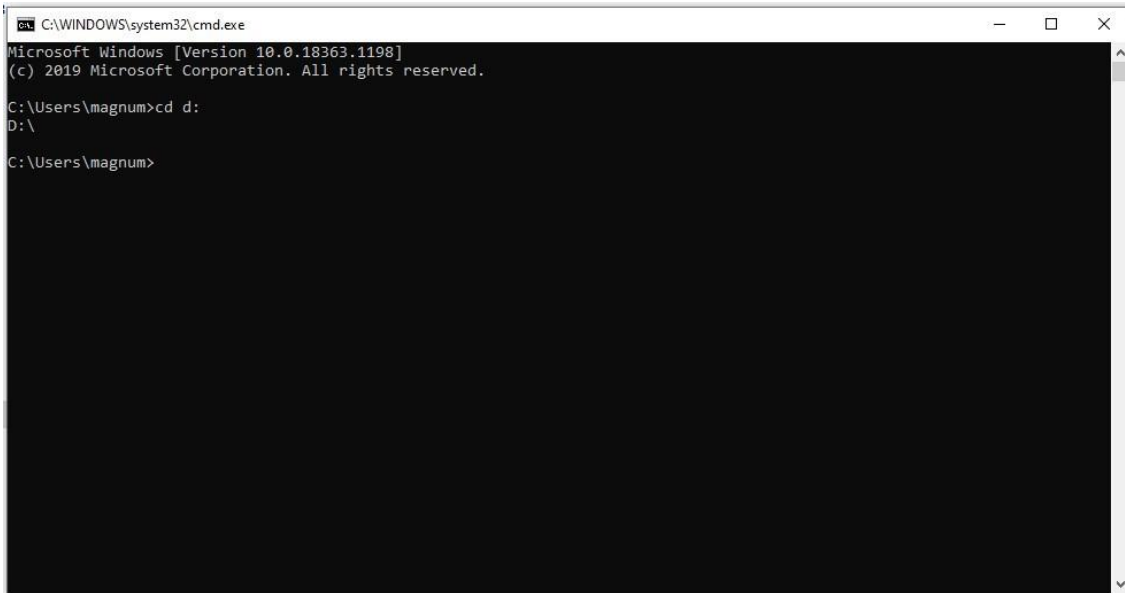
- b. Buka aplikasi command prompt pada Windows

```
C:\WINDOWS\system32\cmd.exe
Microsoft Windows [Version 10.0.18363.1198]
(c) 2019 Microsoft Corporation. All rights reserved.

C:\Users\magnum>
```

- c. Karena saya menyimpan file download pada partisi D di komputer saya maka commandnya seperti ini :

d:

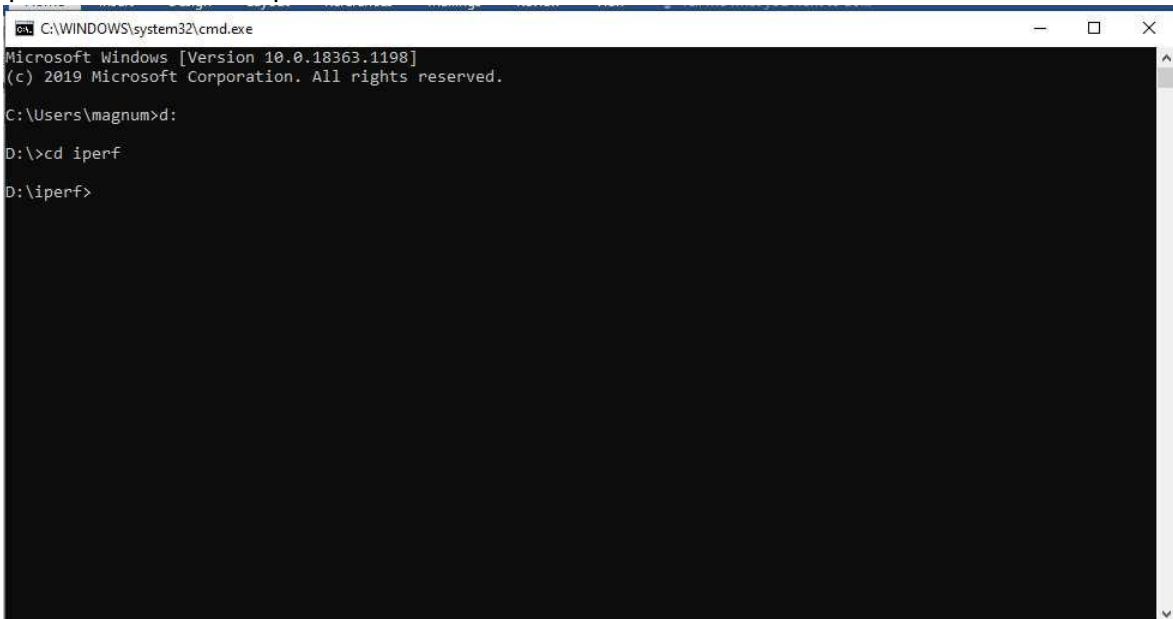


```
C:\WINDOWS\system32\cmd.exe
Microsoft Windows [Version 10.0.18363.1198]
(c) 2019 Microsoft Corporation. All rights reserved.

C:\Users\magnum>cd d:
D:\

C:\Users\magnum>
```

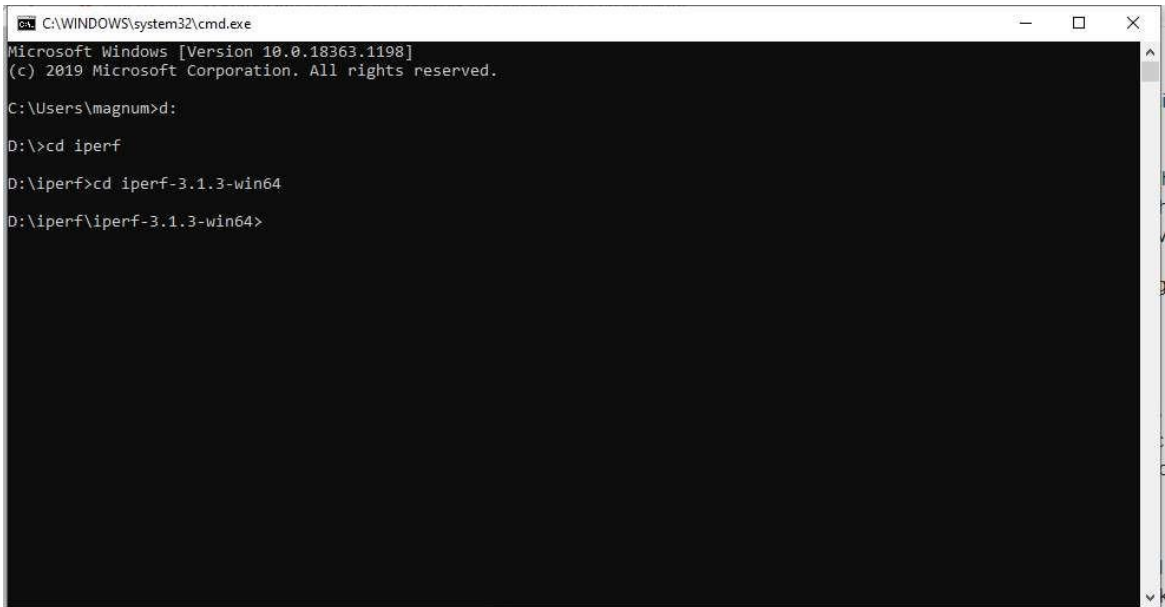
- d. Masuk ke direktori tempat kita menyimpan file download iperf Command : cd iperf



```
C:\WINDOWS\system32\cmd.exe
Microsoft Windows [Version 10.0.18363.1198]
(c) 2019 Microsoft Corporation. All rights reserved.

C:\Users\magnum>d:
D:\>cd iperf
D:\iperf>
```

- e. Masuk ke direktori hasil extract iperf
Command : cd iperf-3.1.3-win64



```
C:\WINDOWS\system32\cmd.exe
Microsoft Windows [Version 10.0.18363.1198]
(c) 2019 Microsoft Corporation. All rights reserved.

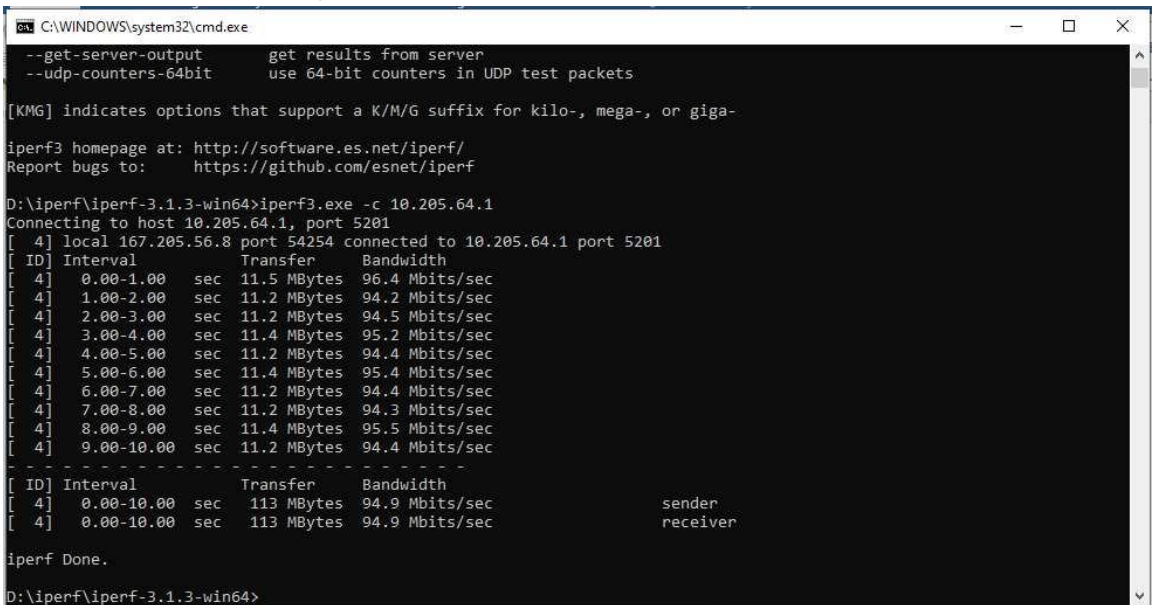
C:\Users\magnum>d:

D:\>cd iperf

D:\iperf>cd iperf-3.1.3-win64

D:\iperf\iperf-3.1.3-win64>
```

- f. Masukkan perintah
Command : iperf3.exe -c 10.205.64.1
Perintah ini akan menunjukkan hasil kualitas koneksi dari client ke border itb



```
C:\WINDOWS\system32\cmd.exe
--get-server-output      get results from server
--udp-counters-64bit    use 64-bit counters in UDP test packets

[KMG] indicates options that support a K/M/G suffix for kilo-, mega-, or giga-

iperf3 homepage at: http://software.es.net/iperf/
Report bugs to:      https://github.com/esnet/iperf

D:\iperf\iperf-3.1.3-win64>iperf3.exe -c 10.205.64.1
Connecting to host 10.205.64.1, port 5201
[ 4] local 167.205.56.8 port 54254 connected to 10.205.64.1 port 5201
[ ID] Interval      Transfer      Bandwidth
[ 4] 0.00-1.00    sec  11.5 MBytes  96.4 Mbits/sec
[ 4] 1.00-2.00    sec  11.2 MBytes  94.2 Mbits/sec
[ 4] 2.00-3.00    sec  11.2 MBytes  94.5 Mbits/sec
[ 4] 3.00-4.00    sec  11.4 MBytes  95.2 Mbits/sec
[ 4] 4.00-5.00    sec  11.2 MBytes  94.4 Mbits/sec
[ 4] 5.00-6.00    sec  11.4 MBytes  95.4 Mbits/sec
[ 4] 6.00-7.00    sec  11.2 MBytes  94.4 Mbits/sec
[ 4] 7.00-8.00    sec  11.2 MBytes  94.3 Mbits/sec
[ 4] 8.00-9.00    sec  11.4 MBytes  95.5 Mbits/sec
[ 4] 9.00-10.00   sec  11.2 MBytes  94.4 Mbits/sec
-----
[ ID] Interval      Transfer      Bandwidth
[ 4] 0.00-10.00   sec  113 MBytes  94.9 Mbits/sec
[ 4] 0.00-10.00   sec  113 MBytes  94.9 Mbits/sec
sender
receiver

iperf Done.

D:\iperf\iperf-3.1.3-win64>
```