* Router: TP-Link TL-ER6120 Gigabyte Ethernet
* Hálózati kártya:- Realtek Semiconductor Co., Ltd. RTL8111 PCI Express Gigabit Ethernet Controller
  + - - Capacity 1Gbit/s
    - - Width 64 bit
    - - clock 33Mhz
* Gép adatai:
  + - Op Rendszer:
      * Ubuntu 22.04.4 LTS
      * 64 bit
      * GNOME version 42.9
    - - Memori: 4Gb
    - -CPU : Intel Core i7-4790 3.6Ghz
      * Width 64bits
      * Core 8
* Program1: iperf3 -server oldal
  + Program kod TCP átvitel esetén
    - iperf3 -s 192.168.33.1 -p 30001 -b 1000M
    - iperf3 -s 192.168.33.1 -p 30001 -b 800M
    - iperf3 -s 192.168.33.1 -p 30001 -b 600M
    - iperf3 -s 192.168.33.1 -p 30001 -b 400M
    - iperf3 -s 192.168.33.1 -p 30001 -b 200M
    - iperf3 -s 192.168.33.1 -p 30001 -b 100M
    - iperf3 -s 192.168.33.1 -p 30001 -b 50M
  + UDP átvitel esetén
    - iperf3 -s 192.168.33.1 -u -p 30001 -b 1000M
    - iperf3 -s 192.168.33.1 -u -p 30001 -b 800M
    - iperf3 -s 192.168.33.1 -u -p 30001 -b 600M
    - iperf3 -s 192.168.33.1 -u -p 30001 -b 400M
    - iperf3 -s 192.168.33.1 -u -p 30001 -b 200M
    - iperf3 -s 192.168.33.1 -u -p 30001 -b 100M
    - iperf3 -s 192.168.33.1 -u -p 30001 -b 50M

iperf3 – program neve

-s – jelzi hogy server amit követ az ip cím

-u – UDP átvitel valósít meg, ennek hiánya TCP kapcsolat

-p port jelen esetben 30000

-b maximális sávszállesség

* + Server oldalon : iperf3 -c -p3000

-c cliens jelöl

-p portot jelöli

Szerver oldalon több folgunk nincsen, iperf3 esetén nem gond ha az átvitel TCP vagy UDP

A mérés eredménye

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| TCP | | | UDP | | |  |
| Speed | Sender | Receiver | Speed | Sender | Receiver | Loss |
| Mbps | Mbps | Mbps | Mbps | Mbps | Mbps | % |
| 1000 | 215 | 212 | 1000 | 954 | 314 | 66 |
| 800 | 215 | 212 | 800 | 800 | 324 | 59 |
| 600 | 216 | 213 | 600 | 715 | 387 | 46 |
| 400 | 214 | 212 | 400 | 400 | 324 | 18 |
| 200 | 200 | 199 | 200 | 200 | 199 | 0 |
| 100 | 100 | 99.6 | 100 | 100 | 99.6 | 0 |
| 50 | 59.6 | 49.8 | 50 | 50 | 49.8 | 0 |

* Program2 : sourcesonoff -server oldal
  + Program kod tcp átvitel esetén
    - Sourcesonoff --transmitter-tcp --don-max=1G --don-type=Poisson –doff-max=1s –doff-type=Poisson –port-number=30000 –destination 192.168.33.1
    - Sourcesonoff --transmitter-tcp --don-max=800M --don-type=Poisson –doff-max=1s –doff-type=Poisson –port-number=30000 –destination 192.168.33.1
    - Sourcesonoff --transmitter-tcp --don-max=600M --don-type=Poisson –doff-max=1s –doff-type=Poisson –port-number=30000 –destination 192.168.33.1
    - Sourcesonoff --transmitter-tcp --don-max=400M --don-type=Poisson –doff-max=1s –doff-type=Poisson –port-number=30000 –destination 192.168.33.1
    - Sourcesonoff --transmitter-tcp --don-max=200M --don-type=Poisson –doff-max=1s –doff-type=Poisson –port-number=30000 –destination 192.168.33.1
    - Sourcesonoff --transmitter-tcp --don-max=100M --don-type=Poisson –doff-max=1s –doff-type=Poisson –port-number=30000 –destination 192.168.33.1
    - Sourcesonoff --transmitter-tcp --don-max=50M --don-type=Poisson –doff-max=1s –doff-type=Poisson –port-number=30000 –destination 192.168.33.1
    - Sourcesonoff --transmitter-tcp --don-max=30M --don-type=Poisson –doff-max=1s –doff-type=Poisson –port-number=30000 –destination 192.168.33.1
    - Sourcesonoff --transmitter-tcp --don-max=10M --don-type=Poisson –doff-max=1s –doff-type=Poisson –port-number=30000 –destination 192.168.33.1
    - Sourcesonoff --transmitter-tcp --don-max=50K --don-type=Poisson –doff-max=1s –doff-type=Poisson –port-number=30000 –destination 192.168.33.1

Sourcesonoff – program neve

--transmitter-tcp- TCP kapcsolatot valósít meg

--don-max – maximáli csomagméret egy csomagon belül

--don-min – minimális adatcsomag (ennek hiánya alapértelmezetten 0)

--don-type – a random generált adatok eloszlása mely lehet Poisson,Constans

--doff-max –szekundumban megadott érték és megadaja a kikapcsolt állapotot

--port-number – a használt port

--destination – annak a zip cime ahova az adatot szeretnénk küldeni

* + Udp átvitel esetén
    - Sourcesonoff --transmitter-udp --don-max=1G --don-type=Poisson –doff-max=1s –doff-type=Poisson –port-number=30000 –destination 192.168.33.1

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| TCP | | | UDP | | |  |  |  |  |
| Speed | Sender | Receiver | Speed | Sender | Receiver | Loss | sender | receiver | los\*10 |
| Mbps | Mbps | Mbps | Mbps | Mbps | Mbps | % | packet | packet |  |
| 1000 | 194.67 | 5.12 | 1000 | 981.54 | 0 | 65.62 | 81146 | 27895 | 656.2369 |
| 800 | 200.42 | 5.28 | 800 | 981.65 | 0 | 65.62 | 81146 | 27895 | 656.2369 |
| 600 | 203.07 | 5.41 | 600 | 971.36 | 0 | 66.38 | 80306 | 26997 | 663.8234 |
| 400 | 204.7 | 5.42 | 400 | 981.64 | 0 | 66.44 | 81156 | 27240 | 664.3501 |
| 200 | 201.25 | 5.37 | 200 | 971.74 | 0 | 65.85 | 80340 | 27436 | 658.5014 |
| 100 | 179.04 | 4.78 | 100 | 863.03 | 0 | 64.99 | 71356 | 24979 | 649.9383 |
| 50 | 164.11 | 4.26 | 50 | 436.45 | 0 | 59.86 | 36088 | 14485 | 598.62 |
| 30 | 187.8 | 5 | 30 | 269.2 | 0 | 52.31 | 22259 | 10615 | 523.1142 |
| 10 | 87.21 | 2.24 | 10 | 87.67 | 0 | 26.77 | 7254 | 5312 | 267.7144 |
| 5 | 45.07 | 1.18 | 5 | 44.48 | 0 | 9.75 | 3683 | 3324 | 97.47488 |
| 1 | 9.08 | 0.313 | 1 | 8.91 | 0 | 0.13 | 743 | 742 | 1.345895 |
| 0.5 | 4.35 | 0.164 | 0.5 | 4.35 | 0 | 0.00 | 365 | 365 | 0 |