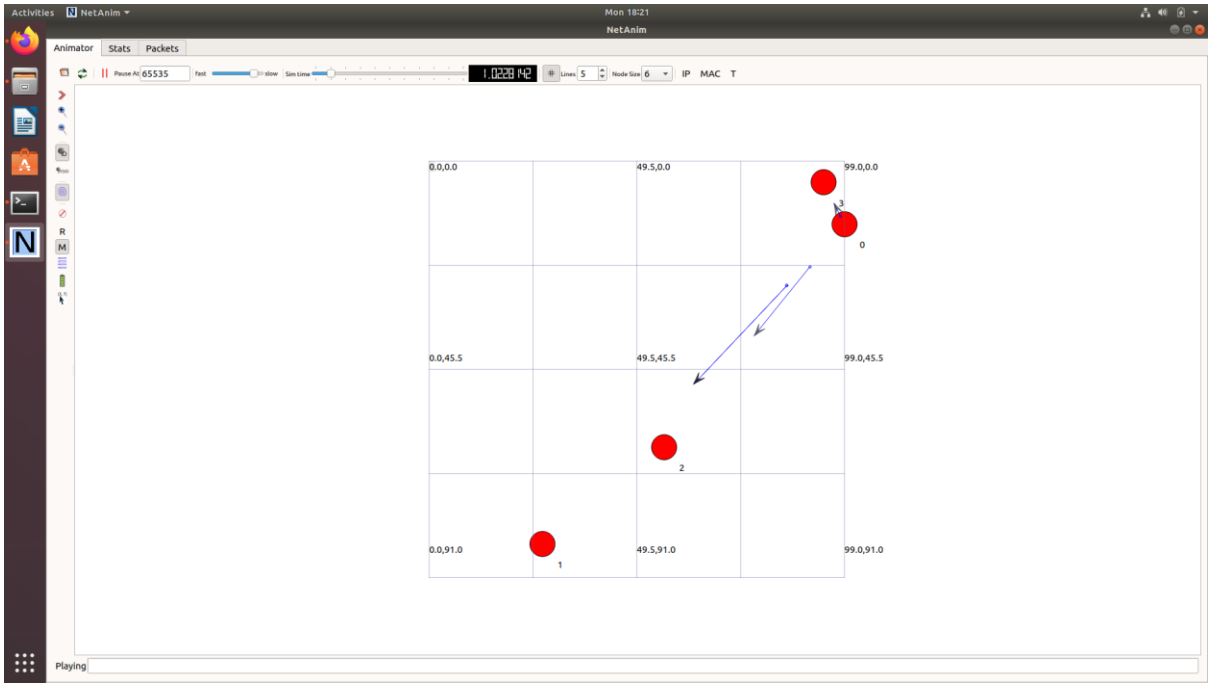
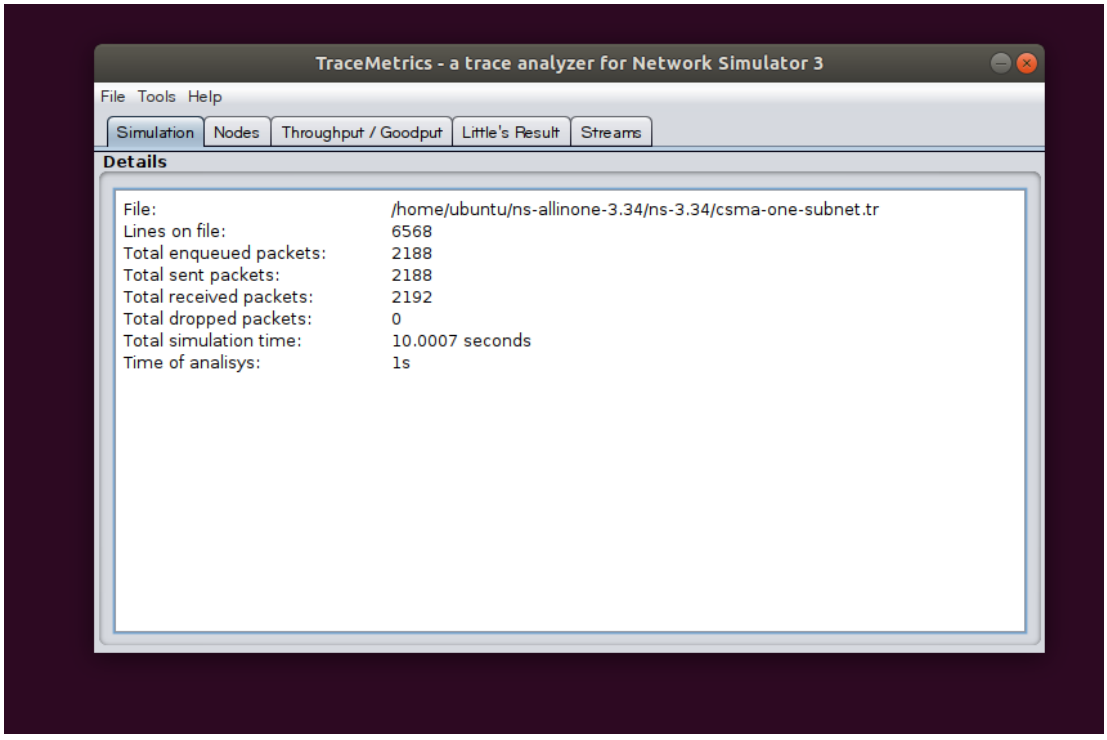
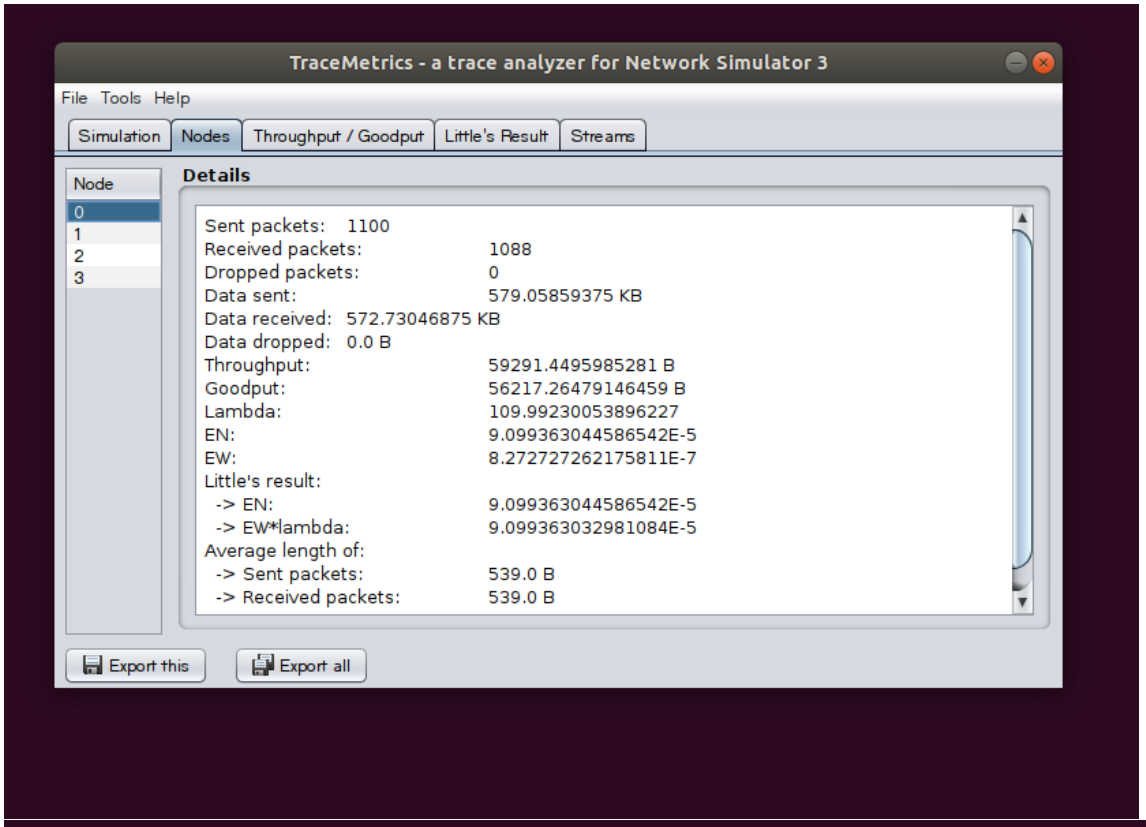
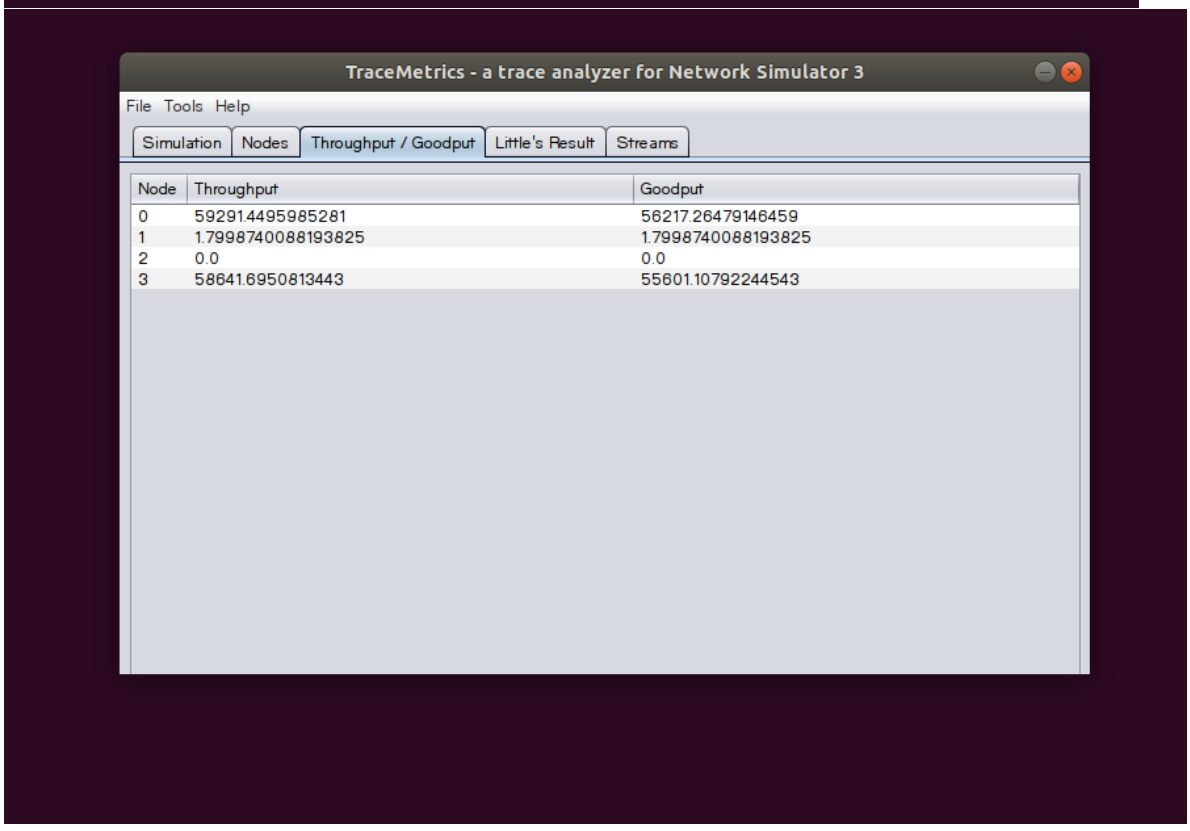
NetAnim OutPut

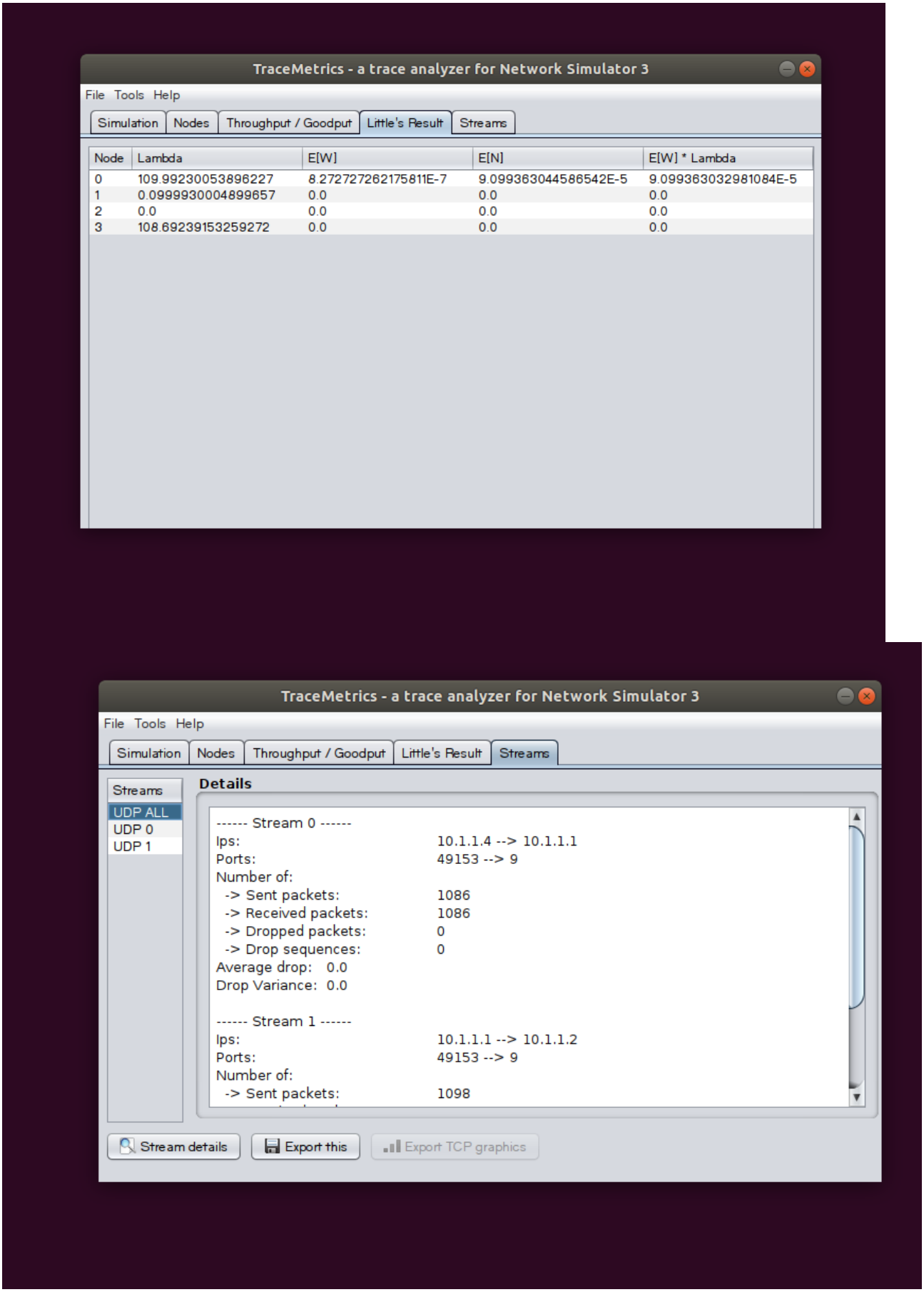


Tracemetric Output:

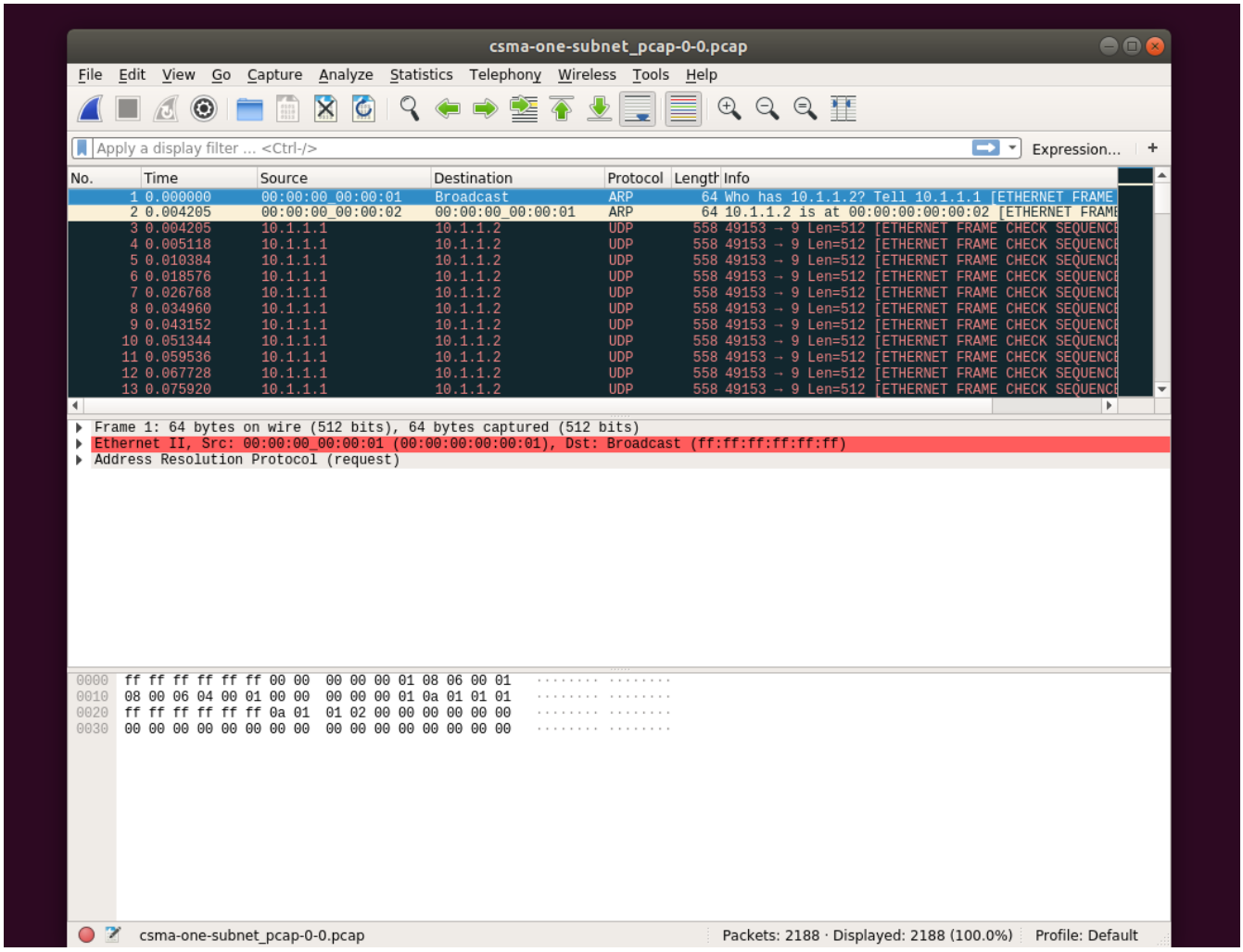


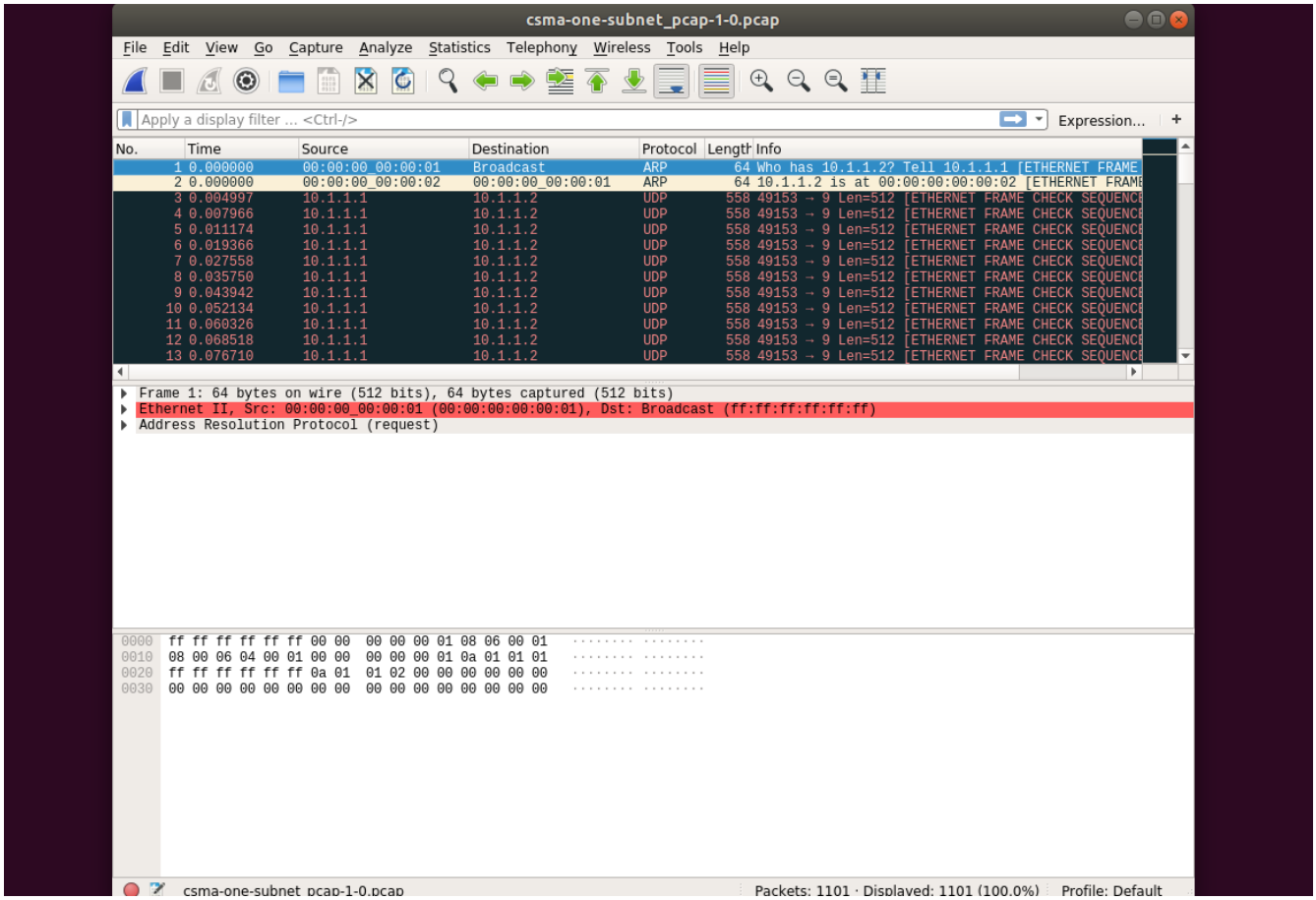

TraceMetrics - a trace analyzer for Network Simulator 3
File Tools Help
Simulation Nodes Throughput / Goodput Little's Result Streams
Node
0
1
2
3
Details
Sent packets: 1100
Received packets: 1088
Dropped packets: 0
Data sent: 579.05859375 KB
Data received: 572.73046875 KB
Data dropped: 0.0 B
Throughput: 59291.4495985281 B
Goodput: 56217.26479146459 B
Lambda: 109.99230053896227
EN: 9.099363044586542E-5
EW: 8.272727262175811E-7
Little's result:
-> EN: 9.099363044586542E-5
-> EW*lambda: 9.099363032981084E-5
Average length of:
-> Sent packets: 539.0 B
-> Received packets: 539.0 B
Export this
Export all

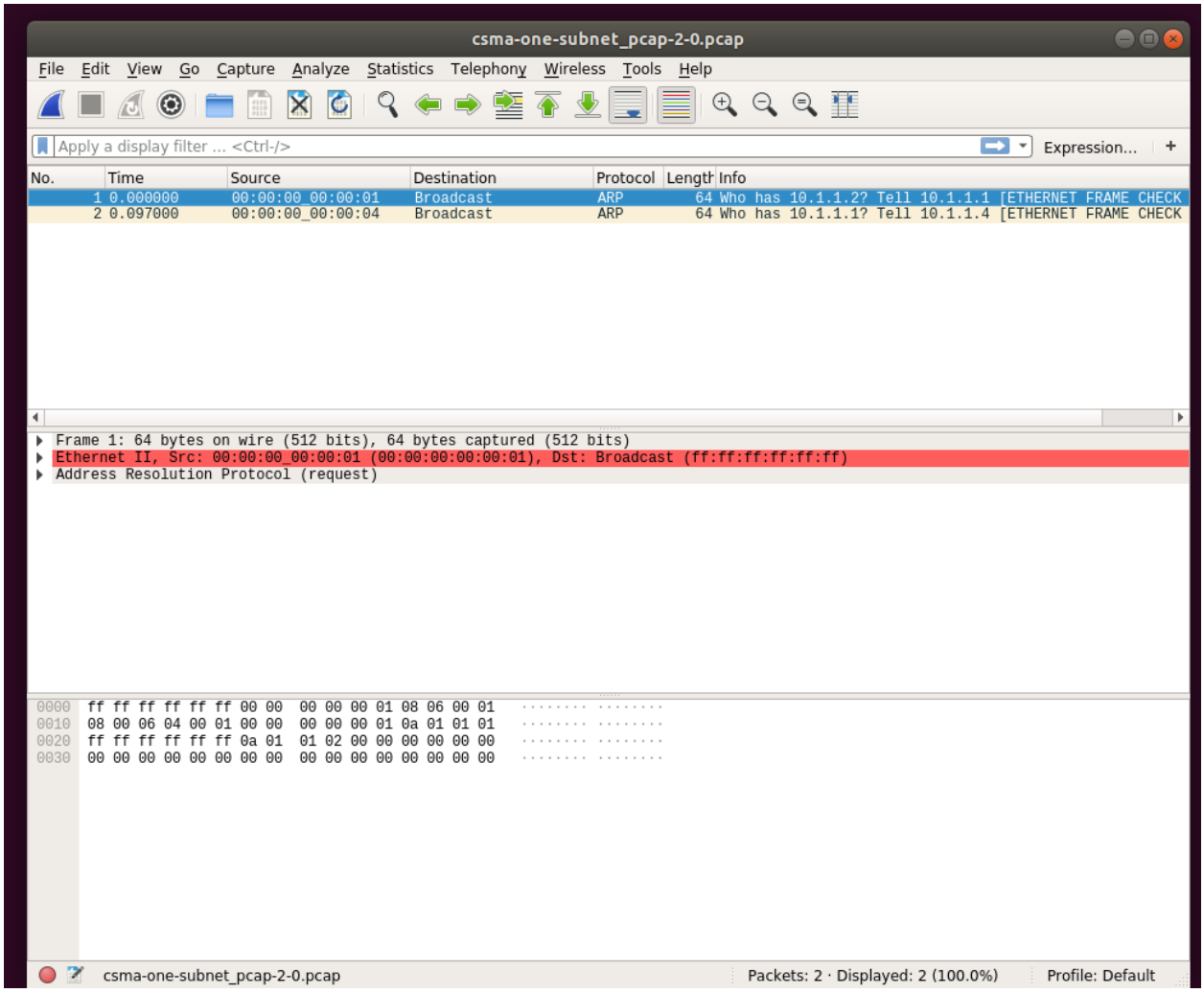

TraceMetrics - a trace analyzer for Network Simulator 3
File Tools Help
Simulation Nodes Throughput / Goodput Little's Result Streams
Node Throughput Goodput
0 592914.4495985281 56217.26479146459
1 1.7998740088193825 1.7998740088193825
2 0.0 0.0
3 58641.6950813443 55601.10792244543

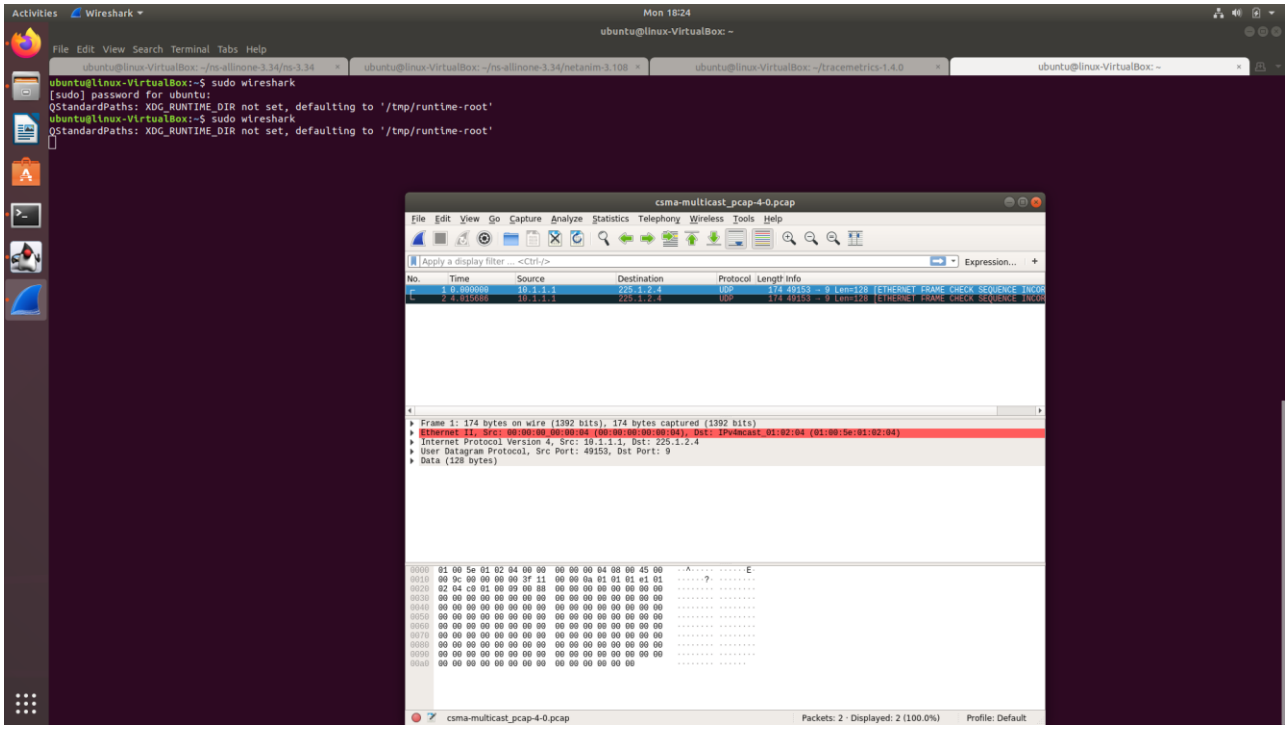

TraceMetrics - a trace analyzer for Network Simulator 3
File Tools Help
Simulation Nodes Throughput / Goodput Little's Result Streams
Node Lambda E[W] E[N] E[W] * Lambda
0 109.99230053896227 8.272727262175811E-7 9.099363044586542E-5 9.099363032981084E-5
1 0.0999930004899657 0.0 0.0 0.0
2 0.0 0.0 0.0 0.0
3 108.69239153259272 0.0 0.0 0.0
TraceMetrics - a trace analyzer for Network Simulator 3
File Tools Help
Simulation Nodes Throughput / Goodput Little's Result Streams
Streams
UDP ALL
UDP 0
UDP 1
Details
------ Stream 0 ------
Ips: 10.1.1.4 --> 10.1.1.1
Ports: 49153 --> 9
Number of:
-> Sent packets: 1086
-> Received packets: 1086
-> Dropped packets: 0
-> Drop sequences: 0
Average drop: 0.0
Drop Variance: 0.0
------ Stream 1 ------
Ips: 10.1.1.1 --> 10.1.1.2
Ports: 49153 --> 9
Number of:
-> Sent packets: 1098
Stream details
Export this
Export TCP graphics

Wireshark Output:




csma-one-subnet_pcap-1-0.pcap
File Edit View Go Capture Analyze Statistics Telephony Wireless Tools Help
Apply a display filter ... <Ctrl-/>
Expression...
No. Time Source Destination Protocol Length Info
1 0.000000 00:00:00_00:00:01 Broadcast ARP 64 Who has 10.1.1.2? Tell 10.1.1.1 [ETHERNET FRAME
2 0.000000 00:00:00_00:00:02 00:00:00_00:00:01 ARP 64 10.1.1.2 is at 00:00:00:00:00:02 [ETHERNET FRAME
3 0.004997 10.1.1.1 10.1.1.2 UDP 558 49153 → 9 Len=512 [ETHERNET FRAME CHECK SEQUENCE
4 0.007966 10.1.1.1 10.1.1.2 UDP 558 49153 → 9 Len=512 [ETHERNET FRAME CHECK SEQUENCE
5 0.011174 10.1.1.1 10.1.1.2 UDP 558 49153 → 9 Len=512 [ETHERNET FRAME CHECK SEQUENCE
6 0.019366 10.1.1.1 10.1.1.2 UDP 558 49153 → 9 Len=512 [ETHERNET FRAME CHECK SEQUENCE
7 0.027558 10.1.1.1 10.1.1.2 UDP 558 49153 → 9 Len=512 [ETHERNET FRAME CHECK SEQUENCE
8 0.035750 10.1.1.1 10.1.1.2 UDP 558 49153 → 9 Len=512 [ETHERNET FRAME CHECK SEQUENCE
9 0.043942 10.1.1.1 10.1.1.2 UDP 558 49153 → 9 Len=512 [ETHERNET FRAME CHECK SEQUENCE
10 0.052134 10.1.1.1 10.1.1.2 UDP 558 49153 → 9 Len=512 [ETHERNET FRAME CHECK SEQUENCE
11 0.060326 10.1.1.1 10.1.1.2 UDP 558 49153 → 9 Len=512 [ETHERNET FRAME CHECK SEQUENCE
12 0.068518 10.1.1.1 10.1.1.2 UDP 558 49153 → 9 Len=512 [ETHERNET FRAME CHECK SEQUENCE
13 0.076710 10.1.1.1 10.1.1.2 UDP 558 49153 → 9 Len=512 [ETHERNET FRAME CHECK SEQUENCE
Frame 1: 64 bytes on wire (512 bits), 64 bytes captured (512 bits)
Ethernet II, Src: 00:00:00_00:00:01 (00:00:00:00:00:01), Dst: Broadcast (ff:ff:ff:ff:ff:ff)
Address Resolution Protocol (request)
0000 ff ff ff ff ff ff 00 00 00 00 00 01 08 06 00 01
0010 08 00 06 04 00 01 00 00 00 00 00 01 0a 01 01 01
0020 ff ff ff ff ff ff 0a 01 01 02 00 00 00 00 00 00
0030 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
csma-one-subnet_pcap-1-0.pcap
Packets: 1101 · Displayed: 1101 (100.0%)
Profile: Default


csma-one-subnet_pcap-2-0.pcap
File Edit View Go Capture Analyze Statistics Telephony Wireless Tools Help
Apply a display filter ... <Ctrl-/>
Expression...
No. Time Source Destination Protocol Length Info
1 0.000000 00:00:00_00:00:01 Broadcast ARP 64 Who has 10.1.1.2? Tell 10.1.1.1 [ETHERNET FRAME CHECK
2 0.097000 00:00:00_00:00:04 Broadcast ARP 64 Who has 10.1.1.1? Tell 10.1.1.4 [ETHERNET FRAME CHECK
Frame 1: 64 bytes on wire (512 bits), 64 bytes captured (512 bits)
Ethernet II, Src: 00:00:00_00:00:01 (00:00:00:00:00:01), Dst: Broadcast (ff:ff:ff:ff:ff:ff)
Address Resolution Protocol (request)
0000 ff ff ff ff ff ff 00 00 00 00 00 01 08 06 00 01
0010 08 00 06 04 00 01 00 00 00 00 00 01 0a 01 01 01
0020 ff ff ff ff ff ff 0a 01 01 02 00 00 00 00 00 00
0030 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
csma-one-subnet_pcap-2-0.pcap
Packets: 2 · Displayed: 2 (100.0%)
Profile: Default


Activities Wireshark
Mon 18:24
ubuntu@linux-VirtualBox: ~
File Edit View Search Terminal Tabs Help
ubuntu@linux-VirtualBox:~$ sudo wireshark
[sudo] password for ubuntu:
QStandardPaths: XDG_RUNTIME_DIR not set, defaulting to '/tmp/runtime-root'
ubuntu@linux-VirtualBox:~$ sudo wireshark
QStandardPaths: XDG_RUNTIME_DIR not set, defaulting to '/tmp/runtime-root'
csma-multicast_pcap-4-0.pcap
File Edit View Go Capture Analyze Statistics Telephony Wireless Tools Help
Apply a display filter ... <Ctrl-/>
Expression...
No. Time Source Destination Protocol Length Info
1 0.000000 10.1.1.1 225.1.2.4 UDP 174 49153 → 9 Len=128 [ETHERNET FRAME CHECK SEQUENCE INCOR
2 4.015686 10.1.1.1 225.1.2.4 UDP 174 49153 → 9 Len=128 [ETHERNET FRAME CHECK SEQUENCE INCOR
Frame 1: 174 bytes on wire (1392 bits), 174 bytes captured (1392 bits)
Ethernet II, Src: 00:00:00_00:00:04 (00:00:00:00:00:04), Dst: IPv4mcast_01:02:04 (01:00:5e:01:02:04)
Internet Protocol Version 4, Src: 10.1.1.1, Dst: 225.1.2.4
User Datagram Protocol, Src Port: 49153, Dst Port: 9
Data (128 bytes)
csma-multicast_pcap-4-0.pcap
Packets: 2 · Displayed: 2 (100.0%)
Profile: Default