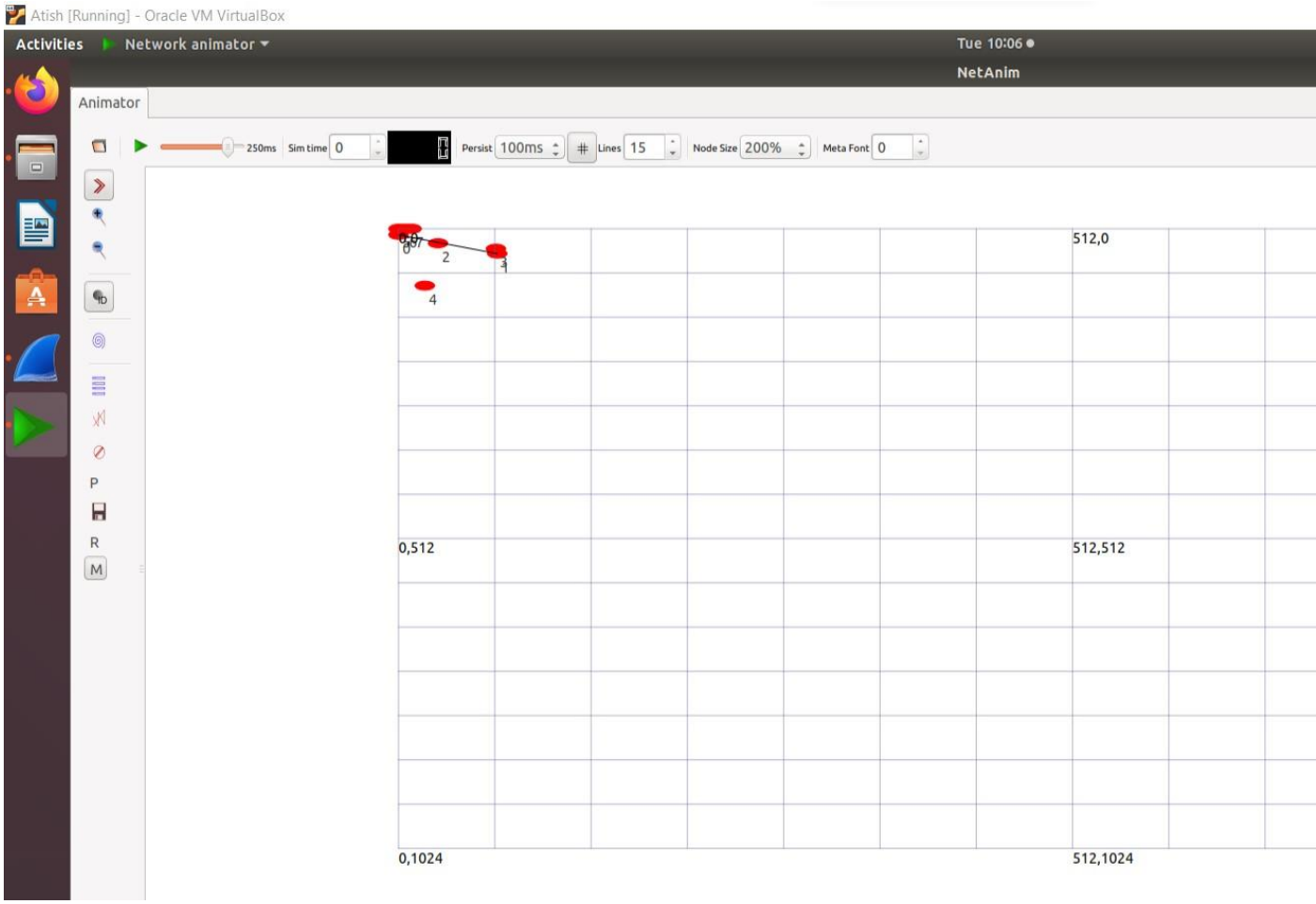
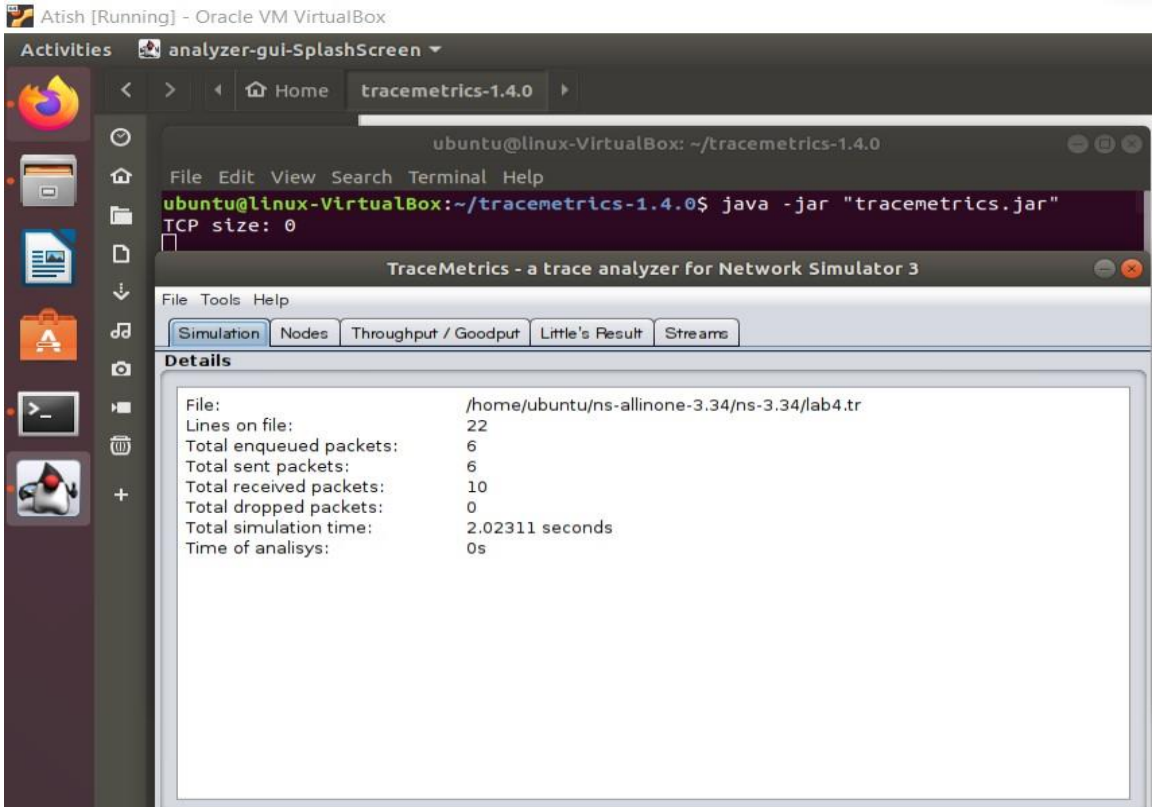
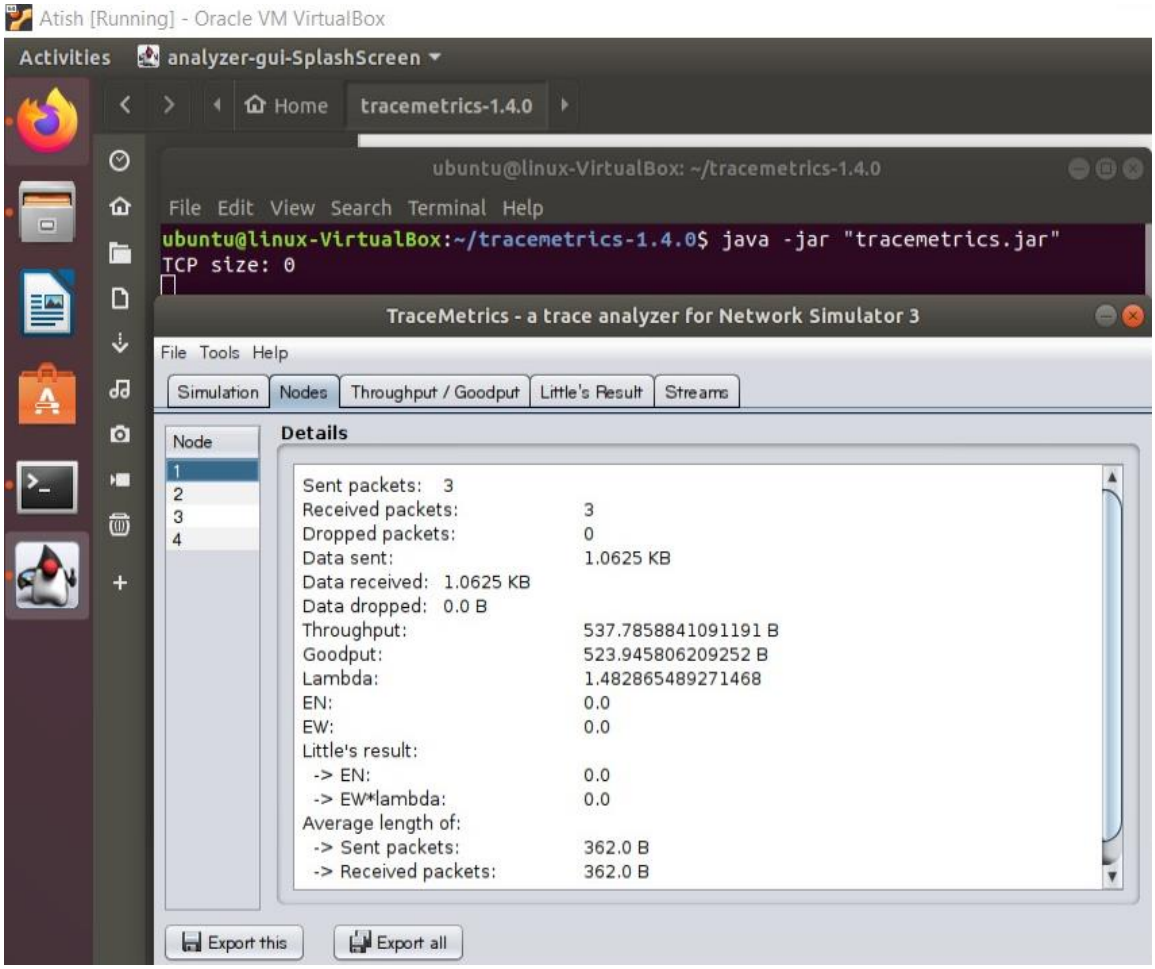
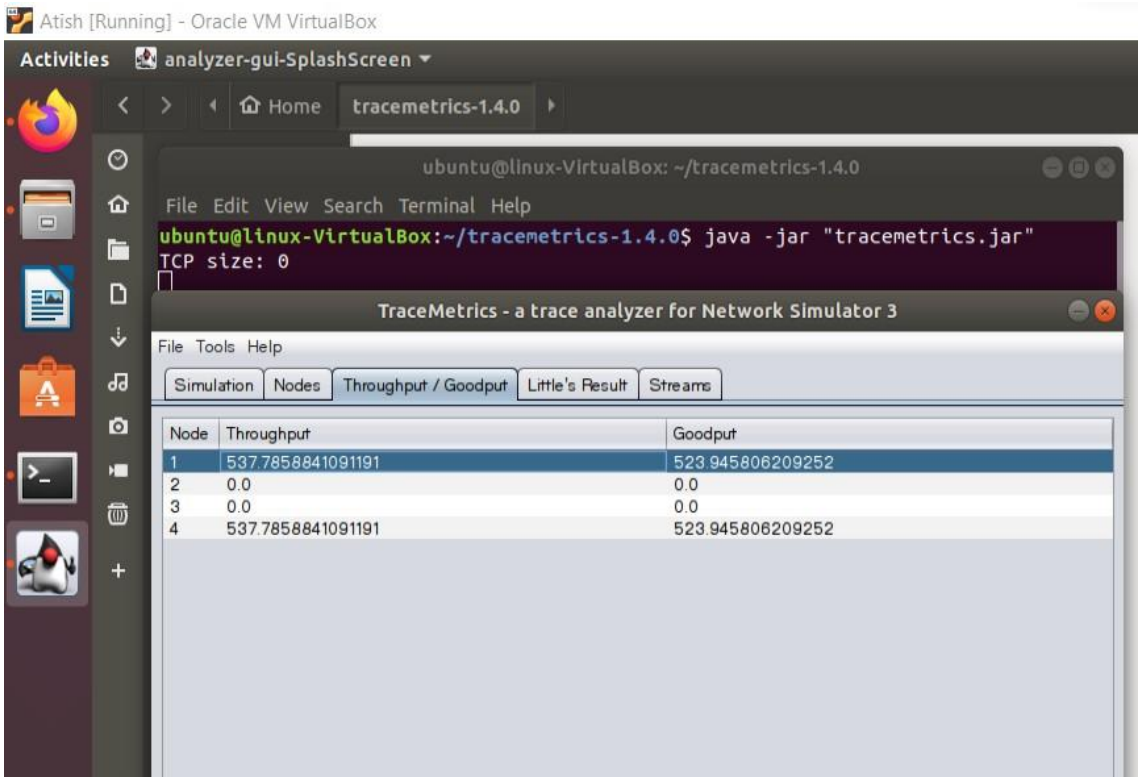
NetAnim:

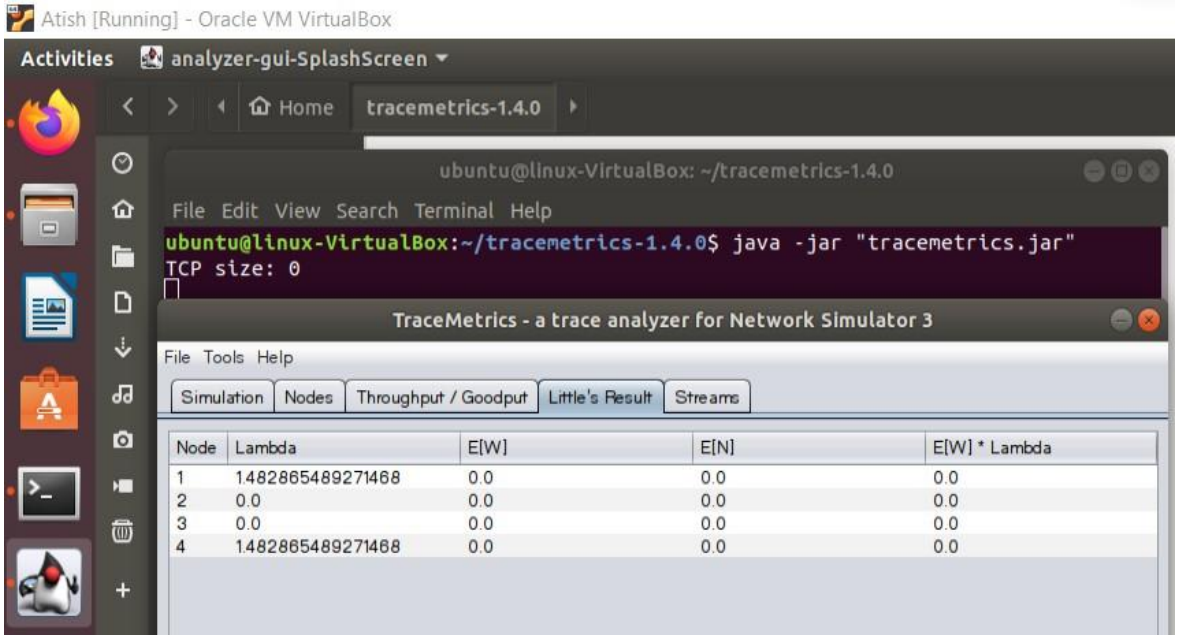

Atish [Running] - Oracle VM VirtualBox
Activities
Network animator
Tue 10:06
NetAnim
Animator
250ms
Sim time 0
Persist 100ms
Lines 15
Node Size 200%
Meta Font 0
P
R
M
0
2
3
4
512,0
0,512
512,512
0,1024
512,1024

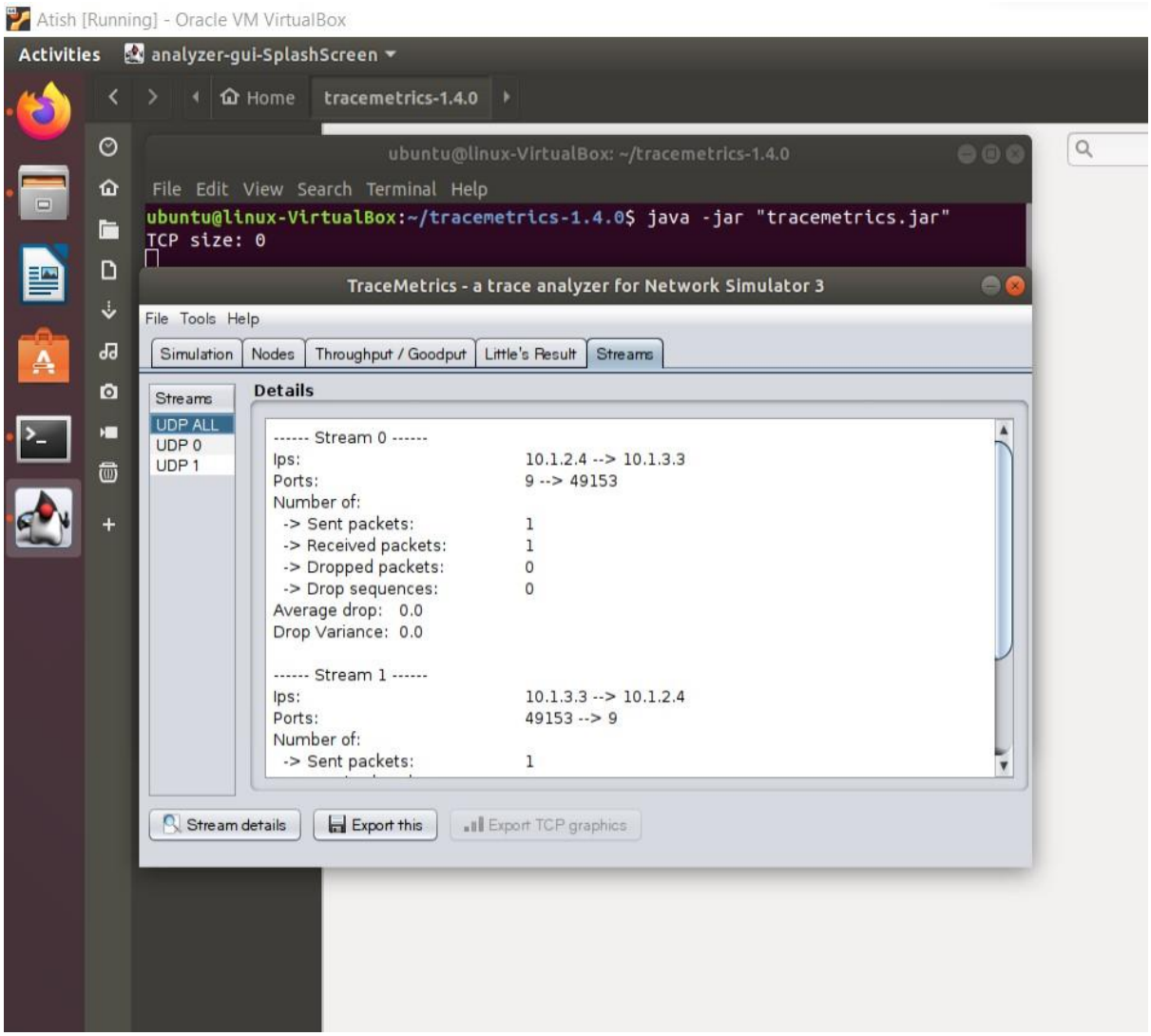
Tracemetrics:



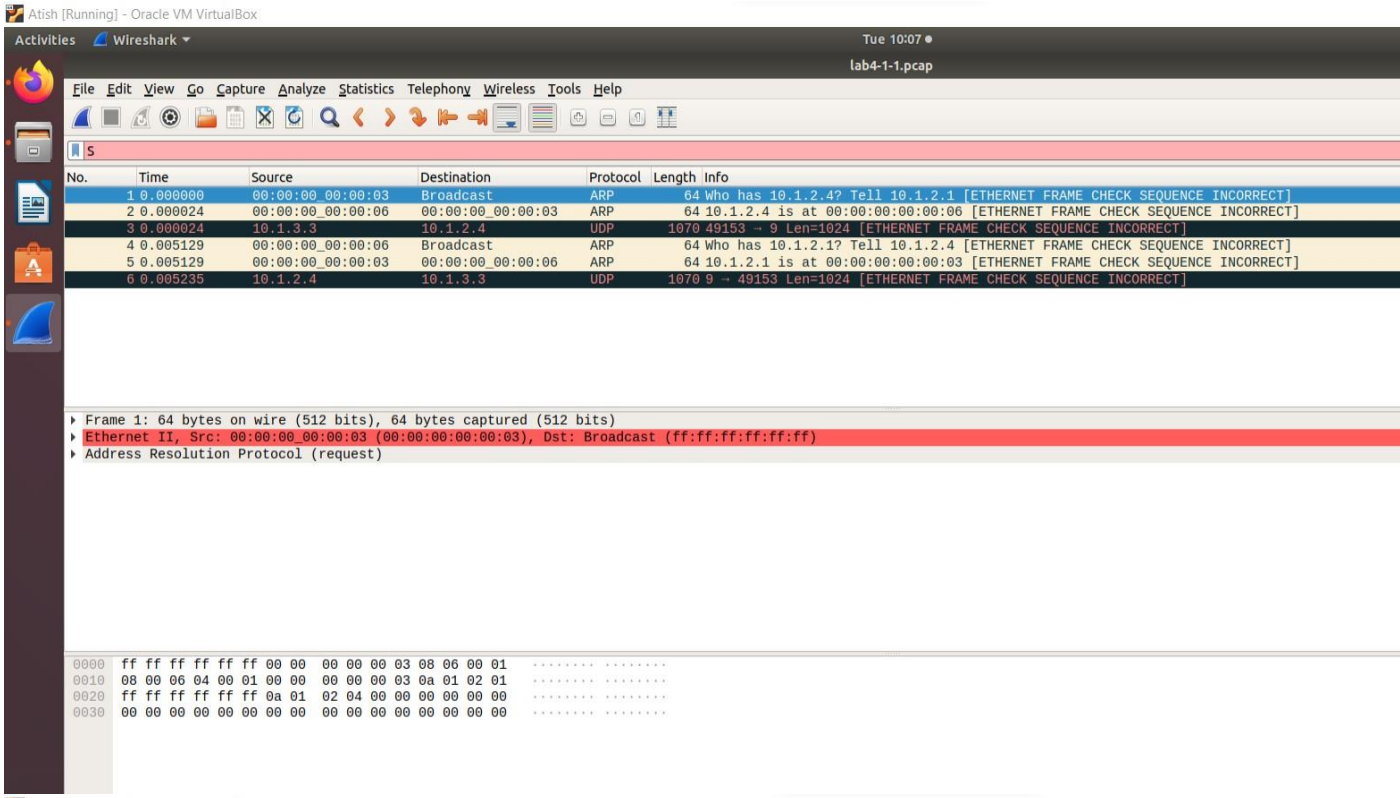


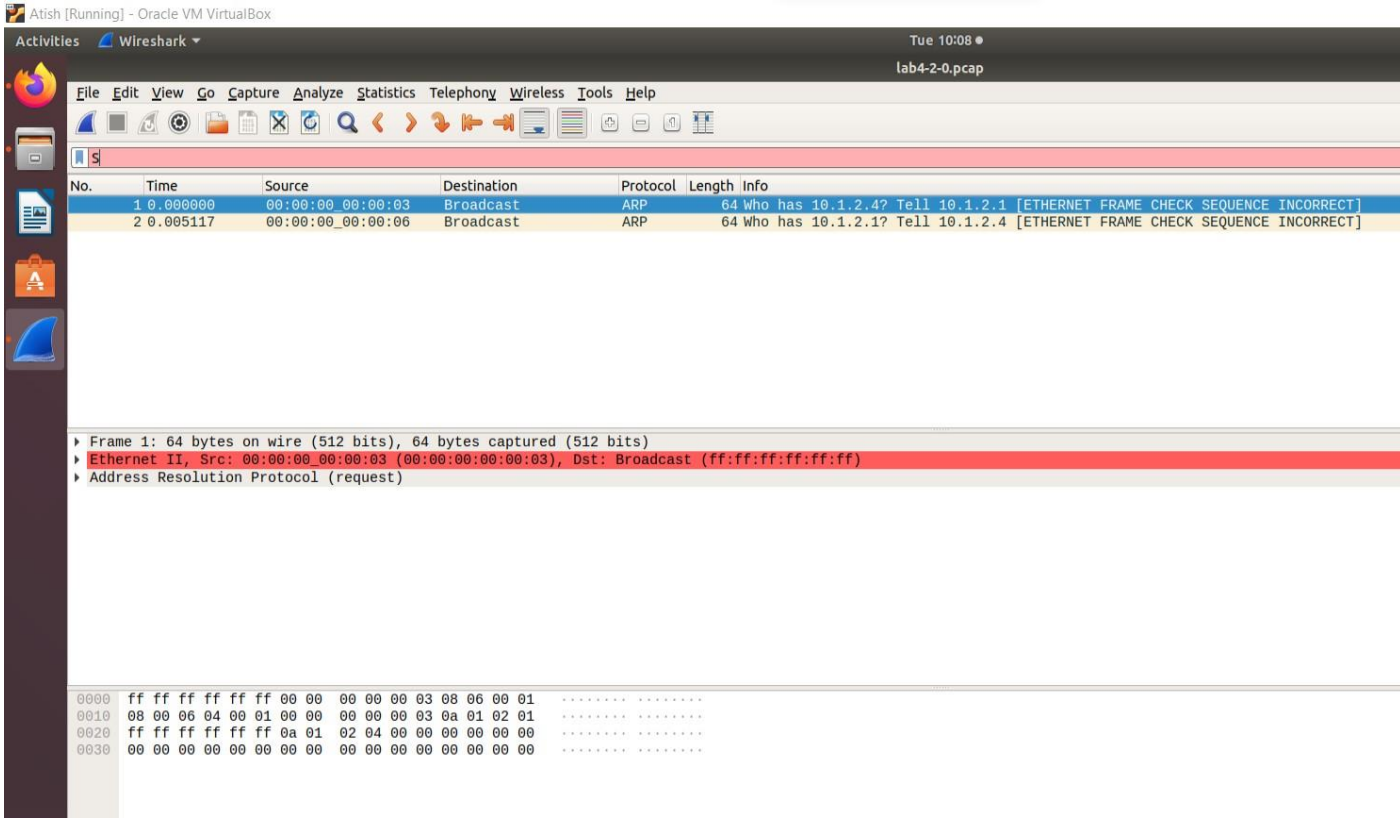

Atish [Running] - Oracle VM VirtualBox
Activities
analyzer-gui-SplashScreen
Home
tracemetrics-1.4.0
ubuntu@linux-VirtualBox: ~/tracemetrics-1.4.0
File Edit View Search Terminal Help
ubuntu@linux-VirtualBox:~/tracemetrics-1.4.0$ java -jar "tracemetrics.jar"
TCP size: 0
TraceMetrics - a trace analyzer for Network Simulator 3
File Tools Help
Simulation
Nodes
Throughput / Goodput
Little's Result
Streams
Node
Throughput
Goodput
1
537.7858841091191
523.945806209252
2
0.0
0.0
3
0.0
0.0
4
537.7858841091191
523.945806209252

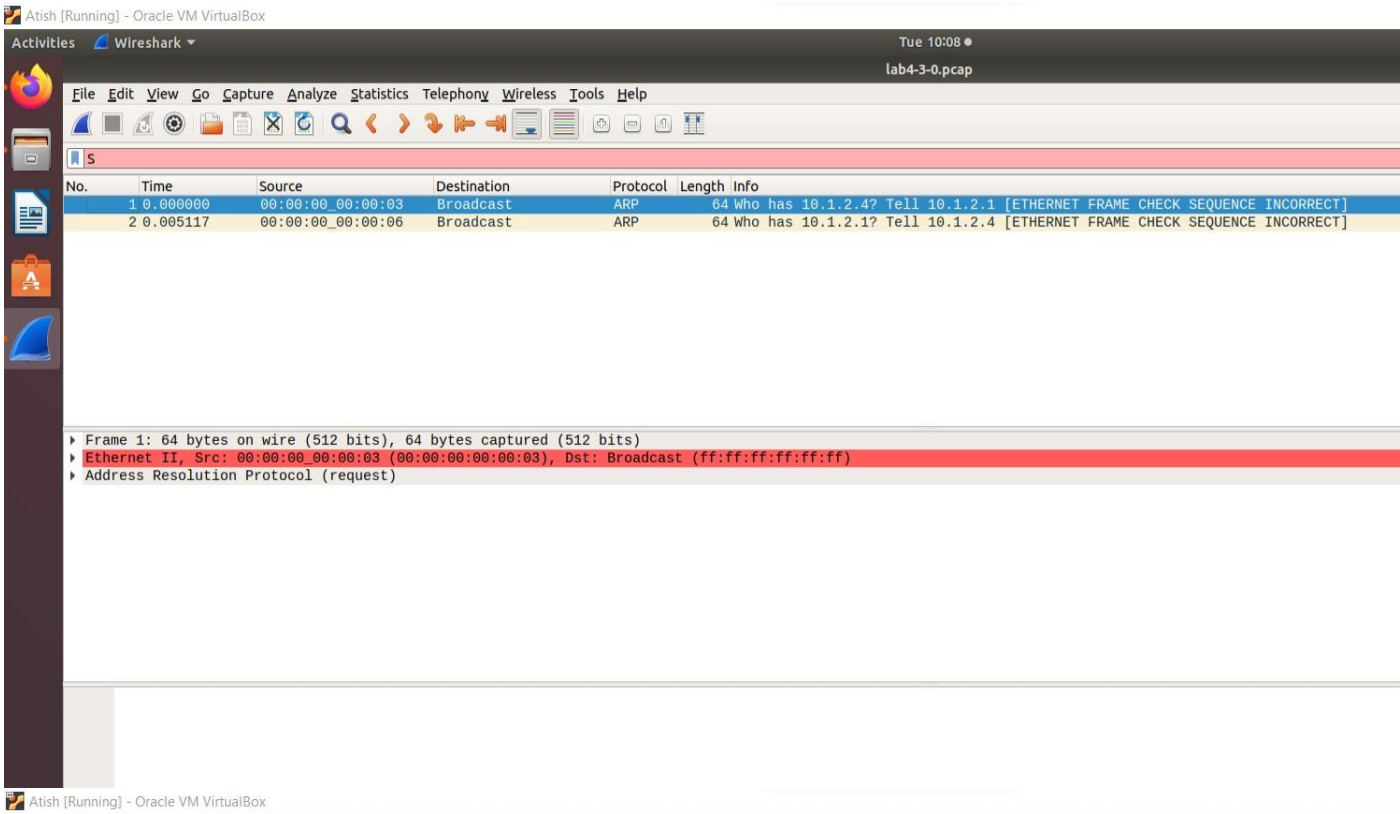

Atish [Running] - Oracle VM VirtualBox
Activities
analyzer-gui-SplashScreen
Home
tracemetrics-1.4.0
ubuntu@linux-VirtualBox: ~/tracemetrics-1.4.0
File Edit View Search Terminal Help
ubuntu@linux-VirtualBox:~/tracemetrics-1.4.0$ java -jar "tracemetrics.jar"
TCP size: 0
TraceMetrics - a trace analyzer for Network Simulator 3
File Tools Help
Simulation
Nodes
Throughput / Goodput
Little's Result
Streams
Node
Lambda
E[W]
E[N]
E[W] * Lambda
1
1.482865489271468
0.0
0.0
0.0
2
0.0
0.0
0.0
0.0
3
0.0
0.0
0.0
0.0
4
1.482865489271468
0.0
0.0
0.0

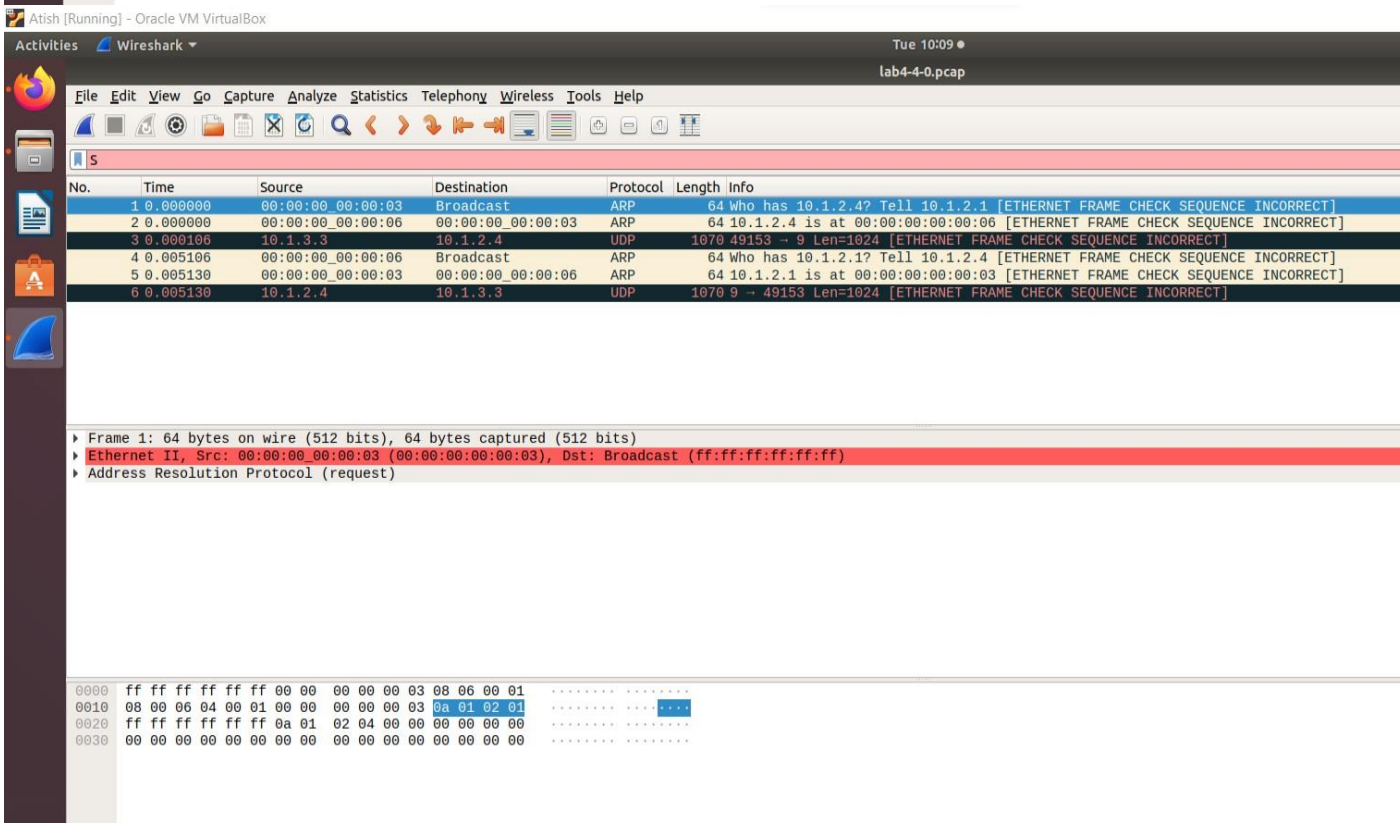

Atish [Running] - Oracle VM VirtualBox
Activities
analyzer-gui-SplashScreen
Home
tracemetrics-1.4.0
ubuntu@linux-VirtualBox: ~/tracemetrics-1.4.0
File Edit View Search Terminal Help
ubuntu@linux-VirtualBox:~/tracemetrics-1.4.0$ java -jar "tracemetrics.jar"
TCP size: 0
TraceMetrics - a trace analyzer 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: 10.1.2.4 --> 10.1.3.3
Ports: 9 --> 49153
Number of:
-> Sent packets: 1
-> Received packets: 1
-> Dropped packets: 0
-> Drop sequences: 0
Average drop: 0.0
Drop Variance: 0.0
------ Stream 1 ------
Ips: 10.1.3.3 --> 10.1.2.4
Ports: 49153 --> 9
Number of:
-> Sent packets: 1
Stream details
Export this
Export TCP graphics

Wireshark:

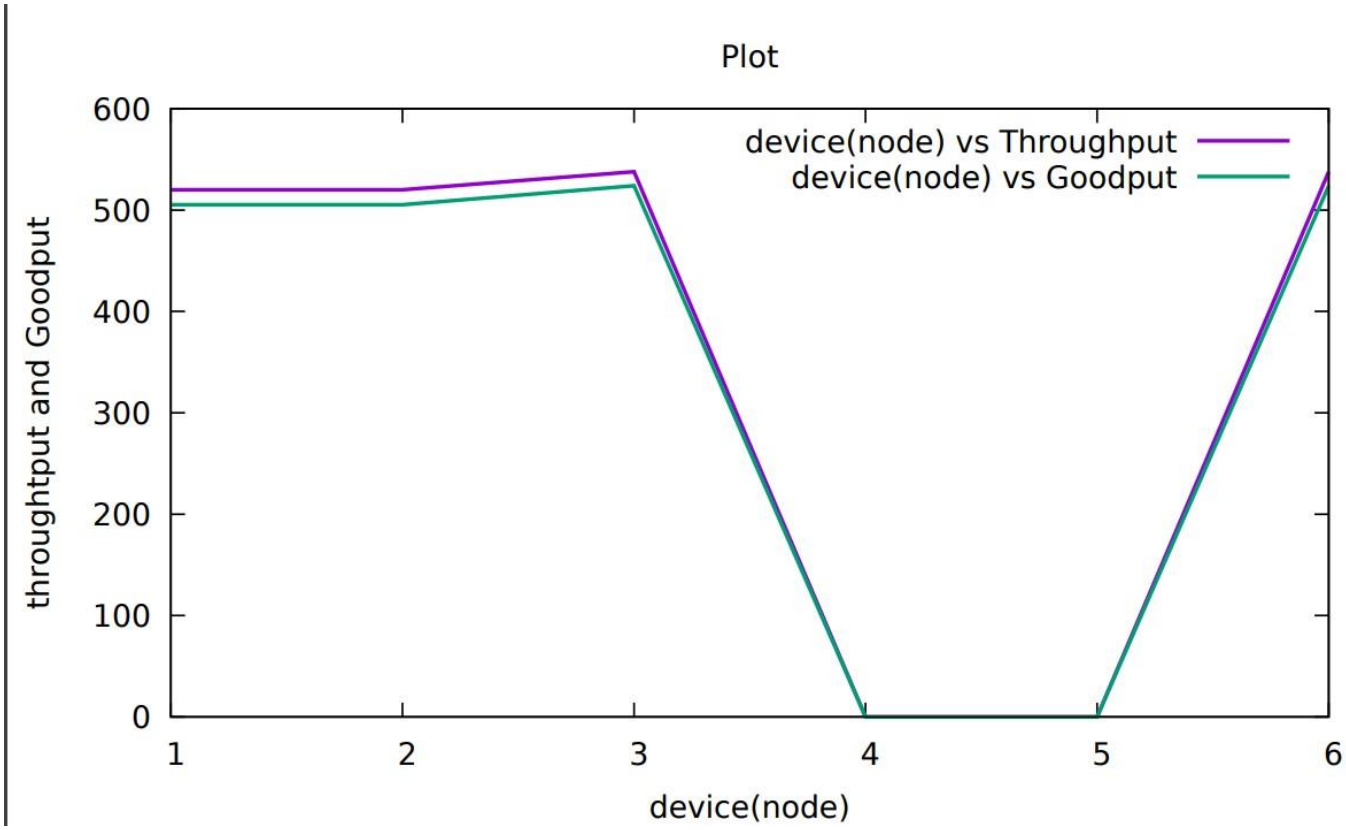

Atish [Running] - Oracle VM VirtualBox
Activities
Wireshark
Tue 10:07
lab4-1-1.pcap
File Edit View Go Capture Analyze Statistics Telephony Wireless Tools Help
No. Time Source Destination Protocol Length Info
1 0.000000 00:00:00_00:00:03 Broadcast ARP 64 Who has 10.1.2.4? Tell 10.1.2.1 [ETHERNET FRAME CHECK SEQUENCE INCORRECT]
2 0.000024 00:00:00_00:00:06 00:00:00_00:00:03 ARP 64 10.1.2.4 is at 00:00:00:00:00:06 [ETHERNET FRAME CHECK SEQUENCE INCORRECT]
3 0.000024 10.1.3.3 10.1.2.4 UDP 1070 49153 → 9 Len=1024 [ETHERNET FRAME CHECK SEQUENCE INCORRECT]
4 0.005129 00:00:00_00:00:06 Broadcast ARP 64 Who has 10.1.2.1? Tell 10.1.2.4 [ETHERNET FRAME CHECK SEQUENCE INCORRECT]
5 0.005129 00:00:00_00:00:03 00:00:00_00:00:06 ARP 64 10.1.2.1 is at 00:00:00:00:00:03 [ETHERNET FRAME CHECK SEQUENCE INCORRECT]
6 0.005235 10.1.2.4 10.1.3.3 UDP 1070 9 → 49153 Len=1024 [ETHERNET FRAME CHECK SEQUENCE INCORRECT]
Frame 1: 64 bytes on wire (512 bits), 64 bytes captured (512 bits)
Ethernet II, Src: 00:00:00_00:00:03 (00:00:00:00:00:03), Dst: Broadcast (ff:ff:ff:ff:ff:ff)
Address Resolution Protocol (request)
0000 ff ff ff ff ff ff 00 00 00 00 00 03 08 06 00 01
0010 08 00 06 04 00 01 00 00 00 00 00 03 0a 01 02 01
0020 ff ff ff ff ff ff 0a 01 02 04 00 00 00 00 00 00
0030 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00


Atish [Running] - Oracle VM VirtualBox
Activities
Wireshark
Tue 10:08
lab4-2-0.pcap
File Edit View Go Capture Analyze Statistics Telephony Wireless Tools Help
No. Time Source Destination Protocol Length Info
1 0.000000 00:00:00_00:00:03 Broadcast ARP 64 Who has 10.1.2.4? Tell 10.1.2.1 [ETHERNET FRAME CHECK SEQUENCE INCORRECT]
2 0.005117 00:00:00_00:00:06 Broadcast ARP 64 Who has 10.1.2.1? Tell 10.1.2.4 [ETHERNET FRAME CHECK SEQUENCE INCORRECT]
Frame 1: 64 bytes on wire (512 bits), 64 bytes captured (512 bits)
Ethernet II, Src: 00:00:00_00:00:03 (00:00:00:00:00:03), Dst: Broadcast (ff:ff:ff:ff:ff:ff)
Address Resolution Protocol (request)
0000 ff ff ff ff ff ff 00 00 00 00 00 03 08 06 00 01
0010 08 00 06 04 00 01 00 00 00 00 00 03 0a 01 02 01
0020 ff ff ff ff ff ff 0a 01 02 04 00 00 00 00 00 00
0030 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00


Atish [Running] - Oracle VM VirtualBox
Activities
Wireshark
Tue 10:08
lab4-3-0.pcap
File Edit View Go Capture Analyze Statistics Telephony Wireless Tools Help
No. Time Source Destination Protocol Length Info
1 0.000000 00:00:00_00:00:03 Broadcast ARP 64 Who has 10.1.2.4? Tell 10.1.2.1 [ETHERNET FRAME CHECK SEQUENCE INCORRECT]
2 0.005117 00:00:00_00:00:06 Broadcast ARP 64 Who has 10.1.2.1? Tell 10.1.2.4 [ETHERNET FRAME CHECK SEQUENCE INCORRECT]
Frame 1: 64 bytes on wire (512 bits), 64 bytes captured (512 bits)
Ethernet II, Src: 00:00:00_00:00:03 (00:00:00:00:00:03), Dst: Broadcast (ff:ff:ff:ff:ff:ff)
Address Resolution Protocol (request)


Atish [Running] - Oracle VM VirtualBox
Activities
Wireshark
Tue 10:09
lab4-4-0.pcap
File Edit View Go Capture Analyze Statistics Telephony Wireless Tools Help
No. Time Source Destination Protocol Length Info
1 0.000000 00:00:00_00:00:03 Broadcast ARP 64 Who has 10.1.2.4? Tell 10.1.2.1 [ETHERNET FRAME CHECK SEQUENCE INCORRECT]
2 0.000000 00:00:00_00:00:06 00:00:00_00:00:03 ARP 64 10.1.2.4 is at 00:00:00:00:00:06 [ETHERNET FRAME CHECK SEQUENCE INCORRECT]
3 0.000106 10.1.3.3 10.1.2.4 UDP 1070 49153 → 9 Len=1024 [ETHERNET FRAME CHECK SEQUENCE INCORRECT]
4 0.005106 00:00:00_00:00:06 Broadcast ARP 64 Who has 10.1.2.1? Tell 10.1.2.4 [ETHERNET FRAME CHECK SEQUENCE INCORRECT]
5 0.005130 00:00:00_00:00:03 00:00:00_00:00:06 ARP 64 10.1.2.1 is at 00:00:00:00:00:03 [ETHERNET FRAME CHECK SEQUENCE INCORRECT]
6 0.005130 10.1.2.4 10.1.3.3 UDP 1070 9 → 49153 Len=1024 [ETHERNET FRAME CHECK SEQUENCE INCORRECT]
Frame 1: 64 bytes on wire (512 bits), 64 bytes captured (512 bits)
Ethernet II, Src: 00:00:00_00:00:03 (00:00:00:00:00:03), Dst: Broadcast (ff:ff:ff:ff:ff:ff)
Address Resolution Protocol (request)
0000 ff ff ff ff ff ff 00 00 00 00 00 03 08 06 00 01
0010 08 00 06 04 00 01 00 00 00 00 00 03 0a 01 02 01
0020 ff ff ff ff ff ff 0a 01 02 04 00 00 00 00 00 00
0030 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

GNUPlot:


Plot
device(node) vs Throughput
device(node) vs Goodput
throughtput and Goodput
device(node)
600
500
400
300
200
100
0
1
2
3
4
5
6