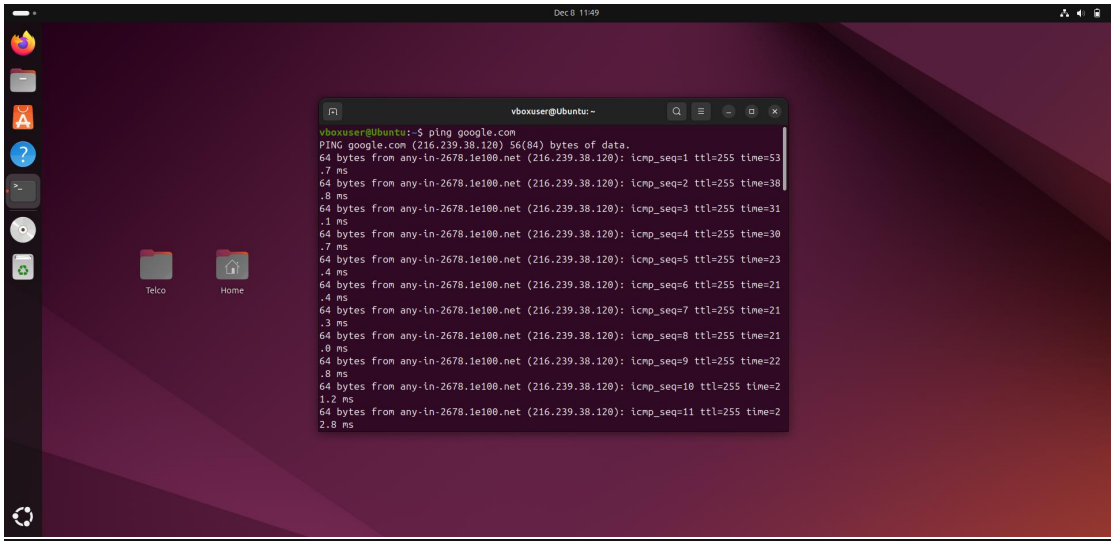
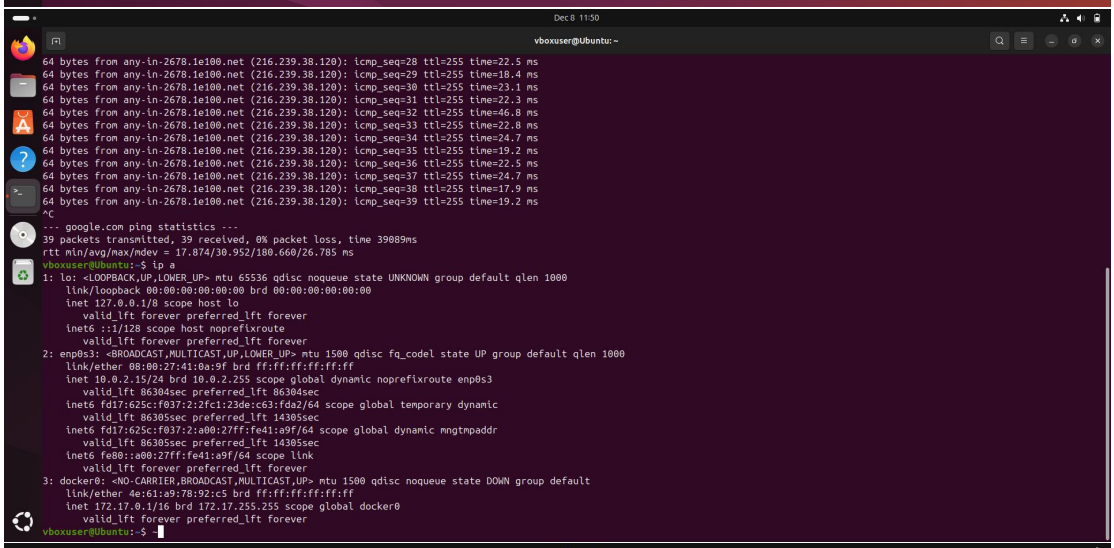
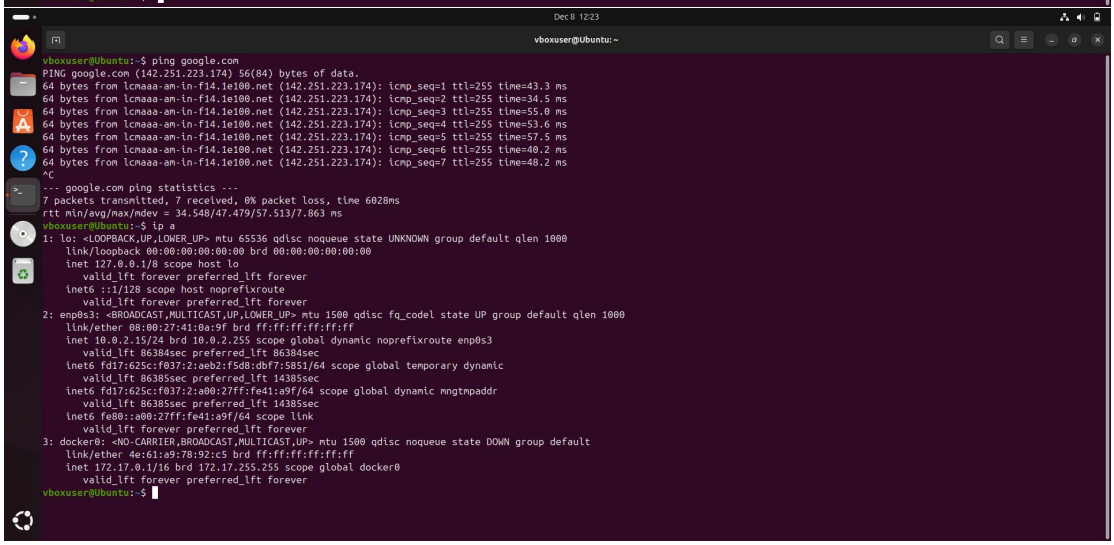
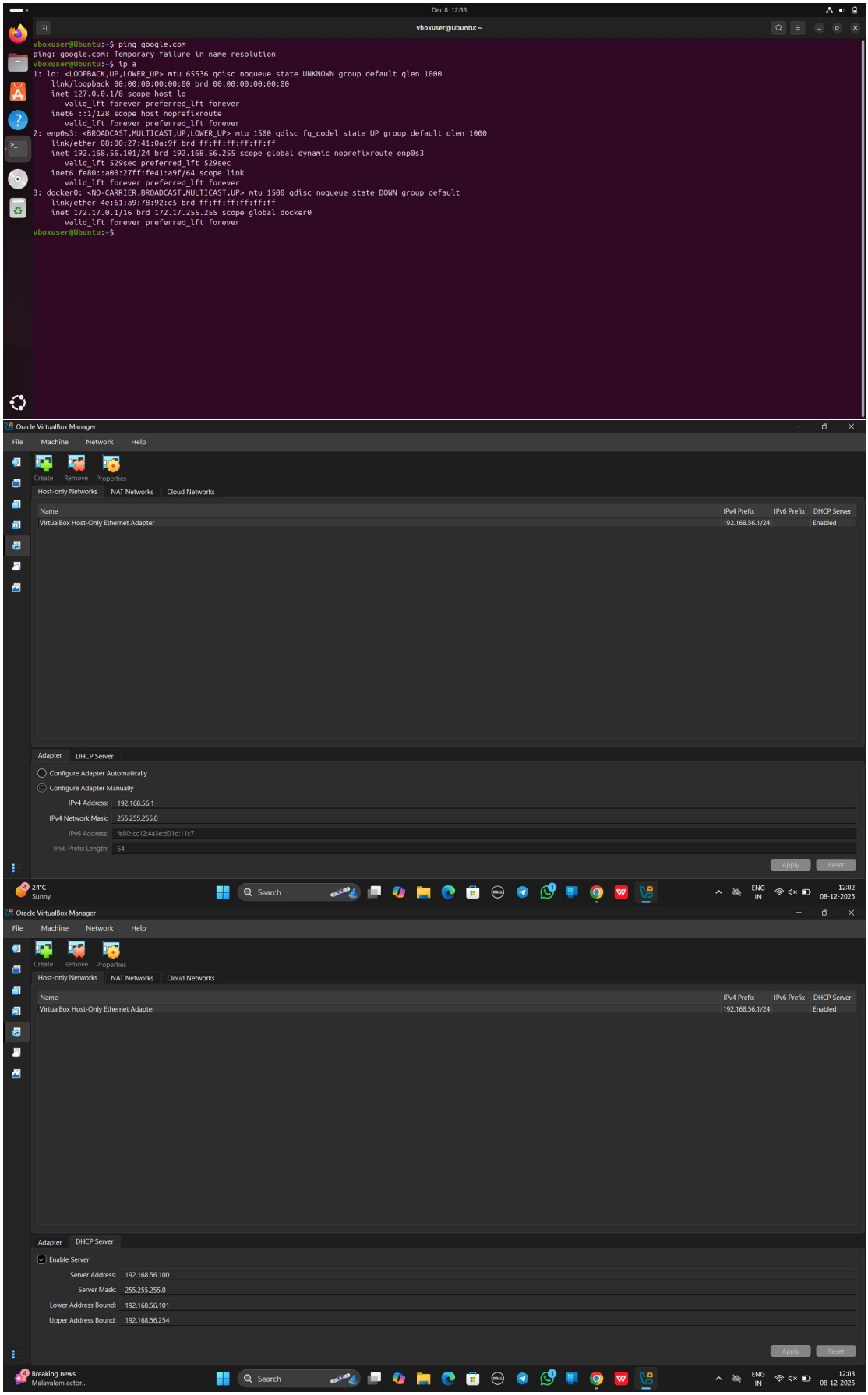
Networks : NAT, Bridged Adapter & Host-only Adapter

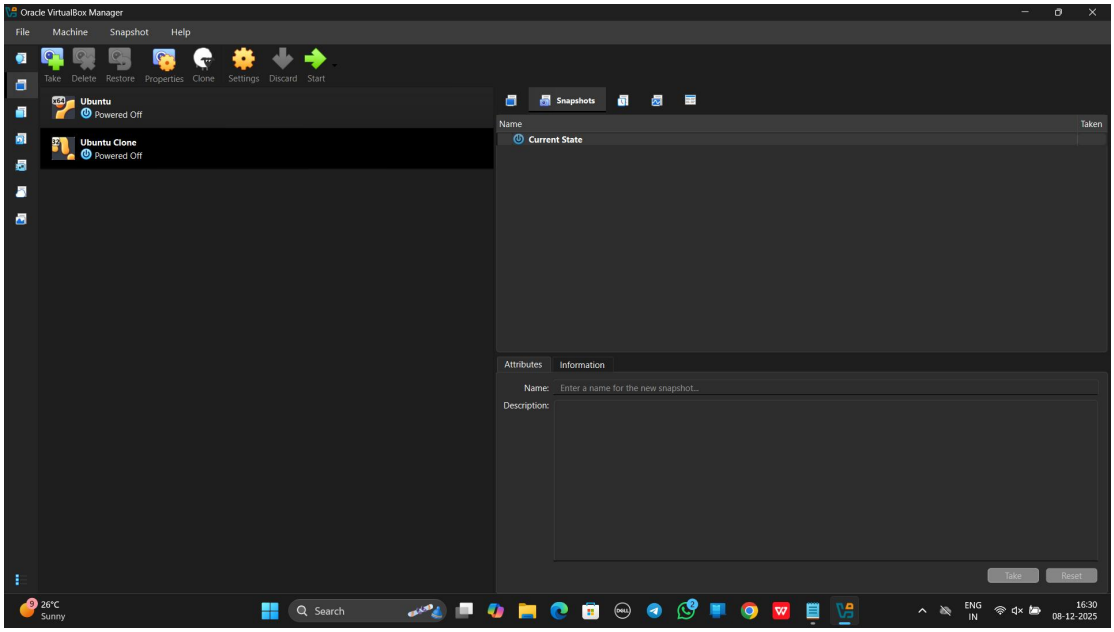




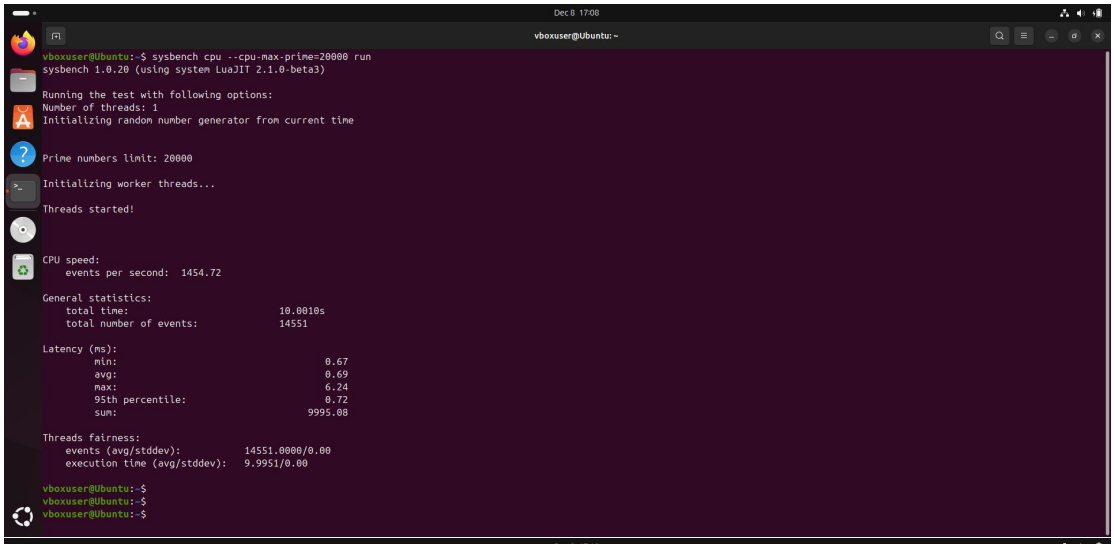


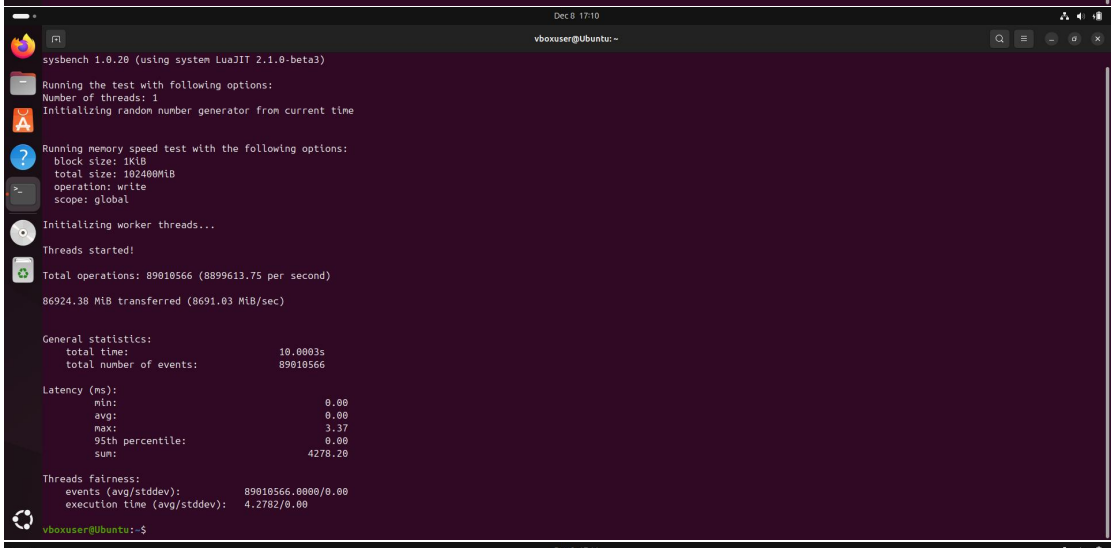

Dec 8 12:38
vboxuser@Ubuntu: ~
vboxuser@Ubuntu:~$ ping google.com
ping: google.com: Temporary failure in name resolution
vboxuser@Ubuntu:~$ ip a
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN group default qlen 1000
link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
inet 127.0.0.1/8 scope host lo
valid_lft forever preferred_lft forever
inet6 ::1/128 scope host noprefixroute
valid_lft forever preferred_lft forever
2: enp0s3: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc fq_codel state UP group default qlen 1000
link/ether 08:00:27:41:0a:9f brd ff:ff:ff:ff:ff:ff
inet 192.168.56.101/24 brd 192.168.56.255 scope global dynamic noprefixroute enp0s3
valid_lft 529sec preferred_lft 529sec
inet6 fe80::a00:27ff:fe41:a9f/64 scope link
valid_lft forever preferred_lft forever
3: docker0: <NO-CARRIER,BROADCAST,MULTICAST,UP> mtu 1500 qdisc noqueue state DOWN group default
link/ether 4e:61:a9:78:92:c5 brd ff:ff:ff:ff:ff:ff
inet 172.17.0.1/16 brd 172.17.255.255 scope global docker0
valid_lft forever preferred_lft forever
vboxuser@Ubuntu:~$
Oracle VirtualBox Manager
File Machine Network Help
Create Remove Properties
Host-only Networks NAT Networks Cloud Networks
Name IPv4 Prefix IPv6 Prefix DHCP Server
VirtualBox Host-Only Ethernet Adapter 192.168.56.1/24 Enabled
Adapter DHCP Server
Configure Adapter Automatically
Configure Adapter Manually
IPv4 Address: 192.168.56.1
IPv4 Network Mask: 255.255.255.0
IPv6 Address: fe80:cc12:4a3ed01d:11c7
IPv6 Prefix Length: 64
Apply Reset
24°C Sunny
Search
ENG IN
12:02 08-12-2025
Oracle VirtualBox Manager
File Machine Network Help
Create Remove Properties
Host-only Networks NAT Networks Cloud Networks
Name IPv4 Prefix IPv6 Prefix DHCP Server
VirtualBox Host-Only Ethernet Adapter 192.168.56.1/24 Enabled
Adapter DHCP Server
Enable Server
Server Address: 192.168.56.100
Server Mask: 255.255.255.0
Lower Address Bound: 192.168.56.101
Upper Address Bound: 192.168.56.254
Apply Reset
Breaking news Malayalam actor...
Search
ENG IN
12:03 08-12-2025

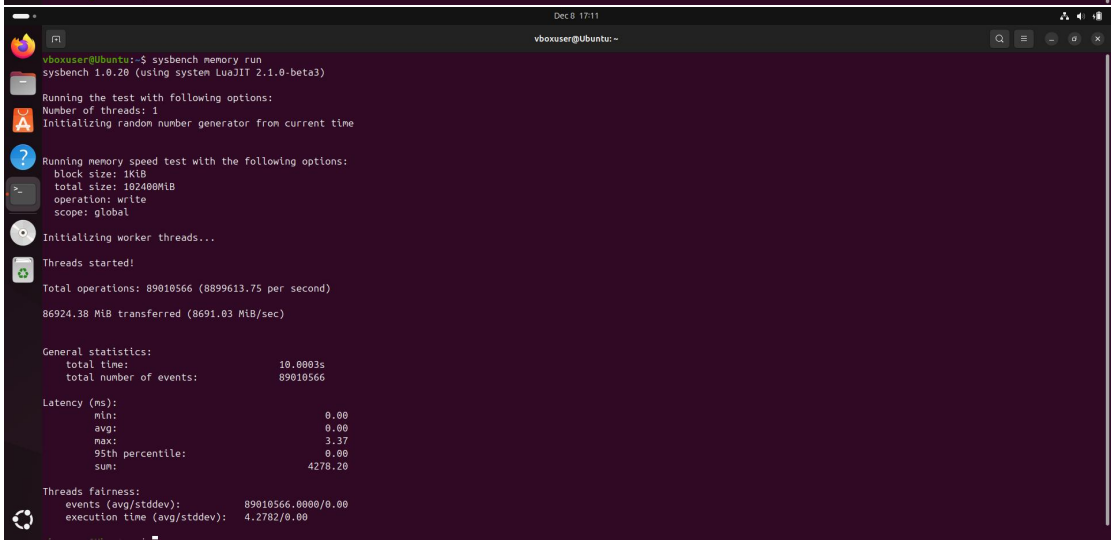
VM Clone

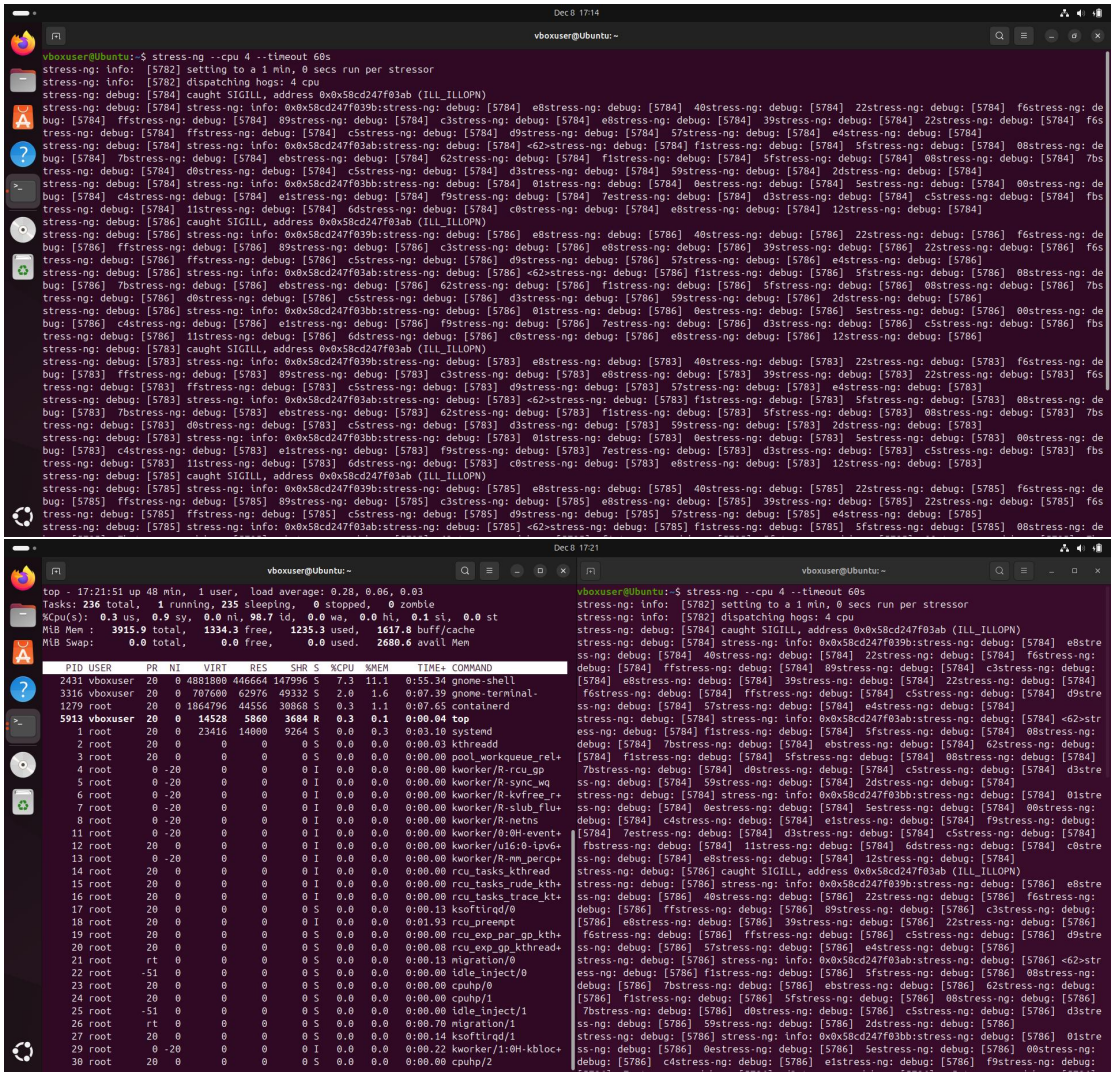

Oracle VirtualBox Manager
File
Machine
Snapshot
Help
Take
Delete
Restore
Properties
Clone
Settings
Discard
Start
Ubuntu
Powered Off
Ubuntu Clone
Powered Off
Snapshots
Name
Taken
Current State
Attributes
Information
Name:
Enter a name for the new snapshot...
Description:
Take
Reset
26°C
Sunny
Search
ENG
IN
16:30
08-12-2025

Benchmarking, iperf3 , fio commands

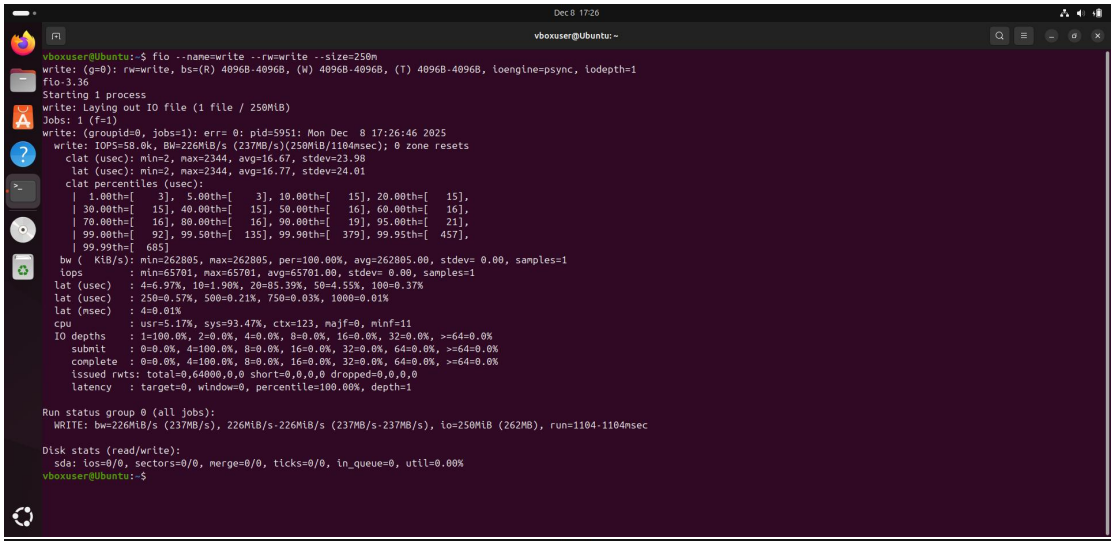


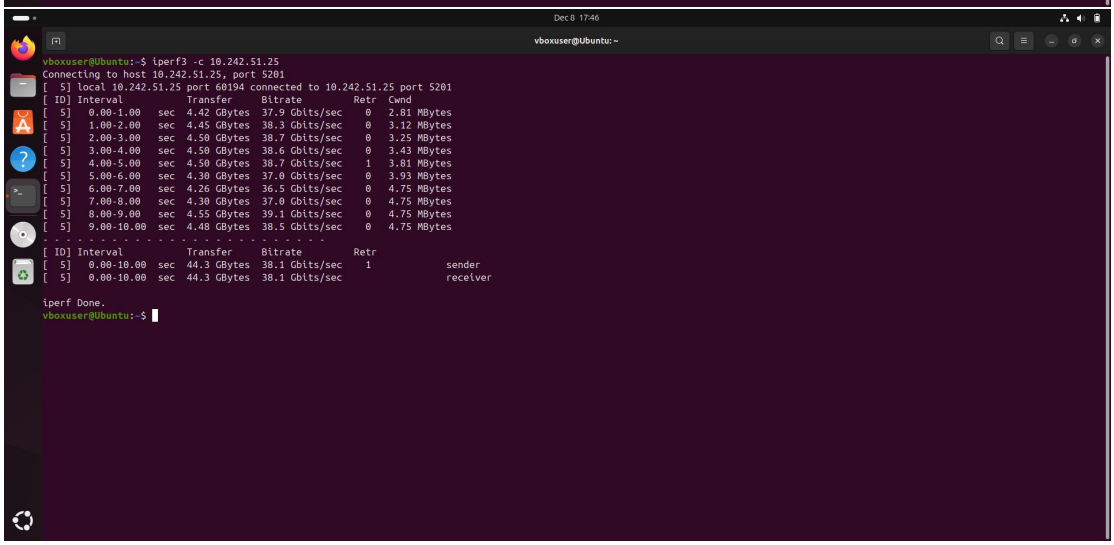





Dec 8 17:14
vboxuser@Ubuntu: ~
vboxuser@Ubuntu:~$ stress-ng --cpu 4 --timeout 60s
stress-ng: info: [5782] setting to a 1 min, 0 secs run per stressor
stress-ng: info: [5782] dispatching hogs: 4 cpu
stress-ng: debug: [5784] caught SIGILL, address 0x0x58cd247f03ab (ILL_ILLOPN)
stress-ng: debug: [5786] caught SIGILL, address 0x0x58cd247f03ab (ILL_ILLOPN)
stress-ng: debug: [5783] caught SIGILL, address 0x0x58cd247f03ab (ILL_ILLOPN)
stress-ng: debug: [5785] caught SIGILL, address 0x0x58cd247f03ab (ILL_ILLOPN)

Dec 8 17:21
vboxuser@Ubuntu: ~
top - 17:21:51 up 48 min, 1 user, load average: 0.28, 0.06, 0.03
Tasks: 236 total, 1 running, 235 sleeping, 0 stopped, 0 zombie
%Cpu(s): 0.3 us, 0.9 sy, 0.0 ni, 98.7 id, 0.0 wa, 0.0 hi, 0.1 si, 0.0 st
MiB Mem : 3915.9 total, 1334.3 free, 1235.3 used, 1617.8 buff/cache
MiB Swap: 0.0 total, 0.0 free, 0.0 used. 2680.6 avail Mem
PID USER PR NI VIRT RES SHR S %CPU %MEM TIME+ COMMAND
2431 vboxuser 20 0 4881800 446664 147996 S 7.3 11.1 0:55.34 gnome-shell
3316 vboxuser 20 0 707600 62976 49332 S 2.0 1.6 0:07.39 gnome-terminal-
1279 root 20 0 1864796 44556 30868 S 0.3 1.1 0:07.65 containerd
5913 vboxuser 20 0 14528 5860 3684 R 0.3 0.1 0:00.04 top
1 root 20 0 23416 14000 9264 S 0.0 0.3 0:03.10 systemd
2 root 20 0 0 0 0 S 0.0 0.0 0:00.03 kthreadd
3 root 20 0 0 0 0 S 0.0 0.0 0:00.00 pool_workqueue_rel+
4 root 0 -20 0 0 0 I 0.0 0.0 0:00.00 kworker/R-rcu_gp
5 root 0 -20 0 0 0 I 0.0 0.0 0:00.00 kworker/R-sync_wq
6 root 0 -20 0 0 0 I 0.0 0.0 0:00.00 kworker/R-kvfree_r+
7 root 0 -20 0 0 0 I 0.0 0.0 0:00.00 kworker/R-slub_flu+
8 root 0 -20 0 0 0 I 0.0 0.0 0:00.00 kworker/R-netns
11 root 0 -20 0 0 0 I 0.0 0.0 0:00.00 kworker/0:0H-event+
12 root 20 0 0 0 0 I 0.0 0.0 0:00.00 kworker/u16:0-ipv6+
13 root 0 -20 0 0 0 I 0.0 0.0 0:00.00 kworker/R-mm_percp+
14 root 20 0 0 0 0 I 0.0 0.0 0:00.00 rcu_tasks_kthread
15 root 20 0 0 0 0 I 0.0 0.0 0:00.00 rcu_tasks_rude_kth+
16 root 20 0 0 0 0 I 0.0 0.0 0:00.00 rcu_tasks_trace_kt+
17 root 20 0 0 0 0 S 0.0 0.0 0:00.13 ksoftirqd/0
18 root 20 0 0 0 0 I 0.0 0.0 0:01.93 rcu_preempt
19 root 20 0 0 0 0 S 0.0 0.0 0:00.00 rcu_exp_par_gp_kth+
20 root 20 0 0 0 0 S 0.0 0.0 0:00.08 rcu_exp_gp_kthread+
21 root rt 0 0 0 0 S 0.0 0.0 0:00.13 migration/0
22 root -51 0 0 0 0 S 0.0 0.0 0:00.00 idle_inject/0
23 root 20 0 0 0 0 S 0.0 0.0 0:00.00 cpuhp/0
24 root 20 0 0 0 0 S 0.0 0.0 0:00.00 cpuhp/1
25 root -51 0 0 0 0 S 0.0 0.0 0:00.00 idle_inject/1
26 root rt 0 0 0 0 S 0.0 0.0 0:00.70 migration/1
27 root 20 0 0 0 0 S 0.0 0.0 0:00.14 ksoftirqd/1
29 root 0 -20 0 0 0 I 0.0 0.0 0:00.22 kworker/1:0H-kbloc+
30 root 20 0 0 0 0 S 0.0 0.0 0:00.00 cpuhp/2
vboxuser@Ubuntu: ~
vboxuser@Ubuntu:~$ stress-ng --cpu 4 --timeout 60s
stress-ng: info: [5782] setting to a 1 min, 0 secs run per stressor
stress-ng: info: [5782] dispatching hogs: 4 cpu
stress-ng: debug: [5784] caught SIGILL, address 0x0x58cd247f03ab (ILL_ILLOPN)
stress-ng: debug: [5786] caught SIGILL, address 0x0x58cd247f03ab (ILL_ILLOPN)


Dec 8 17:26
vboxuser@Ubuntu: ~
vboxuser@Ubuntu:~$ fio --name=write --rw=write --size=250m
write: (g=0): rw=write, bs=(R) 4096B-4096B, (W) 4096B-4096B, (T) 4096B-4096B, ioengine=psync, iodepth=1
fio-3.36
Starting 1 process
write: Laying out IO file (1 file / 250MiB)
Jobs: 1 (f=1)
write: (groupid=0, jobs=1): err= 0: pid=5951: Mon Dec 8 17:26:46 2025
write: IOPS=58.0k, BW=226MiB/s (237MB/s)(250MiB/1104msec); 0 zone resets
clat (usec): min=2, max=2344, avg=16.67, stdev=23.98
lat (usec): min=2, max=2344, avg=16.77, stdev=24.01
clat percentiles (usec):
| 1.00th=[3], 5.00th=[3], 10.00th=[15], 20.00th=[15],
| 30.00th=[15], 40.00th=[15], 50.00th=[16], 60.00th=[16],
| 70.00th=[16], 80.00th=[16], 90.00th=[19], 95.00th=[21],
| 99.00th=[92], 99.50th=[135], 99.90th=[379], 99.95th=[457],
| 99.99th=[685]
bw (KiB/s): min=262805, max=262805, per=100.00%, avg=262805.00, stdev= 0.00, samples=1
iops : min=65701, max=65701, avg=65701.00, stdev= 0.00, samples=1
lat (usec) : 4=6.97%, 10=1.90%, 20=85.39%, 50=4.55%, 100=0.37%
lat (usec) : 250=0.57%, 500=0.21%, 750=0.03%, 1000=0.01%
lat (msec) : 4=0.01%
cpu : usr=5.17%, sys=93.47%, ctx=123, majf=0, minf=11
IO depths : 1=100.0%, 2=0.0%, 4=0.0%, 8=0.0%, 16=0.0%, 32=0.0%, >=64=0.0%
submit : 0=0.0%, 4=100.0%, 8=0.0%, 16=0.0%, 32=0.0%, 64=0.0%, >=64=0.0%
complete : 0=0.0%, 4=100.0%, 8=0.0%, 16=0.0%, 32=0.0%, 64=0.0%, >=64=0.0%
issued rwts: total=0,64000,0,0 short=0,0,0,0 dropped=0,0,0,0
latency : target=0, window=0, percentile=100.00%, depth=1
Run status group 0 (all jobs):
WRITE: bw=226MiB/s (237MB/s), 226MiB/s-226MiB/s (237MB/s-237MB/s), io=250MiB (262MB), run=1104-1104msec
Disk stats (read/write):
sda: ios=0/0, sectors=0/0, merge=0/0, ticks=0/0, in_queue=0, util=0.00%
vboxuser@Ubuntu:~$


Dec 8 17:46
vboxuser@Ubuntu: ~
vboxuser@Ubuntu:~$ iperf3 -c 10.242.51.25
Connecting to host 10.242.51.25, port 5201
[5] local 10.242.51.25 port 60194 connected to 10.242.51.25 port 5201
[ID] Interval Transfer Bitrate Retr Cwnd
[5] 0.00-1.00 sec 4.42 GBytes 37.9 Gbits/sec 0 2.81 MBytes
[5] 1.00-2.00 sec 4.45 GBytes 38.3 Gbits/sec 0 3.12 MBytes
[5] 2.00-3.00 sec 4.50 GBytes 38.7 Gbits/sec 0 3.25 MBytes
[5] 3.00-4.00 sec 4.50 GBytes 38.6 Gbits/sec 0 3.43 MBytes
[5] 4.00-5.00 sec 4.50 GBytes 38.7 Gbits/sec 1 3.81 MBytes
[5] 5.00-6.00 sec 4.30 GBytes 37.0 Gbits/sec 0 3.93 MBytes
[5] 6.00-7.00 sec 4.26 GBytes 36.5 Gbits/sec 0 4.75 MBytes
[5] 7.00-8.00 sec 4.30 GBytes 37.0 Gbits/sec 0 4.75 MBytes
[5] 8.00-9.00 sec 4.55 GBytes 39.1 Gbits/sec 0 4.75 MBytes
[5] 9.00-10.00 sec 4.48 GBytes 38.5 Gbits/sec 0 4.75 MBytes
[ID] Interval Transfer Bitrate Retr
[5] 0.00-10.00 sec 44.3 GBytes 38.1 Gbits/sec 1 sender
[5] 0.00-10.00 sec 44.3 GBytes 38.1 Gbits/sec receiver
iperf Done.
vboxuser@Ubuntu:~$