

1. Get me the IP address of a particular domain (guvi.in)

```
ubuntu@ip-172-31-30-187:~$ ping guvi.in
PING guvi.in (104.26.4.88) 56(84) bytes of data.
64 bytes from 104.26.4.88: icmp_seq=1 ttl=58 time=4.05 ms
64 bytes from 104.26.4.88: icmp_seq=2 ttl=58 time=4.01 ms
64 bytes from 104.26.4.88: icmp_seq=3 ttl=58 time=3.98 ms
64 bytes from 104.26.4.88: icmp_seq=4 ttl=58 time=4.11 ms
64 bytes from 104.26.4.88: icmp_seq=5 ttl=58 time=4.00 ms
64 bytes from 104.26.4.88: icmp_seq=6 ttl=58 time=3.99 ms
64 bytes from 104.26.4.88: icmp_seq=7 ttl=58 time=4.04 ms
^C
--- guvi.in ping statistics ---
7 packets transmitted, 7 received, 0% packet loss, time 6008ms
rtt min/avg/max/mdev = 3.977/4.022/4.105/0.040 ms
ubuntu@ip-172-31-30-187:~$ host guvi.in
guvi.in has address 172.67.70.207
guvi.in has address 104.26.4.88
guvi.in has address 104.26.5.88
guvi.in has IPv6 address 2606:4700:20::ac43:46cf
guvi.in has IPv6 address 2606:4700:20::681a:558
guvi.in has IPv6 address 2606:4700:20::681a:458
guvi.in mail is handled by 5 alt1.aspmx.l.google.com.
guvi.in mail is handled by 5 alt2.aspmx.l.google.com.
guvi.in mail is handled by 1 aspmx.l.google.com.
guvi.in mail is handled by 10 alt3.aspmx.l.google.com.
guvi.in mail is handled by 10 alt4.aspmx.l.google.com.
guvi.in mail is handled by 10 mailstore1.secureserver.net.
guvi.in mail is handled by 20 smtp.secureserver.net.
ubuntu@ip-172-31-30-187:~$ nslookup guvi.in
Server:      127.0.0.53
Address:     127.0.0.53#53

Non-authoritative answer:
Name:   guvi.in
Address: 104.26.5.88
Name:   guvi.in
Address: 104.26.4.88
Name:   guvi.in
Address: 172.67.70.207
Name:   guvi.in
Address: 2606:4700:20::681a:558
Name:   guvi.in
Address: 2606:4700:20::ac43:46cf
Name:   guvi.in
Address: 2606:4700:20::681a:458

ubuntu@ip-172-31-30-187:~$ |
```

2. How do I find my CPU/memory usage of my server

- Checking cpu and memory by using top command

```
ubuntu@ip-172-31-30-187:~$ top
top - 13:36:02 up 7:41, 2 users, load average: 0.00, 0.00, 0.00
Tasks: 109 total, 1 running, 108 sleeping, 0 stopped, 0 zombie
%Cpu(s): 0.3 us, 0.3 sy, 0.0 ni, 98.8 id, 0.0 wa, 0.0 hi, 0.0 si, 0.5 st
MiB Mem : 914.2 total, 332.9 free, 342.0 used, 397.6 buff/cache
MiB Swap: 0.0 total, 0.0 free, 0.0 used, 572.2 avail Mem
```

PID	USER	PR	NI	VIRT	RES	SHR	S	%CPU	%MEM	TIME+	COMMAND
129	root	19	-1	50424	14196	13172	S	0.3	1.5	0:00.59	systemd-journal
1049	root	20	0	12020	8076	7052	S	0.3	0.9	0:00.02	sshd
2214	ubuntu	20	0	12368	5784	3608	R	0.3	0.6	0:00.04	top
1	root	20	0	22636	13716	9620	S	0.0	1.5	0:02.75	systemd
2	root	20	0	0	0	0	S	0.0	0.0	0:00.01	kthreadd
3	root	20	0	0	0	0	S	0.0	0.0	0:00.00	pool_workqueue_release
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_rcu_reclaim
7	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	kworker/R-slab_flushwq
8	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	kworker/R-netns
10	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	kworker/0:0H-events_highpri
13	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	kworker/R-mm_percpu_wq
14	root	20	0	0	0	0	I	0.0	0.0	0:00.00	rcu_tasks_rude_kthread
15	root	20	0	0	0	0	I	0.0	0.0	0:00.00	rcu_tasks_trace_kthread
16	root	20	0	0	0	0	S	0.0	0.0	0:00.04	ksoftirqd/0
17	root	20	0	0	0	0	I	0.0	0.0	0:00.57	rcu_sched
18	root	20	0	0	0	0	S	0.0	0.0	0:00.00	rcu_exp_par_gp_kthread_worker/0
19	root	20	0	0	0	0	S	0.0	0.0	0:00.00	rcu_exp_gp_kthread_worker
20	root	rt	0	0	0	0	S	0.0	0.0	0:00.12	migration/0
21	root	-51	0	0	0	0	S	0.0	0.0	0:00.00	idle_inject/0
22	root	20	0	0	0	0	S	0.0	0.0	0:00.00	cpuhp/0
23	root	20	0	0	0	0	S	0.0	0.0	0:00.00	cpuhp/1
24	root	-51	0	0	0	0	S	0.0	0.0	0:00.00	idle_inject/1
25	root	rt	0	0	0	0	S	0.0	0.0	0:00.17	migration/1
26	root	20	0	0	0	0	S	0.0	0.0	0:00.03	ksoftirqd/1
28	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	kworker/1:0H-events_highpri
29	root	20	0	0	0	0	S	0.0	0.0	0:00.00	kdevtmpfs
30	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	kworker/R-inet_frag_wq
31	root	20	0	0	0	0	S	0.0	0.0	0:00.00	kauditd
32	root	20	0	0	0	0	S	0.0	0.0	0:00.00	khungtaskd
34	root	20	0	0	0	0	S	0.0	0.0	0:00.00	oom_reaper
36	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	kworker/R-writeback
37	root	20	0	0	0	0	S	0.0	0.0	0:01.03	kcompactd0
38	root	25	5	0	0	0	S	0.0	0.0	0:00.00	ksmd
39	root	39	19	0	0	0	S	0.0	0.0	0:00.00	khugepaged
40	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	kworker/R-kintegrityd
41	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	kworker/R-kblockd

- Checking cpu by using htop

```
0% Tasks: 33.40 thr. 76 kthr: 1 running
0.0% Load Average: 0.00 0.00 0.00
Mem [|||||] 186M/914M Uptime: 07:42:33
Swp [|||||] 0K/0K
```

Main	Tab	PID	USER	PRI	NI	VIRT	RES	SHR	S	CPU%	MEM%	TIME+	Command
		2219	ubuntu	20	0	9396	5228	3564	R	0.0	0.6	0:00.08	htop
		1	root	0	26424	13716	9620	0	S	0.0	1.5	0:02.75	/sbin/init
		129	root	19	-1	50424	14196	13172	S	0.0	1.5	0:00.56	/usr/lib/systemd/systemd-journald
		187	root	RT	0	282M	27080	8648	S	0.0	2.9	0:00.76	/sbin/multipathd -d -s
		199	root	20	0	26484	8132	5060	S	0.0	0.9	0:00.24	/usr/lib/systemd/systemd-udev
		200	root	20	0	282M	27080	8648	S	0.0	2.9	0:00.00	/sbin/multipathd -d -s
		201	root	RT	0	282M	27080	8648	S	0.0	2.9	0:00.00	/sbin/multipathd -d -s
		202	root	RT	0	282M	27080	8648	S	0.0	2.9	0:00.00	/sbin/multipathd -d -s
		203	root	RT	0	282M	27080	8648	S	0.0	2.9	0:00.00	/sbin/multipathd -d -s
		204	root	RT	0	282M	27080	8648	S	0.0	2.9	0:01.69	/sbin/multipathd -d -s
		205	root	RT	0	282M	27080	8648	S	0.0	2.9	0:00.00	/sbin/multipathd -d -s
		334	systemd-re	20	0	21592	12860	10684	S	0.0	1.4	0:00.17	/usr/lib/systemd/systemd-resolved
		527	systemd-ne	20	0	22408	9844	6620	S	0.0	1.0	0:00.07	/usr/lib/systemd/systemd-networkd
		589	root	20	0	7220	1996	1868	S	0.0	0.2	0:00.00	/usr/sbin/acpid
		593	root	20	0	7224	2752	2496	S	0.0	0.3	0:00.07	/usr/sbin/cron -F -p
		594	messagebus	20	0	9996	3640	4744	S	0.0	0.6	0:00.76	@dbus-daemon --system --address=systemd: --nofork --nopidfile --systemd-activation --syslog-only
		600	root	20	0	82920	4444	4188	S	0.0	0.5	0:00.73	/usr/sbin/irqbalance
		602	root	20	0	32420	20532	10420	S	0.0	2.2	0:00.14	/usr/bin/python3 /usr/bin/networkd-dispatcher --run-startup-triggers
		603	polkitd	20	0	374M	9856	7540	S	0.0	1.1	0:00.10	/usr/lib/polkit-1/polkitd --no-debug
		606	root	20	0	82920	4444	4188	S	0.0	0.5	0:00.00	/usr/sbin/irqbalance
		614	root	20	0	1949M	36772	24024	S	0.0	3.9	0:00.09	/usr/lib/swap/swapd
		622	root	20	0	18172	8580	7684	S	0.0	0.9	0:00.18	/usr/lib/systemd/systemd-logind
		631	root	20	0	458M	13664	11488	S	0.0	1.5	0:00.15	/usr/libexec/udisks2/udisksd
		632	root	20	0	1949M	36772	24024	S	0.0	3.9	0:00.10	/usr/lib/swap/swapd
		633	root	20	0	1949M	36772	24024	S	0.0	3.9	0:00.02	/usr/lib/swap/swapd
		634	root	20	0	1949M	36772	24024	S	0.0	3.9	0:00.00	/usr/lib/swap/swapd
		635	root	20	0	1949M	36772	24024	S	0.0	3.9	0:00.00	/usr/lib/swap/swapd
		657	root	20	0	458M	13664	11488	S	0.0	1.5	0:00.42	/usr/libexec/udisks2/udisksd
		658	root	20	0	458M	13664	11488	S	0.0	1.5	0:00.00	/usr/libexec/udisks2/udisksd
		663	root	20	0	458M	13664	11488	S	0.0	1.5	0:00.08	/usr/libexec/udisks2/udisksd
		701	root	20	0	6148	1892	1892	S	0.0	0.2	0:00.00	/sbin/agetty -o -p -- -u --keep-baud 115200,57600,38400,9600 - vt220
		711	_chrony	20	0	18400	3716	1060	S	0.0	0.4	0:00.77	/usr/sbin/chronyd -F 1
		719	_chrony	20	0	11072	2328	1772	S	0.0	0.2	0:00.00	/usr/sbin/chronyd -F 1
		737	root	20	0	107M	22864	13520	S	0.0	2.4	0:00.14	/usr/bin/python3 /usr/share/unattended-upgrades/unattended-upgrade-shutdown --wait-for-signal
		749	polkitd	20	0	374M	9856	7540	S	0.0	1.1	0:00.47	/usr/lib/polkit-1/polkitd --no-debug
		750	polkitd	20	0	374M	9856	7540	S	0.0	1.1	0:00.00	/usr/lib/polkit-1/polkitd --no-debug
		752	syslog	20	0	217M	6156	4620	S	0.0	0.7	0:00.04	/usr/sbin/rsyslogd -n -iNONE
		753	polkitd	20	0	374M	9856	7540	S	0.0	1.1	0:00.00	/usr/lib/polkit-1/polkitd --no-debug
		774	root	20	0	458M	13664	11488	S	0.0	1.5	0:00.00	/usr/libexec/udisks2/udisksd
		795	root	20	0	1949M	36772	24024	S	0.0	3.9	0:00.06	/usr/lib/swap/swapd
		811	root	20	0	382M	12764	10972	S	0.0	1.4	0:00.08	/usr/sbin/ModemManager
		827	root	20	0	6104	2000	1872	S	0.0	0.2	0:00.00	/sbin/agetty -o -p -- -u --noclear - linux
		838	root	20	0	458M	13664	11488	S	0.0	1.5	0:00.00	/usr/libexec/udisks2/udisksd
		848	root	20	0	1949M	36772	24024	S	0.0	3.9	0:00.28	/usr/lib/swap/swapd
		853	syslog	20	0	217M	6156	4620	S	0.0	0.7	0:00.04	/usr/sbin/rsyslogd -n -iNONE
		854	syslog	20	0	217M	6156	4620	S	0.0	0.7	0:00.00	/usr/sbin/rsyslogd -n -iNONE
		855	syslog	20	0	217M	6156	4620	S	0.0	0.7	0:00.02	/usr/sbin/rsyslogd -n -iNONE
		860	root	20	0	382M	12764	10972	S	0.0	1.4	0:00.00	/usr/sbin/ModemManager
		863	root	20	0	382M	12764	10972	S	0.0	1.4	0:00.00	/usr/sbin/ModemManager

- Cpu checking by using mpstat command

```
ubuntu@ip-172-31-30-187:~$ mpstat
Linux 6.14.0-1015-aws (ip-172-31-30-187)      12/10/25      _x86_64_      (2 CPU)

13:40:27   CPU    %usr   %nice    %sys %iowait    %irq   %soft  %steal  %guest   %gnice   %idle
13:40:27   all     0.03    0.00    0.02    0.01    0.00    0.00    0.02    0.00    0.00    99.92
```

- Checking memory by using free -m command

```
ubuntu@ip-172-31-30-187:~$ free -m
              total        used        free      shared  buff/cache       available
Mem:           914          345          328           2         399          568
Swap:           0           0           0
```

- Checking cpu and memory by using vmstat 1 command

```
ubuntu@ip-172-31-30-187:~$ vmstat 1
procs -----memory----- --swap--  -----io----- -system--  -----cpu-----
 r  b   swpd   free   buff   cache    si   so    bi   bo    in   cs  us  sy  id  wa  st  gu
 2  0     0 323060 20948 388512     0    0    11    9   41    0  0  0 100  0  0  0
 0  0     0 323060 20948 388552     0    0     0    0  207  152  1  0 100  0  0  0
 0  0     0 323060 20948 388552     0    0     0    0  121   87  0  0 100  0  0  0
 0  0     0 323060 20948 388552     0    0     0    0   74   59  0  0 100  0  0  0
 0  0     0 323060 20948 388552     0    0     0    0   56   43  0  0 100  0  0  0
 0  0     0 323060 20948 388552     0    0     0    0   45   46  0  0 100  0  0  0
 0  0     0 323060 20948 388552     0    0     0    0   49   45  0  0 100  0  0  0
 0  0     0 323060 20948 388552     0    0     0    0   56   49  0  0 100  0  0  0
 0  0     0 323060 20948 388552     0    0     0    0   54   43  0  0 100  0  0  0
 0  0     0 323060 20948 388552     0    0     0    0   49   43  0  0 100  0  0  0
 0  0     0 323060 20948 388552     0    0     0    0   38   38  0  0 100  0  0  0
 0  0     0 323060 20948 388552     0    0     0    0   54   47  0  0 100  0  0  0
 0  0     0 323060 20948 388552     0    0     0    0   50   47  0  0 100  0  0  0
 0  0     0 323060 20948 388552     0    0     0    0   56   47  0  0 100  0  0  0
 0  0     0 323060 20948 388552     0    0     0    0   43   43  0  0 100  0  0  0
 0  0     0 323060 20948 388552     0    0     0    0   62   48  0  0 100  0  0  0
 0  0     0 323060 20956 388544     0    0     0    0   40   59  57  0  0 100  0  0  0
 0  0     0 323060 20956 388556     0    0     0    0   38   44  0  0 100  0  0  0
 0  0     0 323060 20956 388556     0    0     0    0   41   45  0  0 100  0  0  0
 0  0     0 323060 20956 388556     0    0     0    0   44   43  0  0 100  0  0  0
 0  0     0 323060 20956 388556     0    0     0    0   54   42  0  0 100  0  0  0
 0  0     0 323060 20956 388556     0    0     0    0   61   49  0  0 100  0  0  0
 0  0     0 323060 20956 388556     0    0     0    0   40   44  0  0 100  0  0  0
 0  0     0 323060 20956 388556     0    0     0    0   39   40  0  0 100  0  0  0
 0  0     0 323060 20956 388556     0    0     0    0   51   43  0  0 100  0  0  0
 0  0     0 323060 20956 388556     0    0     0    0   44   43  0  0 100  0  0  0
```

- Test the connectivity between 2 nodes

```
ubuntu@ip-172-31-30-187:~$ ping 13.60.8.50
PING 13.60.8.50 (13.60.8.50) 56(84) bytes of data.
^C
--- 13.60.8.50 ping statistics ---
45 packets transmitted, 0 received, 100% packet loss, time 45074ms

ubuntu@ip-172-31-30-187:~$ telnet 13.60.8.50 22
Trying 13.60.8.50...
Connected to 13.60.8.50.
Escape character is '^['.
SSH-2.0-OpenSSH_9.6p1 Ubuntu-3ubuntu13.14
^C
Connection closed by foreign host.

ubuntu@ip-172-31-30-187:~$ nc -zv 13.60.8.50 22
Connection to 13.60.8.50 22 port [tcp/ssh] succeeded!
```

- Test the connectivity between 2 nodes by using traceroute command

```
ubuntu@ip-172-31-30-187:~$ traceroute 13.60.8.50
traceroute to 13.60.8.50 (13.60.8.50), 30 hops max, 60 byte packets
 1  ec2-13-53-0-211.eu-north-1.compute.amazonaws.com (13.53.0.211)  6.877 ms 244.5.0.113 (244.5.0.113)  4.263 ms ec2-13-53-0-213.eu-north-1.compute.amazonaws.com (13.53.0.213)  5.612 ms
 2  * * *
 3  * * *
 4  * * *
 5  * * *
 6  * * *
 7  * * *
 8  * * *
 9  * * *
10  * * *
11  * * *
12  * * *
13  * * *
14  * * *
15  * * *
16  * * *
17  * * *^C
```

2. I have deployed an application in guvi.com:9000, and logs show my app is running, but I'm unable to view the page. Check whether my port is open or not ?

```
ubuntu@ip-172-31-30-187:~$ sudo ss -tulnp | grep 9000
ubuntu@ip-172-31-30-187:~$ nc -zv guvi.in 9000
^C
ubuntu@ip-172-31-30-187:~$ telnet guvi.in 9000
Trying 172.67.70.207...
^C
ubuntu@ip-172-31-30-187:~$ |
```

Port is blocked. App is not listing.