

## Linux TOP Command

➔ Firstly we create a Ubuntu instance

F:\project\aws\all files>ssh -i EC2TUTORIAL.pem ubuntu@65.1.100.180

➔ Now your instance has been running and you got your CMD this :-

ubuntu@ip-172-31-10-134:~\$

➔ TOP COMMAND :-

-> top command work in like a real time .

-> ubuntu@ip-172-31-10-134:~\$ top

-> top command hardum real time pe kaam karta hai means that humare process mein jo jo real time pe ho raha hoga vo hume dikhata rahega

-> top command humko har 3 second mein update karta rehata hai ki processor mein kya chal raha hai humare.

```
C:\Windows\System32\cmd.exe
ubuntu@ip-172-31-10-134:~$ top
top - 08:56:08 up 14 min, 2 users, load average: 0.00, 0.02, 0.05
Tasks: 92 total, 1 running, 91 sleeping, 0 stopped, 0 zombie
%Cpu(s): 0.0 us, 0.0 sy, 0.0 ni,100.0 id, 0.0 wa, 0.0 hi, 0.0 si, 0.0 st
MiB Mem : 978.6 total, 384.9 free, 165.7 used, 428.0 buff/cache
MiB Swap: 0.0 total, 0.0 free, 0.0 used, 662.8 avail Mem

  PID USER      PR  NI   VIRT   RES   SHR  S  %CPU  %MEM     TIME+ COMMAND
    1 root        20   0 102820 12356 8212  S   0.0   1.2   0:04.66 systemd
    2 root        20   0        0      0      0  S   0.0   0.0   0:00.00 kthreadd
    3 root        0 -20      0      0      0  I   0.0   0.0   0:00.00 rcu_gp
    4 root        0 -20      0      0      0  I   0.0   0.0   0:00.00 rcu_par_gp
    6 root        0 -20      0      0      0  I   0.0   0.0   0:00.00 kworker/0:0H
    9 root        0 -20      0      0      0  I   0.0   0.0   0:00.00 mm_percpu_wq
   10 root        20   0        0      0      0  S   0.0   0.0   0:00.07 ksoftirqd/0
   11 root        20   0        0      0      0  I   0.0   0.0   0:00.38 rcu_sched
   12 root        rt   0        0      0      0  S   0.0   0.0   0:00.00 migration/0
   13 root        20   0        0      0      0  S   0.0   0.0   0:00.00 cpuhp/0
   14 root        20   0        0      0      0  S   0.0   0.0   0:00.00 kdevtmpfs
   15 root        0 -20      0      0      0  I   0.0   0.0   0:00.00 netns
   16 root        20   0        0      0      0  S   0.0   0.0   0:00.00 rcu_tasks_kthre
   17 root        20   0        0      0      0  S   0.0   0.0   0:00.00 kauditd
   18 root        20   0        0      0      0  S   0.0   0.0   0:00.00 khungtaskd
   19 root        20   0        0      0      0  S   0.0   0.0   0:00.00 oom_reaper
   20 root        0 -20      0      0      0  I   0.0   0.0   0:00.00 writeback
   21 root        20   0        0      0      0  S   0.0   0.0   0:00.00 kcompactd0
   22 root        25   5        0      0      0  S   0.0   0.0   0:00.00 ksmd
   23 root        39  19        0      0      0  S   0.0   0.0   0:00.00 khugepaged
   69 root        0 -20      0      0      0  I   0.0   0.0   0:00.00 kintegrityd
   70 root        0 -20      0      0      0  I   0.0   0.0   0:00.00 kblockd
   71 root        0 -20      0      0      0  I   0.0   0.0   0:00.00 blkcg_punt_bio
   72 root        0 -20      0      0      0  I   0.0   0.0   0:00.00 tpm_dev_wq
   73 root        0 -20      0      0      0  I   0.0   0.0   0:00.00 ata_sff
   74 root        0 -20      0      0      0  I   0.0   0.0   0:00.00 md
   75 root        0 -20      0      0      0  I   0.0   0.0   0:00.00 edac-poller
   76 root        0 -20      0      0      0  I   0.0   0.0   0:00.00 devfreq_wq
   77 root        rt   0        0      0      0  S   0.0   0.0   0:00.00 watchdogd
   78 root        20   0        0      0      0  I   0.0   0.0   0:00.01 kworker/u30:1-events_power_efficient
   80 root        20   0        0      0      0  S   0.0   0.0   0:00.00 kswapd0
   81 root        20   0        0      0      0  S   0.0   0.0   0:00.00 ecryptfs-kthrea
   83 root        0 -20      0      0      0  I   0.0   0.0   0:00.00 kthrotld
   84 root        20   0        0      0      0  S   0.0   0.0   0:00.00 xenbus
   85 root        20   0        0      0      0  S   0.0   0.0   0:00.04 xenwatch
   86 root        0 -20      0      0      0  I   0.0   0.0   0:00.00 nvme-wq
   87 root        0 -20      0      0      0  I   0.0   0.0   0:00.00 nvme-reset-wq
   88 root        0 -20      0      0      0  I   0.0   0.0   0:00.00 nvme-delete-wq
   89 root        20   0        0      0      0  S   0.0   0.0   0:00.00 scsi_eh_0
   90 root        0 -20      0      0      0  I   0.0   0.0   0:00.00 scsi_tmfs_0
   91 root        20   0        0      0      0  S   0.0   0.0   0:00.00 scsi_eh_1
```

### First row=

-> **top - 09:30:28 up 48 min, 1 user, load average: 0.00, 0.00, 0.00**

-> **top - 09:30:28** = this mean our current system time and up 48 min means machine 45 min sein start hai

-> **1 user** = it shows how much user can do login.

-> **load average: 0.00, 0.00, 0.00** = load average ka matlab ki jo humare cpu pein load paad raha hai vo ,aur yein **0.00, 0.00, 0.00** iska matlab hai ki har 5 sec mein load average batata hai yein humare cpu ki .

### Second row =

➔ **Tasks: 88 total, 1 running, 87 sleeping, 0 stopped, 0 zombie**

-> **Tasks: 88 total** = iska matlab hai ki pure task hai humare

-> **1 running** = 88 jisme sein running 1 hai abhi but system ko jab jitane ki jarurat padti rehati hai vo task leke run karta rehata hai.

-> **87 sleeping**, = 88 mein sein 87 abhi sleep mde mein hai system k uski jarurat nahi agar hogi toh vo apne aap le lega usko.

-> **0 stopped** = iska matlab hai ki humara koi bhi task stopped nah hai

-> **0 zombie** = iska matlab hai ki humane abhi tak koi bhi task kill nahi kiya hai.

-> **%Cpu(s): 0.0 us, 0.0 sy, 0.0 ni,100.0 id, 0.0 wa, 0.0 hi, 0.0 si, 0.0 st**

-> **% Cpu(s): 0.0 us**, = iska matlab hai ki user kein dwara humara cpu kitana memory le raha hai isliye us likha bhi hai.

-> **0.0 sy**, = iska matlab humare system kein dwara kitani memory jaa rahi hai

-> **0.0 ni**, = ye humari nice value hoti hai jo humari low priority ko batati hai. mat

-> **100.0 id** = ye humara ideal hota hai jo ki bas aisa pada hota hai ye koi work nahi karta

->**0.0 wa**, = iska matlab hai waiting kein liye jab hi agar hum input /output device agar connect kiya hai toh uski percentage batata hai ki cpu kitana le raha

->**0.0 hi** = yein humare hardware sein interrupt hota hai jo humane hardware use kiya hai

->**0.0 si**, = software kein interrupts ki percentage batata hai ye

➔ **0.0 st** = isko hum kehate hai stolen time matlab jitani kam value hogi iski utana humare liye better hai yein aur jitana jada hoga utana bekaar agar yein value high ho jayegi toh humari machine slow ho jayegi.

#### Third row =

**MiB Mem : 978.6 total, 389.0 free, 160.5 used, 429.1 buff/cache**

➔ Iska matlab yein humari memory shw kar raha kin n kitani khaali hai kitani used hai aur kitani cache memory hai.

#### Fourth row =

**MiB Swap: 0.0 total, 0.0 free, 0.0 used. 669.6 avail Mem**

➔ Swap memory hum sab k pata hai ki virtual memory hoti hai iska matlab hai ki agar humane 8 gb apaane system ko de rakha hai aur vo full hai toh hum 2 gb agar extra memory lagayenge jo ki virtual hogi aur yein memory humari khud ki banayi huyi hogi machine kein andar

## Use Function in top command :-

- ➔ Agar humane pehale top command chala rakhi hai toh hum pehale **quit** karenge usko **Q** press karke

->Ab jaise mene eak process chalaya sleep

```
ubuntu@ip-172-31-10-134:~$ sleep 10000 &
```

```
[1] 1882
```

-> again top command execute:-

```
ubuntu@ip-172-31-10-134:~$ top
```

->hum sabse neeche dekhenge time +command vali row mein sleep likh kein aa raha hoga aur hum jo sleep process chal raha hoga uska pid note karlenge agar hmo us prcess ko kill ya zombie karna huva toh.

- ➔ Ab agar humane jo banaya hai process usko kill karna ho toh uske liye hum apane cmd mein **K** press karenge aur jaise hi k press karenge vaise hi dekhenge hum ki upar blink karte aayega usme hum apane pid daal denge jo ki humane upar note kar rakhi hai.