Tutorial 3 a: Connect EC2 Linux | T2 micro with Putty | Windows or Linux Terminal >>> Practice Basic Linux Commands
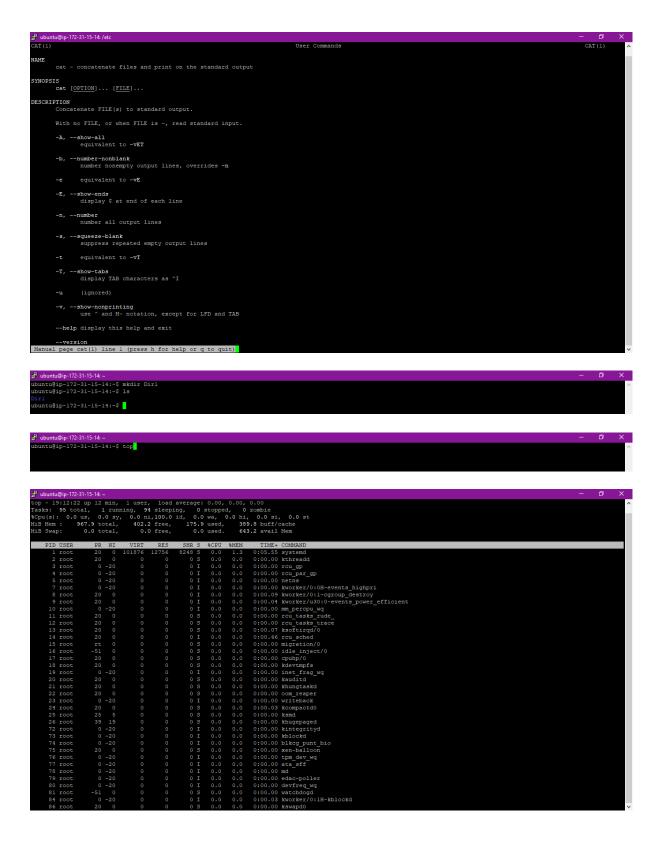
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```
CAT(1)                                    User Commands                                    CAT(1)

NAME
       cat - concatenate files and print on the standard output

SYNOPSIS
       cat [OPTION]... [FILE]...

DESCRIPTION
       Concatenate FILE(s) to standard output.

       With no FILE, or when FILE is -, read standard input.

       -A, --show-all
              equivalent to -vET

       -b, --number-nonblank
              number nonempty output lines, overrides -n

       -e     equivalent to -vE

       -E, --show-ends
              display $ at end of each line

       -n, --number
              number all output lines

       -s, --squeeze-blank
              suppress repeated empty output lines

       -t     equivalent to -vT

       -T, --show-tabs
              display TAB characters as ^I

       -u     (ignored)

       -v, --show-nonprinting
              use ^ and M- notation, except for LFD and TAB

       --help display this help and exit

       --version
 Manual page cat(1) line 1 (press h for help or q to quit)
```

```
ubuntu@ip-172-31-15-14:~$ mkdir Dir1
ubuntu@ip-172-31-15-14:~$ ls
Dir1
ubuntu@ip-172-31-15-14:~$
```

```
ubuntu@ip-172-31-15-14:~$ top
```

```
top - 19:12:22 up 12 min,  1 user,  load average: 0.00, 0.00, 0.00
Tasks:  95 total,   1 running,  94 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 :    967.9 total,    402.2 free,    175.9 used,    389.8 buff/cache
MiB Swap:      0.0 total,      0.0 free,      0.0 used.    643.2 avail Mem

    PID USER      PR  NI    VIRT    RES    SHR S  %CPU  %MEM     TIME+ COMMAND
      1 root      20   0  101876  12756   8248 S   0.0   1.3   0:05.55 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
      5 root       0 -20       0      0      0 I   0.0   0.0   0:00.00 netns
      7 root       0 -20       0      0      0 I   0.0   0.0   0:00.00 kworker/0:0H-events_highpri
      8 root      20   0       0      0      0 I   0.0   0.0   0:00.09 kworker/0:1-cgroup_destroy
      9 root      20   0       0      0      0 I   0.0   0.0   0:00.04 kworker/u30:0-events_power_efficient
     10 root       0 -20       0      0      0 I   0.0   0.0   0:00.00 mm_percpu_wq
     11 root      20   0       0      0      0 S   0.0   0.0   0:00.00 rcu_tasks_rude_
     12 root      20   0       0      0      0 S   0.0   0.0   0:00.00 rcu_tasks_trace
     13 root      20   0       0      0      0 S   0.0   0.0   0:00.07 ksoftirqd/0
     14 root      20   0       0      0      0 I   0.0   0.0   0:00.46 rcu_sched
     15 root      rt   0       0      0      0 S   0.0   0.0   0:00.00 migration/0
     16 root     -51   0       0      0      0 S   0.0   0.0   0:00.00 idle_inject/0
     17 root      20   0       0      0      0 S   0.0   0.0   0:00.00 cpuhp/0
     18 root      20   0       0      0      0 S   0.0   0.0   0:00.00 kdevtmpfs
     19 root       0 -20       0      0      0 I   0.0   0.0   0:00.00 inet_frag_wq
     20 root      20   0       0      0      0 S   0.0   0.0   0:00.00 kauditd
     21 root      20   0       0      0      0 S   0.0   0.0   0:00.00 khungtaskd
     22 root      20   0       0      0      0 S   0.0   0.0   0:00.00 oom_reaper
     23 root       0 -20       0      0      0 I   0.0   0.0   0:00.00 writeback
     24 root      20   0       0      0      0 S   0.0   0.0   0:00.03 kcompactd0
     25 root      25   5       0      0      0 S   0.0   0.0   0:00.00 ksmd
     26 root      39  19       0      0      0 S   0.0   0.0   0:00.00 khugepaged
     72 root       0 -20       0      0      0 I   0.0   0.0   0:00.00 kintegrityd
     73 root       0 -20       0      0      0 I   0.0   0.0   0:00.00 kblockd
     74 root       0 -20       0      0      0 I   0.0   0.0   0:00.00 blkcg_punt_bio
     75 root      20   0       0      0      0 S   0.0   0.0   0:00.00 xen-balloon
     76 root       0 -20       0      0      0 I   0.0   0.0   0:00.00 tpm_dev_wq
     77 root       0 -20       0      0      0 I   0.0   0.0   0:00.00 ata_sff
     78 root       0 -20       0      0      0 I   0.0   0.0   0:00.00 md
     79 root       0 -20       0      0      0 I   0.0   0.0   0:00.00 edac-poller
     80 root       0 -20       0      0      0 I   0.0   0.0   0:00.00 devfreq_wq
     81 root     -51   0       0      0      0 S   0.0   0.0   0:00.00 watchdogd
     84 root       0 -20       0      0      0 I   0.0   0.0   0:00.03 kworker/0:1H-kblockd
     86 root      20   0       0      0      0 S   0.0   0.0   0:00.00 kswapd0
```

```
ubuntu@ip-172-31-15-14:~$ ps -ef
UID        PID   PPID  C STIME TTY          TIME CMD
root         1      0  0 18:59 ?        00:00:05 /sbin/init
root         2      0  0 18:59 ?        00:00:00 [kthreadd]
root         3      2  0 18:59 ?        00:00:00 [rcu_gp]
root         4      2  0 18:59 ?        00:00:00 [rcu_par_gp]
root         5      2  0 18:59 ?        00:00:00 [netns]
root         7      2  0 18:59 ?        00:00:00 [kworker/0:0H-events_highpri]
root         8      2  0 18:59 ?        00:00:00 [kworker/0:1-cgroup_destroy]
root         9      2  0 18:59 ?        00:00:00 [kworker/u30:0-events_unbound]
root        10      2  0 18:59 ?        00:00:00 [mm_percpu_wq]
root        11      2  0 18:59 ?        00:00:00 [rcu_tasks_rude_]
root        12      2  0 18:59 ?        00:00:00 [rcu_tasks_trace]
root        13      2  0 18:59 ?        00:00:00 [ksoftirqd/0]
root        14      2  0 18:59 ?        00:00:00 [rcu_sched]
root        15      2  0 18:59 ?        00:00:00 [migration/0]
root        16      2  0 18:59 ?        00:00:00 [idle_inject/0]
root        17      2  0 18:59 ?        00:00:00 [cpuhp/0]
root        18      2  0 18:59 ?        00:00:00 [kdevtmpfs]
root        19      2  0 18:59 ?        00:00:00 [inet_frag_wq]
root        20      2  0 18:59 ?        00:00:00 [kauditd]
root        21      2  0 18:59 ?        00:00:00 [khungtaskd]
root        22      2  0 18:59 ?        00:00:00 [oom_reaper]
root        23      2  0 18:59 ?        00:00:00 [writeback]
root        24      2  0 18:59 ?        00:00:00 [kcompactd0]
root        25      2  0 18:59 ?        00:00:00 [ksmd]
root        26      2  0 18:59 ?        00:00:00 [khugepaged]
root        72      2  0 18:59 ?        00:00:00 [kintegrityd]
root        73      2  0 18:59 ?        00:00:00 [kblockd]
root        74      2  0 18:59 ?        00:00:00 [blkcg_punt_bio]
root        75      2  0 18:59 ?        00:00:00 [xen-balloon]
root        76      2  0 18:59 ?        00:00:00 [tpm_dev_wq]
root        77      2  0 18:59 ?        00:00:00 [ata_sff]
root        78      2  0 18:59 ?        00:00:00 [md]
root        79      2  0 18:59 ?        00:00:00 [edac-poller]
root        80      2  0 18:59 ?        00:00:00 [devfreq_wq]
root        81      2  0 18:59 ?        00:00:00 [watchdogd]
root        84      2  0 18:59 ?        00:00:00 [kworker/0:1H-kblockd]
root        86      2  0 18:59 ?        00:00:00 [kswapd0]
root        87      2  0 18:59 ?        00:00:00 [ecryptfs-kthrea]
root        89      2  0 18:59 ?        00:00:00 [kthrotld]
root        90      2  0 18:59 ?        00:00:00 [acpi_thermal_pm]
root        91      2  0 18:59 ?        00:00:00 [xenbus]
root        92      2  0 18:59 ?        00:00:00 [xenwatch]
```

```
ubuntu@ip-172-31-15-14:~$ cd Dir1
ubuntu@ip-172-31-15-14:~/Dir1$ echo "Hello world" > file1.txt
ubuntu@ip-172-31-15-14:~/Dir1$ cat file1.txt
Hello world
ubuntu@ip-172-31-15-14:~/Dir1$
```

```
ubuntu@ip-172-31-15-14:~$ echo $PATH
/usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin:/sbin:/bin:/usr/games:/usr/local/games:/snap/bin
ubuntu@ip-172-31-15-14:~$ env
SHELL=/bin/bash
PWD=/home/ubuntu
LOGNAME=ubuntu
XDG_SESSION_TYPE=tty
MOTD_SHOWN=pam
HOME=/home/ubuntu
LANG=C.UTF-8
LS_COLORS=rs=0:di=01;34:ln=01;36:mh=00:pi=40;33:so=01;35:do=01;35:bd=40;33;01:cd=40;33;01:or=40;31;01:mi=00:su=37;41:sg=30;43:ca=30;41:tw=30;42:ow=34;42:st=37;44:ex=01;
32:*.tar=01;31:*.tgz=01;31:*.arc=01;31:*.arj=01;31:*.taz=01;31:*.lha=01;31:*.lz4=01;31:*.lzh=01;31:*.lzma=01;31:*.tlz=01;31:*.txz=01;31:*.tzo=01;31:*.t7z=01;31:*.zip=01
;31:*.z=01;31:*.dz=01;31:*.gz=01;31:*.lrz=01;31:*.lz=01;31:*.lzo=01;31:*.xz=01;31:*.zst=01;31:*.tzst=01;31:*.bz2=01;31:*.bz=01;31:*.tbz=01;31:*.tbz2=01;31:*.tz=01;31:*.
deb=01;31:*.rpm=01;31:*.jar=01;31:*.war=01;31:*.ear=01;31:*.sar=01;31:*.rar=01;31:*.alz=01;31:*.ace=01;31:*.zoo=01;31:*.cpio=01;31:*.7z=01;31:*.rz=01;31:*.cab=01;31:*.w
im=01;31:*.swm=01;31:*.dwm=01;31:*.esd=01;31:*.jpg=01;35:*.jpeg=01;35:*.mjpg=01;35:*.mjpeg=01;35:*.gif=01;35:*.bmp=01;35:*.pbm=01;35:*.pgm=01;35:*.ppm=01;35:*.tga=01;35
:*.xbm=01;35:*.xpm=01;35:*.tif=01;35:*.tiff=01;35:*.png=01;35:*.svg=01;35:*.svgz=01;35:*.mng=01;35:*.pcx=01;35:*.mov=01;35:*.mpg=01;35:*.mpeg=01;35:*.m2v=01;35:*.mkv=01
;35:*.webm=01;35:*.webp=01;35:*.ogm=01;35:*.mp4=01;35:*.m4v=01;35:*.mp4v=01;35:*.vob=01;35:*.qt=01;35:*.nuv=01;35:*.wmv=01;35:*.asf=01;35:*.rm=01;35:*.rmvb=01;35:*.flc=
01;35:*.avi=01;35:*.fli=01;35:*.flv=01;35:*.gl=01;35:*.dl=01;35:*.xcf=01;35:*.xwd=01;35:*.yuv=01;35:*.cgm=01;35:*.emf=01;35:*.ogv=01;35:*.ogx=01;35:*.aac=00;36:*.au=00;
36:*.flac=00;36:*.m4a=00;36:*.mid=00;36:*.midi=00;36:*.mka=00;36:*.mp3=00;36:*.mpc=00;36:*.ogg=00;36:*.ra=00;36:*.wav=00;36:*.oga=00;36:*.opus=00;36:*.spx=00;36:*.xspf=
00;36:
SSH_CONNECTION=182.70.18.19 51880 172.31.15.14 22
LESSCLOSE=/usr/bin/lesspipe %s %s
XDG_SESSION_CLASS=user
TERM=xterm
LESSOPEN=| /usr/bin/lesspipe %s
USER=ubuntu
SHLVL=1
XDG_SESSION_ID=1
XDG_RUNTIME_DIR=/run/user/1000
SSH_CLIENT=182.70.18.19 51880 22
XDG_DATA_DIRS=/usr/local/share:/usr/share:/var/lib/snapd/desktop
PATH=/usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin:/sbin:/bin:/usr/games:/usr/local/games:/snap/bin
DBUS_SESSION_BUS_ADDRESS=unix:path=/run/user/1000/bus
SSH_TTY=/dev/pts/0
_=/usr/bin/env
OLDPWD=/home/ubuntu/Dir1
ubuntu@ip-172-31-15-14:~$
```

```
ubuntu@ip-172-31-15-14:~$ cd Dir1
ubuntu@ip-172-31-15-14:~/Dir1$ head file1.txt
Hello world
ubuntu@ip-172-31-15-14:~/Dir1$
```

```
ubuntu@ip-172-31-15-14:~$ sudo apt -y install net-tools
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
net-tools is already the newest version (1.60+git20181103.0eebece-1ubuntu5).
0 upgraded, 0 newly installed, 0 to remove and 0 not upgraded.
ubuntu@ip-172-31-15-14:~$
```