Command to get CPU server load in % percentage using bash and /proc/stat on Linux

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```
root@pcfreak:~# while [ 1 ]; do :;sleep=1;CPU=(`cat /proc/stat | head -n 1`);PRE
V_TOTAL=0;for VALUE in "${CPU[@]}"; do let "PREV_TOTAL=$PREV_TOTAL+$VALUE";done;
PREV_IDLE=${CPU[4]};sleep $sleep; CPU=(`cat /proc/stat | head -n 1`);unset CPU[0
];IDLE=${CPU[4]};TOTAL=0; for VALUE in "${CPU[@]}"; do let "TOTAL=$TOTAL+$VALUE"
; done;echo $(echo "scale=2; ((($sleep*1000)*(($TOTAL-$PREV_TOTAL)-($IDLE-$PREV_
IDLE))/($TOTAL-$PREV_TOTAL))/10)" | bc -l ); done
100.00
100.00
82.17
27.58
100.00
100.00
42.43
.99
.99
0
.49
.49
0
0
0
```

   Getting load avarage is easy with uptime command, however since nowadays Linux servers are running on multiple CPU machines and Dual cores, returned load avarage shows only information concerning a single processor. Of course [seeing overall CPU server load is possible with TOP / TLoad command / HTOP](#) and a bunch of other monitoring commands, but how you can get a CPU percentage server load using just /proc/stat and bash scripting? Here is hwo:

:;sleep=1;CPU=(`cat /proc/stat | head -n 1`);PREV_TOTAL=0;for VALUE in "${CPU[@]}";
do let "PREV_TOTAL=$PREV_TOTAL+$VALUE";done;PREV_IDLE=${CPU[4]};sleep
$sleep; CPU=(`cat /proc/stat | head -n 1`);unset CPU[0];IDLE=${CPU[4]};TOTAL=0; for
VALUE in "${CPU[@]}"; do let "TOTAL=$TOTAL+$VALUE"; done;echo $(echo "scale=2; (

((\$sleep*1000)*((\$TOTAL-\$PREV_TOTAL)-(\$IDLE-\$PREV_IDLE))/(\$TOTAL-\$PREV_TOT AL))/10)" | bc -l);

52.45

  As you can see command output shows CPU is loaded on 52.45%, so this server will soon have to be replaced with better hardware, because it gets CPU loaded over 50%

  It is **useful to use above bash shell command one liner together with little for loop to refresh output every few seconds and see how the CPU is loaded in percentage over time.**

```
for i in $(seq 0 10); do :;sleep=1;CPU=(`cat /proc/stat | head -n 1`);PREV_TOTAL=0;for VALUE in "${CPU[@]}"; do let "PREV_TOTAL=$PREV_TOTAL+$VALUE";done;PREV_IDLE=${CPU[4]};sleep $sleep; CPU=(`cat /proc/stat | head -n 1`);unset CPU[0];IDLE=${CPU[4]};TOTAL=0; for VALUE in "${CPU[@]}"; do let "TOTAL=$TOTAL+$VALUE"; done;echo $(echo "scale=2; ((($sleep*1000)*(($TOTAL-$PREV_TOTAL)-($IDLE-$PREV_IDLE))/($TOTAL-$PREV_TOTAL))/10)" | bc -l ); done
```

47.50

13.86
27.36
82.67
77.18

  To monitor "forever" output from all server processor overall load use:

```
while [ 1 ]; do :;sleep=1;CPU=(`cat /proc/stat | head -n 1`);PREV_TOTAL=0;for VALUE in "${CPU[@]}"; do let "PREV_TOTAL=$PREV_TOTAL+$VALUE";done;PREV_IDLE=${CPU[4]};sleep $sleep; CPU=(`cat /proc/stat | head -n 1`);unset CPU[0];IDLE=${CPU[4]};TOTAL=0; for VALUE in "${CPU[@]}"; do let "TOTAL=$TOTAL+$VALUE"; done;echo $(echo "scale=2; ((($sleep*10
```

00)*(($TOTAL-$PREV_TOTAL)-($IDLE-$PREV_IDLE))/($TOTAL-$PREV_TOTAL))/10)" |
bc -l); done
...