mpstat manual page

NAME

mpstat - Report processors related statistics.

SYNOPSIS

mpstat [-A] [-u] [-V] [-I { SUM | CPU | SCPU | ALL }] [-P { cpu [,...] | ON | ALL }] [interval [count]]

DESCRIPTION

The mpstat command writes to standard output activities for each available processor, processor 0 being the first one. Global average activities among all processors are also reported. The mpstat command can be used both on SMP and UP machines, but in the latter, only global average activities will be printed. If no activity has been selected, then the default report is the CPU utilization report.

The interval parameter specifies the amount of time in seconds between each report. A value of 0 (or no parameters at all) indicates that processors statistics are to be reported for the time since system startup (boot). The count parameter can be specified in conjunction with the interval parameter if this one is

not set to zero. The value of count determines the number of reports generated at interval seconds apart. If the interval parameter is specified without the count parameter, the mpstat command generates reports continuously.

OPTIONS

-A

This option is equivalent to specifying -u -I ALL -P ALL.

-I { SUM | CPU | SCPU | ALL }

Report interrupts statistics.
With the **SUM** keyword, the mpstat command reports the total number of interrupts per processor. The following values are displayed:

CPU

Processor number. The keyword "all" indicates that statistics are calculated as averages among all processors.

intr/s

Show the total number of interrupts received per second by the CPU or CPUs.

With the **CPU** keyword, the number of each individual interrupt received per second by the CPU or CPUs is displayed. Interrupts are those listed in /proc/interrupts file.

With the **SCPU** keyword, the number of each individual software interrupt received per second by the CPU or CPUs is displayed. This option works only with kernels 2.6.31 and later. Software interrupts are those listed in /proc/softirqs file.

The **ALL** keyword is equivalent to specifying all the keywords above and therefore all the interrupts statistics are displayed.

-P { cpu [,...] | ON | ALL }

Indicate the processor number for which statistics are to be reported. cpu is the processor number. Note that processor 0 is the first processor. The **ON** keyword indicates that statistics are to be reported for every online processor, whereas the **ALL** keyword indicates that statistics are to be reported for all processors.

-u

Report CPU utilization. The following values are displayed:

CPU

Processor number. The keyword all indicates that statistics are calculated as averages among all processors.

%usr

Show the percentage of CPU utilization that occurred while executing at the user level (application).

%nice

Show the percentage of CPU utilization that occurred while executing at the user level with nice priority.

%sys

Show the percentage of CPU utilization that occurred while executing at the system level (kernel). Note that this does not include time spent servicing hardware and software interrupts.

%iowait

Show the percentage of time that the CPU or CPUs were idle during which the system had an outstanding disk I/O request.

%irq

Show the percentage of time spent by the CPU or CPUs to service hardware interrupts.

%soft

Show the percentage of time spent by the CPU or CPUs to service software interrupts.

%steal

Show the percentage of time spent in involuntary wait by the virtual CPU or CPUs while the hypervisor was servicing another virtual processor.

%guest

Show the percentage of time spent by the CPU or CPUs to run a virtual processor.

%gnice

Show the percentage of time spent by the CPU or CPUs to run a niced guest.

%idle

Show the percentage of time that the CPU or CPUs were idle and the system did not have an outstanding disk I/O request.

Note: On SMP machines a processor that does not have any activity at all is a disabled (offline) processor.

-V

Print version number then exit.

ENVIRONMENT

The mpstat command takes into account the following environment variable:

S_TIME_FORMAT

If this variable exists and its value is **ISO** then the current locale will be ignored when printing the date in the report header. The mpstat command will use the ISO 8601 format (YYYY-MM-DD) instead.

EXAMPLES

```
mpstat 2 5
```

Display five reports of global statistics among all processors at two second intervals.

```
mpstat -P ALL 2 5
```

Display five reports of statistics for all processors at two second intervals.

BUGS

/proc filesystem must be mounted for the mpstat command to work.
Only a few activities are given by the Linux kernel for each processor.

FILES

/proc contains various files with system statistics.

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SEE ALSO

sar(1), iostat(1), pidstat(1), vmstat(8)

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