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Red Hat Enterprise Linux Release 9.2 Manual Pages on 'cpupower-set.1' command

$ man cpupower-set.1

CPUPOWER-SET(1) cpupower Manual CPUPOWER-SET(1)

NAME

cpupower-set - Set processor power related kernel or hardware configu? rations

SYNOPSIS

cpupower set [-b VAL]

DESCRIPTION

cpupower set sets kernel configurations or directly accesses hardware registers affecting processor power saving policies.

Some options are platform wide, some affect single cores. By default values are applied on all cores. How to modify single core configura? tions is described in the cpupower(1) manpage in the --cpu option sec? tion. Whether an option affects the whole system or can be applied to individual cores is described in the Options sections.

Use cpupower info to read out current settings and whether they are supported on the system at all.

Options

--perf-bias, -b

Sets a register on supported Intel processore which allows software to convey its policy for the relative importance of performance versus energy savings to the processor.

The range of valid numbers is 0-15, where 0 is maximum performance and 15 is maximum energy efficiency.

The processor uses this information in model-specific ways when it must select trade-offs between performance and energy efficiency.

This policy hint does not supersede Processor Performance states (P-states) or CPU Idle power states (C-states), but allows software to have influence where it would otherwise be unable to express a preference.

For example, this setting may tell the hardware how aggressively or conservatively to control frequency in the "turbo range" above the explicitly OS-controlled P-state frequency range. It may also tell the hardware how aggressively it should enter the OS requested C-states.

This option can be applied to individual cores only via the --cpu option, cpupower(1).

Setting the performance bias value on one CPU can modify the set? ting on related CPUs as well (for example all CPUs on one socket), because of hardware restrictions. Use cpupower -c all info -b to verify.

This options needs the msr kernel driver (CONFIG_X86_MSR) loaded.

SEE ALSO

cpupower-info(1), cpupower-monitor(1), powertop(1)

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