

NAME

powerd - system power control utility

SYNOPSIS

powerd [-a *mode*] [-b *mode*] [-i *percent*] [-M *freq*] [-m *freq*] [-N] [-n *mode*] [-P *pidfile*] [-p *ival*]
[-r *percent*] [-s *source*] [-v]

DESCRIPTION

The **powerd** utility monitors the system state and sets various power control options accordingly. It offers power-saving modes that can be individually selected for operation on AC power or batteries.

maximum Choose the highest performance values. May be abbreviated as **max**.

minimum Choose the lowest performance values to get the most power savings. May be abbreviated as **min**.

adaptive Attempt to strike a balance by degrading performance when the system appears idle and increasing it when the system is busy. It offers a good balance between a small performance loss for greatly increased power savings. May be abbreviated as **adp**.

hiadaptive Like **adaptive** mode, but tuned for systems where performance and interactivity are more important than power consumption. It increases frequency faster, reduces frequency less aggressively, and will maintain full frequency for longer. May be abbreviated as **hadp**.

The default mode is **adaptive** for battery power and **hiadaptive** for the rest.

powerd recognizes these runtime options:

-a *mode* Selects the *mode* to use while on AC power.

-b *mode* Selects the *mode* to use while on battery power.

-i *percent* Specifies the CPU load percent level when adaptive mode should begin to degrade performance to save power. The default is 50% or lower.

-M *freq* Specifies the maximum frequency to throttle up to.

-m *freq* Specifies the minimum frequency to throttle down to.

-N Treat "nice" time as idle for the purpose of load calculation; i.e., do not increase the CPU

frequency if the CPU is only busy with "nice" processes.

- n mode** Selects the *mode* to use normally when the AC line state is unknown.
- P pidfile** Specifies an alternative file in which the process ID should be stored.
- p ival** Specifies a different polling interval (in milliseconds) for AC line state and system idle levels. The default is 250 ms.
- r percent** Specifies the CPU load percent level where adaptive mode should consider the CPU running and increase performance. The default is 75% or higher.
- s source** Enforces method for AC line state refresh; by default, it is chosen automatically. The set of valid methods is **sysctl**, **devd** and **apm** (i386 only).
- v** Verbose mode. Messages about power changes will be printed to stdout and **powerd** will operate in the foreground.

FILES

/var/run/powerd.pid The default PID file.

SEE ALSO

acpi(4), *apm(4)*, *cpufreq(4)*, *rc.conf(5)*

HISTORY

The **powerd** utility first appeared in FreeBSD 6.0.

AUTHORS

Colin Percival first wrote **estctrl**, the utility that **powerd** is based on. Nate Lawson then updated it for *cpufreq(4)*, added features, and wrote this manual page.

BUGS

The **powerd** utility should also power down idle disks and other components besides the CPU.

If **powerd** is used with */etc/rc.d/power_profile*, they may override each other.

The **powerd** utility should probably use the *devctl(4)* interface instead of polling for AC line state.