Rocky Enterprise Linux 9.2 Manual Pages on command 'thermald.8'

$ man thermald.8

thermald(8)   System Manager's Manual   thermald(8)

NAME

   thermald - start Linux thermal daemon

SYNOPSIS

   thermald [OPTIONS]

DESCRIPTION

   thermald is a Linux daemon used to prevent the overheating of platforms. This daemon moni?

   tors temperature and applies compensation using available cooling methods.

   By default, it monitors CPU temperature using available CPU digital temperature sensors

   and maintains CPU temperature under control, before HW takes aggressive correction action.

   Thermal daemon looks for thermal sensors and thermal cooling drivers in the Linux thermal

   sysfs (/sys/class/thermal) and builds a list of sensors and cooling drivers. Each of the

   thermal sensors can optionally be binded to a cooling driver by the in kernel drivers. In

   this case the Linux kernel thermal core can directly take actions based on the temperature

   trip points, for each sensor and associated cooling device. For example a trip temperature

   X in a sensor can be associates a cooling driver Y. So when the sensor temperature = X,

   the cooling driver "Y" is activated.

   Thermal daemon allows one to change this relationship or add new one via a thermal config?

   uration file (thermal-conf.xml). This file is automatically created (thermal-

   conf.xml.auto) and used, if the platform has ACPI thermal relationship table. If not this

   needs to be manually configured.

   For manual configuration refer to the manual page of the thermal-conf.xml.

   In some newer platforms the auto creation of the config file is done by a companion tool

"dptfxtract". This tool can be downloaded from "https://github.com/intel/dptfxtract". It is suggested as parts of the install process, run dptfxtract.

There can be multiple configuration files. User can select a configuration file via -con? fig-file option to override the default selection. The default selection picks one of the file in the following order:

- /etc/thermald/thermal-conf.xml.auto

- /var/run/thermald/thermal-conf.xml.auto

- /etc/thermald/thermal-conf.xml

(*Assuming configure prefix=/ is used during build.)

There is another companion tool "ThermalMonitor", which presents a graphical front end. This allows the monitoring of sensors and changing of thermal trips to give the user more control. The source code of "ThermalMonitor" is a part of the thermald github source, in the tools folder.

OPTIONS

    -h, --help

        Show help options.

    --version

        Print thermald version and exit.

    --no-daemon

        Don't become a daemon: Default is daemon mode.

    --loglevel=info

        log severity: info level and up.

    --loglevel=debug

        log severity: debug level and up: Max logging.

    --poll-interval

        Poll interval in seconds: Poll for zone temperature changes. To disable polling, set to zero. Polling can only be disabled, if available temperature sensors can no? tify temperature change asynchronously.

    --dbus-enable

        Enable Dbus.

    --exclusive-control

        Act as exclusive thermal controller. This will use user-space governor for thermal sysfs and take over control.

--ignore-cpuid-check

    Ignore cpuid check for supported CPU models.

--config-file

    Specify thermal-conf.xml path and ignore default thermal-conf.xml.

--ignore-default-control

    Ignore default CPU temperature control. Strictly follow thermal-conf.xml or ther?

    mal-conf.xml.auto.

--workaround-enabled

    Enable special workarounds for RAPL MMIO power limit and TCC offset every 30 sec?

    onds. This helps to disable RAPL MMIO when not used and adjust TCC offset in cer?

    tain Lenovo laptops.

--disable-active-power

    Disable active power management. This will not set active power limits using RAPL

    MMIO. This may result in constrained performance, if the system boots up with lower

    power limits.

--adaptive

    Use DPTF adaptive tables when present. This will ignore thermald config via xml

    files.

--test-mode

    Force use adaptive mode and exit if not supported, instead of restarting in non

    adaptive mode. This option is primarily for developers.

--systemd

    Assume that thermald is started by systemd. This will prevent running as daemon ir?

    respective of --no-daemon option.

--ignore-critical-trip

    If the configuration defined a critical temperature point, which is too low, this

    option will avoid shutting down the system on reaching this temperature limit.

SEE ALSO

    thermal-conf.xml(5)