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### ***Rocky Enterprise Linux 9.2 Manual Pages on command 'mcelog.triggers.5'***

#### ***\$ man mcelog.triggers.5***

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#### NAME

mcelog.triggers - mcelog trigger scripts reference

#### SYNOPSIS

- /etc/mcelog/bus-error-trigger
- /etc/mcelog/cache-error-trigger
- /etc/mcelog/dimm-error-trigger
- /etc/mcelog/iomca-error-trigger
- /etc/mcelog/page-error-trigger
- /etc/mcelog/socket-memory-error-trigger
- /etc/mcelog/unknown-error-trigger

#### DESCRIPTION

mcelog(8) maintains thresholds of errors using a leaky-bucket algorithm. When the number of errors in a specific time window exceeds a pre-configured threshold a trigger will be executed. Triggers are usually shell scripts in the /etc/mcelog directory but can be also other internal actions. Thresholds and triggers can be configured in mcelog.conf(5)

Trigger will run as the user configured for mcelog in `mcelog.conf`, by default `root`. The default trigger action can be overridden by specifying a different trigger script in the configuration file. Actions in addition to the default trigger (like notifying an administrator) can be put into the respective `/etc/mcelog/*.local` script which is executed after the default action. This allows updating the default scripts without overriding local actions. All trigger actions are also logged to `syslog`.

The DIMM and socket memory error triggers

The `/etc/mcelog/dimm-error-trigger` and `/etc/mcelog/socket-memory-error-trigger` scripts are executed when a DIMM or a CPU socket exceeds a configured corrected or uncorrected memory error threshold. The thresholds are configured in the `mcelog.conf` `[dimm]` and `[socket]` sections. The default triggers log a warning message in the system log. The triggers are only executed when `mcelog` runs as a daemon.

Arguments are passed as environment variables

THRESHOLD      human readable threshold status

MESSAGE        Human readable consolidated error message

TOTALCOUNT    total corrected or uncorrected count of errors for current DIMM depending on what triggered the event

LOCATION        Consolidated location as a single string

DMI\_LOCATION   DIMM location from DMI/SMBIOS if available

DMI\_NAME       DIMM identifier from DMI/SMBIOS if available

DIMM           DIMM number reported by hardware

CHANNEL       Channel number reported by hardware

SOCKETID       Socket ID of CPU that includes the memory controller with the DIMM

CECOUNT       Total corrected error count for DIMM

UCCOUNT        Total uncorrected error count for DIMM

LASTEVENT      Time stamp of event that triggered threshold (in `time_t` format, seconds)

THRESHOLD\_COUNT Total number of events in current threshold time period of specific type

After the default action local actions in `/etc/mcelog/dimm-error-trigger.local` or respective `/etc/mcelog/socket-memory-error-trigger.local` are executed.

The page error trigger

The `/etc/mcelog/page-error-trigger` script is executed by `mcelog` in `daemon` mode when a page in memory exceeds a pre-configured corrected or uncorrected error threshold. `mcelog` internally also implements offlining the page through the kernel. This is configured through the `[page]` section of `mcelog.conf(5)`

The environment arguments are the same as for the `dimmem-error-trigger` script

After the default action local actions in `/etc/mcelog/page-error-trigger.local` are executed.

The cache error trigger

The `/etc/mcelog/cache-error-trigger` shell script is called for cache error handling in `daemon` mode when a CPU reports excessive corrected cache errors. This could be a indication for future uncorrected errors.

This trigger is configured through the `[cache]` section in the `mcelog.conf(5)` configuration file. The threshold is defined by the CPU.

The default trigger offlines the affected CPU cores, unless it is the last core running.

Arguments are passed as environment variables

MESSAGE Human readable error message  
CPU Linux CPU number that triggered the error  
LEVEL Cache level affected by error  
TYPE Cache type affected by error (Data,Instruction,Generic)  
AFFECTED\_CPUS List of CPUs sharing the affected cache  
SOCKETID Socket ID of affected CPU

After the default action local actions in `/etc/mcelog/cache-error-trigger.local` are executed.

The bus-uc-threshold-trigger

The `bus-uc-threshold-trigger` runs on uncorrected errors on a IO bus. It is configured through the `bus-uc-threshold-trigger` and `bus-uc-threshold-trigger-threshold` options in `/etc/mcelog.conf(5)`. By default it logs a message with the error location to the system log. After the

default action local actions in /etc/mcelog/bus-uc-error-trigger.local are executed.

Arguments are passed as environment variables

MESSAGE Human readable consolidated error message.

LOCATION Consolidated location as a single string

SOCKETID Socket ID of CPU that includes the memory controller with the DIMM

LEVEL Interconnect level

PARTICIPATION Processor Participation (Originator, Responder or Observer)

REQUEST Request type (read, write, prefetch, etc.)

ORIGIN Memory or IO

TIMEOUT The request timed out or not

The iomca-error-trigger

The iomca-error-trigger runs when a socket receives bus or interconnect errors. It is configured through the iomca-error-trigger and iomca-error-trigger-threshold options in /etc/mcelog.conf. By default it logs a message with the error location to the system log. After the default action local actions in /etc/mcelog/iomca-error-trigger.local are executed.

Arguments are passed as environment variables

MESSAGE Human readable consolidated error message

LOCATION Consolidated location as a single string

SOCKETID Socket ID of CPU that includes the memory controller with the DIMM

CPU Linux CPU number that triggered the error

SET PCI segment number

BUS PCI bus number

DEVICE PCI device number

FUNCTION PCI function number

The unknown-error-trigger

The unknown-error-trigger runs on any errors not otherwise categorized. It is configured through the unknown-error-trigger and unknown-error-trigger-threshold options in /etc/mcelog.conf. By default it logs a message to the system log. After the default action local actions in /etc/mcelog/unknown-error-trigger.local are executed.

Arguments are passed as environment variables

MESSAGE Human readable consolidated error message

LOCATION Consolidated location as a single string

SOCKETID Socket ID of CPU that includes the memory controller with the DIMM

CPU Linux CPU number that triggered the error

STATUS IA32\_MCi\_STATUS register value

ADDR IA32\_MCi\_ADDR register value

MISC IA32\_MCi\_MISC register value

MCGSTATUS IA32\_MCG\_STATUS register value

MCGCAP IA32\_MCG\_CAP register value

#### SEE ALSO

<http://www.mcelog.org>

mcelog(8), mcelog.conf(5)

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