NAME

gcache - control utility for CACHE GEOM class

SYNOPSIS

gcache create [**-v**] [**-b** *blocksize*] [**-s** *size*] *name prov*
gcache configure [**-v**] [**-b** *blocksize*] [**-s** *size*] *name*
gcache destroy [**-fv**] *name*
gcache label [**-v**] [**-b** *blocksize*] [**-s** *size*] *name prov*
gcache stop [**-fv**] *name ...*
gcache clear [**-v**] *prov ...*
gcache dump *prov ...*
gcache list
gcache status [**-s** *name*]
gcache load [**-v**]
gcache unload [**-v**]

DESCRIPTION

The **gcache** utility is used to control GEOM cache, which can speed up read performance by sending fixed size read requests to its consumer. It has been developed to address the problem of a horrible read performance of a 64k blocksize FS residing on a RAID3 array with 8 data components, where a single disk component would only get 8k read requests, thus effectively killing disk performance under high load.

Caching can be configured using two different methods: "manual" or "automatic". When using the "manual" method, no metadata are stored on the devices, so the cached device has to be configured by hand every time it is needed. The "automatic" method uses on-disk metadata to detect devices. Once devices are labeled, they will be automatically detected and configured.

The first argument to **gcache** indicates an action to be performed:

create Cache the given devices with specified *name*. This is the "manual" method. The kernel module *geom_cache.ko* will be loaded if it is not loaded already.

label Cache the given devices with the specified *name*. This is the "automatic" method, where metadata are stored in every device's last sector. The kernel module *geom_cache.ko* will be loaded if it is not loaded already.

stop Turn off existing cache device by its *name*. This command does not touch on-disk metadata!

destroy Same as **stop**.

clear Clear metadata on the given devices.

dump Dump metadata stored on the given devices.

list See geom(8).

status See geom(8).

load See geom(8).

unload See geom(8).

Additional options:

-f Force the removal of the specified cache device.

-v Be more verbose.

SYSCTL VARIABLES

The following sysctl(8) variables can be used to control the behavior of the **CACHE** GEOM class. The default value is shown next to each variable.

kern.geom.cache.used_hi: 20

kern.geom.cache.used_lo: 5

kern.geom.cache.idletime: 5

kern.geom.cache.timeout: 10

kern.geom.cache.enable: 1

kern.geom.cache.debug: 0

Debug level of the **CACHE** GEOM class. This can be set to a number between 0 and 3 inclusive. If set to 0 minimal debug information is printed, and if set to 3 the maximum amount of debug information is printed.

EXIT STATUS

Exit status is 0 on success, and 1 if the command fails.

SEE ALSO

geom(4), geom(8)

HISTORY

The **gcache** utility appeared in FreeBSD 7.0.

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