NAME

cfumass - USB device side support for Mass Storage Class Transport

SYNOPSIS

This driver can be compiled into the kernel by placing these lines in the kernel configuration file:

> **device usb**
> **device usb_template**
> **device ctl**
> **device cfumass**

The driver module can also be loaded at boot by adding this line to loader.conf(5):

> cfumass_load="YES"

DESCRIPTION

The **cfumass** driver provides device side support for emulating an USB mass storage device compliant with the USB Mass Storage Class Bulk-Only (BBB) Transport specification, implemented as a ctl(4) frontend driver.

To use **cfumass**:

- **cfumass** must be loaded as a module or compiled into the kernel.

- The USB Mass Storage template must be chosen by setting the *hw.usb.template* sysctl to 0.

- The USB OTG port must be working in USB device-side mode. This happens automatically upon connection to a USB host.

- There must be a ctl(4) LUN configured for the *cfumass* port.

Upon loading, the driver creates a ctl(4) port named *cfumass*, presenting the first LUN mapped for that port - usually LUN 0 - to the USB host. See ctl.conf(5) and ctld(8) for details on configuring the LUN. See the **cfumass_enable** and **cfumass_dir** rc(8) variables in rc.conf(5) for an automated way to configure it at boot.

SYSCTL VARIABLES

These variables are available as both sysctl(8) variables and loader(8) tunables:

hw.usb.cfumass.debug

Verbosity level for log messages from the **cfumass** driver. Set to 0 to disable logging or 1 to warn about potential problems. Larger values enable debugging output. Defaults to 1.

hw.usb.cfumass.ignore_stop
Ignore START STOP UNIT SCSI commands with START and LOEJ bits cleared. Some initiators send that command to stop the target when the user attempts to gracefully eject the drive, but fail to start it when the drive is reconnected. Set to 0 to handle the command in a standards-compliant way, 1 to ignore it and log a warning, or 2 to ignore it silently. Defaults to 1.

hw.usb.cfumass.max_lun
Max LUN number to report to the initiator (USB host). Must be between 0 and 15. Some initiators incorrectly handle values larger than 0. Defaults to 0.

SEE ALSO
ctl(4), umass(4), usb(4), usb_template(4), ctl.conf(5), ctld(8)

HISTORY
The **cfumass** driver first appeared in FreeBSD 11.1.

AUTHORS
The **cfumass** driver was developed by Edward Tomasz Napierala *<trasz@FreeBSD.org>* under sponsorship from the FreeBSD Foundation.