Red Hat Enterprise Linux Release 9.2 Manual Pages on 'smartpqi.4' command

$ man smartpqi.4

SMARTPQI(4)   Linux Programmer's Manual   SMARTPQI(4)

NAME

    smartpqi - Microsemi Smart Family SCSI driver

SYNOPSIS

    modprobe smartpqi [disable_device_id_wildcards={0|1}]

                [disable_heartbeat={0|1}]

                [disable_ctrl_shutdown={0|1}]

                [lockup_action={none|reboot|panic}]

                [expose_ld_first={0|1}] [hide_vsep={0|1}]

DESCRIPTION

    smartpqi is a SCSI driver for Microsemi Smart Family controllers.

  Supported ioctl() operations

    For compatibility with applications written for the cciss(4) and

    hpsa(4) drivers, many, but not all of the ioctl(2) operations supported

    by the hpsa driver are also supported by the smartpqi driver. The data

    structures used by these operations are described in the Linux kernel

    source file include/linux/cciss_ioctl.h.

    CCISS_DEREGDISK, CCISS_REGNEWDISK, CCISS_REGNEWD

        These operations all do exactly the same thing, which is to

        cause the driver to re-scan for new devices. This does exactly

        the same thing as writing to the smartpqi-specific host rescan

        attribute.

    CCISS_GETPCIINFO

This operation Returns the PCI domain, bus, device and function and "board ID" (PCI subsystem ID).

CCISS_GETDRIVVER

This operation returns the driver version in four bytes, encoded as:

(major_version << 28) | (minor_version << 24) |

(release << 16) | revision

CCISS_PASSTHRU

Allows BMIC and CISS commands to be passed through to the con?

troller.

Boot options

disable_device_id_wildcards={0|1}

Disables support for device ID wildcards. The default value is

0.

disable_heartbeat={0|1}

Disables support for the controller's heartbeat check. This pa?

rameter is used for debugging purposes. The default value is 0,

leaving the controller's heartbeat check active.

disable_ctrl_shutdown={0|1}

Disables support for shutting down the controller in the event

of a controller lockup. The default value is 0.

lockup_action={none|reboot|panic}

Specifies the action the driver takes when a controller lockup

is detected. The default action is none.

parameter   action

??

none   take controller offline only

reboot   reboot the system

panic   panic the system

expose_ld_first={0|1}

This option enables support for exposing logical devices to the

operating system before physical devices. The default value is

0.

hide_vsep={0|1}

This option enables disabling exposure of the virtual SEP to the

host.   This is usually associated with direct attached drives.

The default value is 0.

FILES

Device nodes

Logical drives are accessed via the SCSI disk driver (sd), tape drives

via the SCSI tape driver (st), and the RAID controller via the SCSI

generic driver (sg), with device nodes named /dev/sd*, /dev/st*, and

/dev/sg*, respectively.

SmartPQI-specific host attribute files in /sys

/sys/class/scsi_host/host*/rescan

The host rescan attribute is a write-only attribute. Writing to

this attribute will cause the driver to scan for new, changed,

or removed devices (e.g., hot-plugged tape drives, or newly con?

figured or deleted logical drives) and notify the SCSI mid-layer

of any changes detected. Usually this action is triggered auto?

matically by configuration changes, so the user should not nor?

mally have to write to this file. Doing so may be useful when

hot-plugging devices such as tape drives or entire storage boxes

containing pre-configured logical drives.

/sys/class/scsi_host/host*/version

The host version attribute is a read-only attribute. This at?

tribute contains the driver version and the controller firmware

version.

For example:

$ cat /sys/class/scsi_host/host1/version

driver: 1.1.2-126

firmware: 1.29-112

/sys/class/scsi_host/host*/lockup_action

The host lockup_action attribute is a read/write attribute.

This attribute will cause the driver to perform a specific ac?

tion in the unlikely event that a controller lockup has been de?

tected. See OPTIONS above for an explanation of the lockup_ac?

tion values.

/sys/class/scsi_host/host*/driver_version

The driver_version attribute is read-only. This attribute con?

tains the smartpqi driver version.

For example:

$ cat /sys/class/scsi_host/host1/driver_version

1.1.2-126

/sys/class/scsi_host/host*/firmware_version

The firmware_version attribute is read-only.   This attribute

contains the controller firmware version.

For example:

$ cat /sys/class/scsi_host/host1/firmware_version

1.29-112

/sys/class/scsi_host/host*/model

The model attribute is read-only. This attribute contains the

product identification string of the controller.

For example:

$ cat /sys/class/scsi_host/host1/model

1100-16i

/sys/class/scsi_host/host*/serial_number

The serial_number attribute is read-only. This attribute con?

tains the unique identification number of the controller.

For example:

$ cat /sys/class/scsi_host/host1/serial_number

6A316373777

/sys/class/scsi_host/host*/vendor

The vendor attribute is read-only. This attribute contains the

vendor identification string of the controller.

For example:

$ cat /sys/class/scsi_host/host1/vendor

Adaptec

In the file specifications below, c stands for the number of the appro‐
priate SCSI controller, b is the bus number, t the target number, and l
is the logical unit number (LUN).

/sys/class/scsi_disk/c:b:t:l/device/raid_level

The raid_level attribute is read-only. This attribute contains
the RAID level of each logical drive.

For example:

$ cat /sys/class/scsi_disk/4:0:0:0/device/raid_level

RAID 0

/sys/class/scsi_disk/c:b:t:l/device/sas_address

The sas_address attribute is read-only. This attribute contains
the unique identifier of the disk.

For example:

$ cat /sys/class/scsi_disk/1:0:3:0/device/sas_address

0x5001173d028543a2

/sys/class/scsi_disk/c:b:t:l/device/ssd_smart_path_enabled

The ssd_smart_path_enabled attribute is read-only. This attri‐
bute is for ioaccel-enabled volumes. (Ioaccel is an alternative
driver submission path that allows the driver to send I/O re‐
quests directly to backend SCSI devices, bypassing the con‐
troller firmware. This results in an increase in performance.
This method is used for HBA disks and for logical volumes com‐
prised of SSDs.) Contains 1 if ioaccel is enabled for the vol‐
ume and 0 otherwise.

For example:

$ cat /sys/class/scsi_disk/1:0:3:0/device/ssd_smart_path_enabled

0

VERSIONS

The smartpqi driver was added in Linux 4.9.

NOTES

Configuration

To configure a Microsemi Smart Family controller, refer to the User

Guide for the controller, which can be found by searching for the spe‐

cific controller at ?https://storage.microsemi.com/?.

SEE ALSO

cciss(4), hpsa(4), sd(4), st(4)

Documentation/ABI/testing/sysfs-bus-pci-devices-cciss in the Linux ker?

nel source tree.

COLOPHON

This page is part of release 5.10 of the Linux man-pages project.   A

description of the project, information about reporting bugs, and the

latest   version   of   this   page,   can   be   found   at

https://www.kernel.org/doc/man-pages/.

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