NAME

scsi_hba_attach_setup, scsi_hba_attach, scsi_hba_detach – SCSI HBA attach and detach routines

SYNOPSIS

#include <sys/scsi/scsi.h>

int scsi_hba_attach_setup(dev_info_t **dip,* **ddi_dma_attr_t** **hba_dma_attr***,**
scsi_hba_tran_t **hba_tran***, int** *hba_flags***);**

int scsi_hba_attach(dev_info_t **dip***, ddi_dma_lim_t** **hba_lim***,**
scsi_hba_tran_t **hba_tran***, int** *hba_flags***, void** **hba_options***);**

int scsi_hba_detach(dev_info_t **dip***);**

INTERFACE LEVEL

Solaris architecture specific (Solaris DDI).

ARGUMENTS

dip	A pointer to the **dev_info_t** structure, referring to the instance of the HBA device.
hba_lim	A pointer to a **ddi_dma_lim**(9S) structure.
hba_tran	A pointer to a **scsi_hba_tran**(9S) structure.
hba_flags	Flag modifiers. The only defined flag value is **SCSI_HBA_TRAN_CLONE**.
hba_options	Optional features provided by the HBA driver for future extensions; must be NULL.
hba_dma_attr	A pointer to a **ddi_dma_attr**(9S) structure.

DESCRIPTION

scsi_hba_attach_setup( ) is the recommended interface over **scsi_hba_attach( )**.

scsi_hba_attach_setup( )
scsi_hba_attach( )

scsi_hba_attach( ) registers the DMA limits *hba_lim* and the transport vectors *hba_tran* of each instance of the HBA device defined by *dip*. **scsi_hba_attach_setup( )** registers the DMA attributes *hba_dma_attr* and the transport vectors *hba_tran* of each instance of the HBA device defined by *dip*. The HBA driver can pass different DMA limits or DMA attributes, and transport vectors for each instance of the device, as necessary, to support any constraints imposed by the HBA itself.

scsi_hba_attach( ) and **scsi_hba_attach_setup( )** use the **dev_bus_ops** field in the **dev_ops**(9S) structure. The HBA driver should initialize this field to **NULL** before calling **scsi_hba_attach( )** or **scsi_hba_attach_setup( )**.

If **SCSI_HBA_TRAN_CLONE** is requested in *hba_flags*, the *hba_tran* structure will be cloned once for each target attached to the HBA. The cloning of the structure will occur before the **tran_tgt_init**(9E) entry point is called to initialize a target. At all subsequent HBA entry points, including **tran_tgt_init**(9E), the **scsi_hba_tran_t** structure passed as an argument or found in a **scsi_address** structure will be the ’cloned’ **scsi_hba_tran_t** structure, thus allowing the HBA to use the **tran_tgt_private** field in the **scsi_hba_tran_t** structure to point to per-target data. The HBA must take care to free only the same **scsi_hba_tran_t** structure it allocated when detaching; all ’cloned’ **scsi_hba_tran_t** structures allocated by the system will be freed by the system.

scsi_hba_attach( ) and **scsi_hba_attach_setup( )** attach a number of integer-valued properties to *dip*, unless properties of the same name are already attached to the node. An HBA driver should retrieve these configuration parameters via **ddi_prop_get_int**(9F), and respect any settings for features provided the HBA.

scsi-options optional SCSI configuration bits

- **SCSI_OPTIONS_DR** if not set, the HBA should not grant Disconnect privileges to target devices.
- **SCSI_OPTIONS_LINK** if not set, the HBA should not enable Linked Commands.
- **SCSI_OPTIONS_TAG** if not set, the HBA should not operate in Command Tagged Queueing mode.
- **SCSI_OPTIONS_FAST** if not set, the HBA should not operate the bus in FAST SCSI mode.
- **SCSI_OPTIONS_WIDE** if not set, the HBA should not operate the bus in WIDE SCSI mode.
- **SCSI_OPTIONS_SYNC** if not set, the HBA should not operate the bus in synchronous transfer mode.

scsi-reset-delay SCSI bus or device reset recovery time, in milliseconds.

scsi_hba_detach( )

scsi_hba_detach( ) removes the reference to the DMA limits or attributes structure and the transport vector for the given instance of an HBA driver.

RETURN VALUES

scsi_hba_attach( ), **scsi_hba_attach_setup( )**, and **scsi_hba_detach( )** return **DDI_SUCCESS** if the function call succeeds, and return **DDI_FAILURE** on failure.

CONTEXT

scsi_hba_attach( ) and **scsi_hba_attach_setup( )** should be called from **attach**(9E). **scsi_hba_detach( )** should be called from **detach**(9E).

SEE ALSO

attach(9E), **detach**(9E), **tran_tgt_init**(9E), **ddi_prop_get_int**(9F), **ddi_dma_attr**(9S), **ddi_dma_lim**(9S), **dev_ops**(9S), **scsi_address**(9S), **scsi_hba_tran**(9S)

Writing Device Drivers

NOTES

It is the HBA driver's responsibility to ensure that no more transport requests will be taken on behalf of any SCSI target device driver after **scsi_hba_detach( )** is called.