slha

Symbios Logic host adapter driver

Description

slha (BTLDPCI-3.04.ME) is the boot-time loadable driver (BTLD) for the 8xx family of Symbios Logic SCSI controllers. It directly supports:

Symbios Logic 53C810 (all 53c8xx SCSI I/O processors)
Symbios Logic 810A
Symbios Logic 815
Symbios Logic 825
Symbios Logic 825A
Symbios Logic 860
Symbios Logic 875

This driver dynamically maps interrupts, supports Fast and Wide SCSI, scatter/gather, and multiple host bus adapters (HBAs). In addition, this driver fully supports either single or multiple processor systems (multiple processor systems must also have the SCO Symmetrical Multiprocessing Support package installed).

slha works with all Symbios Logic 53c8xx SCSI I/O Processors. The 53C810, 815, and 825 are fully supported. The 53C810A and 825A are supported in legacy mode of 53C810 and 825, respectively. The Fast20 negotiation feature of the 53C860 and 875 is also supported. The SCRIPTs RAM operation of the 53C825A and 875 is not currently supported.

After installation, if you add additional Symbios Logic SCSI host bus adapters to the system, use the appropriate **mkdev** command for each device attached to the new host bus adapter. Then, rebuild the kernel, and reboot the system for the change to take effect.

Please refer to the *SCO Hardware Compatibility Handbook* to determine the support status of your host adapter, or contact your system supplier.

Configuring the slha driver

You can configure the **slha** driver using entries in */etc/conf/cf.d/mdevice* and */etc/conf/sdevice.d/slha*. See *mdevice*(F) and *sdevice*(F). Changes to these files will only take effect if the kernel is relinked using **link_unix**(ADM) and the machine rebooted.

Configure **slha** driver-specific characteristics by editing the */etc/conf/pack.d/slha/space.c* file.

Boot time configuration of SCSI

Use the **bootstring**(HW) parameters to override the default hardware configuration information. Of special interest are the **adapter=** parameter that specifies information for the host adapter card that plugs into or is part of the motherboard, and the ***periph=*** parameter that specifies information about the host adapter being used by one of the generic peripheral interfaces (**Sdsk**, **Srom**, or **Stp**).

ioctl commands

The **slha** driver supports all standard SCSI ioctls that are defined in the <*sys/scsicmd.h*> header file and documented on the **scsi**(HW) manual page.

Limitations

Shutting off power to an active CD-ROM drive may hang the shell using the CD-ROM.

If a disk drive capable of Fast-20 operation is attached to a Symbios Logic host bus adapter containing a SCSI chip that is not capable of Fast-20 operation, the system will hang. The Symbios Logic chips which support Fast-20 operation are the 53c860 and 53c875. This is a known problem and will be corrected in a later version of the Driver.

This driver defaults to not issuing Queue Tag messages to any SCSI devices, since at least one SCSI disk drive with a certain firmware level exhibits problems during high I/O operations with Queue Tagging. The driver does implement Queue Tagging. If Queue Tagging is desired, you can edit the file */etc/conf/pack.d/slha/space.c*, change the **slha_do_tagged** to 1 (near the end of the file), link edit the kernel and reboot the system. Some increase in I/O speed has been observed, but this change should be implemented in a non-critical system until the SCSI devices are proven to correctly implement Queue Tagging.

This driver defaults to not implementing an operating system feature known as "do_buffer". A system hang occurs on multiprocessor systems during bootup. We advise that you leave this feature OFF until the driver problem is corrected in a later version.

Diagnostics

See **messages**(M) for general information about kernel error messages, including a list of generic device driver errors.

Files

/usr/include/sys/scsicmd.h
SCSI interface header files

See also

boot(HW), **link_unix**(ADM), **mdevice**(F), **mkdev**(ADM), **sconf**(ADM), **scsi**(HW), **sdevice**(F)

Chapter 16, "Adding SCSI host adapters and peripherals" in the *SCO OpenServer Handbook*
SCO OpenServer *System Administration Guide*