

## SCS FAQ

- Where can I find documentation?

The SCS includes **man** pages for all the LSI commands and configuration files. There are 3 overview pages that are located to sections 1, 5, and 8. Section 1 contains user commands, section 8 contains administrator commands, and section 5 describes configuration files. Finally, there are a number of Linux HOWTO documents located in `/usr/local/doc`.

Example: **man 8 lsi**

- How do I change a device port name?

Port names are symlinks to the serial device ports (`/dev/ttyB*`). These symlinks are located in `/lsi/ports`. The **stty** command is used to change these links.

Example: **stty -F /dev/ttyB6 --name=six**

- Can I break someone else's connection to a device port?

Sometimes a user may leave an interactive connection (using `connect`) to a device port open for extended periods. No other user may access that port while the first connection is open. The root user can break that first connection with the **brk** command. (LSI also offers a timeout daemon that will log users off the SCS after a period of inactivity). The default use of the command will just end the user's interactive session, the `-l` option will also log the user off the SCS.

Example: **brk six**

Example: **brk -l 6**

- How do I exit interactive mode?

Press the keys: **ESC A**

- How do I send a break (when in interactive mode)?

Press the keys: **ESC B**

- How do I prevent sending a break (when in interactive mode)?

add `--nobreak` to the **connect** command

Example: **connect --nobreak port18**

- What command will list active connections?

**lsc**

- What command will list device port names?

**lsp**

- What command will save my settings?

**save**

- How do I tell which mode (DTE or DCE) a device port must be in?

For all ports, run: **pm --all**

For port x, run: **pm ttyBx**

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- How do I mount the CompactFlash so I can write to it?  
Normally, the CF is mounted read-only. In order to modify files not located in the RAM disk, the CF must be switched to read-write mode. This is done with the **mount** command. After the changes are made, you should put the CF back into read-only mode.  
read-write example: **mount -o remount,rw /**  
read-only example: **mount -o remount,ro /**
- How do I set up NFS?  
You must run **chkconfig** and **service** to enable the NFS services. Then you need to edit the file **/etc/fstab** to include the NFS mounts. The NFS services are: portmap, nfs, netfs.  
Example:  
**chkconfig portmap on**  
**chkconfig nfs on**  
**chkconfig netfs on**  
**service portmap start**  
**service nfs start**  
**service netfs start**
- What is **portlogger** and how do I use it?  
**portlogger** is a daemon that monitors data from a device port and can copy it to syslog, a file, or can email it. All three destinations should not be located on the SCS due to limited disk space. The email option has two modes: send email after 'N' characters have been received, or send email if a user-defined pattern is detected in the data stream. Refer to the man page and the HOWTO for **portlogd** (both are located on the SCS CompactFlash)
- I want to log device data to NFS or syslog.  
use **portlogger**
- How do I monitor serial data for strings?  
use **portlogger**
- How do I change my escape sequences (for connect)?  
The command **edituser** will change, on a per-user basis, the sequence of characters that **connect** uses to send a break or exit.
- How do I add users to the SCS?  
use **adduser** (not useradd)
- Why are users are being denied access to ports?  
Verify that the users are members of the groups 'scsusers' and 'monitor'. Users were probably created using useradd – you should be using **adduser**. Also, if you are using a remote database such as LDAP, TACACS, NIS, etc. to authenticate users, you must modify the database to include the users into the above groups. The group id's are 701 and 702 respectively.

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- How do I change the LSI group numbers for scsusers and monitor?  
refer to the comments in [/etc/sysconfig/lsi](#) and [/etc/rc/modules](#)
- How do I make serial port settings permanent?  
In the file [/etc/rc.serial](#), there is one line for each serial port. The file is executed during the boot up process. Making changes to this file will NOT change the port's current settings.
- How do I make a temporary change to a port's baud rate?  
The change will be lost the next time the SCS reboots.  
Example: **stty 19200 -F /dev/ttyB7**
- I can no longer communicate to an attached device.  
Run the **pm** command to determine the correct DTE/DCE setting. If software flow control is enabled, you may need to press Ctrl-Q.
- How do I connect to the DB9 port on my PC?  
PC's are DTE, DB9 male, use adapter the LSI adapter '0008
- How do I change the console port settings (baud rate etc.)  
Changes to console port 1 must be made in two places, the first controls the kernel while it is booting, the second controls the login process. Console port 2 only requires the login modification.  
For console ports 1 & 2 logins, edit [/etc/inittab](#) and modify the ttyS0 and/or ttyS1 lines. For the kernel boot process, edit [/etc/grub.conf](#). This file is located on a read-only partition, so you will need to run: **mount -o remount,rw /**  
Find the kernel line with 'console=ttyS0,9600n8', and make your changes.
- How do I enable telnet?  
To enable the telnet server, edit the file [/etc/xinetd.d/telnet](#) and change "disable=yes" to "disable=no"  
Then you must start the xinetd service with the commands:  
**service xinetd start**  
**chkconfig xinetd on**
- How do I change flow control options?  
temporary: run **stty**  
permanent: edit [/etc/rc.serial](#)
- How do I enable the 2<sup>nd</sup> console port  
edit [/etc/inittab](#)  
The 2<sup>nd</sup> port is fixed as DTE; to connect to a PC or terminal, a null-modem adapter is required.

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- How do I enable the 2<sup>nd</sup> network port

**netconfig -d eth1**

- I started a service, but it didn't start after a reboot  
Did you run **chkconfig** for that service?

- How do I change the network driver options

You must edit the file [/etc/modules.conf](#) and select the options line that you need. The format of this line is: `eepro100 options=eth0,eth1,eth2,...`. If you want to change just the eth1 settings, the line would be:

```
eepro100 options=,0x30
```

- How do I connect a modem to console port 1

We do not recommend connecting a modem to console port 1. Because that port is used by the BIOS and the kernel during the boot up process, it will send streams of data that the modem will try to interpret as commands. This usually results in the modem becoming hung. If you still want to connect a modem, here are the steps.

Console port 1 is set up to connect to a terminal or a PC (it is DCE). In order to communicate with a modem, a null-modem cable is needed, or an internal jumper on the SCS must be changed; this jumper will switch the port from DCE to DTE. The location of the jumper varies depending on the SCS model. It is a three pin header located near the console RJ45 connector.

The default 'getty' program that provides logins on the console port is not suitable for modems. You will need to edit the file [/etc/inittab](#) to modify the T0 line, and to insert a M0 line.

Here is the new T0 line – a '#' is inserted at the front of the line.

```
#T0:2345:respawn:/sbin/agetty -L 9600 ttyS0 vt100
```

Here is the inserted M0 line.

```
M0:2345:respawn:/sbin/mgetty -s 57600 -n 1 -D ttyS0
```

Finally, to activate the changes made to [/etc/inittab](#), you must run:

**telinit q**

There is a log file kept by mgetty that records its status, the file is located in [/var/log](#).

- How do I connect a modem to console port 2

Console port 2 is set up to connect to a modem (it is DTE). However, there is no 'getty' program running on that serial port. The file [/etc/inittab](#) must be edited. The line needed to use a modem with console port is already in the file, but is commented out. Find the line that starts with #M1, and remove the '#'. Save the file, and then run:

**telinit q**

There is a command that you can run that will edit the file for you; the command is:

**enablemodem**. You will need a special modem adapter from us, part number ADP-000018.

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- I have an internal modem, what do I do?

The same steps are required for an internal or external modem.

- How do I connect to a Cisco device that has a RJ45 connector?

Newer Cisco devices with a RJ45 connector for the console port can be connected to a SCS with a straight-thru cable and our port set as DCE (the default). However, Cisco does not use the RTS/CTS signals, so you can not use hardware flow control. Also, the `pm` command will report an adaptor error. If the Cisco device is not at 9600 baud, you will need to edit the file: [/etc/rc.serial](#).

- How do I connect a modem or terminal to one (or more) of the device ports?

We now (June 2006) support modems on all our serial ports except console 1. You need release 3.1-10 or later. To use a modem on console port 2, you will need a special modem adapter from us, part number ADP-000018. This adapter passes the DCD signal into the SCS.

- Can I do a factory restore?

You must create the file: [/.factoryrestore](#) on the SCS and then reboot the unit

```
mount -o remount,rw /  
touch /.factoryrestore  
reboot
```

- What is DTE/DCE?

The simple answer is: DCE is how modems are configured (carrier detect (DCD) is an output) DTE is how servers are configured (carrier detect (DCD) is an input) a DCE device can be connected to a DTE device with a straight through cable. connecting 2 DCE (or DTE) devices together require a null-modem or cross cable.

- How are the SCS console ports configured (DTE or DCE)?

Console port 1 on the SCS defaults to DCE, but can be changed to DTE via an internal jumper on the motherboard.

Console port 2 on the SCS (available on some models) is DTE and can not be changed.

- I can't get a response from my IBM or HP server.

IBM and HP servers are DTE devices, but they require the DCD signal to be present. You must use the LSI adapters ending in 009, 010, 011, or 012 to connect to them.

- How do I change the DTE/DCE mode of a port?

The program **stty** is used to change a ports' mode. Refer to the **stty** man page for more information on the command syntax. Also, the file [/etc/rc.serial](#) must be edited in order for the mode to take effect the next time the SCS is booted.

Example: **stty -F /dev/ttyB5 --mode=dte**

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- Why don't I see anything when I connect to my Linux Server?

Did you remember to edit the /etc/inittab file to run getty on the server's serial port? Also, the Linux kernel does not normally come with serial console port enabled. You may need to recompile the kernel with that option enabled. If all you want to see are log messages, then change the file /etc/syslog.conf to send log messages out the serial port.

- Where can I get more information?

This link has excellent data on serial connections:

<http://www.stokely.com/unix.serial.port.resources>

- What text editors are available on the SCS?

Besides **vi**, the following are available: **joe**, **jstar**, **jmacs**, **rjoe**, and **jpico**.

An alternative to **vi**, **joe** also emulates several other editors. **jstar** is a close imitation of WordStar with many "**joe**" extensions. **jpico** is a close imitation of the Pine mailing system's **pico** editor, but with many extensions and improvements. **jmacs** is a GNU-EMACS imitation. **rjoe** is a restricted version of **joe**, which allows you to edit only the files specified on the command line.

- I want to download an update, do I have to download all previous updates, or just the latest one?

Each update contains all the earlier ones, so you only need the latest set.

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- I've lost the root password, what do I do?

The root password can not be recovered. It can be reset by rebooting the SCS into single-user mode, and then running the command: `passwd`.

To enter single user mode, you must reboot the SCS.

Version 2.0 or later of the `lcd` program allows the SCS to be rebooted or powered off from the front panel. These options are accessed by pressing the up-arrow on the front panel. (to determine the version of the `lcd` program, run the command: `lcd -v`)

Note: if you don't have this version of the program, it can be downloaded from our ftp site and installed - after you have reset the root password.

If you can't do this (reboot the SCS) cleanly (by running `reboot` or from the front panel), then you must cycle the power on the SCS. You must also have a terminal/PC attached to the SCS console port.

The password can only be reset via the console port.

Steps:

reboot the SCS

(later releases of the SCS offer a GRUB option to directly enter single-user mode

if this option is present, select it and skip the next steps)

When GRUB comes up and is counting down, press 'e'

select the kernel line, and press 'e'

enter 'single' (without the quotes, but with the space before the s)

the line should now end with: `console=ttyS0,9600n8 single`

press the enter key

press 'b'

The SCS should start to boot.

When you get to a command prompt, you may enter a new root password by running the command: `passwd`.

When finished, enter: `reboot`