Document 95966

Preconfiguration and Maintenance Set-up Instructions

B-Series and D-Series

Disk Subsystem Manual

for all open systems platforms

Preconfiguration and Maintenance Set-up Instructions

for B-Series and D-Series Disk Subsystems

Information in this file is subject to change. In the event of changes, the information will be revised. Comments concerning its contents should be directed to:

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Summary of Changes

Date	Edition	Description
March 2003	Sixth	This original MS Word document has been converted to the StorageTek FrameMaker template—adding information on modem attachment and technical support (remote) access.

Preconfiguration and Maintenance Set-up Instructions

StorageTek recommends preconfiguration of your Disk Subsystem prior to attaching to the host. One of the following "tools" should be used.

- SANtricity Storage Manager Field Tool version 8.0 for early D-Series solutions
- The latest SMclient version 8.3 for Windows (field tool) software application for either D-Series or B-Series solutions

Note: SMclient includes full Field Tool functionality starting with version 8.3, provided you have controller firmware level 05.3x.xx installed. Use the following procedure prior to attaching to the customer host to ensure that your target IDs, IP address, and storage are properly assigned. This procedure also allows you to provide vital customer host-configuration information.

Preconfiguration Procedure

The following instructions are for the StorageTek B-Series and D-Series Disk Subsystems. Use this procedure **prior to attaching hosts** to help make sure that your installation goes smoothly. Preconfiguration helps the host recognize the back-end storage more readily. It minimizes the amount of reboots, and helps ensure that you don't interrupt the customer's business operations, thereby quickly getting the disk subsystem operational.

Prerequisites

Make sure that you have:

- Laptop running Windows NT Service Pack 4 or higher with ethernet card and open DB9 serial port (you may use open DB25, however, this requires a DB25-DB9 converter). The D173 requires a R-11 to R-45 serial adapter.
- Diagnostic serial cable 24100134
- DB9 serial connector adapter 10402019 (D173 adapter p/n is 24100205)
- Ethernet crossover cable 24100163
- STDSwin serial port program loaded on the laptop
- The latest level of Field Tool or SMclient loaded on the laptop.

Note: An Ethernet hub is recommended to enable attachment and communications to both controllers at the same time.

Procedure

Use this procedure to ensure that you can communicate with the disk subsystem and that you are ready to configure your disk susbsystem. This includes:

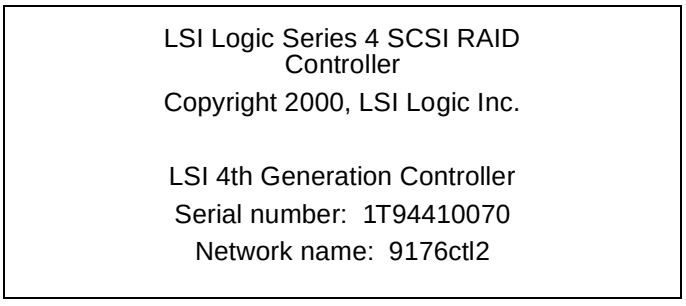
- identifying the configuration that is planned
- verifying the correct code levels
- verifying that previous configuration information has been removed
- verifying the ability to manage the subsystem.

Step 1: Obtain the following information from the customer

1. Number and size of RAID groups to be configured
2. Size and group of LUNs to be configured
3. IP addresses and subnet mask for both controllers if they are to be connected to customer network.

Step 2: Establish serial port connection

1. Power on the B-Series or D-Series Disk Subsystem if not powered on.
2. Connect laptop to Controller A serial connection using the diagnostic serial cable and serial adapter (DB9 plug for 9176; RJ11 plug for D173).
3. Start STDSwin interface tool, and set COM port properties to defaults: Port: **COM1**, Baud: **38400** , Bits: **8**, Stop Bits: **1**, Parity: **NONE**
4. Press ctrl-break to establish your connection (You may have to press Ctrl-Break several times). Try a lower baud rate if necessary.
5. Press <space> bar to set baud rate. Baud rate 38400
6. Press Ctrl-Break then Esc to enter the shell. Press within 5 seconds: <ESC> for SHELL, <BREAK> for baud rate
7. Enter password (infiniti)



   a. Enter password to access shell
   b. Default password is infiniti

8. Enter **netCfgSet** to setup the ethernet.
9. Set the Network Init Flags to 01 as follows.

   Enter command **netCfgSet**

==== NETWORK CONFIGURATION: ALL INTERFACES ====

Network Init Flags : 0x01 Note: Menus are slightly different on D173.

```
01 (Enables ethernet interface)
Network Mgmt Timeout : 30
Network Route #1 : dest=0.0.0.0
RAIDMGR Server #1 : 0.0.0.0
LSI Logic Series 4 SCSI RAID Controller
Copyright 2000, LSI Logic Inc.
LSI 4th Generation Controller
Serial number: 1T94410070
Network name: 9176ctl2
Network Manager #1 : 0.0.0.0
Startup Script :
Shell Password :
```

10. Set the IP addresses and subnet mask. Use the customer provided information if connecting to their network. Use 10.0.0.1 for controller A and 10.0.0.2 for controller B with subnet masks of 255.255.255.0 if not connecting to customer network.

==== NETWORK CONFIGURATION: Ethernet ====

My MAC Address : 00:a0:b8:06:64:d1

My Host Name : 9176ctl1

My IP Address : 201.10.100.30

(Enter Controller's Static IP Address)

Server Host Name :

Server IP Address :

Gateway IP Address : 0.0.0.0

(Needed if connecting through a router to client or SNMP)

Subnet Mask : 255.255.255.0

User Name : guest

User Password :

NFS Root Path :

NFS Group ID Number : 0

NFS User ID Number : 0

value = 0 = 0x0

11. Move serial cable to Controller B and repeat steps a-i.
12. Shut down serial port program and remove serial cable.
13. Cycle Power on the controller.

Step 3: Establish Ethernet port connection

1. On the laptop, open: My computer >> Control Panel >> Network >> Protocols.
2. Select TCP/IP protocol and select Properties.
3. Under the IP address tab, note the current settings prior to changing them.
4. Select Specify an IP address and set the IP address to 1 greater than the highest controller address set in the previous section. (example: If not to be connected to the customer network use 10.0.0.3)
5. Set the subnet mask to match the settings in the previous section.
6. Set default gateway to blank.
7. Close the network window (this does not normally require a reboot, but if it is requested, do it now).

8. Connect Ethernet crossover cable between the laptop and controller A.

   Note: A standard Ethernet cable cannot be used unless a hub is provided between the laptop and the Disk Subsystem.

   An Ethernet hub is recommended to enable attachment and communications to both controllers at the same time.

9. Start the SANtricity Storage Manager Field Tool or SMclient program.
10. Edit >> Add Devices.
11. Type in the “Host IP_address” of controller you are attached to.
12. Highlight the host in the right pane and select Manage Device.
13. Select Storage Array >> Profile (from the toolbar).
14. Gather information on each controller firmware, NVSRAM settings, and if connecting to Solaris, get the controller preferred SCSI IDs (if direct attached; N/A if fabric).
15. Download Firmware and Nvsram as needed (only needed if connected via a hub).

    Note: You cannot download firmware if connected to only one controller (attached using a crossover cable). Also you can only create a volume/volume group for the one controller that you are attached to.

16. Configure the RAID groups and LUNs as directed by the customer in: “Step 1: Obtain the following information from the customer.”.
17. Close the Field Tool or SMclient application.
18. On the laptop, open My Computer >> Control Panel >> Network >> Protocols
19. Select TCP/IP protocol and select Properties.
20. Under the IP address tab, restore the settings to the ones noted in step 3-3.

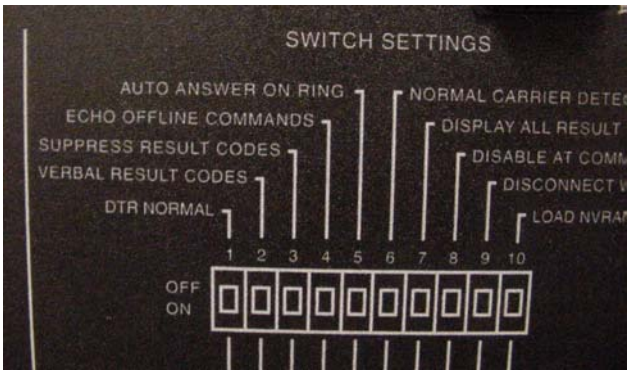
Step 4: Establish host port connection

1. If attaching to Solaris, verify the **sd.conf** file corresponds to the target ID of each controller prior to installing software and connecting the storage subsystem. Note that the target of the controller **must** contain LUN 31 if using the agent (this allows you to manage the array through the fibre).
2. Install software on host, connect the disks, and reboot.

Controller Information and Technical Support Access

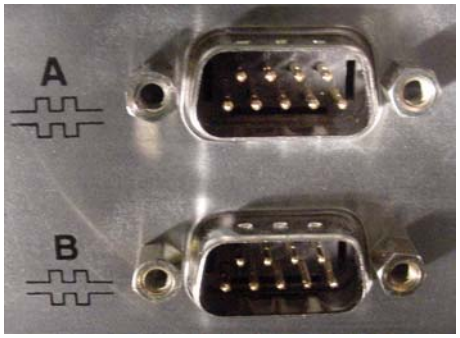
At some point of time, Technical Support may request to dial in to a modem at the customer site to help diagnose a problem. This will require you to obtain permission to use a customer phone line, which you will attach to a modem.

Note: In most cases the customer supplies the phone line socket, and you may have to supply the RJ11 phone cord and modem, which should be set to auto answer, as shown below.



You must also ensure a default minimum baud rate of 9600, and that the phone cord will reach the modem.

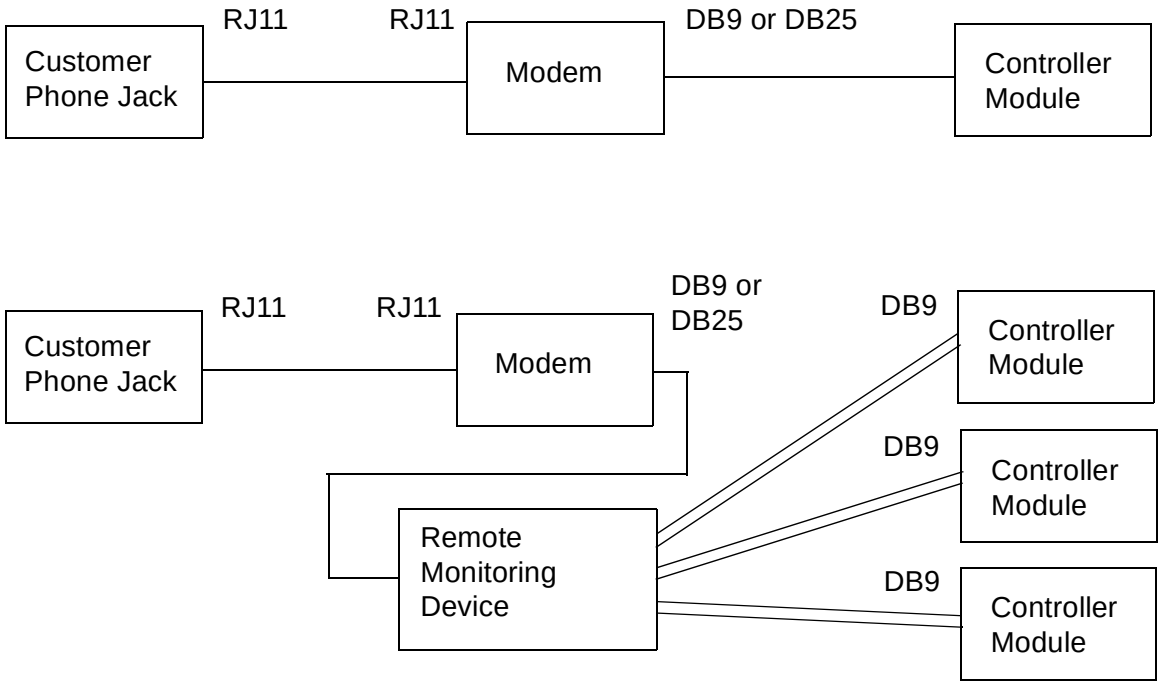
The modem is then connected (when requested) to the DB9 serial port on the back of the controller (using a DB9 to DB9 or possibly a DB25 to DB9 cable) as shown below.



Note: Sometimes a MARS box or a remote monitoring device (such as RS Toolbox) is attached after the modem to allow technical support to look at many different controllers at once.

See the following figures to help construct these diagnostic attachments.

Figure 1. Tech Support Modem Access Diagrams



You may also make this connection to your own laptop using a DB-9 cable to look at controller information. This will allow you to directly communicate with the controllers. See “Procedure” on page 2.

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