IBM 4560-SLX Tape Library

Pulling all tape drive and 4560 logs

THIS PAGE HAS BEEN LEFT BLANK INTENTIONALLY

Table of Contents

THIS PAGE HAS BEEN LEFT BLANK INTENTIONALLY

1 Introduction

This document describes on how to pull dump logs from the 4560-SLX library and all installed tape drives. This document is discussing log pulling from a Microsoft® Windows® based host computer to which the library is attached to.

2 When to pull logs

- Library logs have to be pulled at the point of failure as else vital information is lost
- Tape drive logs should be pulled as soon as the operation completes after the failure has occurred

This means that in any case the failure has to be reproduced in order to obtain useful logs that can be analysed.

3 Tape drive logs

This section describes very briefly what tool to use for pulling drive logs. Where necessary, tape drive serial numbers or file names containing tape drive serial numbers have been anonymised.

The IBM 4560-SLX can accommodate these tape drives:

- LTO Gen 1
- LTO Gen 2
- SDLT320
- SDLT600

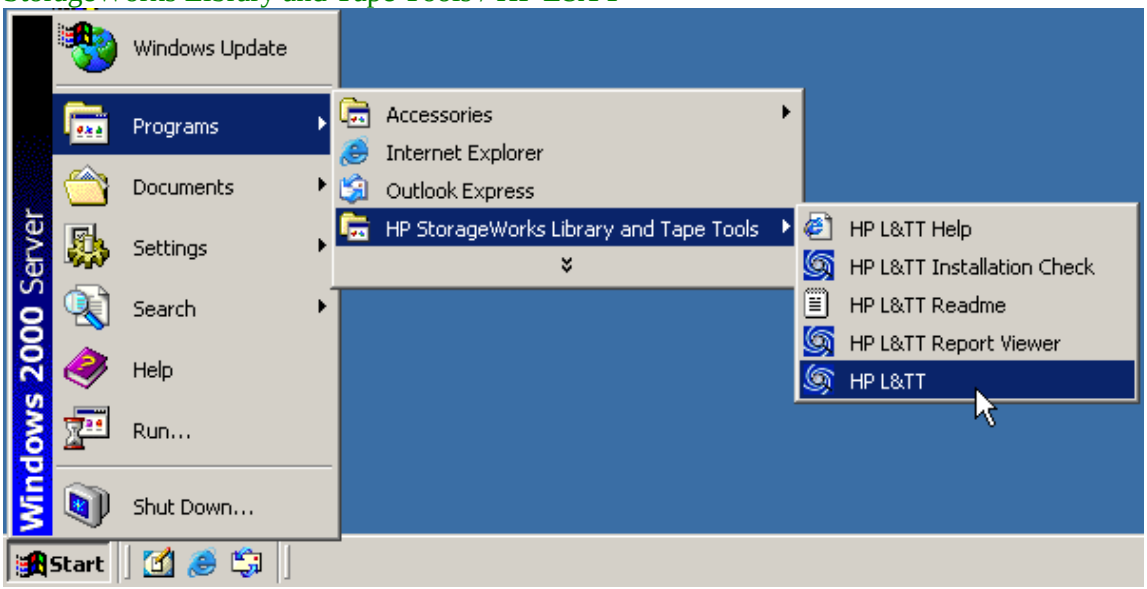
3.1 LTO Gen 1 (Ultrium TD1) logs

The logs for the LTO Gen 1 drive sled has to be pulled with the LTT tool which is available via the System x support document MIGR-5074168.

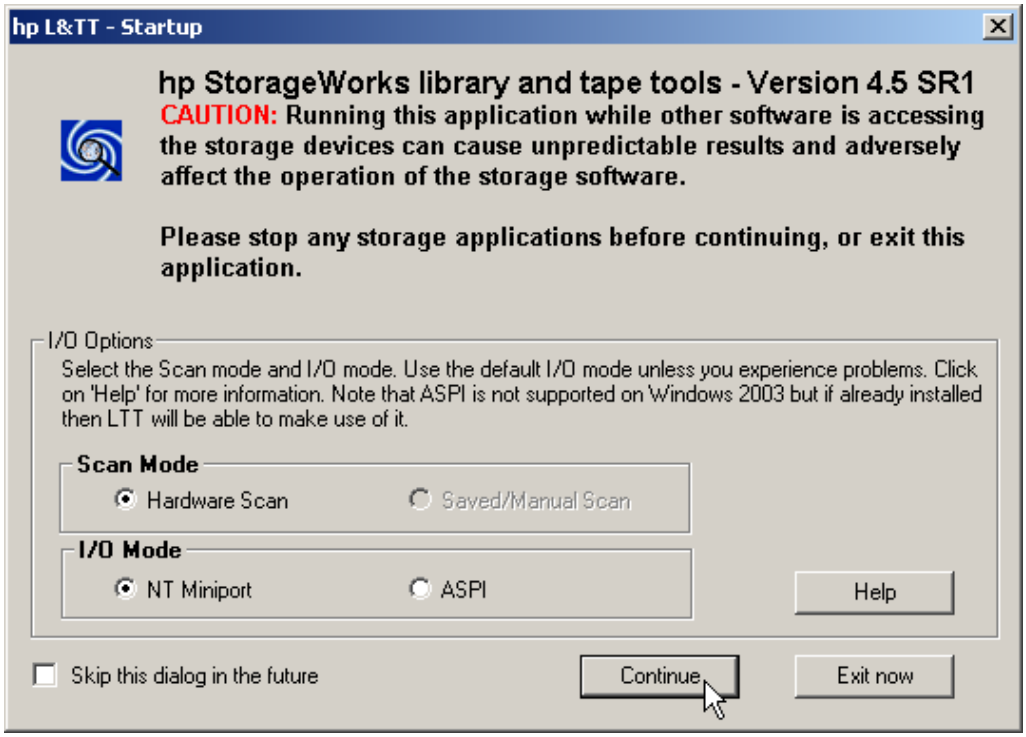
Note: Depending on the backup application in use, it may be necessary to stop and / or disable the associated Windows services in order to complete the tape drive log pulling successfully. For more information review the backup application User Guide or contact the relevant software support.

1. Install the LTT tool from the System x support document MIGR-5074168
   Note: For Windows NT 4.0 with Service Pack 6 or a higher Windows version the ASPI layer software does not need to be installed.

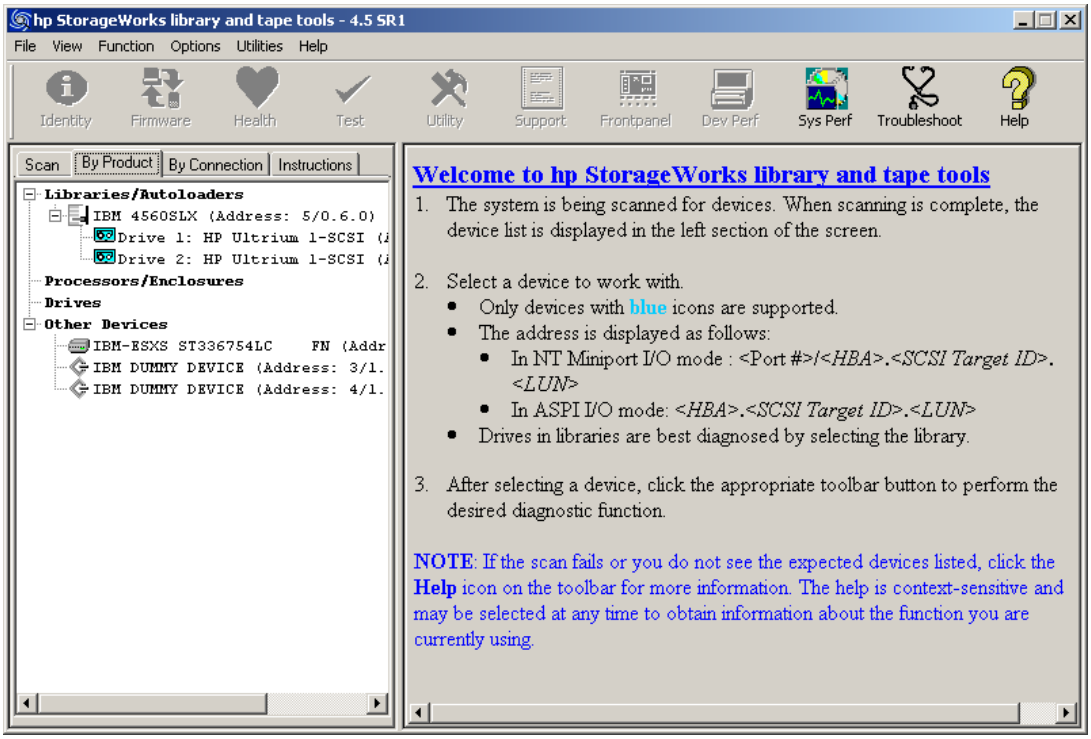
2. Once the installation is complete, launch the LTT software either via its desktop icon "HP StorageWorks Library and Tape Tools" or via the menu "Start / Programs / HP StorageWorks Library and Tape Tools / HP L&TT"



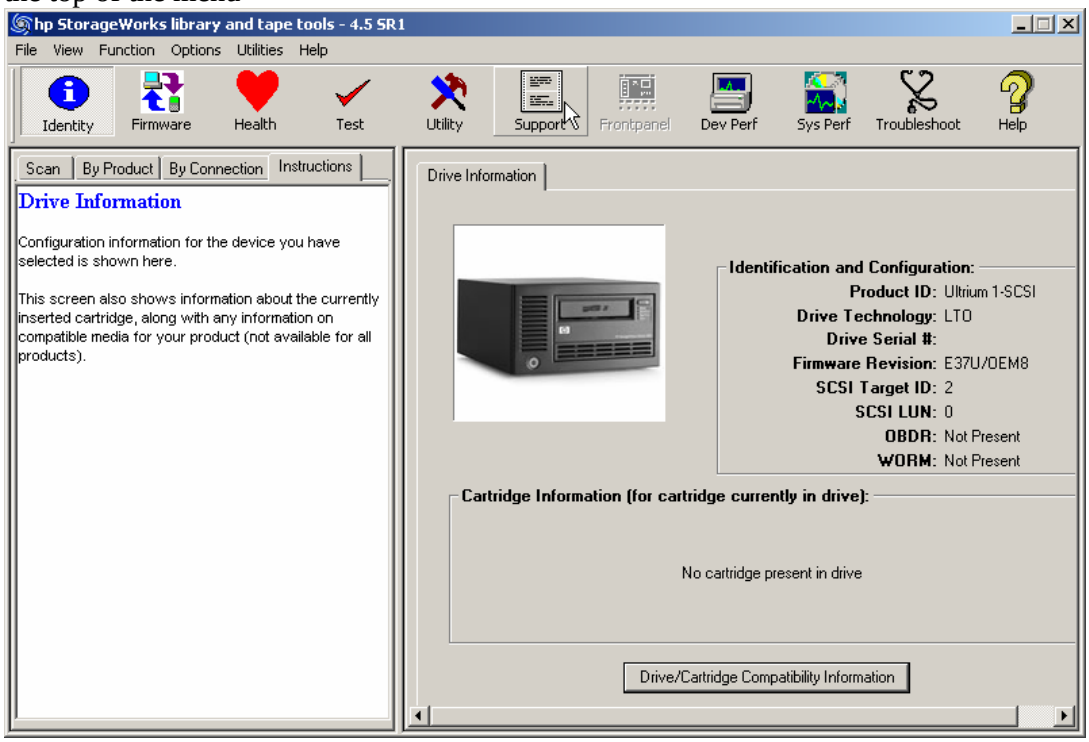
3. In the following window run the software with its default values as shown below by clicking on "Continue"



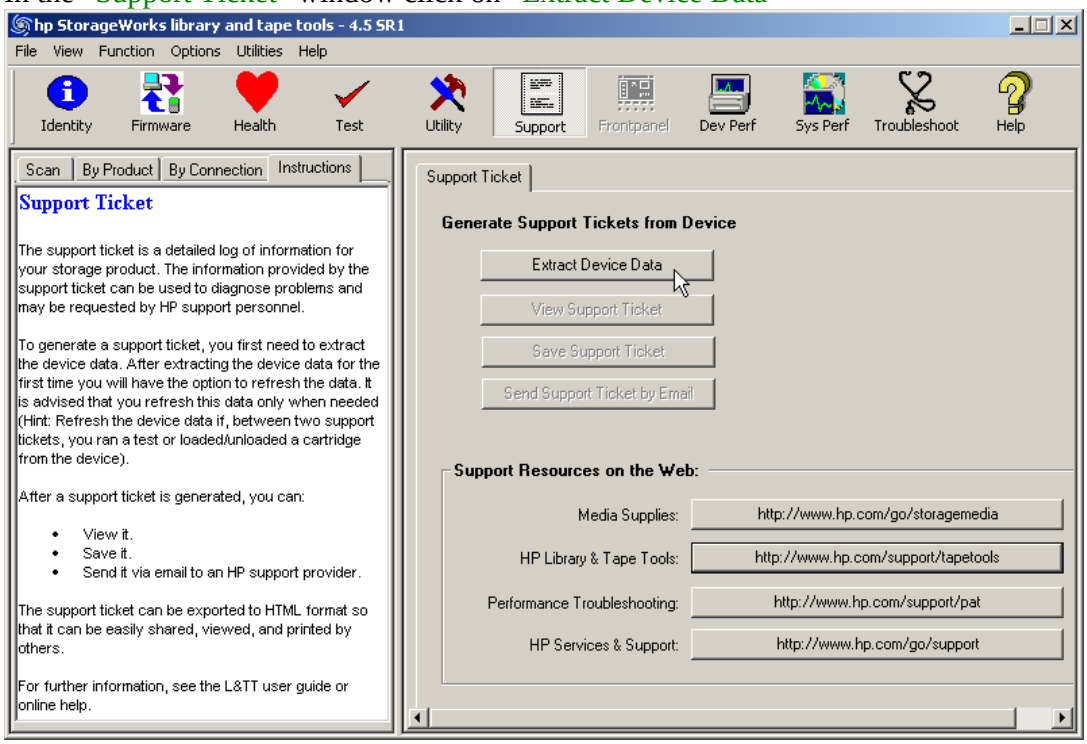
4. Once the software has completed scanning for hardware devices, select the tape drive from the left side



5. Wait until the software shows the "Drive Information", then click on the "Support" icon on the top of the menu

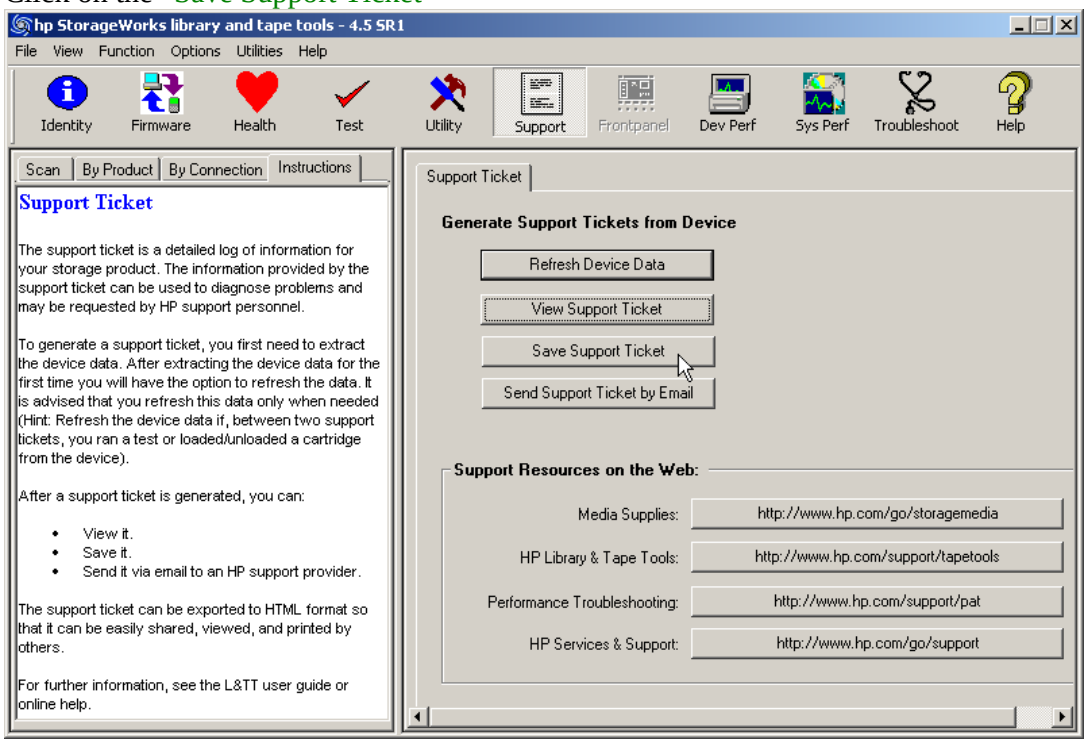


6. In the "Support Ticket" window click on "Extract Device Data"

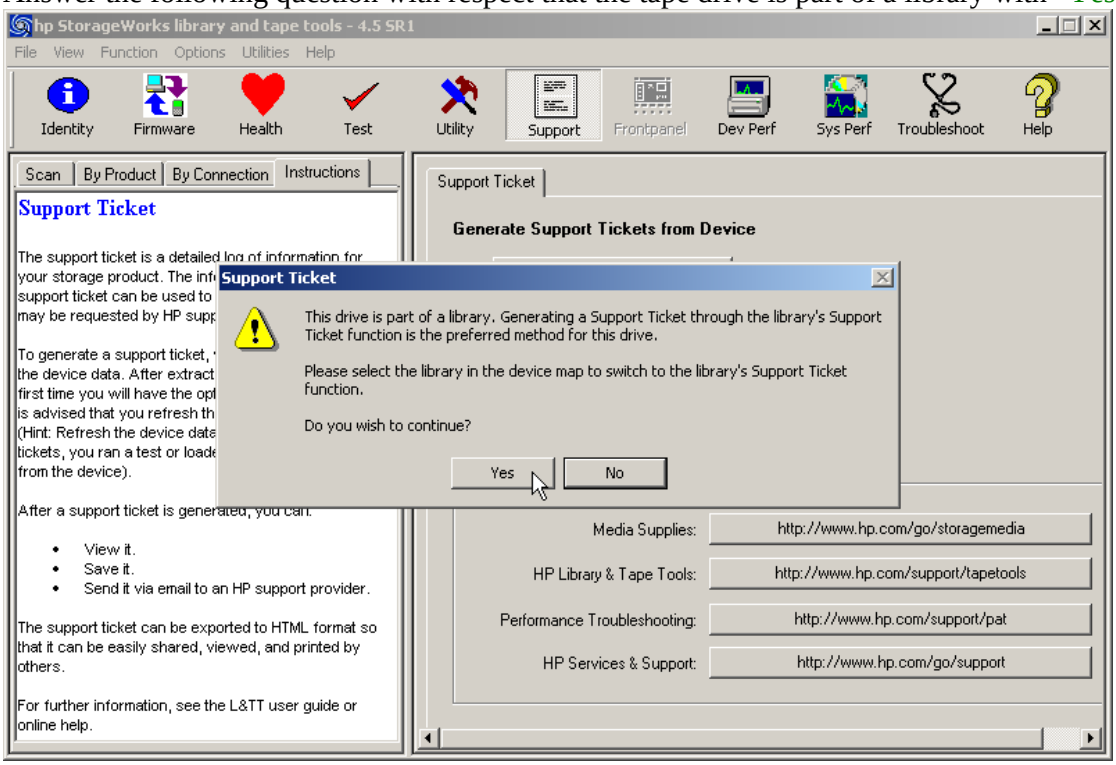


Note: The "Extract Device Data" button is available the first time a ticket is pulled from a specific drive. If a new ticket is to be pulled click on the button "Refresh Device Data"

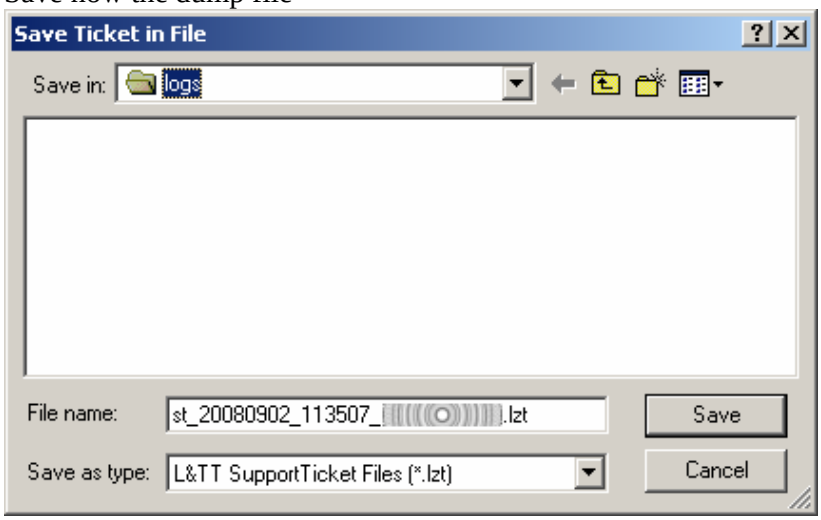
7. Click on the "Save Support Ticket"



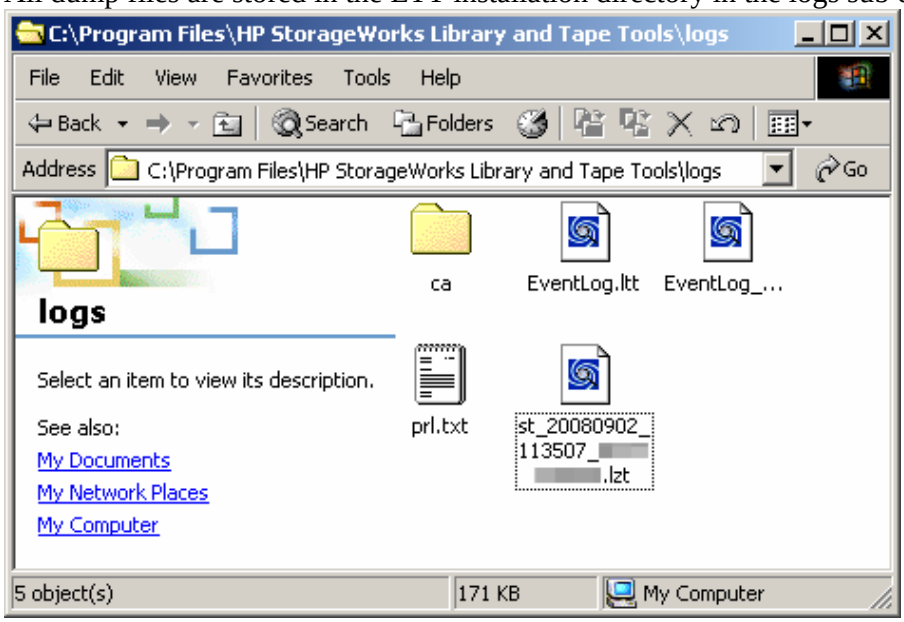
8. Answer the following question with respect that the tape drive is part of a library with "Yes"



9. Save now the dump file



10. All dump files are stored in the LTT installation directory in the logs sub directory



11. Submit all log file(s) to the IBM technical support for review

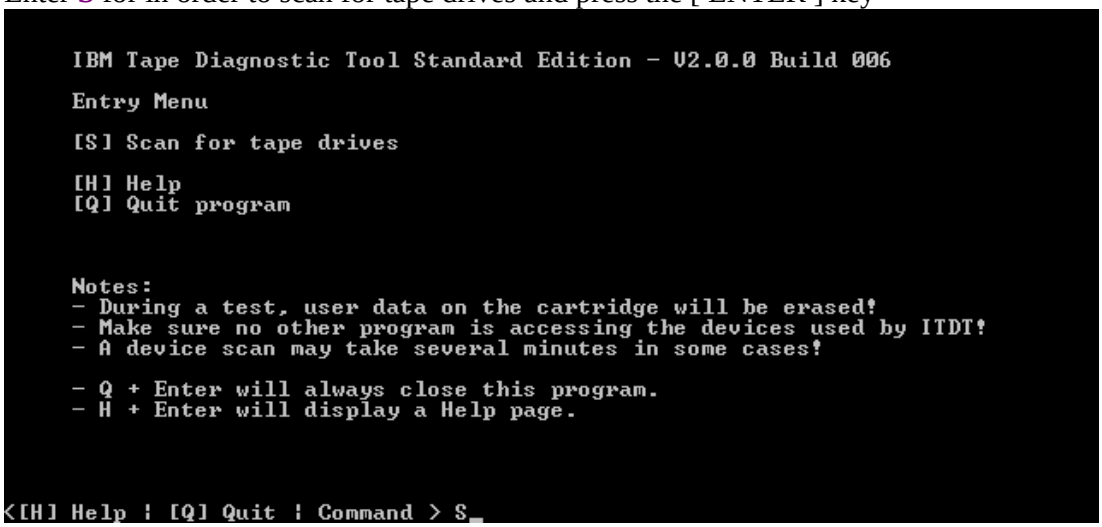
3.2 LTO Gen 2 (Ultrium TD2) logs

The logs for the LTO Gen 2 drive sled has to be pulled with the with the ITDT tool which is available via the ftp site ftp://ftp.software.ibm.com/storage/ITDT/Current.

Notes:
1. Depending on the backup application in use, it may be necessary to stop and / or disable the associated Windows services in order to complete the tape drive log pulling successfully. For more information review the backup application User Guide or contact the relevant software support.
2. The preferred tool is the non-graphical version. This tool will be discussed in this section. The graphical version (GE version) requires Java Runtime Environment to be installed on the Windows computer.
3. If the ITDT tool does not show the tape drives in the library and the IBM LTO Windows device drivers are installed, then follow the instructions per Retain tip H195744 per support document MIGR-5081290.

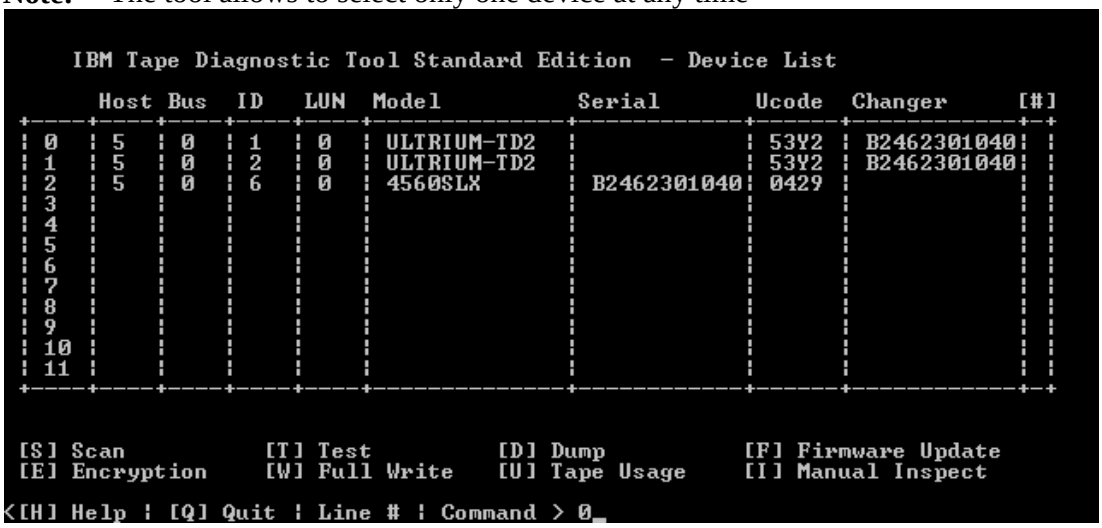
1. Unpack the itdtinst file into an empty directory, e.g. C:\itdt
2. When running the software the first time, read through the License Agreement and accept it

3. Enter **S** for in order to scan for tape drives and press the [ENTER] key



4. Once the scan is complete, select the tape drive from the list by entering its number – for example **0** – pressing the [ENTER] key

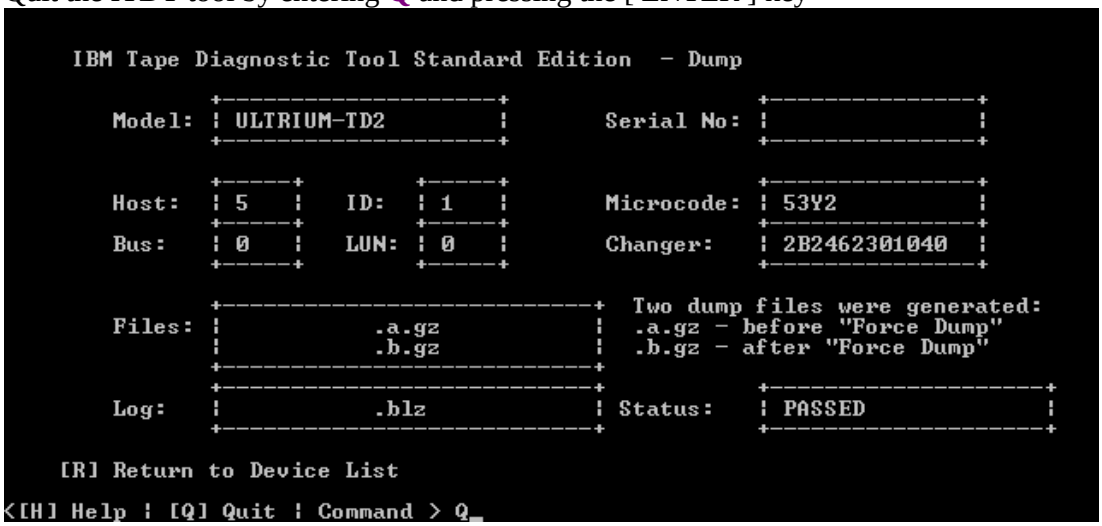
   Note: The tool allows to select only one device at any time



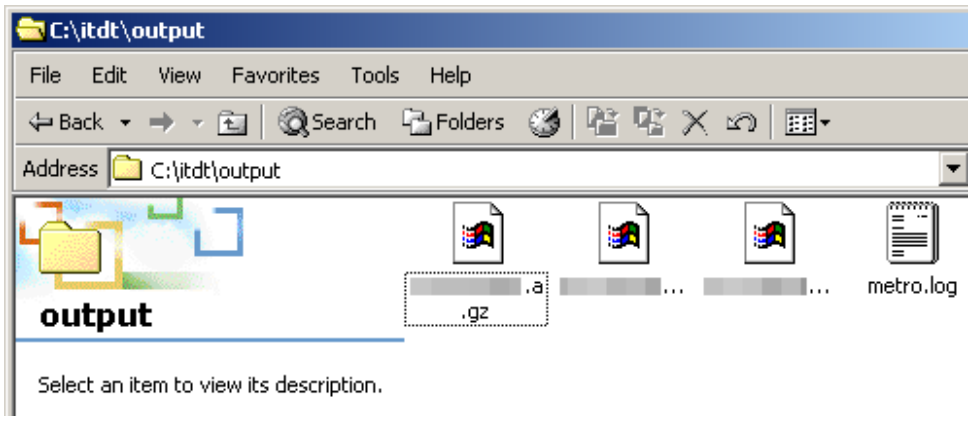
5. An **X** will appear in the furthest right column. Now enter **D** for pulling a tape drive log and press the [ENTER] key

   Note: ITDT v1.x tool calls these dumps "Firmware Dump"

6. Wait until the tool has completed pulling the dump files. The dumps are stored in the output directory
7. Quit the ITDT tool by entering **Q** and pressing the [ENTER] key



8. Submit all files from the output directory to the IBM technical support team for review and delete them afterwards



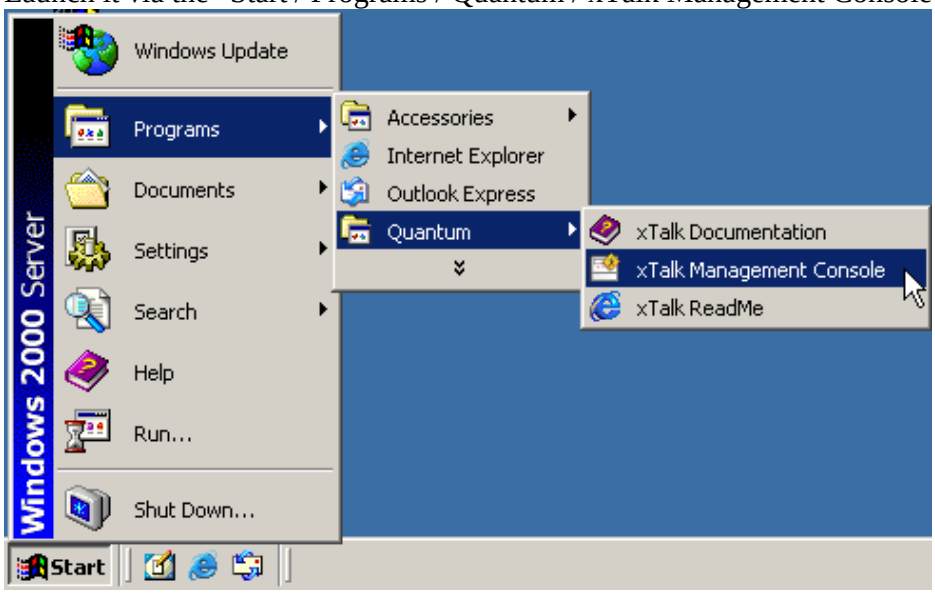
3.3 SDLT320 and SDLT600 logs

The logs for the SDLT320 and the SDLT600 tape drive sled has to be pulled with the xTalk tool which is available via the System x support document MIGR-5073759

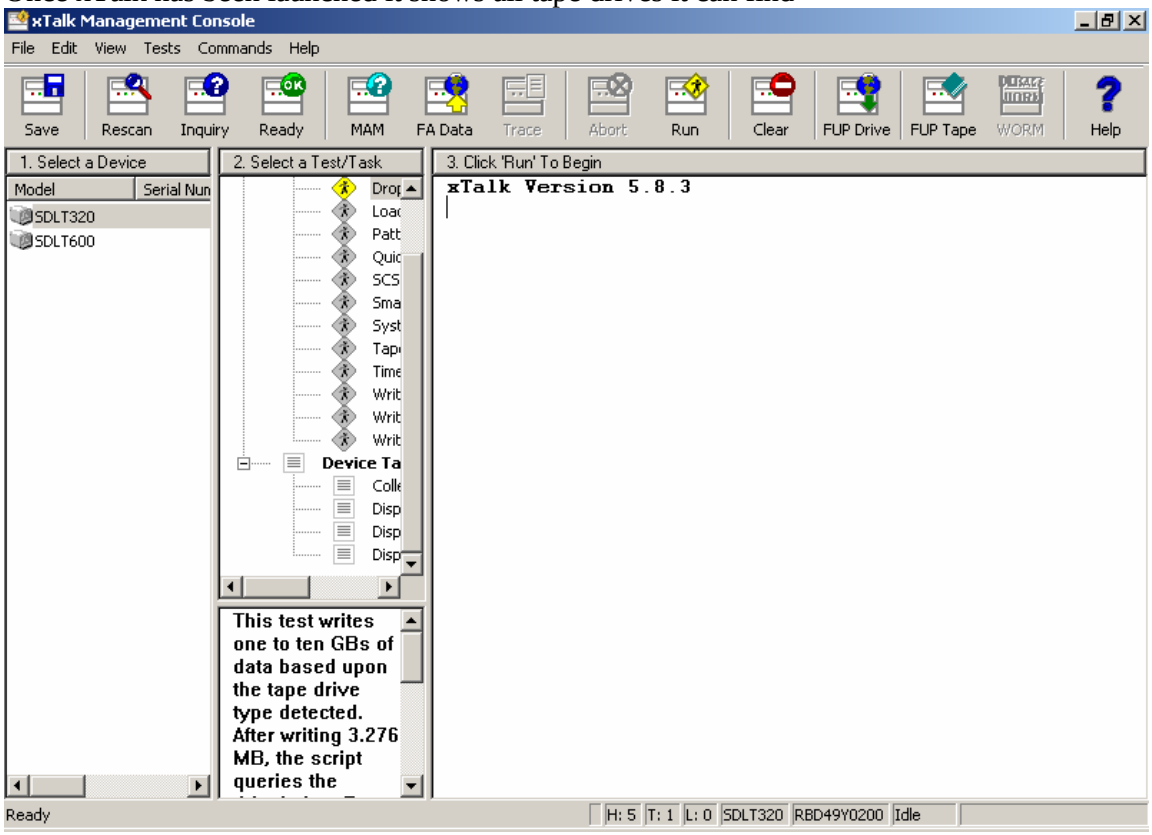
Note: Depending on the backup application in use, it may be necessary to stop and / or disable the associated Windows services in order to complete the tape drive log pulling successfully. For more information review the backup application User Guide or contact the relevant software support.

1. Install the xTalk tool from MIGR-5073759

2. Launch it via the “Start / Programs / Quantum / xTalk Management Console”

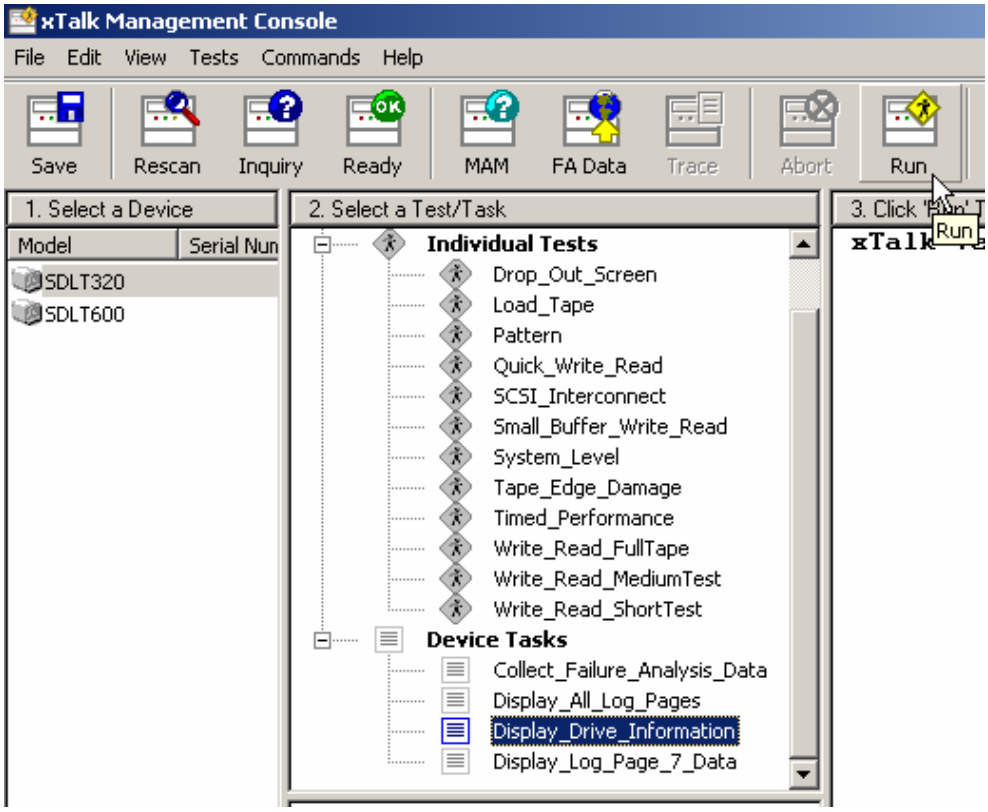


3. Once xTalk has been launched it shows all tape drives it can find

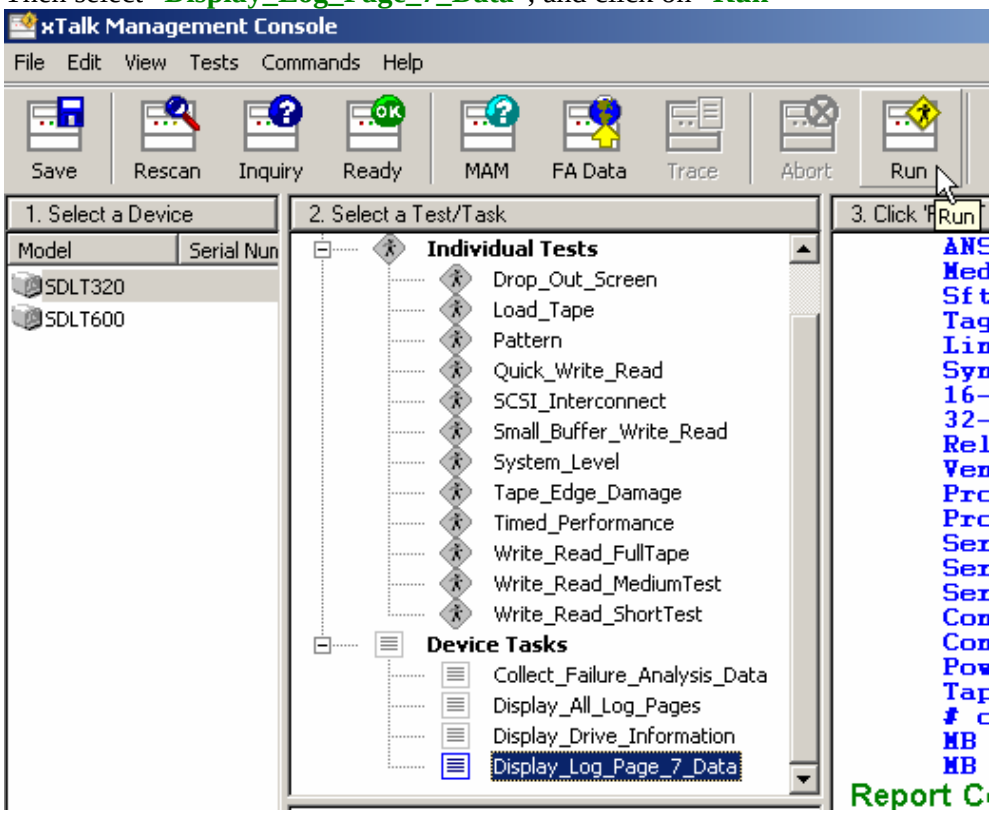


4. Select the tape drive for which a log has to be pulled

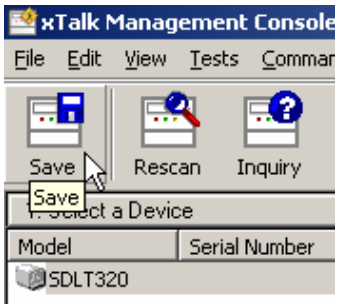
5. Click in the "**2. Select a Test/Task**" window on "**Display_Drive_Information**", and click on "**Run**"



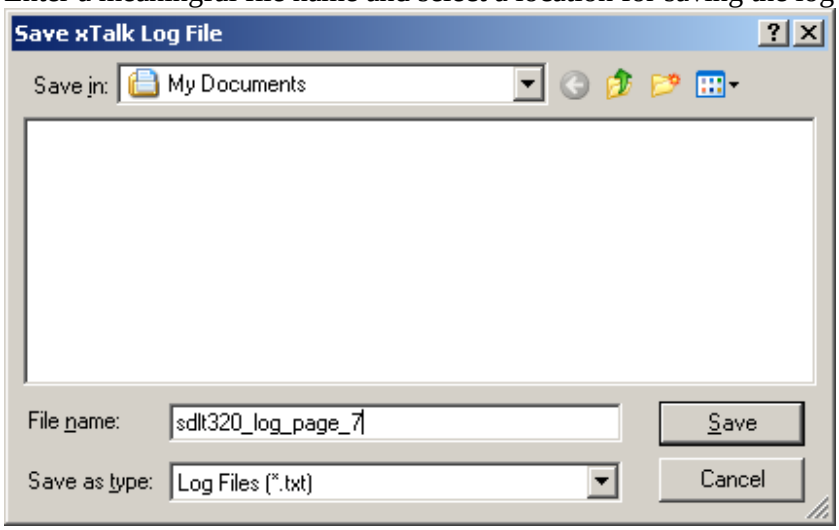
6. Then select "**Display_Log_Page_7_Data**", and click on "**Run**"



7. Once all information has been collected, save the output by clicking on the "**Save**" button



8. Enter a meaningful file name and select a location for saving the log file



9. Submit the log file(s) to the IBM technical support for review

4 4560-SLX Library Logs

This section discusses how to pull 4560-SLX Library Logs. These logs are different from the ones that are to be pulled from the Fibre Channel card. For details on how to pull the Fibre Channel logs refer to chapter 5 4560-SLX Fibre Channel Option Logs.

4.1 Pulling logs with the Neocenter software

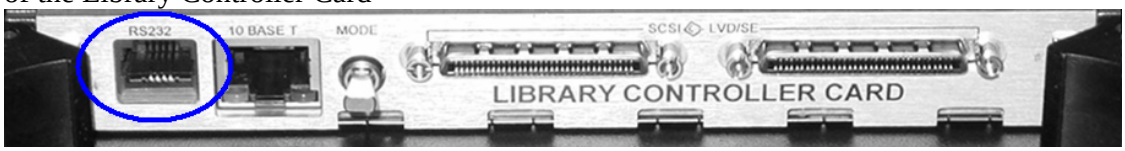
The Neocenter software only runs in a Windows environment. It requires that the host computer is equipped with a physical RS-232 DB-9 serial port.

Download and install the latest IBM 4560 SLX Windows Utility (Neocenter software) from the IBM System x support document MIGR-5080918.

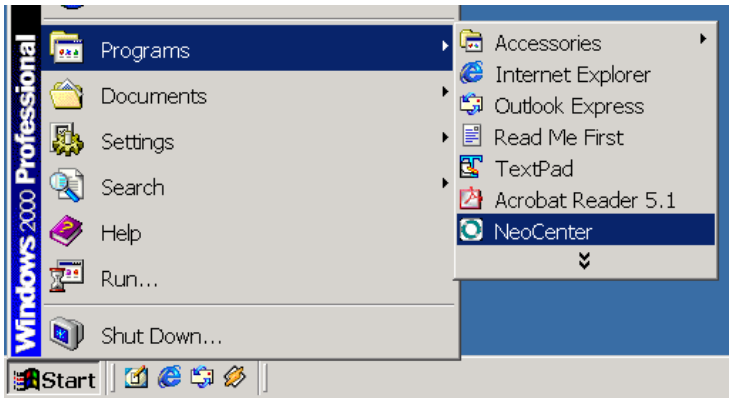
1. Install the Neocenter software

2. Attach the RS-232 to RJ11 communication cable (FRU 24P7355) to the host computer on which the Neocenter software has been installed

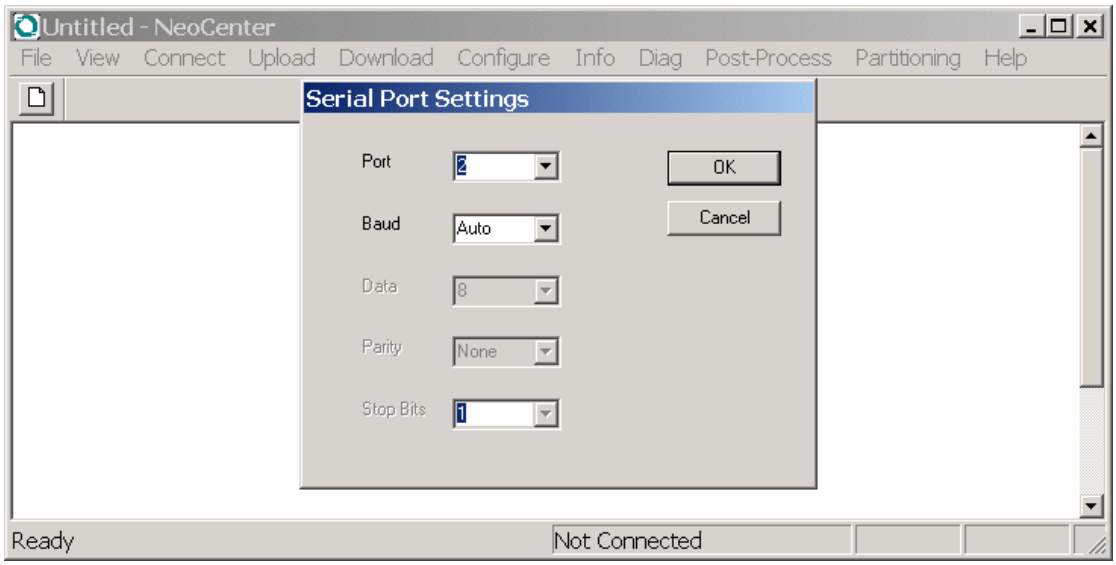
3. Attach the RJ-11 connector of the RS-232 to RJ11 communication cable to the RS-232 port of the Library Controller Card



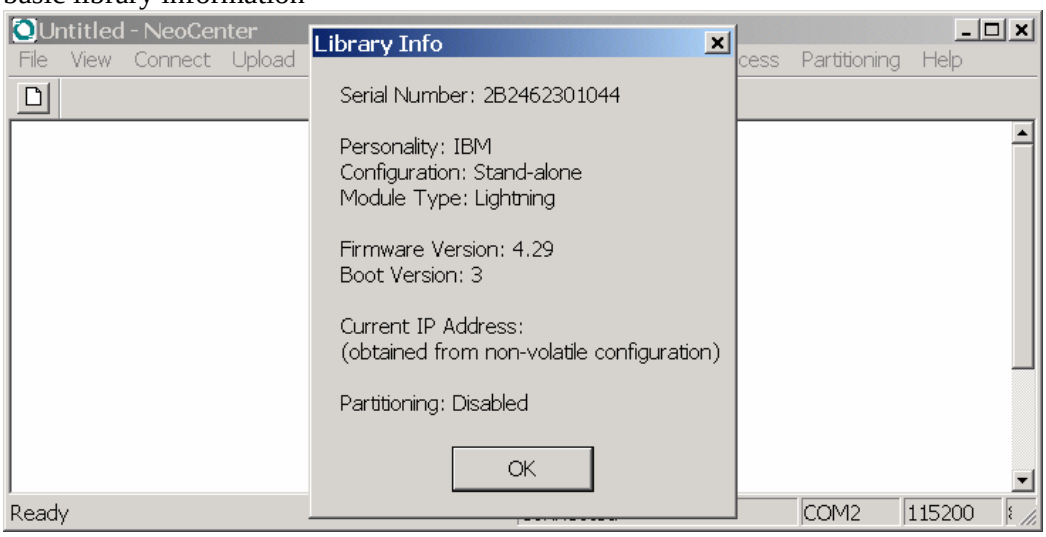
4. Launch the Neocenter software



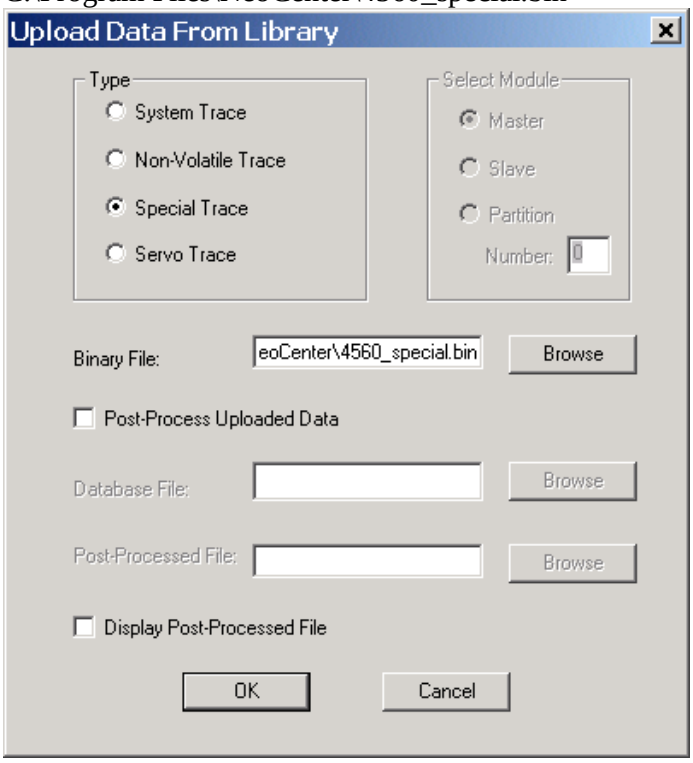
5. Click on the Connect menu item, select the correct physical serial port, and click on the OK button



6. The connection can be verified by clicking on the Info menu item. This will show some basic library information

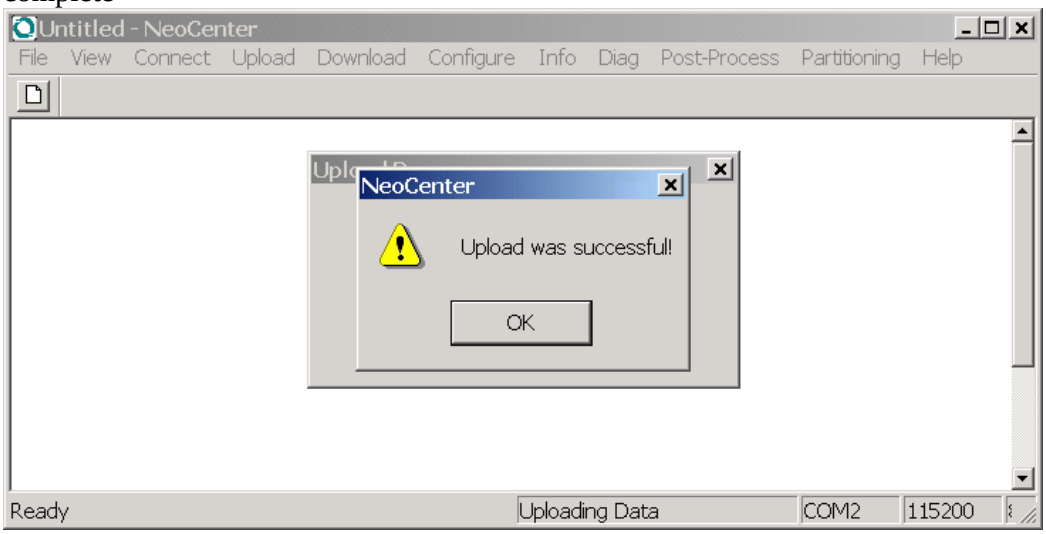


7. Click on the Upload menu item
8. In the following dialogue box click on the button left to “Special Trace”
9. In the “Binary File” field enter the location and name of the log file. For example, C:\Program Files\NeoCenter\4560_special.bin

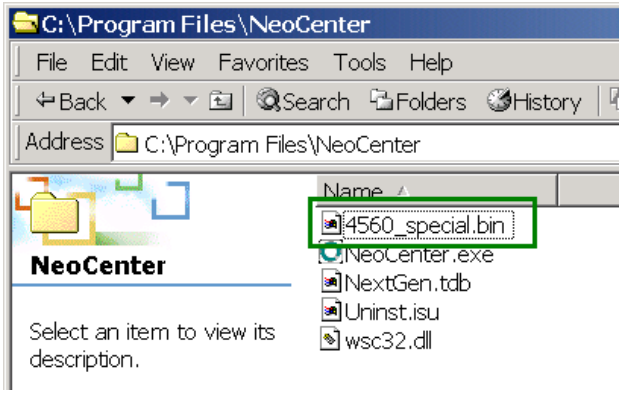


10. Click on the OK button
11. Wait until the software has completed uploading the log

12. Once the log has been uploaded click on the OK button confirming that the upload is complete



13. Close the Neocenter software and open the directory into which the binary file has been stored



14. Make the binary file available to the IBM technical support team

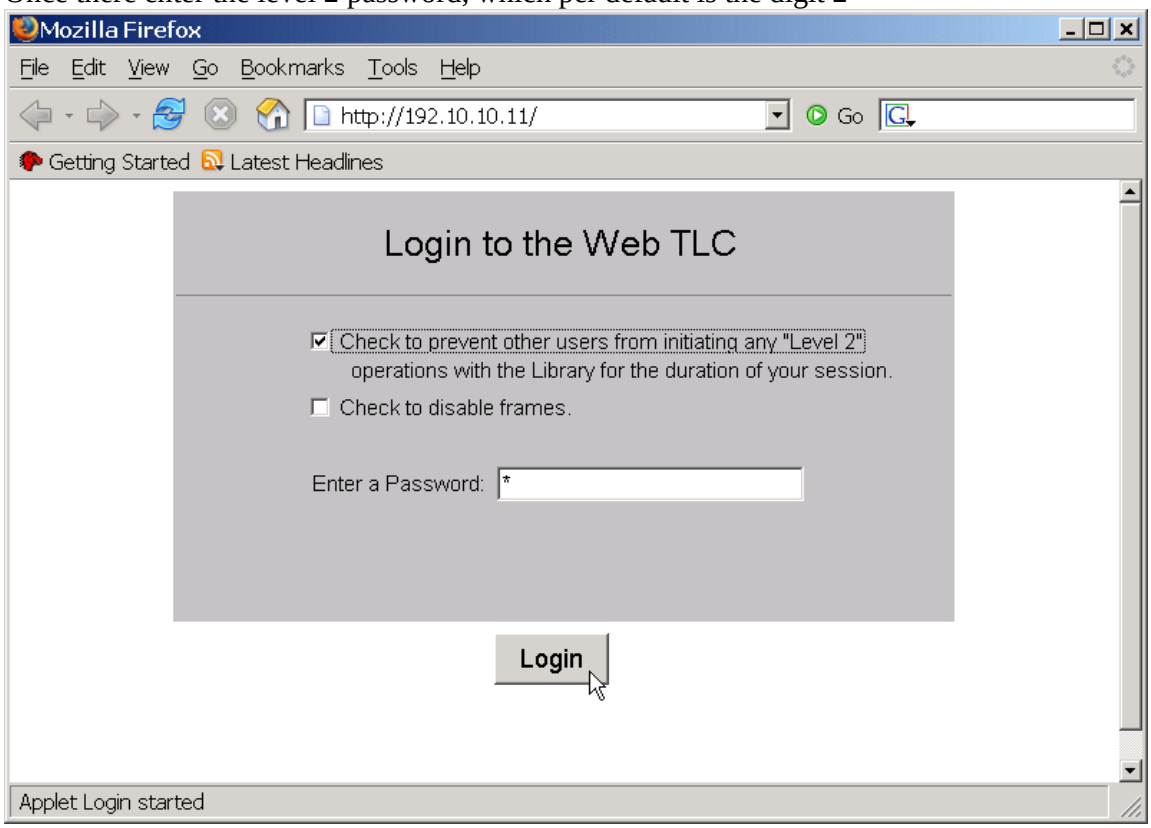
4.2 Pulling the logs via the the web interface

In order to pull the logs the following is required:

- An up-to-date web browser
- JRE (Java Runtime Environment) v5 (a.k.a. v1.5) or higher
- An Ethernet connection to the Library controller card
- The level 2 access password, which per default is the digit 2

1. Open up the web browser and point it to the 4560-SLX IP address

2. Once there enter the level 2 password, which per default is the digit 2



3. Click on the top menu list on the entry History, scroll down until the area titled “Download a Binary File…”, is displayed

4. Download the Library Special trace file (363712 bytes)

5. Once saved, open up the directory into which the binary file has been saved
6. Make the binary file available to the IBM technical support team

5 4560-SLX Fibre Channel Option Logs

The pulling of the Fibre Channel Option Logs (in short FCO logs) can either be done via the cards serial port or via the LAN. It is required that the terminal program can capture the displayed text in a text file.

Note: In order to pull the Fibre Channel Option Card (FCO) logs, the FCO must be installed in the library:

5.1 FCO ports

The port highlighted in green is the 10/100 Ethernet port
The port highlighted in blue is the RS-232 port

5.2 Pulling FCO logs via serial port

Requirements

- The host computer must be equipped with a physical RS-232 DB-9 port
- The RS-232 to RJ11 communication cable (FRU 24P7355)

- A Terminal program that allows for capturing text output, e.g. Windows HyperTerminal

Note: The port settings for pulling the logs via the serial port are as follows:

- bits per second - 115,200
- Data bits - 8
- Stop bit - 1
- Parity - None
- Flow control – None

5.3 Pulling FCO logs via Ethernet

In order to pull the FCO logs successfully via Ethernet the connection to the FCO adapter must be established by using the telnet protocol. The default telnet password is password

Note: The factory default IPv4 address of the FCO card is:

10.0.0.1 and subnet mask 255.255.255.0

This address will only work, if it has not been changed. If it has been changed then use the current IPv4 address and subnet mask.

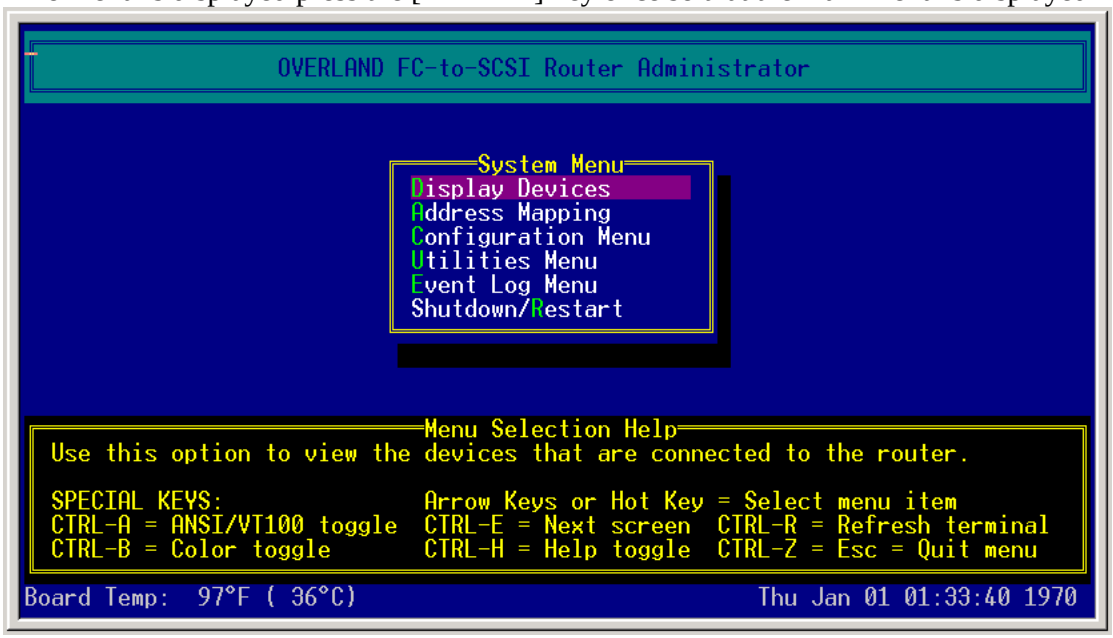
If the changed IPv4 address is unknown, then pull the logs via the FCO card's serial port.

5.4 Pulling the FCO logs

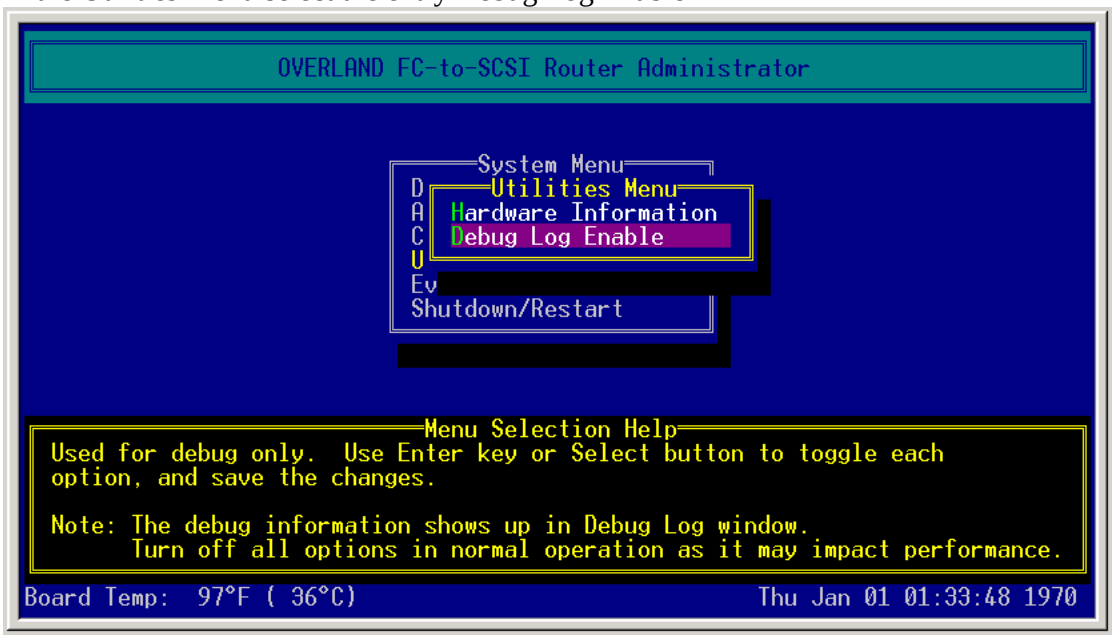
Note: The port settings for pulling the logs via the serial port are as follows:

- bits per second - 115,200
- Data bits - 8
- Stop bit - 1
- Parity - None
- Flow control – None

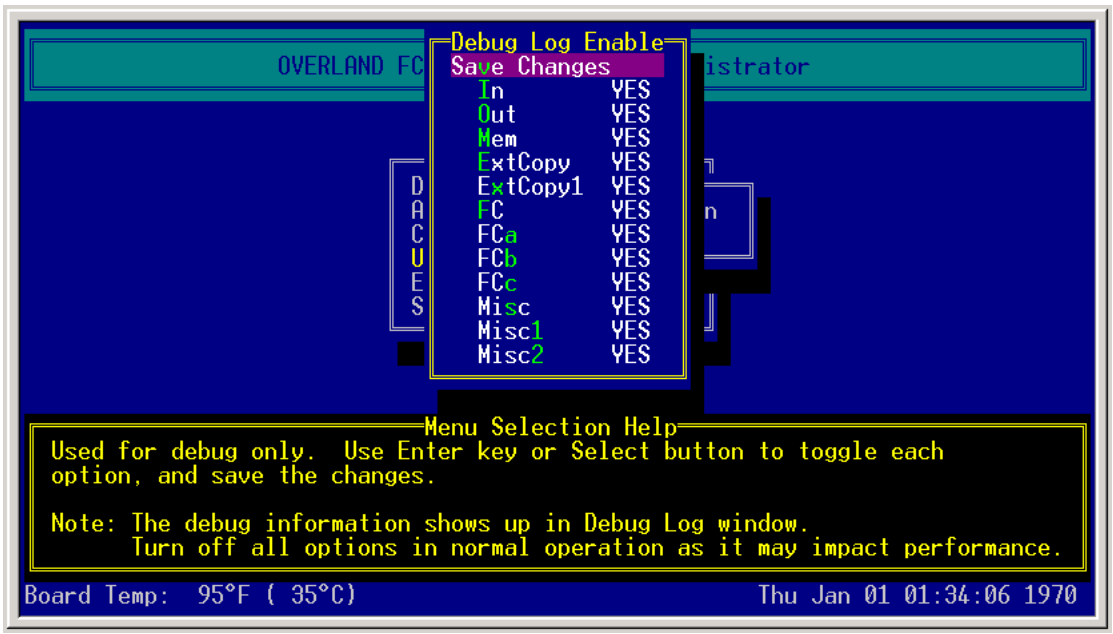
1. Connect to the 4560-SLX library either via the serial port or LAN. The default Telnet password is password
2. If no menu is displayed press the [ENTER] key once so that the main menu is displayed



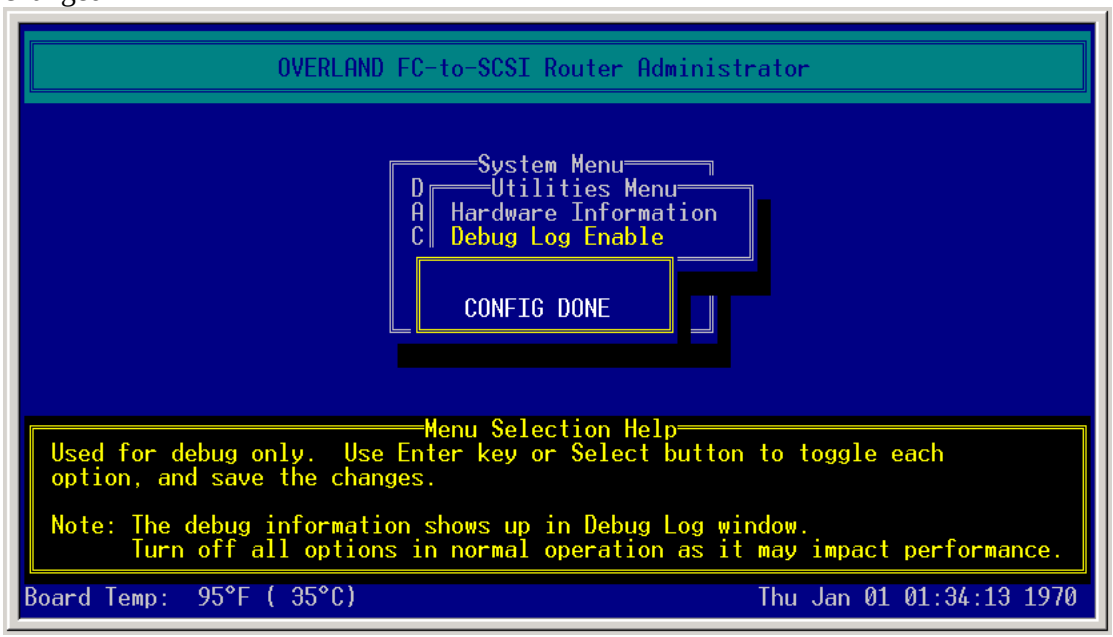
3. Select the menu entry Utilities Menu
4. In the Utilities Menu select the entry Debug Log Enable



5. Set all shown entries to Yes

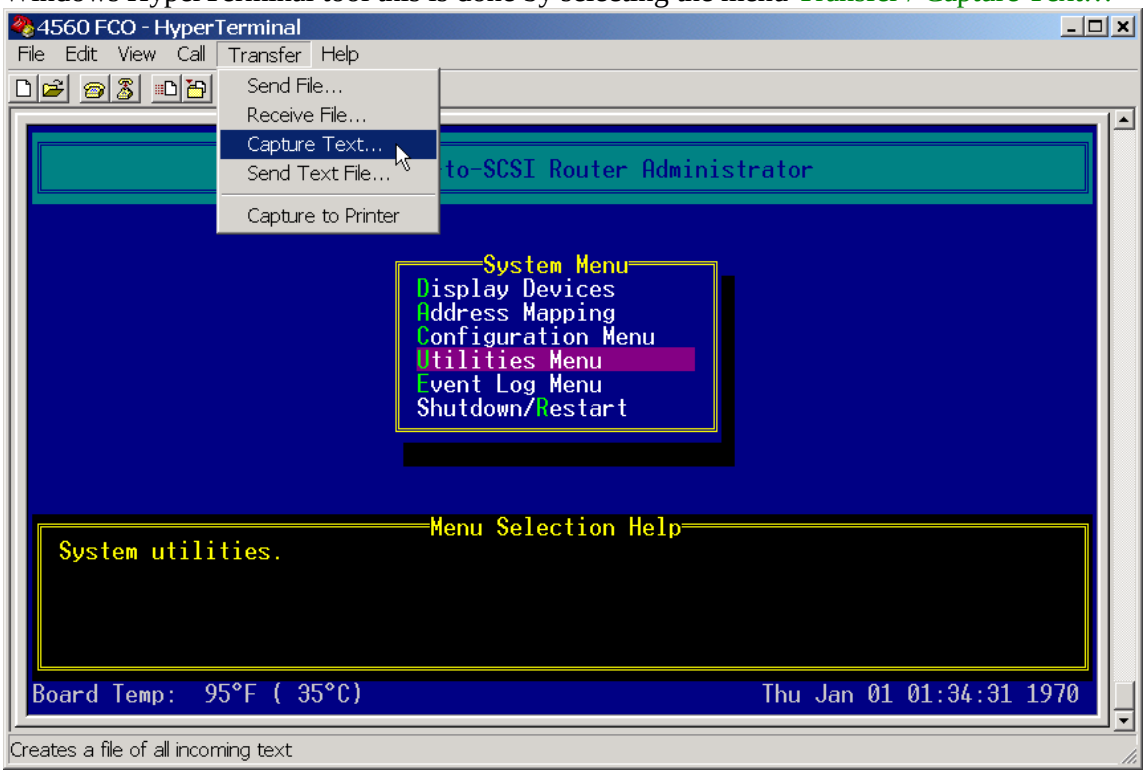


6. Press the [ESC] button and confirm by selecting Yes and pressing the [ENTER] key, that the debugging is to be enabled
7. Press the [ESC] button once the card has confirmed that the configuration has been changed

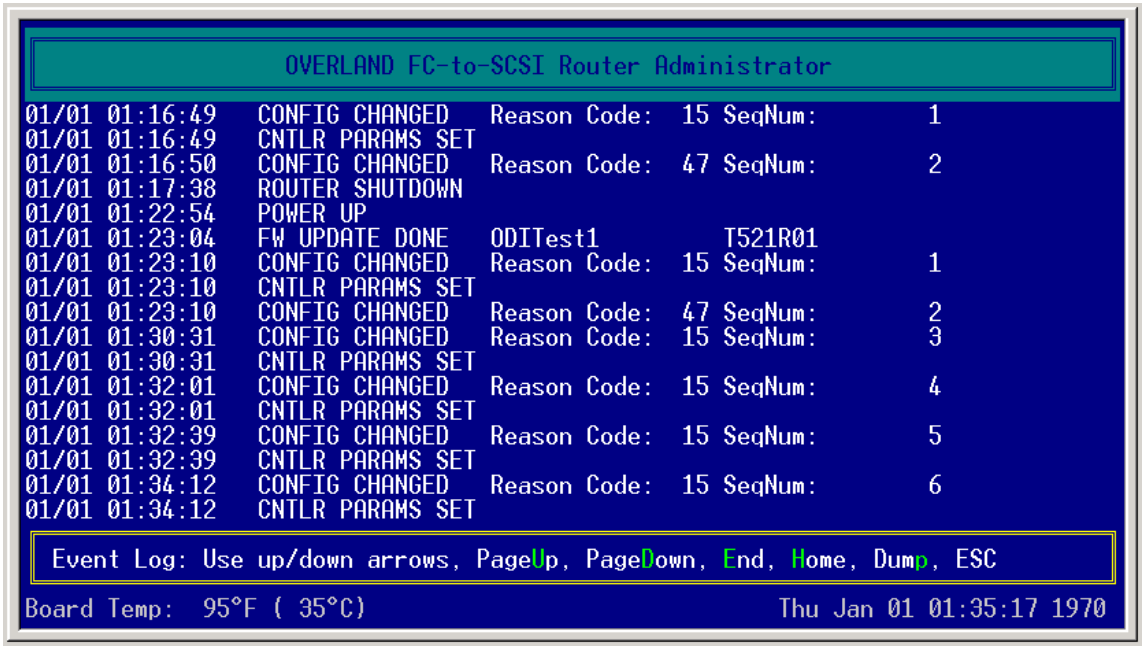


8. If not returned to the main menu press the [ESC] button until it is displayed
9. Reproduce the failure

10. Configure the terminal program now such, that it captures all text displayed. In the Windows HyperTerminal tool this is done by selecting the menu Transfer / Capture Text…

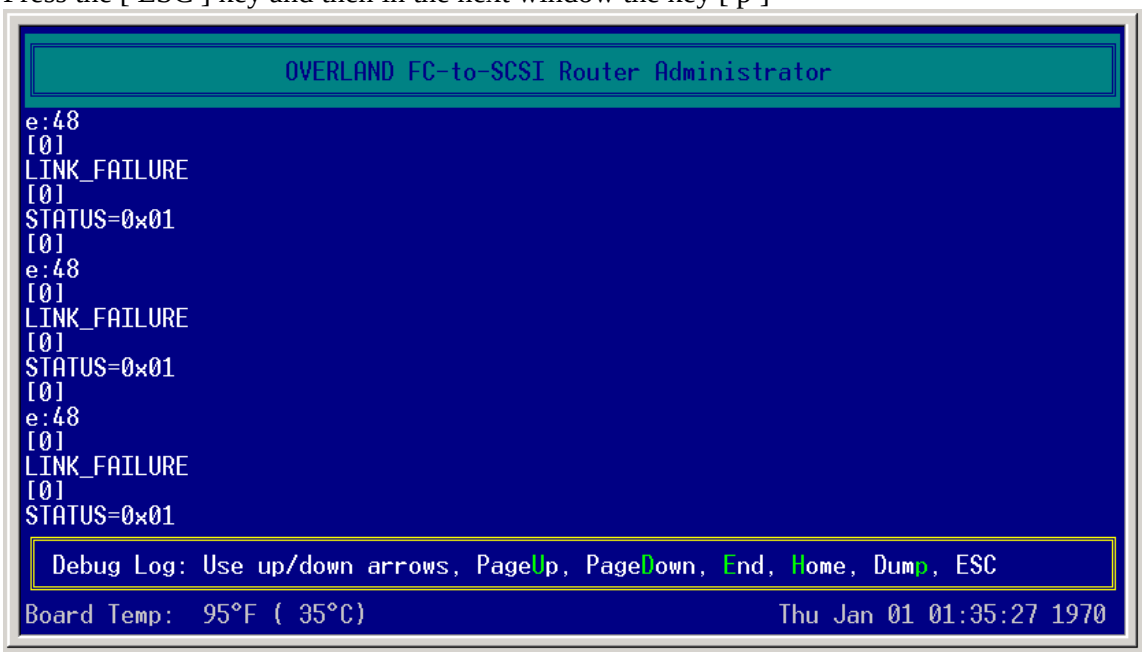


11. In the pop-up window select enter the target drive, directory, and file name as appropriate and then click on the “Start” button
12. Now press the key combination [CTRL+E]
13. This switches over to the “OVERLAND FC-to-SCSI Router Administrator”

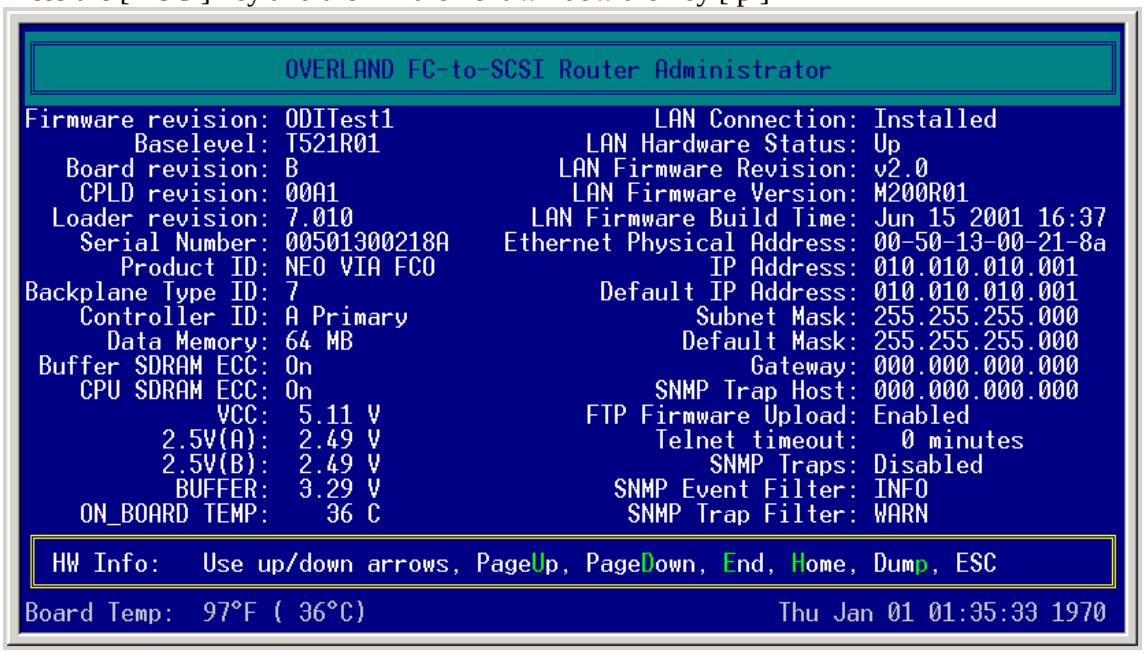


14. Press the key [p], this will collect the first set of logs

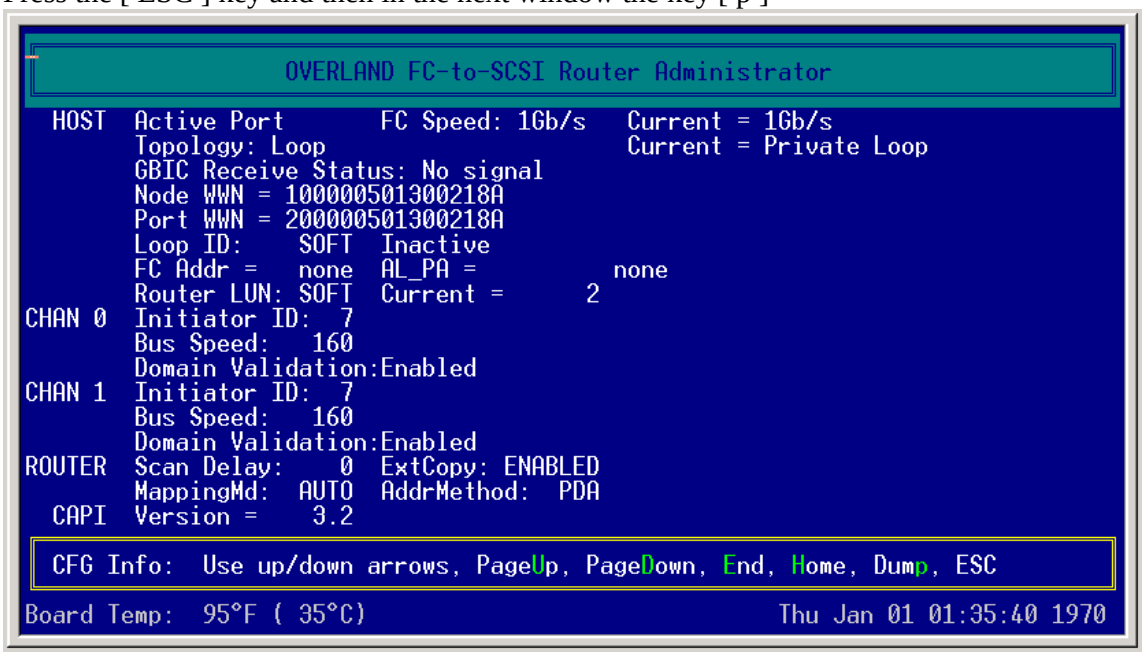
15. Press the [ESC] key and then in the next window the key [p]



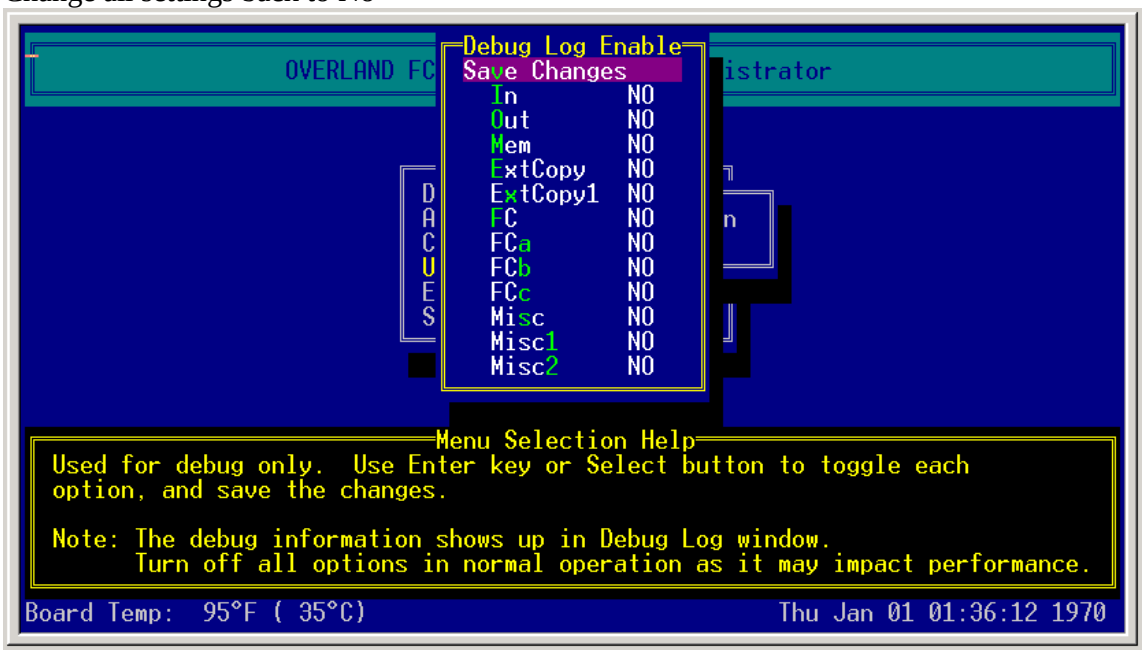
16. Press the [ESC] key and then in the next window the key [p]



17. Press the [ESC] key and then in the next window the key [p]



18. Press the [ESC] key. When back in the main menu, stop any text capturing. In HyperTerminal this is done via its menu Transfer / Capture Text / Stop
19. In the FCO main menu select the Utilities Menu and press [ENTER]
20. Select the menu entry Debug Log Enable and press [ENTER]
21. Change all settings back to No



22. Press [ESC] and confirm that the changes are to be saved
23. Once the configuration has been changed press the [ESC] button again
24. Close the connection to the 4560-SLX FCO adapter
25. Make the 4560-SLX FCO log file available to the IBM technical support team

THIS PAGE HAS BEEN LEFT BLANK INTENTIONALLY

THIS PAGE HAS BEEN LEFT BLANK INTENTIONALLY

This document was written by Christian Flatscher