

## **IBM DLT-V4 Windows 2003 Device Driver Installation Information**

**Note:** Parts of this document can be used for installing and using the IBM DLT-V4 tape drive p/n 39M5659, FRU 39M5663 in other operating systems than Windows.

### **IBM System x Server with SATA onboard controllers, hardware set up**

1. When using an IBM System x Server with SATA onboard controllers ensure that no SATA RAID is in use. If SATA RAID is in use and the tape drive appears not to be working do one of the following:
  - a) Check if the IBM SAS HBA p/n 25R8060 is on ServerProven for your server. The System x Server Proven website located at  
<http://www-03.ibm.com/servers/eserver/serverproven/compat/us/>  
or refer to the ServeRAID Adapter Quick Reference located at  
<http://publib-b.boulder.ibm.com/Redbooks.nsf/RedbookAbstracts/tips0054.html?Open>  
If it is, then use this card with the Tape drive
  - b) Contact your IBM Technical Support for further assistance in order to resolve the issue
2. When using an IBM System x Server that has both SCSI and SATA onboard controllers such as the IBM x226 server, then ensure that the following settings are made in the system BIOS under I/O Devices:

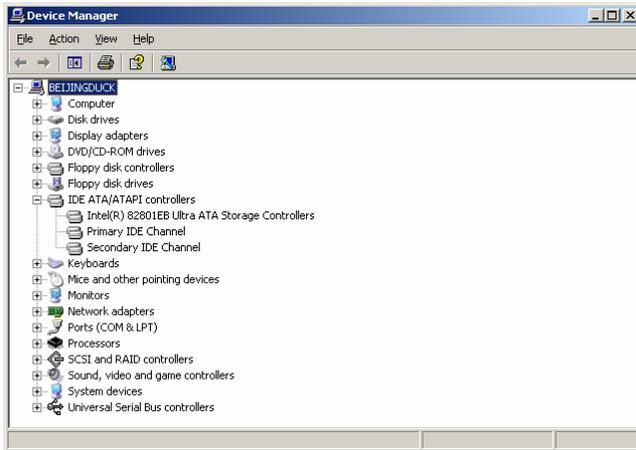
Planar SCSI	Enabled
Parallel ATA	Both
Serial ATA	Enabled
Native Mode Operation	Serial ATA
SATA RAID Enable	Disabled

**Note:** The Planar SCSI is only to be enabled if there are SCSI hard disks in use. This is independent from the use of onboard SCSI RAID or the use of a Zero Channel RAID card such as the IBM ServeRAID 6i+ adapter.

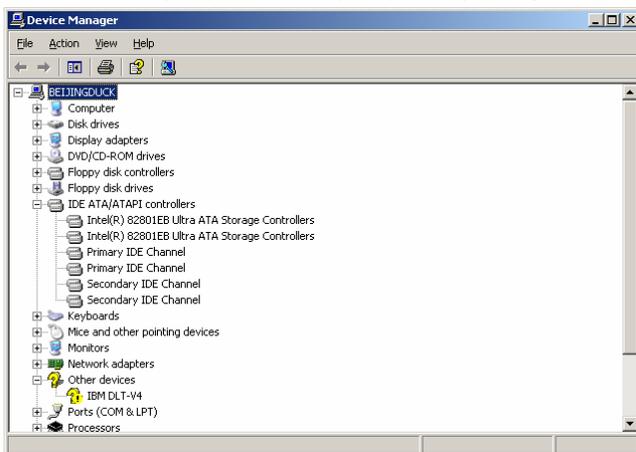
3. Ensure that the SATA RAID controller to which the IBM DLT-V4 tape drive is attached to the DMA mode is enabled. Details follow later in this document.

## Installing the IBM DLT-V4 device drivers when a SATA onboard controller is in use

1. When checking the Windows 2003 Hardware Device Manager before the IBM DLT V4 tape drive is installed then only one IDE controller may be present. This is the standard EIDE controller for CD-ROM drives.

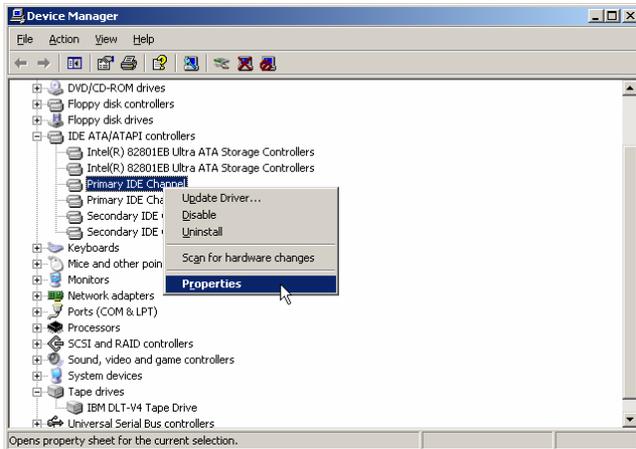


2. After the IBM DLT V4 tape drive has been attached to the onboard SATA controller the Windows 2003 Hardware Device Manager will report two IDE controllers and an unknown tape backup device. The second IDE controller is the SATA onboard controller.

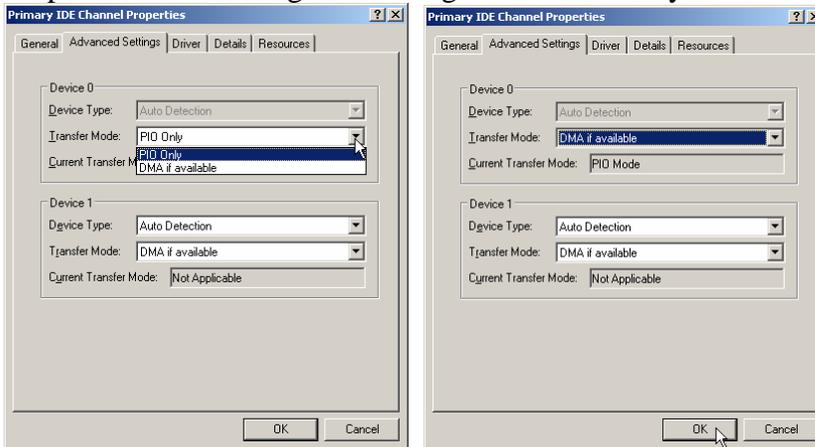


3. Install the IBM DLT V4 Windows 2003 tape drive device drivers from the IBM System x Support page as follows:
  - a) Right click on the IBM DLT-V4 Tape drive entry and chose "Update Driver..."
  - b) When asked if Windows should connect to Windows Update select "No, not this time" and click on "Next"
  - c) In location selection select "Install from a list or specific location (Advanced)" and then click on "Next"
  - d) Chose the following installation location: "Don't search. I will chose the driver to install" and click on "Next"
  - e) As Hardware Type select "Tape drives" click on "Next"

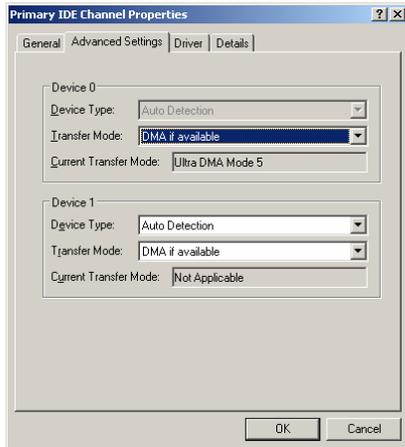
- f) In the following window click on “Have Disk...” and browse to the directory which contains the IBM DLT-V4 tape drive drivers for Windows
  - g) Click on the QntmDLT.inf file and then on “Open”
  - h) In the following Windows click through “OK”, “Next” and “Finish”
4. In the Windows 2003 Hardware Device Manager select the SATA onboard controller to which the IBM DLT-V4 Tape drive is attached to, right click on it and select “Properties”. In the below picture the IBM DLT-V4 tape drive was attached to the Primary onboard SATA controller channel.



5. In the IDE adapter Channel Options select the “Advanced Settings” tab. In the “Transfer Mode” drop down menu change the settings from “PIO Only” to “DMA if available” and click OK.



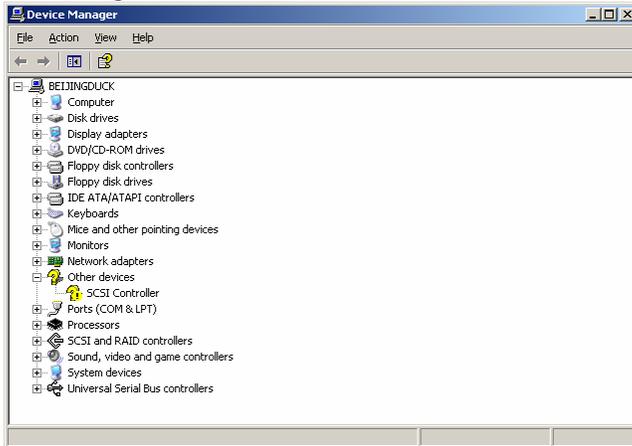
6. Now recheck the IDE controller Transfer settings again as described above and verify that it is set to “Ultra DMA Mode 5”. If it is not then reboot the server.



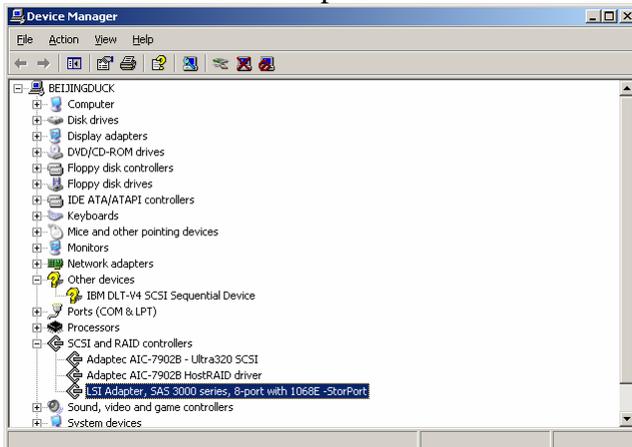
7. If all the above criteria is fulfilled then the IBM DLT-V4 tape drive is ready for use

## Installing the IBM DLT-V4 tape drive drivers when it is attached to the IBM SAS HBA controller p/n 25R8060

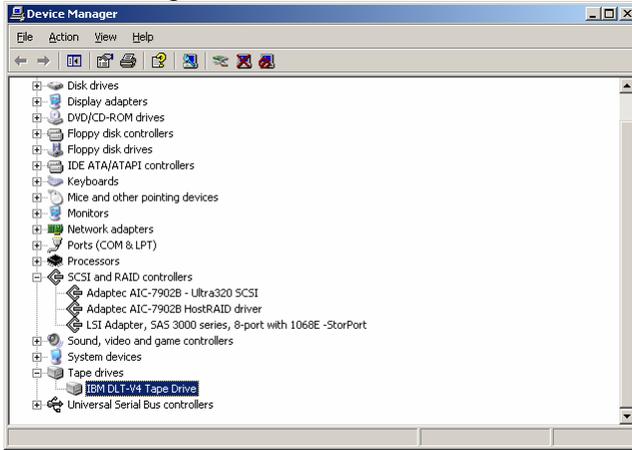
1. After installing the IBM SAS HBA the Windows 2003 Hardware Device Manager will show the following devices:



2. After installing the Windows device driver for the IBM SAS HBA controller Windows will now find the IBM DLT-V4 tape drive as an unknown device



3. Install the device drivers for the IBM DLT-V4 tape drive as outlined in the chapter “Installing the IBM DLT-V4 device drivers when a SATA onboard controller is in use” under step 3. Once the driver installation is complete the Windows 2003 Hardware Device Manager will show the tape drive as recognized



4. It is not necessary to set any Transfer Mode with the IBM SAS HBA since it supplies both native SAS and SATA connectors. The tape drive is now ready for use

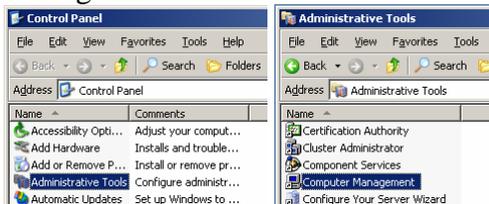
## Using the IBM DLT-V4 tape drive with the Windows 2003 integrated Backup application

When inserting new media – and under certain circumstances when it has been used - into the IBM DLT-V4 tape drive it is important that it is made available for use in the Windows 2003 integrated native Backup application NTBackup.

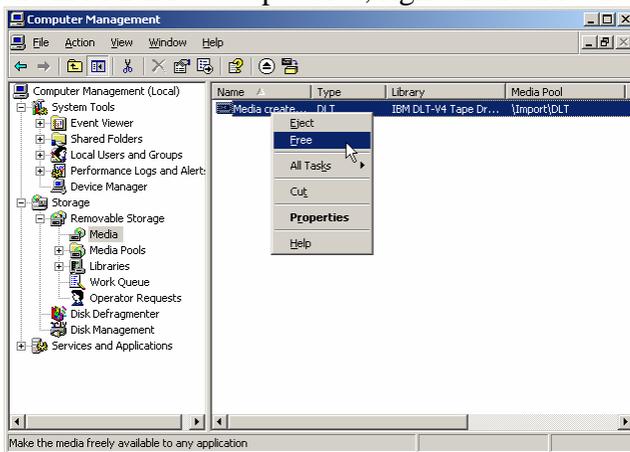
**Note:** In the following description it is assumed that in Windows 2003 the classic desktop / menu is used.

Do the following:

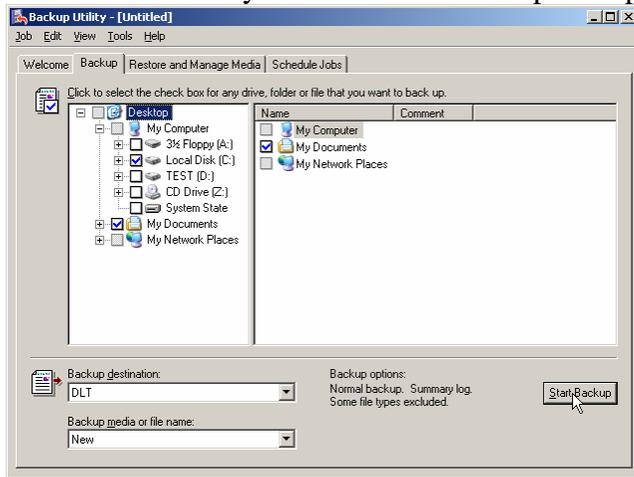
1. Click through “Start” / “Settings” / “Control Panel”
2. In the Control Panel launch the “Administrative Tools” applet and then launch the “Computer Management” tool



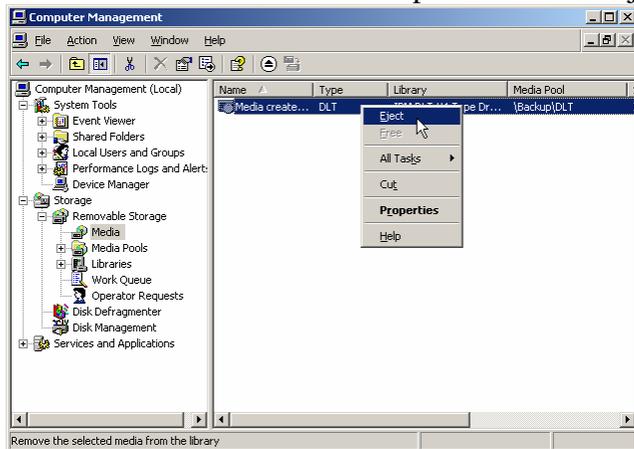
3. In Computer Management under “Storage” / “Removable Storage” search for the media inserted in the IBM DLT-V4 tape drive, right click on it and select “Free”.



4. Once the media has been set to “Free” close the Computer Management MMC console and launch the Windows native Backup application NTBackup by clicking through “Start” / “Programs” / “Accessories” / “System Tools” / “Backup” and perform a backup of your data



5. In order to prolong both the tape drive and the media life time eject the media after the backup is complete. Open the Computer Management console as described above and search again for the media that is inserted in the tape drive. Right click on the media and select “Eject” and follow the onscreen menus in order to complete the media ejection. Now store the media in a safe place.



## Retain Tip H12790

Record number: H12790

Abstract: PIO MODE NOT FOR SATA TAPE DRIVES

### SYMPTOM:

The DLT-V4 SATA tape drive and data cartridges are recognized in Windows Removeable Storage Manager, however, the data cartridges cannot be read or written.

### PROBLEM ISOLATION AIDS:

- This Tip is not hardware specific.
- The system is configured with at least one of the following:  
Microsoft Windows 2003 Server, any model
- The system is configured with one or more of the following  
IBM Options:  
  
IBM 160/320 GB DLTV4 tape drive, Option p/n 39M5659
- The system has the symptom described above.

### FIX:

To enable or check the transfer mode use Windows Device Manager.

1. Open Device Manager.
2. Double click and select the IDE ATA/ATAPI controllers.
3. Right click on the icon for Channel to which the device is connected. On IBM servers with dual SATA controller chipsets the following legend applies:

Channel 0=Primary IDE channel  
Channel 1=Secondary IDE channel  
Channel 2=Primary IDE channel second chipset  
Channel 3=Secondary IDE channel second chipset.

4. In the Current Transfer Mode drop-down box, select "DMA if Available".

### WORKAROUND:

None.

### DETAILS:

Configuration of Microsoft Windows for DMA transfers (SATA) is required of sequential access devices.

The tape drives are designed to reject Write/Read commands that use PIO mode method of transfer.

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## Retain tip H19238

Record number: H19238

Abstract: DLT V4 TAPE DRIVE 39M5659 FAILS AFTER INSTALL

SYMPTOM:

After installing the DLT V4 tape drive, part number 39M5659, FRU part number 39M5663, into a System x server and the Microsoft Windows device drivers for it, the tape drive fails to perform any backups.

PROBLEM ISOLATION AIDS:

- This Tip is not hardware specific.
- The system is configured with at least one of the following:

Microsoft Windows 2003 Server  
Microsoft Windows 2003 Server EE x64  
Microsoft Windows 2003 Server for 64 Bit Itanium Servers

- The system is configured with one or more of the following IBM Options:

IBM 160/320 GB DLT V4 tape drive, Option p/n 39M5659

- The system has the symptom described above.

FIX:

Open Microsoft Windows Device Manager and select, under IDE ATA/ATAPI controller, the SATA controller to which the tape drive is attached to.

Right click on this device and open Properties. In Properties, select the Advanced Settings tab and change the Transfer Mode from "PIO" to "DMA". Click on OK.

WORKAROUND:

None.

DETAILS:

The DLT V4 SATA tape drive uses the DMA mode for data transfer. If the SATA controller channel is set to PIO, then it is not able to establish a communication link to the DLT V4 tape drive.

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## **Additional Information**

This document has been written by Christian Flatscher

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