

**IBM System x3400 and x3500  
servers**



**SATA backup device  
Not seen when attached to  
SATA onboard controller port**

Retain tip [H191434](#)



# Contents

<b>1 Important.....</b>	<b>1</b>
2 Symptoms .....	1
3 Affected configurations.....	1
4 Solution.....	1
4.1 Server preparation .....	2
4.2 BIOS configuration .....	2
4.3 Windows 2003 .....	6
4.4 Windows 2008 .....	7
4.5 Hardware installation .....	8
4.6 How the backup solution is seen during server POST .....	10
4.6.1 IBM DDS Gen 5 ( DAT72) SATA Tape Drive .....	10
4.6.2 IBM 160/320 GB Half-High DLT V4 Internal SATA Tape Drive .....	10
4.6.3 IBM GoVault Backup/Restore Tape Drive .....	11
4.7 Backup solution seen in Windows when drivers are installed .....	11
4.7.1 IBM DDS Generation 5 Tape Drive ( DAT72 ) Tape Drive .....	12
4.7.2 IBM 160/320 GB Half-High DLT V4 Internal SATA Tape Drive .....	12
4.7.3 IBM GoVault Backup/Restore Tape Drive .....	13

## 1 Important

Always check and ensure that the latest version of this support document is available from the IBM System x hardware Retain tip [H191434](#) available via support document [MIGR-5071873](#).

Ensure that:

- the System x backup solution is always on the latest supported firmware level
- the latest System x backup solution diagnostics solution is installed
- the latest System backup solution drivers are installed, when applicable

For latest System x backup solution code connect to the System x support document [TAPE-FILES](#).

## 2 Symptoms

After installing an IBM System x SATA backup solution any of the onboard SATA controller connectors of an IBM x3400 or x3500 server the backup device is not seen during server POST or in the host Operating System.

## 3 Affected configurations

The system may be any of the following IBM servers:

- System x3400, type 7975, any model
- System x3400, type 7976, any model
- System x3500, type 7977, any model

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

- Digital Data Storage (DDS) Generation 5 Tape Drive ( DAT72 ), Option part number 43W8480, Replacement part number 43W8489
- GoVault Backup/Restore Tape Drive, Option part number 25R0006, Replacement part number 25R0037
- GoVault Internal Dock without cartridge, Option part number 42D8771, Replacement part number 43W8486
- GoVault 80 GB Cartridge, Option part number 39M5617, Replacement part number 25R0037
- GoVault 120 GB Cartridge, Option part number 42D8776, Replacement part number 42D8779
- IBM 160/320 GB Half-High DLTV4 Internal SATA Tape Drive, Option part number 39M5659, Replacement part number 39M5663

The system is configured with at least one of the following:

- Microsoft® Windows® 2003 Server, any version, any service pack
- Microsoft Windows 2008 Server, any version, any service pack

## 4 Solution

- Notes:**
- The solution is only supported for Microsoft Windows based IBM System x servers
  - This document is intended for Windows 2003 and higher only

The solution requires a change in the Server BIOS. Also the version of the Microsoft Windows Operating System in use plays a role.

## 4.1 Server preparation

- Do not connect the System x backup solution to any of the server's onboard SATA controllers
- Obtain the latest Server BIOS and apply it. It is available via support document [MIGR-64734](#) or support document [MIGR-64732](#)
- Reboot the server after applying the latest BIOS
- If not done already, install the Windows Operating System

## 4.2 BIOS configuration

1. Reboot the host server and boot into the Server BIOS by pressing F1 when prompted

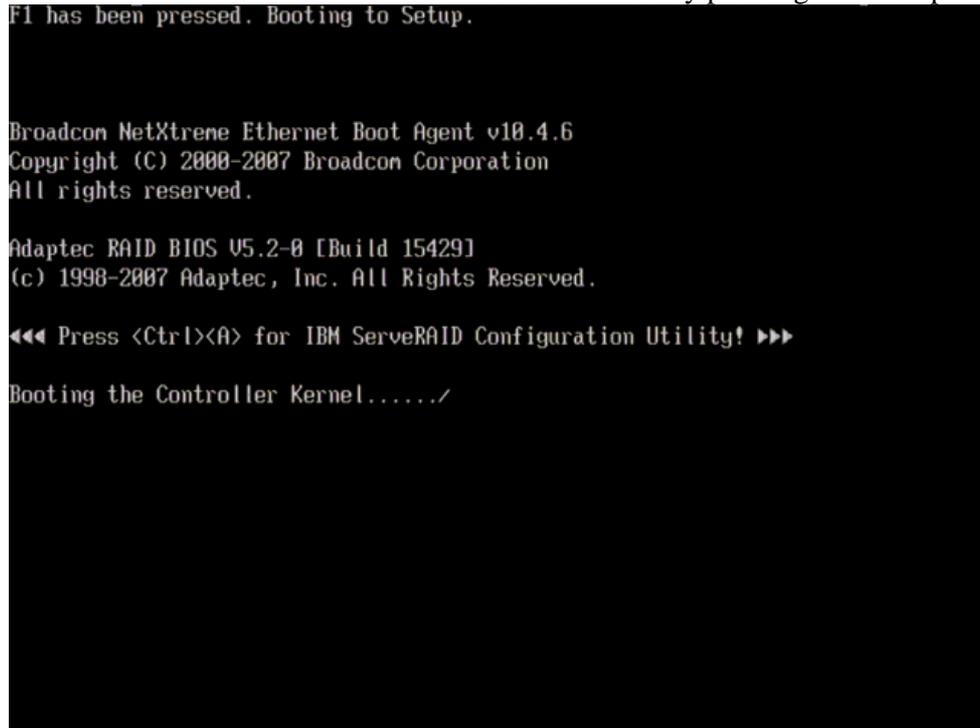


Figure 1 - Server booting into System BIOS



5. Set the "SATA Controller Mode Option" to from "Compatible" to "Disabled"

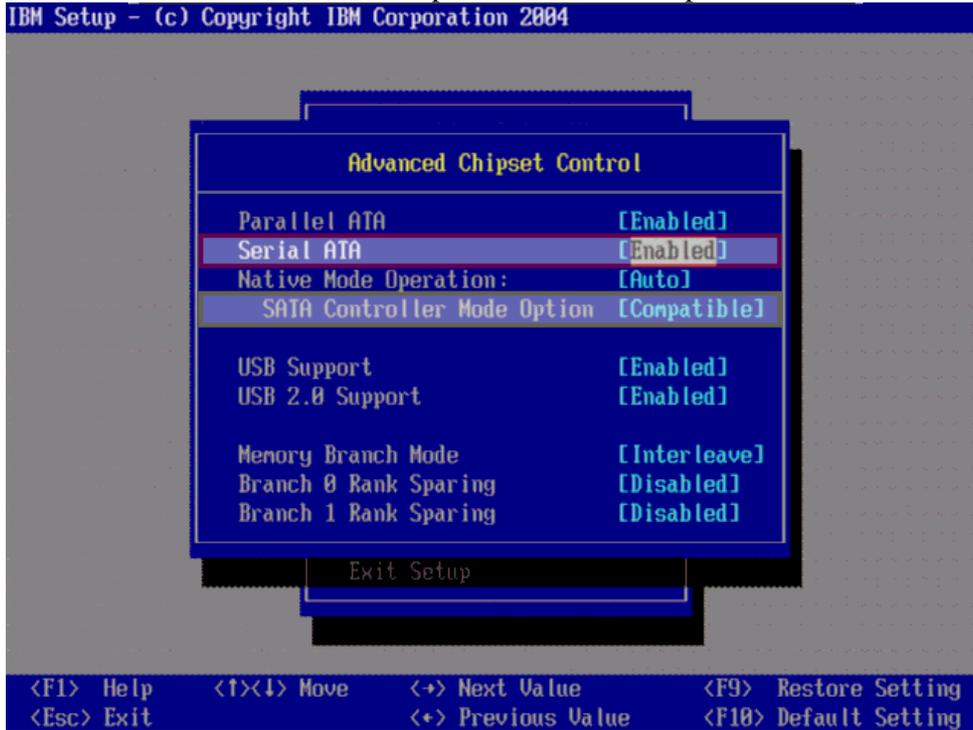


Figure 4

6. This will change the BIOS entry from "SATA Controller Mode Option" to "SATA AHCI Enable" and it will be set to "Disabled"



Figure 5

7. Change the "SATA ACHI Enable" Option to "Enabled"

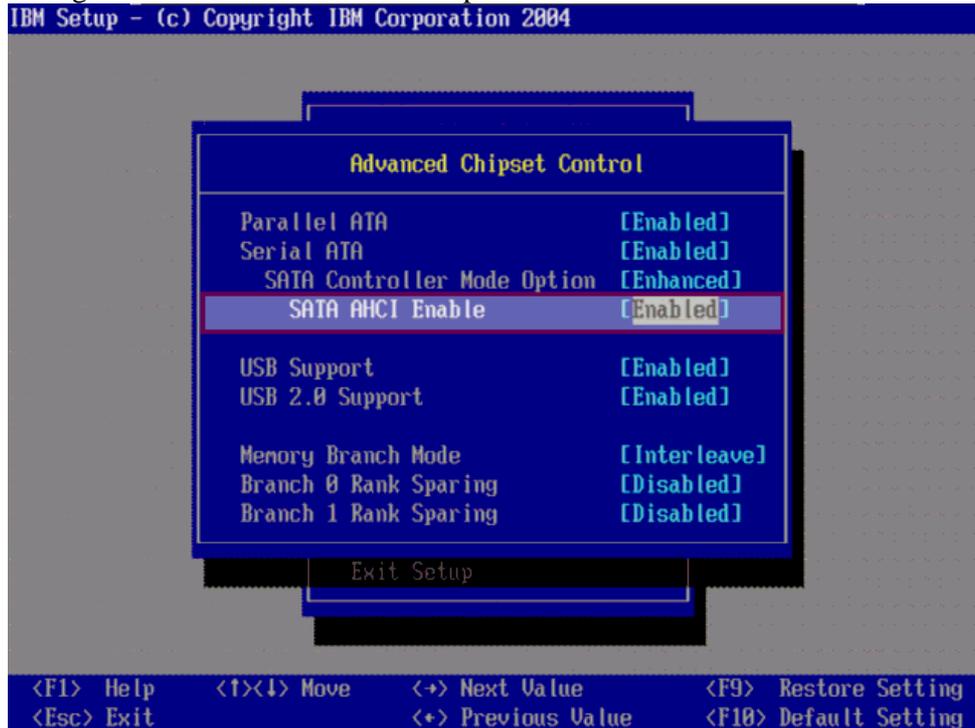


Figure 6

8. Exit from this menu with the "ESC" key until back in the BIOS main menu. Select the entry "Save Settings" and press [ ENTER ]

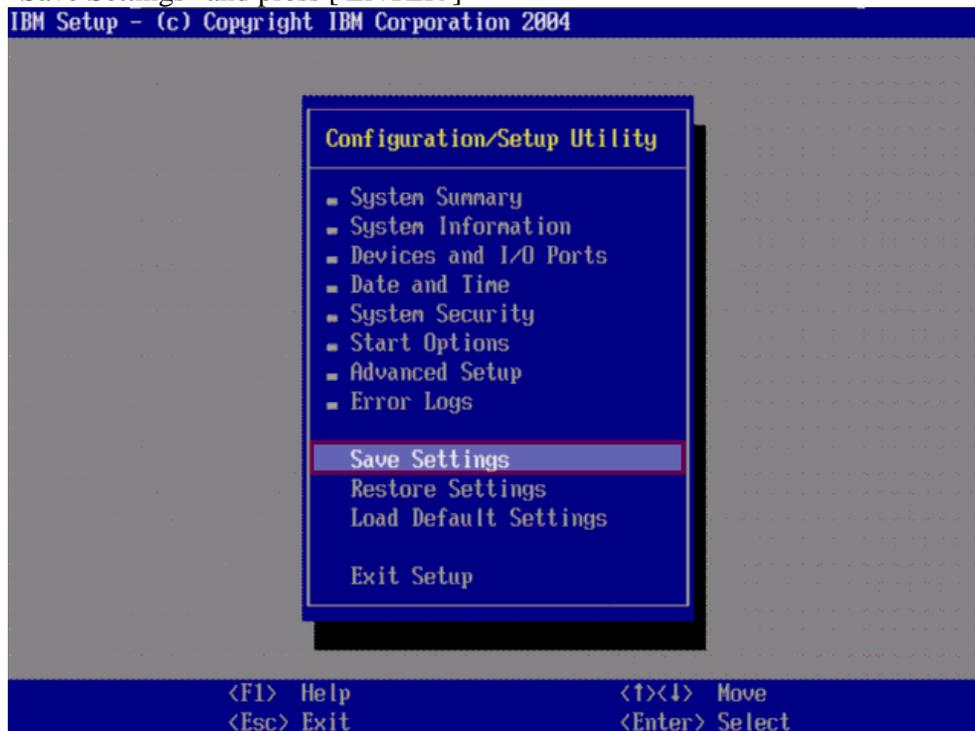


Figure 7

9. Confirm by pressing the [ ENTER ] key

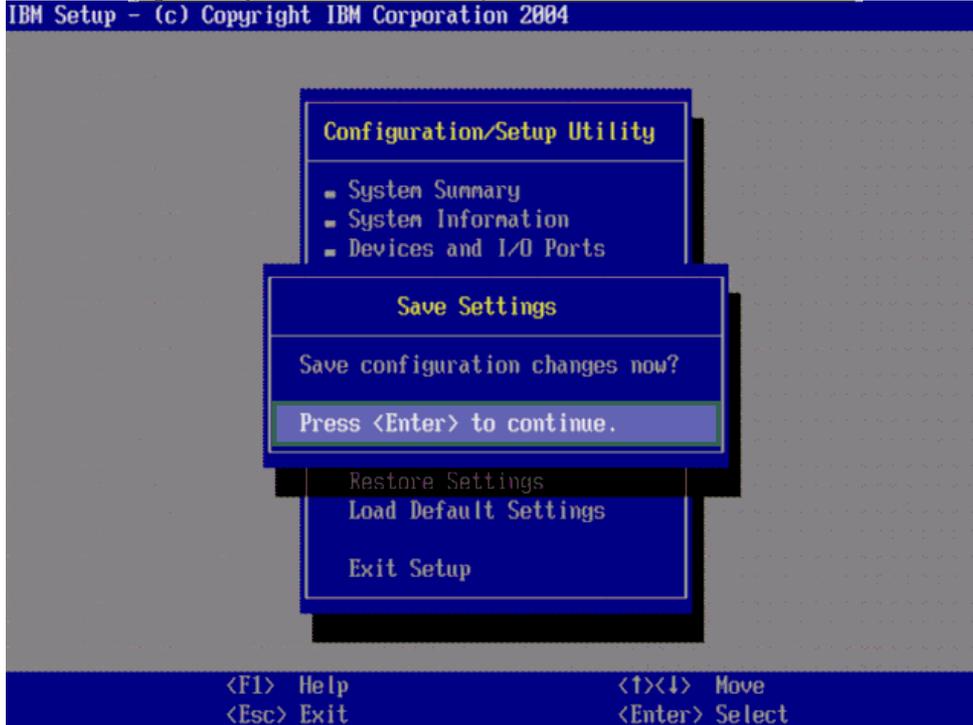


Figure 8

10. Quit the server BIOS

### 4.3 Windows 2003

1. Boot the server into the Windows Operating System
2. The Windows 2003 "Found New Hardware Wizard" will inform of new found hardware and wants to install the device drivers for it. Cancel this request



Figure 9 - The "Found New Hardware Wizard" pops up

3. Download the latest "Intel Matrix Storage Manager" from the support document [MIGR-5074376](#) and install it
4. After the installation the "Intel(R) 631xESB/632xESB SATA ACHI Controller" will be visible in the Windows 2003 Device Manager

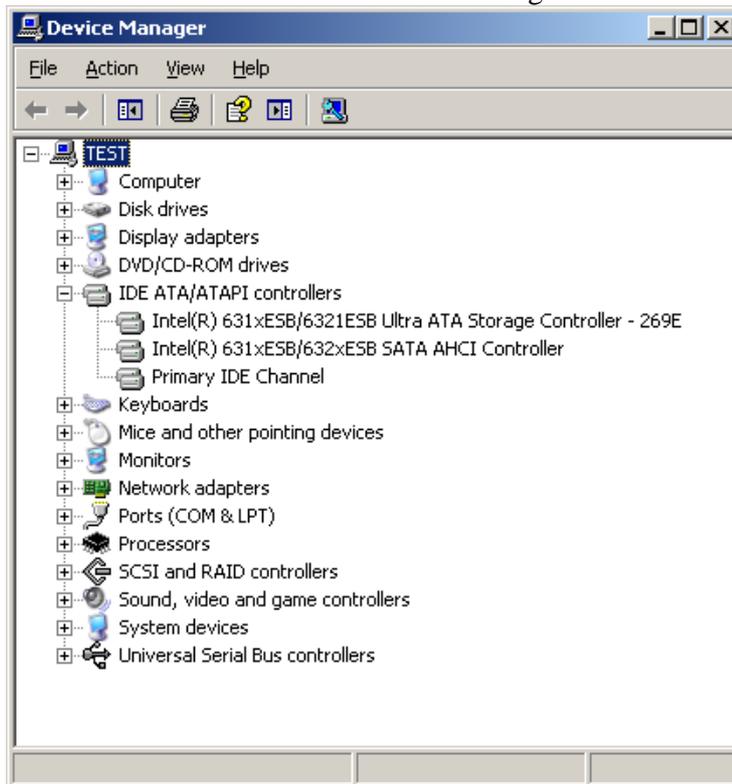


Figure 10 - AHCI Controller in the Windows 2003 Device Manager

5. Shut down the server and turn it off

#### 4.4 Windows 2008

The "Intel Matrix Storage Manager" is part of the Windows 2008 distribution and does not need to be installed. Shut down the server and turn it off.

## 4.5 Hardware installation

Install the IBM System x backup solution into an available server bay – preferable the bottom bay  
Connect the SATA cable of the IBM System x backup solution to one of the onboard SATA ports.  
The relevant SATA ports are highlighted in an amber circle in [Figures 11](#) and [12](#).

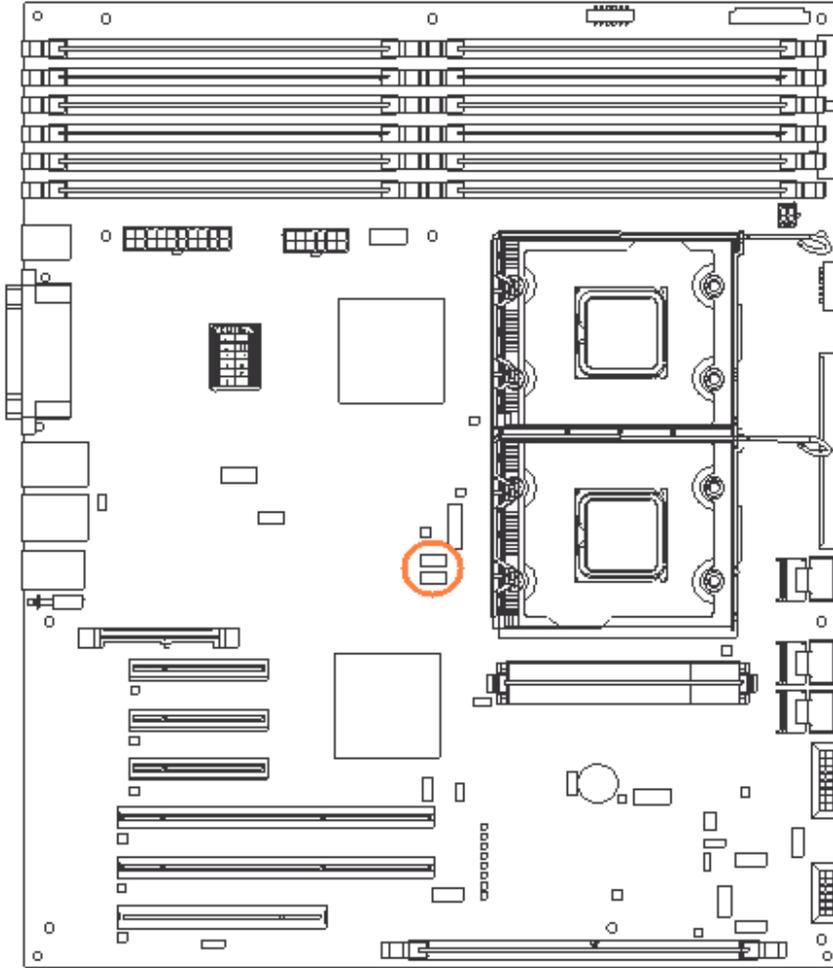


Figure 11 - System board overview with SATA ports highlighted

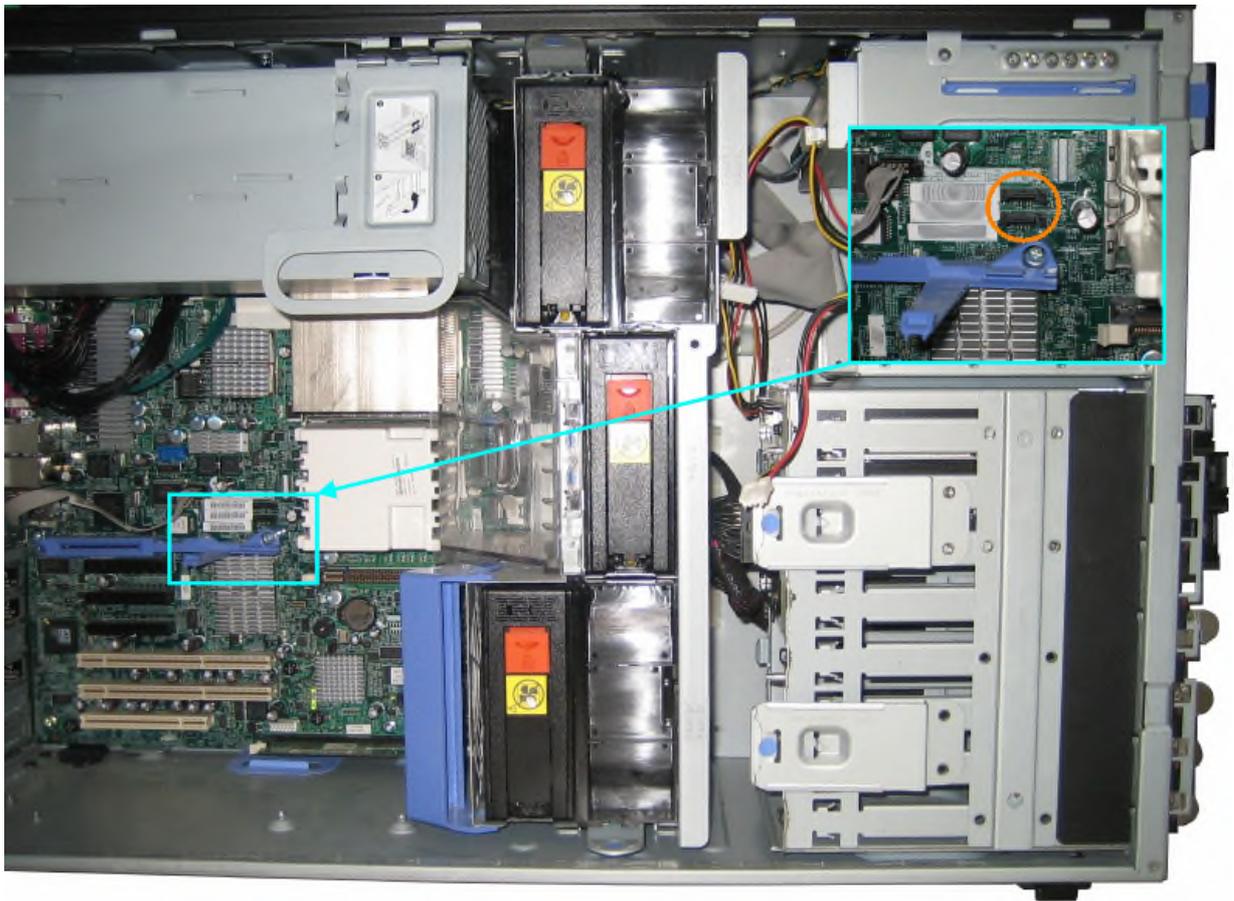


Figure 12 - SATA port locations in the server

## 4.6 How the backup solution is seen during server POST

### 4.6.1 IBM DDS Gen 5 ( DAT72) SATA Tape Drive

```
Serial ATA AHCI BIOS, Version iSrc 1.12_E 12102007
Copyright (c) 2003-2007 Intel Corporation
** This version supports only Hard Disk and CDROM drives **
Please wait. This will take few seconds.

Controller Bus#00, Device#1F, Function#02: 06 Ports, 01 Devices
  Port-00: No device detected
  Port-01: No device detected
  Port-02: No device detected
  Port-03: No device detected
  Port-04: No device detected
  Port-05: ARMD, IBM    DDS Gen5
            (Device not supported in this AHCI option ROM build)
No device found
AHCI BIOS not installed

Adaptec RAID BIOS V5.2-0 [Build 15429]
(c) 1998-2007 Adaptec, Inc. All Rights Reserved.

<<< Press <Ctrl><A> for IBM ServeRAID Configuration Utility! >>>

Booting the Controller Kernel.....;
```

Figure 13

**Note:** The message "Device not supported in this AHCI option ROM build" can be ignored

### 4.6.2 IBM 160/320 GB Half-High DLTV4 Internal SATA Tape Drive

```
Serial ATA AHCI BIOS, Version iSrc 1.12_E 12102007
Copyright (c) 2003-2007 Intel Corporation
** This version supports only Hard Disk and CDROM drives **
Please wait. This will take few seconds.

Controller Bus#00, Device#1F, Function#02: 06 Ports, 01 Devices
  Port-00: No device detected
  Port-01: No device detected
  Port-02: No device detected
  Port-03: No device detected
  Port-04: ARMD, IBM    DLT-V4
            (Device not supported in this AHCI option ROM build)
  Port-05: No device detected
No device found
AHCI BIOS not installed

Adaptec RAID BIOS V5.2-0 [Build 15429]
(c) 1998-2007 Adaptec, Inc. All Rights Reserved.

<<< Press <Ctrl><A> for IBM ServeRAID Configuration Utility! >>>

Booting the Controller Kernel.....;
```

Figure 14

**Note:** The message "Device not supported in this AHCI option ROM build" can be ignored

### 4.6.3 IBM GoVault Backup/Restore Tape Drive

```
Serial ATA AHCI BIOS, Version 1Src 1.12_E 12102007
Copyright (c) 2003-2007 Intel Corporation
** This version supports only Hard Disk and CDROM drives **
Please wait. This will take few seconds.

Controller Bus#00, Device#1F, Function#02: 06 Ports, 01 Devices
Port-00: No device detected
Port-01: No device detected
Port-02: No device detected
Port-03: No device detected
Port-04: No device detected
Port-05: ARMD, IBM GoVault
          (Device not supported in this AHCI option ROM build)
No device found
AHCI BIOS not installed
```

Figure 15

**Note:** The message "Device not supported in this AHCI option ROM build" can be ignored

### 4.7 Backup solution seen in Windows when drivers are installed

The Windows "New Found Hardware Wizard" will request device driver installation for the "IBM DDS Generation 5 Tape Drive ( DAT72 ) Tape Drive" or the "IBM 160/320 GB Half-High DLTV4 Internal SATA Tape Drive". At this stage the backup application of choice can be used or installed. For further information refer to the backup application User Guide.

**Note:** The Windows 2008 native backup application "Server Backup" does not support tape drive backup solutions. For additional information refer to ["Windows Server Backup Step-by-Step Guide for Windows Server 2008"](#) located at [http://technet.microsoft.com/en-us/library/cc770266\(WS.10\).aspx](http://technet.microsoft.com/en-us/library/cc770266(WS.10).aspx) in the section "Special considerations" last bullet more information can be found on this matter.

#### 4.7.1 IBM DDS Generation 5 Tape Drive ( DAT72 ) Tape Drive

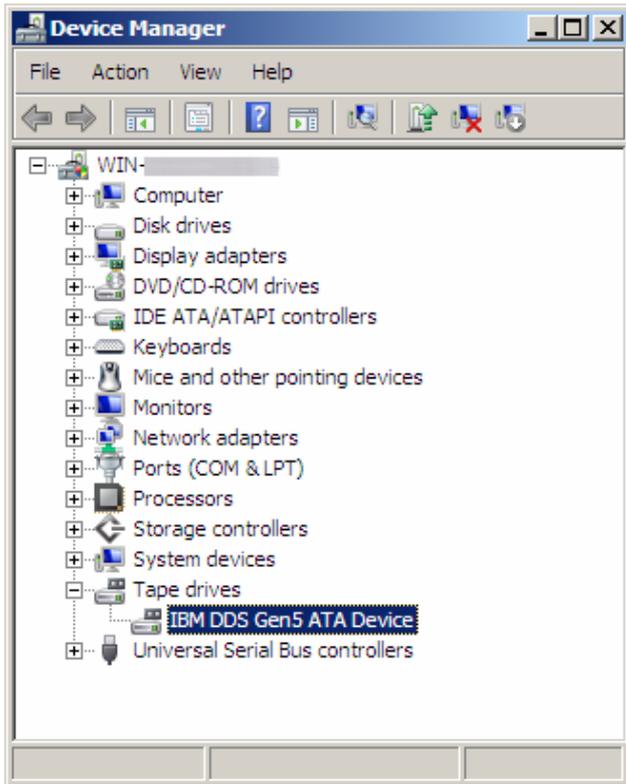


Figure 16

#### 4.7.2 IBM 160/320 GB Half-High DLT V4 Internal SATA Tape Drive



Figure 17

### 4.7.3 IBM GoVault Backup/Restore Tape Drive



Figure 18



THIS DOCUMENT WAS WRITTEN BY CHRISTIAN FLATSCHER

© 2009 IBM CORP.

© 2009 IBM UK LTD.