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StarWind iSCSI SAN: Virtual Tape Library (Part 1)

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If you have questions about installing or using this software, check this and other documents first - you will find answers to most of your questions here or there. If you need further assistance, please contact us.

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Guide

Introduction

StarWind Software Inc. StarWind allows you to create Virtual Tape Devices and Tape Libraries based upon hard disk storage. A Virtual Tape Device is a special hard drive file that's made available to your network that is normally used for file backup and recovery proposes.

By enabling virtualized hard drive space as a Tape Device, Backup Managers are able to integrate VTLs with existing backup software and current backup and recovery processes and procedures. It also enables the "backup to disk" functionality that many older backup software versions do not support. This prevents unnecessary and costly backup software upgrades.

Starwinds VTL solution allows Backup Managers to store backup data on inexpensive PATA and SATA hard drive systems, instead of having to use expensive tapes and tape drive systems. And by backing up your data to disk instead of tapes, VTLs will most often increase performance for both backup and restore operations. Scalability is increased by using RAID array enclosures to host and store your VTLs, by allowing the addition of more hard drives and/or enclosures to increase overall storage capacity.

This document provides step-by-step instructions on using **StarWind** virtual tape devices.
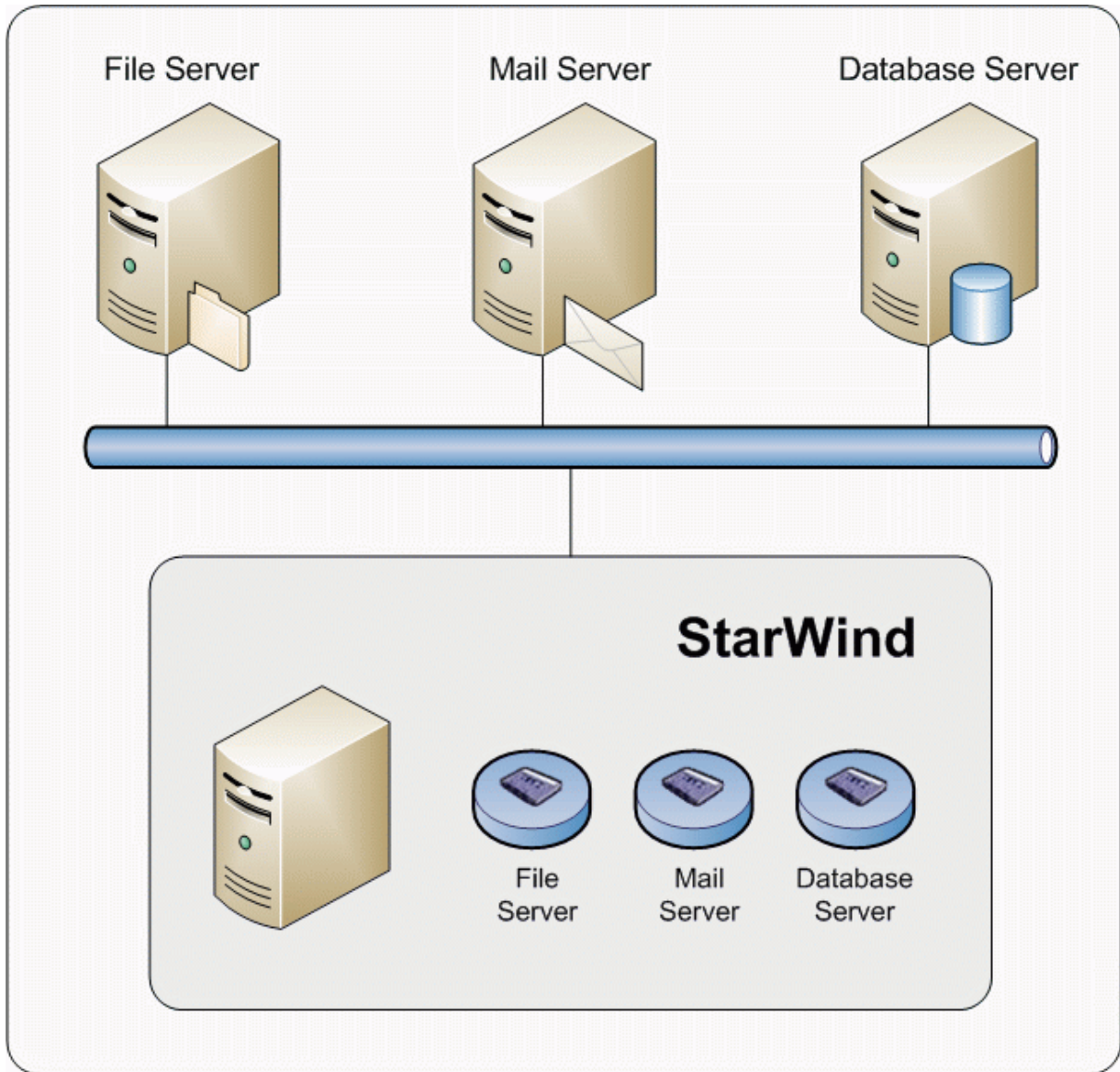
Figure 1. StarWind provides virtual tape devices

Configuring StarWind Server
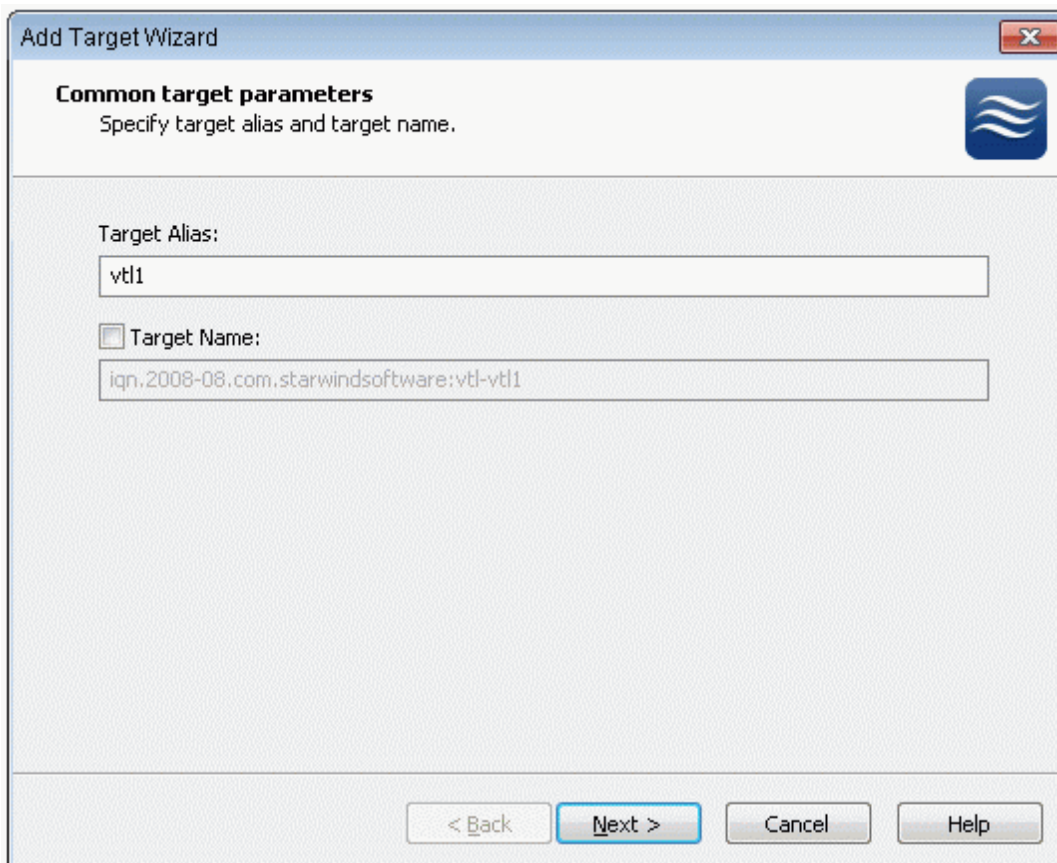
Preparing Virtual Tape Device

Launch the StarWind console **Start -> All Programs -> StarWind Software -> StarWind -> StarWind**. Whenever the **StarWind Console** is running, its icon will appear in the system tray.

The **StarWind Console** may be accessed by either double clicking the icon using the left mouse button or single click with the right mouse button and selecting the Start Management menu item from the pop-up menu.

From the **Connections** tree select the computer you want to provision the iSCSI target device on. Press **Connect** button to continue. You will be prompted to enter the login and password. Default ones are: test, test. You can always change them later.
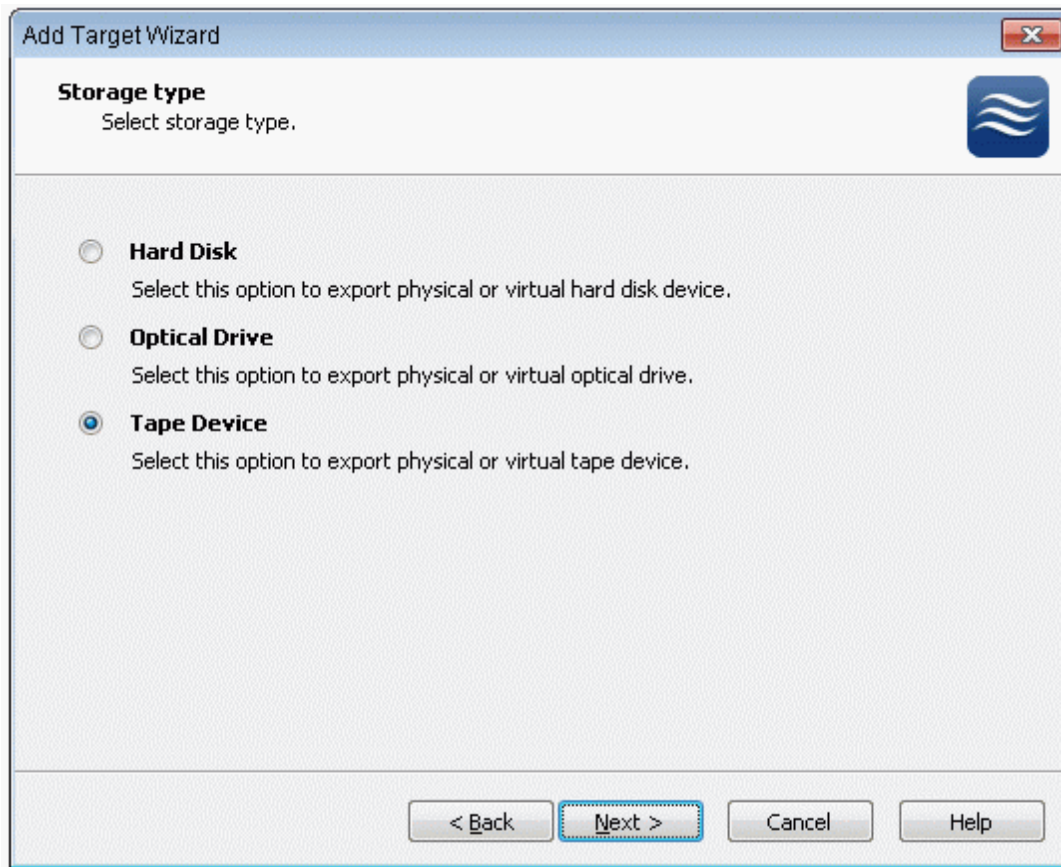
Press **Add Target** button to continue.

In the Wizard that appears, specify a target name. The name must be a unique name by which the device will be declared to the iSCSI initiators connecting to StarWind over an IP network.
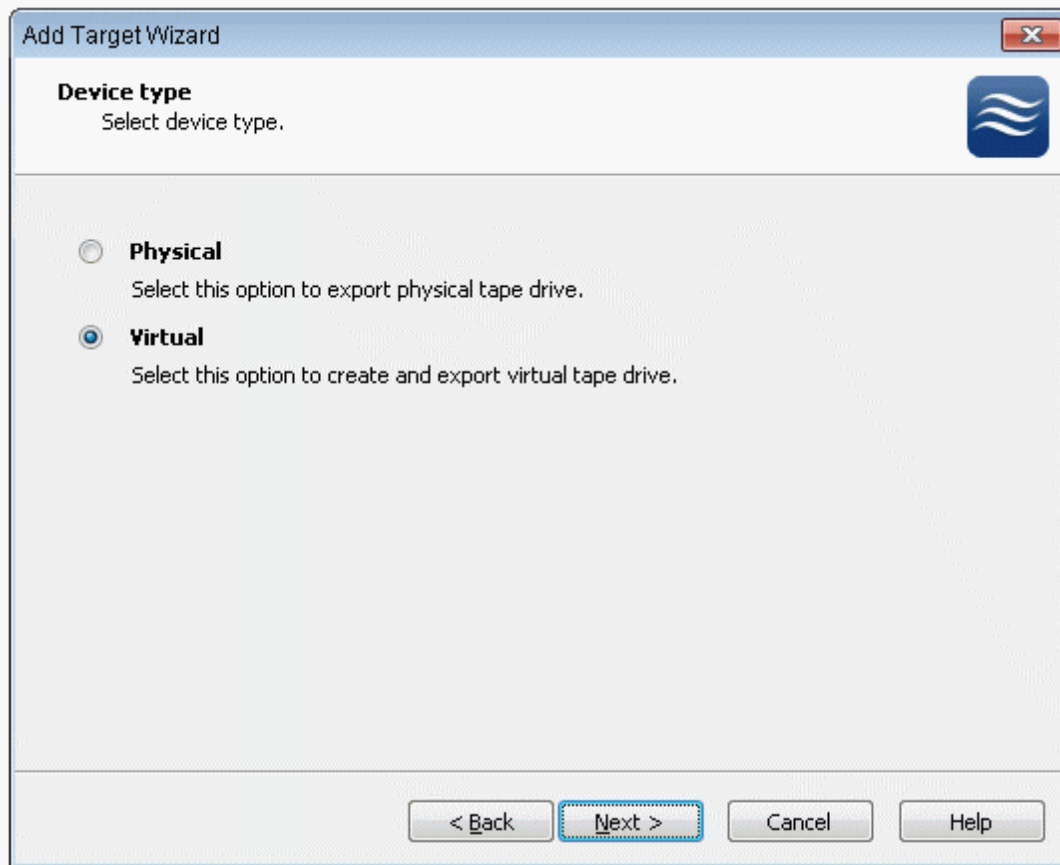
Press the **Next** button to continue.

Select **Tape Device**.
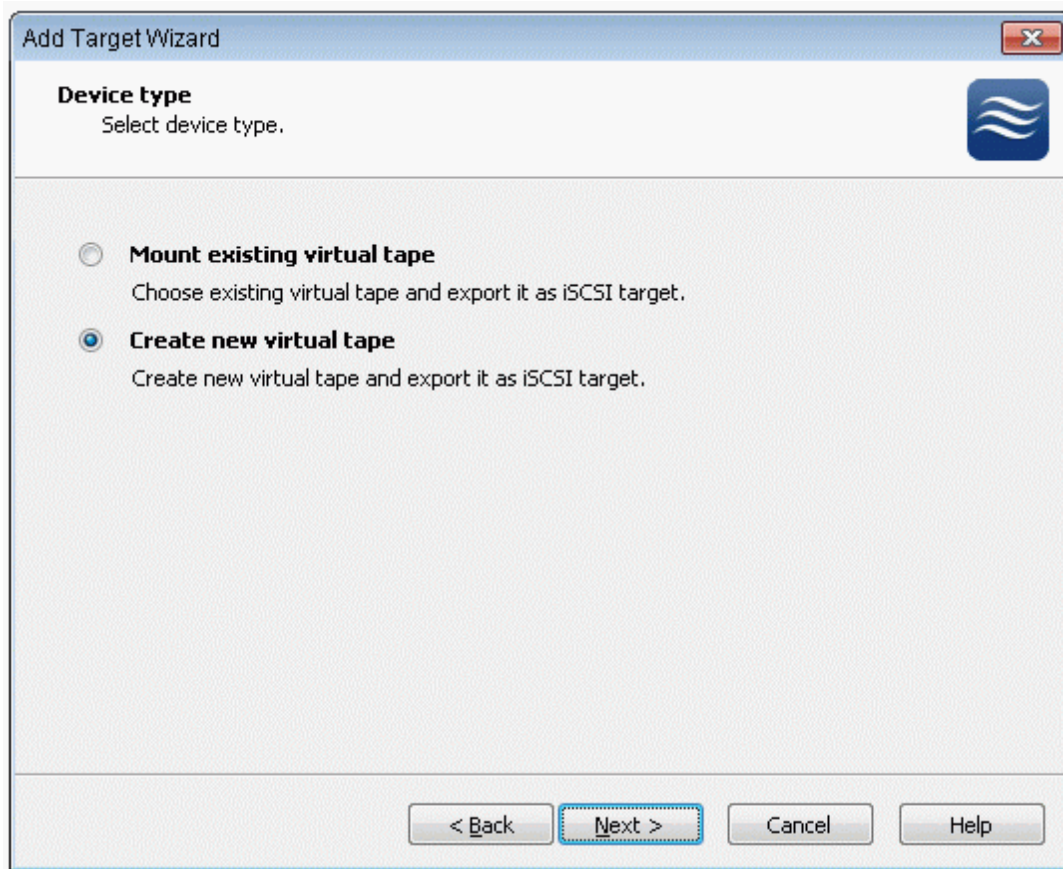

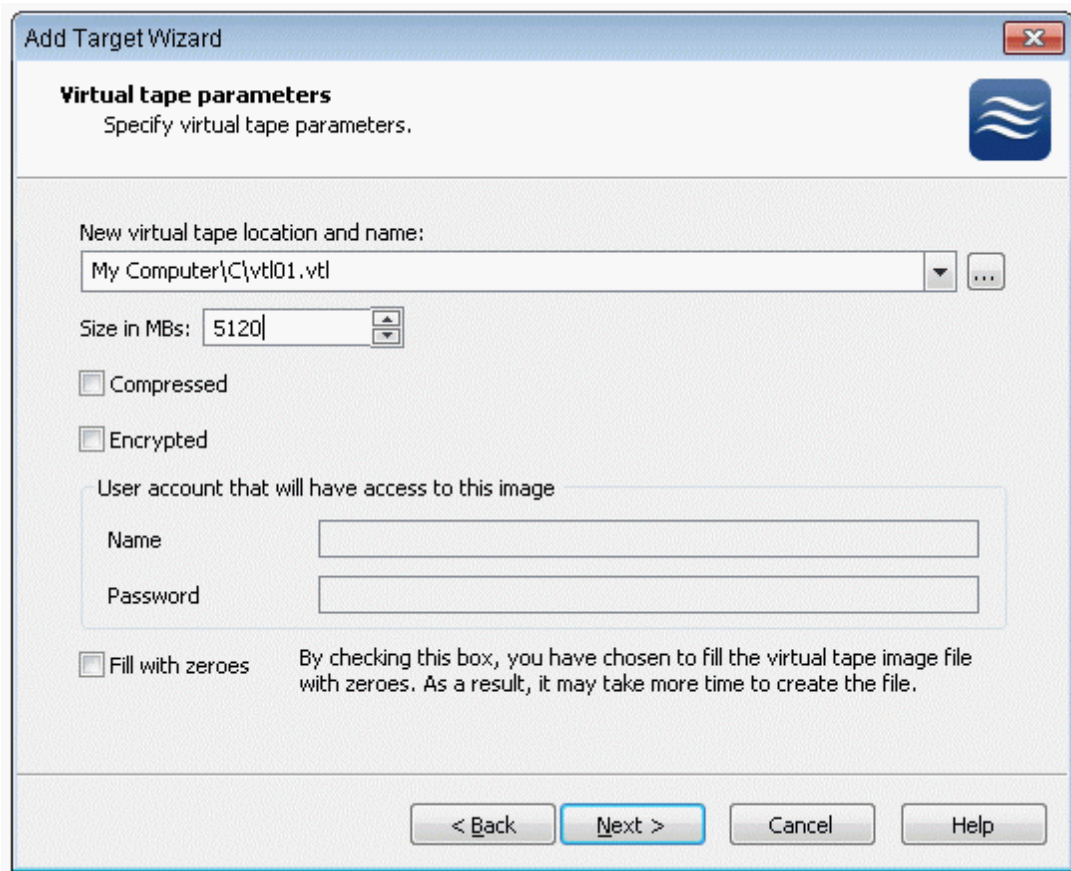Press the **Next** button to continue.

Select **Virtual**.

Press the **Next** button to continue.

Select **Create new virtual tape** to create a new image or **Mount existing virtual tape** to mount an existing image that you've prepared before.
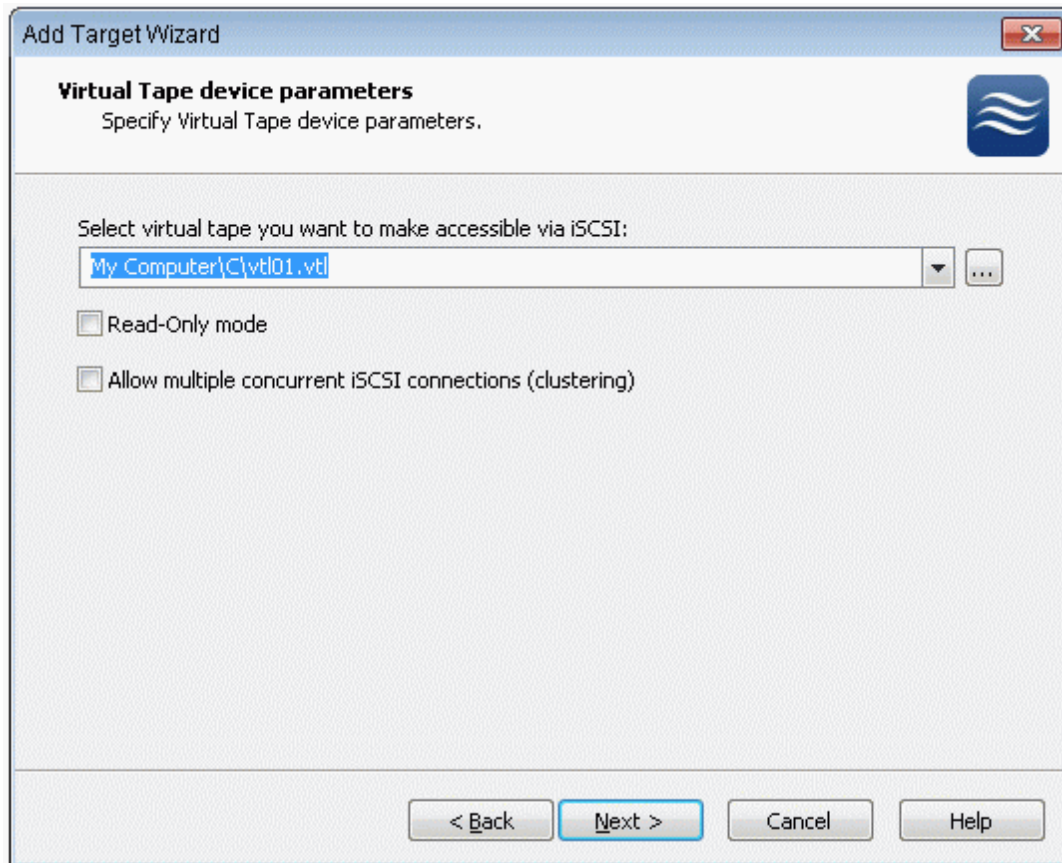

Press the **Next** button to continue.

If you have decided to create a new virtual tape, specify the location and the name of the virtual tape you want to be created. The virtual tape size is specified in megabytes. Refer to the online help for details regarding additional parameters (**Fill with zeroes, Compressed** and **Encrypted**).
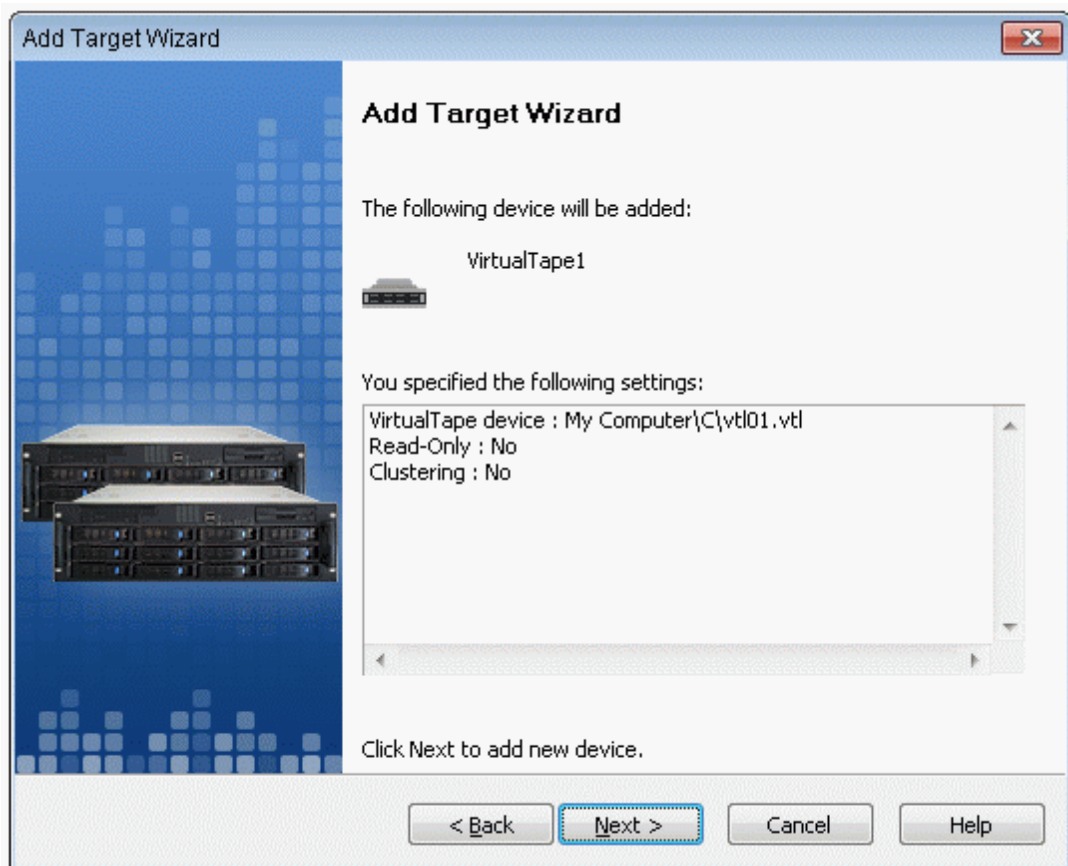

Press the **Next** button to continue.

An Virtual tape device can have additional parameters. Refer to the online help for details regarding the additional parameters (**Read-only mode** and **Allow multiple connections (clustering)**).
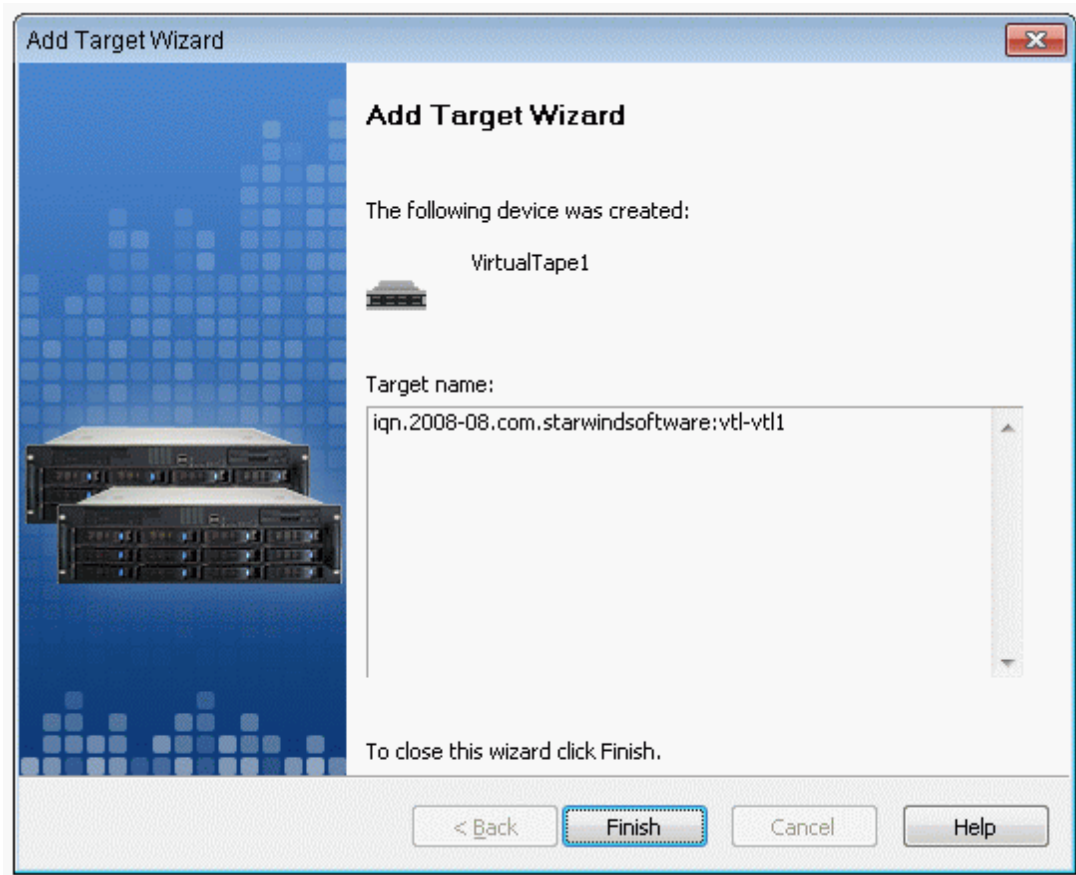

Press the **Next** button to continue.

Check the device parameters are correct. Press the **Back** button should any changes be required.

Press the **Next** button to continue.

A summary of the created device is displayed on the last wizard page (see image below).
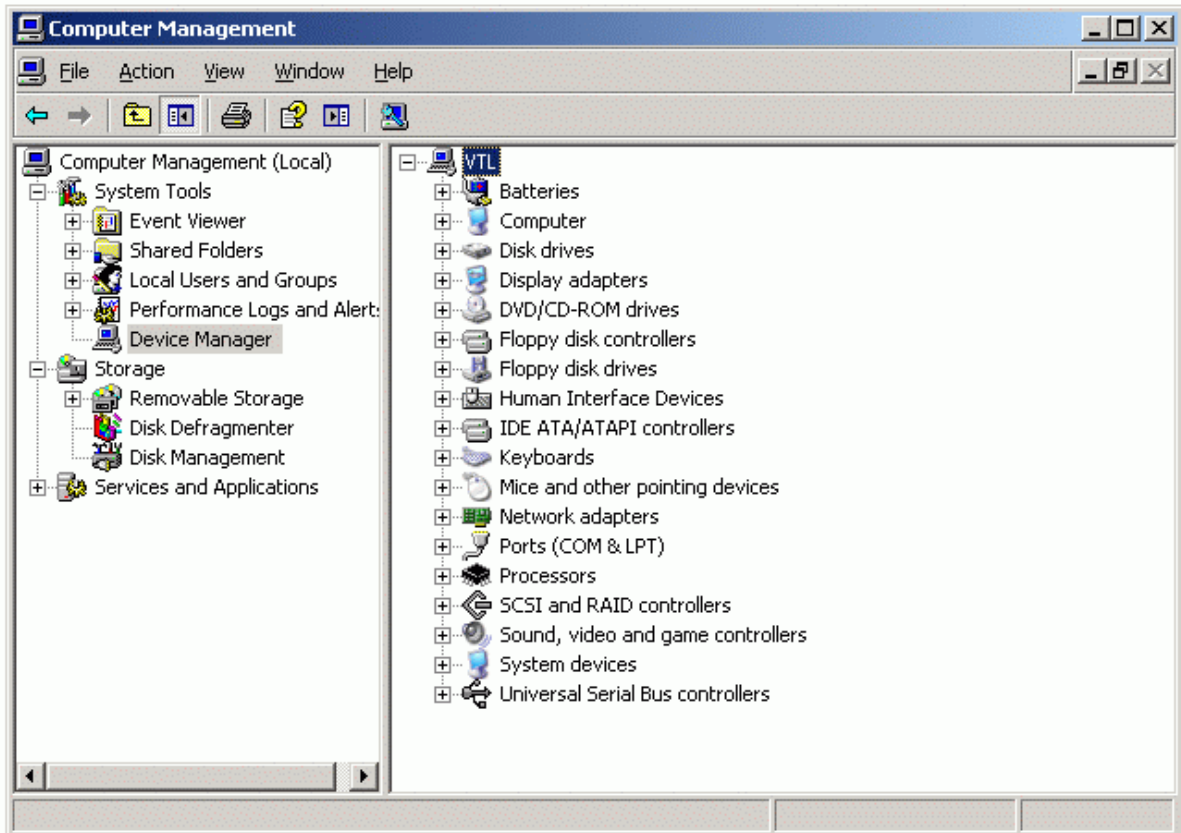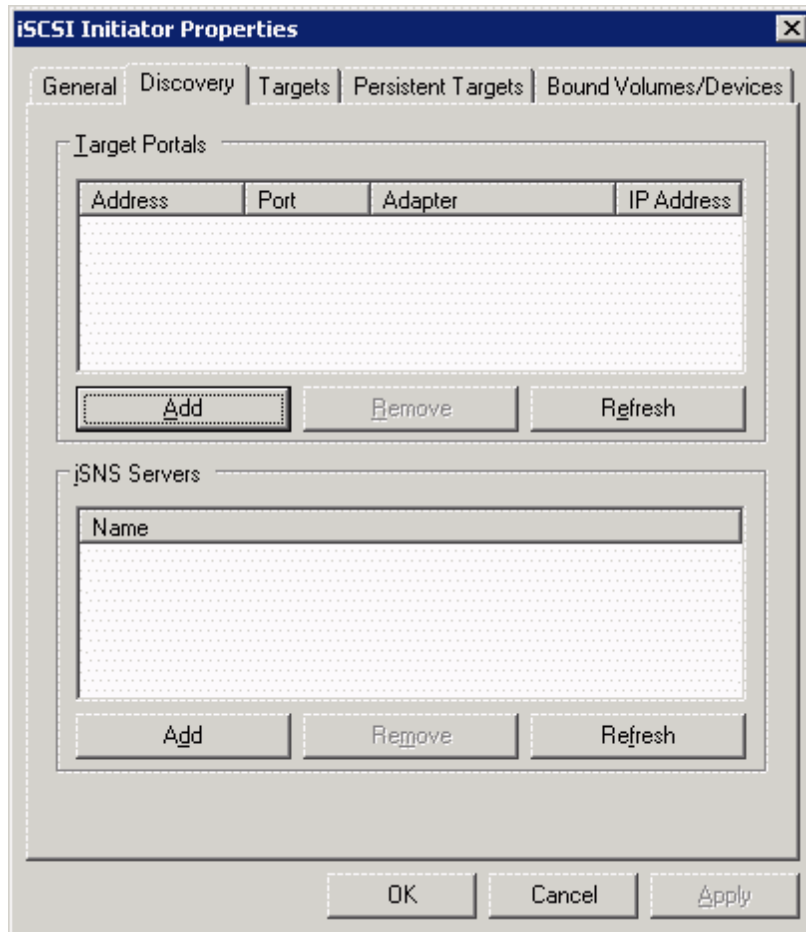

Press the **Finish** button to close the wizard.

Configuring iSCSI Client

Connect the Target

Launch the **Computer Management** console. Note that it currently shows no tape devices connected.
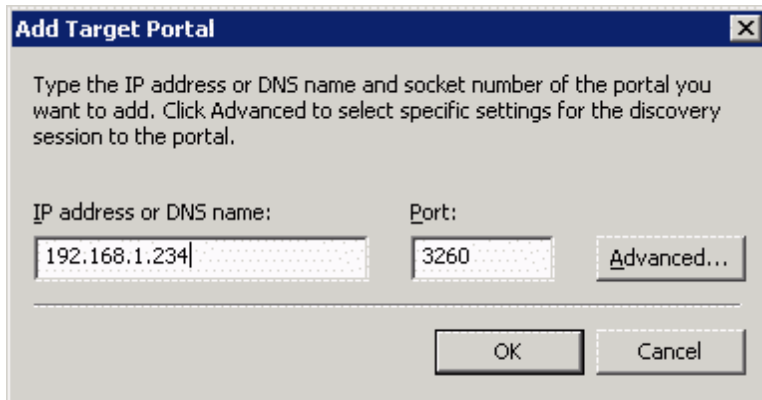

Launch the Microsoft iSCSI Software Initiator application **Start -> All Programs -> Microsoft iSCSI Initiator -> Microsoft iSCSI Initiator**.
Switch to the **Discovery** tab.

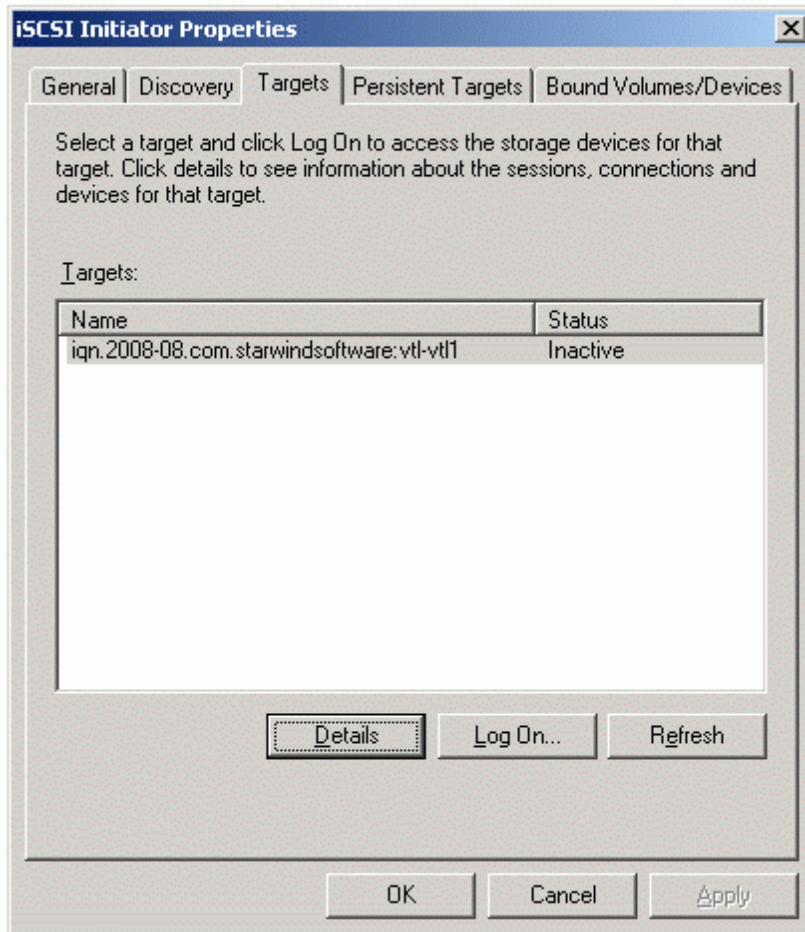Click **Add** in the **Target Portals** group.

In the **Add Target Portal** dialog, type in the IP address of the computer with **StarWind** installed and the port number assigned to **StarWind** (default : 3260).
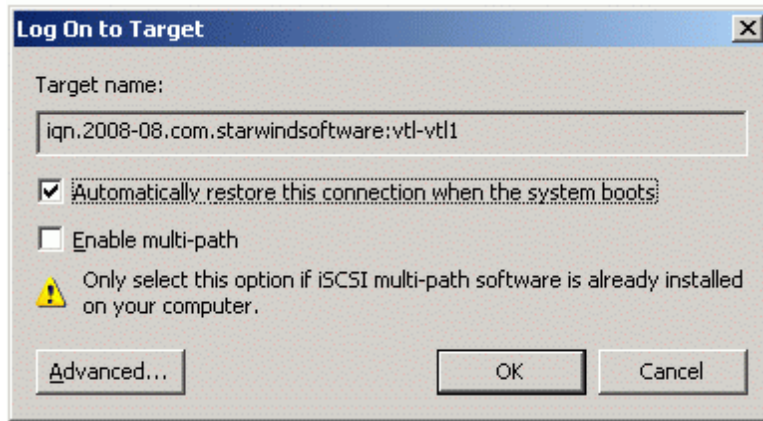

Press the **OK** button to continue.

Switch to the **Targets** tab. Select the target name from the list (if no targets are listed, press the **Refresh** button).
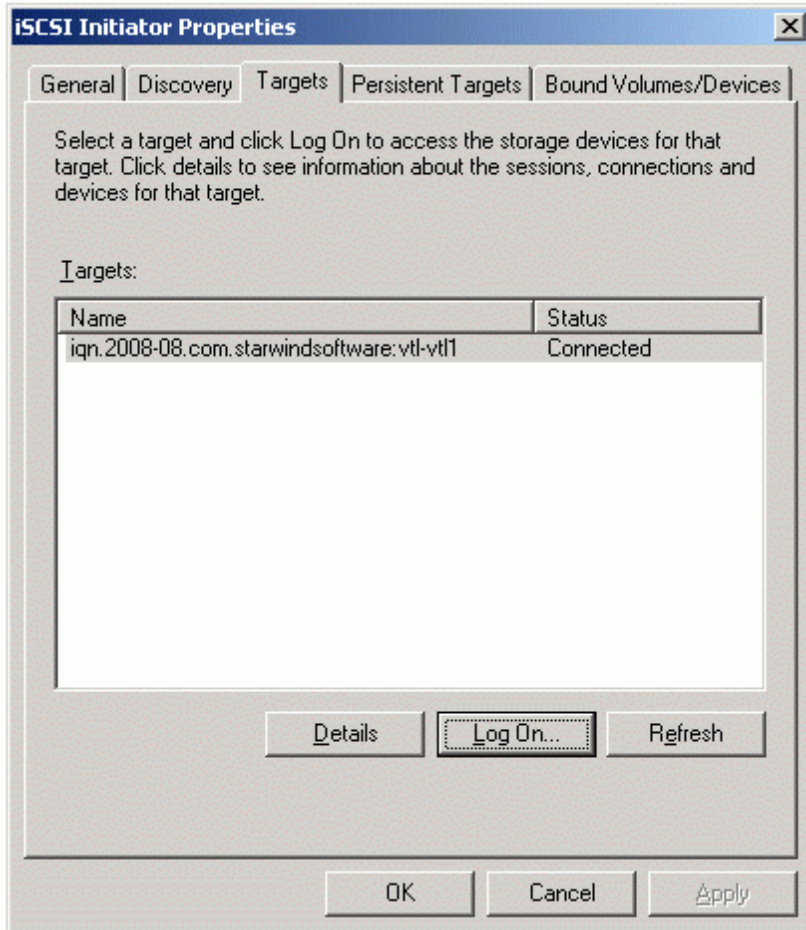

Press the **Log On…** button.

In the **Log On to Target** dialog, enable the **Automatically restore this connection when the system boots** checkbox.
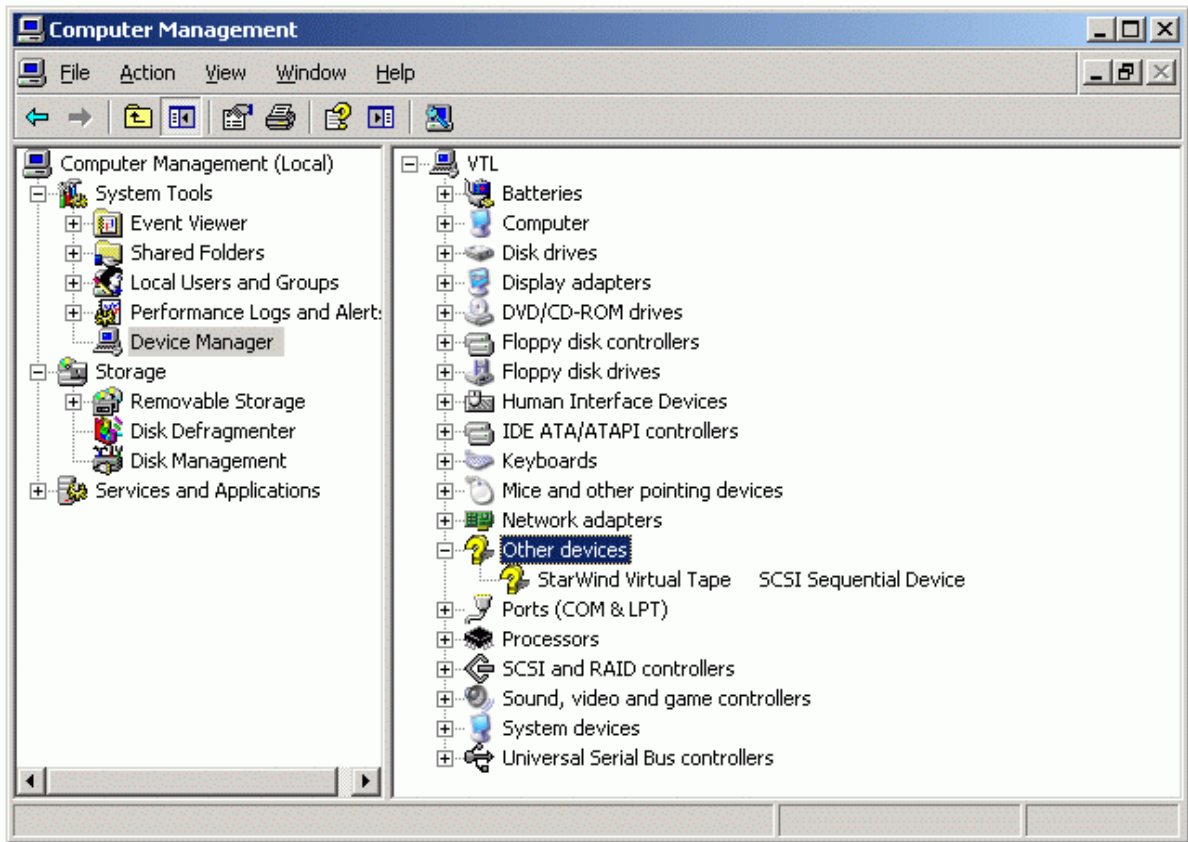

Press the **OK** button to continue.

If the logon is successful, the iSCSI device will show a status of **Connected**. It may take a few seconds for the device to appear in Windows.
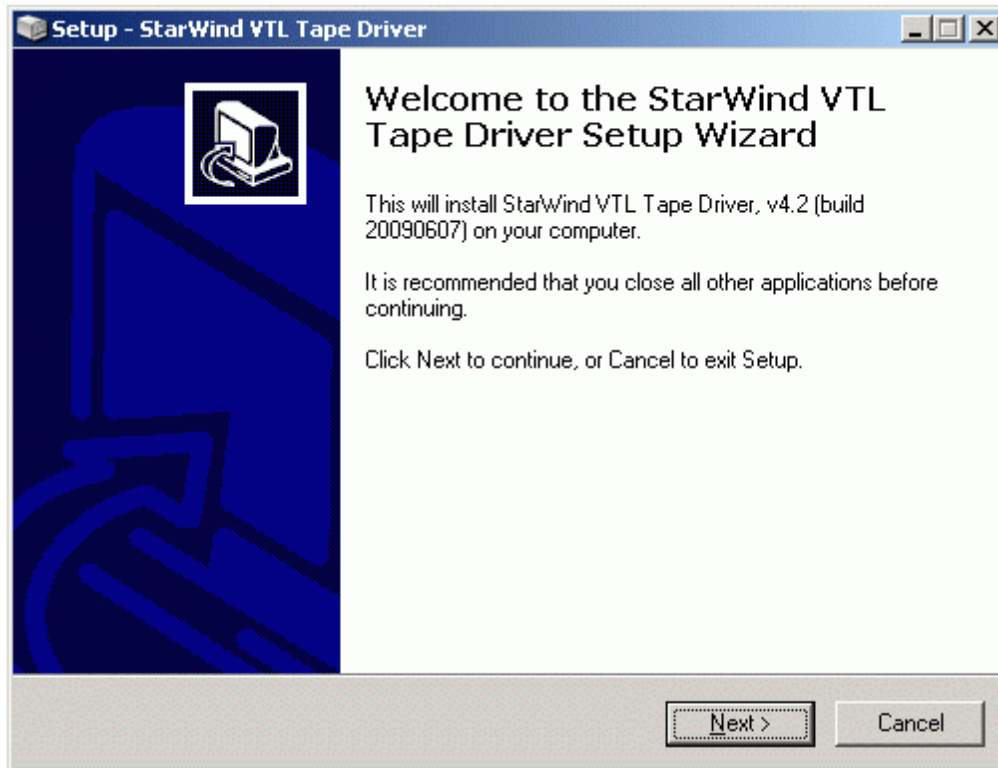
After connecting to the target, the tape device will appear as a local device.
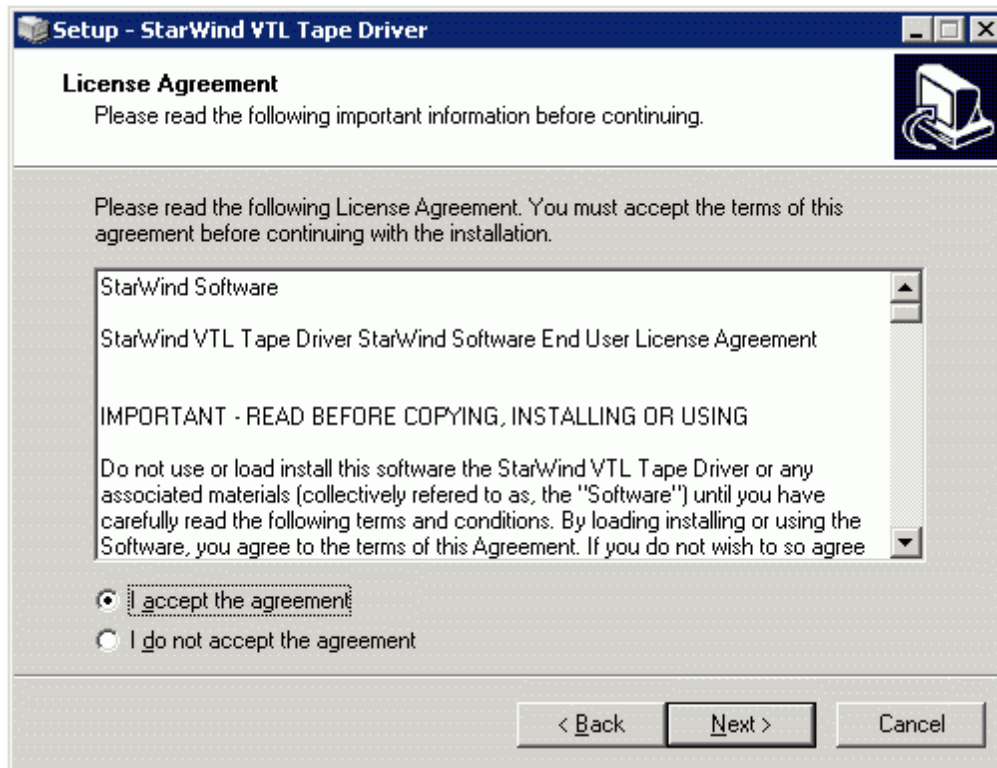
Install StarWind VTL Tape Driver
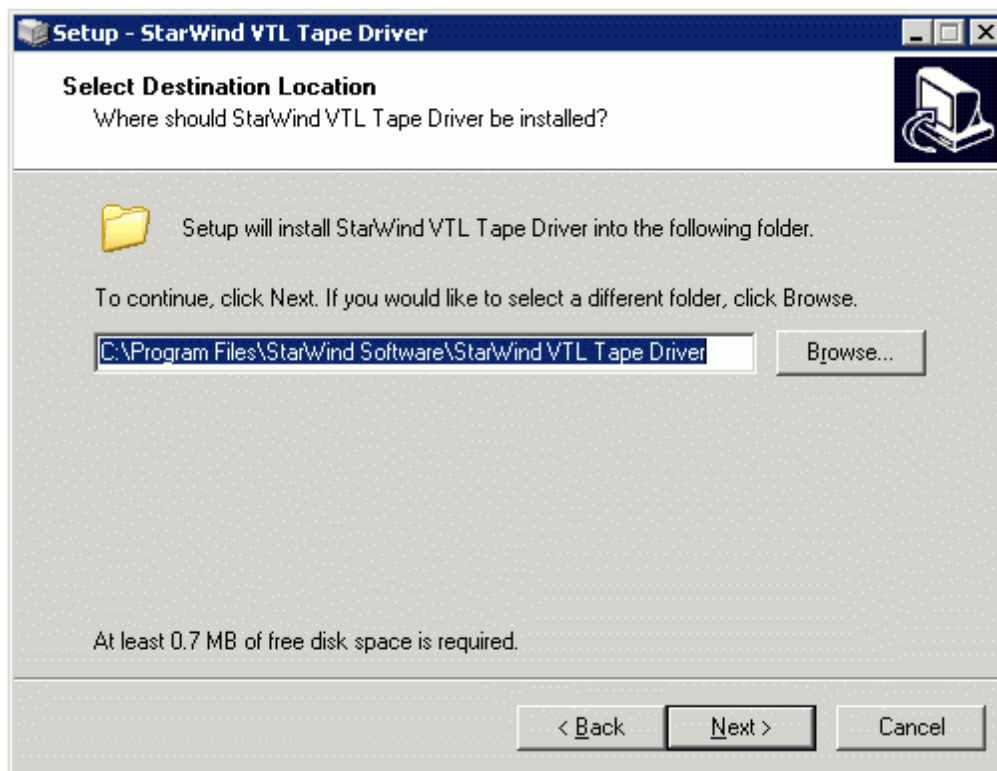
Launch the driver installer.

Press the **Next** button to continue.

Accept the license agreement.

Press the **Next** button to continue.
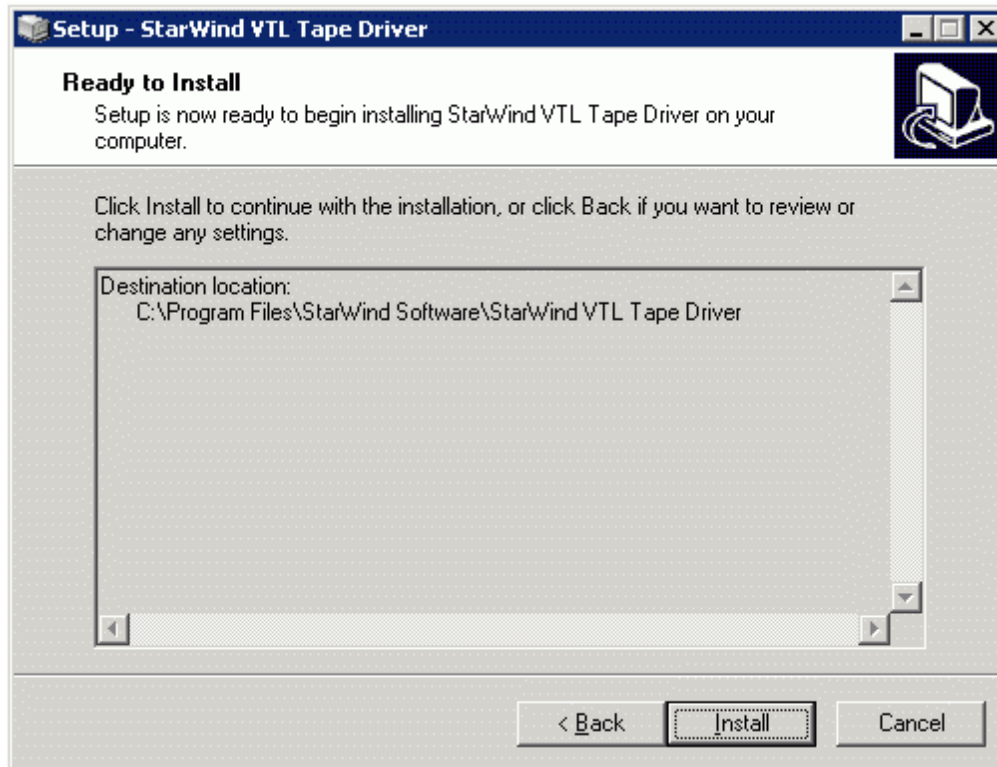
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Specify the installation location or accept the default one.

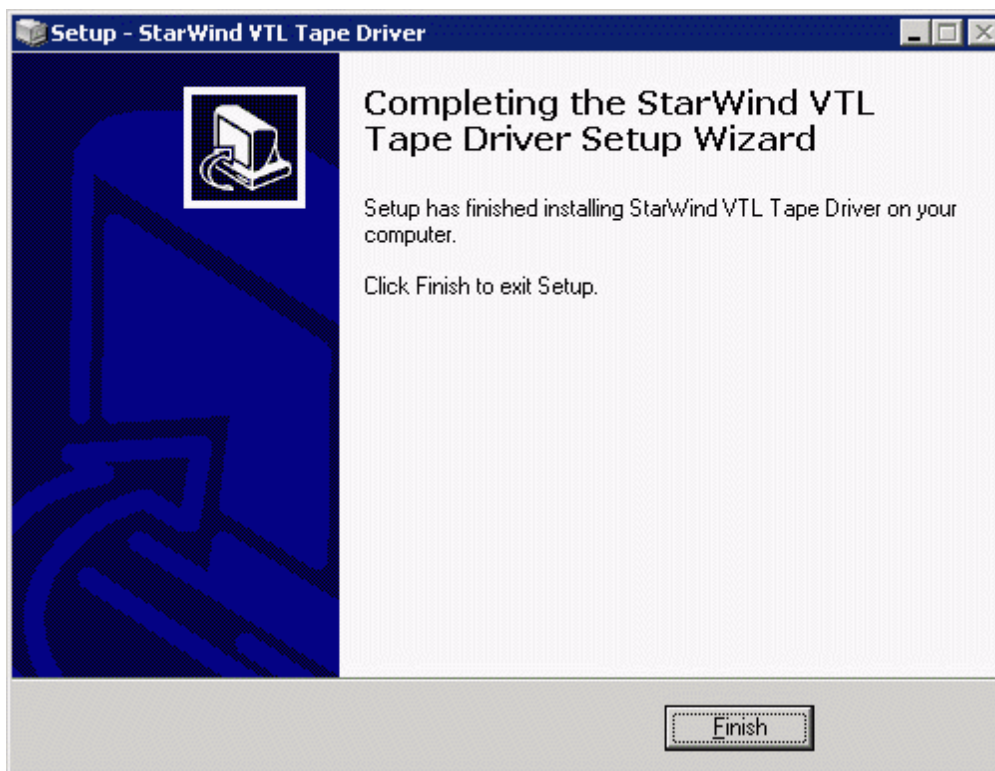Press the **Next** button to continue.

Ensure the destination location is correct or press the **Back** button if any changes are required.
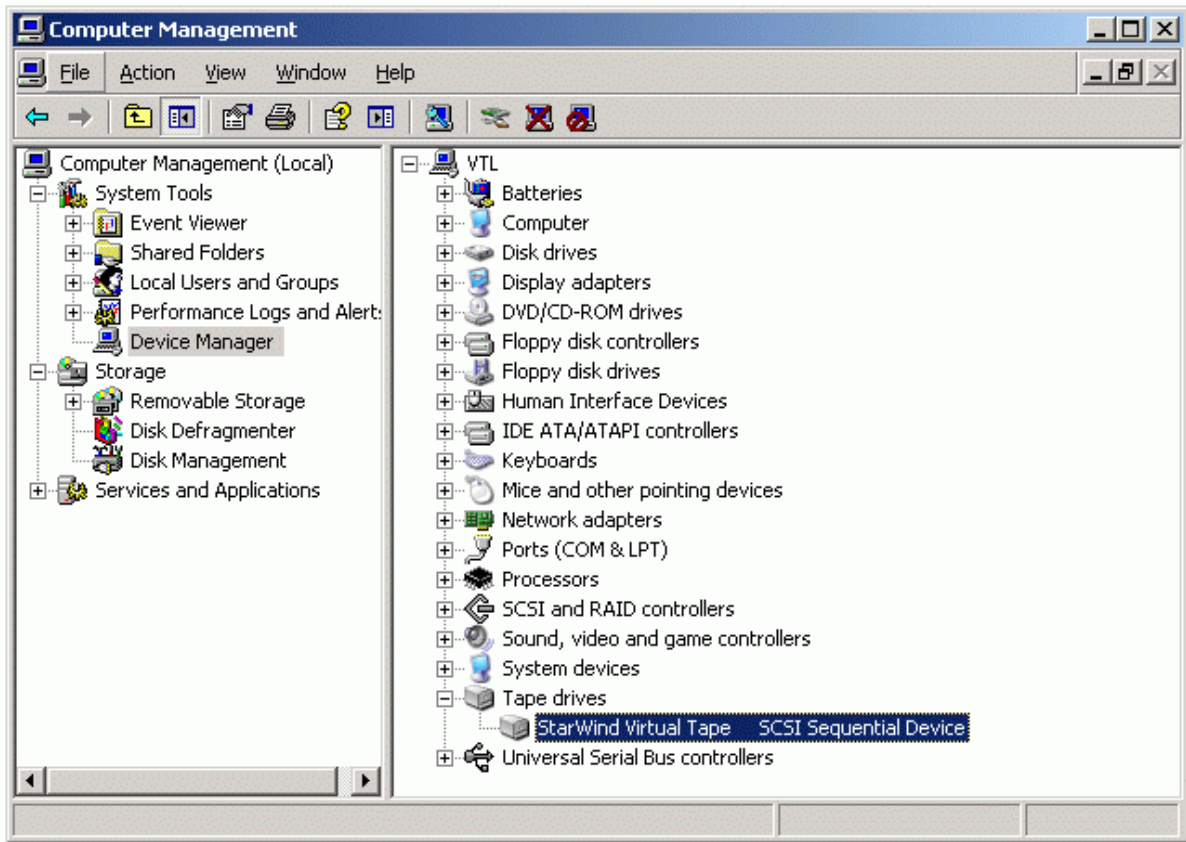

Press the **Install** button to start installation.

The Completing the StarWind VTL Tape Driver Setup page appears.

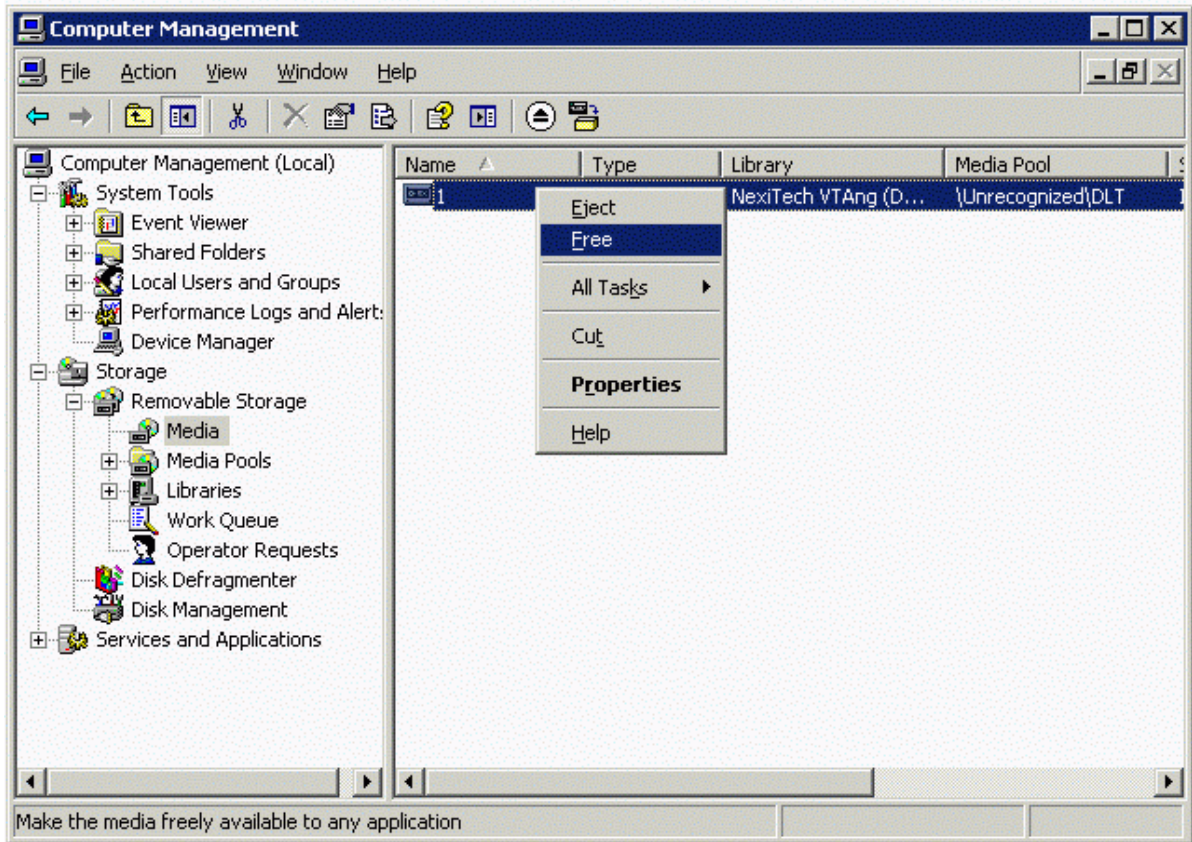Press the **Finish** button to close the wizard.

The driver is installed and the device is now ready for use.
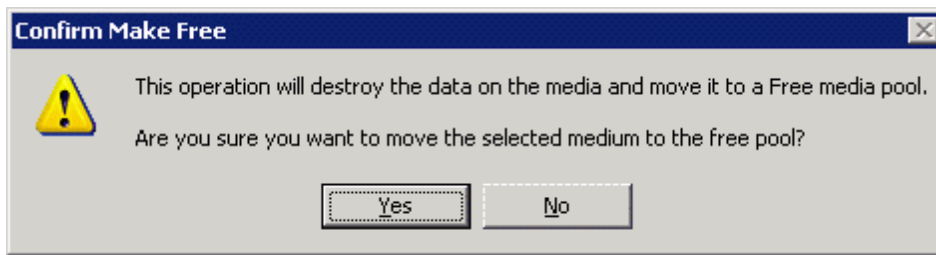
Backup or Restore Wizard

Prepare the Media

Launch the **Computer Management** console. Select the **Media** node.

Press the right mouse button over the media and select the **Free** pop-up menu item.

The Confirmation dialog appears.

Confirm Make Free

This operation will destroy the data on the media and move it to a Free media pool.

Are you sure you want to move the selected medium to the free pool?

Yes   No

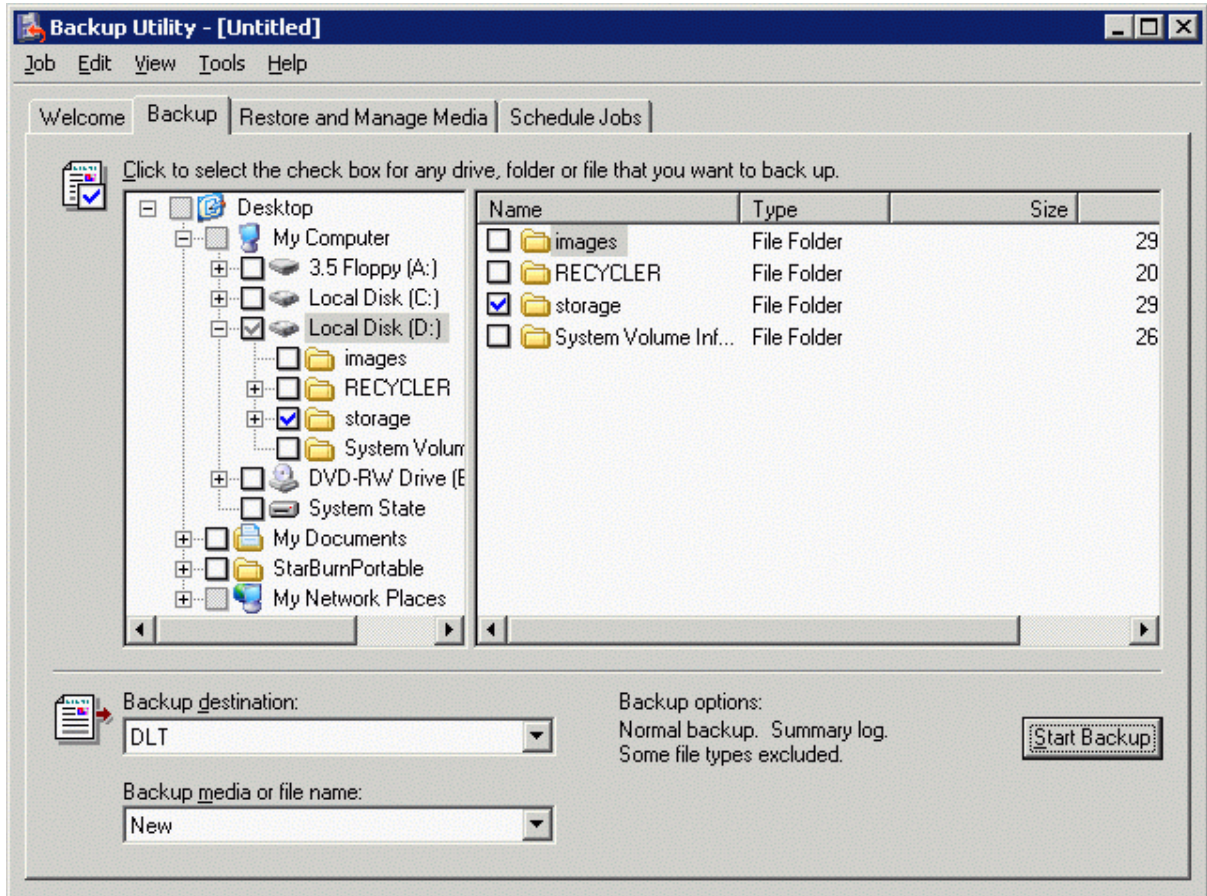Press the **Yes** button to continue or **No** button to abort.

Backup

Now we are ready to perform a backup. Launch the **Backup or Restore Wizard** by selecting **Start ->All Programs->Accessories->System Tools->Backup**
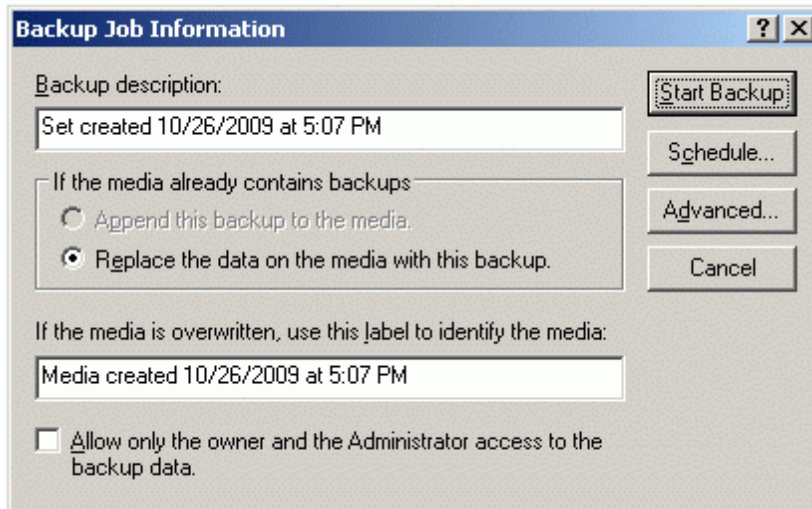

Click the **Advanced Mode** link.

Select the **Backup** tab. Choose a directory you wish to backup. Specify the **Backup destination** and the **Backup media or filename**.

Press the **Start Backup** button to continue.
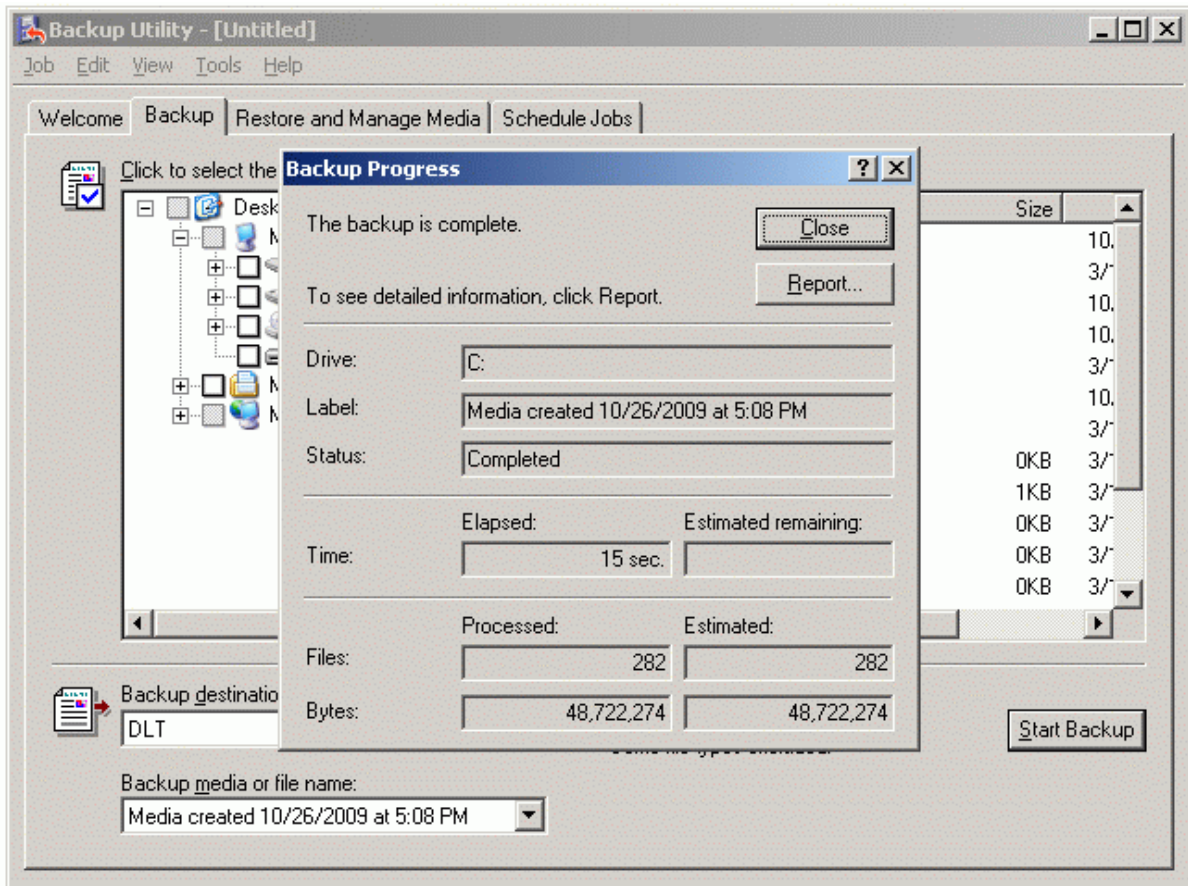
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The **Backup Job Information** dialog appears. Optionally you may specify the **Backup description** and a label to identify the media.

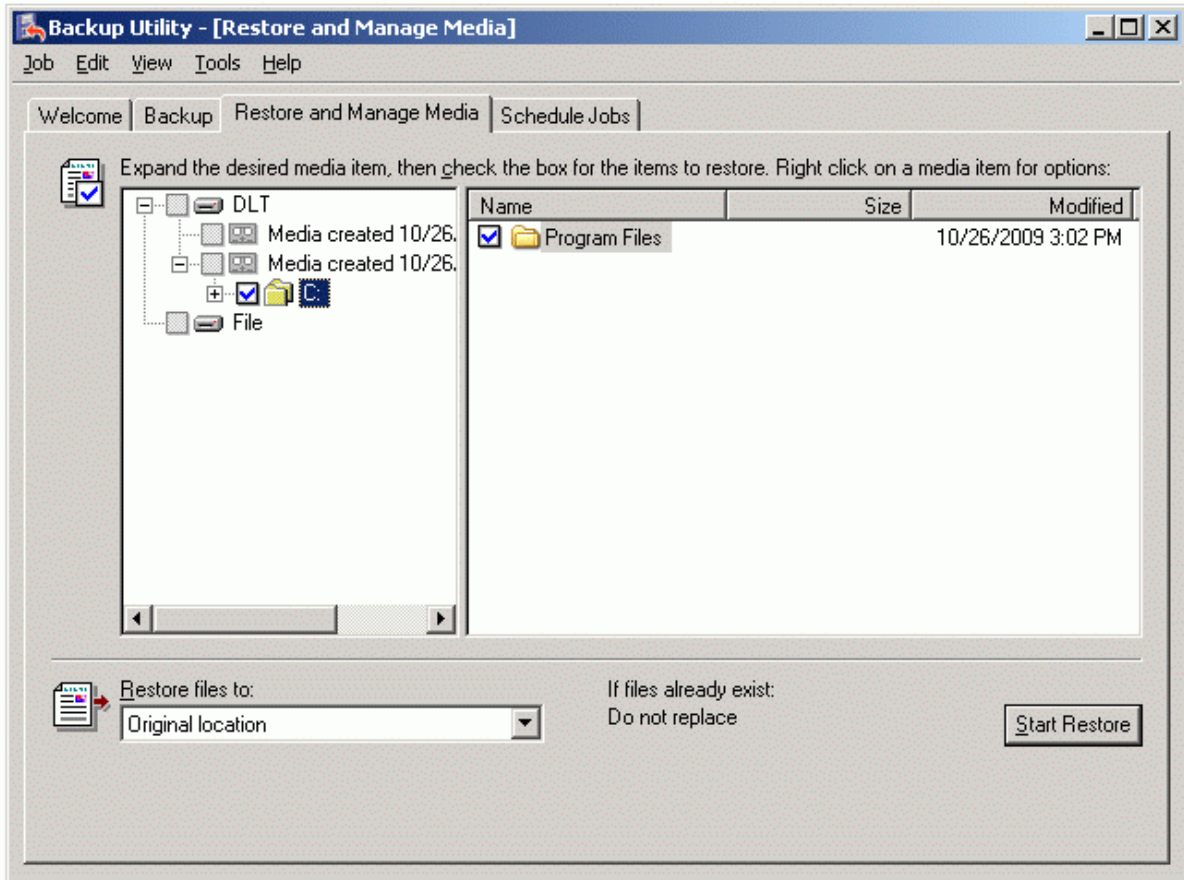Press the **Star Backup** button to begin backup.

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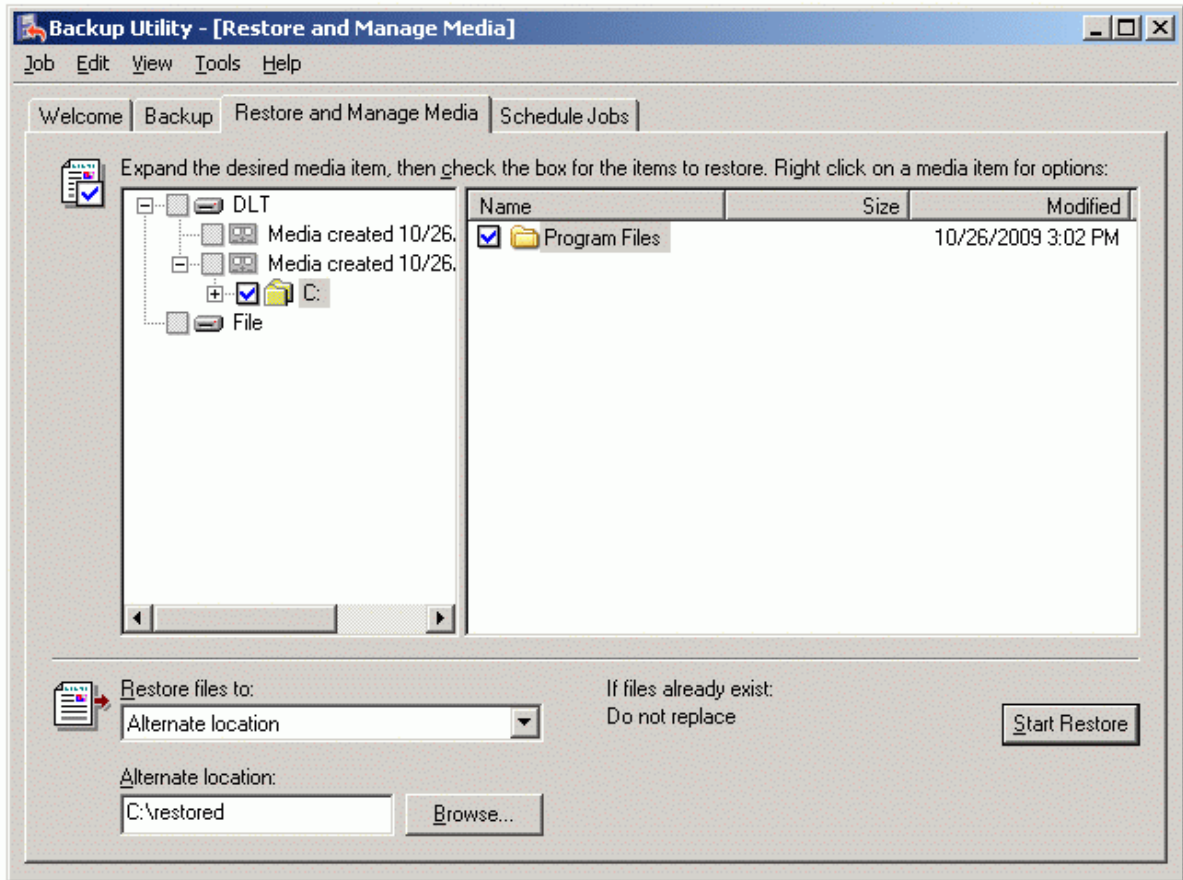When the backup is complete. You may optionally view the backup report.

Press the **Close** button to exit the dialog.

Restore

Launch the **Backup or Restore Wizard** by selecting **Start ->All Programs->Accessories->System Tools->Backup.** Select the **Restore and Manage Media** tab. Choose the item you wish to restore. Specify the restore location. You can restore to either the **Original location** or an **Alternate location**.
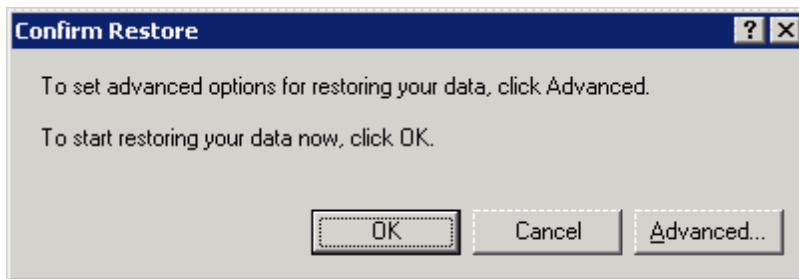

If you have decided to restore to an **Alternate location,** specify the alternate path.

Press the **Start Restore** button to continue.

The Confirmation dialog appears.

Confirm Restore

To set advanced options for restoring your data, click Advanced.

To start restoring your data now, click OK.

OK   Cancel   Advanced...

You may optionally press the **Advanced** button to set advanced options. Press the **OK** button to begin restore.
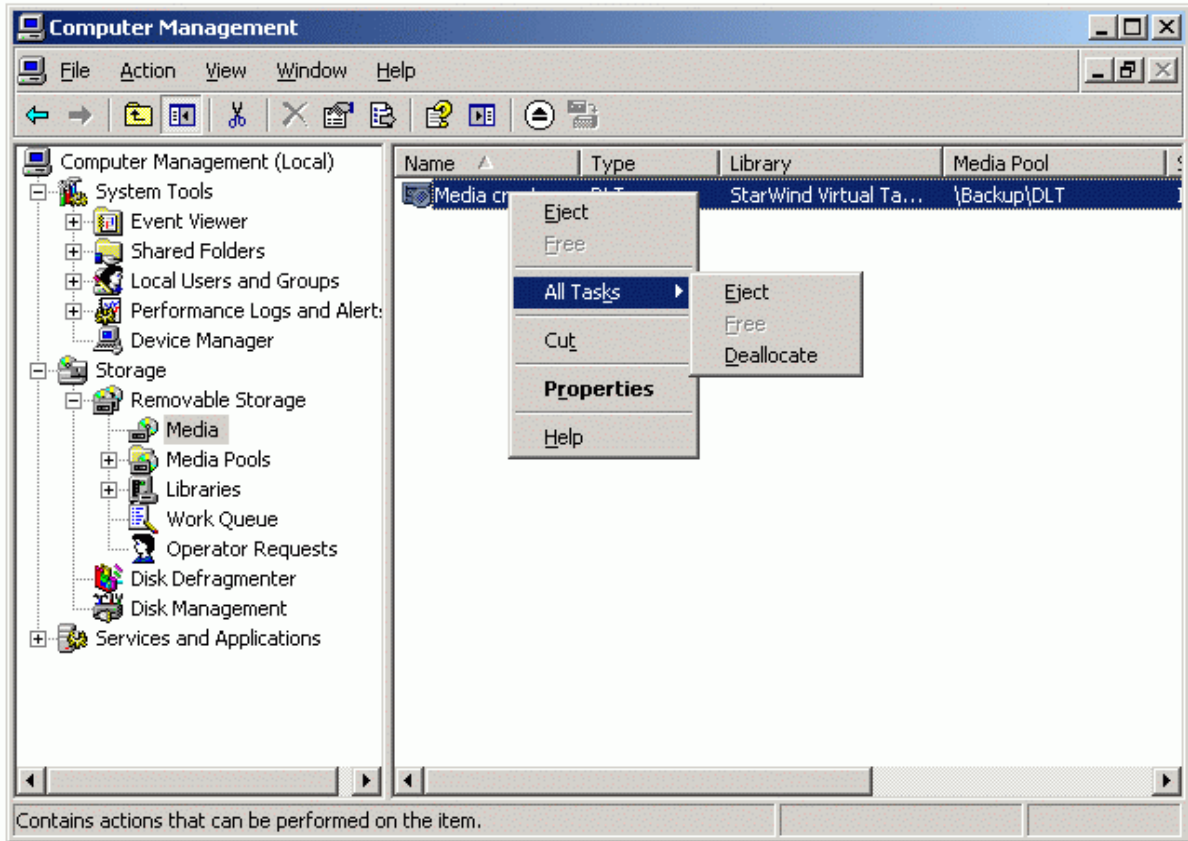
When the restore is complete. You may optionally view the restore report.
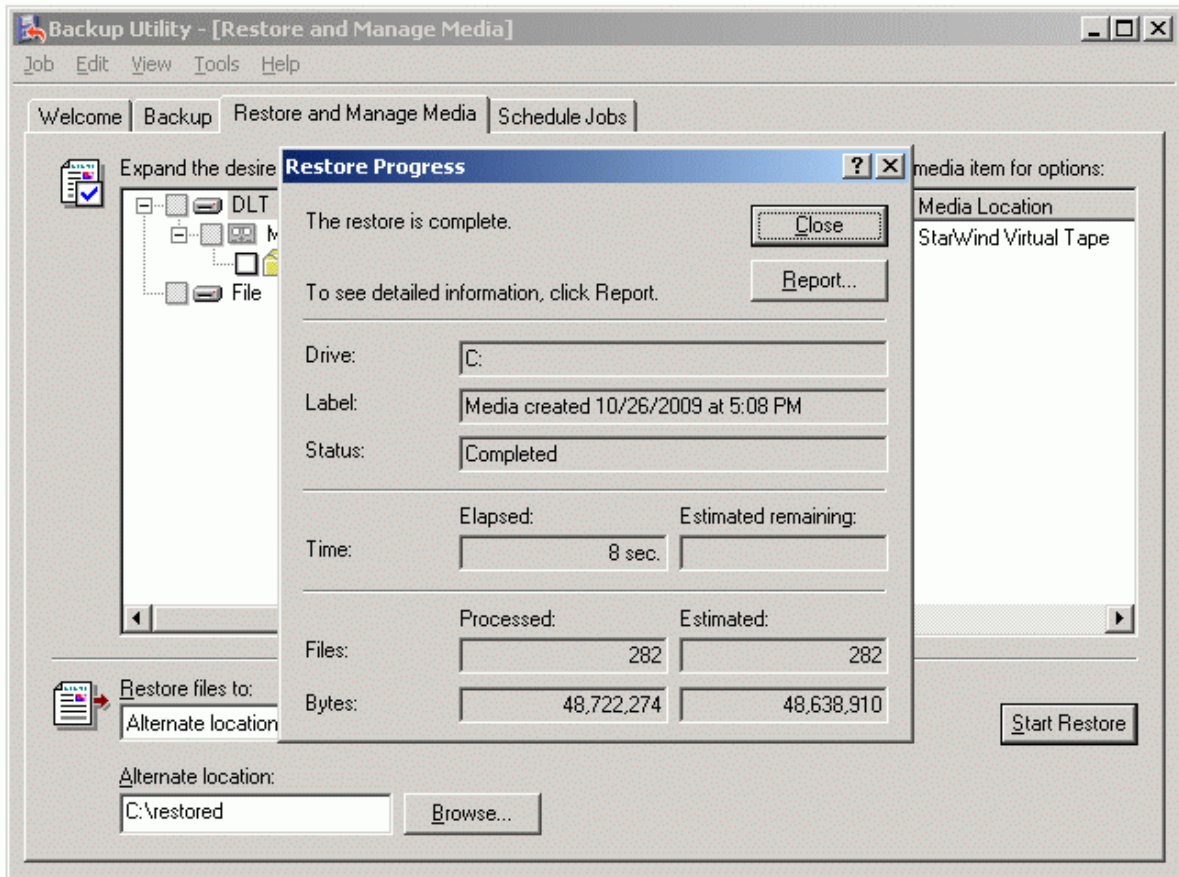
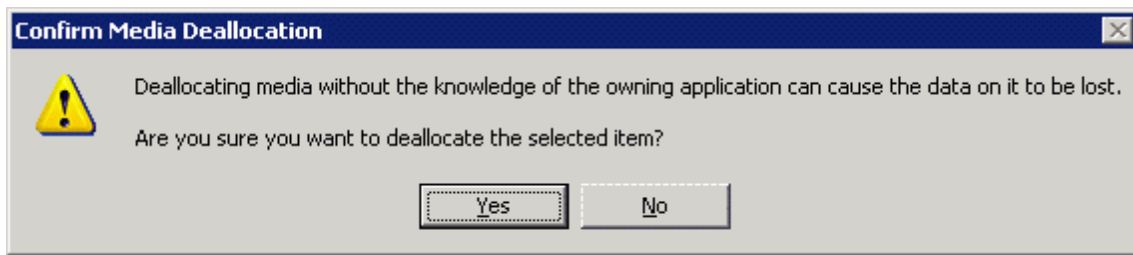Press the **Close** button to exit the dialog.

Erase Media

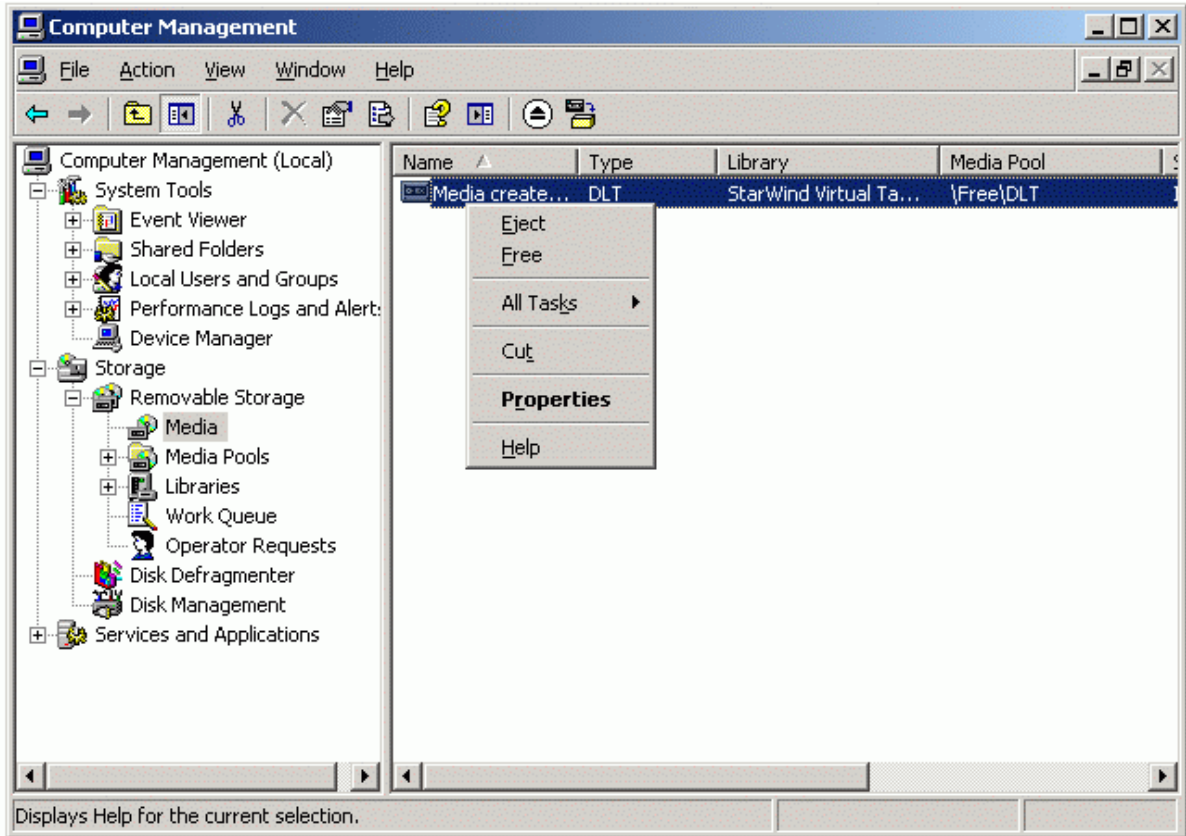Launch the **Computer Management** console. Switch to the **Media** node.

Press the right mouse button over the media and select the **All Tasks -
>Deallocate** item from the popup menu.

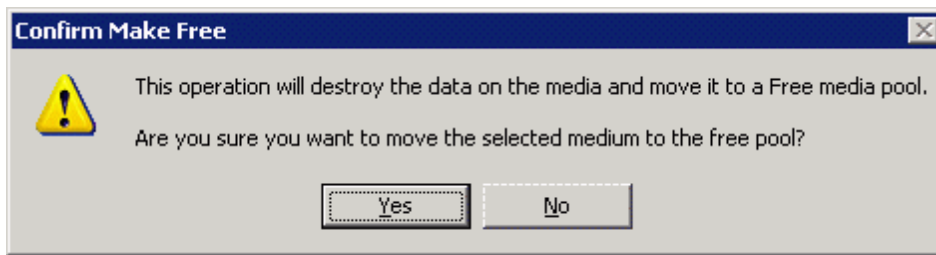The Confirmation dialog appears.

Press the **Yes** button to continue or **No** button to abort.

Select the **Media** node. Press the right mouse button over the media and select the **Free** pop-up menu item.

The Confirmation dialog appears.

Press the **Yes** button to continue or **No** button to abort.

Conclusion

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