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*InveStore v4*  
*Quick Start Guide*

**Pegasus Disk Technologies, Inc.**

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## Quick Start Installation Guide and Introduction

Welcome to the InveStore Storage Management Software v4 Quick Start Installation Guide. This guide explains how new users can quickly install, test, activate, and begin using the InveStore v4 Storage Management Software.

### **New Features and Functionality**

- InveStore v4 makes use of the Microsoft Management Console (MMC) modules for its interface architecture. This allows the InveStore interface greater functionality, easy *Snap-in* of MMC compliant modules, and provides seamless integration with the Windows NT/2000/XP/2003 operating systems.
- *Volume Sets* is one of the significant new features of the InveStore v4 Storage Management Software. Creating a Volume Set uses a process of combining individual disk cartridges within a library device and making them appear to be a single contiguous volume.

Details on these new features as well as information about Managing the Storage System, Optimization, support as a Windows Service, and Trouble-shooting may be found in the *Help* file system accessed from the InveStore programs menu. Or you may access the InveStore v4 User Manual, available by selecting the option from the InveStore folder.

**NOTE:** This guide assumes that you have obtained storage hardware and a Windows server with adequate resources and have installed them according to the manufacturer's recommended instructions. Pegasus takes no responsibility for the proper installation of hardware.

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## What You Need

- Storage Library
- Windows NT/2000/XP/2003 server with Adaptec SCSI interface and the appropriate system requirements
- InveStore installation CD
- Blank storage media for system verification
- Log on with *Administrator* rights on the local machine.

## Minimum System Requirements

|   |   |
|---|---|
| <b>Processor</b>  | Intel Pentium III 450 MHz or better   |
| <b>Hard disk space (DASD)</b>   | 15MB per disk surface for directory cache files with minimum of 50 MB.<br>Pagefile = 2 x RAM + 48MB   |
| <b>System RAM<sup>a</sup></b>   | Workstation - 512MB<br>Server - 1024MB  |
| <b>SCSI card or Fibre Channel interface hardware with necessary drivers</b> | Adaptec or compatible.<br>ASPI required with all models   |
| <b>Operating system</b>   | NT 4.0 Server or Workstation (SP6a)<br>Windows 2000 Professional or Server (SP3)<br>Windows XP Professional (SP1)<br>Windows 2003 Professional or Server. |
| <b>Microsoft Management Console</b>   | MMC v1.2 installed with InveStore   |
| <b>Windows compatible LAN connection</b>                                    | Network interface card and OS protocols   |

a. Additional memory will increase system performance.

| <b>RAM Memory</b> | <b>Standalone Windows Workstation (10 Users Max)</b> | <b>Peer to Peer Workstation (10 Users Max)</b> | <b>Windows Server up to 100 Users</b> | <b>Windows Server up to 500 Users</b> |
|-------------------|--|--|---------------------------------------|---------------------------------------|
| Minimum           | 256 MB   | 512 MB   | 1024 MB                               | 2048 MB                               |
| Recommended       | 512 MB   | 768 MB   | 2048 MB                               | 4096 MB                               |

## Installation

**IMPORTANT NOTE:** You must logon with an account that has administrator privileges for the local system on the storage server itself, to install InveStore under Windows.

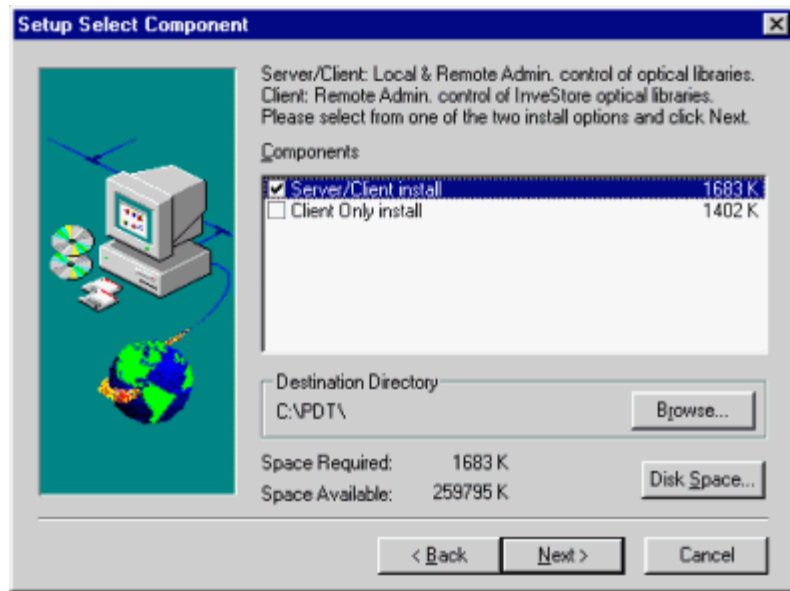
The installation program performs the following basic procedures:

- Updates the Windows registry to include the appropriate directory paths and specify the necessary device drivers.
- Creates the PDT directories on the magnetic hard drive you specify, and copies the InveStore program files to this directory.
- Installs Microsoft Management Console (MMC) if needed.

To install InveStore:

- 1 Insert the InveStore CD into your Server's CD-ROM drive. The CD should autoplay or you may click the **Start** menu in the lower left corner of the Windows desktop and use **Run** to launch **Setup.exe**.
- 2 Read the information displayed in the **Welcome** and **Software License Agreement** screens, and click **Next**. Follow the instructions displayed for **User Information** and **Destination Location** entering the appropriate information when prompted.

3 Next, you will select the **Setup Type** that you desire to install:



There are two Setup Types that you will select from this screen.

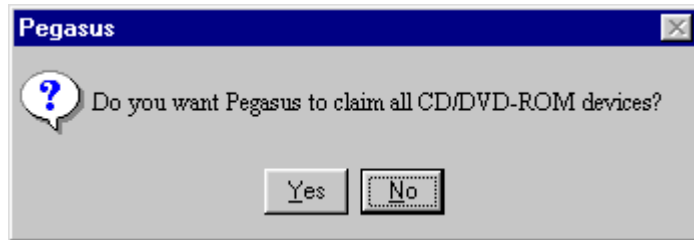
- **Server/Client:** Installs all InveStore program files for local and remote storage library control, the InveStore MMC snap-in modules for the console, and the Help file stem and on-line manuals to your system.
- **Client:** Installs the InveStore MMC snap-in modules for remote console control of InveStore storage servers, and the on-line manuals to your system.

4 Select the **Setup Type** you desire, and then **Next**.

5 During the installation, you will be prompted to input your InveStore software license serial number which is located on the back of the CD cover. You **MUST** input a valid license serial number.

6 InveStore will ask you if you want it to claim the CD/DVD devices, connected to your server. If you select yes, InveStore will claim and control all CD/DVD devices. Choosing no will prevent InveStore

from claiming and taking control of your CD/DVD devices. (If installing an InveStore WIN-CD-xxx software model, this prompt will not appear)



**NOTE:** If you are using InveStore to control a supported CD/DVD library or tower you will need to choose **YES**, or no InveStore CD/DVD drivers will be installed.

- 7 You will be asked if you would like to install the Adobe Acrobat Reader if it is not already present on your computer. This program is required to view the InveStore manuals which are in PDF format.
- 8 Once the installation process has been completed, you will be prompted to restart your server. ***It is necessary*** to restart your server at this point to complete the installation process.

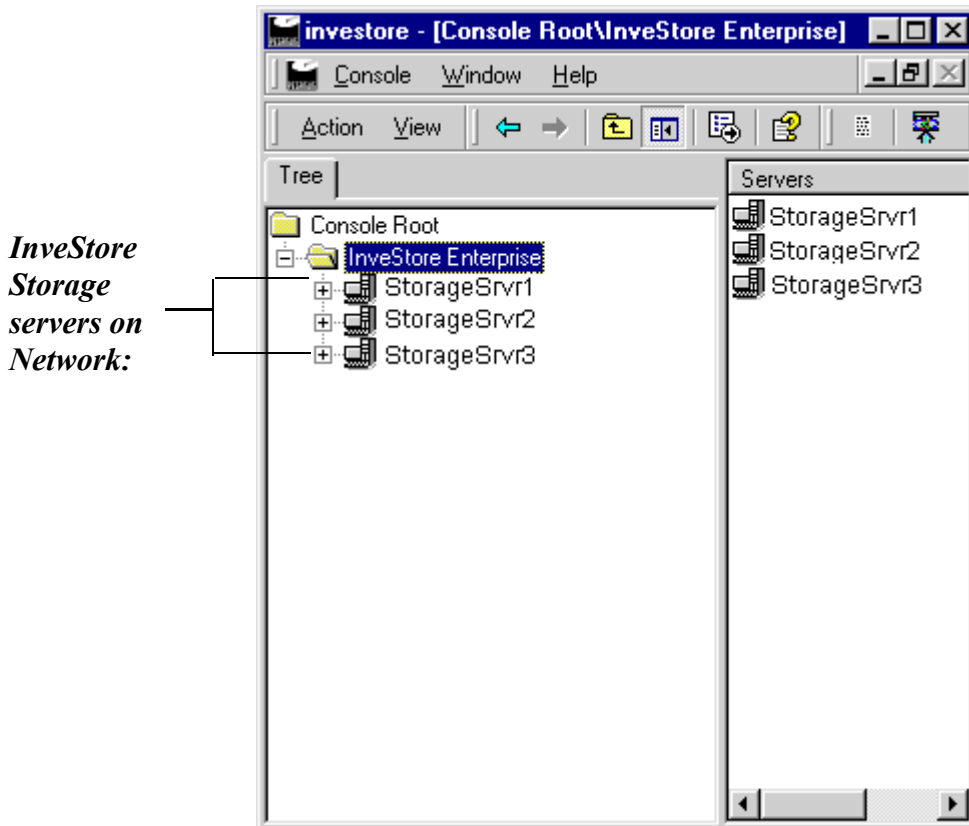
## System Startup

For your initial start of the InveStore storage software and for subsequent restarts when not running as a service, first choose the *InveStore Startup* icon from the Pegasus InveStore folder off the list of *Programs* on the *Start* menu.

This will start the storage sub-system and MMC program for the InveStore console screen.

**NOTE:** Once started, the InveStore console may be resized as needed.

To view the InveStore servers that are detected locally or on your Network, click on the “+” symbol or the “InveStore Enterprise” view:

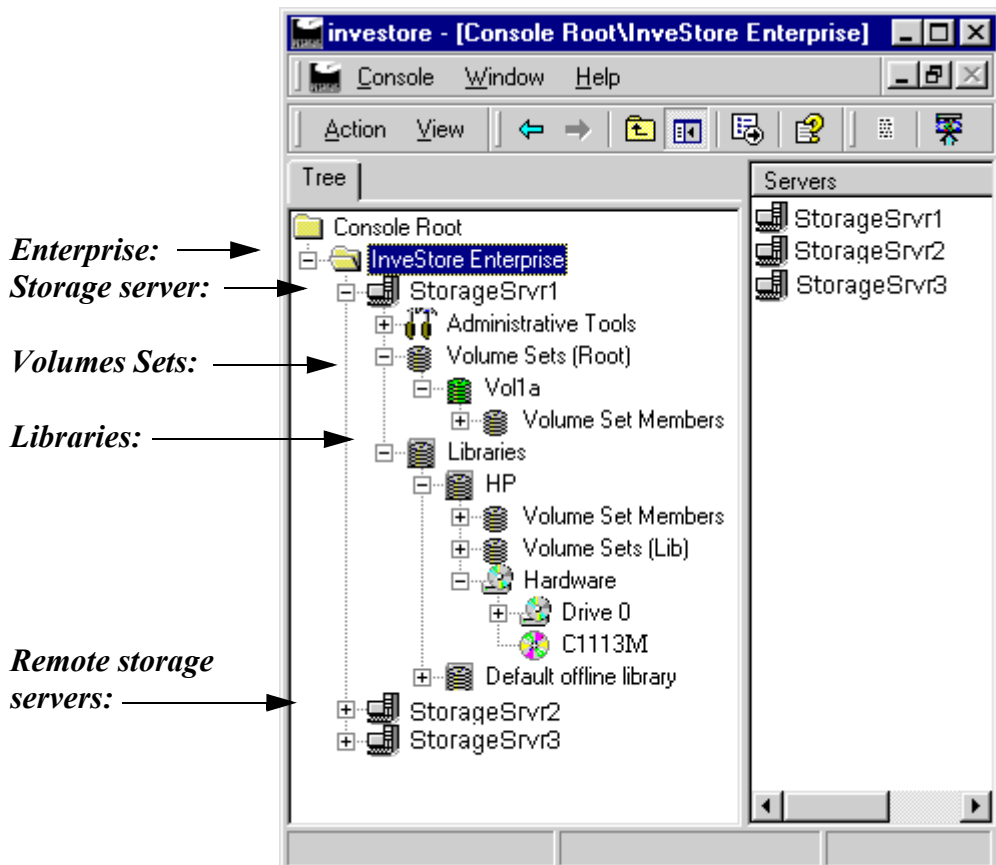


**NOTE:** If the system does not respond to a ready state displaying servers, access the **HELP FILE** or see Appendix B **Troubleshooting and Technical Support** in the InveStore v4 User Manual.

## InveStore Enterprise

The InveStore Storage Management software presents the storage system and all of its components via an Explorer like console, with the *Enterprise level* being the parent view.

From within the *InveStore Enterprise* level you may access all of the folders and icons providing the administrator with management, access, and control for each server in your storage system:



Each view will present to the administrator with action Icons for functions specific to the current view.

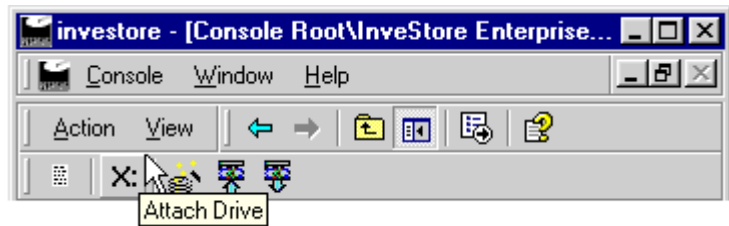
**NOTE:** For further details see the *HELP FILE* or Chapter 2 of the InveStore v4 Users Manual, *Navigating the InveStore Console*, and Chapter 3, *Managing the Storage System*.

## Attaching a Logical Drive

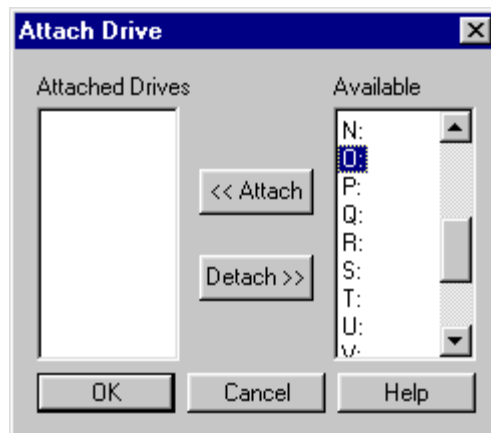
To prepare the InveStore controlled storage resource for use, you must first attach a local drive letter to the storage file system so that it may be accessed transparently.

Attaching the drive letter is a one-time procedure. This drive letter is automatically re-mapped upon an InveStore system startup. To assign a drive letter from the *Server* view tool bar:

- Select the **Attach Drive** icon from the *Server* view console tool bar setting.



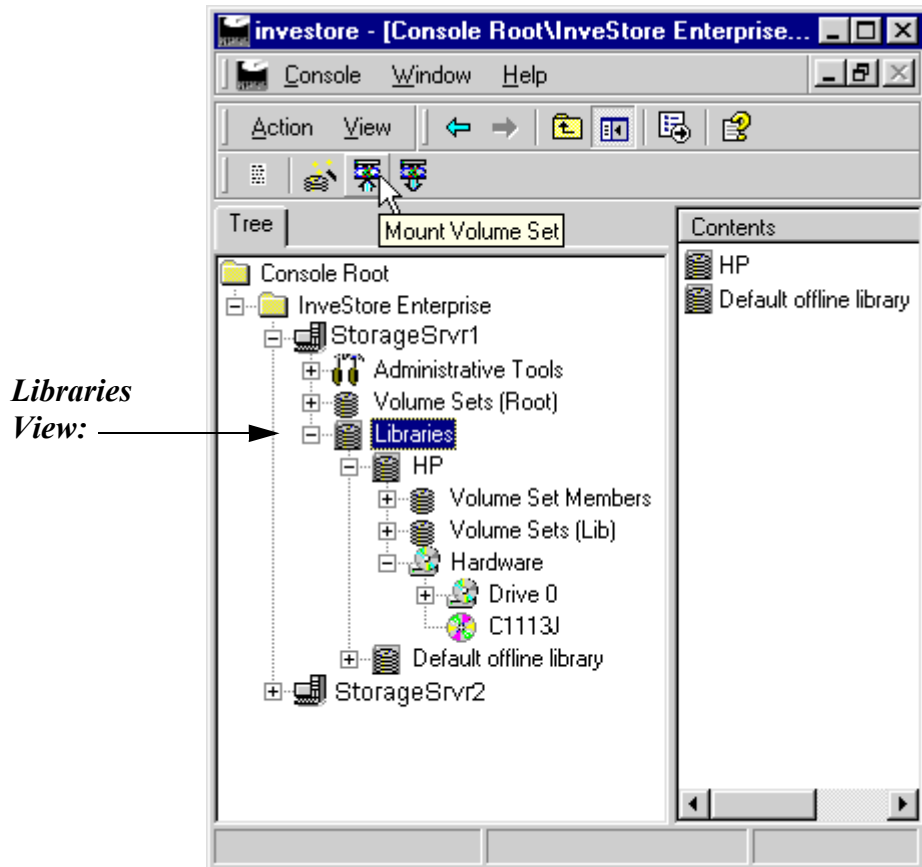
- Displayed is the screen from which you will Attach your drive letter



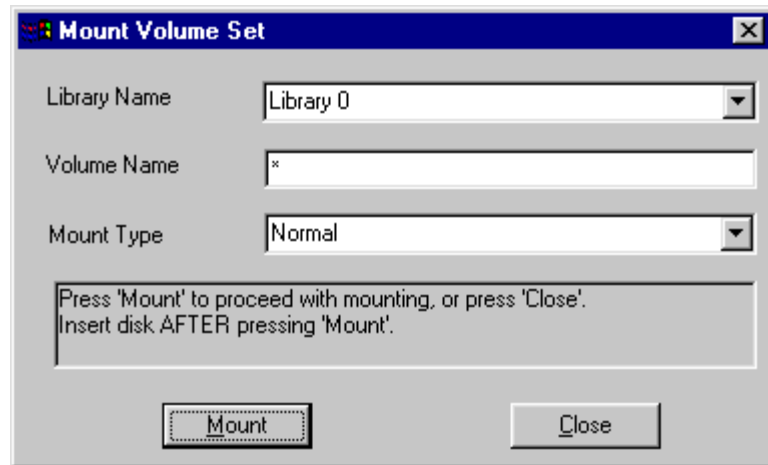
- Choose a drive letter from the **Available** window on the right of this screen and then select **Attach**.
- Click **OK**.

## Mounting or Premounting a Volume Set

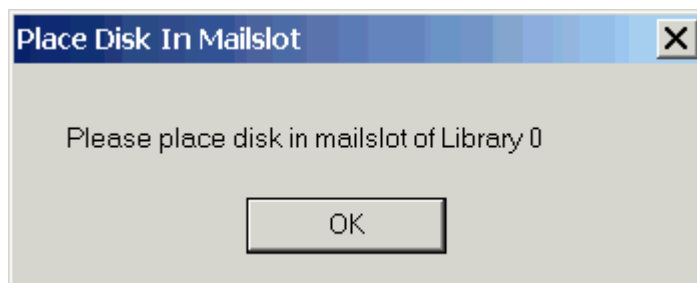
- To **Mount** a volume set, or to **Premount** media (used for formatting), from the **Libraries** View select the **Mount Volume Set** icon:



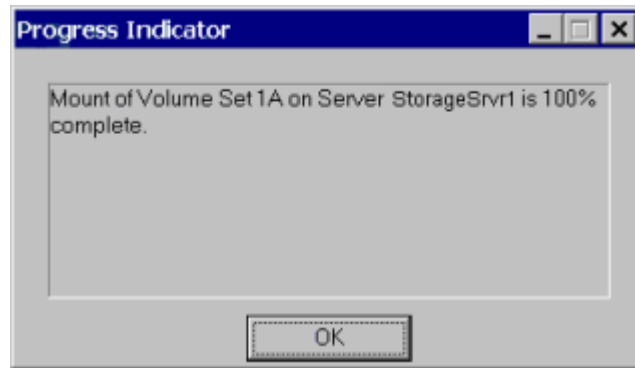
- The **Mount** Wizard will appear. You will first select the Library that you want to mount the Volume/Volume Set into.



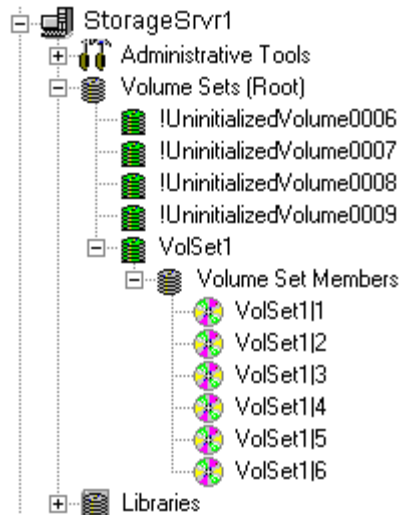
- Leave the wildcard Volume Set name as “\*”. InveStore will automatically READ the volumes inserted.
- Select the **Mount** button. You will then be prompted to place the storage media into the mail-slot of the library:



- InveStore will issue the necessary robotic commands to move the media for mounting. A progress indicator will provide you with a status of the mounting process.



- Once the process completes the mounting of all members of the volume set, you will see the volume set displayed under the **Volume Set** view.



## Formatting a Volume Set

All media must be formatted with the InveStore file system before data can be written to the storage system. This media must be “PreMounted” into the library device as discussed earlier in this *Quick Start*, in the section on *Mounting or Premounting a Storage Volume*.

### **Considerations**

Before creating Volume Sets for use in your storage system, it is critical that you understand your storage system needs. This includes understanding how you write and use your data; how much storage space is needed for all of your data needs; and the types and sizes of volume sets needed to meet those needs.

### **Media Used**

The following naming conventions are utilized for the media surfaces already mounted into the library device, that may be used in the format process:

-!*UninitializedVolume*: unformatted media.

-!*ReusableVolume*: media designated for reuse.

-!*FreedVolume*: media that has been erased.

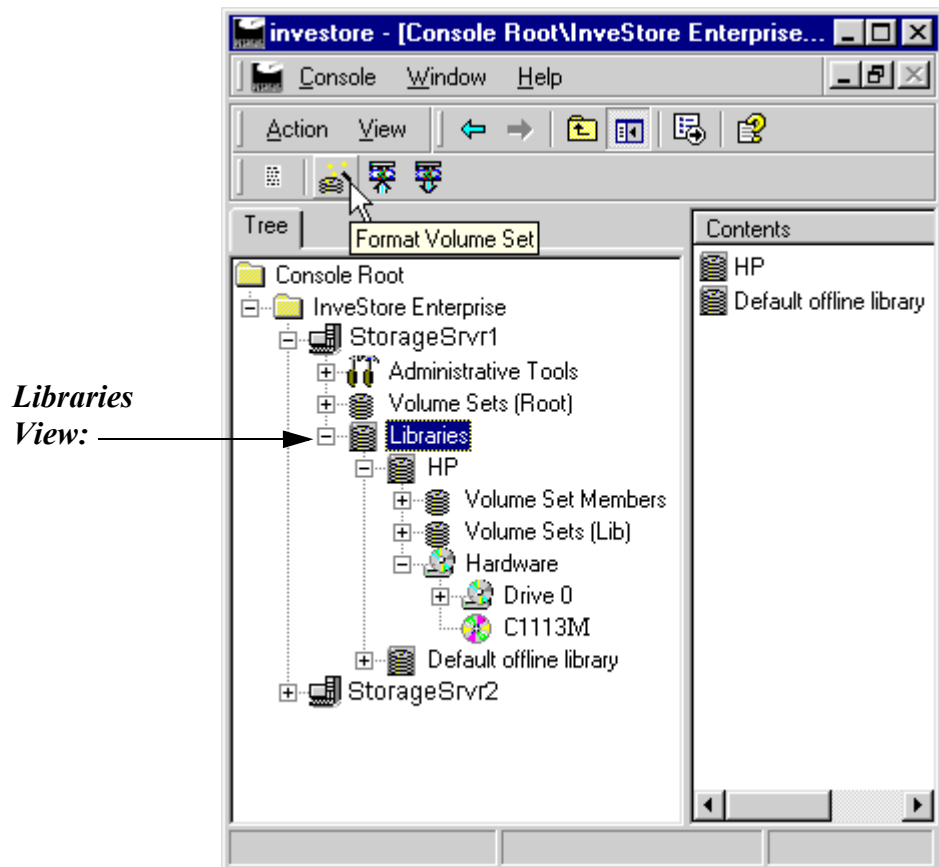
-!*UnknownFileFormat*: formatted with a different file system.

### **Format Process**

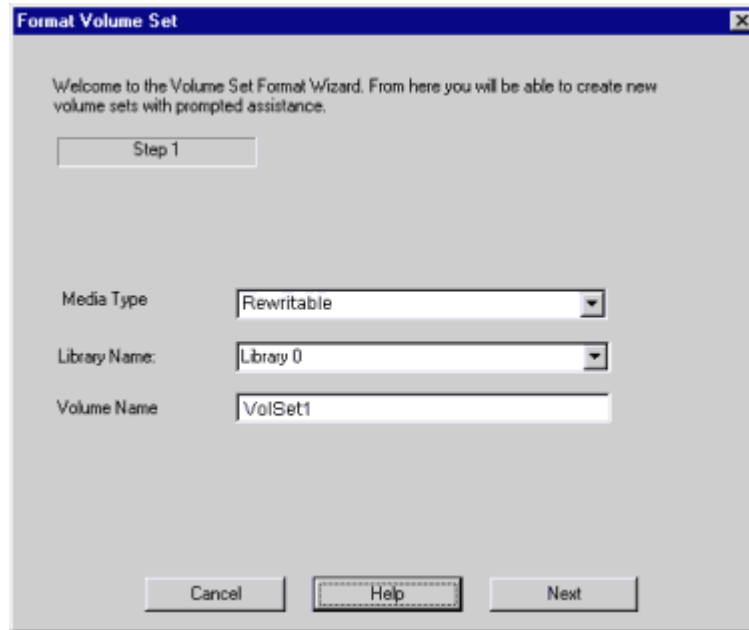
The InveStore console provides an easy to use format wizard that is utilized to initialize all media for use within the InveStore system. There are two (2) steps in this process.

**IMPORTANT NOTE:** You will **NOT** use the front panel buttons on the storage library for this procedure.

- To access the *Format Wizard* from the *Libraries* view, select the *Format Volume Set* icon.

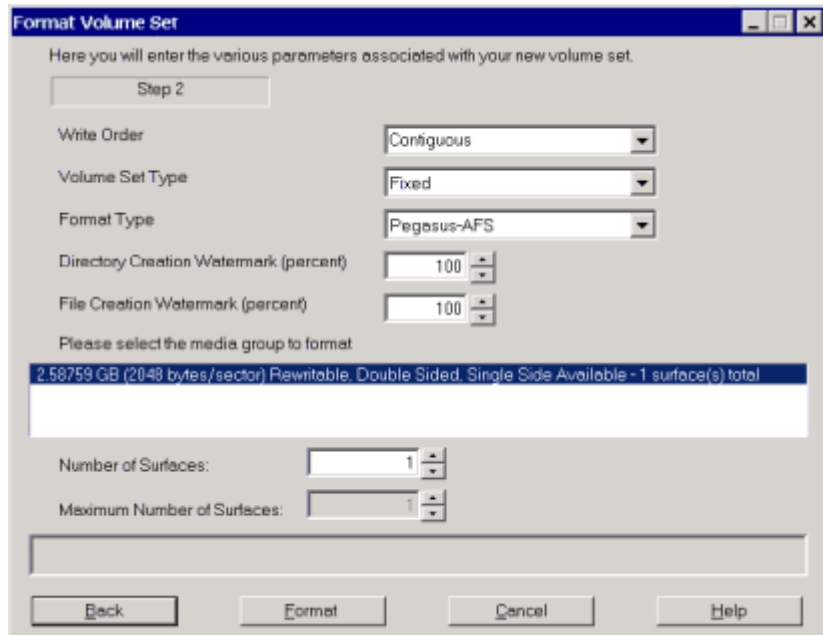


**Step 1** of this process determines the type of media and the storage device that you will use, and the volume set name:



- The **Media Type** is defined by whether you are using WORM or Rewritable media. You cannot interchange media types within the same volume set. Make sure that the type of media you select, is all ready mounted in the library
- The **Library Name** is the name of the physical storage library that you are formatting the volume set in. Make sure to specify the correct library.
- **Volume Name**- Input a unique volume name for the volume set excluding the following characters: ~ ! @ # \$ % ^ & \* ( ) ? + ; : , - / .
- Once completed, select **Next** to continue.

**Step 2** of the format wizard allows you to determine the functional characteristics for this volume set:



- **Write Order-** The write order determines the order to which the volume member surfaces are written in.
- **Volume Set Type-** Fixed, Manual, or Automatic Extensibility.
- **Format Type-** At this time this is limited to the PEGASUS-ARCHIVE-FILESYSTEM.
- **Directory and File Creation Watermark-** This setting will minimize disc thrashing.
- **Please select the media group to format-** You *Must* select and hi-light the media group to format from the listed groups.
- **Number of Surfaces-** At the time of format you must determine the number of surfaces that you want allocate for use in the creation of the new volume set.

**NOTE:** For *Fixed* sets, the minimum number will also be the maximum number.

**Minimum** determines the number of surfaces that will be used in the initial creation of the volume set at format time.

**Maximum** determines the total number of surfaces that the new volume set may grow up to.

**NOTE:** For further details on this subject, see the **HELP FILE** or read Chapter 3 of the InveStore v4 Users Manual, *Managing the Storage System*.

- Once you have completed all of your selections, press the **Format** button to begin the formatting process.

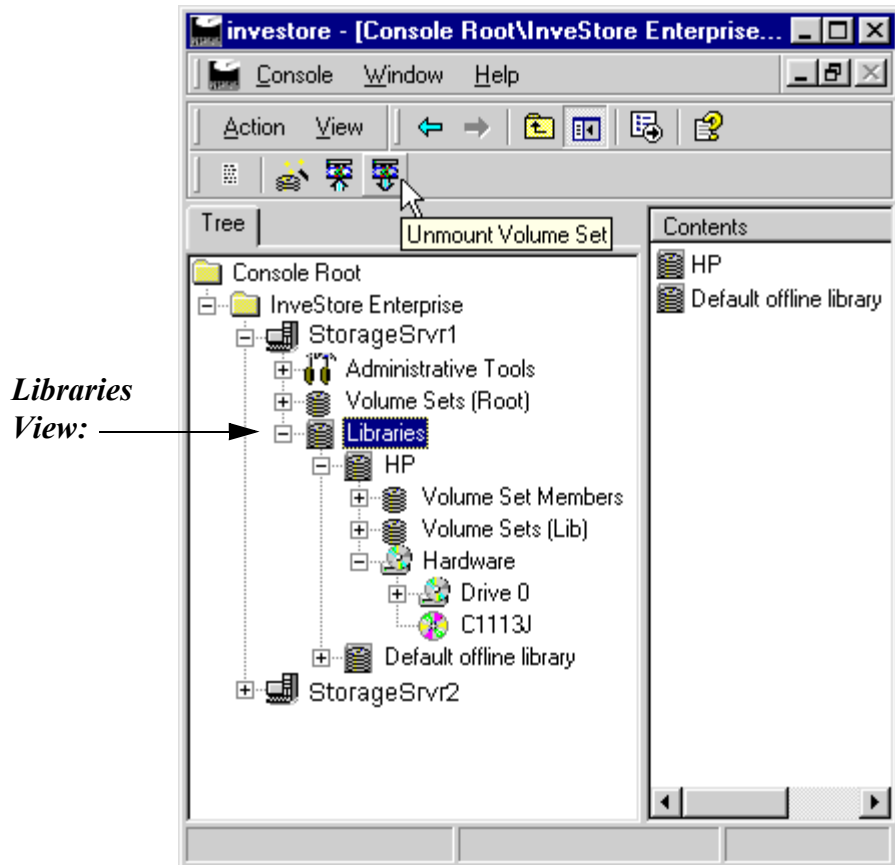
A progress indicator screen will provide a status of the format. Once the format of the volume set has completed, the volume name will be displayed to the right of the *Volume Sets* view.

**NOTE:** For further information on these parameters, see the **Help File** system or Chapter 4 in the *User Guide* on *Volume Sets*.

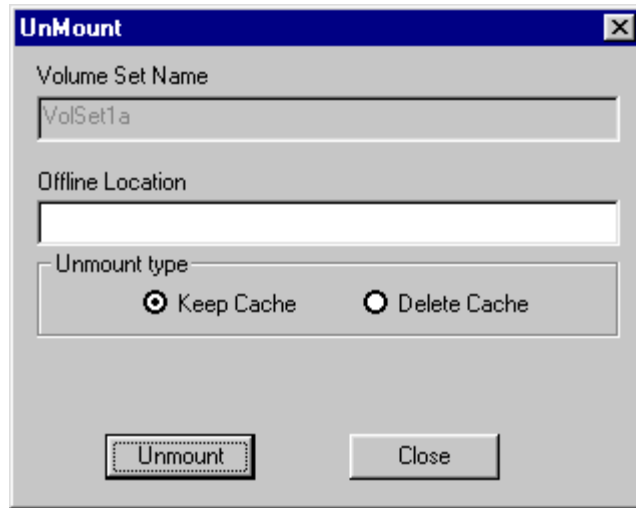
## Unmounting a Volume Set

**IMPORTANT NOTE:** You will *NOT* use the front panel buttons on the library for this procedure.

- To Unmount a volume set from the *Libraries* view (export a media out of the library or drive), select the *Unmount Volume Set* icon:



- From the **Unmount** Wizard, use the **Volume Set** pull down to select the volume set that you want to Unmount:



- **Unmount Type:** You may track the location of an offline volume set (media stored outside of the physical device, such as in a different room, cabinet, or building), recording an offline location if desired. To track an un-mounted volume set, select the **Keep Cache** option. If you do not want to track the offline location of a volume set, select the **Delete Cache** option.
- **Offline Location:** For ease in tracking offline volume sets, you may add information in this area describing the exact location (room, cabinet, building) that you are storing the “offline” volume in.

**NOTE:** If you have selected the **Keep Cache** option, once the volume set is un-mounted from the library, the volume will still be listed in the folder contents to the right of the **Library** view. Any attempt to access the offline volume set will prompt a message to the operator as defined by the **Request Mount Time** (the maximum number of seconds that a request for a file on an off-line volume will wait for the volume to be mounted) in the **Performance Manager**. For further details see the **HELP FILE** or chapter 7 of the InveStore v4 Users Manual *Optimizing System Performance*.

## Testing the Storage System

This section describes how you may test your storage system by transferring files between the sever hard drive and the volume sets mounted in your storage device.

**NOTE:** The test requires that you have a formatted volume set already mounted in the storage device and have **ATTACHED** a drive letter.

### To copy files using the Windows storage server:

- 1 Using Windows Explorer, locate the attached drive letter and create a new folder within the test volume name. With the volume name selected, click on the Explorer **File menu**, **New**, and then **Folder**.
- 2 Using Windows Explorer, locate a large file on your server hard drive. Right click on the file and select **Copy**.
- 3 Using Windows Explorer, navigate to your new folder name. Right click on the new folder and select **Paste**.
- 4 Compare the size of the file on the storage volume with the size of the file on the server hard drive. If necessary, select **View** and then **Details** to see the file sizes.

**NOTE:** If the files do not match or you suspect a problem, see Appendix B, **Troubleshooting** of the InveStore v4 User Manual.

Upon successful testing, you will have a working storage file system that is ready to handle production data.

As you format and mount new volume sets into the system, InveStore will scan the directory structures into cache for rapid access by users. To optimize your installation for your own environment see the **HELP FILE** or Chapter 3 *Managing the Storage system* in the InveStore v4 User Manual.

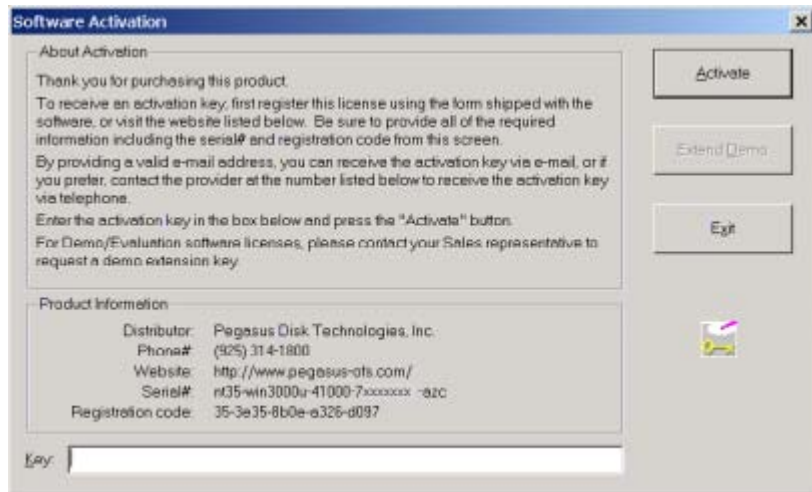
You may now set up your network shares, for sharing the InveStore controlled storage resource to your client workstations.

**NOTE:** For details on setting up your “shares” see the **HELP FILE** or Chapter 5, *Sharing on a Windows Network* in the InveStore v4 User Manual.

## Registering and Activating InveStore

Now that you have successfully installed InveStore, you will need to register and activate it. InveStore requires activation within 15 to 30 days after installation and will periodically notify you of the number of days remaining. If the software is not activated by the end of this time period, it will cease to function.

This information may be found in the Activation screen accessed via the Activation option in the InveStore folder:



To register your InveStore product, visit our on-line registration at the Pegasus web site:

<http://www.pegasus-afs.com/register/>

Once you have filled out the on-line information, you will be emailed an activation code with further instructions.

## Reactivating InveStore

If you should need to re-install the InveStore software on your server, or move the system to another server, the activation will be nullified. You will need to request a new activation key at:

<http://www.pegasus-afs.com/reactivate/>

## Receiving Technical Support

Pegasus offers several avenues to receive Technical Support assistance.

Pegasus has created a very useful *Help File* system that is accessed directly through the InveStore programs menu or as a standalone application from `\PDT\HELP\InveStore.hlp`.

This program accesses a knowledge base of information regarding the InveStore product.

This includes “How to” documentation from the Users Manual, common problems and errors, White papers on special topics, error codes and messages, and trouble shooting information.

Pegasus also offers direct support via e-mail or telephone.

**NOTE:** A *README.TXT* file is included in the `\PDT` directory with the latest release information.

## Have Your Information Ready

Pegasus Technical Support hours are 7:00 - 17:00 PST, Monday through Friday (excluding holidays). We guarantee a 24-hour response time during the business week on all technical support.

When contacting Pegasus Technical Support staff regarding a question or problem, please make sure to have the following information ready:

- The InveStore product serial number for your install site.
- A detailed problem description.
- A copy of the InveStore log file (`[Server Name-Date].LOG`) file from the day/time the error occurred. The log file is time/date stamped and may be found in the `PDT\LOG` directory.

These LOG files should include a Pegasus system startup and should reflect the date current with the experienced problem (example: `StorageSrvr021003.LOG`).

The required information may be Internet emailed to:

[support@pegasus-afs.com](mailto:support@pegasus-afs.com)

Or you may fax your problem description and the printouts to:  
(925) 314-1801 Attention: Technical Support.

### Pegasus Technical Support Contact Information

Address:

Pegasus Disk Technologies, Inc.  
2333 San Ramon Valley Blvd.  
San Ramon, CA 94583

Phone:

925-314-1800

FAX:

925-314-1801

Email:

[support@pegasus-afs.com](mailto:support@pegasus-afs.com)

Re-activation requests for previously registered software:

[www.pegasus-afs.com/reactivate](http://www.pegasus-afs.com/reactivate)

Registration and first time Activation:

<http://www.pegasus-afs.com/register>