


Reinstalling the Operating System on the Dell™ PowerVault™ 745N

This document details the following steps to reinstall the operating system on a PowerVault 745N system:

1. [Install the Reinstallation Console](#) on a system running Microsoft Windows® 2000, Microsoft Windows Server® 2003, or Microsoft Windows XP Professional.
2. [Prepare the USB Key](#) provided with your NAS system for the reinstallation. If you do not have the USB Key that came with your system, any should work as long as it is 64MB in size or larger.
3. [Reinstall the operating system](#) on your NAS system.

 **NOTICE:** This procedure resets your Network Attached Storage (NAS) system to the default settings. It also deletes all data on the software-RAID NAS system. Hardware-RAID NAS system data volumes and external storage data volumes are not affected.


Requirements


- Client system with a CD drive running Windows 2000 (Professional or Server), Windows Server 2003, or Windows XP Professional
- 64MB USB Key included with your NAS system
- *Resource* CD included with your NAS system
- *Reinstallation* CDs included with your NAS system
- Keyboard, mouse, and monitor attached to your NAS system
- Network Interface Cable
- You must disable any firewall that might be running on the client system
- Your client system must NOT be part of a domain or set up to be part of a domain, even if the system is not actually connected to a network


Installing the Reinstallation Console


You must set up a client system running one of the supported operating systems (Windows 2000 Professional or Server, Windows Server 2003, or Windows XP Professional) to reinstall the operating system image on your NAS system. Part

of this setup includes installing a set of NAS utilities used for the reinstallation process.

 **NOTE:** You must have administrator privileges on the client system to install the Reinstallation Console.

 **NOTE:** On systems running Windows XP Professional, network sharing is disabled by default. You must enable network sharing before installing the Reinstallation Console.

 **NOTE:** You must disable any firewall running on the client system.

 **NOTE:** Your client system must NOT be part of a domain or set up to be part of a domain, even if the system is not actually connected to a network.

Perform the following steps to set up your client system:

1. Insert the *Resource CD* that came with your NAS system into your client system's CD drive.

The *Resource CD* automatically starts and shows the following:

Main Menu

Welcome to Dell PowerVault 745N Network Attached Storage system Resource CD.



- **Reinstallation Utilities**
Install the reinstallation utilities for your Dell PowerVault 745N system.
- **System Documentation**
Read and/or print the system documentation for your PowerVault 745N system.
- **Supporting Documentation**
Read and/or print the supporting documentation for your PowerVault 745N system.
- **OpenManage Documentation**
Read and/or print the documentation for the OpenManage Applications installed with your PowerVault 745N system.

2. From the *Resource CD* menu, click **Reinstallation Utilities**.

The following screen appears:

Reinstallation Utilities

Reinstallation utilities for your Dell PowerVault 745N system.



- **Dell PowerVault NAS Reinstallation Console**

Click to install the Dell PowerVault NAS Reinstallation Console on a client system. See your *Dell PowerVault 745N Administrator's Guide* for more information.

- **Dell PowerVault USB Key Preparation Utility**

Click to install the Dell PowerVault NAS Reinstallation Console on a client system. See your *Dell PowerVault 745N Administrator's Guide* for more information.

3. Click on **Dell PowerVault NAS Reinstallation Console**.
4. When prompted to open the file or save it to your computer, click **Open**.
5. Follow the prompts and accept the defaults to complete the installation.

When complete, an icon appears on your client system desktop labeled “**Dell PowerVault NAS Reinstallation Console**.”

Preparing the USB Key

Because the USB key is used to boot the NAS system to start the reinstallation process and to provide configuration information, the USB Key must be configured with the necessary information.

- ➡ **NOTICE:** This procedure deletes all existing data on the USB Key.
- ➡ **NOTICE:** The following procedures can be performed on a USB Key larger than 64MB in size, but the size of the USB Key capacity will change to 64MB in size. This is NOT a permanent change.
- ✍ **NOTE:** You must have administrator privileges on the client system to install the Dell PowerVault USB Key Preparation Tool.

To configure the USB Key, perform the following steps:

1. Insert the USB Key into a USB port on the client system.
2. Insert the *Resource CD* that came with your NAS system into your client system CD drive.

The *Resource CD* automatically starts and the following screen appears:

Main Menu

Welcome to Dell PowerVault 745N Network Attached Storage system Resource CD.



- **Reinstallation Utilities**
Install the reinstallation utilities for your Dell PowerVault 745N system.
- **System Documentation**
Read and/or print the system documentation for your PowerVault 745N system.
- **Supporting Documentation**
Read and/or print the supporting documentation for your PowerVault 745N system.
- **OpenManage Documentation**
Read and/or print the documentation for the OpenManage Applications installed with your PowerVault 745N system.

3. From the *Resource CD* menu, click **Reinstallation Utilities** to display the reinstallation utilities.

The following screen appears:

Reinstallation Utilities

Reinstallation utilities for your Dell PowerVault 745N system.



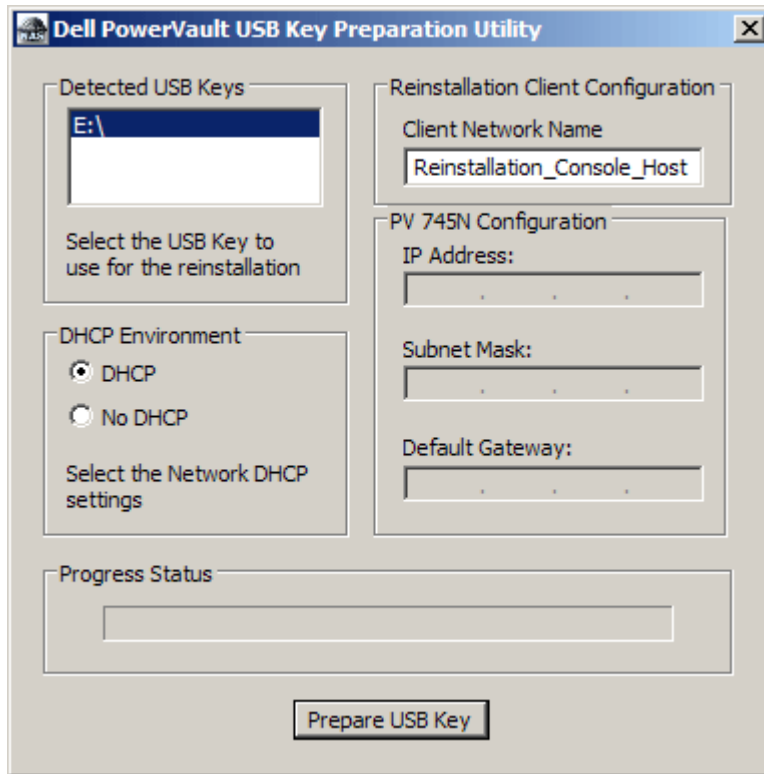
- **Dell PowerVault NAS Reinstallation Console**
Click to install the Dell PowerVault NAS Reinstallation Console on a client system. See your *Dell PowerVault 745N Administrator's Guide* for more information.
- **Dell PowerVault USB Key Preparation Utility**
Click to install the Dell PowerVault NAS Reinstallation Console on a client system. See your *Dell PowerVault 745N Administrator's Guide* for more information.

5. Click **Dell PowerVault USB Key Preparation Tool**.
6. When prompted to open the file or save it to your computer, click **Open**.
7. Follow the prompts and accept the defaults to complete the installation.


An icon appears on the client system's desktop labeled "**Dell PowerVault USB Key Preparation Utility.**"

8. Click **Start > Programs > Dell NAS Reinstallation Tools > Dell PowerVault USB Key Preparation Utility**.

When you open the **Dell PowerVault USB Key Preparation Utility**, it should look like this:




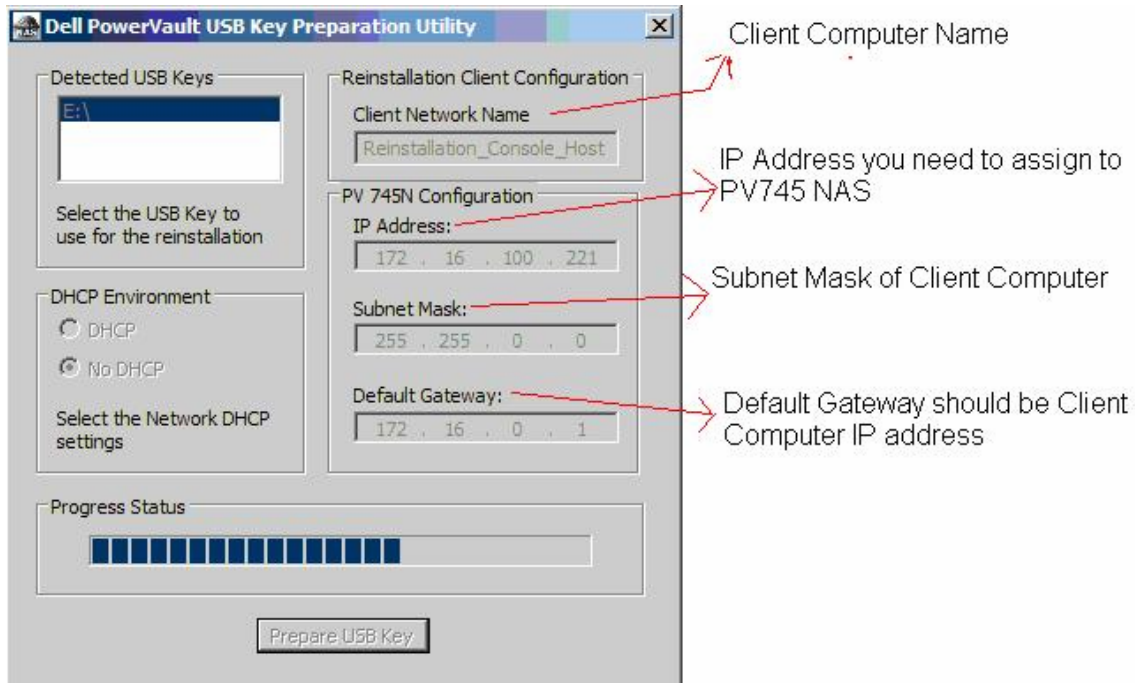
9. Make sure that the proper drive letter for the inserted USB key is listed on the client system under **Detected USB Keys**.
10. In the **Client Network Name** text box, type the name of the client system you are using for the reinstallation process.

 **NOTE:** You can get the client system's name by right clicking on **My Computer** and selecting **Properties**. Click the tab labeled **Computer Name**. The name of the client system is listed on this tab in the **Full computer name** field.

11. If your system is in a DHCP environment, click **Prepare USB Key**.


If your system is in a non-DHCP environment: select the **No-DHCP** radio button; enter an IP address, subnet mask, and default gateway; and click **Prepare USB Key**.

 **NOTE:** The IP address is NOT that of the client system, but the Subnet Mask and Default Gateway ARE of the client system.



NOTE: If you do not enter the client name, you will be prompted for the client system name and network configuration each time you attempt to reinstall.

The USB Key configuration is complete, and the USB Key is ready for use.

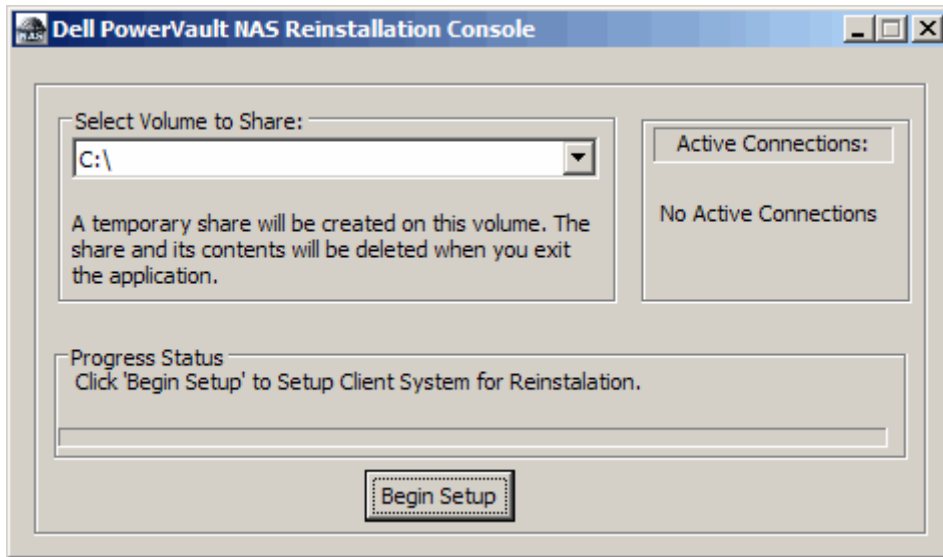
1. Click the **Safely Remove Hardware** icon  on the Windows toolbar and then click **Safely Remove Mass Storage Device**.
2. Remove the USB key from the client system.

Using the PowerVault NAS Reinstallation Console

1. Click the **Dell PowerVault NAS Reinstallation Console** icon to open the **Dell PowerVault Reinstallation Console**.




2. From the dropdown menu, select the drive letter where you want to copy the NAS operating system reinstallation image to the client system. This location requires 3GB of available space.



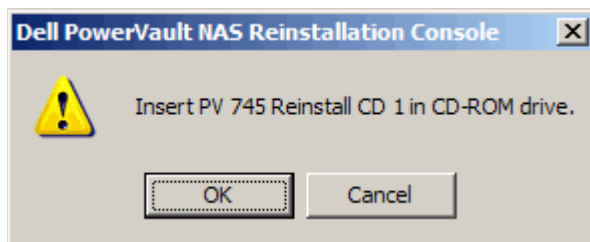
Reinstallation Console

3. Click **Begin Setup**.

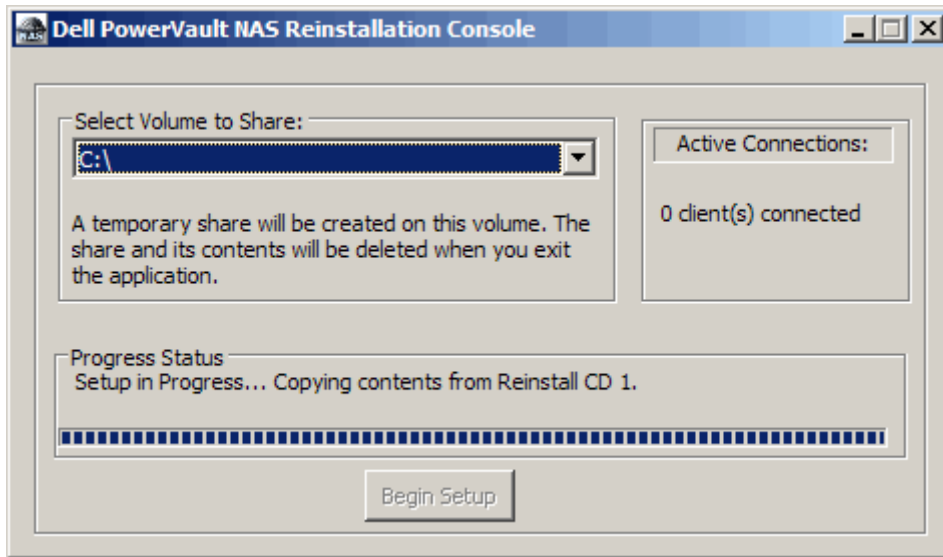
 **NOTE:** Some PowerVault 745N systems ship with three Reinstallation CDs, while others include four Reinstallation CDs. The following information depicts a system that requires three Reinstallation CDs, however the procedure also applies to systems requiring four CDs. If your system requires four CDs, you will be automatically prompted to insert the fourth CD during reinstallation.

4. Insert the **PowerVault 745 Reinstallation CD 1** into the CD-ROM drive and click **OK**.

The image of the operating system is copied to the client system's hard drive. The Reinstallation Console shows the status of the copy process.



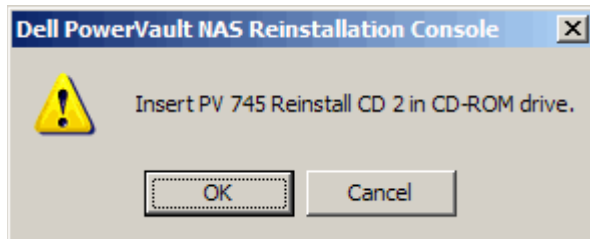
Insert PV 745 Reinstallation CD 1



Reinstallation Console Copy Status

5. When prompted for the second CD, remove reinstallation CD 1, insert reinstallation CD 2, and click **OK**.

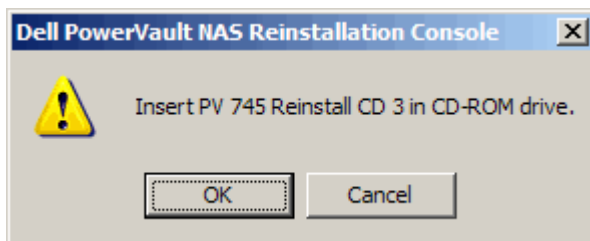
The image of the operating system continues to copy to the client system's hard drive. The Reinstallation Console shows the status of the copy process.



Insert PV 745 Reinstallation CD 2

6. When prompted for the third CD, remove reinstallation CD 2, insert reinstallation CD 3, and click **OK**.

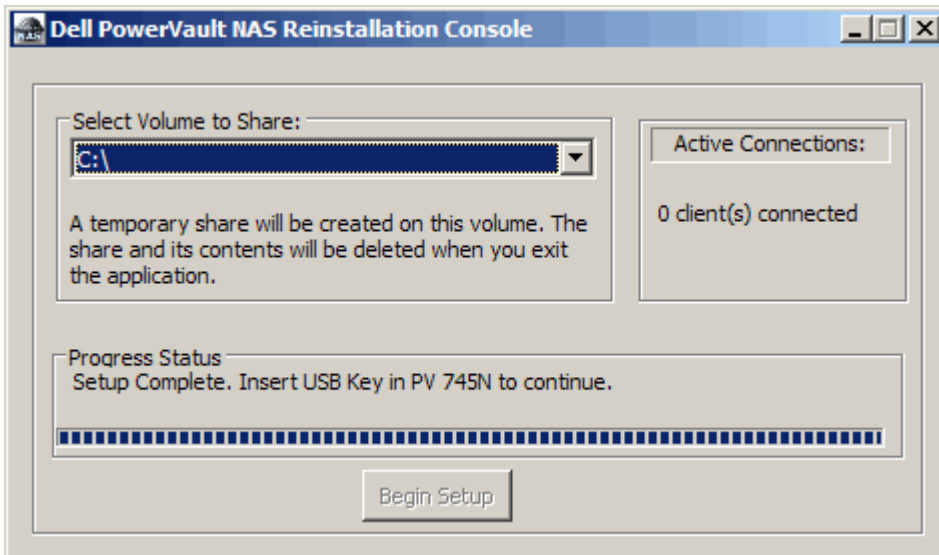
The image of the operating system continues to copy to the client system's hard drive. The Reinstallation Console shows the status of the copy process.



Insert PV 745 Reinstallation CD 3

7. When the image transfer is complete, the Reinstallation Console prompts to **Insert USB Key in PV 745N to continue.**

NOTE: Do not close the **Dell PowerVault NAS Reinstallation Console** application until after you have finished reinstalling the operating system on your NAS system.



Insert USB Key in PV 745N

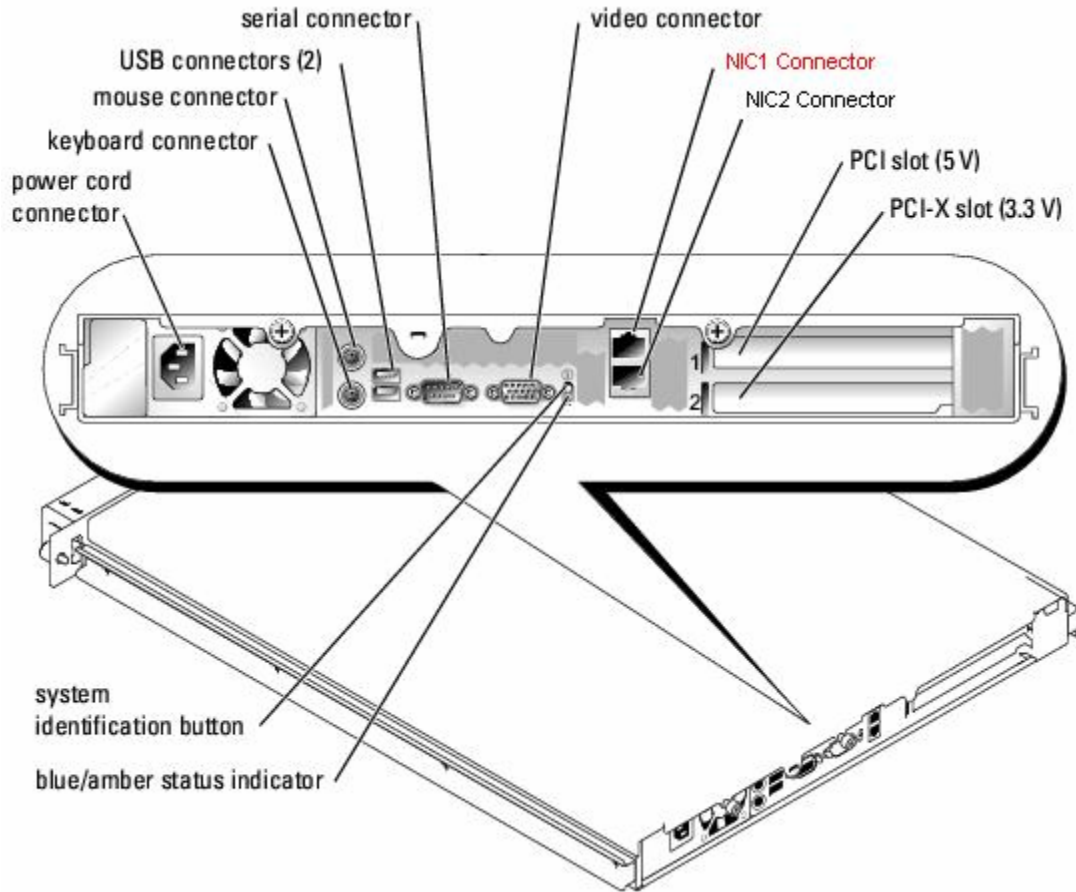
Reinstalling the Operating System on Your NAS System

NOTICE: This procedure resets your NAS system to the default settings. Any data on the internal operating system drives will be deleted. Data on external SCSI enclosures will not be affected.

Before performing this procedure on an External Storage NAS system, attempt to recover your system by following the procedures in "[Troubleshooting External Storage Configuration NAS Systems](#)." For instructions on how to determine the configuration of your NAS system, see "[Determining a NAS System's Configuration](#)" in "NAS Manager."

NOTE: Dell recommends that you back up your system, if possible, before attempting a system reinstallation. See "[Backing Up the System](#)."

1. Shut down the NAS system. See "[Shutting Down the NAS System](#)" in "NAS Manager."
2. Ensure that the NAS system is using NIC 1 to connect to the same network as the client system or directly to the client system.



- ➡ **NOTICE:** Failure to disconnect all external storage enclosures from your NAS system before performing a system reinstallation may lead to data loss. Disconnect all external storage enclosures from your NAS system prior to continuing with this procedure.
- 📎 **NOTE:** During reinstallation, you must use NIC 1 to connect the NAS system to a network that includes your client system or directly to the client system.
- 📎 **NOTE:** Turn off any external storage enclosures attached to your system.

3. Disconnect all external storage enclosures from your NAS system.

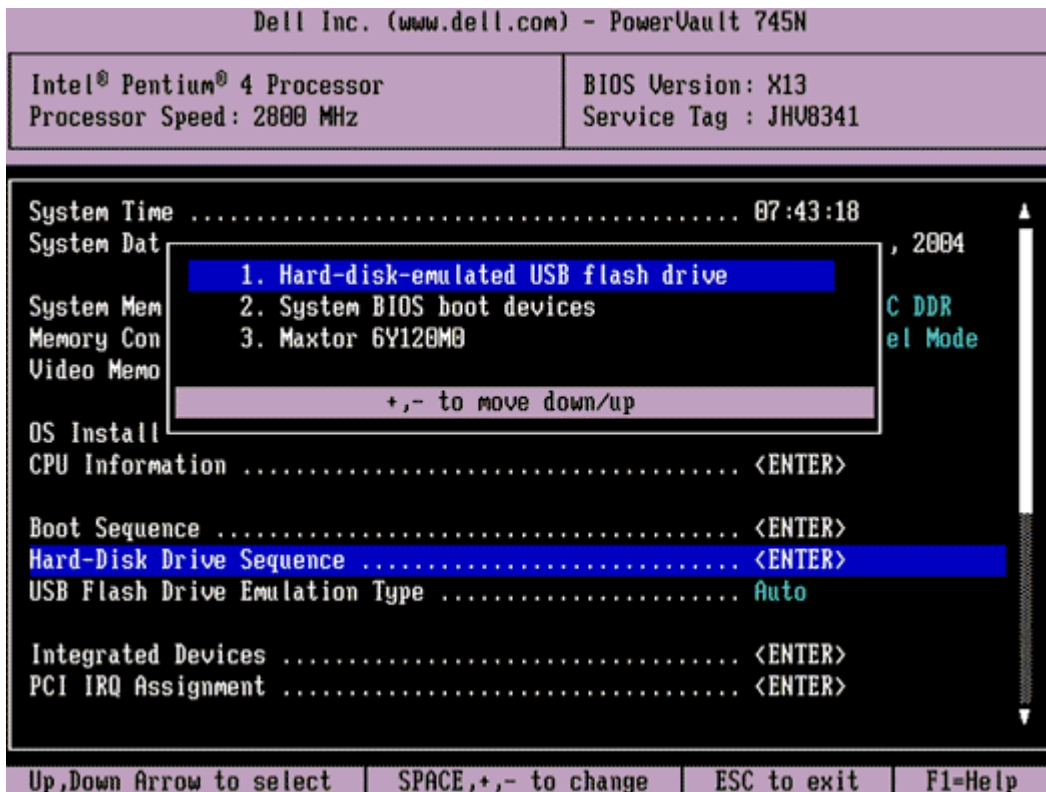
4. Insert the prepared USB Key into one of the USB connectors on the PowerVault 745N.

5. Turn on the NAS system.

- 📎 **NOTE:** There are three (3) USB connectors on the PV745. One (1) connector is located under the front panel bezel and two (2) are located on the back panel.

6. During the boot process, press <F2> when “**F2=Setup**” displays on the screen (at the “Dell” splash screen just before POST starts).
7. In the BIOS setup screen, select **Boot Sequence** and press <Enter>.
8. Ensure that **Hard drive C** is first in the list and press <Esc> to exit the **Boot Sequence** menu.
9. Select **Hard-Disk Drive Sequence** and press <Enter>.
10. Ensure that **Hard-disk-emulated USB flash drive** is first in the list by using the <+>\<-> keys and press <Esc>.

The system screen should look similar to this:



11. Press <Esc> again, select **Save Changes and Exit**, and press <Enter>. The system automatically shuts down and reboots from the USB Key.
12. When the Dell PowerVault NAS 745N menu displays, press <1> to select **Reinstall NAS system**, and press <Enter>.

The system screen should look similar to this:

```
Dell PowerVault NAS 745N Menu

1. Reinstall NAS system
2. Run Diagnostics
3. Update firmware

Enter Selection :
```

13. Follow the on screen instructions to reimage the operating system.

14. Read the warning message.

15. Type **Y** and press <Enter> to continue with the installation.
A message appears asking you to confirm your selection.

```
The command completed successfully.
MS-DOS LAN Manager v2.1 Netbind
Microsoft DOS TCP/IP 1.0a
Connecting to the Configuration Server...
The command completed successfully.

Searching Network...

Verifying RAID configuration
Please Wait...

Software RAID system detected.

ATTENTION!
This process will reset the NAS system image back to factory defaults.

WARNING! The Operating System volume and all settings will be DELETED!
WARNING! All data on the system will be DELETED!

Backup all data on the data volume using the recovery volume before
performing a system reinstallation or you will lose your data.

Do you want to continue[Y,N]?_
```

Warning Message

16. Type **Y** and press <Enter> to confirm your selection.

The system begins reimaging the boot partition. Once the imaging process is complete, the appliance instructs you to remove the USB key and reboot the system.

```
MS-DOS LAN Manager v2.1 Netbind
Microsoft DOS TCP/IP 1.0a
Connecting to the Configuration Server...
The command completed successfully.

Searching Network...

Verifying RAID configuration
Please Wait...

Software RAID system detected.

ATTENTION!
This process will reset the NAS system image back to factory defaults.

WARNING! The Operating System volume and all settings will be DELETED!
WARNING! All data on the system will be DELETED!

Backup all data on the data volume using the recovery volume before
performing a system reinstallation or you will lose your data.

Do you want to continue[Y,N]?Y
Confirm selection[Y,N]?_
```

Confirm selection

```
PQIDeploy DOS
Copyright (C) 1994-2002 PowerQuest Corporation
Build 003 on Jun 10, 2003 23:49:02

9:00 Entire Progress:10% Delete all:100%
10:25 Entire Progress:100% Restore:100%
10:25 Entire Progress:100%

The operation completed successfully.

Starting Phase 2 of Software installation
Please Wait...

Phase 2 of Software Installation Complete

Software reinstallation complete.

The NAS System will need to reboot to complete reinstallation.

Shutdown the system, remove the USB Key and power on the system
using the power button.
```

Remove the USB key and reboot

17. Shut down the PowerVault 745N and remove the USB key.

18. Reconnect all external storage that you disconnected in Step 3, then turn on the PowerVault 745N.

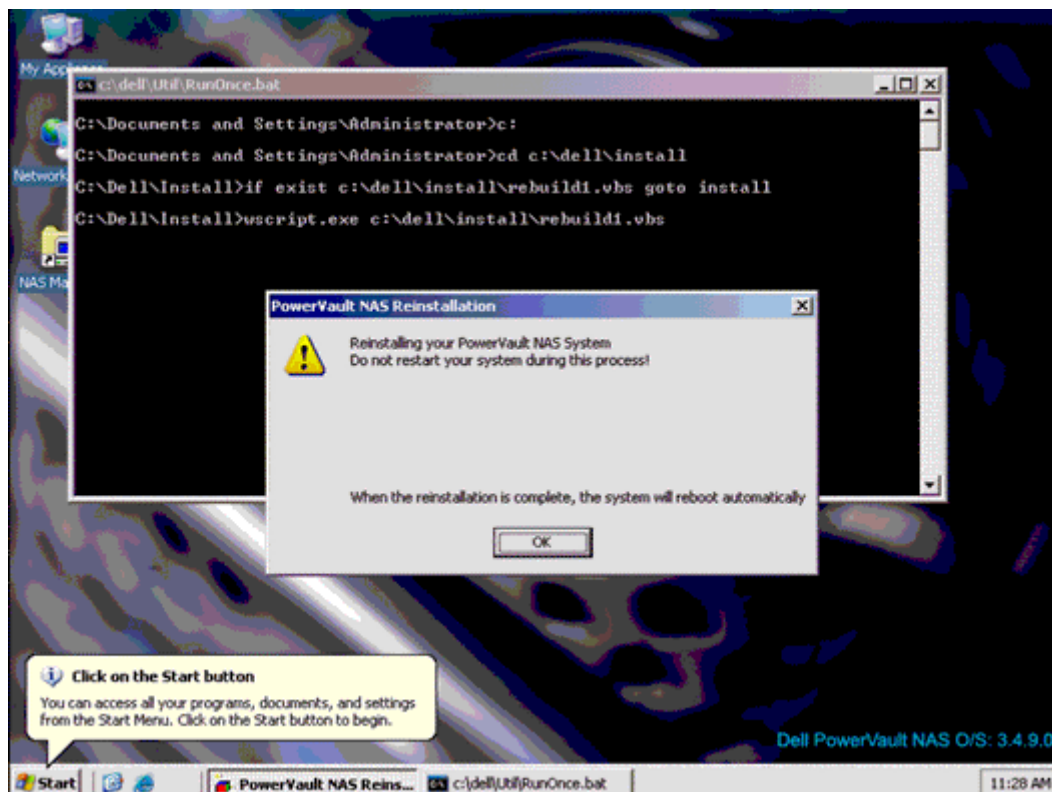
The PowerVault 745N boots into Windows Storage Server 2003.

It may take up to a couple of hours for this process to complete.

Automated Sequence of the PowerVault 745N Reinstall Process

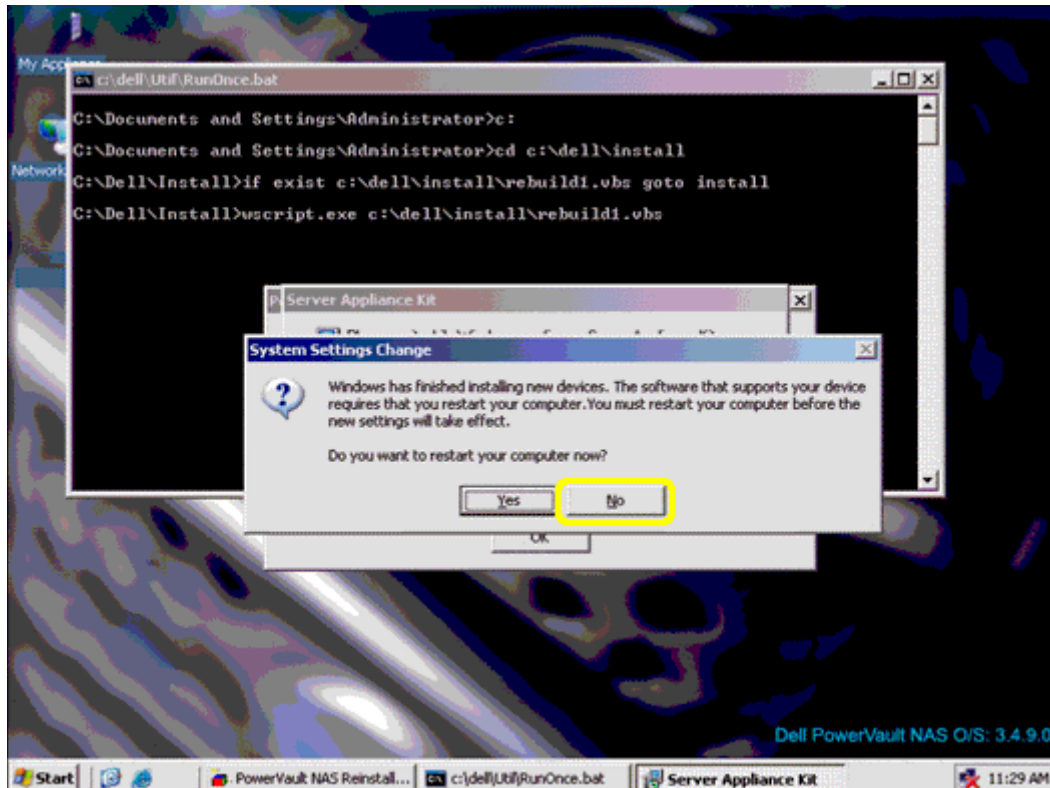
➔ **NOTICE:** During the install, you will be prompted to restart the server. **Ignore this message** and the system will continue reinstalling. When a reboot is necessary, the system will reboot on its own with out user intervention.

1. The PowerVault 745N will automatically log on and begin processing the installation scripts. A dialog box appears with the message **“Reinstalling your PowerVault NAS system. Do not restart your system during this process. When the reinstallation is complete, the system will reboot automatically.”**



Do not reboot the system

2. During the install, you will be prompted to restart the server. **Ignore this message.** The system will continue reinstalling. When a reboot is necessary, the system will reboot on its own, without user intervention, and the reinstallation process will continue. The reinstallation process can take several hours.



Ignore restart messages


NOTE: After the operating system has finished reinstalling, it may take up to 5 hours for the disks to complete synchronizing the RAID 5.

3. When the procedure completes, log in to the PowerVault 745N.
4. On the client system, close the Reinstallation Console.

NOTE: During the reinstallation process, do not attempt to connect to your NAS system. Depending on your configuration, this part of the reinstallation process may take several hours. During this process, the system may reboot several times while completing the reinstallation process. The reinstallation process is complete when the logon screen is displayed.

NOTE: The default administrator user name is **administrator** and the default password is **powervault**.

See "[Configuring Your NAS System for the First Time](#)" in "[Initial Configuration](#)."

 **NOTE:** Check the Dell Support website at support.dell.com for the latest driver and software updates. You may need to install updates after completing the operating system reinstallation.

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