Dell™ PowerVault™ NX1950 Systems Important Information

Model EMU01

Notes and Notices

NOTE: A NOTE indicates important information that helps you make better use of your computer.

NOTICE: A NOTICE indicates either potential damage to hardware or loss of data and tells you how to avoid the problem.

Dell™ PowerVault™ NX1950 Systems Important Information

- Critical System Information
- Installation and Setup Issues
- Deployment Issues
- Management Issues
- Upgrade Issues

This document provides important information about Microsoft® Windows® Unified Data Storage Server 2003 operating system installed on your Dell™ PowerVault™ NX1950 storage solution.

NOTE: Throughout this document, the term *Integrated solution* refers to the configuration of PowerVault NX1950 storage systems with PowerVault MD3000 storage arrays. The term *Gateway solution* refers to the configuration of PowerVault NX1950 storage systems and Dell|EMC storage arrays. For more information, see the *Installation Guide* that shipped along with your system.

Critical System Information

Table 1-1 describes the critical system issues you may encounter and the workaround for the issues.

Table 1-1. Critical System Information

Issue	Description	Workaround/Solution
Snapshots are lost after node failover	This problem occurs, if the **volume properties** and snapshot settings are not selected and confirmed in the cluster nodes. Subsequent node failover may result in loss of snapshot due to insufficient space and incorrect settings.	To ensure proper working of snapshot: 1. Go to **Windows Explorer**→ **Volume properties**→ File System where iSCSI **.vhd** file resides→ **Shadow Copies**→ **Settings**. 2. Ensure that the volume entry for the option **Located on this volume** is populated with the same value as the chosen volume drive letter. 3. Ensure that the maximum size (default value is **Use limit**) can accommodate snapshots. If not, change the value according to the space requirement or change the settings to **No limit** and select **OK**. 4. If the default setting contains sufficient space for snapshots, open the **Volume properties**→ **Shadow copies**→ **Settings** tab and select **OK**.
Rollback operation fails and the system state does not roll back to the chosen iSCSI snapshot	This problem occurs as the TEMP folder in the default System variables path (**C:\WINDOWS\TEMP**) does not have enough space to accommodate the modified blocks of a iSCSI LUN (**.vhd** file). The event is logged in the Application Event log as a WinTarget event with the following details: The Microsoft iSCSI could not roll back <virtual disk ID> to the snapshot taken. The operation failed with error code 112	To work around this issue: 1. Right-click **My computer**→ **Properties**→ **Advanced**→ **Environment Variables**. 2. In the **System Variable**s section, select **TEMP** and Click **Edit**. 3. Change the variable value to a path (volume) that has sufficient space to accommodate all modified blocks of **.vhd** file. If you know that the available space is sufficient for rollback, retain the default value. 4. After a Rollback operation, go to **Application Event log** and confirm the successful Rollback. **NOTE:** Do not run concurrent Rollback operations.
Disk timeout occurs on the host during RAID failover.	Host disks timeout during RAID failover.	**NOTE:** Download the iSCSI Failover Utility from the Dell support website, **support.dell.com** and run it on the hosts connected to NX1950. This registry fix changes the disk timeout to 160 seconds on the hosts to prevent disk timeouts during RAID failover on the storage subsystem. You should run the iSCSI Failover Utility before you establish iSCSI sessions. You can download it from the Dell support website, **support.dell.com**. It is recommended that you use a separate network for iSCSI traffic. **The iSCSI initiator must point to the dedicated iSCSI virtual IP address for the cluster to failover.**
Connection to the iSCSI logical unit number (LUN) is lost when a cluster failover occurs.	On the iSCSI Target: The network settings for the Microsoft iSCSI Software Target are reset on cluster nodes when a resource group fails. The specified settings are lost and the network IP addresses (including the public and private IP addresses) for the cluster nodes are enabled for iSCSI storage requests. If the iSCSI target is not a part of the cluster resource, connection to the target is lost during failover.	It is recommended that you use a separate network for iSCSI traffic. To re-establish connection to the iSCSI LUN, perform the following steps: 1. Stop the **Microsoft iSCSI Target Service** and then close the **PowerVault NX1950 Management Console**. 2. Go to **cluadmin.exe**→ **Groups**→ **Cluster Group**. 3. Right-click the **Cluster Group** and select **New Resource**. 4. In the **New Resource** window, enter WinTarget as the Service, and select **Resource Type** as generic resource. 5. In the **Dependencies** window add the cluster IP address (for management network only), the dedicated iSCSI virtual IP address, and cluster name of the current single node cluster.

		6. Add the registry key located at: `software\Microsoft\iSCSI Target`. 7. Select the **WinTarget** resource and bring it online. 8. Disable the firewall and delete the cache file located at **%APPDATA%\Microsoft\MMC\nas2**. 9. Start the **Microsoft iSCSI Target Service**. 10. Launch the **PowerVault NX1950 Management Console**. **NOTE:** It is recommended you configure iSCSI traffic on a dedicated network separate from the one you use for file share access. Create an additional IP network resource in the cluster group containing the iSCSI Target service resource (like *Cluster Group*). Configure the iSCSI initiators to connect to the iSCSI target using the IP address of the separate network you created.

Installation and Setup Issues

provides issues that you may encounter while setting up your cluster or installing software and the workaround for the issues.

Table 1-2. Installation and Setup Issues

Issue	Description	Workaround/Solution
Windows Unified Data Storage Server 2003 SP2 media is requested during operating system installation	When you install or restore the operating system on your system, you are prompted to insert the Windows Unified Data Storage Server 2003 SP2 media	When you are prompted to insert the Windows Unified Data Storage Server 2003 SP2 media for the first time, perform the following: 1. Click **OK** and then click **Browse**. 2. Browse to **C:\Windows\amd64\amd64\ directory** and select **convlog.ex_ file**. 3. Click **Open**. 4. Click **OK** to continue installation. When you are installing MUI packs you are prompted to insert the Windows Unified Data Storage Server 2003 SP2 media for the second time. Perform the following steps: 1. Click **OK**. 2. Click **Browse**. 3. Browse to **C:\Windows\amd64\amd64\lang directory** and select **cplexe.ex_ file**. 4. Click **Open**. 5. Click **OK** to continue installation.
No warning message is displayed when you upgrade the **Dell Storage Initialization Wizard**	No Warning message is displayed when you install a new version of **Dell Storage Initialization Wizard** over the factory-installed version of the **Dell Storage Initialization Wizard**.	This feature is working as designed.
In the Integrated solution, the **Dell Storage Initialization Wizard** does not validate the PowerVault MD3000 Storage array name	In the **Dell Storage Initialization Wizard**, the **Configure a Name for your PowerVault MD3000 array** field does not validate the text entered. The array field accepts all special characters such as **#**, **@**,**!**, **$**, and**%**, but replaces the unsupported characters. If the length of the text exceeds 30 characters, the array field uses the previous array name of the PowerVault MD3000 storage array without displaying any error message.	Follow these guidelines when you create an array name: l Do not use spaces in the array name. l Do not use the special characters like **#**, **@**,**!**, **$**, or**%** in the array name. l Ensure that the array name does not exceed 30 characters.
Firewall script is not automatically installed	The firewall script is not installed automatically from the *Dell Systems Build and Update Utility* media.	For the correct installation procedure, see the *Dell PowerVault NX1950 Systems Deployment Guide* available on the Dell Support website at **support.dell.com**.
Internet Information Server (IIS) is installed by default	The IIS component is installed by default either from the factory or during a restore of Windows Unified Data Storage Server 2003 x64 operating system using the *Dell PowerEdge Installation and Server Management* media.	This is working as designed. IIS is a prerequisite for the PowerVault NX1950 storage solution.
Virtual Disk Service (VDS)/ Volume Shadow Copy Services (VSS) provider installer does not prompt you to reboot the system	After you install VDS/VSS provider on the PowerVault NX1950 storage solution and the PowerVault MD3000 storage array, the installer does not prompt you to reboot the system and causes the Storage Management console to behave unpredictably.	Reboot the system after installing the VDS/VSS provider.

Deployment Issues

provides the list of issues you might encounter during deployment of the PowerVault NX1950 storage solution and the workaround.

Table 1-3. Deployment Issues and Solutions

Issue	Description	Workaround/Solution
RAID 1 and RAID 10 are both reported as RAID1_0 and are referred to as **mirrored**	You have an option to create either a RAID 5 or a mirrored LUN. When you create a mirrored LUN, the default is two disks, which is actually striping with mirroring without parity and not a mirrored LUN.	This is working as designed.
In the Gateway solution, the PowerPath application logs an error	In the Gateway solution, you may see a PowerPath error, after you upgrade from the Windows Unified Data Storage Server 2003 Standard Edition to the Enterprise Edition or after you join a domain.	Reinstall PowerPath using the **Repair** option. Ensure that you have administrative privileges on the domain controller.

Cluster resources may cause errors when you enable Single Instance Storage (SIS) on a PowerVault NX1950 cluster	If you enable SIS on a shared physical disk resource on a PowerVault NX1950 cluster and then attempt to move a group (with one of the shared physical disks), the resource does not move between nodes and fails eventually. The other physical resource may also fail.	This issue is currently being investigated by Microsoft.
		
		If you have already configured SIS in a cluster environment, you can either disable SIS or the volume can be UN-SISed by performing the following:
		
		l Disable SIS (recommended)
		  a. To recover from failed resources reboot the cluster nodes one after the other. This forces the resources to move to a node.
		  b. Open a command prompt on the node which owns the physical disks and run the following command: sisadmin /d
		  c. Move the group to the other node and do the same. This ensures that Groveler service is stopped and the resources can failover successfully.

		l UN-SIS the shared physical disks.
		  a. Backup the data on the shared physical disks.
		  b. Delete and recreate the volumes.
		  c. Restore the backed up data.

The **Microsoft Management Console** hangs during an operation	The **Microsoft Management Console** stops responding or hangs during an operation execution.	To work around this issue, perform one of the following: l Close and restart the Microsoft Management Console. l Log off and Log on to the system and re-open the **Microsoft Management Console**. l Restart your system.
Inconsistency between the slot number displayed in Microsoft Management Console and PowerVault Modular Disk Storage Manager	In the **PowerVault NX1950 Microsoft Management Console**, the storage enclosure slots are numbered from 1 to 15. The same slots are numbered from 0 to 14 in the PowerVault Modular Disk Storage Manager.	There is no workaround.
Quorum disk is created automatically from the available disks	The **PowerVault NX1950 Management Console** automatically selects the quorum disk from the available disk or volume even if data exists on the disk or volume. However, the existing data on the disk or volume is not erased.	This feature is working as designed. The quorum disk cannot be selected by the user. Before you create a cluster, it is recommended that you allocate storage space on the storage array and ensure that RAID 1 volume is available.
In the Integrated solution, password protected PowerVault MD3000 arrays are not supported	The **Dell Storage Initialization Wizard** cannot configure password protected PowerVault MD3000 arrays. It does not display an error message indicating that the configuration has failed.	Do not password protect the PowerVault MD3000 Storage Array OR Set a password through the **SMReg** tool. The tool is a part of the VDS provider and is located in the installation directory.
Microsoft Services for NFS does not validate the domain name	The **Active Directory Domain** field in the **Microsoft Services for NFS Properties** window accepts any value and the value in this field is not validated to ensure if the domain name exists. This issue causes problems when you access NFS services within a domain.	To work around this issue, use the **Identity Mapping** wizard to validate the domain name. This wizard can be launched from the **Microsoft Services for NFS** console.
Setting quota limit that is larger than the LUN size does not display an error message	The **PowerVault NX1950 Management Console** does not display a warning message when you set the quota limit larger than LUN size.	Verify the LUN or volume size before setting a quota limit.
In the PowerVault MD3000 storage array, new LUNs cannot be created in a disk group	If all the disks are assigned to disk groups, you cannot create a LUN on the available free space in disk groups using the **PowerVault NX1950 Management Console**.	l Extend the existing LUNs size. OR l Use the **PowerVault Modular Disk Storage Manager** to create LUNs and assign the LUNs to the system manually.
Mounting shared volumes using network file system (NFS) displays an error in Linux clients	When you mount a share on a Linux client, the following error message is displayed: mount: <NASServerName>:/<ShareName>: can't read superblock	To work around this issue, perform the following steps: 1. Click **Administrative tools→ Local Security Policy→ Local Policies User Rights Assignment→ Bypass Traverse Checking** 2. Click **Add User or Group**, add anonymous logons and, click **OK** to apply. 3. Run the following command from the Linux client command prompt and then reboot the server: gpupdate/server
Unauthenticated users can configure storage with Dell|EMC arrays	Before the privileged users list is populated on Dell|EMC arrays, all users with administrator rights can successfully perform operations in the **Storage Manager for SANs** and in the **Storage Provision**	Run the **Dell Storage Initialization Wizard** and log in to the array. The privileged users list is now populated thereby preventing unauthorized users from accessing the storage array.

	wizard. When the privileged users list is populated, all administrator users that are not a part of this list cannot access the storage array and manage the LUNs that are created.	
Default time for scheduling task when idle is 10 minutes and cannot be reset	The value for **Schedule Task When Idle** cannot be set to a different value. The value you enter is not retained and the default value—10 minutes—is used.	This is a known issue.
Enabling Single Instance Storage (SIS) on the first volume disables SIS on the subsequent volumes	When you enable SIS on the first volume using the **Advanced** tab of the **Volume Properties** window, SIS is disabled on subsequent volumes and no error message is displayed.	To work around this issue, run the following command from the command prompt to fully enable the SIS features: sisadmin /i <volume>

When you enable SIS on subsequent volumes through the Graphical User Interface (GUI), the SIS service is stopped. You must restart the SIS service manually through the **services.msc** application for each volume.

For more information, see Knowledge Base article 913109 on the Microsoft Support website at **support.mircosoft.com**. |
Limitations while creating private LUNs with the PowerVault MD3000 array	When you are creating a LUN, though you select the **This Server only** option in **Provision Storage**→ **Server Assignment**, the LUN is assigned to all nodes in the cluster.	You can create Private LUNs manually only using the **Dell PowerVault Modular Disk Storage Manager**. For more information see the *Dell PowerVault Modular Disk Storage Manager User's Guide* located on the Dell support website at **support.dell.com**.
Storage Provision wizard fails when formatting a volume less than 8 MB	When you create a volume on a LUN of less than 8 MB using the **Storage Provision** wizard, the volume cannot be formatted.	This is a known issue.
Error message is displayed when you start or stop the NFS service	When you try to start or stop the **User Name Mapping**, **Client for NFS**, or **Server for NFS** service from the Microsoft Service for NFS, the following error message is displayed: Unspecified user.	This feature is working as designed. To perform this action, you must log in as an administrator.
The PowerVault MD3000 storage array is labeled as Fiber Channel in the **Storage Provision** wizard	In the **Storage Provision** wizard, the PowerVault MD3000 storage array is labeled as Fiber Channel even though it is not a Fiber Channel connection.	This is a known issue.
Dell Initial Configuration Tasks wizard or **PowerVault NX1950 Management Console** does not start after **Dell Storage Initialization Wizard** has initialized	This issue occurs because the **Dell Storage Initialization Wizard** encountered an error condition and exited before completing the configuration. In certain cases, the error message disappears from the screen without user interaction.	This is a known issue. To resolve this issue, call Dell Technical Support.
The **Dell OpenManage™ Help** window in the **PowerVault NX1950 Configuration**

Tasks Wizard appears in English irrespective of the language setting | The **Dell OpenManage™ Help** window is displayed in English and not in the language of the selected environment such as French, German, Japanese, Korean, Simplified Chinese, Spanish, or Traditional Chinese. | This is a known issue. |
| **Dell Storage Initialization Wizard** may stop responding | **Dell Storage Initialization Wizard** may stop responding if the desktop is locked while **Dell Storage Initialization Wizard** is configuring the system. | Perform the following steps:

1. Terminate the **Dell Storage Initialization Wizard** application using the **Windows Task Manager**.
2. Restart the **Dell Storage Initialization Wizard** from the **PowerVault NX1950 Management Console**. Click **Start**→ **All Programs**→ **Administrative Tools**→ **Windows Unified Data Storage Server**. |
| Microsoft error reporting displays **Dell Storage Initialization Wizard** application errors | **NOTE:** This error occurs if you exit the **Dell Storage Initialization Wizard** while it is running.

Microsoft Error Reporting displays the following application error message while using the **Dell Storage Initialization Wizard**:

Some unexpected errors have happened to the software you recently used | To workaround this issue, run the **Dell Storage Initialization wizard** completely without interruption. |
| Enabling Windows Firewall | The following ports must be open:

l   UDP port = 80: http
l   UDP port = 111: Portmap UDP
l   UDP port = 1048: NFS MountUDP
l   UDP port = 2049: NFS Server UDP
l   UDP port = 1047: NFS Lock UDP
l   UDP port = 1039: NSM UDP
l   UDP port = 162: SNMP
l   UDP port = 2162: Array Init 1
l   UDP port = 2163: Array Init 2
l   UDP port = 137: NetBIOS Name Service
l   UDP port = 138: NetBIOS Datagram Service
l   TCP port = 80: IIS
l   TCP port = 135: RPC
l   TCP port = 3260: ISCSI
l   TCP port = 111: Portmap TCP
l   TCP port = 1048: NFS Mount
l   TCP port = 2049: NFS Server TCP
l   TCP port = 1047: NFS Lock | For download instructions and location of the firewall script, see the *Dell PowerVault NX1950 Systems Deployment Guide* located on the Dell Support website at **support.dell.com**.

NOTE: Ensure that adequate security precautions are in place before proceeding with the workaround for this issue. |

Issue	Description	Workaround/Solution
	l TCP port = 1039: NSM l TCP port = 25: Storage Processor l TCP port = 443: Java CLI/Secure l TCP port = 137: NetBIOS TCP l TCP port = 139: NetBIOS Session Service l TCP port = 445: SMB over TCP l TCP port = 3389: Remote Desktop	
The **Action** Pane displays **More Actions** instead of **List of Actions**	The **Action** pane in the **PowerVault NX1950 Management Console** displays the menu name as **More Actions** instead of **List of Actions**. When you click **More Actions**, the menu is displayed. This issue is observed in the following consoles: l Microsoft Services for NFS l iSCSI Software target l Indexing Service l Local User and Groups l Event Viewer l Performance Logs and Alerts	This feature is working as designed.
In Windows Unified Data Storage Server 2003, Standard Edition, automatic failback is not enabled by default	The PowerVault NX1950 solution software does not set the LUN_Rebalance registry key to enable re-balancing. This prevents automatic failback. **NOTICE:** Any unintended changes to the registry may cause problems.	To enable failback manually, see the *Dell PowerVault MD3000 User's Guide* available on the Dell Support website at **support.dell.com**.
In the Gateway solution, creation of LUN is allowed when no users are added to the system configuration (symcfg)	This problem occurs if: l No authorized users have been added to the privileged user's list on each storage processor. l Invalid users are added to the privileged user's list on each storage processor. l Authorized users are manually added to the **agent.config** file.	This feature is working as designed.
In the Gateway solution, the **LUN Creation Wizard** does not display an error when the storage group is full	The storage group has a maximum of 256 LUNs that can be assigned to the storage group. Any additional LUNs created through **Storage Manager for SANs** console are not assigned to the storage group. No warning or error messages are logged in the event log.	This is a known issue.
Unable to extend volume during I/O	If the volume being extended also requires a LUN to be extended, the volume extension fails while I/O is running.	To extend a volume while I/O is running: l Extend the LUN through the **Storage Manager for SANs** console. OR l Extend the LUN using **Diskpart.** For more information on **Diskpart**, see the Microsoft Support website at **support.microsoft.com**.
Network Interface Card (NIC) Teaming is not supported for iSCSI	As per Microsoft's specification, NIC Teaming is only supported for file protocols and not iSCSI.	For more information about NIC teaming, see the Microsoft Windows Server® 2003 technology centers website at **www.microsoft.com/windowsserver2003/technologies**.
In the Gateway solution, VDS provider initialization fails if user name contains spaces	While configuring Dell|EMC arrays using the **Dell Storage Initialization Wizard**, you must enter the array administrator username and password. If the administrator username contains a space the **Dell Storage Initialization Wizard** completes successfully but the **Share and Storage Management** wizard displays a VDS initialization error.	Ensure that the array administrator username does not contain space (s).
In the Gateway solution, LUN can not be assigned either to a server or cluster	Creating a LUN through storage manager for SANs fails at the step **Assign LUN to a server or cluster**.	Using navisphere, log-in, right-click on the storage array of your choice and select **properties**. In the **properties** window, select the **storage access** tab and check the **access control enable** check box.
In the Gateway solution, Quorum disk can not be assigned to a cluster	Creating a LUN through storage manager for SANs fails at the step **Assign LUN to a server or cluster**.	Using navisphere, log-in, right-click on the storage array of your choice and select **properties**. In the **properties** window, select the **storage access** tab and check the **access control enable** check box. Rerun the **Dell Storage Initialization Wizard**.

Management Issues

Table 1-4 provides information about the issues you may encounter when you perform management activities on the PowerVault NX1950 storage solution and the possible workaround/solution.

Table 1-4. Management Issues

Issue	Description	Workaround/Solution

The **Microsoft Management Console** hangs	The **Microsoft Management Console** may hang when multiple **Storage Manager for SANs** provisioning operations run in parallel through the **Async** feature.	Do not perform more than four provisioning operations simultaneously.
LUN is not accessible	After you successfully create a LUN using **Storage Manager for SANs**, the LUN is not accessible from the **Disk Management** wizard.	After you successfully create a LUN using **Storage Manager for SANs,** the LUN may take a few minutes to initialize. Before accessing the LUN, ensure that 100% LUN initialization has occurred.
Inaccurate LUN capacity is displayed	During multiple **Async** LUN creation using **Storage Manager for SANs**, the available capacity is not reported accurately.	Until the complete initialization of a LUN occurs, the VDS provider reports the previous available/advertised capacity before the provisioning operation was performed.
In a Gateway solution, increasing LUN capacity may fail	The maximum LUN size grows after extending to the previously advertised maximum LUN size. In some instances, attempt to extend to the new advertised capacity may fail.	This is a limitation, when you are using Dell|EMC storage arrays.
LUN extension fails	Extension of LUN fails if different disk types (FC, SAS, SATAx) are included in the same disk group.	Combination of different types of disks is not supported.
NT Backup fails	NT Backup may fail using AX4-5 with EMC VSS hardware provider installed	NT backup is not supported with EMC AX4-5 arrays when VSS hardware provider is installed. To work around the issue, uninstall the VSS hardware provider.
Symantec Backup Exec passes with exceptions	Symantec Backup Exec may fail on AX4-5 storage arrays when the EMC VSS hardware provider is installed.	Symantec backup is not supported with EMC AX4-5 storage arrays when VSS hardware provider is installed. To work around the issue, uninstall VSS hardware provider.
In an Integrated Solution, LUN extension fails	LUN extension fails.	To resolve this issue, ensure that the LUN you are extending is initialized. To verify that the LUN is initialized, go to **Start→ Programs→ Dell Modular Disk Storage Manager**. If the LUN is being initialized, wait for the initialization to complete.

Extending a LUN size to a value greater than 2 TB fails	An attempt to extend an existing LUN size value to greater than 2 TB fails.	To workaround this issue:
		
		1. Back up or move all data on the basic master boot record (MBR) disk that you want to convert into a GUID partition table (GPT) disk. If the disk does not have partitions or volumes, skip to step 3. To backup data:
		  a. Stop sharing the volume using the **Share and Storage Provision** wizard.
		  b. Launch Clu-admin (take off-line and delete).
		  c. Unassign the volume from the cluster group and assign to a local server using SMFS.
		2. Using the **Disk Management** window, re-scan the disks to update the **extend** status.
		3. At the command prompt, type `diskpart`
		4. If the disk does not contain any partitions or volumes, skip to step c.
		5. At the DISKPART prompt, type:
		  a. `list volume` and record the number of the volume that you want to delete.
		  b. `select volume`
		  c. `delete volume`
		  d. `list disk` and record the disk number of the disk that you want to convert to a GPT disk.
		  e. `select diskn`
		  f. `convert gpt`
		6. After converting to GPT disk format, provide a drive letter to this volume. Using **Diskpart**, select the new volume and extend. Using the **Disk Management** window, verify that the size of the new volume is correct. Add this volume as a resource in the cluster group. Refresh the **Share and Storage Management** interface.

LUN does not failover	The Assign function in **Storage manager for SANs** only exposes the LUN/volumes to the hosts and does not assign it to the cluster group or HA instances.	To include the LUN/volume in the cluster group, perform the following steps:
		
		1. Assign the LUN to the cluster.
		2. In the **Dell PowerVault Modular Disk Storage Manager**, verify that the LUN has been assigned to the **Host Group**.
		3. In **Disk Management**, verify that the disk is basic and assign it a drive letter.
		4. Launch Cluster Administration by clicking **Start→ Administrative→ Tools→ Cluster Administrator→ Groups**. Right-click **Cluster Group** and select **New Resource**.
		5. Enter the following required information:
		  o Name
		  o Description
		  o Resource Type: Choose **Physical**

		Disk ○ Group: Choose **Cluster Group** 6. Click **Next**. 7. Verify that all cluster nodes are in the **Possible Owners** window and click **Next**. 8. Select the following dependencies: ○ **Cluster IP Address** ○ **Cluster Name** ○ **Physical Disk of Choice** 9. Click **Add** and then click **Next**. 10. Complete the wizard and then click **Finish**. 11. Right-click **Resource** and choose **Online**. The disk is now a part of the cluster. 12. In the **Share and Storage Management** window, refresh the **Volumes** tab.
The **Share Provision wizard** allows a share to be created in an existing shared folder without displaying a warning that the current file settings may be erased	The **Share and Storage Management** wizard allows you to create a new shared folder in an existing shared folder without warning that this may erase the **File Screen** settings of the existing shared folder. The **File Screen** setting for all shares in the **Share** tab of the **Share and Storage Management** wizard is checked. However, only the last **File Screen** setting is applied to the share.	This is a known issue.
Long failover time on the PowerVault MD3000 storage array	The PowerVault NX1950 storage solution supports redundant paths through a single or dual Serial-Attached SCSI (SAS) Host Bus Adapter (HBA) controller. When you configure the PowerVault NX1950 storage solution to support a redundant path through a single controller, the failover takes a longer time during heavy input/output. However, there is no loss of data due to a delay in failover.	For more information, see the Knowledge Base article 940467 at the Microsoft Support website at **support.mircosoft.com**.
Uninstalling and Reinstalling **File Server Resource Manager** displays two consoles in the **PowerVault NX1950 Management Console**	When you uninstall and reinstall **File Server Resource Manager** one console is displayed under the **Share and Storage Management** wizard and the other console is displayed under **PowerVault NX1950 Management Console**.	You can ignore the snap-in that appears below **PowerVault NX1950 Management Console**.
LUN type for a failed over volume in a cluster is displayed as **Simple**	In the **Share and Storage Management** wizard, all volumes that failover are displayed as **Simple**.	To refresh the RAID type: 1. In the second node where the volumes are displayed as **Simple,** go to **Disk Management**. 2. Go to **Share and Storage Management**→ **Volumes** and click **Refresh**.
LUN type for volume displayed as **unknown** in a cluster	The LUN type for volumes created from the passive node in a cluster is displayed as **unknown** in the **Share and Storage Management** wizard of the active node.	Go to the **Disk Management** window and perform a refresh. Go back to the **Share and Storage Management** wizard and perform a refresh. All the LUNs are now displayed properly.
Reverting the shadow copies in Microsoft Cluster Services fails	An error message is displayed when reverting a shadow copy of volume that is a part of a cluster group.	Remove the volume from the cluster resources and revert the shadow copy. After a successful revert, add the volume back to the cluster group. For more information, see the knowledge base article KB945361 on the Microsoft Support website at **support.microsoft.com**.
Launching the **Share Provision** wizard after uninstalling the **File Server Resource Manager** results in a **storagemgmt.dll** console error.	If you run the **Share Provision** wizard from **Share and Storage Management** wizard after uninstalling the **File Server Resource Manager** using **Add or Remove Programs**, the following error message is displayed: `Unhandled exception in managed code snap-in` **Share and Storage Management** wizard is removed from the **PowerVault NX1950 Management Console**.	To reinstall the **File Server Resource Manager** perform the following steps: 1. Go to **Control Panel**→ **Add or Remove Programs**→ **Add or Remove Windows Components**→ **Management and Monitoring Tools**. 2. Select **File Server Resource Manager**. **NOTE:** After reinstalling the **File Server Resource Manager**, the **PowerVault NX1950 Management Console** shows two similar consoles.
The **Storage Manager for SANs** console does not remove the available drive letters assigned to a volume.	When two *Create LUN* operations are performed in rapid succession, the **Storage Manager for SANs** console does not remove the available drive letters. This issue is indicated by an error message related to volume creation failure.	To work around this issue, use the **Disk Management** console to create volumes manually or wait for a few seconds for the used drive letter to be removed from the **Storage Manager for SANs** console.
Deleted drives or volumes in the **Disk Management** console cause the system to crash.	After you delete a volume through the **Storage Manager for SANs** console, the volume continues to display under the Disk Management console. If you select the deleted volume, the **PowerVault NX1950 Management Console** crashes.	To avoid this issue, use the **Share and Storage Manager** console to delete the volume.
VDS errors are reported in the Windows application log.	While creating or deleting LUNs, the following error message is reported in the Windows application log: `Storage Manager for SANs encountered the following error(s) while loading information from Virtual Disk Service (VDS) or VDS hardware provider(s). Some of the functionality may not be available on the hardware provider(s).`	To work around this issue, set the password on the storage array using the **SMReg** tool.

	LUN - 'www' IVdsDisk.QueryExtents 'System.Runtime.InteropServices.COMException - 'Exception from HRESULT: 0x80042444	
Files to include and **Files to exclude** in the **Files Group Properties** window have the same file extensions.	In the **Files Group Properties** window, the **Files to include** and **Files to exclude** lists may have the same file extensions.	During the **File Screening** operation, the files in the **Files to include** list have higher precedence over the files in the **Files to exclude** list.
BERemote.exe terminates unexpectedly while protecting servers running Windows Unified Data Storage Server 2003 x64 operating system with Backup Exec 10.x for Microsoft Windows Server operating systems.	**BERemote.exe** terminates unexpectedly while protecting Windows Unified Data Storage Server 2003 x64 operating system with Backup Exec 10.x for Windows Server operating systems.	Symantec addresses this issue with Knowledge Base article 285187, located on the Veritas Support website at **support.veritas.com**.
Removing a node from a cluster.	When you delete a server group entry in **Manage Server Connections** section, access to the LUN is removed automatically.	For more information about removing, replacing, and deleting nodes from the cluster, see *Dell PowerVault NX1950 Cluster Systems Installation and Troubleshooting Guide* that shipped with your storage system.
Sorting By Size does not work as expected.	In the **PowerVault NX1950 Management Console**, the columns are sorted based on the character value instead of the numeric value. This issue occurs in the following wizards: l **Create LUN** wizard — Subsystem and type l **Provision a Shared Folder** wizard — Shared Folder location l **Provision Storage** wizard — LUN type For example, the rows are sorted depending on the string value such as 1, 10, 100, 2, 20, 200, and so on instead of 1, 2, 10, 20, 100, 200.	This is a known issue.
Cannot restore Java RDP session after it has been minimized.	It is not possible to restore a Java Remote Desktop Protocol (RDP) session to full screen mode after it has been minimized. Attempting to restore the session appears unrecoverable.	To work around this issue, close and relaunch the browser to establish the session with the remote system.
The diagnostic report for the Distributed File System (DFS) replication group generates an error.	When you create a diagnostic report for a replication group, the following error message appears: The health report cannot be generated. Error HRESULT E_FAIL has been returned from a call to a COM component.	For more information, see the Microsoft Knowledge Base article 912154 located on the Microsoft Support website at **support.microsoft.com**.
In the Gateway solution, **the Blink Drive Light...** option returns warning messages and does not work.	When using the **Storage Managers for SANs**, the **Blink Drive Light** feature does not work.	Working as designed.
Microsoft Management Console does not allow you to unassign ports (WWN's) if a LUN is assigned.	**Manage Server connections** does not allow you to unassign ports if LUNs are created previously and/or assigned to the array when you attempt to select the port. When you attempt to perform this action, the **Microsoft Management Console** crashes.	This is a known issue. To workaround this issue, close and restart the **Microsoft Management Console** or reboot the system.
System event log displays EMC Powerpath® dead path for a deleted LUN.	When you delete a LUN is from the **Microsoft Management Console**, the System Event Log displays a Powerpath dead path error.	The information in the system event log is either cached disk or LUN that is not yet deleted. You can ignore this message.
In the Gateway solution, the **Create LUN** wizard displays an incorrect value of the available free space.	19% of the total storage capacity is allocated for overhead requirements and no data can be stored in this space. However, this is displayed as available free space.	This feature is working as designed.
Unable to delete iSCSI snapshots via the **Microsoft Management Console** using the **Microsoft iSCSI** snap-in.	When you create volume shadow copy on a volume, a snapshot is created for each iSCSI virtual disk existing on the volume. You can view, restore, or mount the snapshots from the **Microsoft Management Console** by going to **Microsoft iSCSI Software Targe**t→ **Snapshots**→ **Active Snapshots**. This issue occurs when you deploy multiple iSCSI virtual disks on a volume and the volume has volume Shadow Copy. When you delete an iSCSI Snapshot that is on this volume, the Snapshot is not be deleted and another copy of the snapshot of other iSCSI virtual disks appear in the list.	To delete a snapshot created from a shadow copy, delete the entire shadow copy.
Attempt to evict a node from cluster causes a CLI error.	After you execute the CLI command cluster node <node name> /forcecleanup the system displays an error notifying you the attempt was unsuccessful.	Reboot the system and execute the command again.
Extending a GUID partition table (GPT) volume in Gateway solutions fails.	If you extend a GPT volume without refreshing in **Share and Storage Management** wizard, the volume extension fails.	To work around, perform the following procedure: 1. Stop the share on the volume to be extended. 2. From the **Disk Management** wizard delete volume partition. 3. Go to **Share and Storage management**→ **Volumes** and click **Refresh**. 4. Convert to GPT from Disk management. 5. Format and assign a drive letter to the new volume from disk management. 6. Refresh the **Share and Storage Management** console. You can now extend the volume.
In Gateway solutions, maximum extension on Dell|EMC AX150 storage array	After you create a 2-TB LUN or volume on an unpartitioned AX150 storage array, you cannot extend to maximum. This issue occurs if you use the **Share and Storage Management** wizard.	l Extend the LUN from Navisphere Manager. l Extend the volume from **Disk**

fails.		**management** or **Diskpart** utility.
In Gateway solutions, the **Storage Manager for SANs** console displays incorrect LUN size when LUN is greater than 2 TB.	Any LUN that is greater than 2 TB is reported as 2 TB in the **Storage Manager for SANs** console	This is a known issue.
In the Gateway solution, extension to maximum LUN size grows.	The reported initial maximum size can be extended based on the requirement of the RAID group it is a part of. The reported maximum size for LUN extension increases after the extension operation on the storage array because of the one or both of the following factors: l The API allocates a safe buffer zone during the estimation of the maximum size of the RAID group, due to the required 5—7% overhead of the RAID group. l A new RAID group with additional disks may have been created.	Verify the maximum allowed LUN size through Navisphere Manager
In Gateway solutions, actual LUN extension Size is smaller than the requested size.	After a successful LUN creation, the reported LUN size is smaller than the requested LUN size from the **Share and Storage Management** wizard. The API allocates a safe buffer zone during the estimation of the maximum LUN size. The maximum LUN size also depends on the RAID type. The overhead is approximately 5—7% of the LUN size. For example, in a LUN of size 100 GB, 2 TB is allocated to overhead**.**	Verify maximum allowed LUN size through Navisphere Manager.

Upgrade Issues

provides a list of issues you may encounter during an upgrade and the possible workaround or solution.

Table 1-**5. Upgrade Issues**

Issue	Description	Workaround/Solution
If Firewall is enabled during upgrade, it may cause issues.	If the Windows firewall is enabled during upgrade from Windows Unified Data Storage Server 2003 Standard Edition to Windows Unified Data Storage Server 2003 Enterprise Edition, the **Microsoft iSCSI Software Target** console fails.	Disable the firewall before starting the upgrade.
Importing Virtual Disks.	If you do not unassign the LUNs from a system correctly before redeploying an operating system, the pre-existing LUNs may be unavailable in the new operating system due to SCSI reservation.	You must clear the SCSI reservation on the virtual disks manually. **NOTE:** For more information about the commands required to clear SCSI reservation on virtual disks, see the *Dell PowerVault MD3000 Storage Manager CLI Guide*.
iSCSI Software Target console crashes if a node has iSCSI virtual disks assigned to it before joining the cluster.	If you create iSCSI virtual disks or targets before the node joins the cluster, the **iSCSI Software Target** snap-in crashes.	Perform the following steps: 1. Stop the **Microsoft iSCSI Target Service** and then close the **PowerVault NX1950 Management Console**. 2. Launch **cluadmin.exe**→ **Groups**→ **Cluster Group**. 3. Right-click the **Cluster Group** and select **New Resource**. 4. In the **New Resource** window, enter WinTarget as the Service, and select resource type as **Generic Resource**. 5. In the **Dependencies** window, add cluster IP address and cluster name of your current single node cluster. 6. Add the registry key: SOFTWARE\Microsoft\iSCSI Target. 7. Select the **WinTarget** resource and bring it online. 8. Disable the firewall and delete the cache file located at **%APPDATA%\Microsoft\MMC\nas2**. 9. Start the **Microsoft iSCSI Software Target Service**. 10. Launch the **PowerVault NX1950 Management Console**.