

Using the Microsoft Windows Server 2003 Backup Utility with Linksys Network Storage Systems for Large File Sizes

The backup utility (**NTBACKUP**) included in Microsoft Windows Server 2003 can fail to back up files that are larger than 150GB in size to the NSS4000 and NSS6000 series network storage systems. If this occurs, error messages indicate a speed mismatch between the file send and receive.

The problem depends on specific configurations and memory allocations and does not occur on all systems. If you experience this problem, you need to adjust your Microsoft Windows configuration as described in the following sections to ensure proper functionality.

1. Install Microsoft Windows Server 2003 Service Pack 1 software if you do not have it installed.
2. Install the Microsoft Windows Server 2003 Volume Shadow Copy Service (VSS) software update. (Skip this step if Microsoft Windows Server 2003 Service Pack 2 is installed.)
3. Edit the Microsoft Windows registry.
4. Configure Microsoft Windows Server 2003 memory usage.
5. Complete the final configuration steps.

Install Microsoft Windows Software

1. If Microsoft Windows Server 2003 Service Pack 1 software is not installed, you will need to install the following:
 - Microsoft Windows Server 2003 Service Pack 1
 - Microsoft Windows SharePoint Services 2.0 Service Pack 1
 - Microsoft Windows XP SP2 for Client Deployment (not required for Windows Server 2003 Standard Edition)
 - Microsoft Windows Small Business Server 2003 Service Pack 1 (not required for Windows Server 2003 Standard Edition)
 - Microsoft Exchange Server 2003 Service Pack 1 (optional)

Instructions for installing this software are located at the following URL:

<http://download.microsoft.com/download/e/0/f/e0fee8ce-768d-41c0-8871-9bc48e0b3fc3/ToDownloadFilesandReadInstructions.htm>

2. Reboot your server after installing software.

3. Install the Microsoft Windows Server 2003 Volume Shadow Copy Service (VSS) Software Update. (If Microsoft Windows Server 2003 Service Pack 2 installed, skip this step.)

To install this software update, follow the instructions at the following URL:

<http://support.microsoft.com/default.aspx?scid=kb;en-us;891957>

For more information about VSS, see:

http://searchwincomputing.techtarget.com/tip/0,289483,sid68_gci1076710,00.html

Edit the Microsoft Windows Registry

Make the following changes to ensure the server does not run out of resources:

1. Click **Start > Run**.
2. Enter **regedit** in the Open box, then click **OK**.
3. Locate and click the following registry subkey:

HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Session Manager\Memory Management

4. From the Edit menu, select **New**, then click **DWORD Value**.
5. Enter **PoolUsageMaximum** as the entry name, then press **Enter**.
6. Right-click **PoolUsageMaximum** and select **Modify**.
7. Click **Decimal**.
8. In the Value data box, enter **60** (**40** for the 3GB switch), then click **OK**.

NOTE: The value is a percentage. You may have to adjust this value to 40 if the backup fails. If the backup works, increase the value by approximately 25% until you find the value at which the backup fails. Use the largest number possible to get successful results; however, do not use a value greater than 60.

9. Exit the Registry Editor.

If the backup continues to fail, perform the following steps:

1. Click **Start > Run**.
2. Enter **regedit** in the Open box, then click **OK**.
3. Locate and click the following registry subkey:

HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Session Manager\Memory Management

4. From the Edit menu, select **New**, then click **DWORD Value**.
5. Enter **PagedPoolSize** as the entry name, then press Enter.

6. Right-click **PagedPoolSize** and select **Modify**.
7. Click **Hexadecimal**.
8. In the Value data box, enter a value of **FFFFFFFF**, then click **OK**.
9. Exit the Registry Editor.

Configure Microsoft Windows Server 2003 Memory Usage

Perform the following steps to assist the kernel memory when it is exhausted by built-in buffering during backups that run for long periods of time. Microsoft Windows 2003 Server allows you to use the hard disk space as the virtual RAM.

1. In Microsoft Windows 2003 Server, click **Start**.
2. Right-click **My Computer**.
3. Select **Properties**.
4. Under **Performance**, click the **Advanced** tab.
5. Click **Settings**.
6. Click the **Advanced** tab.
7. Select **Memory Usage to Programs**. By default, Microsoft Windows Server 2003 is set on System Cache.
8. Under **Virtual Memory**, click **Change** and increase the size for the paging system file. (If you have multiple drives, each drive default setting is from 16 MB - 1524 MB.)

For example, if you use C:\ for your main paging, select **C:** and set the following custom sizes:

- Initial size (MB): 1524
 - Maximum size (MB): 8048 (however, you can increase this to the size available from the drive)
9. Click **Set**.
 10. Click **Apply**.
 11. Reboot the server.

Complete the Final Configuration Steps

1. Map the share volume using CIFS.
2. Run **NTBACKUP** in normal mode.