

Slow performance when backing up a Data Domain appliance to Remote Storage Node Advanced File Type Devices (AFTDs) using CIFS

Products

NetWorker storage node 7.4.x for Windows

NetWorker storage node 7.5.x for Windows

Issue

In cases where a Data Domain appliance is backed up to a remote AFTD on a NetWorker 7.4.x or 7.5.x Windows storage node through CIFS, data transfer rates may be slower than expected.

Resolution:

To ensure optimal write performance in this situation, it is strongly recommended that you install the available fix on all Windows NetWorker storage nodes where Data Domain appliances are backed up to an AFTD through CIFS. While installation of hotfix will show immediate improvements, further benefits will be realized when an AFTD which has a minimum block size of 128KB is used.

Apply Hotfix

The Hotfix available for 7.4 SP5 and 7.5 SP1 can be downloaded from <ftp.legato.com>

For NetWorker 7.4 SP5 Go to <ftp.legato.com/pub/NetWorker/Updates/LGTsc32103/7.4.5>

For NetWorker 7.5 SP1 Go to <ftp.legato.com/pub/NetWorker/Updates/LGTsc32103/7.5.1>

2. Download appropriate fix for the platform of the NetWorker server:

Directory Contents and Operating Systems:

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Contents	Operating System
nt86	Windows 32 bit
ntx64	Windows Intel 64 bit

3. Stop the NetWorker Remote Exec service when backups/recoveries are not occurring.

4. Rename **nsrmmd.exe** the file in c:\Program Files\Legato\nsr\bin.

5. Place the downloaded **nsrmmd.exe** in c:\Program Files\Legato\nsr\bin

6. Start the NetWorker Backup and Recover Service (and the EMC GST Service if the NetWorker storage node is also the NMC server)

Confirm Device Block size is set to 128kb

1. Connect to the NetWorker server using NMC
2. Click on **Devices**.
3. **Select Devices from the navigation tree.**
4. **Right mouse** click on the AFTD CIFS device and select **Properties....**
5. Click the **Volume** Tab.
6. In the **Volume Block Size** field, confirm that the block size reports 128 kb or larger.
7. If the Volume block size is less than 128kb, the volume will need to be changed to 128kb:
 - a. Click on the **Operations** tab and make note of the pool defined in the **volume pool** field.

- b. The **adv_file** device will need relabeled for a blocksize of 128kb. Proceed to “Staging AFTD data section”
8. If the volume block size is 128 kb or larger, nothing further is required and the succeeding steps can be skipped.

Staging AFTD Data Section

To preserve data on the AFTD before relabeling, the savesets contained on the AFTD CIFS should be staged to different media such as tape or another AFTD.

Configure Staging Pool

1. Right mouse click **Media Pools** and select **New**
2. In the **name** field, type **aftd_stage**
3. From the **pool type** drop down select **Backup Clone**.
4. Click **ok**. A windows popup will be presented to notify that a Label Template has not been selected. Click ok on this message.
5. Click **Ok** again in the Pool window to allow NetWorker to define the label template
6. If a jukebox exists in the environment, click **Libraries** in the **Devices** windows.
 - a. In the Volume section, right mouse click on a volume without data and select **Label**.
 - b. Ensure **aftd_stage** pool is selected in the **Pool** drop down and click **ok**.
 - c. Proceed to **Create Stage Policy and stage savesets**
7. If a jukebox does not exist in the environment, proceed to **Create a new adv_file device**

Create a new adv_file device

1. In the devices windows, right mouse click on **Devices** and select **New**
2. In the **name** field specify the name of the new AFTD CIFS device.
3. From the **media type** drop down select **adv_file**
4. Click on the **Advanced** tab
5. From the **Device Block Size** drop down, select 128 kb.
6. Click **Ok**.
7. Right mouse click on the newly created device and select **Label**.
8. From the pools drop down select the pool **aftd_stage**.
9. Click **Ok**.

Create Stage policy and stage savesets

1. Click on the **Configuration** menu button.
2. Select **Staging** from the navigation pane, right mouse click and select **New**.
3. In the **name** field, type **AFTD stage**
4. In the **Devices** section, select the write enabled AFTD CIFS device (not the one with _readonly in the name)
5. In the **Clone pool** field , select **aftd_stage**
6. In the **Control** section, select **Enabled**

7. Click the **Operations** tab
8. From the **Start Now** drop down, select **Stage all savesets**
9. Click **Ok**.
10. Click on the **Monitoring** button.
11. Under Logs confirm that you see the message such as:
 "nsrd cloning session:save sets done reading xxx MB"
 "nsrstage Completed recover space operation for volume <vol_id>"
12. Click on the **Media** menu button.
13. Click **volumes** in the navigation pane.
14. Confirm all save sets have been staged from the original CIFS AFTD (0 kb used, 0% used)
15. Click on the **Devices** menu button.
16. Right mouse click on the CIFS AFTD and select **Delete**.
 - d. If pools have been configured for this device you will receive a warning that the pool restrictions must be lifted. To do this:
 - e. Click on Media and select Media Pools from the navigation pane.
 - f. Right mouse click on the pools with the restrictions and select Properties
 - g. Click on the **selection criteria** tab
 - h. Unselect the CIFS adv_file device and click ok. Repeat for all affected pools
 - i. Return to Devices and reattempt the CIFS AFTD device deletion

Recreate the CIFS AFTD

1. In the devices windows, right mouse click on Devices and select **New**
2. In the **name** field specify the name of the AFTD CIFS device.
3. From the **media type** drop down select **adv_file**
4. Click on the **Advanced** tab
5. From the **Device Block Size** drop down, select 128 kb.
6. Click **Ok**.
7. Right mouse click on the newly created device and select **Label**.
8. From the pools drop down select the pool which the original CIFS AFTD was configured for.
9. Click **Ok**.

Clean up

1. Click on **Configuration** menu button and select **Staging** from the navigation pane.
2. Right Mouse click on **AFTD Stage** and select **Delete**.
3. Click on the **Media** menu button and select **Media Pools** in the navigation pane.
4. Right mouse click on afdt_stage and select **Properties**