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Global Leader in Software Defined Storage.

NexentaStor
Release Notes 4.0.3

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Software: NexentaStor

Software Version: 4.0.3

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Contents

What is New in this Release?

NexentaStor 4.0.3 is a maintenance release that addresses some of the NexentaStor 4.0.1 issues. This release includes enhancements in the following areas:

- Seamless upgrade from NexentaStor 3.1.6 to 4.0.3

    NexentaStor supports seamless upgrades from 3.1.6 to 4.0.3 and beyond. For 4.0 users, upgrading from 4.0.x to 4.0.3 is straightforward without downtime, like any other maintenance upgrade. For 3.1.x users, it is required to upgrade to 3.1.6 before upgrading to 4.0.3.

- SMB

    - New Domain Controller Locator

        The new Domain Controller Locator uses a more efficient algorithm to determine the optimum Domain Controller. It is no longer necessary to use the `sharectl` option to specify a preferred Domain Controller

    - AD-style join and IDMU support

        The AD-style join is made the preferred method of joining the Active Directory Domain. This enables users to use the IDMU feature in the Identity Mapping Service.

Note:	In NexentaStor 3.1.x RPC-style join was temporarily set as default method. Therefore, upgrading from NexentaStor 3.1.x to 4.0.3 may require additional configuration steps.
	For more information, contact [Nexenta Support]().

    - Kerberos client authentication

        Added support for Kerberos authentication for Microsoft Windows clients.

- NDMP

    NexentaStor 4.0.3 adds NDMP support for Commvault Simpana 10 and Symantec NetBackup 7.x for backup and recovery use cases.

- Block target provider

    Addressed several critical issues in iSCSI and FC target provider

- I/O continuity and fault tolerance enhancements

- Security updates

- NexentaStor vCenter Web Client Plugin

    A new plugin that enables you to provision and manage NexentaStor iSCSI LUNs and NFS folders in VMware vCenter Web Client 5.1 or later. The plugin seamlessly integrates into VMware Web Client User interface providing the capability to monitor, snapshot, and clone NexentaStor datasets.

Discontinued Functionality

Due to lack of customer demand, Nexenta discontinued WebDAV sharing protocol and its support starting from NexentaStor 4.0.3. For further clarifications, contact support@nexenta.com.

System Requirements

For system requirements for each environment, refer to the "System Requirements" section in the *NexentaStor Installation Guide*.

List of SMB Supported Client Operating Systems

Network clients can access files on NexentaStor using the Server Message Block (SMB) protocol if NexentaStor can properly authenticate that domain users. When an SMB client connects to a Common Internet File System (CIFS) server, NexentaStor authenticates the user according to the permissions specified on the domain to which NexentaStor is joined and has an active machine account.

The following table describes the versions of Domain Controllers and client Operating Systems that has been successfully tested to work with NexentaStor.

Table 1: SMB Compatibility Matrix

	Windows Server R2 2012	Windows Server 2012	Windows Server R2 2008	Windows Server 2008	Windows Server R2 2003	Windows Server 2003	Workgroup Mode
Windows 2012 R2	X	X	X	X	X	X	X
Windows 8	X	X	X	X	X	X	X
Windows 2012	X	X	X	X	X	X	X
Windows 2008 R2	X	X	X	X	X	X	X
Windows 7	X	X	X	X	X	X	X
Windows 2008	X	X	X	X	X	X	X
Windows 2003 R2	X	X	X	X	X	X	X
Windows XP	X	X	X	X	X	X	X

	Windows Server R2 2012	Windows Server 2012	Windows Server R2 2008	Windows Server 2008	Windows Server R2 2003	Windows Server 2003	Workgroup Mode
Windows 2003	X	X	X	X	X	X	X
Red Hat/ CentOS 6.5	X	X	X	X	X	X	X
Ubuntu 12.04 TLS	X	X	X	X	X	X	X
Mac OS X 10.9.2	X	N/S	N/S	N/S	N/S	X	X

Upgrading

For upgrading between minor versions of NexentaStor 4.0.x, see: Upgrading Minor Versions of NexentaStor 4.0.x

For upgrading from NexentaStor from 3.1.x to 4.0.x, see About Upgrading from Version 3.1.6 to Version 4.0.3, Upgrading from Version 3.1.6 to 4.0.3 with an Internet Connection, Upgrading from Version 3.1.6 to 4.0.3 with no Internet Connection

Upgrading Minor Versions of NexentaStor 4.0.x

❖ *To upgrade NexentaStor 4.0.x to minor version, type:*

```
nmc:/$ setup appliance upgrade
```

About Upgrading from Version 3.1.6 to Version 4.0.3

Seamless upgrade is a new method of upgrading a NexentaStor appliance version from 3.1.6 to 4.0.3. To upgrade NexentaStor from version 3.1.6 to 4.0.3, you must first upgrade to version 3.1.6 or later 3.x version.

During the upgrade NexentaStor services and volumes remain available to network clients. The upgrade operation requires system restart. Therefore, it is recommended that the upgrade process is scheduled during a system maintenance window. All NexentaStor services and volumes are not available during the restart.

Upgrading from Version 3.1.6 to 4.0.3 with an Internet Connection

Before you upgrade the NexentaStor appliance from version 3.1.6 to version 4.0.3, obtain the license from http://nexenta.com/products/downloads/register-nexentastor and verify that your environment meets the following prerequisites:

- The network interface card is included to the hardware compatibility list for NexentaStor v4.0.3.

- No third party applications or packages are present on your NexentaStor appliance. You may have third party packages installed if you changed repository sources on your NexentaStor appliance. Upgrade will result in the loss of components that are not included with the NexentaStor build.

❖*To upgrade from version 3.1.6. to 4.0.3, using NMC:*

1. If you have not upgraded to NexentaStor 3.1.6, upgrade to NexentaStor 3.1.6 by typing:

    ```
    nmc:/$ setup appliance upgrade
    ```

2. Disable multi-NMS

    Type:

    ```
    nmc:/$ setup appliance nms property srvpool_cnt_initial -p 0
    nmc:/$ setup appliance nms restart
    ```

3. Upgrade to NexentaStor 4.0.3 by typing:

    ```
    nmc:/$ setup nexentastor upgrade
    ```

Note:	Close all browsers connected to the Nexenta Management View (NMV) during the upgrade process.

System response:

```
Upgrade NexentaStor Appliance from version 3 to version 4.
This process include upgrade kernel, drivers, base system and appliance.
WARNING: We can't guarantee third-party software will continue to work properly
after upgrade.
WARNING: The system should be restarted at the end of the process.
Proceed?
```

4. Type y.

    The upgrade process may take some time.

Warning:	During the upgrade, do not switch off or restart the NexentaStor appliance.

5. NexentaStor notifies you about the upgrade process.

    ```
    The first phase of upgrade has completed successfully
    Reboot now to finish upgrade to 4.0?
    ```

6. Continue to work using NexentaStor 3.1.6 or reboot to activate NexentaStor 4.0.3

    Nexenta does not recommend to continue to work using NexentaStor 3.1.6 after the first stage of upgrade is completed. You may postpone the restart if you have incomplete archiving tasks. Otherwise, proceed with the reboot. When rebooting all NexentaStor services and datasets are unavailable for network clients.

Warning:	After you upgrade the volume version, back up your system. Backups created for mirrored pools with earlier volume versions may not be available after the upgrade.

7. Optionally, upgrade NexentaStor volumes to version 28 by typing:

    ```
    nmc:/$ setup volume <volname> version-upgrade
    ```

8. Repeat Step 7 for all NexentaStor volumes.

	To upgrade the HA Cluster plugin, see: *NexentaStor HA Cluster User Guide*.
Note:	In the case of HA Cluster or Auto Sync environment upgrade both the nodes to 3.1.6 before proceeding with the upgrade to 4.0.3.

Upgrading from Version 3.1.6 to 4.0.3 with no Internet Connection

Before you upgrade your appliance with no Internet Connection, review section Upgrading from Version 3.1.6 to 4.0.3 with an Internet Connection. Verify that your environment meets all prerequisites described in this section.

❖ *To upgrade from Version 3.1.6 to 4.0.3 with no Internet Connection:*

1. If you are unable to connect to the Internet to upgrade your system, contact support@nexenta.com.

2. Mount or burn the ISO image.

    Complete Step 2 to Step 8 from section Upgrading from Version 3.1.6 to 4.0.3 with an Internet Connection.

Re-running the Upgrade from Version 3.1.6 to 4.0.3

Generally, Nexenta does not recommend to roll back a NexentaStor appliance to version 3.1.6 after the upgrade to 4.0.3 on a production system. If you upgrade the volume version during the upgrade to version 4.0.3, the data and system volumes will be unavailable in version 3.1.6, since volume version 28 is not supported in the NexentaStor 3.1.6.

Rollback and upgrade is somewhat acceptable on a testing system.

During the upgrade, NexentaStor creates a flag file `/volumes/.config/.3_to_4_upgrade`. If you try to run the upgrade after rolling back to version 3.1.6, the upgrade fails.

To re-run the upgrade to version 4.0.3, delete the `/volumes/.config/.3_to_4_upgrade` file and run the `setup nexentastor upgrade` command again.

❖ *To rerun the upgrade from version 3.1.6 to 4.0.3, using NMC:*

1. Log in to bash:

    ```
    nmc:/$ option expert_mode =1
    nmc:/$ !bash
    ```

2. Type:

    ```
    # rm /.config/.3_to_4_upgrade
    ```

3. Exit bash by typing:

    ```
    # exit
    ```

4. Run:

    ```
    nmc:/$ setup nexentastor upgrade
    ```

Known Issues

This section describes known issues in the NexentaStor 4.0.3.

The 4.0.3 Remote Replication Protocol (RRP) is Only Compatible with Other NexentaStor 4.0.3 Systems

Description: NEX-403

The Auto-Sync plugin, which is included with the NexentaStorbase software, requires the replication destination to be another NexentaStor 4.0.3 system and is not backwards compatible. This is a result of enhancements to improve the performance of the underlying data transport and to add significant feature/function capabilities of Auto-Sync.

Workaround:

If you want to replicate data using Auto-Sync between different versions of NexentaStor, use Auto-Sync with the zfs+ssh protocol.

Issues with SuperMicro® physical View in NMV

Description: RM 13297

When using SuperMicro hardware where the shared JBOD(s) have been manually setup using NMC, and in an HA configuration, the physical view of the JBOD in NMV may display incorrectly on one of the nodes.

Workaround:

Manually configure the shared JBOD(s) using the `setup jbod <jbod_name> model` command on both nodes prior to failover. If the service has already been failed over, run the `setup jbod model` on the node that misses the JBOD physical view.

Access Based Enumeration partially working in 4.0.3

Description: NEX-2058

When you enable Access Based Enumeration (ABE) for a CIFS share, a user sees only the files and folders he has permission to access. In NexentaStor 4.0.x, ABE fails for both shared directories and shared folders. Any user can see the shared folders that he does not have permission to access.

Workaround:

If your environment requires the use of Access Based Enumeration, do not upgrade your NexentaStor appliance at this time.

After seamless upgrade from 3.1.6 to 4.0.3 disks are not displayed in Settings> Disks in NMV

Description: NEX-2456

After seamless upgrade from 3.1.6 to 4.0.3 disks are not displayed in **Settings > Disks** in NMV

Workaround:

❖*To restore the disks links, using NMV:*

1. Click **Settings > Disks**.

2. Click the **Refresh** button.

    Disks will appear on the **Summary Information** page

Multi-NMS Prohibits the Use of Proxies During the Upgrade

Description: SUS-95, SUP-542, SUP-561

When upgrading using the `setup appliance nms property upgrade_proxy` command, the proxy settings are not honored if Multi-NMS is enabled. Multi-NMS is enabled by default.

Workaround:

Disable Multi-NMS, using NMC:

1. Set the size of NMS-pool to `0` by typing:

    ```
    nmc:/$ setup appliance nms property srvpool_cnt_max -p 0 -y
    ```
2. Restart NMS by typing:

    ```
    nmc:/$ setup appliance nms restart
    ```

Share Settings are not Retained on NMC/NMV Manual Export

Description:

NexentaStor does not save the share settings and Auto-Sync services when manually exporting a pool from NMC or NMV.

Workaround:

To avoid saving and restoring the share settings, export the pool.

❖*To export the pool, using NMC:*

◆Type:

```
# zpool export backuppool
```

Active Directory Member IDs May Remain in the List of Users After NexentaStor Leaves a Domain

Description: RM 13310

After leaving an Active Directory Domain, NexentaStor may retain the IDs of members of the removed domain.

Workaround:

❖*To remove the IDs, using NMC:*

1. Log in to bash:

   ```
   nmc:/$ option expert_mode=1
   ```

2. List the local group members by typing:

   ```
   # smbadm show -m
   ```

3. Delete the group members associated with the removed domain:

   ```
   # smbadm remove-member -m MEMBER GROUP
   ```

Command : "run benchmark bonnie-benchmark" is not working as expected

Description: NEX-2357

The `run benchmark bonnie-benchmark` command does not start the benchmark test.

Workaround

The `bonnie-benchmark` plugin is curently being reviewed for consistency in performance reporting. At this time Nexenta does not recommend customers install the bonnie plugin.

Restricting client host access to read-only does not mount CIFS share

Description: NEX-2218

The CIFS share properties page includes wrong syntax for the Restrict Client Host Access field.

Workaround

The correct syntax includes the @ sign. Example: ro=@ip_address.

The NexentaStor build fails to install on IBM servers

Description: NEX-2003

The NexentaStor build fails during installation on IBM System x3650 M4 server. The server goes into

maintenance mode.

Workaround

Do not install NexentaStor 4.0.3 on IBM System x3650 M4 server.

RSF : Newly added volume is directly going to the Import Failure State

Description: NEX-2380

When adding a newly created shared volume that consists of only two disks to the HA Cluster, the shared volume goes into the Import Failure state.

Workaround

When you create a shared volume for an HA Cluster, add at least four disks to the volume. In the HA Cluster configuration two volumes are used for heartbeat and the rest for SCSI reservations. If you have only two disks in the shared volume, no disks are available for reservations. Therefore, the HA Cluster service cannot start.

Apache server does not restart automatically after the upgrade

Description: NEX-2306

In certain circumstances the Apache server may not restart automatically after upgrading to NexentaStor 4.0.3. It may be caused by a change in the SSL CERT process implemented in NexentaStor 4 0.3.

Workaround:

Manually restart the Apache server.

If it does not fix the issue:

1. Log in to bash by typing:

   ```
   nmc:/$ option exeprt_mode =1
   nmc:/$ !bash
   ```

2. Bring the apache service online:

   ```
   # svcadm clear svc:/network/http:apache22
   ```

3. Log in to NMC by typing:

   ```
   # exit
   ```

4. Generate a new SSL certificate:

   ```
   nmc:/$ setup appliance mmv generate_ssl_cert
   ```

5. Follow the prompts to generate a new SSL certificate.

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Error: incomplete write — retrying on iSCSI LUNs

Description: NEX-252

iSCSI issue when running NexentaStor to NexentaStor. The following error message may be displayed for iSCSI LUNs:

```
incomplete write- retrying
```

Workaround:

Use standard JBOD configuration from certified solution or reference architecture.

NMC: Manual Failover Changes Service on an old Active Node to Manual

Description: NEX-813

An NMC issue with manual failover process. When performing a manual failover, using NMC, NexentaStor changes the failover mode of the node that is being failed over from Automatic to Manual. This results in the inability of the shared volume service to failback to the original node when it restores.

Workaround:

After performing a manual failover, change the failover mode back to Automatic.

NDMP Backup May not Continue After Inserting a New tape in Symantec NetBackup (NBU)

Description: NEX-837

NDMP backup issue. When a Symantec NetBackup™ job spans tapes, it may fail to recognize the insertion of the new tape. Therefore, the job may halt.

Workaround:

Do not run a backup using NBU that spans tapes.

The mptsas_ioc_task_management Failed to Reset IOC To Recovery

Description: NEX-928

The mptsas issue when a ZEUS IOPS drive is seated in a JBOD with what appears to be a bad connection to the backplane. As a result, the drive continuously goes online and offline. Therefore, it triggers a deadlock in mptsas.

Workaround:

Ensure that required components are installed and properly configured.

IO Continuity and ZFS Operation Impacted Under Certain Multiple Failure Scenarios

Description: OS-106

IO Continuity issue when performing multiple cable pull, path fails over or manual power fail/ re-start operations. This can cause IO to hang in certain cases.

Workaround:

Avoid repeated cable pulls or other negative type testing.

NMS May Cause Memory Issues

Description: SUP-737

NMS may, over time, leak and not reclaim heap memory.

Workaround:

Restart NMS.

The NFS Service May Enter Maintenance Mode After Changing the Hostname

Description: SUP-783

The NFS service may enter into maintenance mode if you change the hostname. It may also happen during the volume import, if the hostname has changed.

Workaround:

Reboot the NexentaStor appliance after changing the hostname.

Network SSH bindings Do Not Work If NMS Has Incorrect Primary Interface

Description: NEX-1054

Network ssh-bindings does not function correctly if NMS uses an incorrect primary interface.

Workaround:

Verify the primary network interface configuration.

Error Message in NexentaStor Installer During the Installation on a 3GB Disk

Description: NEX-976

During the installation using a very small disk (< 4 GB, for example a small VMDK disk for VM), NexentaStor Installer may display the following error message:

```
Disk size is too small. Needed at least 1073743872 MB.
```

Workaround:

Install NexentaStor on disk with at least 4 GBs capacity or larger.

Issues With sas2ircu When Using More Than 200 Disks In 6 JBODs

Description: NEX-925

Sas2ircu has problems when using more than 200 disks in 6 JBOD's.

Workaround:

There is an NMS option that determines the timeout. Set it to 5 minutes or longer. For more information, see `setup appliance property`.

NexentaStor Confuses DNS and ONC Domain

Description: NEX-1159

Appliance confuses DNS and ONC domain to be the same thing. This may break multiprotocol filesharing configurations where they are required to be different.

Workaround:

- If the AD domain is configured correctly and ONC is not:

1) In NexentaStor, log in to bash:

```
nmc:/$ option expert_mode =1
nmc:/$ !bash
```

2) Edit the `/etc/defaultdomain` by typing:

```
# vi /etc/defaultdomain
```

3) Type the domain name

4) Set the domain name:

```
# domainname $(cat /etc/defaultdomain)
```

5) Confirm the domain name by typing:

```
# domainname
```

- If the ONC domain is configured correctly and DNS is not:

1) In NMC, log in to bash:

```
nmc:/$ option expert_mode =1
nmc:/$ !bash
```

2) Specify the correct setting in the `resolv.conf` file by typing:

```
# vi /etc/resolv.conf
```

Reservation Conflict Panic During Ungraceful HA Failover When Placing SCSI-2 Reservations

Description: NEX-1197

SmrtStor TXA2D20400GA6001 firmware K311 drives do not fully support SCSI-2 reservations.

Workaround:

Do not use SmrtStor TXA2D20400GA6001 firmware K311 drives.

It has been determined that KZ20 firmware has addressed this issue. Remove reservations before upgrading the firmware.

Creating Volume with the Same Name as Deleted Volume in the HA Cluster Group Causes Kernel Panic

Description: NEX-1213

During the volume creation, the following error message is displayed:

```
assertion failed: space_map_open() == 0 (0x6 == 0x0), file: ../../
common/fs /zfs/metaslab.c, line: 985
```

The following actions may cause kernel panic:

1) Install two NexentaStor 4.0.3.

2) Create an HA Cluster group.

3) Create a volume called *data*.

4) Add the volume *data* into the HA Cluster configuration.

5) Remove the volume from the HA Cluster.

6) Destroy the volume *data*.

7) Re-Create the volume *data*.

Workaround:

When you re-create a shared volume, assign a new name for the volume.

Pressing Ctrl+C on the Installer Log screen Terminates the screen

Description: NEX-1227

Pressing Ctrl+C on installer log screen closes the screen.

Workaround:

Ignore the message to press Ctrl+C to refresh.

Session Inactivity Timeout

Description: NEX-1330

The NMV Session inactivity timeout (minutes) does not work.

Workaround:

The use of **Login_NMV_Timeout** to restrict session inactivity is not supported.

SSH Bindings and HA Cluster

Description: NEX-1342

SSH binding: the hostname property value must comply with the type of binding.

Workaround:

Unbind any existing IP address based SSH binding before creating hostname/FQDN based SSH binding (SSH bindings between two appliances that are designated to become HA nodes of the same HA Cluster).

For example purposes, the following IP address/hostname pair is used:

```
192.168.1.1  host 1
```

❖*To configure the SSH-binding:*

1. View the existing SSH-binding based on IP addresses by typing:

   ```
   nmc:/$ show network ssh-bindings
   ```

   System response:

   ```
   HOST                    PINGABLE  SSH-ACCESSIBLE  IS-APPLIANCE
   root@192.168.1.1           Yes       Yes             Yes
   ```

2. Unbind the existing IP address based ssh-bindings, if any:

   ```
   nmc:/$ setup network ssh-unbind root@192.168.1.1
   ```

3. Create hostname/FQDN based ssh-binding:

   ```
   nmc:/$ setup network ssh-bind -HA
   ```

```
Remote appliance hostname : host1
Remote appliance IP : 192.168.1.1
Remote user : root
Remote port : 22
Super-User password: xxxxxxx
```

Settings for Nameserver in /etc/resolv.conf Reset After Reboot

Description: NEX-1360

The nameserver line from `/etc/resolv.conf` is not persistent across reboots if using DHCP.

Workaround:

Make the DHCP server reply include the nameservers required for the AD environment.

SSH Bindings and HA Cluster

Description: NEX-1367

Failed to bidirectionally unbind an HA Cluster pair.

Workaround:

If you unbind one of the HA Cluster nodes bidirectionally, you can force the unbind on the other node.

❖*To unbind an HA pair bidirectionally:*

1. Log in to the first HA node.

2. Unbind the node bidirectionally by typing:

   `nmc:/$ setup network ssh-unbind -b root@host2`

3. Log in to alternate HA node:

   `nmc:/$ setup network ssh-unbind -f root@host1`

Volume Properties - Read Only Visibility

Description: NEX-1385

Changing the `read-only` property of a volume does not reflect in the output of the following command:

   `nmc:/$ show volume <vol-name> property`

The property does not change after system reboot.

Note:	The operation works. However, it is not reflected through NMC.

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Workaround:

Ignore the NMC output.

NMV Allows to Specify Identical Names for CIFS Folders

Description: NEX-1392

NMV allows two folders to have identical share names within the same volume.

Workaround:

When creating a folder, make sure that you assign a unique name to the folder.

The Show Network Netgroup Command Does not Display Netgroups

Description: NEX-1403

The NMC command `show network netgroup` does not display netgroups.

Workaround:

Use bash commands `ldaplist` and `getent` to view the list of netgroups.

Incorrect User and User Group Naming

Description: NEX-1407

```
NexentaStor allows to create a user or group name that starts with a number or
a special character.
```

Workaround:

Make sure that you specify the name of a user or group that starts with a letter.

Failed to Create an SSH Binding to a Virtual IP Address

Description: NEX-1423

```
HA-pair SSH binding to additional virtual IP address (VIP) on the same
NexentaStor appliance fails.
```

Workaround:

❖*To create the HA-pair SSH-binding to an additional IP address, using NMC:*

1. Verify the status of SSH bindings:

```
nmc:/$ show network ssh-bindings
```

2. Remove the bindings for all VIPs that are not pingable or not SSH-accessible:

```
nmc:/$ setup network ssh-unbind -f vipaddress
```

3. Add the removed VIP addresses:

```
nmc:/$ setup network ssh-bind <vip>
```

Importing a NexentaStor Volume with the Enabled Sharenfs Property Fails

Description: NEX-1465

Importing pool with the `sharenfs` property set to `on` fails.

Workaround:

From the **Shares** page, deselect NFS and reselect it again. The state of the NFS service is now consistent. However, NMV may still display the error. Ignore the error.

Selecting Permission to Inherit Results In Enabling All Permissions for a User

Description: SMB-140

Selecting the **Permissions to inherit** checkbox in the ACL properties for a user, assigns all permissions for the selected user. Typically, you do not want to enable all permissions for a user.

Workaround:

❖ *To configure the ACL inheritance:*

1. Do not select the **Permissions to inherit** checkbox.

2. Click **More...** and select the following:

   • Inherit to all newly created files in a directory

   • Inherit to all newly created directories in a directory

Unable to Map a CIFS Share using Microsoft Windows 2003 and Windows 2008 R2 clients

Description: SMB-148

Unable to map a CIFS share using Win2003/Win2003R2 client on a Win2008 R2 DC with Domain User/Domain Administrator or SMB credentials.

Workaround:

Windows 2003 r2, and earlier, uses NTLMv1 by default, which may results in interoperability issues during the domain account authentication. Configure these clients to **Send NTLMv2**

response only (`LmCompatibilityLevel=3`).

See Also:

* http://technet.microsoft.com/en-us/library/cc738867%28v=ws.10%29.aspx

Issues addressed in NexentaStor 4.0.3

The following table describes the issues fixed in this release.

Table 2-1: Fixed Issues

Key	Description	Component(s)	Sub-Component(s)
SUP-874	Fixed Security Vulnerability: Apache HTTP Server Byte Range DoS.	NMV, Protocols	Security
SUP-867	Fixed issue that causes panic in `smb_com_locking_andx`.	Protocols	CIFS
SUP-788	Fixed the issue when NMS unnecessarily offlines and onlines target ports after failover of an RSF pool.	NMS	COMSTAR
NEX-1991	Fixed issue with SMB2 not granting level II oplocks..	Protocols	CIFS
NEX-1985	Fixed the issue with creating auto-sync service for unreachable host: can't get zfs list.	Auto-Sync	Plugin: Auto-Sync
NEX-1933	Application-nut and network-nut collide.	Packaging	Repository
NEX-1924	Fixed the issue with the `NZA/Common.pm` hostname resolving functions resulting in Perl "Use of uninitialized value" warnings.	Auto-Sync, NMS	NMS, Plugin: Auto-Sync
NEX-1897	Fixed the issue with `NMS NZA::exec_generic` allowing command execution on random ssh-bound hosts.	Auto-Sync, NMS	NMS, Plugin: Auto-Sync
NEX-1896	Fixed spelling error in NMV in **Analytics > Profiles > Available Statistics**.	NMV	Other
NEX-1892	Fixed the issue with 30 sec. delay responding to `smb2_create`.	Protocols	CIFS
NEX-1889	Added support of 12G HBAs for `mpt_sas` driver.	Kernel	Drivers
NEX-1880	Fixed issue with "safe mode" being broken due to / being readonly.	Packaging	Core
NEX-1875	Fixed the issue with the `x86_64.miniroot-safe` module missing vital utilities.	Packaging	Core

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Table 2-1: Fixed Issues

Key	Description	Component(s)	Sub-Component(s)
SFR-51	Autosync-check runner puts the service in maintenance mode if a scheduled job is not running but queued.	None	
NEX-1874	Fixed the issue when Auto-sync creates DNS queries with root@ prefix.	Auto-Sync, NMS	NMS, Plugin: Auto-Sync
NEX-1872	Fixed the issue with NMV not setting cookie attributes to protect session tokens or complement https (OWASP-2013-A2).	NMV	NMV
NEX-1842	Fixed the issue when the `appliance configuration restore interface` command fails with an error "Can't use string ("e1000g0") as a HASH ref".	NMC	NMC
NEX-1787	Added filtering the `regexp` symbols from PID or VID for `sesctl`.	Kernel	Other
NEX-1737	Added the ability to script custom actions into the AutoSync control flow.	Auto-Sync	Plugin: Auto-Sync
NEX-1733	Fixed the issue with 4.0.1 that is shipping with ntpd Ver. 4.2.5p200 which is subject to CVE-2009-3563.	Packaging	Security
NEX-1693	Fixed the issue with path traversal from /theme directory tree allowing remote unauthenticated access to data stored on NexentaStor with root privileges via NMV.	NMV	Security
NEX-1669	Implemented a possibility to install trial licences for RSF packages.	NMC	Plugin: RSF-1 - HA Cluster
NEX-1637	Fixed the issue with the `smbstat` command that should show SMB2 activity.	Kernel, Protocols	CIFS
NEX-1630	Fixed the issue with missing `/do-not-start-ha` file in NexentaStor OEM version	Installation	Plugin: RSF-1 - HA Cluster
NEX-1532	Fixed the issue with wrong path in 'clean' target of NMS Makefile that causes failure during NMS deploy.	NMS	NMS

Table 2-1: Fixed Issues

Key	Description	Component(s)	Sub-Component(s)
NEX-1528	Fixed the issue when the HA Cluster initialization is not possible through NMC.	HA	NMC, Plugin: RSF-1 - HA Cluster
NEX-1524	Adjusted RRP logic to be able to use the changed `zfs_receive()` function.	Auto-Sync, RRP	Plugin: Auto-Sync, ZFS
NEX-1522	Copied license confirmation file from 3.x for upgraded systems.	Appliance Mgmt	Seamless Upgrade
NEX-1505	Fixed the issue with HA Cluster nodes losing TPG, iSCSI Target, initiators AND clients losing storage LUNs upon Seamless Upgrade.	Comstar, Seamless Upgrade	NMC
NEX-1497	Fixed the issue with inability to log in to NMV with a user created in 3.1.5 after an upgrade using seamless upgrade.	Seamless Upgrade	Seamless Upgrade
NEX-1493	Fixed the issue with the most of the information entered when creating a new user is not being saved after seamless upgrade.	Seamless Upgrade	Seamless Upgrade
NEX-1474	Fixed punctuation error on the `SNMP AGENT: CONFIGURE` screen.	User Interface	SNMP
NEX-1449	Fixed the issue with inability to create Auto-Sync jobs when snapshots are present at destination.	Auto-Sync	Plugin: Auto-Sync
NEX-1447	Changed the size of work buffer to the range from 1 to 100.	Auto-Sync	Plugin: Auto-Sync
NEX-1416	Fixed the issue with node replacement not working for node with the same name.	HA	Plugin: RSF-1 - HA Cluster
NEX-1264	Fixed the issue with the save analytics-profile's operation without adding a chart displaying "Profile saved" message instead of an error message.	NMV	NMV
NEX-784	Fixed the recording of `create auto-tier`.	NMC	NMC
NEX-611	Nexpose: Fixed Sensitive RPC 'rquotad' Service is Enabled (rpc-sensitive-rquotad-svc).	Packaging	Security
SUP-907	Resolved the issue with dedicated dump device size limited to 16GB.	Installation	Core

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Table 2-1: Fixed Issues

Key	Description	Component(s)	Sub-Component(s)
SUP-894	Fixed the issue with failover that hangs during the zpool import.	Kernel	Plugin: RSF-1 - HA Cluster
SUP-887	Fixed the issue with Mac client that hangs when accessing an SMB2 share on a NexentaStor 4.0.2.	Protocols	CIFS
SUP-873	Fixed Security Vulnerability: "Remote services accepts connections weakly encrypted using SSL 2.0"	NMV, Protocols	Security
SUP-869	Fixed the issue with when NMV forwards to to High-availablity.com on the OEM version of NexentaStor.	NMV	NMV
SUP-827	Fixed the issue with the `switch` command not available in NMC.	NMV	NMV
NEX-2054	Fixed the issue with Illumos gate merge tracking issue	Kernel	Other
NEX-2045	Fixed the issue with page fault occuring at `netbios_first_level_name_decode+0xbb`	Kernel	CIFS
NEX-2039	Fixed the issue with codenomicon failure in `smb_write`.	Protocols	CIFS
NEX-2028	Fixed the issue with enclosed ID serial numbers that are not displayed with new sesctl.	NMS, NMV	NMS, NMV
NEX-2024	Fixed the issue with multiple vulnerabilities in OpenSSL 0.9.8y and 1.0.1g	Libraries, Packaging	NMV
NEX-2016	Fixed the issue with the `show version -c` command in 4.0.3 is not displayed in 4.0.3 fixes.	NMC	NMC
NEX-1947	Adjusted the Auto-Sync logic to use the changed `zfs_receive()` function.	Auto-Sync	Plugin: Auto-Sync
NEX-1928	Fixed the issue when SCSI compare and write commands with data buffers greater than 16K hang Comstar.	COMSTAR	iSCSI
NEX-1923	Fixed the issue when retiring a device may hang or leave device unusable after unretire.	Kernel	Block I/O Stack

Table 2-1: Fixed Issues

Key	Description	Component(s)	Sub-Component(s)
NEX-1920	Fixed the issue when renaming SMB from Win2k8 fails.	Protocols	CIFS
NEX-1849	Fixed the issue with primary network interface assignment.	NMV	NMV
NEX-1768	Fixed the issue with `storage_vmotion` workbench test failing migration on iSCSI backed VMFS datastores.	Kernel, Protocols	Other
NEX-1727	Fixed bad link to product registration web page in Community Edition.	Installation	NMS
NEX-1691	Removed the excessive messages caused by dpkg in nexenta-installer for OEM version of NexentaStor.	Installation	Other
NEX-1638	Updated DC Locator.	Future	Other
NEX-1526	Fixed the issue that were causing the following error during R2L: 3.1.x => 4.0.1 zfs+ssh replication: `Failed to get sizes of snapshots on dataset: invalid option 'P'.`	Auto-Sync	Plugin: Auto-Sync
NEX-1512	FIxed the issue with NDMP failing to restore files with Symantec Netbackup	Kernel	NDMP
NEX-1480	Modified the default redundancy type.	NMV	NMV
NEX-1375	Fixed the issue with NMV not showing very clear notification, while unconfiguring the unconfigured interfaces.	NMV	NMV
NEX-667	Added Chassis Mgmt for HP D6000 JBOD.	Appliance Mgmt	NMS
SUP-897	Fixed the issue when NMS offlines CPUs upon a shutdown/reboot.	NMS	NMS
SUP-866	FIxed the issue with `smbd lwps` getting stuck at `libsocket recv().`	Protocols	CIFS
SUP-698	Fixed the issue when a NexentaStor appliance regularly crashes with a kernel memory allocator, duplicate free: buffer freed.	Kernel	COMSTAR
NEX-2170	Fixed the issue with the "CUSTOMIZE SYSTEM PROPERTIES" page redirecting to "TechSupport page"; instead of going to same page.	NMV	Other

Table 2-1: Fixed Issues

Key	Description	Component(s)	Sub-Component(s)
NEX-2169	Fixed the issue with IO completions in the ISR.	Kernel	Other
NEX-2157	Updated the `mpt_sas` firmware.	Kernel	Drivers
NEX-2110	Fixed the issue with NDMP leaving zombie restore and backup threads around which resources are hold up.	Data Management	NDMP
NEX-2106	Fixed the issue with SMB2 `query_file_info` FileAlternateNameInformation fails.	Protocols	CIFS
NEX-2098	Fixed performance issue with HP D6000 JBOD.	Appliance Mgmt	Chassis Management
NEX-2096	Fixed the issue with Automatic applicance > save_configuration that failes due to the `host_check` call.	NMS	NMS
NEX-2095	Added scripts for NDMP	Data Management	NDMP
NEX-2057	Fixed the name of iSCSI initiator in the popup windows in NMV.	NMV	NMV
NEX-2056	Fixed default admin password issue in the OEM build.	Appliance Mgmt	NMV
NEX-2036	Enabled SMB signing by default.	Protocols	CIFS
NEX-2013	Fixed the issue with syslog warnings at boot time.	NMS, Packaging, Seamless Upgrade	NMS
NEX-2009	Fixed an undefined node error that prevented RSF-1 from starting in NMV.	NMC, NMV	Plugin: RSF-1 - HA Cluster
NEX-1995	Fixed the issue with SMB failing to authenticate domain user with 40 or more domain group members.	Protocols	CIFS
NEX-1852	Re-enabled Kerberos-style AD join.	Protocols	CIFS
NEX-1810	Extended security Kerberos	Protocols	CIFS
NEX-1692	Fixed permissions for certificate file in NMS.	NMV	Security
NEX-1670	Fixed the issue with WebDAV using a pregenerated key pair.	NMV, Protocols	Security
NEX-1534	Fixed the issue with `isa-l` causes lint warnings.	Kernel	ZFS

Table 2-1: Fixed Issues

Key	Description	Component(s)	Sub-Component(s)
NEX-1123	Fixed the issue with NDMP commands being unable to uniquely identify Nexenta and the file server version.	Kernel	NDMP
NEX-1033	Modified the po-file generator script for runners localization support for OEM version of NexentaStor.	Localization, NMS	l18N,NMC,NMV
NEX-781	Fixed the issue with NexentaStor failing to synchronize time using 'pool.ntp.org'.	NMS	NMS
SUP-911	Fixed the issue with changes to the minute off-set for hourly auto-sync jobs in NMV not being set.	NMV	NMV
SUP-909	Fixed the issue with the **Edit ACL Entity** dialog allowing shell escapes and expansions to authenticated users.	NMV	NMV
SUP-904	Fixed the issue with multiple disks and expanders going offline in MD-3060e	Chassis Management	Other
SUP-882	Fixed the issue with settings imported for upgrade resulting in NFS attribute conflict.	NMS	NMV
SUP-836	Fixed the issue with /var/log disappearance after reboot that results in NMV entering maintenance mode.	NMV	NMV
SUP-761	Fixed the issue with the `sbd_flush_data_cache()` call against closed zvol resulting in NULL pointer deref in the `zil_commit()` call further down the stack.	Kernel	COMSTAR
SUP-645	Fixed the issue with several vulnerabilities related to an old version of Apache and some out-of-date SSL settings.	Appliance Mgmt	Security
SUP-504	Fixed the issue with multiple disks being falsely failed/retired by new `zio_timeout` handling code.	Kernel	ZFS
NEX-2356	Withdrew NEX-2199 and fixed bug that NEX-2199 introduces.	Chassis Management	Other
NEX-2354	Added a rollback option if RSF fails to restart after installing the RSF license.	HA	Plugin: RSF-1 - HA Cluster

Table 2-1: Fixed Issues

Key	Description	Component(s)	Sub-Component(s)
NEX-2353	Fixe the issue with SMB2 TC # 448950 - PANIC in SMB2.Compounded-commands.	Protocols	CIFS
NEX-2344	Fixed the issue with SMB2 TC: 458439 Panic in SMB2.	Protocols	CIFS
NEX-2332	Fixed the issue with failing upgrade from 4.0.2 to 4.0.3 using apt-clone.	Installation	Other
NEX-2324	Added sticky switch to move command so that the service mode fails over as well.	HA, NMV	Plugin: RSF-1 - HA Cluster
NEX-2302	Improved managing of idmap rediscovery interval.	Protocols	CIFS
NEX-2286	Improved smbadm join error messages.	Protocols	CIFS
NEX-2267, NEX-2282, NEX-2281, NEX-2267	Fixed the issue with Nexenta ID not being shown in NDMP after upgrading from 4.0.1 to 4.0.3	Installation, NMC	NDMP
NEX-2273	Fixed the issue with AD Join needing to put `default_realm` in `krb5.conf`.	Appliance Mgmt	NMC,NMS,NMV
NEX-2256	Removed WEBDAV from under `show share all` command.	NMC	NMC
NEX-2210	Added forced failover.	HA, NMV	Plugin: RSF-1 - HA Cluste
NEX-2191	Fixed reverse resolve in `/usr/lib/krb5/klookup`.	Commands + Daemons, Libraries	Other
NEX-2188	Fixed the issue with browsing top level share producing RPC error 1728	Protocols	CIFS
NEX-2179	Fixed the issue when enabling the smb user on a share results in not setting the inheritance flag.	Appliance Mgmt	CIFS
NEX-2178	Fixed the issue with multi-block transfers on memory constrained systems for `write_same(0x93)` and `compare_and_write (0x89)` resulting in memory corruption	Comstar	COMSTAR

Table 2-1: Fixed Issues

Key	Description	Component(s)	Sub-Component(s)
NEX-2105	Fixed the issue resulting in the following error: `assertion failed: (scmd->flags & SBD_SCSI_CMD_TRANS_DATA) && scmd->trans_data != NULL, file: ../../common/io/comstar/lu/ stmf_sbd/sbd_scsi.c, line: 2447`	Kernel	Core
NEX-2103	Improved 12G `mpt_sas`, including messages enhancement, a fix for a reversed conditional in the FW update code path, and support for FastPath on devices that support it.	Kernel	Drivers
NEX-2094	Set SNMP to disable by default.	Commands + Daemons	NMS
NEX-2087	Fixed the issue with NexentaStor booting into rollback checkpoint.	Installation	Seamless Upgrade
NEX-2074	Fixed the issue with NMS cfgadm unconfigure controllers of the `fc-fabric` type when rescanning HBAs.	NMS	NMS
NEX-2062	Fixed the issue that results in the following error message in NMV: `Rr Daemon: Configure, does not restore "replication session timeout" value to its original value`	Appliance Mgmt	NMV
NEX-1998	Fixed the default PATH.	Commands + Daemons	Core
NEX-1963	Fixed the issue when user remains in a cointinous cycle of Start RSF when RSF remote API `install_license` has failed.	HA	NMV, Plugin: RSF-1 - HA Cluster
NEX-1962	Fixed the error message in the Alert box for RSF remote API `install_license` failure.	HA	NMV, Plugin: RSF-1 - HA Cluster
NEX-1887	Fixed the issue with zvol sharing failing with the RSF plugin configured.	NMS	Plugin: RSF-1 - HA Cluster
NEX-1799	Fixed the issue with authentication failure of domain account from Win2003 with NTLM(v1).	Protocols	CIFS

Table 2-1: Fixed Issues

Key	Description	Component(s)	Sub-Component(s)
NEX-1635	Fixed the issue that results in the following error message: `SMB2 TC: 157974 Panic in smb2_create/smb_decode_sd`	Kernel	Other
NEX-1555	Added support for SC847DE26-R2K02JBOD JBOD to NMC and NM.	Chassis Management	Chassis Management
NEX-1438	Fixed the issue with Dell faulting drives for slow IO.	Kernel	FMA
NEX-1423	Fixed the issue with SSH binding to second VIP on the same machine being setup incorrectly.	NMC, NMS	NMC, NMS
NEX-1404	Fixed the issue with selecting **Europe - Germany** as Locale at installation (malformed entries for DE in `zone_sun.tab`).	Installation	Core
NEX-1173	Added support for setting up NexentaStor as a Kerberos client.	Appliance Mgmt	NMC, NMS
NEX-1128	Fixed the issue with generic UID and GID remapping for AUTH_SYS (NFS Server)	Kernel	NFS
NEX-1015	Fixed the issue with inability to add iSCSI remote initiators using NMC.	NMC	COMSTAR
NEX-1013	Fixed the issue with creating SCSI Target Initiator and Target groups using NMC	NMC	COMSTAR

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