# Dell EMC NetWorker

Version 19.1.x

## Release Notes

302-005-693
REV 03
August 14, 2019

These release notes contain supplemental information about the NetWorker 19.1 release.


- Revision history ..... 2
- Product description ..... 2
- New and changed features in NetWorker 19.1.1 ..... 2
- New and changed features in NetWorker 19.1 ..... 2
- Fixed Issues ..... 4
- Known issues and limitations for NetWorker 19.1 ..... 10
- Environment and system requirements ..... 48
- Install, upgrade, and configure ..... 48
- Additional resources ..... 48


DELL EMC

# Revision history

The following table presents a revision history of this document.

**Table 1** NetWorker 19.1.1 release notes revision history

| Revision | Date | Description |
|---|---|---|
| 03 | July 03, 2019 | Updated for NetWorker 19.1.1 release. |
| 02 | May 29, 2019 | Updated the "New features" section. |
| 01 | May 20, 2019 | First release of this document for NetWorker 19.1. |

# Product description

The NetWorker environment provides the ability to protect an enterprise against data loss. As the enterprise grows, so does the complexity and importance of protecting data. The NetWorker software provides the power and flexibility to meet these challenges.

The NetWorker software is a cross-platform, client/server application that provides the ability to remotely manage all NetWorker servers from a web-enabled, graphical interface.

Before installing this release, review the *NetWorker Installation Guide*, *NetWorker Administration Guide*, and other documentation. The "Additional resources" section lists the complete documentation set.

# New and changed features in NetWorker 19.1.1

This section provides information about the new features and enhancements in NetWorker 19.1.1.

### Support for associating schedule to an action

From NetWorker 19.1.1 and later, you can associate a schedule to an action. When the schedule is associated with action, the default override option of the action is disabled. Instead, the overrides that are set on the associated nsr schedule are applied.

# New and changed features in NetWorker 19.1

This section provides information about the new features and enhancements in NetWorker 19.1.

### NetWorker Runtime Environment

NetWorker Runtime Environment (NRE) provides an installer package to deliver the supported Java Runtime Environment (JRE) for NetWorker and a Java application to launch NMC.

Dell EMC recommends that you use the JRE version packaged with NRE. However, you are free to continue using any supported JRE version that has been licensed directly from Oracle.

The NRE package contains the following files:

- JRE 8
- Java Application to launch NMC

**Note:**

- You must first install NRE and then install NetWorker.
- You cannot install NRE on a MAC system.

The *NetWorker Runtime Environment Readme* provides more information.

### Disk connectivity check

When a device loses its connection with the NetWorker server, the DCC (device connectivity check) framework discovers device unavailability or inaccessibility. When the device is unavailable, the NetWorker server notifies the user through the NMC console, Networker logs, or by email.

The *NetWorker Administration Guide* provides more information.

### Policy management using NetWorker Management Web UI

The NetWorker Management Web UI has been enhanced to include support for the following:

- Managing policies
- Managing workflows
- Managing actions
- Managing groups

The *NetWorker Administration Guide* provides more information.

### SHA1 certificates for secure communication between server and clients

SHA-1 certificates are created by the `nsrexecd` process for communication with pre-9.1.1 clients. The presence of these certificates caused failure in security scans for customers. For those who do not have older clients, and to avoid security scan failures, the `nsradmin` option is provided to remove and recreate the SHA1 certificates on a need basis.

The *NetWorker Security Configuration Guide* provides more information.

### nsrstage migration status update in daemon log

When the administrator initiates a nsrstage migration to move data from one volume to another, a few of the bootstrap savesets are retained in the volume. However, NetWorker reports that the volume is cleaned. These files are retained to facilitate a disaster recovery.

From Networker 19.1 and later, a warning notification will be displayed in the system tray and the `daemon.raw` log will be updated to indicate that a few of the savesets were not deleted from the volume post staging.

The following logs are updated to indicate that a few of the save sets are not deleted from the volume:

- Daemon.raw of the server
- Daemon.raw of the storage node
- NMC log pane
- Nsradmin message attribute of the NSR resource

Message format: `Data for the following bootstrap saveset will not be removed from media: <saveset id>`

### HTTPS as default implementation for NMC

Starting with NetWorker 19.1, NMC supports HTTPS only. You can create a SSL certificate or use an existing certificate during the installation of NetWorker.

The *Networker Installation Guide* provides more information.

### SNMP v2 trap and MIB support

NetWorker 19.1 supports backup, clone, and restore of file systems (block-based backup, NDMP, and BMR), vProxy, SQL, and Oracle.

The *NetWorker Administration Guide* provides more information.

### Using filter to specify savesets

You can clone specific save sets that are part of a policy, workflow, or action by using filters with the `nsrclone` command.

The *NetWorker Administration Guide* provides more information.

### Single NetWorker command for DDBoost device creation from CLI on DD as a replacement of NMC GUI New Device Wizard

This feature enables you to create and configure Data Domain device from the command line and also helps to configure Data Domain specific features like SMT and retention lock. This command eliminates the need to manually create the storage unit and the device folder in the DD host.

The *NetWorker Data Domain Boost Integration Guide* provides more information.

### Enabling remote solution

Applications performing operations on VMAX or PowerMax use Solution Enabler (SE) to send the required commands to the array. SE must be installed on the hosts that are running these applications. It works in two different modes:

- SE LOCAL mode sends commands directly to PowerMax or VMAX over LUNs that are provisioned to the local server (GateKeepers).
- SE REMOTE mode relays commands to a server running SE LOCAL mode to send the commands on its behalf (Proxy).

Storage administrators must be able to use Solutions Enabler REMOTE mode capability instead of the LOCAL mode when using Networker with ProtectPoint, so you do not have to configure gatekeepers on every database host that must be protected.

The *NetWorker Snapshot Management Integration Guide* provides more information.

### Postgres version upgrade

NMC Postgres version has been upgraded from 9.2 to 11.1.

**Note:** After the postgres migration to version 11, you cannot restore the NMC server protection backup taken before the upgrade because the database version changes after the upgrade.

### Support for Networker vProxy Appliance upgrade

Networker 19.1 supports vProxy Appliance upgrade using the `nsrvproxy_mgmt` CLI when issued with redeploy parameter. To reduce the efforts of manually upgrading vProxies, it provides a flexible way by which you can automatically upgrade the existing vProxies to the latest version.

The *NetWorker VMware Integration Guide* provides more information.

### Support for NetWorker vProxy Dual NIC configuration during vProxy deployment

NetWorker 19.1 supports Dual NIC configuration during the vProxy deployment in the vCenter. You can now configure the Dual NIC settings for vProxy during the OVF deployment in the properties tab.

The *NetWorker VMware Integration Guide* provides more information.

# Fixed Issues

## Fixed issues in NetWorker 19.1.1

The following issues have been fixed in NetWorker 19.1.1.

| Issue Number | Description |
|---|---|
| 309517 | Disk connectivity check messages were not logged for NFS based AFTD devices which were unavailable. This issue has been fixed. |
| 307350 | When performing a file level restore from NWUI using the NetWorker REST API, the following error appeared:<br>`Unable to set user privileges based on user token for nsrtomcat : Security token has expired`<br>This issue has been fixed. |
| 302993 | NetWorker API failed with the following internal server error:<br>`Unable to set user privileges based on user token for SYSTEM.`<br>This issue has been fixed. |
| 310468 | A core dump file was generated when reading NFS mounts on Solaris. This issue has been fixed. |
| 310755 | File level restore was slow and unreliable. This issue has been fixed. |
| 310476 | While using jukeboxes (tape library), load operations resulted in a loop after a new tape deposit. The `nsrlcpd` process failed to update the inventory list and continued to loop. This issue has been fixed. |
| 310365 | Performance issues were observed during server protection backup. This issue has been fixed. |
| 310346 | The `nsrcapinfo` command did not return the information that it was being queried for. This issue has been fixed. |
| 310101 | NetWorker did not resolve save set `ALL` for NetApp storage virtual machines in a cluster mode. This issue has been fixed. |
| 309885 | During cloud tier recovery, NetWorker selected the incorrect save set clone instance for recovery operations. This issue has been fixed. |
| 309795 | Performing a SQL VM application consistent backup failed on a German Windows operating system. This issue has been fixed. |
| 309467 | When a clone controlled replication (CCR) was attempted with retention lock enabled on the target Data Domain device, virtual synthetic replication (VSR) was found to be broken. This issue has been fixed. |
| 307965 | Upgrading Linux clients on SLES 12 using the `nsrpush` command failed on `systemd` enabled Linux machines. This issue has been fixed. |
| 307887 | On Windows 2012 R2 platform, when encrypted files were restored, the permissions of the parent folders were also inherited to the files. This issue has been fixed. |

| Issue Number | Description |
|---|---|
| 307017 | Custom action notification triggered notifications with additional arguments that were not requested in the command. This issue has been fixed. |
| 305711 | While editing a group, if you selected a vCenter object in the selection menu, the virtual machines were deselected. This issue has been fixed. |
| 305634 | `nsrd` crashes and a nsrd dump file is created when running a clone workflow, which includes a save set query group with explicitly defined 530 save sets. This issue has been fixed. |
| 300339 | Device selection issues were observed during restore, if IP or FC devices were configured on the same storage node. This issue has been fixed. |
| 298737 | NMC monitoring page displayed the incorrect clone size. This issue has been fixed. |
| 297033 | When you ran a FULL backup using the command line, the following message was reported:<br>`is being reset/promoted to level 'Full' as no backup is found`<br>This issue has been fixed. |
| 290086 | NMM client failed to upgrade using the `nsrpush` command or from NMC when a single package was selected. This issue has been fixed. |
| 311542 | Starting a workflow using the `nsradmin` command failed. This issue has been fixed. |
| 311505 | The `nsrck` command failed on some clients. This issue has been fixed. |
| 311108 | The `nsrclone` command with the `-m` option performed a regular clone operation instead of CCR even though the source and destination volumes were of Data Domain type. This issue has been fixed. |
| 310874 | After upgrading from NetWorker 18.x to 19.1.0.2, a false failure notification was sent when the Policy level notification was set as "on Failure". This issue has been fixed. |
| 310549 | The NetWorker reports had a discrepancy between the "Amount of Data" and the "Target Size" from backups and their clones. This issue has been fixed. |
| 309971 | When the `mminfo` command was executed for two pools, information for three pools were received instead of two. This issue has been fixed. |
| 307847 | Networker stopped responding due to a race condition that occurred when performing DNS lookups. This issue has been fixed. |
| 307321 | NMC client failed to launch on a Mac OS 10.x using Safari browser. This issue has been fixed. |

| Issue Number | Description |
|---|---|
| 305232 | When backups were running, a few of the virtual machine backups failed and nsrvproxy_save binary generated a core dump file. This issue has been fixed. |
| 303919 | A version mismatch was reported during updation of saveset-record in Media database. This issue has been fixed. |
| 301545 | NetWorker block based backup recovery took longer than expected after the client was upgraded from NetWorker 8.2.x to 9.x. This issue has been fixed. |
| 300787 | When you allocated a volume that was already in the NetWorker jukebox inventory list, the volume allocation to an ACSLS jukebox failed with `Operation`OP_STL_BULK_ADD' requires a volume or slot range` message. This issue has been fixed. |
| 300610 | The `scanner` command could not read data from the NDMP Tape device on EMC VNX NAS, if the tape was labeled with NDMP 'bufsz' set to 128 (default value). This issue has been fixed. |
| 310966 | When NetWorker was started, an unclear message was displayed. This issue has been fixed. |
| 310915 | The `authc_configure.sh` script failed to verify the java version of NRE. This issue has been fixed. |
| 310653 | When a workflow runs an action, the group name field was empty. This issue has been fixed. |
| 309486 | Attempting to start an individual client in an RDZ using the dynamic clients protection group functionality failed. This issue has been fixed. |
| 309246 | Associating a shared pool to a shared device and then assigning the shared device to an RDZ did not fail. This issue has been fixed. |
| 308933 | Notifications on file inactivity threshold alerts included unwanted messages when a separate notification was set for warnings for a policy. This issue has been fixed. |
| 307585 | NMC took a longer time to perform a browsable recovery of a small file and several versions of the same file simultaneously. It timed out when reading the index file. This issue has been fixed. |
| 305784 | When two directories were specified in the `save` command, if one succeeded and the other failed, the failure was considered as a warning. This issue has been fixed. |
| 305173 | The `nsrd` process crashed randomly and a core dump file was generated. This issue has been fixed. |
| 303674 | When the NDMP flag definition on the client was enabled, the server network interface was not passed to the nsrndmp_save command. This issue has been fixed. |

| Issue Number | Description |
|---|---|
| 303541 | When backup worklow of the server backup failed, the index backup was not listed in the failed backups. This issue has been fixed. |
| 301012 | When a save set had both forward slash and backward slash, NMC failed to open and displayed an error. This issue has been fixed. |
| 297926 | Performing a backup of a disaster recovery save set failed. This issue has been fixed. |
| 297839 | When cloning a Data Domain Cloud Tier device, the error `Invalid parameters to nw_get_ddos_version` was displayed. This issue has been fixed. |
| 294715 | Client push failed with error: `Error spawning the uasm process`. This issue has been fixed. |
| 257877 | When you refreshed a policy on the backup tab of a Vcenter web client, the `nsrvmwsd` process on the NetWorker server crashed and respawned after a while. When the `nsrvmwsd` process crashed, no policies were displayed. And when it respawned, the policy was displayed without any virtual machines in the policy. This issue has been fixed. |
| 254730 | Bootstrap backup was marked as successful with a failed stat.db dump. This issue has been fixed. |
| 309609 | Clone operation failed with an error. This issue has been fixed. |
| 306827 | The `systemctl enable` command failed to re-enable NetWorker and GST services. This issue has been fixed. |
| 291842 | You cannot update two different workflows under one policy from different clients at the same time. This issue has been fixed. |
| 232363 | Data recovery privileges for non NMC users are updated. |

## Fixed issues in NetWorker 19.1

The following issues have been fixed in NetWorker 19.1.

| Issue Number | Description |
|---|---|
| 298879 | The SHA-1 certificates could not be deleted even if they were not used. This issue has been fixed. |
| 303333 | The policy configuration changes were not logged in the `rap.log` file. This issue has been fixed. |
| 304829 | During the installation of NetWorker packages (`clnt/xtd-client/nmc)` on Oracle Unbreakable Enterprise Kernel (UEK |

| Issue Number | Description |
|---|---|
| | R4, U6, U7, and R5), the following messages were displayed even if the installation was successful:<br>`Unit networker.service could not be found`<br>`Unit nsrps.service could not be found`<br>`Unit gst.service could not be found`<br>This issue has been fixed. |
| 305158 | After an upgrade to NetWorker 18.2, NMC server protection backup failed. This issue has been fixed. |
| 303967 | During file-level restore, the **Networker Management Web UI** Monitoring window displayed the entire size of the virtual machine as the total recover size instead of the actual size of the restored files. This issue has been fixed. |
| 303788 | The NetWorker 18.2 vProxy appliance (3.0.0.x) was not backward-compatible with the NetWorker 18.1 server. This issue has been fixed. |
| 304760 | Browsing objects for file level restore in the **NetWorker Management Web UI** was slower than expected with the vProxy for NetWorker 18.2, particularly when attempting to restore files to or from a folder that contained a large number of files. This issue has been fixed. |
| 304722 | File-level restores performed using the **NetWorker Management Web UI** or the **Dell EMC Data Protection Restore Client** failed during browse operations if the NetWorker server was running on a cluster server environment. This issue has been fixed. |
| 241752 | After upgrading the VMware Backup Appliance from a NetWorker 8.1 or 8.2 release to NetWorker 9.1.x, you could not use the Mozilla Firefox browser to launch the **EMC Backup and Recovery Configuration Utility** window or the **Dell EMC Data Protection Restore Client**. This issue has been fixed. |
| 303168 | The success notifications in the Policy management feature did not get cleared automatically. This issue has been fixed. |
| 303927 | After you created or updated a resource, the **FINISH** or **SAVE** button was not disabled until the operation completed. This issue has been fixed. |
| 301258 | Incorrect message was displayed when you executed the `networker status` command on the NetWorker client. This issue has been fixed. |
| 308435 | Unwarranted RPC critical messages were being logged for the NAS/NDMP client. This issue has been fixed. |
| 306534 | You could not recover backups from a RDZ using Global Administrator rights. This issue has been fixed. |
| 307180 | The recover operation failed when performing a VSS recovery. This issue has been fixed. |

| Issue Number | Description |
|---|---|
| 307334 | During upgrade, the `nsrdump` process failed. This issue has been fixed. |
| 288234 | During recovery of a Windows client that used NetWorker strong authentication (nsrauth) to communicate with other NetWorker hosts, communications with the NetWorker server failed during a Windows BMR recovery. This issue has been fixed. |
| 306818 | NDMP save set clone using NMC did not work on Windows for a 2-way setup. This issue has been fixed. |
| 300392 | The nws resource "start" action script now monitors the `nsrctld`, `nsrd`, `nsrindexd`, `nsrmmdbd`, and `nsrjobd` process. |
| 307266 | NMC displayed the recovery status as successful for a failed deduplication restore. This issue has been fixed. |
| 304895 | If you explicitly failed a backup, and if no save set were backed up, the clone status was logged as `succeeded` instead of `did not run` in the `daemon.raw` file. This issue has been fixed. |
| 305160 | The messages in the **Events** report were not rendered in the correct format for the Media category. This issue has been fixed. |
| 304813 | In a cluster environment, the performance of the `nsrexecd` process has been enhanced with a new locking mechanism. |
| 304814 | In a cluster environment, the logging mechanism of the server and client processes has been enhanced. |
| 305558 | Archiving a save set with the command `save -y forever -b Archive` failed with an error. This issue has been fixed. |

# Known issues and limitations for NetWorker 19.1

Learn about the known issues in the NetWorker 19.1 release.

**Note:** For known issues and limitations in the previous NetWorker releases, refer to the *NetWorker 18.2 Release Notes* at the Support website https://support.emc.com.

## General issues

The following table contains general known issues, including general messaging, compatibility, and configuration issues.

**Table 2** General issues

| Impacted NetWorker versions | Defect number | Feature | Description | Workaround |
|---|---|---|---|---|
| 19.1.1 | 312205 | NetWorker server | When creating a schedule, if you use the abbreviation “s” instead of “skip” to specify the backup level, the backup is not skipped. | |
| 19.1 and later | 309871 | NVE | The GST service fails to restart after an NVE reboot. This issue is observed intermittently, primarily during the first reboot. | Do the following to manually start the GST service:<br>1. Type the following command to switch to super user: **`sudo su`**<br>2. Type the following command to start the GST service: **`/etc/init.d/gstd start`** |
| 19.1 and later | 308749 | NVE | NetWorker services do not start on an IPv6 environment hosted on NVE. | 1. Type the `sudo su` command to switch to super user.<br>2. Add the <*hostname*> at the end of the line in the `/etc/hosts` file.<br>`127.0.0.1 localhost.localdomain localhost <hostname>`<br>3. Type the following commands to start the NetWorker and NMC daemons:<br>`/etc/init.d/networker start /etc/init.d/gstd start` |
| 19.1 and later | 309375 | NetWorker application | When running policies configured with a large number of workflows, for example, while running multiple clones with more than hundred workflows, the following error message might appear in the `daemon.raw` log file.<br>`Unable to bind socket to port 0 from connection port range 0-0: Cannot assign requested address.` | Make the following configuration changes on your Linux server:<br>1. Check the existing value of the ip_local_port_range parameter:`cat /proc/sys/net/ipv4/ip_local_port_range` If required, change the value using the following command: `echo 15000 61000 > /` |

**Table 2** General issues (continued)

| Impacted NetWorker versions | Defect number | Feature | Description | Workaround |
|---|---|---|---|---|
| | | | | `proc/sys/net/ipv4/ip_local_port_range`<br>2. Check the existing value of the tcp_fin_timeout parameter:`cat /proc/sys/net/ipv4/tcp_fin_timeout`<br>If required, change the value using the following command: `echo 30 > /proc/sys/net/ipv4/tcp_fin_timeout`<br>3. Check the existing value of the tcp_tw_recycle parameter:`cat /proc/sys/net/ipv4/tcp_tw_recycle`<br>If the value is 0, change it to 1.<br>4. Check the existing value of the tcp_tw_reusee parameter:`cat /proc/sys/net/ipv4/tcp_tw_reuse`<br>If the value is 0, change it to 1.<br>**Note:** You must reset the configuration changes after every reboot. |
| 19.1 and later | 308977 | Client file index | The `nsrindexd` process terminates in a scaled environment. | |
| 19.1 and later | 307428 | SNMP | For NMDA and NMSAP Oracle modules, `adhoc job` attribute is false for CLI. Therefore, the restore type is shown as 'Recover through GUI' for CLI initiated restores. | |
| 19.1 and later | 303744 | Logging | The policy notification log file displays incorrect number of files for successful backup and clone actions. | |
| 19.1 and later | 303447 | CLI | If you specify multiple pool names in the `mminfo` command | |

**Table 2** General issues (continued)

| Impacted NetWorker versions | Defect number | Feature | Description | Workaround |
|---|---|---|---|---|
| | | | (for example, `mminfo -avot -q "pool=<pool1> , pool=<pool2> ... ... pool=<pooln>" `), the output does not indicate the absence of pools. However, information about the existing pools is displayed. | |
| 19.1 and later | 304585 | NetWorker server | On Linux, if there are more than 100 concurrent workflows (with both backup and clone action)running, the `nsrd` and `nsrmmdbd` processes hangs for 4 to 5 minutes. | Segregate the workflows into four different chunks and schedule them to run with an interval difference of 5 to 10 minutes. |
| 19.1 and later | 298715 | Authenticatio n | Port 7999 is fixed to auth_proxyd, even if the configured port range does not include port 7999 | To change the port used by auth_proxyd:<br>1. On the NetWorker server, type: `nsradmin`.<br>2. From the nsradmin prompt, type the following commands to update the authentication proxy port:<br>**`nsradmin> p type:nsr`**<br>**`nsradmin> update Authentication Proxy port:7499`**<br>The value 7499 is an example of an unassigned port that the user wants to assign.<br>3. When prompted, type **`y`**.<br>4. Exit the nsradmin program: **`quit`**<br>5. Restart the NetWorker services. |
| 19.1 and later | 296364 | rDNS | In NetWorker Module for Microsoft (NMM), Active Directory is not supported in rDNS environment. | Perform NMM Active Directory backups and restores using default authentication. |
| 19.1 and later | 295994 | rDNS Backward compatibility | NMM 8.x restore is not supported in an nsrauth environment. | NMM 8.x restore must be done in a default auth environment. |

**Table 2** General issues (continued)

| Impacted NetWorker versions | Defect number | Feature | Description | Workaround |
|---|---|---|---|---|
| 19.1 and later | 296030 | rDNS | In NMM, when the NetWorker server and the NetWorker client are in different domains, the Client Backup Configuration Wizard fails to create a client using shortname. | Create clients manually using FQDN. |
| 19.1 and later | 293818 | REST API | File indexing capability for Block Based Backup is not supported. | Use the NMC to perform this task. |
| 19.1 and later | 289973 | Localization | The NMC launch page is not fully translated to Japanese on Windows environments. | |
| 19.1 and later | 288851 and 288852 | Localization | In NMC, with the language set to Japanese, some report names are displayed in English on the **Reports** pane. | |
| 19.1 and later | 303498 | Licensing | The licensing server fails to start automatically during the boot up when running on Linux operating system. | Install License Server v3.6 from the following link: https://support.emc.com/downloads/1095_NetWorker |
| 19.1 and later | 279071 | NetWorker Virtual Edition | When you configure a virtual machine in the VMware vSphere Client to use with NetWorker Virtual Edition, in the Deploy OVF Template wizard, on the **Customize Template** page, the values are not mandatory. | |
| 19.1 and later | 305835 | Localization | Networker cannot recognize Japanese surrogate pair character. | Copy and paste the surrogate pair to another client resource. |
| 19.1 and later | 307833 | Google Cloud Platform | When the NetWorker server is upgraded from version 8.2.4 to version 18.2 on VMs that are running on Google Cloud Platform, the RAP resources fail to display the resources. | You must reconfigure the authentication server by running the script `/opt/nsr/authc-server/scripts/authc_configure.sh`. |
| 19.1 and later | 308593 | NVE | In the NVE upgrade wizard, the Add Data Domain checkbox in the Data Domain Settings tab is non functional. | Configure the Data Domain using the NMC. |

## Backup issues (includes traditional file system, and block-based backups)

The following table contains known issues that affect NetWorker backup operations, including traditional file system, and block-based backup operations.

**Table 3** Backup issues

| Impacted NetWorker versions | Defect number | Feature | Description | Workaround |
|---|---|---|---|---|
| 19.1 and later | 277037 | Backup | In the NMC Policy Action wizard, when you try to add a rules-based override on the last day of each month, the override does not consistently occur.<br>The issue is seen during the months of March, May, July, October, and December. When the previous month had fewer days than the current month, the issue will happen. For example, the override will occur on March 28 when February has only 28 days. For other months, the override will occur on the 30th day even when there are 31 days. | |
| 19.1 and later | 297476 | Block based backup | On the Linux hosts that have the UEFI **Secure Boot** option enabled, block based backup drivers do not load, and the following error message appears:<br>`insmod: ERROR: could not insert module /lib/modules/3.10.0-693.el7.x86_64/extra/nsrbbb.ko: Required key not available` | Disable the **Secure Boot** option. |
| 19.1 and later | 278553 | Backup | A workflow restart fails to resume previously uncompleted workflow when the actions associated with the workflow are modified.<br>For example, if a workflow contains a backup action, and the workflow is run with the backup precmd configured with an incorrect filename, if you try to modify the precmd with the correct filename and run the workflow again, the workflow fails to resume the backup. | |
| 19.1 and later | | Backup | Archiving of Windows SYSTEM or VSS SYSTEM save sets is not currently supported. | |

**Table 3** Backup issues (continued)

| Impacted NetWorker versions | Defect number | Feature | Description | Workaround |
|---|---|---|---|---|
| 19.1 and later | | Backup | If a level 1 to 9 backup is run on an IP4700 filer within five minutes of creating a file, more files than expected may be saved. For example, if a level 1 backup is run, followed by a level 2 backup, and both of these backups complete within five minutes of the file being created, the newly created file might appear on both the level 1 and level 2 backups, although the files should only be added to the level 1 backup. | To avoid this problem, wait at least five minutes after creating a file before you run a backup. |
| 19.1 and later | 226761 | Block-based backup | When you perform a block based clone recovery from a tape, the save sets that you manually backed up do not appear for selection.<br>If you performed a scheduled backup, the cloned block based backup save sets correctly appear for selection in the recovery UI. | |
| 19.1 and later | 225064 | Block-based backup | Linux enables you to exit a block based recovery session while you are accessing the same mounted recovery from either terminal or NMC, but stale entries remain after you exit the recovery session. | Restart the host to remove the stale entries. |
| 19.1 and later | 224941 | Block-based backup | On Linux, block based backups fail during live Input/Output operations. | For BBB backup, ensure that a minimum 10% of the volume size is free for taking a snapshot. |
| 19.1 and later | 204291 | Block based backup | On Linux, the block based incremental backups consistently fail and display a message similar to the following:<br>`save: Block Based Error subsystem error while performing Block Based Backup. Check if any other process is already accessing the snapshot or delete the snapshot manually and try again` | On RHEL, open the `/lib/udev/rules.d/80-udisks.rules` file and comment out the following line: **`KERNEL=="dm-*", OPTIONS +="watch`**<br>On SLES, open the `/lib/udev/rules.d/64-device-mapper.rules` file and comment out the following line: **`OPTIONS +="watch"" which gets enabled for "KERNEL=dm-*`** |

**Table 3** Backup issues (continued)

| Impacted NetWorker versions | Defect number | Feature | Description | Workaround |
|---|---|---|---|---|
| 19.1 and later | 202795 | Parallel save streams | NetWorker does not honor the client parallelism value that is provided for the virtual client, and uses the active node value instead if the client parallelism value is less than the user defined value, resulting in backup failure. | |
| 19.1 and later | 186372 | Block-based backup | When you perform the block based backups on Windows 2012 client with a non-Windows NFS Data Domain device as a remote storage node, the performance of the backups reduces. | |
| 19.1 and later | 174354 | Block-based backup | In NMC, the New destination path field on the **Select the Recovery Options** page lists the block based backup save set mount points also. However, to perform a redirected file level recovery, you must not select the mount points that exist in the following locations:<br>• `\nsr\tmp\bbb` on Windows<br>• `/nsr/tmp/bbb` on Linux | |
| 19.1 and later | 224293 | Parallel save streams | When you enable parallel save streams and set a high client parallelism value, backing up a large number of save sets (>1000) creates an overload on NetWorker server resources due to the number of save sessions, and the backup times out. | Set the client parallelism to a lower value. The default value is 4, and you can increase this value as recommended in the "Parallel save streams considerations" section of the *NetWorker Performance Optimization Planning Guide*, but note that a significantly higher value increases the chances of the backup timing out.<br>You can also increase the default timeouts in the client resource's *Save operations* attribute **`PSS:timeout_mins=25`** and the NetWorker Server Policy Action's inactivity timeout of 30 minutes to higher values respectively. |
| 19.1 and later | 308249 | Google Cloud Platform | The performance of backup and restore operation of CentOS clients that are running on Google Cloud Platform is slow. | |

**Table 3** Backup issues (continued)

| Impacted NetWorker versions | Defect number | Feature | Description | Workaround |
|---|---|---|---|---|
| 19.1 and later | 308246 | Google Cloud Platform | `nsrpush` fails to upgrade the clients that are running on Google Cloud Platform. | |
| 19.1 and later | 307970 | Google Cloud Platform | For the clients that are running on Google Cloud Platform, post upgrade the nsrexecd fails to spawn nsrsapsv process for the backup to initiate. | |

## Recovery issues (includes traditional file system, and block-based backup restores)

The following table contains known issues that affect NetWorker recovery operations, including traditional file system, and block-based backup recovery operations.

**Table 4** Recovery issues

| Impacted NetWorker version | Defect number | Feature | Description | Workaround |
|---|---|---|---|---|
| 19.1 and later | 303891 | Recovery | In the Recover wizard, if remote clone devices are selected, the corresponding remote storage node is not listed. | Use the following command for recovery: `recover -s <server ip> -S <ssid> -b <clone pool> -J <remote storage node> -d <destination>` |
| 19.1 and later | 304370 | Recovery | In a multi home environment, after file system recovery, clone operations fail with the following message:<br>`Calling mm_deactivate for mmd`<br>Also, in a multi home (dual NIC) environment, if the **Dynamic nsrmmd** option is selected on the storage node, clone operations fail after several successful backup and clone actions (if clone is linked to backup). | Clear the **Dynamic nsrmmd** option on the storage node. |
| 19.1 and later | 299918 | Recovery | During recovery, if backup spans across two tape volumes, the second backup tape volume is | |

**Table 4** Recovery issues (continued)

| Impacted NetWorker version | Defect number | Feature | Description | Workaround |
|---|---|---|---|---|
| | | | displayed under **Select alternate volumes of cloned data by pool**. | |
| 19.1 and later | 286793 | Recovery | When you configure a restore from a clone copy and specify both RESTORE_TYPE_ORDER=conventional and NSR_RECOVER_POOL=Default Clone in the restore command, the operation fails. An error similar to the following appears when the operation fails:<br>`Could not get volume from media pool: No ProtectPoint devices found in media pool "Default Clone" on NSR server "servername"` | When you configure a restore operation from a clone copy, do not use both RESTORE_TYPE_ORDER and NSR_RECOVER_POOL in the same operation.<br>To restore the backup from the conventional clone copy, use the RESTORE_TYPE_ORDER=conventional parameter only. |
| 19.1 and later | 277641 | ProtectPoint | When you mount a snapshot for FBF restore, a `Directory not found` error message appears, even when the directory is listed. | Ignore the error and proceed with recovery. |
| 19.1 and later | 276192 | Recovery | Recovery operations are performed through direct file access when direct file access is disabled in the client properties. | Create a `/nsr/debug/nodirectfile` file to prevent recovery operations from using direct file access. |
| 19.1 and later | 276354 | Recovery | Veritas File System access control lists (ACLs) on an AIX system cannot be recovered.<br>The ACL attributes are not saved during the backup and the following message appears in the save logs:<br>`10/12/16 12:35:14.470907 no extended ACL entry for `/wpars/tmp/test_acl.txt'`<br>AIX with Veritas File System ACLs are not supported, however, AIX with JFS2 ACLs are supported. | |

**Table 4** Recovery issues (continued)

| Impacted NetWorker version | Defect number | Feature | Description | Workaround |
|---|---|---|---|---|
| 19.1 and later | 270057 | Block based recovery | When you perform a block based File Level Recovery of a cloned save set from a Data Domain Cloud Tier device by using the command line, NetWorker does not support a user-defined pool for staging. The recovery operation selects the available pool for staging, and proceeds. | |
| 19.1 and later | 239350 | Block based recovery | If the **Bytes of sector** sizes of the source and target volumes are different, NetWorker does not support block based image recoveries. For example, you cannot perform a block based image recovery of a volume that has 4096 as the **Bytes of sector** size to a volume that has 512 as the **Bytes of sector** size and vice versa. | Ensure that the target volume's **Bytes of sector** size is the same as the source volume's **Bytes of sector** size. |
| 19.1 and later | 261256 | Block based recovery | If you perform a block based clone recovery on a remote client by using the `-l <pool_name>` option, the operation fails and displays the following error: `nsrclone: Command not found` | Perform the recovery by using either a GUI or the NetWorker server CLI. |
| 19.1 and later | 232610 | ProtectPoint | After a Linux system is upgraded to RHEL 6.6, a restore of a ProtectPoint backup might fail if the files are located on an LVM2 system. The restore failure produces the following type of error message in the ddbmsd trace file: `Failed to find physical volume "/dev/sdr"`<br>The failure is caused by a Linux RHEL 6.6 bug:<br>https://bugzilla.redhat.com/show_bug.cgi?id=1202785 | Contact RHEL Support to obtain the LVM2 patch. |
| 19.1 and later | | Recovery | During a DAR recovery, symbolic links for files, directories, and | |

**Table 4** Recovery issues (continued)

| Impacted NetWorker version | Defect number | Feature | Description | Workaround |
|---|---|---|---|---|
| | | | other specific files, such as device files or named pipes, cannot be recovered. To recover these files, use the NetApp restore command with the `-x` option. The Network Appliance documentation has more information about the NetApp restore command. | |

## Cloning and staging issues

The following table contains known issues that affect the cloning and staging operations.

**Table 5** Cloning and staging issues

| Impacted NetWorker versions | Defect number | Feature | Description | Workaround |
|---|---|---|---|---|
| 19.1 and later | 238635 | ProtectPoint | When you create a clone pool using NMC, the device creation wizard does not show the permissions of the clone pool. If you configure clone controlled replication (CCR) using a clone pool with read-only permissions, the CCR operation fails with a `permission denied` error. | Before you configure a CCR operation, verify that you have read and write permissions to the clone pool. |
| 19.1 and later | 299863 | Cloning | When configuring multiple clone workflows for a scheduled clone, if a single backup pool has multiple savesets, ensure that each clone workflow is streamlined to split the list of savesets that must be cloned. If you attempt to clone a common SSID from a backup pool using multiple workflows into a single clone pool, using only backup pool as the filter, the clone action might result in a media waiting event . | Ensure that the clone workflows in a single backup pool that have multiple savesets are separated by multiple clone pools. The best practice is to configure multiple workflows using additional filters along with the backup pool. |
| 19.1 and later | 299988 | Cloning | If RPS is disabled, saveset query clone progress is not displayed in the **Show Details** window. | |

## Virtualization issues (includes vProxy appliance, VMware Backup appliance, and VADP)

The following table contains known issues that affect NetWorker virtualization, including NetWorker VMware Protection with the vProxy appliance (or NVP), VMware Backup appliance, and VADP.

**Table 6** Virtualization issues

| Impacted NetWorker versions | Defect number | Feature | Description | Workaround |
|---|---|---|---|---|
| 19.1 and later | 309963 | VMware (vProxy) | vCenter Flash plugin must be manually uninstalled and re-installed when you upgrade NetWorker from 18.2.x to NetWorker 19.1. | Follow the instructions in the "Remove the flash-based vCenter plug-in from the vSphere Web Client" section of the *VMware Integration Guide*.<br>Ensure that you remove the MOB entries and then re-install the vCenter plugin after you upgrade to NetWorker 19.1. |
| 19.1 and later | 303352 | VMware (vProxy) | • VBA restore fails, if RPS is not enabled in the NetWorker server. Ensure that you enable RPS before you perform a VBA restore.<br>• The storage node and the NetWorker sever must be of the same version. If an earlier version of the storage node is present, ensure that you disable it, or upgrade to NetWorker 18.2 or later.<br>• When NetWorker is upgraded from an earlier version to 18.2 or later, ensure that you restart the NetWorker server to complete the upgrade. (This is only applicable for VBA backups because you might have backups with earlier NetWorker releases.) | |
| 19.1 and later | 309951 | VMware (vProxy) | If vProxy is deployed directly on an ESXi 6.0 host from the vSphere client, you will not have an option to set the vProxy password during deployment. | You must change the default passwords from the console window of the vProxy appliance, if required after deployment.<br>The default password for the root account is changeme and for the admin account, it is a3dp@m8n. |

**Table 6** Virtualization issues (continued)

| Impacted NetWorker versions | Defect number | Feature | Description | Workaround |
|---|---|---|---|---|
| 19.1 and later | 308365 | VMware (vProxy) | In NWUI, the VMware backup action create and edit wizard displays invalid levels (Incremental Synthetic Full and Cumulative Incr) for selection even though it is not supported. | |
| 19.1 and later | 303660 | VMware (VBA) | In the vSphere Web Client's **EMC Backup and Recovery** user interface, a VMware Backup Appliance (VBA) restore from a clone copy on an AFTD or tape device fails when the primary backup in the Data Domain system is not available. | Use the vProxy appliance to restore these VBA backups. This operation can be performed in the **NetWorker Management Web UI**. |
| 19.1 and later | 304067 | VMware (vProxy) | On Ubuntu or Debian Ext4 file systems, file-level restore operations fail. | |
| 19.1 and later | 302990 | VMware (vProxy) | Revert of a virtual machine with virtual RDM disks fail, if Revert VM configuration is set. | |
| 19.1 and later | 296842 | VMware (SQL application-consistent protection) | An SQL application-consistent FULL backup fails with the error "Failed to send "catalog_snapshot" to target virtual machine: MSSQL Agent: Unable to resolve Data Domain host name." | Add the Data Domain host entries on the SQL Client host file. |
| 19.1 and later | 293201 | VMware (SQL application-consistent protection) | Restore fails when the NetWorker server is upgraded to 18.1 or later, but the vProxy version is kept at NetWorker 9.2.x. | When the NetWorker server is upgraded to version 18.1 or later, ensure that all vProxies are also upgraded to NetWorker 18.1 or later. |
| 19.1 and later | 295866 | VMware (vProxy) | The NetWorker REST API allows you to specify an invalid port number to use for *httpPort* for vCenter plug-in registration. | No further action is required as this value is ignored in the API. Regardless of the value you specify, a valid connection to the vCenter will still be established. |
| 19.1 and later | 296512 | VMware (vProxy) | File-level restore failures are not immediately reflected in the log files. | |
| 19.1 and later | 287712 | VMware (vProxy) | When a virtual machine backup is restarted from a program different from the one where the workflow was initiated (for example, when a workflow initiated from the NMC | To ensure a successful restart of the workflow, perform the restart from the same program that you used to initiate the workflow. |

**Table 6** Virtualization issues (continued)

| Impacted NetWorker versions | Defect number | Feature | Description | Workaround |
|---|---|---|---|---|
| | | | **NetWorker Administration** window is restarted from the vSphere Web Client's **VM Backup and Recovery** user interface), the workflow fails with the error "Unable to restart workflow run: Overrides 'null' do not match the ones in job record." | |
| 19.1 and later | 289352 | VMware Backup Appliance | Network address translation (NAT) is not supported for VMware Backup Appliance configuration. When configuring a network for the VMware Backup Appliance and the vCenter server, do not modify the network address information by using NAT or other configuration methods such as firewall, IDS, or TSNR. When these unsupported methods are deployed as part of the virtual network, some VMware Backup Appliance functionality may not work as designed. | |
| 19.1 and later | 284605 | VMware (SQL application-consistent protection) | When performing a SQL instance restore in the **Dell EMC Data Protection Restore Client**, if the restore fails for one of the databases, the remaining database restores for that instance fail. | If this occurs, restore the databases individually. |
| 19.1 and later | 284023 | VMware (SQL application-consistent protection), Data Domain | Mount operations in the **Dell EMC Data Protection Restore Client** are unsuccessful if a Data Domain High Availability (DDHA) failover on DDOS 6.0.1 or 6.1 is in progress, leading to restore failures. | Wait until the DD HA failover is complete and then retry the restore. You can determine the status of the failover by using the DDShell command:<br>`ost@dd9500-2(active:0)# ha status`<br>`HA System name: dd9500-ha1.lss.emc.com`<br>`HA System status: highly available`<br>`Node Name Node id Role HA State`<br>`----------`<br>`------- ------- --------`<br>`dd9500-2.lss.emc.com 0 active online`<br>`dd9500-3.lss.emc.com 1 standby online`<br>`----------`<br>`------- ------- --------` |

**Table 6** Virtualization issues (continued)

| Impacted NetWorker versions | Defect number | Feature | Description | Workaround |
|---|---|---|---|---|
| 19.1 and later | 283648 | VMware (SQL application-consistent protection) | Due to a limitation with non-ASCI characters, if a database name contains an acute accent (´), then a SQL transaction log backup cannot be accessed on the Data Domain device, and the clone to AFTD fails. | |
| 19.1 and later | 281504 | VMware (SQL application-consistent protection) | SQL Server application-consistent full backups fail with the message "An error occurred while quiescing the virtual machine." | Lack of volume space might result in the failure to quiesce the database. To avoid this issue, ensure that you maintain a minimum of 300 MB space in each drive. |
| 19.1 and later | 280614 | VMware (vProxy) | The **Restore** tab of the vSphere Web Client's **VM Backup and Recovery** user interface displays the clone copy as the primary copy when the primary copy is deleted from Networker. | You can perform a successful recovery from the **VM Backup and Recovery** user interface by selecting the clone copy. |
| 19.1 and later | 280674 | VMware (vProxy) | NetWorker 9.1.1 does not support VMware Faut Tolerance backup operations. When initiated, VMware Faut Tolerance backups fail. | |
| 19.1 and later | 278626 | VMware (vProxy) | The **Restore** tab of the vSphere Web Client's **VM Backup and Recovery** user interface does not display any information in the **Availability** column for the vProxy backups. | |
| 19.1 and later | 278838 | VMware (vProxy) | If you add a virtual machine that has already been backed up by an existing workflow to a new workflow within the VM Backup and Recovery plug-in in the vSphere Web Client, the **Last Start Time** of the new workflow gets updated automatically in the **Backup** tab, even if the workflow has not yet been started. | |
| 19.1 and later | 279096 | VMware (vProxy) | After upgrading the vCenter server from version 5.5 to version 6.0, the vCenter **Task Name** does not display correctly backup and recovery tasks. For example, a NetWorker backup task appears as "com.emc.networker.backup.task.la | |

**Table 6** Virtualization issues (continued)

| Impacted NetWorker versions | Defect number | Feature | Description | Workaround |
|---|---|---|---|---|
| | | | bel" instead of "NetWorker Backup." | |
| 19.1 and later | 277525 | VMware (vProxy) | Restore operations from a clone copy residing on a CloudBoost or DD Cloud Tier device fail when initiated from the **VM Backup and Recovery** user interface in the **vSphere Web Client**.<br>Also, the clone copy on the CloudBoost or DD Cloud Tier device may be listed as the primary copy, while the primary copy on the Data Domain device may be listed as the clone copy. This error occurs when the clone copy is on a tape device as well, however in that instance a restore from the clone copy on the tape device is successful. | If this issue occurs, you can still perform a successful recovery within the **VM Backup and Recovery** user interface by selecting the copy on the Data Domain device that is listed as the clone copy. |
| 19.1 and later | 279402 | VMware (vProxy) | Upon refresh of **VMware View** in NMC in a large VMware vCenter environment, the background process nsrvim consumes a high amount of memory on the NetWorker server. For example, nsrvim can consume up to 7 GB RAM in a site with 200 ESXi hosts and more than 4000 virtual machines in a single vCenter. This memory is used to load vCenter inventory data into local structures. | If this occurs, depending on the scale of the VMware environment, allocate more RAM to the NetWorker server to reduce the impact of this memory consumption |
| 19.1 and later | 274789 | VMware (vProxy) | When recovering a virtual machine backup from a Data Domain device directory or Mtree that is missing, the recovery hangs instead of failing. | |
| 19.1 and later | 278045 | VMware (vProxy) | When the parallelism value for a vProxy backup action is set to a value greater than 0 and less than 100, the broker does not honor the parallelism value by allocating the correct number of sessions. When this occurs, the broker reserves all available hotadd/NBD sessions to virtual machines even if the virtual machines are in 'Waiting to run' state. | |

**Table 6** Virtualization issues (continued)

| Impacted NetWorker versions | Defect number | Feature | Description | Workaround |
|---|---|---|---|---|
| 19.1 and later | 273803 | VMware (vProxy) | A recovered virtual machine fails to power on if the source virtual machine is attached to a dvportgroup which no longer exists. This issue affects the following types of restore operations:<br>• Instant access recovery<br>• Virtual machine recovery<br>• Emergency recovery | Manually edit the virtual machine settings and assign the required network connection before powering on the recovered virtual machine. |
| 19.1 and later | 269171 | VMware (vProxy) | The **Backup** tab in the vSphere Web Client's **VM Backup and Recovery** user interface displays the last start time based on the start time of the backup for the virtual machines in the policy. Therefore, if the same virtual machine is contained within multiple policies, then the last start time displayed will be identical between the two policies. | |

## NetWorker Management Web UI issues

The following table contains known issues that affect the NetWorker Management Web UI (NWUI) tasks.

**Table 7** NetWorker Management Web UI issues

| Impacted NetWorker versions | Defect number | Feature | Description | Workaround |
|---|---|---|---|---|
| 19.1 and later | 309005 | NWUI | Horizontal scrolling related issues are observed with multi-select storage node component for Traditional and Snapshot Backup actions.<br>• Scrolling the text area of the selected component does not work in Firefox browser.<br>• In the storage node, if the name has too many characters, the text is | Use Chrome or Internet Explorer if the storage node names are lengthy and if you must perform horizontal scrolling. |

**Table 7** NetWorker Management Web UI issues (continued)

| Impacted NetWorker versions | Defect number | Feature | Description | Workaround |
|---|---|---|---|---|
| | | | truncated when you select it and try to scroll. | |
| 19.1 and later | 307876 | NWUI | The NWUI Upgrade wizard has an Install button instead of the Upgrade button. | |
| 19.1 and later | 309465 | NWUI | When creating or updating a policy, group, and rule, there is no option to associate the policy to a restricted datazone. | Use NMC OR CLI to associate RDZ with the policy, group, or rule. |
| 19.1 and later | 309111 | NWUI | The VMware Proxies Tasks tab shows the status column as running and the completed column with date "12/31/1969, 4:00:00 PM". | |
| 19.1 and later | 306860 | NWUI | The show column option does not get closed after you create or edit a static client group, if the filter or expand button is selected. | Do not use the show column option along with the filter option. |
| 19.1 and later | 302210 | NWUI | The column separator is not visible, and the column names get jumbled when you try to resize the columns. | Stop resizing the columns when the column names start getting jumbled up. |
| 19.1 and later | 308777 | NWUI | A workflow started using NWUI cannot be stopped using the CLI or NMC. | Use the NetWorker REST Job Cancel API to stop the job. |
| 19.1 and later | 304559 | NWUI - Backup | When adding or editing a VMWare backup group, if you select, expand, or clear nodes in a tree, you might observe flickering of the tree node selection. | Cancel and re-initiate the operation. |
| 19.1 and later | 304558 | NWUI - Backup | When you are adding or editing a VMware group, if there is only one child node (virtual machine) under the container, and if you select the child node, the parent node gets protected. | 1. Add a dummy child node under the container and refresh the vCenter inventory from NWUI.<br>2. Add the required child node for protection. |
| 19.1 and later | 304594 | NWUI | If your password expires, NWUI does not provide information on the password expiry nor does it | 1. Login to NMC and change your password. |

**Table 7** NetWorker Management Web UI issues (continued)

| Impacted NetWorker versions | Defect number | Feature | Description | Workaround |
|---|---|---|---|---|
| | | | prompt you to enter a new password. | 2. Use the new password to login to NWUI. |
| 19.1 and later | 299258 | NWUI | RnA scale testing H5UI-Browser becomes unresponsive and very slow during inventory browsing of large scale vCenter environment. | You have to wait for NetWorker Management Web UI to load. There is no functionality failure other than slow response of loading the tree when there are thousands of entities under a single node. |

## NetWorker Management Console (NMC) issues

The following table contains known issues that affect the NMC, including reporting, notifications, and the GUI.

**Table 8** NMC issues

| Impacted NetWorker versions | Defect number | Feature | Description | Workaround |
|---|---|---|---|---|
| 19.1.1 | 312364 | NMC | If you specify the start time attribute value as "00:00" when creating an action using the action create command, NMC displays the start time of an action as Absolute. | Do not specify the start time attribute value as "00:00". |
| 19.1 and later | 309160 | NMC | When you create a new workflow or action, the following message appears a number of times: `resource does not exist` | |
| 19.1 and later | 305152 | NMC | If you double-click actions when a workflow copy operation is in progress, a Java Null Pointer Exception error is displayed. However, the copy operation completes successfully and you can continue to edit the workflow. | Modify actions within the workflow only after the copy operation completes. |
| 19.1 and later | 303654 | NMC | On a SLES 15 x86_64 system, NMC displays the client operating system as Linux 4.12.14-23-default instead of SLES 15. This issue is observed only if the `lsb_release` package is not present. | Install the `lsb_release` packages. |

**Table 8** NMC issues (continued)

| Impacted NetWorker versions | Defect number | Feature | Description | Workaround |
|---|---|---|---|---|
| 19.1 and later | 304068 | NMC | If a version of OpenSSL that is earlier than 1.0 is installed on a machine, and if some applications are still using the earlier version of OpenSSL, GSTD services fail to start. This is because of compatibility issues with the earlier versions of OpenSSL. | Uninstall or stop the services that are using the earlier version of OpenSSL. |
| 19.1 and later | 304783 | NMC | On Linux, when you login to NMC using LDAP with non-ASCII characters, login fails with the following error:<br>`You do not have privileges to use NetWorker Management Console.` | 1. Stop NetWorker services.<br>2. Execute the following commands to create the `/nsr/authc/conf/web.xml` file.<br>`rm -f /nsr/authc/conf/web.xml`<br>`cp /opt/nsr/authc-server/scripts/web.xml.template /nsr/authc/conf/web.xml`<br>`chown nsrtomcat: /nsr/authc/conf/web.xml`<br>`chmod 400 /nsr/authc/conf/web.xml`<br>3. Start NetWorker services. |
| 19.1 and later | 299917 | NMC | When selecting volumes for recovery, only one volume is displayed even though backup spans across two tape volumes. | |
| 19.1 and later | 288839 | NMC | In NMC, when you perform a backup of a client having 10,000 save set files, backup fails with the following message:<br>`Cannot run savefs: The program issued a command but the command length is incorrect. (Win32 error 0x18)"` | |
| 19.1 and later | 292533 | NMC | AD/LDAP advanced configuration accepts invalid values and the values are saved without any validation. | |
| 19.1 and later | 284044 | NMC | NMC displays incorrect percentage completion for save sessions. The | |

**Table 8** NMC issues (continued)

| Impacted NetWorker versions | Defect number | Feature | Description | Workaround |
|---|---|---|---|---|
| | | | progress is shown as 0% until the task completes. You cannot determine the intermediate progress until the task completes. | |
| 19.1 and later | 299870 | NetWorker wizard | The NetWorker wizard displays save sets for both virtual and physical clients. When performing a backup for virtual clients, if you select a path owned by the physical client, backup fails. If you select **All**, backups succeed only for the paths on the virtual node. | |
| 19.1 and later | 280303 | NMC | In a Windows 2008 R2 environment, the following error is generated in the application event log, when you start the EMC GST service:<br>`Event ID: 1001 Description: The description for Event ID ( 1001 ) in Source (ACECLIENT) cannot be found. The local computer may not have the necessary registry information or message DLL files to display messages from a remote computer. You may be able to use the /AUXSOURCE= flag to retrieve this description; see Help and Support for details. The following information is part of the event: <Root>: \WINNT\system32\sdconf.rec.` | The error message indicates that the `<Root>:\Windows\system32\sdconf.rec` file (the shared secret file) is not found and is required by the RSA Authentication Client.<br>This error does not have any functionality impact on NMC and can be safely ignored. |
| 19.1 and later | 299644 | NMC | When adding a NetWorker system in DPC, the hostname field must be set with the same value (either the FQDN or the IP address of the NetWorker server) that was set in the NMC **Enterprise** window. If the value differs, monitoring functionality in NMC does not work as expected. | |
| 19.1 and later | 289638 | NMC | A mismatch of save set count is observed in the `mminfo` command output and the NMC reports. This is because of the way server protection backup is handled in Windows and Linux clients. In Windows, the `cst` folder is backed | |

**Table 8** NMC issues (continued)

| Impacted NetWorker versions | Defect number | Feature | Description | Workaround |
|---|---|---|---|---|
| | | | up, but it is not backed up in the case of Linux. | |
| 19.1 and later | 297981 | NMC | In NMC, when you attempt to generate recovery reports, the server details might not display immediately in the recover reports page. There is a wait time of about 0 to 6 hours. | |
| 19.1 and later | 299683 | NMC | Backup and clone size in NMC and Policy Notification logs for APP Consistent Tlog backups might differ marginally. | Check the save set details to determine the correct size.<br>1. In NMC, click **Media**.<br>2. In the left pane, select **Disk Volumes**.<br>3. View the save set details for the selected volume. |
| 19.1 and later | 281876 | GUI | In some instances, when a NDMP recovery initiated from the NMC **Recover** wizard fails, the recovery incorrectly displays as successful in NMC. After the recovery, review the details to ensure the operation was actually successful. | |
| 19.1 and later | 279145 | GUI | If changes are made at the save set level after a backup or clone action completes, only the media database will contain the updated information. The Save Set Details report in NMC and the NMC database will remain out-of-sync until the next action is run. | |
| 19.1 and later | 278645 | GUI | When you set the DD Retention Lock Time from the NMC **Policy Action** wizard for backup and clone actions, the time is always set as 23:59:59 of the respective date, regardless of the unit of time configured (hours, days, months, or years). | |
| 19.1 and later | 278978 | GUI | If you specify an incorrect network path when adding a NFS share in the NMC **Devices** window, the appropriate error message does not display. Instead, an error indicating | |

**Table 8** NMC issues (continued)

| Impacted NetWorker versions | Defect number | Feature | Description | Workaround |
|---|---|---|---|---|
| | | | that either the username or password are incorrect appears. | |
| 19.1 and later | ESC 28715 | GUI | When logged into NMC, a user who is assigned to a restricted data zone with access to few data protection resource can also view other resources that are unassigned to any restricted data zones. This user will not, however, be able to modify these unassigned resources directly. | |
| 19.1 and later | 275822 | GUI | In a NetWorker server clustered environment, when you configure client resources for the physical nodes using the Client Backup Configuration wizard, the **Specify Backup Configuration Type** page displays **Extended Client Installed: No** even when the NetWorker extended client is installed. | |
| 19.1 and later | 257865 | GUI | The **EMC Data Protection Restore Client** offers selection of multiple folders at the same level for browsing, but can handle only one directory at a time. Only contents from the last selected folder display. | |
| 19.1 and later | 251839 | GUI | You can no longer start a policy from NMC's Protection window to run a workflow. Instead, you must start the workflow. | |
| 19.1 and later | 224579 | GUI | Two or more instances of the same workflow appear under a policy in NMC's NetWorker Administration **Monitoring** window. | Restart the GSTD daemons/ services. |
| 19.1 and later | 20009 | GUI | NMC does not display save streams while performing an NMM backup. | |
| 19.1 and later | 239044 | GUI | For both block-basked backup (BBB) and non-BBB, the NMC Recover wizard cannot display folder contents if the folder contains more than 200,000 files. | There is no workaround for non-BBB. For BBB, browse to the folder that contains the VHDx mount (for example, `C:\Program Files\EMC NetWorker\nsr\tmp\BBB\<clientname>\<ssid>`) and copy the data manually. |

**Table 8** NMC issues (continued)

| Impacted NetWorker versions | Defect number | Feature | Description | Workaround |
|---|---|---|---|---|
| 19.1 and later | 241657 | Reporting | Reporting data shown in NMC is only provided for the period that GSTD is running. If the NetWorker server is running but GSTD is not, when GSTD is started again NMC will not fetch reporting data for policies run during the period that GSTD was down. | |

## Install and upgrade issues

The following table contains known issues that affect installing and upgrading NetWorker, including packaging, binaries, Client Push, compatibility, and interoperability.

**Table 9** Install and upgrade issues

| Impacted NetWorker versions | Defect number | Feature | Description | Workaround |
|---|---|---|---|---|
| 19.1 and later | 301572 | Install | On Windows, uninstalling the NetWorker extended package fails during the first attempt, but succeeds in the second attempt. | |
| 19.1 and later | 308563 | Client Push | There is no error or warning message displayed when adding the cross platform package using the Native option. | |
| 19.1 and later | 307876 | Upgrade | The NWUI Upgrade wizard has Install button instead of Upgrade button. | |
| 19.1 and later | 309096 | Upgrade | When upgrading NVE from an earlier version to NetWorker 19.1, the GUI stops responding. | Refresh the GUI to verify the current status of the NVE upgrade. |
| 19.1 and later | 305161 | Install | When installing the NetWorker Management Web UI on the Networker server, if a non default port is provided for authc, and if it is being used by other applications, the installer does not prompt the user that the port is in use. With the default port 9090, installation works as expected. | |

**Table 9** Install and upgrade issues (continued)

| Impacted NetWorker versions | Defect number | Feature | Description | Workaround |
|---|---|---|---|---|
| 19.1 and later | 304871 | Upgrade | When upgrading to NetWorker 18.2, the following warning is displayed:<br>`/bin/grep: /etc/ld.so.conf.d/networker.conf: No such file or directory`<br>This message can be ignored. | |
| 19.1 and later | 303999 | Install | When installing the Networker client package on SLES, the following error is displayed:<br>`no such file or directory`<br>This is an expected error, and occurs because of the changes in the SLES 15 Operating System. | Install the `net-tools` package. |
| 19.1 and later | 304875 | Upgrade | When upgrading NetWorker on a CentOS Linux 6.10 x86 system, the following message is logged multiple times in the `daemon.log` file:<br>`unknown unknown LOG unrendered` | |
| 19.1 and later | 303718 | Upgrade | When upgrade or migration is in progress, if you access NMC, the notification message that appears has Error as the title instead of Information. However, this does not indicate failure. | |
| 19.1 and later | 303375 | Install | If you install more than one language pack, and launch NMC, the content is displayed in more than one language. | Ensure that you set English as the default language before you launch NMC. |
| 19.1 and later | 303021 | Upgrade | On Windows, after an upgrade, NetWorker services fail to start, and the following error is displayed:<br>`rmq: NO SSL support for rabbitmq`<br>This issue is observed only if NetWorker is installed on a non default location, for example, `D:\EMC Networker 922`. | 1. From the command prompt, delete or rename the invisible folder named `EMC` that gets created under `D:` (For example, `D:\EMC`).<br>2. Start NetWorker services. |

**Table 9** Install and upgrade issues (continued)

| Impacted NetWorker versions | Defect number | Feature | Description | Workaround |
|---|---|---|---|---|
| 19.1 and later | 299873 | Installation | Uninstall in a Windows Clustered environment might take about 11 to 30 minutes, if antivirus is enabled. If antivirus is disabled, uninstall takes only about 3 to 4 minutes. | During uninstall or upgrade, stop the antivirus software. After the NetWorker services are up and running, start the antivirus.<br>Or<br>Include the NetWorker in the exception list of the antivirus software. |
| 19.1 and later | 180647 | Upgrading | Client Push upgrades for the NetWorker client may fail in Linux environments. This failure is due to library dependencies which cannot be resolved when `rpm` is running. | The *NetWorker Updating from a Previous Release Guide* provides different methods for upgrading the NetWorker client. |
| 19.1 and later | 277694 | Installation | While you are configuring the installation of NetWorker Virtual Edition, when you reach the Data Domain Configuration page, if you choose to create a new login for Data Domain Boost, the installation fails. | Use the existing Data Domain Boost login credentials and continue with the installation. |
| 19.1 and later | 115876 | Upgrading/ Client Push | After successfully upgrading a NetWorker client with Client Push, NMC does display the updated client version. | |
| 19.1 and later | 236655 | Upgrading | After upgrading NetWorker, if you plan to perform backups to an AFTD, the AFTD device you create must use a UNC path. | |
| 19.1 and later | 231399 | Upgrading | After migration, the backup of the bootstrap/indexes may not be directed to the preferred pool. | Edit the **Server db** backup action in the **Server Protection Policy** and change the **Destination Pool** to the pool that you want. This can be done from NMC's **Administration** window or the `nsrpolicy` command line interface.<br>To change the destination pool using nsrpolicy:<br>`nsrpolicy action update server-backup -p "Server Protection" -w "Server backup" -A "Server db backup" --destination_pool <your pool>` |

**Table 9** Install and upgrade issues (continued)

| Impacted NetWorker versions | Defect number | Feature | Description | Workaround |
|---|---|---|---|---|
| 19.1 and later | 308557 | Upgrading | When the NetWorker server is upgraded from version 8.2.4 to version 18.2 on VMs that are running on Google Cloud Platform, the backup and restore operation fails due to mismatch in the peer information. | Delete the nsr peer information and retry the backup operation. You can delete the peer information by running the following command**nsradmin -s <NWserver> -p nsrexec -C -y "NSR peer information"** from the NetWorker server. |

## Cluster issues

The following table contains known issues that affect cluster environments.

**Table 10** Cluster issues

| Impacted NetWorker versions | Defect number | Feature | Description | Workaround |
|---|---|---|---|---|
| 19.1 and later | 309154 | Cluster | Cluster services fail to start after the server cluster upgrade. | |
| 19.1 and later | 283024 | Cluster | On a HP-UX Cluster setup, when you select save set `ALL` for a virtual client, all the save sets on the physical and virtual node gets backed up. | You must explicitly specify the save sets that you want backed up for a virtual client. |
| 19.1 and later | 291246 | Cluster | If NMC is running on a highly-available NetWorker server and registered through `authc`, if the NetWorker Server role moves to a different node, the jobs may not appear on the NMC Monitoring pane. | 1. Restart the GST service on NMC.<br>2. After the NetWorker Server role is started, ensure that the `authc-server` folder is created under the `shared_disk\nsr\` folder.<br>3. If the folder does not exist, stop and start the NetWorker Server role. |
| 19.1 and later | 278459 | Cluster | After you configure a three-node NetWorker server cluster, the nsrd service fails to start. | |

## NetWorker Snapshot Management (NSM) issues

The following table contains known issues that affect NSM operations.

**Table 11** NSM issues

| Impacted NetWorker versions | Defect number | Feature | Description | Workaround |
|---|---|---|---|---|
| 19.1 and later | 308930 | Snapshot Management | When you select the **Snapshot Validation** option in the **Client Configuration Summary** page, the validation fails. However, this does not impact the backup or restore workflow. During mount, Networker checks if the snapshot creation was successful or not. | |
| 19.1 and later | 299825 | Snapshot Management | For Networker Snap based workflow, Cloud Tier recovery from clone initiates a data recall from cloud to active tier even if there is a backup snapshot copy present in the backup pool.<br>**Note:** This issue impacts all existing Cloud Tier supported versions of Networker. | Ensure that no backup is present in the backup pool before initiating a recovery from clone, which is an inherent check in the Cloud Tier workflow for the traditional non snapshot backups. However, there is no such inherent checks in the case of NSM implementation. |
| 19.1 and later | 286783 | Snapshot Management | In a ProtectPoint on AIX environment, clone operations from snapVX to Data Domain fail if the restore FTS LUNs are not available on the NetWorker server. | Ensure that the restore FTS LUNs are available on the NetWorker server. |
| 19.1 and later | 275977 | Snapshot Management | If you try to perform an Inplace/Outplace FBF Isilon snapshot recovery on an empty folder, the folder structure is not maintained. Only the files are restored but the folder is not. | |
| 19.1 and later | 272650 | Snapshot Management | An error occurs when configuring NSM with XtremIO snapshots. | See Configuring NSM with XtremIO snapshots on page 46 for the workaround procedure. |
| 19.1 and later | 288129 | Snapshot Management | An error occurs when configuring NSM with NetApp NAS snapshots. | See Configuring NSM with NetApp NAS snapshots on page 47 for the workaround procedure. |
| 19.1 and later | 272086 | Snapshot Management | If you perform an Inplace/Outplace recovery and select the duplicate file option as 'Fail the recover,' the recover status shows as "Failed" instead of "Success." However, a directed recovery shows the status as "Success" after recovery.<br>Ensure that the target path has the same files and directories that were selected for the recovery before starting the restore. | |

**Table 11** NSM issues (continued)

| Impacted NetWorker versions | Defect number | Feature | Description | Workaround |
|---|---|---|---|---|
| 19.1 and later | 271738 | Snapshot Management | Restore for VNXe (Thunderbird) Snapshots fails if the backup credentials you used, were created during a VNXe client creation. | To successfully restore a VNXe (Thunderbird) Snapshot, update the administrator credentials in Management Credentials. To modify Management Credentials, go to the Snapshot Management tab under Modify Client Properties. |
| 19.1 and later | 258985 | Snapshot Management | The NSM RecoverPoint backup or restore may fail during a snapshot validation or mount operation with the following file system consistency check (FSCK) error:<br>`FileSystem inconsistent error`<br>This issue may occur when the storage array is busy and not responsive to RecoverPoint. In this unresponsive state, RecoverPoint might leave the target device where snapshot data is in READ ONLY state, and the FSCK fails. | Retry the backup or recover operation. |
| 19.1 and later | 184056 | Snapshot Management | If you select the mount host as the destination host for an out of place restore using NMC's **Administration** window, the window incorrectly allows you to browse to the mounted snapshot and select a location on the snapshot as the destination. The restore will complete without error. | |

## Network Data Management Protocol (NDMP) issues

The following table contains known issues that affect NDMP operations.

**Table 12** NDMP issues

| Impacted NetWorker versions | Defect number | Feature | Description | Workaround |
|---|---|---|---|---|
| 19.1 and later | 308599 | NDMP | When scanning an Isilon NDMP tape, the following message | |

**Table 12** NDMP issues (continued)

| Impacted NetWorker versions | Defect number | Feature | Description | Workaround |
|---|---|---|---|---|
| | | | appears even though the scan completes successfully:<br>`read error No space left on device`<br>You can ignore the message if the scan completes and the media index is populated. | |
| 19.1 and later | 305118 | NDMP | NDMP backup is marked successful in NMC, even if one of the two Isilon Multistream Backup fails. | |
| 19.1 and later | 280295 | NDMP | After performing a NDMP backup, the File History folders are no longer visible. | In order to retain the File History folders, manually create a file named ndmp_savedbg in the C:\Program Files\EMC Networker\nsr\debug\ folder on Windows, or the /nsr/debug directory on Linux. On Windows platforms specifically, a NetWorker services restart is also required for the change to take effect. |
| 19.1 and later | 281876 | NDMP | When you perform a NMDP recovery from the NMC **NetWorker Administration Recover** window, NMC displays all NDMP recoveries as successful even if one fails. | Provide a valid destination path. |

## NetWorker utility issues

The following table contains known issues that affect the NetWorker utilities.

**Table 13** NetWorker utility issues

| Impacted NetWorker versions | Defect number | Feature | Description | Workaround |
|---|---|---|---|---|
| 19.1.1 | 311842 | CLI | Selection by schedule action might not work as expected in some cases. | |
| 19.1 and later | 309753 | CLI | In the case of a clone action, `skip` and `incr_synth_full` are accepted as valid levels for the Filter level attribute. | |

**Table 13** NetWorker utility issues (continued)

| Impacted NetWorker versions | Defect number | Feature | Description | Workaround |
|---|---|---|---|---|
| | | | However, NMC does not display these two values. When you update the Exclude level attribute to Yes/No and Filter level attribute to `skip`/ `incr_synth_full` using `nsradmin` or `nsrpolicy`, only Exclude level gets updated in NMC to Accept/Reject. There is inconsistency between NMC and `nsradmin` or `nsrpolicy`. | |
| 19.1 and later | 309606 | CLI | In nsradmin, when you use the Append operation with NSR Protection Policy Action resource type, it does not accept `No` as a response and proceeds with attribute modification. It also does not function as expected when used with NSR Protection Policy Workflow resource. | |
| 19.1 and later | 308208 | CLI - nsrpolicy | When you create a policy and workflow with `index-nas-snap` as the action type, the **Filter** and **Exclude** attributes are displayed. | |
| 19.1 and later | 305153 | CLI | The visual mode of `nsradmin` displays additional **Known types** options when compared to the text mode. | |
| 19.1 and later | 299060 | CLI | Running the `mminfo` query in the verbose mode might consume more time when compared to the earlier releases. This is because of the enhancements made to additional breakthrough logging and query optimization features in NetWorker 18.1 and later. | |
| 19.1 and later | 261585 | Command prompt | When you log in to NetWorker as the root user by executing the `nsrlogin` command and do not run `nsrlogout` when completed with the session, the session expires and subsequent commands run by this user, such | If you use `nsrlogin` to run NetWorker commands while logged in as an LDAP or authc local user, then it is recommended that you always run `nsrlogout` when completed with the session. If subsequent |

**Table 13** NetWorker utility issues (continued)

| Impacted NetWorker versions | Defect number | Feature | Description | Workaround |
|---|---|---|---|---|
| | | | as NDMP backups, may fail with a "`Security token has expired`" error. | operations fail with the error "`Security token has expired`" and the root login is enabled, then run `nsrlogout` as the root user on the server. |
| 19.1 and later | 251486 | Command prompt | If you run an inquire during a DD failover, the VTL output does not display. However, there is no impact to the backup. | |
| 19.1 and later | ESC 26376 | Command prompt | When you run `savefs` to backup a file system and specify a trailing forward slash "/" in the path, as in `/DSE/mnt/`, NetWorker does not list the file system. | Remove the "/" at the end of the path. For example, specify `/DSE/mnt` instead of `/DSE/mnt/`. |
| 19.1 and later | ESC 25843 | Command prompt | When you install NetWorker in a HP Serviceguard cluster environment with legacy mode, you cannot execute NetWorker commands. When you attempt to execute commands, the following error occurs: `/opt/networker/bin/nsr_mk_cluinfo[19]: /etc/cmcluster/.nsr_cluinfo: Cannot create the specified file.` | |
| 19.1 and later | 182642 | Command prompt | Using the `recover` command with the -a option to recover all files backed up in a mount point does not recover all files when you also specify a "/" after -a. For example, `recover -a / -d /home` | |

## Device and media issues

The following table contains known issues that affect devices and media.

**Table 14** Device and media issues

| Impacted NetWorker versions | Defect number | Feature | Description | Workaround |
|---|---|---|---|---|
| 19.1 and later | 306558 | Data Domain | A delay of 10 minutes is observed when performing a backup to the DFC device on the storage node | |
| 19.1 and later | 279580 | Data Domain | You cannot clean up Data Domain retention-locked save sets from NetWorker by using nsrmm, nsrim, or RAP deletion at any time before the expiry date, even after reverting the Retention Lock from the Data Domain system to an earlier date. | |
| 19.1 and later | 276299 | Devices | When you run the `mminfo` command with the `-q` option, the output returns stale entries of save set information even when the media is deleted. | Delete individual save sets using the `nsrmm -d -S` *<saveset_id>* command. |
| 19.1 and later | 276479 | Devices | When you run the `mminfo` command with the `-m` option, an extra row appears in the output. This issue does not impact functionality. | Relabel the volume and run the `mminfo -m` command again. |
| 19.1 and later | 273649 | CloudBoost | If the NetWorker server and the CloudBoost appliance are in different domains, host entries might be missing in the host files or there might be forward or reverse name resolution issues between NetWorker and CloudBoost. With this scenario, the following error message appears:<br>The selected CloudBoost Appliance is unsupported for device type CloudBoost. | Update the missing host entries for NetWorker and CloudBoost in the following locations.<br>For CloudBoost:<br>• `/etc/hosts`<br>• `/opt/maginatics/active/mgt_console/resources/templates/hosts.erb`<br>For NetWorker:<br>• `/etc/hosts`<br>• `/nsr/res/servers` |
| 19.1 and later | 2621<br>Bug Numbers: 166266 and 173665<br>06 | Data Domain | If you are using DDOS version 5.7 and later or 6.0 and later, the system does not return proper deduplication statistics for DD Boost backups. | To get deduplication statistics for DD Boost backups, perform the following steps:<br>1. Upgrade to the DDOS builds with the fix either 5.7.3.0 and later, or 6.0.1.0 and later.<br>2. In the Data Domain system issue, the following command: **`ddsh -s se sysparam set`** |

**Table 14** Device and media issues (continued)

| Impacted NetWorker versions | Defect number | Feature | Description | Workaround |
|---|---|---|---|---|
| | | | | **FM_GET_ACCURATE_COMP_STATS=TRUE** |
| 19.1 and later | 241611 | Data Domain | DFC does not work when encryption strength is set to **High** | Set the encryption strength for the client "*" on the DD OS to **None**:<br>• From the CLI, display the current configuration by running `ddboost clients show config`, and then change the configuration by running `ddboost clients modify encryption-strength none *`.<br>• From the Data Domain system manager GUI, navigate to **Data Management** > **DD Boost** > **Settings** and edit the settings for client "*" |
| 19.1 and later | 241479 | Data Domain | The Data Domain Boost version does not display during normal save operations for backups with Data Domain as the destination target. | To display the Data Domain Boost version, run the save operation in debug mode. |
| 19.1 and later | Devices | | Tape devices shared by more than one computer can experience unpredictable bus resets from any of the computers. These reset commands can cause a tape on a shared bus (such as SCSI or Fibre Channel) to rewind. This issue can cause the following results:<br>• Tapes that are prematurely treated as full.<br>• Corrupted data on tapes. | See Bus reset can rewind tape on Microsoft Windows on page 45 for more information and workaround details. |
| 19.1 and later | 229440 | ProtectPoint | In a VMAX replication environment with primary and secondary VMAX systems connected by an SRDF link, a roll back restore of a ProtectPoint backup might fail with a SYMAPI error message. For example, the symapi log contains the following error message:<br>`Failure during initial sync. sts:` | For more information about the issue, contact Technical Support and reference OPT 472718 and the VMAX fix 82392. |

**Table 14** Device and media issues (continued)

| Impacted NetWorker versions | Defect number | Feature | Description | Workaround |
|---|---|---|---|---|
| | | | `SYMAPI_C_FAILED_REMOTE_LOAD`<br>After the roll back restore failure, the RDF device pairs might remain in the SyncInProg state and might need to be manually synchronized. | |
| 19.1 and later | 301861 | Data Domain | When the back up data spans across multiple data domain VTL device, then NMC displays the following error:<br>nsrd NSR media warning: rd=appeng1.datadomain.com:/dev/rtape/tape211_BESTnb reading: I/O error | |

## Bus reset can rewind tape on Microsoft Windows

Tape devices shared by more than one computer can experience unpredictable bus resets from any of the computers. These reset commands can cause a tape on a shared bus (such as SCSI or Fibre Channel) to rewind. The results can include:

- Tapes that are prematurely treated as full.
- Corrupted data on tapes.

System configurations that do not properly protect tape devices shared by more than one computer can experience these bus resets. Some switching hardware can be configured to protect tape devices from resets. Certain operating systems include built-in protection (that can be turned on by the user) against stray bus resets.

To determine whether the switch or operating system includes such protection, and to learn how to use it, refer to the manufacturer's documentation or contact the manufacturer.

**Note:** Whatever solution you select must block the reset command from the tape drives, but must not block it from certain cluster-controlled disks. The reset is a necessary part of the disk arbitration process in some cluster environments. To determine whether this applies in your environment, refer to the cluster documentation.

The NetWorker software does not support configuring a tape device in a shared SCSI or Fibre Channel environment without using either a hardware switch or an appropriate operating system solution to handle the bus reset issue.

Microsoft does not support attaching any tape drive to any shared SCSI bus that also hosts cluster-controlled disks because of this issue.

# Configuring NSM with XtremIO snapshots

Use the following workaround procedures to successfully configure NSM with XtremIO snapshots.

## Configuring NSM with XtremIO snapshots on a two node setup

**Procedure**

1. At the top right corner of the NSM GUI, select the **Server** tab.
2. Select **User Groups** from left pane under **Server**.
3. In the right pane of the UI, select and double-click **Users**.
4. On the **Users** screen, check all privileges inside the **Privileges** pane under the **Configurations** menu.
5. On the **Users** screen, add **Storage Node** in the **External** roles.

   For example:

   ```
   cn=Users,cn=Groups,dc= ledmb072,dc=lss,dc=emc,dc=com
   cn=Users,cn=Groups,dc= ledmb071,dc=lss,dc=emc,dc=com
   ```

   where:

   - “ledmb071” is the Application Host
   - “ledmb072” is the Server

6. Repeat step 5 for Security Administrators and Application Administrators.
7. Add entries for the client in the **Security Administrators** screen.

   For example:

   ```
   group=Administrators,host= ledmb072
   user=administrator,host= ledmb072
   user=system,host= ledmb072
   group=Administrators,host= ledmb071
   user=administrator,host= ledmb071
   user=system,host= ledm b071
   ```

   The first set of entries is for the Server, which by default will be present after NMC server Configuration. The second set is for the Application Host.

8. Repeat Step 7 for Application Administrators.
9. Create an NMC Client using the wizard for the Server also. You must make at least one LUN available to server from the same XtremIO array.
10. Create the client.

## Configuring NSM with XtremIO snapshots on a three node setup

**Procedure**

1. At the top right corner of the NSM GUI, select the **Server** tab.
2. Select **User Groups** from left pane under **Server**.
3. In the right pane of the select double-click **Users**.
4. On the **Users** screen, check all privileges inside the **Privileges** pane under the **Configurations** menu.

5. On the **Users** screen, add **Storage Node** in the **External** roles.

   For example:

   ```
   cn=Users,cn=Groups,dc= ledmb072,dc=lss,dc=emc,dc=com
   cn=Users,cn=Groups,dc= ledme048,dc=lss,dc=emc,dc=com
   ```

   where:

   - "ledme048" is the Storage Node
   - "ledmb072" is the Server

6. Repeat step 5 for Security Administrators and Application Administrators.
7. Add entries for the client in the **Security Administrators** screen.

   For example:

   ```
   group=Administrators,host= ledmb072
   user=administrator,host= ledmb072
   user=system,host= ledmb072
   group=Administrators,host= ledme048
   user=administrator,host= ledme048
   user=system,host= ledme048
   ```

   The first set of entries is for the Server, which by default will be present after NMC server Configuration. The second set is for the Storage Node.

8. Repeat Step 7 for Application Administrators.
9. Create an NMC client using the wizard for the Storage Node. The XtremIO array has to make at least one LUN visible to the Storage Node.
10. Create the client.

## Configuring NSM with NetApp NAS snapshots

Use the following workaround procedures to successfully configure NSM with NetApp ONTAP.

### Configuring NSM with NetApp ONTAP 7-mode

**About this task**

Configure the following pre-requisites on the NetApp filer.

**Procedure**

1. Create volumes in the NetApp filer with UNIX and NTFS default permissions.
2. Configure CIFS and NFS protocols on the filer.
3. Mount the volumes on the NetWorker server.
4. Configure NDMP credentials.

### Configuring NSM with NetApp ONTAP Cluster Mode

**About this task**

Configure the following pre-requisites on the NetApp filer.

**Procedure**

1. Create the Vservers with separate credentials. Ensure that the user is assigned the "vsadmin" role.
2. Ensure that the user has ONTAP API SSH and HTTPS access.
3. Configure NDMP credentials.
4. Map the domain controller to the respective Vservers.
5. Ensure that the CIFS and NFS protocol services are up and running.
6. Set up the export policies and name spaces in the Vserver.
7. Create the backup volumes, and then map the backup volumes to the respective export policies.
8. Ensure that the NetWorker server is added to the Vserver export policy.
9. In case of CIFS, create the CIFS share.
10. Mount the volumes on the NetWorker server using the following command:

    ```
    mount <vservername>:/volname /mountpoint
    ```

11. Complete the following steps from NMC:
    a. While configuring the client resource, add the Vserver name or IP address.
    b. Add the Vserver username and password under Management credentials.
    c. Add the Vserver name in the Management Name field.
    d. Add the saveset name in the following format:

    ```
    /vol/<volumename>
    ```

# Environment and system requirements

The *NetWorker Performance Optimization Planning Guide* provides information on the environment and system requirements.

# Install, upgrade, and configure

To install NetWorker 19.1, use the guidelines provided in the *NetWorker Installation Guide*.

To upgrade NetWorker from a previous release, use the guidelines provided in the *NetWorker Updating from a Previous Release Guide*

# Additional resources

You can use these resources to find more information about this product, get support and provide feedback.

## Related documentation

The NetWorker documentation set includes the following publications, available on the Support website:

- *NetWorker E-LAB Navigator*
  Provides compatibility information, including specific software and hardware configurations that NetWorker supports. To access E-LAB Navigator, go to https://elabnavigator.emc.com/eln/elnhome.

- *NetWorker Administration Guide*
  Describes how to configure and maintain the NetWorker software.
- *NetWorker Network Data Management Protocol (NDMP) User Guide*
  Describes how to use the NetWorker software to provide data protection for NDMP filers.
- *NetWorker Cluster Integration Guide*
  Contains information related to configuring NetWorker software on cluster servers and clients.
- *NetWorker Installation Guide*
  Provides information on how to install, uninstall, and update the NetWorker software for clients, storage nodes, and servers on all supported operating systems.
- *NetWorker Updating from a Previous Release Guide*
  Describes how to update the NetWorker software from a previously installed release.
- *NetWorker Release Notes*
  Contains information on new features and changes, fixed problems, known limitations, environment and system requirements for the latest NetWorker software release.
- *NetWorker Command Reference Guide*
  Provides reference information for NetWorker commands and options.
- *NetWorker Data Domain Boost Integration Guide*
  Provides planning and configuration information on the use of Data Domain devices for data deduplication backup and storage in a NetWorker environment.
- *NetWorker Performance Optimization Planning Guide*
  Contains basic performance tuning information for NetWorker.
- *NetWorker Server Disaster Recovery and Availability Best Practices Guide*
  Describes how to design, plan for, and perform a step-by-step NetWorker disaster recovery.
- *NetWorker Snapshot Management Integration Guide*
  Describes the ability to catalog and manage snapshot copies of production data that are created by using mirror technologies on storage arrays.
- *NetWorkerSnapshot Management for NAS Devices Integration Guide*
  Describes how to catalog and manage snapshot copies of production data that are created by using replication technologies on NAS devices.
- *NetWorker Security Configuration Guide*
  Provides an overview of security configuration settings available in NetWorker, secure deployment, and physical security controls needed to ensure the secure operation of the product.
- *NetWorker VMware Integration Guide*
  Provides planning and configuration information on the use of VMware in a NetWorker environment.
- *NetWorker Error Message Guide*
  Provides information on common NetWorker error messages.
- *NetWorker Licensing Guide*
  Provides information about licensing NetWorker products and features.
- *NetWorker REST API Getting Started Guide*
  Describes how to configure and use the NetWorker REST API to create programmatic interfaces to the NetWorker server.
- *NetWorker REST API Reference Guide*
  Provides the NetWorker REST API specification used to create programmatic interfaces to the NetWorker server.
- *NetWorker 19.1 with CloudBoost 19.1 Integration Guide*
  Describes the integration of NetWorker with CloudBoost.

- *NetWorker 19.1 with CloudBoost 19.1 Security Configuration Guide*
  Provides an overview of security configuration settings available in NetWorker and Cloud Boost, secure deployment, and physical security controls needed to ensure the secure operation of the product.
- NetWorker Management Console Online Help
  Describes the day-to-day administration tasks performed in the NetWorker Management Console and the NetWorker Administration window. To view the online help, click **Help** in the main menu.
- NetWorker User Online Help
  Describes how to use the NetWorker User program, which is the Windows client interface, to connect to a NetWorker server to back up, recover, archive, and retrieve files over a network.

### Where to find product documentation

- https://www.dell.com/support
- https://community.emc.com

### Where to get support

The Support website https://www.dell.com/support provides access to product licensing, documentation, advisories, downloads, and how-to and troubleshooting information. The information can enable you to resolve a product issue before you contact Support.

To access a product-specific page:

1. Go to https://www.dell.com/support.
2. In the search box, type a product name, and then from the list that appears, select the product.

### Knowledgebase

The Knowledgebase contains applicable solutions that you can search for either by solution number (for example, KB000xxxxxx) or by keyword.

To search the Knowledgebase:

1. Go to https://www.dell.com/support.
2. On the **Support** tab, click **Knowledge Base**.
3. In the search box, type either the solution number or keywords. Optionally, you can limit the search to specific products by typing a product name in the search box, and then selecting the product from the list that appears.

### Live chat

To participate in a live interactive chat with a support agent:

1. Go to https://www.dell.com/support.
2. On the **Support** tab, click **Contact Support**.
3. On the **Contact Information** page, click the relevant support, and then proceed.

### Service requests

To obtain in-depth help from Licensing, submit a service request. To submit a service request:

1. Go to https://www.dell.com/support.
2. On the **Support** tab, click **Service Requests**.

**Note:** To create a service request, you must have a valid support agreement. For details about either an account or obtaining a valid support agreement, contact a sales representative. To

get the details of a service request, in the `Service Request Number` field, type the service request number, and then click the right arrow.

To review an open service request:

1. Go to https://www.dell.com/support.
2. On the **Support** tab, click **Service Requests**.
3. On the **Service Requests** page, under **Manage Your Service Requests**, click **View All Dell Service Requests**.

### Online communities

For peer contacts, conversations, and content on product support and solutions, go to the Community Network https://community.emc.com. Interactively engage with customers, partners, and certified professionals online.

### How to provide feedback

Feedback helps to improve the accuracy, organization, and overall quality of publications. You can send feedback to DPAD.Doc.Feedback@emc.com.

Copyright © 2005-2019 Dell Inc. or its subsidiaries. All rights reserved.

Dell believes the information in this publication is accurate as of its publication date. The information is subject to change without notice.

THE INFORMATION IN THIS PUBLICATION IS PROVIDED “AS-IS.” DELL MAKES NO REPRESENTATIONS OR WARRANTIES OF ANY KIND WITH RESPECT TO THE INFORMATION IN THIS PUBLICATION, AND SPECIFICALLY DISCLAIMS IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. USE, COPYING, AND DISTRIBUTION OF ANY DELL SOFTWARE DESCRIBED IN THIS PUBLICATION REQUIRES AN APPLICABLE SOFTWARE LICENSE.

Dell Technologies, Dell, EMC, Dell EMC and other trademarks are trademarks of Dell Inc. or its subsidiaries. Other trademarks may be the property of their respective owners. Published in the USA.