

Release Notes

Dell EMC NetWorker

Version 18.2

Release Notes

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REV 01

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These release notes contain supplemental information about the NetWorker 18.2 release.

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Revision history

The following table presents a revision history of this document.

Table 1 NetWorker 18.2 release notes revision history

Revision	Date	Description
01	December 14, 2018	First release of this document for NetWorker 18.2.

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

This section provides information about the new features and enhancements in NetWorker 18.2.

vProxy recovery of backups taken with the VMware Backup appliance

The VMware Backup appliance is not supported for backup or recovery operations in NetWorker 18.2. You can, however, use the vProxy appliance to recover backups taken with the VMware Backup appliance from previous NetWorker releases. To perform these recoveries, use the NetWorker Management Web UI.

The *NetWorker VMware Integration Guide* provides more information.

vProxy appliance configuration now supports IPv6

NetWorker 18.2 supports using either IPv4 or IPv6 for the vProxy appliance configuration. Note that the vProxy appliance does not support dual stack addressing (using IPv4 and IPv6 together). If you want to run backups and restores using the vProxy appliance, use IPv4 only addressing or IPv6 only addressing for the vProxy.

The *NetWorker VMware Integration 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, in the context of VMware:

- Managing policies
- Managing workflows
- Managing actions (VMWare backup and Clone)

- Managing groups (VMWare backup and Clone groups)
- Managing rules

Note

NetWorker Management Web UI is not backward-compatible with the earlier versions of NetWorker.

The *NetWorker VMware Integration Guide* provides more information.

nsradmin operations for policy management

Enhanced the `nsradmin` command to include support for creating, updating, and deleting policies, workflows, and actions using the name value attributes instead of JSON strings.

The *NetWorker Administration Guide* provides more information.

Automated Multi Streaming for Exchange save set

In NetWorker 18.2, AMS support has been extended for Exchange save sets.

The *NetWorker Administration Guide* provides more information.

Configurable backup retries

- Increased the maximum number of retries to 24 from the current value of 5.
- Increased the maximum retry delay to 3600 seconds (60 minute) from 720 seconds (12 minutes).

The default retry value is 1.

The *NetWorker Administration Guide* provides more information.

Client backup reporting

Enhanced the NetWorker error reporting capability. You can now identify:

- Clients that are disabled
- Workflows that are running from previous backup
- Workflows that did not start because of server issues

The *NetWorker Administration Guide* provides more information.

Expose hidden client attributes through REST API

The following attributes will now be part of the client resource representation in NetWorker API:

- Server NetWork Interface
- Data Domain Interface
- Data Domain Backup
- Save Operations
- Client Direct Enabled
- Job Control
- Pool
- NetWorker Version

The *NetWorker REST API Getting started Guide* provides more information.

SNMP trap enhancements

NetWorker 18.2 includes the following SNMP trap enhancements:

- SNMP v2c MIB support
- SNMP trap alert for NetWorker to comply with the MIB format
- SNMP MIB support for action success or failure notifications for both backup and clone actions

The *NetWorker Administration Guide* provides more information.

GSTD services will run as a non-root user on Linux platform

The following changes have been made to the `nmc_config` script:

- The database user information is auto-configured.
- The directories created by `lgtonmc.rpm` are managed by `nsrnmc` user and `nsrnmc` group.
- GSTD and its spawned services run as `nsrnmc`. `nsrnmc` is a non-root user and is non-configurable.

Removal of Avamar client from the NetWorker package

Starting with NetWorker 18.2, the Avamar client must be downloaded from the Support website. It will not be made available with the NetWorker software package.

NetWorker Software Compatibility Guide

The *NetWorker Software Compatibility Guide* is now available on E-Lab Navigator (<https://elabnavigator.emc.com/elb/elhome>).

Fixed issues

The following issues have been fixed in NetWorker 18.2.

Issue Number	Description
294851	The Internet Explorer 11 browser did not show the drop down calendar in the VMware recovery screen when using NetWorker Management Web UI. This issue has been fixed.
303993 293869	In a NetWorker Linux cluster setup, executing the <code>networker.cluster -r</code> command resulted in starting two <code>nsrexed</code> processes. This issue has been fixed.
304010	During Exchange backup, the <code>nsrbbb.sys</code> driver failed to respond, and lead to a lack of response from the Operating System. This issue has been fixed.
304135	In a Windows 2 node cluster, Networker Server Disaster recovery tool (<code>nsrdr</code>) exited without completing recovery. This issue has been fixed.
302658	After installing the block based backups (BBB) package on SLES, the <code>nsrbbb</code> services had to be started manually. This issue has been fixed.
301432	The save process crashed while running through policy having backup and clone action. This issue has been fixed.
302765	BBB backup of a volume with cluster size less than 4000 failed. This issue has been fixed.
284042	If a vProxy got disconnected from the vCenter, a <code>nsrdisp_nwbg</code> memory leak occurred because of repeated

Issue Number	Description
	attempts by the NetWorker server to access vProxy. This issue has been fixed.
266812	During BBB backup, you could not determine why a full backup was performed instead of an incremental backup. This issue has been fixed.
287538	NetWorker attempted to clone from the wrong path and failed. This issue has been fixed.
293736	Cluster services had to be started twice with <code>systemctl</code> implementation. This issue has been fixed.
294143	If more than one client had the same save set, client association to the group was established even if the group creation failed. This issue has been fixed.
294347	On Windows 2012 R2 server, after upgrading to NetWorker 18.1, occasionally, the <code>nsrmmdbd</code> process consumed 100% of a CPU core. This issue has been fixed.
295365	IE Edge browser did not show drop down for HOT add sessions and NBD sessions while adding vProxy. This issue has been fixed.
296071	FLR recovery of the file to a folder, which contained the same file name failed from NMC FLR console. This issue has been fixed.
296586	Labeling a Data Domain device using the Data Domain Default pool failed. This issue has been fixed.
296680	Uninstall in a Windows Clustered environment took about 11 to 30 minutes, if antivirus was enabled. This issue has been fixed.
298054	NetWorker REST API now uses Apache CXF 3.2.4.
298188	Notification using <code>smtpmail</code> action command was not working for Write Completion and Device Disabled events. This issue has been fixed.
298584	EMC Data Protection Restore Client GUI displayed <code>Removing Mount</code> for hours even after the mount was removed from the virtual machine. This issue has been fixed.
298804	If multiple clone workflows were running in parallel as per schedule, one of the clone workflows failed. This issue has been fixed.
298808	In a Windows environment, when multiple clone workflows were running in parallel, the <code>nsrclone</code> process failed. This issue has been fixed.
298933	APP Consistent full backups failed, if the mount point had non English characters in the name. This issue has been fixed.
299024	If RPS was enabled, concurrent clone operations took more time when compared to the backup duration. This issue has been fixed.

Issue Number	Description
299487	If RPS was enabled, the <code>nsrrecovery</code> process crashed when the source and target was Data Domain, and parallel save stream was configured. This issue has been fixed.
299627 299628	In a Windows environment, if RPS was enabled, during cloning, the <code>nsrrecovery</code> process failed. This issue has been fixed.
299660	During sequential cloning, if RPS was enabled, the <code>nsrclone</code> CPU utilization was 100%. This issue has been fixed.
299745	Clone operations failed for 305 virtual machines out of 750 virtual machines within a vProxy workflow with a size mismatch error. This issue has been fixed.
299981	If RPS is enabled, Advanced File Type Device (AFTD) tape clone failed when the destination clone pool had only one device. This issue has been fixed.
300015	In NetWorker Management Web UI, the Monitoring page did not display any recover sessions information when launched using Internet Explorer or Firefox browser in non-English locale. This issue has been fixed.

Known issues and limitations for NetWorker 18.2

Learn about the known issues in the NetWorker 18.2 release.

Note

For known issues and limitations in the previous NetWorker releases, refer to the *NetWorker 18.1 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
18.2	303744	Logging	The policy notification log file displays incorrect number of files for successful backup and clone actions.	
18.2	302993	REST API	NetWorker API fails with the following internal server error: Unable to set user privileges based on user token for SYSTEM.	Retry the API call again to resolve the issue.

Table 2 General issues (continued)

Impacted NetWorker versions	Defect number	Feature	Description	Workaround
18.2	303447	CLI	If you specify multiple pool names in the <code>mminfo</code> command (for example, <code>mminfo -avot -q "pool=<pool1> , pool=<pool2> ... pool=<pooln>"</code>), the output does not indicate the absence of pools. However, information about the existing pools is displayed.	
18.2	304585	NetWorker server	On Linux, if there are more than 100 concurrent workflows (with both backup and clone action) running, the <code>nsrd</code> and <code>nsrmmdbd</code> 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.
18.2	298715	Authentication	Port 7999 is fixed to <code>auth_proxyd</code> , even if the configured port range does not include port 7999	<p>To change the port used by <code>auth_proxyd</code>:</p> <ol style="list-style-type: none"> 1. On the NetWorker server, type: <code>nsradmin</code>. 2. From the <code>nsradmin</code> prompt, type the following commands to update the authentication proxy port: <pre>nsradmin> p type:nsr nsradmin> update Authentication Proxy port:7499</pre> <p>The value 7499 is an example of an unassigned port that the user wants to assign.</p> 3. When prompted, type <code>y</code>. 4. Exit the <code>nsradmin</code> program: <code>quit</code> 5. Restart the NetWorker services.
18.2	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.
18.2	295994	rDNS Backward compatibility	NMM 8.x restore is not supported in an <code>nsrauth</code> 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
18.2	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.
18.2	297279	rDNS	BMR in rDNS fails with the error Error trying to validate NetWorker server credentials: Unable to create client connection with server <server hostname> Reason: Unknown host	
18.2	293818	REST API	File indexing capability for Block Based Backup is not supported.	Use the NMC to perform this task.
18.2	293136	Dual-NIC	In a dual NIC configuration, backup of clients residing on the secondary network hangs.	In place of dual-NIC External Storage Node, introduce an additional storage node in the respective networks.
18.2	289973	Localization	The NMC launch page is not fully translated to Japanese on Windows environments.	
18.2	288851 and 288852	Localization	In NMC, with the language set to Japanese, some report names are displayed in English on the Reports pane.	
18.2	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
18.2	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.	

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
18.2	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: 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.
18.2	278553	Backup	A workflow restart fails to resume previously uncompleted workflow when the actions associated with the workflow are modified. 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.	
18.2		Backup	Archiving of Windows SYSTEM or VSS SYSTEM save sets is not currently supported.	
18.2		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.
18.2	249428	Block-based backup	On Windows Server 2008 R2, incremental backups always shift to full backups. Also, the following error message appears when you start and stop the nsrbbb service multiple times, the following error message appears:	1. Check the operating system version of Windows Server 2008 R2 by running the following command: wmic OS get Caption,CSDVersion,OSArchitecture,Version

Table 3 Backup issues (continued)

Impacted NetWorker versions	Defect number	Feature	Description	Workaround
			System error 577 has occurred.	<ol style="list-style-type: none"> If the operating system version is earlier than 6.1.7601, to upgrade the operating system version to 6.1.7601 or later, start the Windows update application on the host. Install the Windows security patch from the following link: https://www.microsoft.com/en-us/download/details.aspx?id=46148 To ensure that the error message does not appear, start and stop the <code>nsrbbb</code> service multiple times by running the following commands: <ul style="list-style-type: none"> <code>net start nsrbbb</code> <code>net stop nsrbbb</code> Perform incremental backups.
18.2	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. If you performed a scheduled backup, the cloned block based backup save sets correctly appear for selection in the recovery UI.	
18.2	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.
18.2	224941	Block-based backup	On Linux, block based backups fail during live Input/Output operations.	When you perform live Input/Output operations on a volume, and simultaneously perform a block based backup of the same volume, the backup fails.
18.2	204291	Block based backup	On Linux, the block based incremental backups consistently fail and display a message similar to the following: <code>save: Block Based Error subsystem error while performing Block Based</code>	On RHEL, open the <code>/lib/udev/rules.d/80-udisks.rules</code> file and comment out the following line: <code>KERNEL=="dm-*", OPTIONS += "watch"</code>

Table 3 Backup issues (continued)

Impacted NetWorker versions	Defect number	Feature	Description	Workaround
			Backup. Check if any other process is already accessing the snapshot or delete the snapshot manually and try again	On SLES, open the <code>/lib/udev/rules.d/64-device-mapper.rules</code> file and comment out the following line: <code>OPTIONS += "watch"</code> which gets enabled for <code>"KERNEL=dm-*</code>
18.2	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.	
18.2	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.	
18.2	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: <ul style="list-style-type: none"> <code>\nsr\tmp\bbb</code> on Windows <code>/nsr/tmp/bbb</code> on Linux 	
18.2	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 <i>NetWorker Performance Optimization Planning Guide</i> , but note that a significantly higher value increases the chances of the backup timing out. You can also increase the default timeouts in the client resource's <i>Save operations</i> attribute <code>PSS:timeout_mins=25</code> and the NetWorker Server Policy Action's inactivity timeout of 30 minutes to higher values respectively.

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
18.2	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: <code>recover -s <server ip> -S <ssid> -b <clone pool> -J <remote storage node> -d <destination></code>
18.2	304370	Recovery	In a multi home environment, after file system recovery, clone operations fail with the following message: <code>Calling mm_deactivate for mmd</code> 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.
18.2	299918	Recovery	During recovery, if backup spans across two tape volumes, the second backup tape volume is displayed under Select alternate volumes of cloned data by pool .	
18.2	286793	Recovery	When you configure a restore from a clone copy and specify both <code>RESTORE_TYPE_ORDER=conventional</code> and <code>NSR_RECOVER_POOL=Default Clone</code> in the restore command, the operation fails. An error similar to the following appears when the operation fails: <code>Could not get volume from media pool: No ProtectPoint devices found in media pool "Default Clone" on NSR server "servername"</code>	When you configure a restore operation from a clone copy, do not use both <code>RESTORE_TYPE_ORDER</code> and <code>NSR_RECOVER_POOL</code> in the same operation. To restore the backup from the conventional clone copy, use the <code>RESTORE_TYPE_ORDER=conventional</code> parameter only.

Table 4 Recovery issues (continued)

Impacted NetWorker version	Defect number	Feature	Description	Workaround
18.2	295533	Recovery	When you recover a client that uses old authentication (oldauth) to communicate with other NetWorker hosts, communications with the NetWorker server may fail. The issue occurs because NetWorker 18.1 and later uses NetWorker strong authentication (nsrauth) and will refuse to allow the recovery operation to complete.	Perform the following steps: <ol style="list-style-type: none"> 1. Connect to the nsrexec database: <code>nsradmin -p nsrexec</code> 2. Set the query to the NSRLA resource: <code>p type:nsrla</code> 3. Update the auth methods attribute to nsrauth and perform a recovery <code>update auth methods : 0.0.0.0/0,nsrauth</code> 4. If the recovery fails for any of the clients, then update the authentication method for that client: <code>update auth methods : 0.0.0.0/0,nsrauth, "<client_name>,oldauth"</code>
18.2	297279	Recovery	<p>BMR in an rDNS environment fails with the following error:</p> <pre>Error trying to validate NetWorker server credentials: Unable to create client connection with server <server hostname> Reason: Unknown host</pre> <p>To use BMR, oldauth must be enabled for the BMR client on the NetWorker server. While rDNS works with nsrauth and the availability of forward entries in the DNS server.</p> <p>For BMR to work in rDNS, reverse entries must be present in the DNS server. However, the rDNS features are not applicable in this case.</p>	
18.2	277641	Recovery	When you mount a snapshot for FBF restore, a <code>Directory not found</code> error message appears, even when the directory is listed.	Ignore the error and proceed with recovery.
18.2	276192	Recovery	Recovery operations are performed through direct file access when direct file access is disabled in the client properties.	Create a <code>/nsr/debug/nodirectfile</code> file to prevent recovery operations from using direct file access.

Table 4 Recovery issues (continued)

Impacted NetWorker version	Defect number	Feature	Description	Workaround
18.2	277110	Recovery	NetWorker fails to recover save sets residing on a shared disk to the active cluster node when you specify the active cluster node in the NMC Recovery wizard in the Destination Host field.	
18.2	276354	Recovery	Veritas File System access control lists (ACLs) on an AIX system cannot be recovered. The ACL attributes are not saved during the backup and the following message appears in the save logs: 10/12/16 12:35:14.470907 no extended ACL entry for `/wpars/tmp/ test_acl.txt` AIX with Veritas File System ACLs are not supported, however, AIX with JFS2 ACLs are supported.	
18.2	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.	
18.2	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.
18.2	261256	Block based recovery	If you perform a block based clone recovery on a remote client by using the <code>-1 <pool_name></code> option, the operation fails and displays the following error:	Perform the recovery by using either a GUI or the NetWorker server CLI.

Table 4 Recovery issues (continued)

Impacted NetWorker version	Defect number	Feature	Description	Workaround
			nsrclone: Command not found	
18.2	232610	ProtectPoint	<p>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"</p> <p>The failure is caused by a Linux RHEL 6.6 bug: https://bugzilla.redhat.com/show_bug.cgi?id=1202785</p>	Contact RHEL Support to obtain the LVM2 patch.
18.2		Recovery	<p>During a DAR recovery, symbolic links for files, directories, and other specific files, such as device files or named pipes, cannot be recovered. To recover these files, use the NetApp restore command with the <code>-x</code> option. The Network Appliance documentation has more information about the NetApp restore command.</p>	

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	Issue number, Feature	Description	Workaround
18.2	304895	Cloning	If you explicitly fail a backup, and if no save set gets backed up, the clone status is logged as <code>succeeded</code> instead of <code>did not run</code> in the <code>daemon.raw</code> file.	NMC and <code>jobsdb</code> report the status of the clone job as <code>did not run</code> . Verify the status of the clone job from the NMC Monitoring page or using the <code>jobquery</code> command.
18.2	238635	ProtectPoint	When you create a clone pool using NMC, the device creation wizard does not show the permissions of the clone	Before you configure a CCR operation, verify that you have read and write permissions to the clone pool.

Table 5 Cloning and staging issues (continued)

Impacted NetWorker versions	Defect number	Issue number, Feature	Description	Workaround
			pool. If you configure clone controlled replication (CCR) using a clone pool with read-only permissions, the CCR operation fails with a <code>permission denied</code> error.	
18.2	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.
18.2	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	Issue number, Feature	Description	Workaround
18.2	303967	VMware (vProxy)	During file-level restore, the NetWorker Management Web UI Monitoring window displays the entire size of the virtual machine as the total recover size instead of the actual size of the restored files.	
18.2	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	Use the vProxy appliance to restore these VBA backups. This operation can be performed in the NetWorker Management Web UI .

Table 6 Virtualization issues (continued)

Impacted NetWorker versions	Defect number	Issue number, Feature	Description	Workaround
			primary backup in the Data Domain system is not available.	
18.2	304067	VMware (vProxy)	On Ubuntu or Debian Ext4 file systems, file-level restore operations fail.	
18.2	302990	VMware (vProxy)	Revert of a virtual machine with virtual RDM disks fail, if Revert VM configuration is set.	
18.2	303788	VMware (vProxy)	The NetWorker 18.2 vProxy appliance (3.0.0.x) is not backward-compatible with the NetWorker 18.1 server.	
18.2	304760	VMware (vProxy)	Browsing objects for file level restore in the NetWorker Management Web UI is slower than expected with the vProxy for NetWorker 18.2, particularly when attempting to restore files to or from a folder that contains a large number of files.	If experiencing slow performance during file-level restores, you can use the NetWorker 18.1 version of the vProxy appliance, which is version 2.3.0.x. Note, however, that the earlier vProxy versions do not support restores from VBA backups, and do not support selection of the user elevation option to override UAC limitations.
18.2	304722	VMware (vProxy)	<p>File-level restores performed using the NetWorker Management Web UI or the Dell EMC Data Protection Restore Client fail during browse operations if the NetWorker server is running on a cluster server environment. When the restore fails, an error message displays in both interfaces:</p> <ul style="list-style-type: none"> In the NetWorker Management Web UI, the message indicates <code>Error occurred while updating currentWorkingDirectory</code>. In the Dell EMC Data Protection Restore Client, the message indicates <code>Unable to browse the destination. The directory cannot be browsed. Please check the directory of the VM. Could not connect</code>. 	<p>You can use the NMC NetWorker Administration Recovery wizard to perform the file-level restore, or use the following workaround prior to performing the restore in the NetWorker Management Web UI or the Dell EMC Data Protection Restore Client:</p> <ol style="list-style-type: none"> SSH to the vProxy (<code>cd /usr/lib/systemd/system</code>) and log in as admin, then sudo as the root user. Use the vim editor to open the file <code>vrapid.service</code>. Locate the line that starts with "ExecStart=" and add <code>--disable-access-control</code> to the command line argument. Reload the unit config file into systemd by typing <code>systemctl daemon-reload</code>.

Table 6 Virtualization issues (continued)

Impacted NetWorker versions	Defect number	Issue number, Feature	Description	Workaround
			to vproxy: Returned status: 401.	5. Restart the vrapid engine by typing <code>systemctl restart vrapid.service</code> .
18.2	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.
18.2	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.
18.2	295866	VMware (vProxy)	The NetWorker REST API allows you to specify an invalid port number to use for <code>httpPort</code> 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.
18.2	296512	VMware (vProxy)	File-level restore failures are not immediately reflected in the log files.	
18.2	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 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."	To ensure a successful restart of the workflow, perform the restart from the same program that you used to initiate the workflow.
18.2	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.	

Table 6 Virtualization issues (continued)

Impacted NetWorker versions	Defect number	Issue number, Feature	Description	Workaround
18.2	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.
18.2	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: <pre> ost@dd9500-2(active:0)# ha status HA System name: dd9500- ha1.lss.emc.com HA System status: highly available Node Name Node id Role HA State ----- dd9500-2.lss.emc.com 0 active online dd9500-3.lss.emc.com 1 standby online ----- </pre>
18.2	283648	VMware (SQL application-consistent protection)	Due to a limitation with non-ASCII 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.	
18.2	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.
18.2	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.
18.2	280674	VMware (vProxy)	NetWorker 9.1.1 does not support VMware Fault Tolerance backup operations. When initiated, VMware Fault Tolerance backups fail.	

Table 6 Virtualization issues (continued)

Impacted NetWorker versions	Defect number	Issue number, Feature	Description	Workaround
18.2	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.	
18.2	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.	
18.2	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.label" instead of "NetWorker Backup."	
18.2	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 . 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.
18.2	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	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

Table 6 Virtualization issues (continued)

Impacted NetWorker versions	Defect number	Issue number, Feature	Description	Workaround
			a single vCenter. This memory is used to load vCenter inventory data into local structures.	
18.2	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.	
18.2	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.	
18.2	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: <ul style="list-style-type: none"> • Instant access recovery • Virtual machine recovery • Emergency recovery 	Manually edit the virtual machine settings and assign the required network connection before powering on the recovered virtual machine.
18.2	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
18.2	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.
18.2	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.	<ol style="list-style-type: none"> 1. Add a dummy child node under the container and refresh the vCenter inventory from NWUI. 2. Add the required child node for protection.
18.2	303168	NWUI	The success notifications in the Policy management feature does not get cleared automatically.	Navigate to another page or manually close the message.
18.2	303927	NWUI	After you create or update a resource, the FINISH or SAVE button is not disabled until the operation completes.	Wait until the spinner disappears. Do not click the FINISH or SAVE buttons again before the operation completes, and the notification is displayed.
18.2	304594	NWUI	If your password expires, NWUI does not provide information on the password expiry nor does it prompt you to enter a new password.	<ol style="list-style-type: none"> 1. Login to NMC and change your password. 2. Use the new password to login to NWUI.
18.2	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
18.2	305160	NMC	The messages in the Events report are not rendered in the correct format for the Media category.	View Events using the NMC Enterprise Monitoring window.

Table 8 NMC issues (continued)

Impacted NetWorker versions	Defect number	Feature	Description	Workaround
18.2	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.
18.2	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 <code>lsb_release</code> package is not present.	Install the <code>lsb_release</code> packages.
18.2	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.
18.2	304783	NMC	On Linux, when you login to NMC using LDAP with non-ASCII characters, login fails with the following error: <pre>You do not have privileges to use NetWorker Management Console.</pre>	<ol style="list-style-type: none"> 1. Stop NetWorker services. 2. Execute the following commands to create the <code>/nsr/authc/conf/web.xml</code> file. <pre>rm -f /nsr/authc/conf/web.xml cp /opt/nsr/authc-server/scripts/web.xml.template /nsr/authc/conf/web.xml chown nsrtomcat: /nsr/authc/conf/web.xml chmod 400 /nsr/authc/conf/web.xml</pre> 3. Start NetWorker services.
18.2	299917	NMC	When selecting volumes for recovery, only one volume is displayed even though backup spans across two tape volumes.	
18.2	288839	NMC	In NMC, when you perform a backup of a client having 10,000 save set files,	

Table 8 NMC issues (continued)

Impacted NetWorker versions	Defect number	Feature	Description	Workaround
			backup fails with the following message: <pre>Cannot run savefs: The program issued a command but the command length is incorrect. (Win32 error 0x18) "</pre>	
18.2	292533	NMC	AD/LDAP advanced configuration accepts invalid values and the values are saved without any validation.	
18.2	284044	NMC	NMC displays incorrect percentage completion for save sessions. The progress is shown as 0% until the task completes. You cannot determine the intermediate progress until the task completes.	
18.2	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.	
18.2	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: <pre>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.</pre>	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. This error does not have any functionality impact on NMC and can be safely ignored.
18.2	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	

Table 8 NMC issues (continued)

Impacted NetWorker versions	Defect number	Feature	Description	Workaround
			differs, monitoring functionality in NMC does not work as expected.	
18.2	289638	NMC	A mismatch of save set count is observed in the <code>mminfo</code> 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 <code>cst</code> folder is backed up, but it is not backed up in the case of Linux.	
18.2	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.	
18.2	299683	NMC	Backup and clone size in NMC and Policy Notification logs for APP Consistent Tlog backups might differ marginally.	<p>Check the save set details to determine the correct size.</p> <ol style="list-style-type: none"> 1. In NMC, click Media. 2. In the left pane, select Disk Volumes. 3. View the save set details for the selected volume.
18.2	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.	
18.2	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.	
18.2	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).	

Table 8 NMC issues (continued)

Impacted NetWorker versions	Defect number	Feature	Description	Workaround
18.2	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 that either the username or password are incorrect appears.	
18.2	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.	
18.2	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.	
18.2	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.	
18.2	251839	GUI	You can no longer start a policy from NMC's Protection window to run a workflow. Instead, you must start the workflow.	
18.2	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.
18.2	20009	GUI	NMC does not display save streams while performing an NMM backup.	
18.2	239044	GUI	For both block-basked backup (BBB) and non-BBB, the NMC Recover wizard cannot display folder contents if	There is no workaround for non-BBB. For BBB, browse to the folder that contains the VHDx mount (for example, C:\Program Files\EMC

Table 8 NMC issues (continued)

Impacted NetWorker versions	Defect number	Feature	Description	Workaround
			the folder contains more than 200,000 files.	NetWorker\nsr\tmp\BBB \<clientname>\<ssid>) and copy the data manually.
18.2	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
18.2	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.	
18.2	305158	Upgrade	<p>After an upgrade to NetWorker 18.2, NMC server protection backup might fail with the following error:</p> <pre>Cannot run savepsm: No such file or directory</pre> <p>This is because of the non availability of the binary savepsm.exe file at C:\Program Files\EMC NetWorker\nsr\bin.</p>	Copy the savepsm.exe binary file from C:\Program Files\EMC NetWorker\Management\GST\etc to C:\Program Files\EMC NetWorker\nsr\bin .

Table 9 Install and upgrade issues (continued)

Impacted NetWorker versions	Defect number	Feature	Description	Workaround
18.2	304871	Upgrade	<p>When upgrading to NetWorker 18.2, the following warning is displayed:</p> <pre>/bin/grep: /etc/ld.so.conf.d/networker.conf: No such file or directory</pre> <p>This message can be ignored.</p>	
18.2	304829	Install	<p>During the installation of NetWorker packages (clnt/xtc-client/nmc) on Oracle Unbreakable Enterprise Kernel (UEK R4, U6, U7, and R5), the following messages appear even if the installation is successful:</p> <pre>Unit networker.service could not be found Unit nsrps.service could not be found Unit gst.service could not be found</pre> <p>These messages can be ignored.</p>	
18.2	303999	Install	<p>When installing the Networker client package on SLES, the following error appears:</p> <pre>no such file or directory</pre> <p>This is an expected error, and occurs because of the changes in the SLES 15 Operating System.</p>	Install the <code>net-tools</code> package.
18.2	304875	Upgrade	<p>When upgrading NetWorker on a CentOS Linux 6.10 x86 system, the following message is logged multiple times in the <code>daemon.log</code> file:</p> <pre>unknown unknown LOG unrendered</pre>	
18.2	303718	Upgrade	<p>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.</p>	
18.2	303375	Install	<p>If you install more than one language pack, and launch NMC, the content appears in more than one language.</p>	Ensure that you set English as the default language before you launch NMC.

Table 9 Install and upgrade issues (continued)

Impacted NetWorker versions	Defect number	Feature	Description	Workaround
18.2	303021	Upgrade	<p>On Windows, after an upgrade, NetWorker services fail to start, and the following error is displayed:</p> <pre>rmq: NO SSL support for rabbitmq</pre> <p>This issue is observed only if NetWorker is installed on a non default location, for example, D:\EMC NetWorker 922.</p>	<ol style="list-style-type: none"> 1. From the command prompt, delete or rename the invisible folder named <code>EMC</code> that gets created under D: (For example, D:\EMC). 2. Start NetWorker services.
18.2	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.	<p>During uninstall or upgrade, stop the antivirus software. After the NetWorker services are up and running, start the antivirus.</p> <p>Or</p> <p>Include the NetWorker in the exception list of the antivirus software.</p>
18.2	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 <code>rpm</code> is running.	The <i>NetWorker Updating from a Previous Release Guide</i> provides different methods for upgrading the NetWorker client.
18.2	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.
18.2	115876	Upgrading/ Client Push	After successfully upgrading a NetWorker client with Client Push, NMC does display the updated client version.	
18.2	236655	Upgrading	After upgrading NetWorker, if you plan to perform backups to an AFTD, the AFTD device you create must use a UNC path.	
18.2	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 <code>nsrpolicy</code> command line interface.

Table 9 Install and upgrade issues (continued)

Impacted NetWorker versions	Defect number	Feature	Description	Workaround
				<p>To change the destination pool using nsrpolicy:</p> <pre>nsrpolicy action update server-backup -p "Server Protection" -w "Server backup" -A "Server db backup" --destination_pool <your pool></pre>
18.2	241752	Upgrading/ VMware Protection	After upgrading the VMware Backup Appliance from a NetWorker 8.1 or 8.2 release to NetWorker 9.1.x, you cannot use the Mozilla Firefox browser to launch the EMC Backup and Recovery Configuration Utility window or the Dell EMC Data Protection Restore Client .	<p>To resolve this issue, execute the following commands on the VMware Backup Appliance as the root user:</p> <ul style="list-style-type: none"> • /usr/java/latest/bin/keytool -delete -alias tomcat -storepass changeit • /usr/java/latest/bin/keytool -genkeypair -v -alias tomcat -keyalg RSA -sigalg SHA256withRSA -keystore /root/.keystore -storepass changeit -keypass changeit -validity 3650 -dname "CN=localhost.localdom, OU=Avamar, O=EMC, L=Irvine, S=California, C=US" • emwebapp.sh --restart

Cluster issues

The following table contains known issues that affect cluster environments.

Table 10 Cluster issues

Impacted NetWorker versions	Defect number	Feature	Description	Workaround
18.2	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.

Table 10 Cluster issues (continued)

Impacted NetWorker versions	Defect number	Feature	Description	Workaround
18.2	291246	Cluster	If NMC is running on a highly-available NetWorker server and registered through <code>authc</code> , if the NetWorker Server role moves to a different node, the jobs may not appear on the NMC Monitoring pane.	<ol style="list-style-type: none"> 1. Restart the GST service on NMC. 2. After the NetWorker Server role is started, ensure that the <code>authc-server</code> folder is created under the <code>shared_disk\nsr\</code> folder. 3. If the folder does not exist, stop and start the NetWorker Server role.
18.2	278459	Cluster	After you configure a three-node NetWorker server cluster, the <code>nsrd</code> 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
18.2	299825	Snapshot Management	<p>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.</p> <hr/> <p>Note</p> <p>This issue impacts all existing Cloud Tier supported versions of NetWorker.</p>	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.
18.2	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.
18.2	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.	
18.2	272650	Snapshot Management	An error occurs when configuring NSM with XtremIO snapshots.	See Configuring NSM with XtremIO snapshots on page 37 for the workaround procedure.

Table 11 NSM issues (continued)

Impacted NetWorker versions	Defect number	Feature	Description	Workaround
18.2	288129	Snapshot Management	An error occurs when configuring NSM with NetApp NAS snapshots.	See Configuring NSM with NetApp NAS snapshots on page 39 for the workaround procedure.
18.2	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. Ensure that the target path has the same files and directories that were selected for the recovery before starting the restore.	
18.2	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.
18.2	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: <pre>FileSystem inconsistent error</pre> <p>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.</p>	Retry the backup or recover operation.
18.2	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
18.2	305118	NDMP	NDMP backup is marked successful in NMC, even if one of the two Isilon Multistream Backup fails.	
18.2	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 <code>ndmp_savedbg</code> in the <code>C:\Program Files\EMC Networker\nsr\debug\</code> folder on Windows, or the <code>/nsr/debug</code> directory on Linux. On Windows platforms specifically, a NetWorker services restart is also required for the change to take effect.
18.2	281876	NDMP	When you perform a NDMP 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
18.2	305153	CLI	The visual mode of <code>nsradmin</code> displays additional Known types options when compared to the text mode.	
18.2	299060	CLI	Running the <code>mminfo</code> 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.	

Table 13 NetWorker utility issues (continued)

Impacted NetWorker versions	Defect number	Feature	Description	Workaround
18.2	261585	Command prompt	When you log in to NetWorker as the root user by executing the <code>nsrlogin</code> command and do not run <code>nsrlogout</code> when completed with the session, the session expires and subsequent commands run by this user, such as NDMP backups, may fail with a "Security token has expired" error.	If you use <code>nsrlogin</code> to run NetWorker commands while logged in as an LDAP or authc local user, then it is recommended that you always run <code>nsrlogout</code> when completed with the session. If subsequent operations fail with the error "Security token has expired" and the root login is enabled, then run <code>nsrlogout</code> as the root user on the server.
18.2	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.	
18.2	ESC 26376	Command prompt	When you run <code>savefs</code> to backup a file system and specify a trailing forward slash "/" in the path, as in <code>/DSE/mnt/</code> , NetWorker does not list the file system.	Remove the "/" at the end of the path. For example, specify <code>/DSE/mnt</code> instead of <code>/DSE/mnt/</code> .
18.2	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: <code>/opt/networker/bin/ nsr_mk_cluinfo[19]: /etc/ cmcluster/.nsr_cluinfo: Cannot create the specified file.</code>	
18.2	182642	Command prompt	Using the <code>recover</code> command with the <code>-a</code> option to recover all files backed up in a mount point does not recover all files when you also specify a "/" after <code>-a</code> . For example, <code>recover -a / -d /home</code>	

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
18.2	279580	Data Domain	You cannot clean up Data Domain retention-locked save sets from NetWorker by using <code>nsrmm</code> , <code>nsrim</code> , 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.	
18.2	276299	Devices	When you run the <code>mminfo</code> command with the <code>-q</code> option, the output returns stale entries of save set information even when the media is deleted.	Delete individual save sets using the <code>nsrmm -d -S <saveset_id></code> command.
18.2	276479	Devices	When you run the <code>mminfo</code> command with the <code>-m</code> option, an extra row appears in the output. This issue does not impact functionality.	Relabel the volume and run the <code>mminfo -m</code> command again.
18.2	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: The selected CloudBoost Appliance is unsupported for device type CloudBoost.	Update the missing host entries for NetWorker and CloudBoost in the following locations. For CloudBoost: <ul style="list-style-type: none"> <code>/etc/hosts</code> <code>/opt/maginatrics/active/mgt_console/resources/templates/hosts.erb</code> For NetWorker: <ul style="list-style-type: none"> <code>/etc/hosts</code> <code>/nsr/res/servers</code>
18.2	2621 Bug Numbers: 166266 and 173665 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: <ol style="list-style-type: none"> Upgrade to the DDOS builds with the fix either 5.7.3.0 and later, or 6.0.1.0 and later. In the Data Domain system issue, the following command: <code>ddsh -s se sysparam set FM_GET_ACCURATE_COMP_STATS=TRUE</code>
18.2	241611	Data Domain	DFC does not work when encryption strength is set to <code>High</code>	Set the encryption strength for the client "*" on the DD OS to <code>None</code> :

Table 14 Device and media issues (continued)

Impacted NetWorker versions	Defect number	Feature	Description	Workaround
				<ul style="list-style-type: none"> From the CLI, display the current configuration by running <code>ddboost clients show config</code>, and then change the configuration by running <code>ddboost clients modify encryption-strength none *</code>. From the Data Domain system manager GUI, navigate to Data Management > DD Boost > Settings and edit the settings for client "*" "
18.2	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.
18.2	Devices		<p>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:</p> <ul style="list-style-type: none"> Tapes that are prematurely treated as full. Corrupted data on tapes.	See Bus reset can rewind tape on Microsoft Windows on page 37 for more information and workaround details.
18.2	229440	ProtectPoint	<p>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:</p> <pre>Failure during initial sync. sts: SYMAPI_C_FAILED_REMOTE_LO AD</pre> <p>After the roll back restore failure, the RDF device pairs might remain in the SyncInProg state and might need to be manually synchronized.</p>	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
18.2	301861	Data Domain	When the back up data spans across multiple data domain VTL device, then NMC displays the following error: 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

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

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 <vservname>:/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 18.2, 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/elb/elhome>.
- *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 18.2 with CloudBoost 18.2 Integration Guide*
Describes the integration of NetWorker with CloudBoost.
- *NetWorker 18.2 with CloudBoost 18.2 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.

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