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RELEASE NOTES

# EMC® NetWorker® Module for Microsoft SQL Server

Release 5.2 Service Pack 1

# Release Notes

P/N 300-008-658
Rev A01

May 12, 2009

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These release notes contain supplemental information about EMC NetWorker Module for Microsoft SQL Server, release 5.2 SP 1. Topics include:

## Revision history

The following table presents the revision history of this document.

| Revision | Date | Description |
|---|---|---|
| A01 | May 22, 2009 | First release of the product. |

## Product description

The EMC® NetWorker® Module for SQL Server, release 5.2 SP 1 provides several quality enhancements and bug fixes.

## New features and changes

This NetWorker Module release includes the following new or enhanced features, as well as problem fixes. "Fixed problems" on page 2, contains a list of problems fixed for this release.

The following are features added to this release:

- IPv6 support with NetWorker client, storage nodes, and servers configured for IPv6 support.
- Integration with the NetWorker 7.5 Client Configuration Wizard. This wizard enables simple backup configuration of the NetWorker Module for SQL Server client. To use the Configuration Wizard, NetWorker 7.5 or later server and client must be installed.
- Support for NetWorker Software Distribution feature. This module can be installed on multiple machines by using the NetWorker 7.4 or later software distribution framework.

  **Note:** Upgrading from NetWorker Module for SQL Server 5.0 to any later version is not available on x64 and ia64 platforms with this feature. Use the NetWorker Module installation program to upgrade on these platforms. Upgrading from NetWorker Module for SQL Server 5.1.*x* to a newer version is supported on these platforms.

- Language support for Simplified Chinese, Korean, French, and Japanese.

## Fixed problems

Table 1 on page 3 lists the problems fixed in the NetWorker Module 5.2 SP 1 release. The latest software is available on Powerlink at **Support > Software**

**Downloads and Licensing > Downloads J-O / NetWorker Module > NetWorker Module for SQL Server.**

Table 1 Problems fixed for release 5.2 SP 1

| Issue number | Description |
|---|---|
| LGTpa84693 | Some backup options are reset after reconnecting to a SQL instance in the backup session. |
| LGTpa80579 | Scheduled backup always full in database mirroring due to invalid authorization. |
| LGTpa82140 | Mixed SQL Server setup shows only default instance in the NetWorker configuration wizard. |
| LGTsc20308 | Incorrectly named option for recover operation. |
| LGTpa85286 | Restore options make logtail promote to full in continuous restore. |
| LGTpa80484 | In a piecemeal restore, the "Mark the file group to display" list shows a file group that has not yet been backed up. |
| LGTsc11869 | Forced rollback of online SQL Server database fails. |
| LGTsc18909 | Level information not showing up when monitoring manual backup jobs. |

**Note:** The most up-to-date product issues for EMC NetWorker Module for Microsoft SQL Server are detailed online in the EMC Issue Tracker available on the EMC® Powerlink® website: http://Powerlink.EMC.com.

# Environment and system requirements

Release 5.2 SP 1 supports the following client configurations. Supported configurations occasionally change after release. The *EMC Information Protection Software Compatibility Guide* provides the latest list of supported configurations.

## Supported operating systems

This module supports the following editions of Microsoft Windows:

- Windows 2000 (x86) with the latest service packs
- Windows Server 2003 (x86, x64, IA64) with the latest service packs
- Windows Server 2003 R2 (x86, x64, IA64) with the latest service packs
- Windows Server 2008 (x86, x64) with the latest service packs

See "Microsoft Windows and SQL Server compatibility" on page 4 for SQL Server and operating system compatibility with this module.

## Microsoft SQL Server

The NetWorker Module for Microsoft SQL Server software supports the following versions of Microsoft SQL Server:

- Microsoft SQL Server 2008 Express, Workgroup, Standard, Web, Compact, and Enterprise editions
- Microsoft SQL Server 2005 Express, Workgroup, Standard, and Enterprise editions
- Microsoft SQL Server 2000 Standard and Enterprise editions

### Microsoft Windows and SQL Server compatibility

NetWorker Module for Microsoft SQL Server is compatible with Microsoft Windows and Microsoft SQL Server, as shown in Table 2 on page 4.

**Table 2 NetWorker Module compatibility**

| SQL Server versions | Windows Server versions | Cluster support |
|---|---|---|
| SQL Server 2008 (x86, x64)<br>SQL Server 2005 (x86, x64) | Windows Server 2008 (x86, x64) | Windows Server 2008 Enterprise edition<br>Windows Server 2008 Datacenter edition |
| SQL Server 2008 (x86, x64, IA64)<br>SQL Server 2005 (x86, x64, IA64) | Windows Server 2003 R2 (x64, x86, IA64)<br>Windows Server 2003 (x64, x86, IA64)<br>Windows 2000 (x86) | Windows Server 2003 Enterprise edition<br>Windows Server 2003 Datacenter edition<br>Windows 2000 Advanced Server<br>Windows 2000 Datacenter Server |
| SQL Server 2000 (x86, IA64) | Windows Server 2003 R2 (x64, x86, IA64)<br>Windows Server 2003 (x64, x86, IA64)<br>Windows 2000 (x86) | Windows Server 2003 Enterprise edition<br>Windows Server 2003 Datacenter edition<br>Windows 2000 Advanced Server<br>Windows 2000 Datacenter Server |

- With the Windows Server 2003 x64 operating system, the SQL Server, NetWorker, and the module software are supported in native mode. This module software does support SQL Server running in WOW64 mode.
- A Microsoft hotfix is required for the module running on Windows Server 2003 x64 with SQL Server 2000. SQL Server 2000 Virtual Device Interface (**Sqlvdi.dll**) is a 32-bit DLL. The 64-bit Volume Shadow Copy Service (VSS) writer that is included with the x64 edition of Windows Server 2003 requires an x64 edition of **Sqlvdi.dll** to work correctly. The Microsoft knowledgebase article http://support.microsoft.com/kb/913100/ provides more information.

## NetWorker PowerSnap Module

The NetWorker PowerSnap™ Module software is required only if the NetWorker Module for Microsoft SQL Server software is to perform snapshot backup and recovery operations. For recovery of snapshot backups, PowerSnap Module software is *not* required on the target SQL Server host.

For snapshot backup support, the SQL Server host must have a supported snapshot-capable storage subsystem.

PowerSnap Module software requirements are as follows:

- The SQL Server host must have the appropriate PowerSnap Module installed to recover a PowerSnap saveset backup.
- A computer other than the SQL Server host is required as the PowerSnap datamover (proxy client), the data mover host must have the following software installed:
  - NetWorker software release 7.4 or later
  - PowerSnap Module software appropriate for the storage subsystem

Table 3 on page 5 lists configurations for snapshot backup and recovery with NetWorker Module for SQL Server, release 5.2 and later.

**Table 3 NetWorker Module and PowerSnap support**

| SQL Server versions | Operating System versions | PowerSnap Arrays |
|---|---|---|
| SQL Server 2008 (x86)<br>SQL Server 2005 (x86)<br>SQL Server 2000 (x86) | Windows Server 2003 R2 (x86)<br>Windows Server 2003 (x86) | PowerSnap for Symmetrix DMX™ |
| SQL Server 2008 (x86, x64)<br>SQL Server 2005 (x86, x64)<br>SQL Server 2000 (x86) | Windows Server 2003 R2 (x86, x64)<br>Windows Server 2003 (x86, x64) | PowerSnap for CLARiiON® |
| SQL Server 2008 (x86)<br>SQL Server 2005 (x86)<br>SQL Server 2000 (x86) | Windows Server 2003 R2 (x86)<br>Windows Server 2003 (x86) | PowerSnap for RecoverPoint |

See the PowerSnap documentation and the *EMC Information Protection Software Compatibility Guide* for additional information.

## NetWorker software

The NetWorker client software must be installed on the SQL Server host computer. For more information about the installation requirements for NetWorker client software, refer to the appropriate *EMC NetWorker Installation Guide*.

The NetWorker software requirements for NetWorker Module for Microsoft SQL Server software are as follows:

- NetWorker client and server software release 7.4 or later for internationalization and localization support.
- NetWorker client and server software release 7.4.2 or later for Windows Server 2008 and SQL Server 2008 support.

  **Note:** The nsr_render_log is required to view module logs and is supplied with NetWorker 7.4 and later releases. For releases prior to 7.4, this can be obtained from EMC Customer Support.

- NetWorker client and server release 7.5 or later for Client Configuration Wizard support.

NetWorker Module for Microsoft SQL Server software can connect to and interact with a NetWorker server running on any supported operating system platform.

**Note:** The NetWorker Configuration Wizard will not work with SQL Server 2008 unless the "Microsoft SQL Server 2005 Backward Compatibility Components" package is installed. The Configuration Wizard uses SQL-DMO to communicate with SQL Server, which was removed from SQL Server 2008. The backward compatibility package can be downloaded from http://www.microsoft.com/downloads/.

## Space requirements for language support

Make sure that the minimum space, listed in Table 4, Table 5, and Table 6, is available before installing the NetWorker Module.

**Table 4 Space requirements for 32-bit platforms**

| Installation type | Space needed |
|---|---|
| Typical - English | 6.8 MB |
| Typical – French | 11.7 MB |
| Typical – Japanese | 22.4 MB |
| Typical – Korean | 19.4 MB |
| Typical – Simplified Chinese | 16.4 MB |
| Custom – NetWorker Module software | 6.0 MB |
| Custom – Language Pack – French | + 4.9 MB |
| Custom – Language Pack – Japanese | + 15.6 MB |
| Custom – Language Pack – Korean | + 12.6 MB |
| Custom – Language Pack – Simplified Chinese | + 9.5 MB |

**Table 5 Space requirements for x64 platforms**

| Installation type | Space needed |
|---|---|
| Typical - English | 9.1 MB |
| Typical – French | 14.0 MB |
| Typical – Japanese | 24.8 MB |
| Typical – Korean | 21.7 MB |
| Typical – Simplified Chinese | 18.6 MB |
| Custom – NetWorker Module software | 8.3 MB |
| Custom – Language Pack – French | + 4.8 MB |
| Custom – Language Pack – Japanese | + 15.6 MB |
| Custom – Language Pack – Korean | + 12.5 MB |
| Custom – Language Pack – Simplified Chinese | + 9.5 MB |

Table 6 Space requirements for ia64 platforms

| Installation type | Space needed |
|---|---|
| Typical – English only | 15.6 MB |

# Known problems and limitations

The following sections describe known problems in this NetWorker Module for SQL Server release and procedures to work around these problems, if available:



## Limitations in backup operations

This section describes backup limitations with the NetWorker Module for SQL Server release 5.2 SP1 software.

### Support for Microsoft SharePoint Portal Server

The NetWorker Module for SQL Server can perform backups of the SQL Server databases in the SharePoint Portal Server environment. However, backup and recovery of the full SharePoint environment is not supported by this NetWorker Module.

Additional information regarding backup and restore operations by using NetWorker software on the various versions of SharePoint Portal Server, can be found in Technical Bulletin 393. The EMC NetWorker Module for Microsoft.

### Warning message appears for SQL Server 2008 filestream databases (LGTsc29125)

The SQL Module displays a warning message when the "FILESTREAM for Transact-SQL access level" option is enabled for a database. The same warning appears for databases with the "FILESTREAM for file I/O streaming access" option selected.

The the third option "Enable FILESTREAM for file I/O streaming access" does not produce the warning.

This is as designed. To perform a backup or restore, the module needs the higher access level (stream level access) for both the local and remote client.

### Do not schedule incremental backups while a full backup is running (LGTsc29366)

The SQL Module does not handle incremental backups of a database taken while a full backup is in progress. When the database is restored, the recover plan incorrectly includes the overlapped incremental backup. This will fail with a 'log sequence out of order' error.

To work around this issue:

- Schedule full backups of a large database for a specific time of day. Schedule incremental backups frequently during the day such that none of them occur during the full backup.
- Use the **-z** option to construct a recovery plan that does not include the overlapped incremental backup.

  For backups such as:

```
Full start
Incremental1 start
Incremental1 end
Full end
Incremental2 start
Incremental2 end
...
IncrementalN start
IncrementalN end
```

  The SQL Module code will generate the recovery plan as:

```
Full
Incremental1
Incremental2
...
IncrementalN
```

  This can be modified to specify individual restore commands for the full backups and incremental backups 2 through N.

```
nsrsqlrc ... -S norecovery -t "time of the Full backup"
nsrsqlrc ... -z -S norecovery -t "time of Incremental2"
...
nsrsqlrc ... -z -t "time of IncrementalN"
```

  **Note:** The module can be used to generate template command lines to assist in this process (run **nwmssql.exe -t**). The backup history, with the time values to use with the **-t** option are available in the database properties dialog.

### Backup needs client local credentials, though client is in the domain (LGTsc29310)

Backup requires local administrator values in the remote access field of the client, even though it is connected to the domain in SQL fail over cluster setup.

### Account for structural database changes during backup cycle (LGTsc29532, LGTsc29536, LGTsc26472, LGTpa33202)

If the logical or physical structure of a database is changed during a backup cycle, recovery of data will not be possible beyond the point of the change. For example, if a full backup of a database is performed, then a physical or structural change is made to the database followed by an incremental backup, a restore of the database will fail with the following error:

```
Microsoft SQL Server Provider error:
Logical file 'File2' is not part of database 'CopyOfLGTsc26472'. Use
RESTORE FILELISTONLY to list the logical file names.
```

The SQL Module does not employ RESTORE FILELISTONLY. To work around this issue, perform a full backup to prevent recovery failures if you make physical or logical file or filegroup structure changes.

Changes internal to the database such as adding or removing tables, changing the relational structure of the database, or adding, removing, or updating data will not cause this error.

## Limitations in restore operations

This section describes restore limitations.

### SQL FLIR to Mirror cannot restore to Symmetrix clones (LGTsc27939)

Running a SQL instance restore to a Symmetrix BCV clone device fails with the following error:

```
[SymmResourceManager.cpp 1030] device (000190300791:48F) is a Clone
target.
Skipping ..
[SCEmcSymm.cpp 856] Error allocating Resource : No available devices
found.
```

This is a restriction for SQL BCV clone restores.

### Datamover name is mis-handled for copy restore operations (LGTsc07633)

Specifying a datamover at the command line for a copy restore operation works correctly the first time, but is set to the client host name thereafter.

To work around this issue, restart the NetWorker Module for SQL Server for each copy restore from a snapshot.

### Verify-only restore of stripped backup fails (LGTsc27309)

Verify restore of stripped backup fails if there are less number of tapes than the tapes used for backup. Normal and copy restore succeeds.

The following error appears:

```
The media set has 2 media families but only 1 are provided. All
members must be provided.
```

The verify-only restore works correctly if the same number of devices is used to restore as were used for the backup.

## Limitations with snapshot backups or restores

### AES encryption is not supported for snapshot backups (LGTsc28736)

AES encryption is not supported for snapshot operations.

### PowerSnap does not allow a copy restore to the same source path as the backup (LGTsc27938, LGTsc20880)

A copy restore for snapshot backup fails when the destination is the same as the source. Both the data file and log file destinations must be different. Even if one of them has the same destination as its source, the copy restore will fail.

To work around this issue, make sure that the restore location is not the same as the source. If the log file and data file destinations are exchanged, the restore is successful. A restore is also successful when a new directory is made in the source folder and the destination is provided to be that directory.

#### Two backup sessions are seen for a backup of multiple filesystems (LGTsc21299)

When a snapshot backup is performed for multiple filesystems on a single disk, two backup sessions display in the NetWorker Management Console with two different IDs.

The two backups sessions are due the way the SQL Module works. The module first queries for the list of snapshottable objects and then opens a session for the snapshot. Disregard the extra session.

#### SQL FLIR to mirror cannot restore to Symmetrix clones (LGTsc20093)

The PowerSnap restore option **-A symm_snap_tech=clone** is not recognized by the NetWorker Module for SQL Server program at this time.

#### SQL Server backup looks for media on local node even though a storage node is configured (LGTsc11947)

A SQL Server backup may generate a "media waiting" event and seek a local device even when a remote storage node with a snapshot pool is configured.

Workaround: Create and mount a local device for backups even if using a remote storage node.

#### Instant restore of a single SQL Server filegroup fails (LGTsc11882)

Restoring a single SQL Server filegroup from a snapshot may fail.

Workaround: Restore the entire SQL Server database.

#### With a PowerSnap and SQL Module FLIR piecemeal restore option set, the system drive is unmounted and the recover fails (LGTsc06169)

With Microsoft Windows Server 2003, image recovery workflow, and a FLIR using a mirror-type recovery with the piecemeal restore option set in the SQL Module interface, the system drive becomes uninstalled and the recover fails.

Workaround: Select the normal restore type option in the SQL module interface. Do not select the piecemeal restore option.

#### FLIB backup of a SQL database on a single volume is successful, but with trace log (LGTpa88729)

A FLIB backup of a SQL database on a single volume with the PowerSnap Module is successful. The NetWorker Module for SQL Server backs up the database files, transaction logs, and the metadata objects. The metadata objects are typically on the C:\ drive, which cannot be snapped. The backup of these objects fails over to a conventional PowerSnap Module backup, which causes creation of the trace log file. The trace log file is not a problem.

#### Filegroup recover causes xlog backup to fail and xlog recover fail (LGTsc20360)

When performing a conventional filegroup recovery from a snapshot backup that is rolled over to a file device, the recovery happens and the transaction log backup after that fails with the message:

```
Database <DB_Name> is loading, it can not be backed up.
```

The database is left in the restoring state.

This does not happen for non-snapshot backups.

## Limitations with NetWorker

### NetWorker Configuration Wizard on a SQL Server 2008 client requires the Microsoft SQL Server 2005 Backward Compatibility Components package (LGTsc28207)

When using the wizard to add a new client on the NetWorker server, a crash can occur on a SQL Server 2008 client.

To work around this problem, install the SQL Server 2005 Backward Compatibility Components from the Microsoft web site:

http://www.microsoft.com/downloads/

For x64 operating systems, apply the SQL Server 2005 SP2/SP3 package.

## Limitations on internationalization

This sections describes limitations on internationalization.

### The NetWorker Module for SQL Server software does not provide cross-language support

Cross-language support is defined as any operation that involves SQL objects whose names are in languages that are different from the host system's default user language. Starting with release 3.1.1, the this NetWorker Module software does *not* support any cross-language environments or configurations.

### Timestamp support

This module software supports only timestamps in this format:

```
-t "Thu Jan 30 10:30:59 2006"
```

### String input limitations

Non-Latin characters are allowed for attributes in the NetWorker User for SQL Server program and for any value specified for a command option.

Windows and Microsoft SQL Server impose limits on the size of resource strings. For example, Microsoft SQL Server allows up to 128 characters in the name of a SQL object.

The NetWorker software also imposes a 128-byte limit on string length. A Latin alphabet string of 128 characters is composed of 128 bytes because Latin letters can be represented by a single byte. Chinese, however, requires three bytes to represent a single character. To fit into 128 bytes, a Chinese string cannot exceed 42 characters. Some European languages, like German, require two bytes to represent a single character. To fit into 128 bytes, a German string cannot exceed 64 characters.

Table 7 on page 12 lists the limits on the string size of command options for the NetWorker Module software commands **nsrsqlsv** and **nsrsqlrc**.

**Table 7 Command option string size limits**

| Commands and options | Command | String-size limit |
|---|---|---|
| Instance name | **nsrsqlsv** or **nsrsqlrc** | 16 bytes |
| Database name | **nsrsqlsv** or **nsrsqlrc** | 128 bytes |
| Database filegroup name | **nsrsqlsv** or **nsrsqlrc** | 128 bytes |
| Database filename | **nsrsqlsv** or **nsrsqlrc** | 128 bytes |
| Directory paths (relocation lists for **-C** and **-S**) | **nsrsqlrc** | 260 bytes |
| **-P** (password) | **nsrsqlsv** or **nsrsqlrc** | 128 bytes, limited by SQL Server on English language systems and by NetWorker software on non-English language systems |
| **-U** (username) | **nsrsqlsv** or **nsrsqlrc** | 128 bytes, limited by SQL Server on English language systems and by NetWorker software on non-English language systems |
| **$** (instance name) | **nsrsqlsv** or **nsrsqlrc** | 16 bytes, limited by SQL Server on English language systems and by NetWorker software on non-English language systems |
| **-C** (file configuration, relocation list) | **nsrsqlrc** | 260 bytes, limited by Windows on English language systems and by NetWorker software on non-English language systems |
| **-d** (copy operation) | **nsrsqlrc** | 128 bytes, limited by Windows on English language systems and by NetWorker software on non-English language systems |
| **-M** (log mark name) | **nsrsqlrc** | 32 bytes, limited by SQL Server on English language systems and by NetWorker software on non-English language systems |
| **-R** (partial filegroup list) | **nsrsqlrc** | 128 bytes, limited by Windows on English language systems and by NetWorker software on non-English language systems |
| **-S** (standby file) | **nsrsqlrc** | 260 bytes, limited by SQL Server on English language systems and by NetWorker software on non-English language systems |

NetWorker server resources, such as Device, Pool, and Group resources, can be configured by using non-Latin characters, since they are created by the NetWorker Administrator program and are transparent to the NetWorker Module software.

### Mid-level user accounts to enable copy restore

In order to select other client machines as the source of a copy restore, the destination machine and an appropriate user account or group must be specified in the list of NetWorker administrators on the NetWorker Server.

To avoid placing numerous backup operators in the administrators list, which grants them all privileges, you can do the following:

1. In the NetWorker Administrator program, create a User Group with a name of your choosing and in the Comment field describe it as "Enable copy restore with NMSQL."
2. Add a user to the new group as user_account@*fully qualified domain name*. The hostname and the domain name together make up the fully qualified domain name.
3. Select all privileges, except "Change security settings" and "Configure NetWorker." All other settings are required once the "Remote access all clients" privilege is specified.

This allows user_account, and only user_account, to copy restore to the fully qualified domain name (FQDN), and only to FQDN. Other users and/or machines can be added as needed.

For more information about managing NetWorker server access, refer to the *EMC NetWorker Administration Guide*.

### Limitations in Documentation

The following is a known issue with the documentation.

#### Items need to be fixed in the online help (LGTsc29917)

Two items were not fixed in the online help before the delivery of 5.2 SP 1:

- On the **Properties Dialog Box for Backup Operation** help topic, the section **Perform checksum before writing to media** mentions SQL Server 2005 but not SQL Server 2008.
- The **Setting Backup Options** help topic should be modified to list and describe the two compression options that show up in the Backup Options window. They are **Compress the backup content (using SQL server)** and **Compress the backup content (using NetWorker)**. It should also be noted that the **Compress the backup content (using SQL server)** checkbox displays only when dealing with a SQL Server 2008 instance. The current page just describes XBSA compression.

## Technical notes

There are no technical notes to report for this release. All installation, configuration, and product information is provided in the EMC NetWorker Module for Microsoft SQL Server documentation.

## Documentation

For information on installing and using the NetWorker Module software, refer to these additional EMC NetWorker Module for Microsoft SQL Server, release 5.2 SP1 documentation sources:

- Installation guide
- Administration guide
- NetWorker User for SQL Server online help

These EMC NetWorker resources are specific to the NetWorker server version, and are also available:

- Administration guide
- Installation guide
- Release notes
- Command reference guide
- Error message guide
- Disaster recovery guide

Other useful EMC resources are:

- PowerSnap Module installation and administration guide (for the appropriate PowerSnap Module)
- Technical Bulletin 393: Using NetWorker Module for Microsoft SQL Server to Back Up and Restore Microsoft SharePoint Product Databases

The complete set of EMC documentation is provided in PDF form on the Documentation Suite CD-ROM shipped with the EMC software. The most up-to-date documentation is available at www.support.EMC.com.

## Software media, organization, and files

This section is currently not applicable to the NetWorker products.

## Installation

Complete installation procedures are provided in the *EMC NetWorker Module for Microsoft SQL Server Installation Guide*.

## Troubleshooting and getting help

EMC support, product, and licensing information can be obtained as follows.

**Product information —** For documentation, release notes, software updates, or for information about EMC products, licensing, and service, go to the EMC Powerlink website (registration required) at:

`http://Powerlink.EMC.com`

**Technical support —** For technical support, go to EMC Customer Service on Powerlink. To open a service request through Powerlink, you must have a valid

support agreement. Please contact your EMC sales representative for details about obtaining a valid support agreement or to answer any questions about your account.