SnapManager® 7.2.1 for Microsoft® SQL Server®

Release Notes

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NetApp®

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Updates to these release notes

NetApp occasionally issues updates to release notes between product releases as new information becomes available. Review these updates carefully.

May 2015 update

The “Known limitations” topic has been updated to clarify that the SnapMirror and SnapVault limitation exists when using SnapDrive 7.1 for Windows and not SnapDrive 7.1.1 for Windows.

April 2015 update

The “Verifying support for your configuration in the IMT” topic has been updated to note that the Interoperability Matrix no longer lists the supported protocols for SnapManager for Microsoft SQL Server.

March 2015 update

The “Upgrade notes” topic has been updated to note that Virtual Storage Console 4.2.2 for VMware vSphere is required for VMDK support.

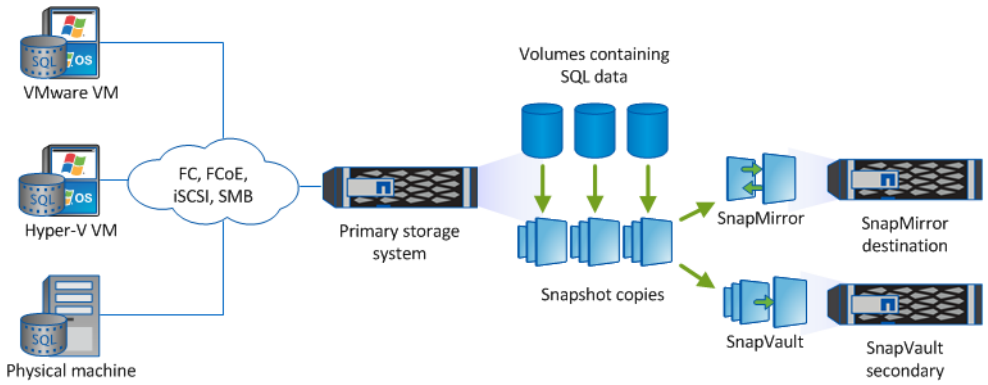
Related concepts

Upgrade notes on page 7

Product overview

SnapManager for Microsoft SQL Server is a host-side component of the NetApp integrated storage solution for SQL Server, offering application-aware primary Snapshot copies of SQL databases. You can use SnapManager with Data ONTAP SnapMirror technology to create mirror copies of backup sets on another volume, and with Data ONTAP SnapVault technology to archive backups efficiently to disk.

Together these tools offer a complete Snapshot-based data protection scheme that is as scalable, reliable, and highly available as the underlying storage system. The following illustration shows the components in a SnapManager deployment with clustered Data ONTAP:



SnapManager highlights

SnapManager features seamless integration with Microsoft products on the Windows host and with NetApp Snapshot technology on the back end. It offers an easy-to-use, wizard-based administrative interface.

- *Integration with the Microsoft Volume Shadow Copy Service (VSS)* ensures that write requests are frozen and write caches are flushed before backups are taken. SnapManager supports Windows Volume Manager, Windows Server Failover Clustering, Microsoft Multipath I/O (MPIO), and SQL Server AlwaysOn Availability Groups.
- *Fast, nondisruptive Snapshot technology* using NetApp SnapDrive for Windows software enables you back up databases in seconds and restore them in minutes without taking SQL Servers or databases offline. Snapshot copies consume minimal storage space. You can store up to 255 copies per volume.
- *Automated central administration* offers hands-off, worry-free data management. You can schedule routine SQL Server database backups, configure policy-based backup retention, set up point-in-time and up-to-the-minute restore operations and proactively monitor your SQL Server environment with periodic email alerts. PowerShell cmdlets are available for easy scripting of backup and restore operations.

In addition to these major features, SnapManager offers the following:

- Integrated FlexClone software enables you to create space-efficient point-in-time copies of production databases for testing or data extraction (FlexClone license required)
- Simplified migration of existing databases to NetApp storage with an easy-to-use Configuration wizard
- Nondisruptive, automated backup verification

- Fast reseeding of databases in an AlwaysOn cluster
- Federated database backup of multiple SQL Server instances and databases
- Support for backup of LUNs, SMB shares, and VMDKs
- Support for physical and virtualized infrastructures
- Support for iSCSI, Fibre Channel, FCoE, RDM, and VMDK over NFS and VMFS

New in this release

SnapManager 7.2.1 for Microsoft SQL Server includes critical bug fixes.

Related references

New and changed commands on page 9

Related information

SnapManager 7.2 for Microsoft SQL Server Administration Guide

Fixed issues

It is a good practice to review the known issues fixed in a new release before upgrading to it. If a Bugs Online report is available, the bug ID contains a hyperlink to the report.

Bug ID	Description
873244	SnapManager does not support a SnapVault or SnapMirror update of a cloned volume.
892393	An exception error message is displayed in SnapManager 7.2 when scheduling jobs using the configuration wizard.
875669	SnapManager for Microsoft SQL Server backup and restore operations are slow with native SnapVault when there are large number of secondary Snapshots.
980046	Clone operation for SnapManager for Microsoft SQL Server fails as the `GetSortedSnapshot` is unable to sort the SnapList correctly.
922917	SnapManager for Microsoft SQL Server clone from SnapVault backup connects to the SnapMirror destination.

Upgrade notes

Upgrade notes describe new requirements and changes in support between the last release of the product and this one, including any deprecated features. Review this information carefully before upgrading to the new release. See the NetApp Interoperability Matrix (IMT) for supported configurations and the product user documentation for complete system requirements.

Supported upgrade path

You can upgrade to SnapManager 7.2.1 for Microsoft SQL Server from SnapManager 5.2.1 and later.

Changes to host requirements

- At a minimum, SnapDrive for Windows 7.1 is required for performing split, clone-of-clone, and delete operations.
- At a minimum, OnCommand Unified Manager Core Package 5.2R1 is required for SnapVault support with Data ONTAP operating in 7-Mode environments.
- Virtual Storage Console 4.2.2 for VMware vSphere is required for VMDK support.

This version is required because it enables SnapManager to back up cloned databases and to clone already cloned databases that reside on VMDKs.

Verifying support for your configuration in the IMT

You can use the NetApp Interoperability Matrix (IMT) to verify product support for your configuration: Data ONTAP software, host operating system, and so on. Verify support for your configuration before you install or upgrade to the new release.

About this task

Note: The IMT no longer lists the supported protocols for SnapManager for Microsoft SQL Server. Protocol support for SnapManager is defined by the version of SnapDrive in your environment, so you should refer to the protocol support listed for your version of SnapDrive for Windows in the IMT.

Steps

1. Access the IMT.

   NetApp Interoperability Matrix Tool

2. If **SnapManager for Microsoft SQL Server (SMSQL)** is not the selected Storage Solution, click **Change** and select it under the **Database Suite** category.

3. In the **Component Explorer** pane, select each component you want to verify and click **Add** when prompted.

   When you add an item, incompatible items are grayed out.

   Tip: Select the parent of a set of components to select all of its children.

4. When you are satisfied with your choices, click **Show Results**.

   The IMT lists each supported configuration.

5. You can:

   - Scroll across a configuration to view the supported components and any notes or alerts for the configuration.
   - Click the configuration name to display complete information for supported components, including support history and NetApp policies and guidelines for the selected Storage Solution category.

6. If no results are returned for your configuration, use the feedback wizard to report the problem to NetApp:

   a. Click **Feedback** in the upper right corner of the IMT.

   b. Select **I cannot find my configuration**, then click **Next**.

   c. Choose **SnapManager for Microsoft SQL Server (SMSQL)** in the **Solution** drop-down, then type your comments and click **Submit**.

New and changed commands

Review these changes to product commands before upgrading to the new release. You need to be sure that the changes will not break any scripts that you use to execute the commands.

cmdlet	Change
`split-clone`	This cmdlet enables you to split the cloned database from the parent database.

Important cautions

Important cautions identify issues that might cause data loss or system failure. You should review these cautions carefully.

Accessing dedicated and shared LUNs after transition

After transitioning LUNs from a 7-Mode environment to clustered Data ONTAP using the 7-Mode Transition Tool, perform the following actions to access the dedicated and shared LUNs.

Before you begin

You must review the 7-Mode Transition Tool capabilities and limitations to understand the impact of these limitations on your transitioned LUNs. See the 7-Mode Transition Tool documentation.

Steps to manage the transitioned LUNs

1. Add the clustered Data ONTAP IP address and credentials in the transport protocol settings in SnapDrive for Windows.
2. Create iSCSI sessions from SnapDrive for Windows to the iSCSI LIFs to identify the LUNs in the clustered Data ONTAP cluster.
3. Re-attach the databases on transitioned LUNs to Microsoft SQL Server.
   These databases are made unavailable as part of the transition.
4. Continue with the normal backup operations.

Verification and restore operations from transitioned Snapshot copies are not supported

You cannot perform backup verification and restore operations using Snapshot copies that reside on LUNs that have been transitioned from a 7-Mode environment to clustered Data ONTAP using the 7-Mode Transition Tool. However, you can back up, verify, and restore from the new Snapshot copies that you create.

The verification and restore operations have the following limitations:

- Verification and cloning of transitioned Snapshot copies are not supported.
- Restore operations from transitioned Snapshot copies are not supported.
- Transition from Virtual Machine Disk (VMDK) is not supported because Virtual Storage Console (VSC) does not support the 7-Mode Transition Tool.

Restore of a single database using SnapManager for Microsoft SQL Server might cause the other databases to become unusable

When two or more databases are sharing the same LUN and only one database is selected for restore operation using SnapManager for Microsoft SQL Server, the other databases that are not selected for restore operation might become unavailable.

You might face this issue in any of the following scenarios:

- The SQL browser service is currently not running or is disabled.
- The UDP Port 1434 is filtered by the firewall.

Related information

7-Mode Transition Tool 2.0 Data and Configuration Transition Guide
7-Mode Transition Tool 2.0 SAN Host Transition and Remediation Supplemental Guide
7-Mode Transition Tool 2.0 Release Notes

Known limitations

Known limitations identify platforms, devices, or functions that are not supported by this release of the product, or that do not interoperate correctly with it. Review these limitations carefully.

SnapMirror and SnapVault relationships not supported on the same clustered Data ONTAP source volume

If you are using SnapDrive 7.1 for Windows, you cannot configure SnapMirror and SnapVault relationship on the same clustered Data ONTAP source volume. You must configure these relationships on different source volumes. This limitation does not exist starting with SnapDrive 7.1.1 for Windows.

Backup limitations

- SnapManager does not support filegroup backups of or restore operations for Microsoft SQL Server databases.
- SnapManager does not support differential backups.
- SnapManager does not back up SQL Server database copies.
- Dataset integration with NetApp Management Console data protection capability is not available for VMDK over NFS and VMFS datastores.
- SnapManager does not back up tempdb files, but it does back up all other system database files.

Verification on SnapMirror destination volumes not supported for VMFS datastores

SnapManager does not support verification on SnapMirror destination volumes if the source and destination volumes contain VMFS datastores. This limitation applies to clustered Data ONTAP only.

Federated backups can fail with the addition of a remote database

Federated backups are not supported when databases from remote SQL Server instances are added to nonfederated database groups. To back up databases from multiple remote hosts without federation, you should create backups on those databases separately, by connecting to individual SQL Server hosts.

Database and SnapInfo directory must be on separate volumes for SnapVault backups

If you archive a database to a SnapVault backup (clustered Data ONTAP only), the database and SnapInfo directory must be on separate volumes.

Fractional space reservation policy not supported with SQL Server 2012

SnapManager's fractional space reservation policy is not supported with SQL Server 2012. SnapManager does not take action to prevent the overwrite reserve from becoming fully depleted in an SQL Server 2012 configuration.

SnapManager does not support specifying fully qualified domain names for SQL Servers

When you add an SQL Server to SnapManager, SnapManager does not support specifying a fully qualified domain name for an SQL Server instance. You must enter the SQL Server name.

Multiple backup operations required for databases on LUNs and SMB shares contained in the same volume

If databases on LUNs and SMB shares are contained in the same volume, you cannot back up those databases from a single backup operation. Instead, you must set up two backup operations: one for the databases that reside on the LUNs and one for the databases that reside on the SMB shares.

Backup with remote verification and remote cloning on available destination volumes not supported on VMDK with VMFS datastore

Attempting to mount a VMFS datastore backup copy or trying to clone such a backup copy can fail with the error `Volume is read-only`. SnapManager for Microsoft SQL Server does not support remote verification of available destination volumes for VMDK backup copies created on VMFS datastores. It also does not support remote cloning of VMDK backup copies created on VMFS datastores. Attempting either of these operations results in the error message.

Storage Virtual Machine (SVM) disaster recovery

Storage Virtual Machine (SVM) disaster recovery (SVM DR) is supported in clustered Data ONTAP 8.3.1. If you use SnapManager for Microsoft SQL Server to manage volumes or LUNs in an SVM and if the SVM is configured for disaster recovery, then SnapManager is not supported in this configuration.

Known issues

Known issues identify problems that might prevent you from using this release of the product successfully. NetApp Bugs Online provides complete information for most known issues, including any workarounds.

NetApp Bugs Online

If a Bugs Online report is available, the bug ID contains a hyperlink to the report.

Known issues identified in this release

The following issues have been identified in the previous release:

Bug ID	Description
658358	SnapManager for Microsoft SQL Server job monitoring reports a database that no longer exists.
613912	SnapManager for Microsoft SQL Server does not support special characters in database name.
528233	SnapManager for Microsoft SQL Server backup with retention option set deletes the transaction logs for all the databases on a shared LUN (Vdisk scenario) even when single database is chosen for backup.

Known issues identified in previous releases

The following issues were reported in previous editions of the release notes:

Bug ID	Description
797025	SnapManager does not allow you to delete Snapshot copies from SnapManager, which is attached to a clone and uses a generic naming convention because further backup jobs using generic naming fail.
681912	Backup might fail or omit a database when performing a federated backup operation involving both databases from the local instance and an FCI on the same cluster node.
849566	SnapVault and SnapMirror updates fail if the SnapVault and SnapMirror destinations have the same source volume.
868823	SnapManager shows a success message for the split clone operation on an SMB share even though the operation fails.
869213	SnapManager is unable to migrate the replicated database to NetApp LUNs and displays the error message: `Cannot drop the database '{DBName}' because it is being used for replication.`
857128	A SnapManager backup operation with verification is successful on a Level 2 clone in a 7-Mode storage system even though it is supposed to fail.
868505	SnapManager enables the user to perform split or delete clone operations on a first-level clone even when there is a second-level clone linked to the first-level clone. This issue is reported only in 7-Mode environments.

Bug ID	Description
868905	A SnapManager restore operation fails when a backup is selected from the secondary storage system. This issue is reported only in Data ONTAP 8.2.x environments.
850492	Restore view of the archived backups shows all the backups taken from the initial backup even though it is deleted from the vault destination using the DFM dataset.
875560	SnapManager does not move the database to Single User Mode when performing a clone re-synchronization and when disconnecting from the database.
746131	SnapManager does not adequately alert you when SnapInfo backups fail, which can lead to errors when cloning a database to a remote server.
812959	SnapManager restores online databases even though the **Restore databases even if existing databases are online** option is not enabled.
550310	The SnapManager Dashboard does not display the date and time of recent events for clustered instances.
638770	Snapshot copy verification using the restore-backup cmdlet does not use the server-specific verification server when the verification server is not specified.

Where to get help and find more information

The NetApp Support Site provides access to troubleshooting tools, product documentation, and technical assistance. You can use NetApp Community forums to connect with peers, and the NetApp Library to access technical reports and white papers.

- *NetApp Support*
  Access troubleshooting tools, product documentation, and technical support assistance.
- *NetApp Communities*
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