AgreeYa™ Recovery Manager for SharePoint® 5.2.1

Product Overview

Contents

SharePoint Recovery Scenarios Using Native Tools

Microsoft® SharePoint® products and services provide native tools for two scenarios: disaster recovery and content recovery.

Topics:

Disaster Recovery

Disaster recovery is usually defined as a restore after a complete loss of the entire SharePoint server farm or one of its critical components. Since SharePoint keeps all data and over 90% of configuration information in SQL databases, disaster recovery often focuses on protecting data stored on the backend SQL servers.

SharePoint Central Administration allows you to back up and recover farm configuration and content, including relevant SQL databases and index files. Same functionality is exposed in the command-line SharePoint administration tools: STSADM.exe in SharePoint 2007 and PowerShell commandlets in SharePoint 2010 and 2013.

SharePoint farm restore should be considered a part of a larger disaster recovery plan. Since SharePoint restore is very sensitive to various environment variables, administrators need to carefully plan the process prior to a potential disaster. Missing accounts, misspelled server names, or lack of necessary security logins on a SQL server can all result in a failed or incomplete restore of the data and services.

Content Recovery

Content recovery is usually a user-driven operation that restores accidentally deleted or overwritten data. SharePoint natively allows users to restore deleted documents, lists, and document libraries from the Recycle Bin.

Each user can see and restore from the Recycle Bin only the items that were deleted by them from that particular site. Site administrators have access to the Site Collection Recycle Bin, which displays content deleted by all users within the SharePoint site collection.

In addition to Recycle Bin, SharePoint enables versioning for lists and document libraries, so users can roll back changes made by mistake and recover from document overwrites.

When self-service tools such as Recycle Bin and versions do not meet the needs, SharePoint administrators can use server tools such as site collection backup and restore or unattached database recovery in SharePoint 2010 and 2013. Typically, these require preliminary planning, additional disk space and manual administrator work to granularly recover lost or corrupted data without impacting other content.

What's Missing

WSS 3.0 and MOSS 2007 provide tools to help administrators to recover from a catastrophic failure, and to enable end users to recover items they have mistakenly deleted or modified. However, recovery needs often extend beyond these two scenarios. Consider the following situations:

A user did not delete a document but it is missing from the SharePoint site. He is not sure of the document's name, but knows it was last accessed the previous month. Native tools are of little use because:

- The Recycle Bin stores items only for 30 days by default.
- The document will be displayed only in the Recycle Bin of the user who deleted it; no other users can see or restore it.
- The Recycle Bin shows only the objects that were deleted. Individual document will not appear even in the Site Collection Recycle Bin if the entire folder or document library is deleted.

A project is closed and the associated SharePoint site is deleted as a part of cleanup process. But the site included an important Contacts list of partners who worked on the project. The site owner asks the helpdesk to retrieve the Contacts list from the deleted site and restore it to another site. Again, native tools are insufficient:

- The Recycle Bin does not capture site deletion
- In SharePoint 2007, if the full content database backup is available, it is possible to attach the database to a different (test) SharePoint farm and browse down to the site. Then you can export data such as Contacts list to a spreadsheet and import it back on a different site. This is a lengthy and error-prone manual process
- In SharePoint 2010 and 2013 it is possible to export sites and lists from an "unattached content database". The process does not require a test SharePoint farm like in 2007, but still involves manual restore of a database from backup, export and import of the data. The process is largely manual and requires administrator privileges both on SQL Server® and in SharePoint

During a farm-level disaster, faulty hardware must be replaced before the SharePoint server farm can be completely restored, so the server farm will not be back online until the next business day. But a sales manager urgently needs one of the documents stored in SharePoint; otherwise they will lose an important deal. Native tools are awkward in this situation:

- If you have to retrieve a document before the entire farm is back online, you can restore the database and attach it to a test SharePoint environment. Then you must browse through the sites to find the document - searching is unavailable until SharePoint re-indexes the database. And you have to do all this while in an emergency disaster recovery situation

A SharePoint administrator leaves the company without properly documented disaster recovery documentation. The SharePoint farm goes down shortly after that due to SQL failure and all data is lost. Luckily, farm level backups had been scheduled via command line tools and Windows Task Scheduler, and the new administrator has last night's backup available. Native tools are available to help to restore, but provide little guidance:

- SharePoint Central Administration user interface cannot be used to restore from backup, since the entire farm is down. None of the SharePoint services can work in absence of the configuration database
- Administrators can restore from the farm backup only after SQL server instance is rebuilt, a new farm with a new configuration database is created with SharePoint Configuration Wizard, and all necessary service accounts and their permissions are configured. This would still require manual reconfiguration

of farm services and settings after the restore, which would involve a lot of guessing without a documented recovery plan

These and other similar recovery scenarios are not properly addressed by native tools available in SharePoint.

Welcome to AgreeYa Recovery Manager for SharePoint

AgreeYa™ Recovery Manager for SharePoint® is an easy to use, innovative solution that helps IT administrators quickly locate deleted or modified SharePoint documents and other items and then restore them with any level of granularity from a content database backup.

Topics:

Getting Started

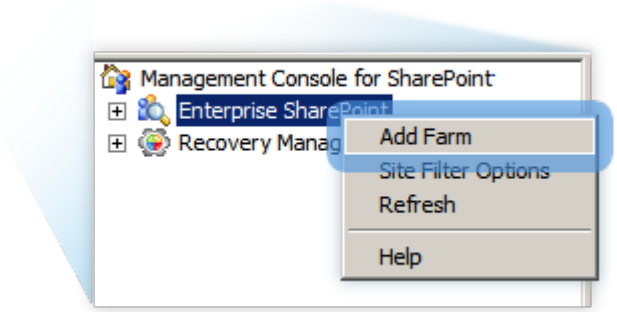
In this section:

- Add SharePoint Farm
- Protect SharePoint Data
- Discover Backups
- Analyze Backup
- Search and Restore

Add SharePoint Farm

To start managing a farm with Recovery Manager you first need to add it. Right-click the Enterprise SharePoint node under Management Console to start the Add Farm Wizard.

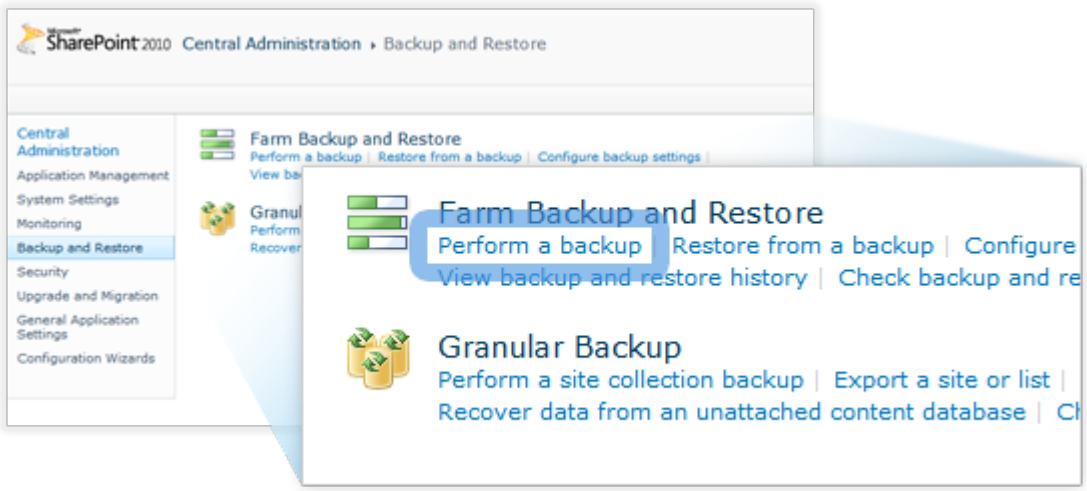
Figure 1: Add Farm



Protect SharePoint Data

Recovery Manager does not require any additional item-level backups to be created and can granularly restore a single item from a solid database backup. Use SharePoint Central Administration to create farm backup or see Recovery Manager documentation for the full list of supported backup formats.

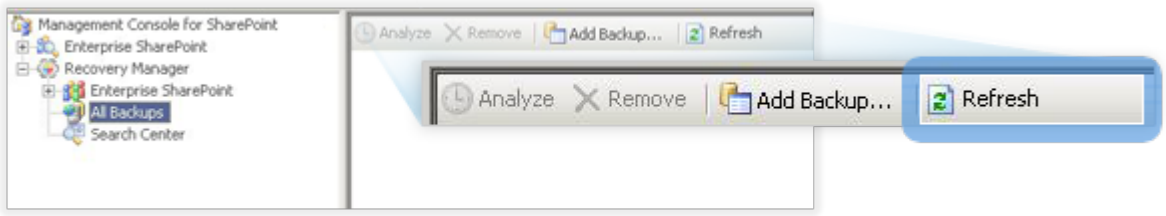
Figure 2: Creating Backup



Discover Backups

Recovery Manager automatically discovers new backups of SharePoint content databases every night. You can also initiate backup discovery manually when a backup completes. Browse to the web application node under Recovery Manager | Enterprise SharePoint and click **Refresh** on the toolbar.

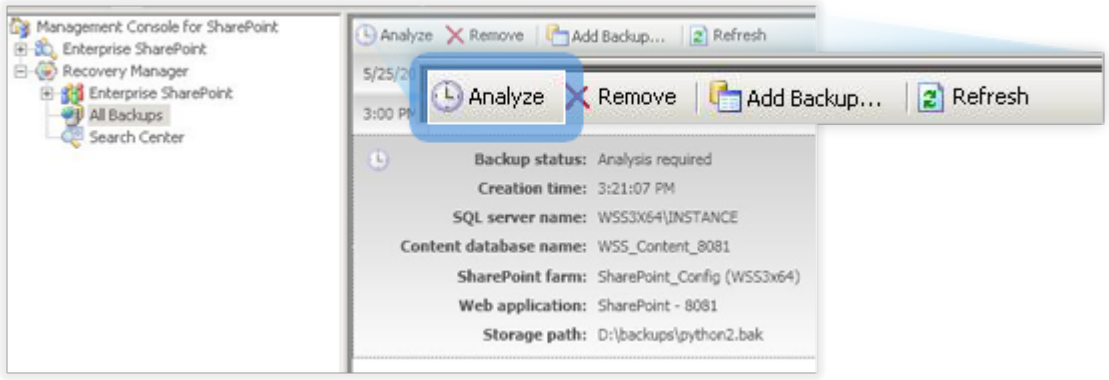
Figure 3: Manual Backup Discovery



Analyze Backup

Recovery Manager analyzes backups to make the backup contents searchable. To analyze a backup, browse to the web application node under **Recovery Manager | Enterprise SharePoint**. Then select a backup in the right-hand pane and click Analyze on the toolbar. You can also configure Recovery Manager to automatically analyze new backups as they become available. To review and change configuration settings select the Enterprise SharePoint node under Recovery Manager.

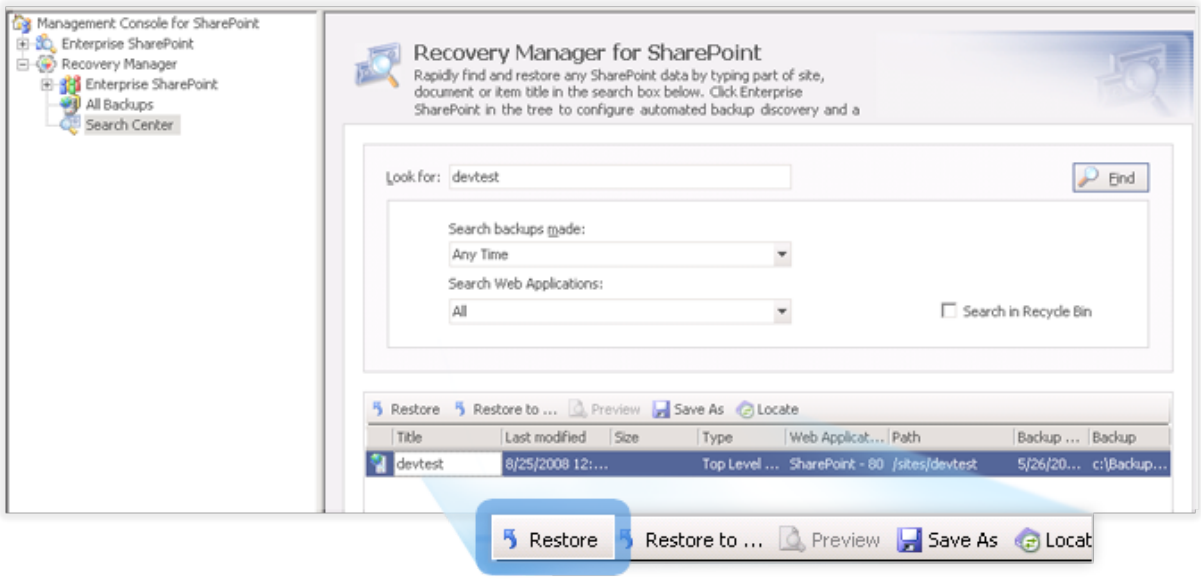
Figure 4: Analyzing Backup



Search and Restore

Use the **Search** node under Recovery Manager to quickly find the data that should be restored. A single search query can span multiple backups and live SharePoint recycle bins. Alternatively you can navigate to a backup for a specific SharePoint web application under **Recovery Manager | Enterprise SharePoint**. Once you locate the content, choose one of the available recovery options for the located content. Recovery Manager allows you to restore data back to its original location, to a different location in SharePoint, or save files and folders to the file system.

Figure 5: Restoring Backup



Key Features

Use of SharePoint grows quickly and so does the amount of data stored in SharePoint. Businesses require backup and restore solutions that use storage space efficiently, and do not require unnecessary duplicate backups to be created and maintained. Recovery Manager for SharePoint allows for granular data recovery from full or differential backups of the complete SharePoint content database.

Recovery Manager integrates with industry leading backup technologies and can restore the data from backups created with any of the following backup solutions:

- Native SQL and SharePoint backups
- Microsoft Systems Center Data Protection Manager
- Quest AppAssure Backup, Recovery and Replication
- LiteSpeed for SQL Server
- Quest vRanger Backup and Replication
- IBM Tivoli Storage Manager for Databases
- Symantec NetBackup for Microsoft SQL Server
- Symantec Backup Exec Agent for Microsoft SQL Server
- Hewlett-Packard Data Protector
- BakBone NetVault Backup APM for SQL Server and Quest NetVault Backup Plug-in for SQL Server

Granular and Flexible Restore

Administrators want to be able to address user calls regardless of whether it is a single list item restore request, a document library, or a site. Restoration process should not become more complicated or introduce new steps if scope of restore is different from the scope of deletion (e.g. restore several documents from a deleted doc library).

Recovery Manager provides the same search, browsing and restore experience regardless of the scope of recovery or the recovery destination. Recovery Manager can restore data back to its original location, a different location in the same or different SharePoint farm, or save documents and entire document libraries to the file system.

Recovery with Zero Data Loss

Business users require all data to be restored with all associated metadata, including permissions, properties, views, alerts, workflow state, audit trails, etc. In some environments preserving certain fields can be required for compliance reasons, for example author and last modifier names or document version history with accurate numbers and timestamps.

Recovery Manager preserves all the metadata and associated links for the items and documents it restores. It also takes care of access permissions, alerts, links, version histories, and workflow sate and associations. In fact, in most cases you cannot tell the difference between the original and the restored content.

Quick Recovery

Time is critical in most of the restore operations. A recovery solution should provide quick recovery, and mitigate possible dependencies and delays in the process.

The list below includes factors that can impact time to restore and explain how Recovery Manager can help minimize this impact:

1. Time it takes for an administrator to start working on the user restore requests.

   Often, administrators who are in charge of recoveries have lots of other responsibilities and may be working on higher priority tasks. Recovery Manager Web Access allows administrators to delegate the time-consuming task of locating a required object to Helpdesk or junior members of the IT admin team. They can then review and approve the restoration requests submitted via Web Access.

2. Time to find and locate the requested data.

   Users who call for a recovery may not have complete and accurate information about when the content they need was deleted, where it had been located prior to deletion, or even not remember the exact document name.

   Recovery Manager allows searching for content across multiple backups and SharePoint recycle bins at the same time, making it easy to locate the necessary data and the exact backup file where the most recent version of this content is available even when complete information is submitted by business users.

3. Cross-team communications if recovery involves SQL DBAs or Backup Operators to retrieve the necessary tape(if backup file already moved to tape) and mount the backup copy of the SQL database to staging environment.

   Recovery Manager seamlessly integrates with the backup solutions, automatically locates and analyzes new backups as they become available, and provides full information about the backup file in the search results. It also restores data from any of the supported backup formats, completely automating the process so that there is no need to involve SQL DBA or Backup Operator.

   Recovery Manager proxies all administrator actions with the backup software, so that SharePoint administrator who performs granular recovery from a database backup does not need any access to Symantec or IBM or SQL Management Studio consoles, whichever tool is used for creating backups.

4. Time to write the data back to SharePoint.

   Recovery Manager allows you to significantly reduce the time it takes to write the data back to SharePoint environments. When paired with Quest LiteSpeed for SQL Server, Recovery Manager reads data directly from backups to rapidly restore the data from content database backups bypassing any interim steps that may take additional time.

Emergency Access to Critical Data in SharePoint

Granular content recovery can also be a part of the disaster recovery exercise, when a particular site needs to be up and running or specific documents are required back as soon as possible, while the rest of the unavailable SharePoint farm can have lower time to restore expectations.

Recovery Manager allows you to quickly browse backup content and retrieve only the data you need, even when the original SharePoint site is no longer available. You can get business-critical documents or even sites back online before the entire server farm is back up and running.

SharePoint Farm Backup and Recovery

Reliable strategy of data recovery is a matter of significance for most SharePoint farms. IT administrators need processes and products in place to ensure any SharePoint data can be restored, whether it be a single document or the entire SharePoint farm.

Recovery Manager for SharePoint provides a quick way to create farm backups and restore all data, services and configurations in case of a disaster recovery.

With Recovery Manager, you can effortlessly perform restore from Central Administration Backups - just download Recovery Manager and it will guide you through the process and actually make the restore happen.

Simple, Unified and Repeatable Recovery Process

Regardless of the scope of restoration requests, IT administrators want the same, simple and repeatable process for recovery. It should require minimum or no training for Helpdesk or junior IT personnel with basic knowledge of SharePoint. It should require minimum or no involvement of other groups within the IT (such as SQL DBA, Backup Operators).

Recovery Manager's intuitive Management Console and Web Access interfaces require no special skills except basic SharePoint knowledge to locate and restore the data. Seamless integration with SharePoint recycle bins and the backup software means that the person using Recovery Manager does not need to be involved in the backup process or even know which tools are used for backing up SharePoint content databases.

Recovery after Installing Patches/Updates

IT administrators require that data in backups remains valid and usable after hotfixes, update rollup and service packs are installed for WSS and SharePoint Server. End users often request to restore deleted data at least few days after deletion. Installation of an update should not prevent IT from being able to restore data. Recovery Manager can restore the data from a backup created prior to the hotfix or Service Pack installed, so all your backups remain valid.

NOTE: Recovery Manager cannot restore data across WSS versions; data from backup created for a WSS

v2 farm cannot be restored to WSS v3 or MOSS 2007. Similarly Recovery Manager cannot restore data across different SharePoint versions; data from backup created for a SharePoint 2010 farm cannot be restored to SharePoint 2013 or 2016 version.

Premier Edition

Recovery Manager for SharePoint comes in one edition: Premier

This edition is better suited for enterprise scenarios, where multiple SharePoint farms are deployed and delegation of access via Web Access is required. Premier edition also allows integration with other backup solutions such as Symantec Backup Exec and NetBackup; IBM Tivoli Storage Manager for Databases.

The table below summarizes features of Recovery Manager Premier edition:

Table 1: Premier Edition of Recovery Manager

Feature	Recovery Manager Premier
How many SharePoint farms?	Any number of SharePoint farms
Full Farm Backup/Recovery	Yes
Supported backup formats	All supported backup formats
Allow restore to alternate SharePoint	Yes
Search across multiple backups	Yes
Web Access	Yes
Integration with AgreeYa Site Administrator for SharePoint	Yes
Integration with Storage Maximizer for SharePoint 2010 and SharePoint 2013	Yes

Architecture Overview

Recovery Manager for SharePoint works with Management Console for SharePoint and Site Administrator for SharePoint, allowing you to easily manage your SharePoint infrastructure.

Recovery Manager for SharePoint consists of the following components:

- MMC Extension Snap-in
- RMSP Discovery Task
- Recovery Manager for SharePoint Service
- Recovery Manager for SharePoint Logger Service
- Recovery Manager Engine
- Recovery Manager Backup Reader / Quest LiteSpeed
- Backup Discovery
- Backup Analysis
- Backup Restore
- Using a Staging Location

MMC Extension Snap-in

Recovery Manager snap-in extends the Management Console for SharePoint or Site Administrator for SharePoint management console with the Recovery Manager UI controls.

RMSP Discovery Task

This automatically created task is responsible for detecting backups of the SharePoint content databases added to the scope of the Management Console for SharePoint or managed by Site Administrator for SharePoint. It specifies the backup discovery time and by default is set for 2 AM daily.

Recovery Manager for SharePoint Service

This Windows service is responsible for performing analysis of backups of the SharePoint content databases added to the scope of the Management Console for SharePoint or managed by Site Administrator for SharePoint.

Recovery Manager for SharePoint Logger Service

This service is responsible for maintaining the Recovery Manager log files.

Recovery Manager Engine

Recovery Manager Engine analyzes backups, compares differences in SharePoint hierarchy, and transfers the data from the backups to a matched SharePoint Web application or the location you choose.

Recovery Manager Backup Reader / Quest LiteSpeed

With Recovery Manager Backup Reader or Quest LiteSpeed 8.5 or higher installed, you can benefit from rapid analysis and recovery with low disk space requirements for SQL native and LiteSpeed backups, as Recovery Manager no longer creates temporary databases in the staging location.

Backup Discovery

Recovery Manager reads the list of managed SharePoint web applications from Site Administrator for SharePoint. It also leverages the information collected by Site Administrator about the SharePoint content databases used by each web application.

For each SQL server where SharePoint databases reside, the Recovery Manager for SharePoint service periodically pulls the backup history information from SQL Server system databases. The discovery time is specified by RMSP Discovery task and is set to 2 am by default, the discovery interval is 24 hours and Recovery Manager allows the users to customize these.

You can also add backup files to Recovery Manager manually. This can help when you need to retrieve certain data from a backup of SharePoint server that has been decommissioned.

Backup Analysis

The backup analysis process creates the cache of the backup file contents. It is possible to enable automatic backup analysis or to start the analysis manually. The backup cache includes information about the SharePoint hierarchy and metadata for documents and items. This cache is used when you browse the backup content or search among backups in the Recovery Manager console. The analysis process includes the following steps:

1. When a new backup is discovered by the Recovery Manager for SharePoint service or added manually, it is queued for analysis.

2. Depending on which backup software is used, Recovery Manager for SharePoint service will:
    a. LiteSpeed for SQL Server 8.5 or later: read the necessary metadata and hierarchy information directly from backup file.
    b. SQL native or SharePoint native backup: if the LiteSpeed or Recovery Manager Backup Reader component is installed on the SQL server, the service will read metadata and hierarchy information from backup file. Otherwise, it will extract the backup file contents to the staging location and read it from there.
    c. Other backup formats: the Recovery Manager service will extract the backup file content to a temporary database on staging location. The staging location can be specified as a different SQL Server instance or as a different drive on the same SQL instance as the original SharePoint content database.
3. The service then builds the cache based on the information it read from the backup file or from the temporary database.

Once a backup is analyzed, its content is exposed in Recovery Manager for browsing and searching. After the analysis is complete, the temporary database can safely be deleted from the staging location. See the Using a Staging Location section below for details.

Backup Restore

When a user initiates a restore of SharePoint data (such as documents, list items, libraries, or sites), from SQL Server native backups, SharePoint native or LiteSpeed backups, Recovery Manager simply extracts the data that needs to be restored directly from the backup file. It then restores this data directly to the live SharePoint environment.

If Recovery Manager is used together with other 3rd party backup software, it performs the following steps to restore SharePoint data:

1. Recovery Manager checks whether the temporary database already exists for the backup on the staging location. Whenever possible, it will read data for a restore operation from the existing temporary database.
2. If needed, Recovery Manager extracts the backup content to the temporary database.
3. Recovery Manager reads the needed data from the temporary database and restores it to the live SharePoint environment.

This approach allows IT administrators locate the needed data and the associated backup file before actually retrieving anything from backup.

Using a Staging Location

The staging location is used by Recovery Manager to temporarily extract the SQL database from a backup created with backup software other than Quest LiteSpeed for SQL, and native SQL or SharePoint backup tools. There is no requirement to have the staging location to restore data from these backups if either LiteSpeed 8.5 (or later) or Recovery Manager Backup Reader component is installed on the SQL server.

For backups created with Microsoft Data Protection Manager, Symantec or Tivoli tools, the staging location is used for analysis and granular restore of SharePoint contents. When the temporary database is available on the staging location, restore operations take literally seconds.

You have two options to configure the location of the temporary database - you can use the original content SQL server as a staging location, i.e. the same server where the backup was made (the default setting), or you can use SQL server that hosts the Site Administrator repository database as a staging location.

Additional Resources

For additional information about AgreeYa software, visit AgreeYa web site.

For more information about native backup capabilities in Windows SharePoint Services and Office SharePoint Server, refer to the product documentation available from Microsoft, such as the Protecting and recovering Office SharePoint Server 2007 page on Technet at http://technet.microsoft.com/en-us/library/cc303422%28v=office.12%29.aspx.

The information on Microsoft SharePoint Server 2010 is available on http://technet.microsoft.com/en-us/sharepoint/ee263917.aspx.

Please refer to http://technet.microsoft.com/en-us/sharepoint/ee263910.aspx for the Microsoft SharePoint Foundation 2010 resources.

The information on Microsoft SharePoint 2013 is available on http://technet.microsoft.com/en-us/sharepoint/ee263910.aspx.

The information on Microsoft SharePoint 2016 and 2019 is available on https://docs.microsoft.com/en-us/sharepoint/.

About AgreeYa

AgreeYa listens to customers and delivers worldwide innovative technology, business solutions and services they trust and value. For more information, visit http://agreeya.com/.

Contacting AgreeYa

For sales or other inquiries, visit http://agreeya.com/contact.html or call (800) AGREEYA.

Technical support resources

Technical support is available to customers who have purchased AgreeYa software with a valid maintenance contract and to customers who have trial versions. To access the Support Portal, go to http://recoverymanager.agreeya.com.

The Support Portal provides self-help tools you can use to solve problems quickly and independently, 24 hours a day, 365 days a year. In addition, the portal provides direct access to product support engineers through an online Service Request system.

The site enables you to:

- Create, update, and manage Service Requests (cases)
- View Knowledge Base articles
- Obtain product notifications
- Download software. For trial software, go to Trial Downloads.
- View how-to videos
- Engage in community discussions
- Chat with a support engineer