



AgreeYa™ Recovery Manager for SharePoint® 4.8

User Guide

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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](#)

Getting Started

In this section:

- l [Add SharePoint Farm](#)
- l [Protect SharePoint Data](#)
- l [Discover Backups](#)
- l [Analyze Backup](#)
- l [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. You do not need this step with Recovery Manager Basic Edition that works with the local SharePoint farm.

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.

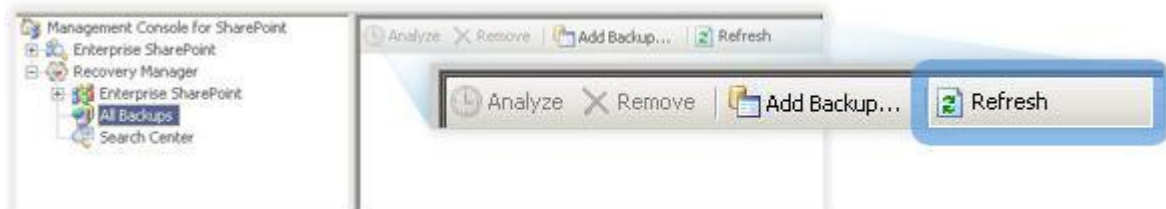
Figure 2: Creating Backup



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.

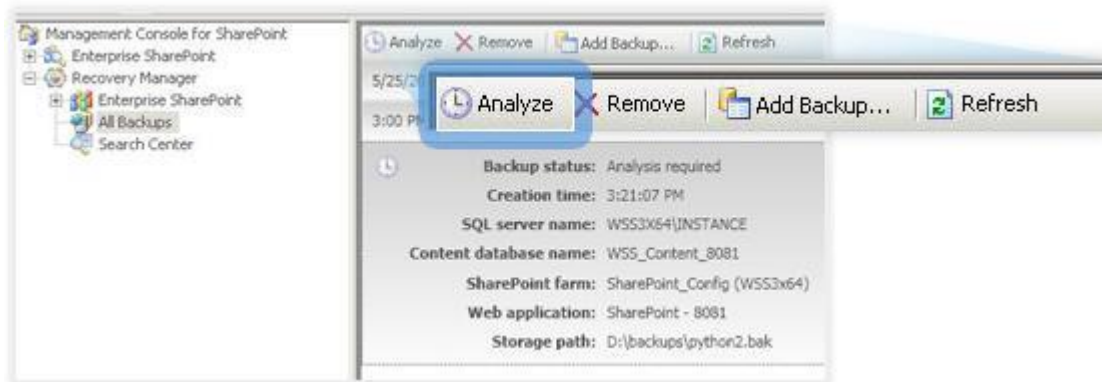
Figure 3: Manual Backup Discovery



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.

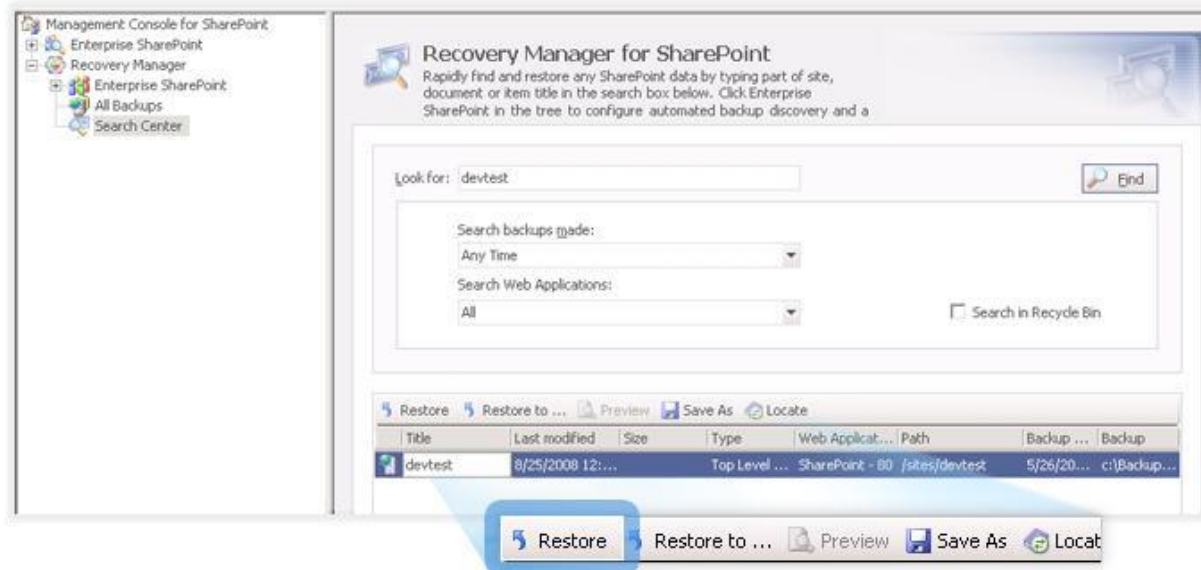
Figure 4: Analyzing Backup



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




Role Separation

Recovery Manager for SharePoint is designed to fit into an organization's backup infrastructure and processes. It supports a wide range of different deployments and organizational structures. This section explains how Recovery Manager can ensure the most efficient granular SharePoint content restore process by supporting the existing delineation of duties between different groups within IT.

Roles and Level of Access

Recovery Manager integrates with SharePoint's Recycle Bin as well as a variety of SQL backup technologies and leverages the organization's existing infrastructure, processes and roles. This ensures flexibility in deployment and execution for each organization. Different levels of recovery functionality can be made available to business users and IT personnel.

 **NOTE:** Although Recovery Manager can work in an environment where all or some of these roles exist, the product does not require special configuration for different combinations.

Business Users/Self Service

Business users can restore mistakenly deleted or modified documents and items using the built-in SharePoint features, such as Recycle Bin and versions. Both are natively available in Microsoft Windows SharePoint Services 3.0 and Microsoft Office SharePoint Server 2007.

Although the Recycle Bin can prevent a large number of calls to the help desk, it does not address some scenarios:

- Recycle Bin is both site-specific and user-specific. It does not allow you see documents and items deleted by someone else, nor does it allow searching across multiple SharePoint sites and site collections.
- Recycle Bin only displays the object that has been deleted. When a folder or library is deleted, you will not see the document you're looking for in the Recycle Bin.
- Recycle Bin only keeps data for specified time (30 days in each of the two stages by default) and makes it impossible to restore something from the end of last quarter. After expiration in Recycle Bin, this data is only available in backups.
- Finally, Recycle Bin is of little use when a site is deleted and needs to be restored.

All this inevitably results in calls to the help desk or restoration requests submitted to SharePoint administrators.

Help Desk Personnel

The help desk is the front-line that takes calls from business users who need content restored. Help desk operators typically do not have permissions to access the backups or SharePoint content, but they can help narrow down the issue and route it to the appropriate IT group.

To make this process more efficient, Recovery Manager Web Access allows a 'search-only' level of access for help desk or junior IT operators. Users with this level of permissions do not get or need any rights to the production SharePoint or corresponding backups. They can log on to Recovery Manager to perform the following actions:

- Search across multiple backups and SharePoint Recycle Bins with a single query.
- Identify the content requested by the user and the location of the most relevant copy based on the user's needs. This can be found in the latest backup or the Recycle Bin.
- Submit the restoration request on behalf of the business user, including all details of the content needing restoration and an optional comment.

Receive e-mail confirmation when the restore is approved and completed by SharePoint administrator.



NOTE: Recovery Manager does not allow help desk personnel to actually retrieve any data from Recycle Bin or backups. It only displays title and location of the content in the search results.

SharePoint Administrators

SharePoint administrators who use Recovery Manager enjoy the same search functionality described above.

They can search across multiple backups and Recycle Bins, even across different SharePoint farms, and identify data that needs to be restored even when a user who requested it does not know the exact name or location. Data can be restored back to its original location in SharePoint or to a different SharePoint site; documents and libraries can also be exported to the file system.

Recovery Manager Web Access automatically sends e-mail notifications to the SharePoint administrators when a new restoration request is submitted by the help desk. Administrators can review and approve the requests right away or choose to perform larger restorations (for example large lists or sites) later in off-peak hours.

SharePoint administrators do not need to have access to the production SharePoint data or backup files to use Recovery Manager. The product proxies administrator access to the data and allows secure restoration. Whenever data is retrieved from backups, all administrator actions are tracked in the Recovery Manager audit log.

SQL Server Database Administrators (DBA)

SharePoint administrators often work closely with the SQL DBA team. Delineation of duties between these two IT groups is common in many environments. Recovery Manager fully supports this role separation:

- Recovery Manager automatically discovers new backups of SharePoint content databases in SQL and makes them searchable for help desk and SharePoint administrators without SQL DBA involvement.
- Recovery Manager proxies access to the backup files, so only a single service account needs this level of permission. Because of this multiple users aren't required to have access to the SQL Server backups.
- Recovery Manager automates the restore process to avoid unnecessary involvement of the SQL DBA team in routine SharePoint operations.

- Finally, the product integrates with various SQL backup solutions to fit into any backup infrastructure. There is no requirement to change the SQL Server maintenance or backup processes to support granular SharePoint content restores with Recovery Manager.

Infrastructure Administrators/Backup Operators

Organizations that rely on enterprise wide cross-platform backup software such as Microsoft Data Protection Manager, Tivoli Storage Manager or Symantec NetBackup often have a designated backup operations group within IT.

With Recovery Manager, SharePoint administrators can perform granular content restores from backups handled by this group. Help desk or SharePoint administrators who use Recovery Manager do not need to have access to the backup infrastructure or backup files.

Recovery Manager can search the contents of backup files even if they have been moved offline. When a restore is required from such backup, Recovery Manager provides full information about the backup (file name, backup time and expected location). This allows for efficient communications across different IT groups: the SharePoint administrator can create accurate requests to the backup operators who make the specific file available online, without wasting time on looking through multiple backups. Once the restore is complete, the backup can be moved back offline.

How it Works

Recovery Manager has various features that allow flexibility in deployment and use:

- **Recovery Manager Web Access** provides two tiers of delegation, search-only for help desk and full access for SharePoint administrators.
- **Recycle Bin integration** allows admins to locate the most up-to-date content that for some reason could not be found by business users. Since Recycle Bin is available online within the same production SharePoint, this also simplifies restore and makes it faster.
- **Automatic discovery and analysis of backups** enables search in the most recent SharePoint content database backups as soon as they become available. This process is configured once and happens automatically even for new content databases that are added to a SharePoint farm managed with Recovery Manager.
- **Support for different backup formats** allows companies to use Recovery Manager with the existing infrastructure with little or no change required to the existing backup processes.
- **Recovery Manager service** proxies all user access to the backup files and to production SharePoint and SQL servers. This allows only the necessary limited number of accounts to have administrative access to the data.
- **Audit log** keeps track of all restore actions, with details on who retrieved which data from backups, and when and where the data was restored to. The audit trail is stored in the Windows event log on the server where the Recovery Manager service is running.

Supported Platforms

- l [Microsoft SharePoint](#)
- l [Microsoft SQL Server](#)
- l [Supported Backup Formats](#)

Microsoft SharePoint

Recovery Manager for SharePoint supports the following versions and editions of Microsoft SharePoint products and technologies:

- Windows SharePoint Services (WSS) version 2.0
- Windows SharePoint Services (WSS) version 3.0
- SharePoint Portal Server (SPS) 2003
- Office SharePoint Server (MOSS) 2007
- Microsoft SharePoint Server 2010
- Microsoft SharePoint Foundation 2010
- Microsoft SharePoint Server 2013
- Microsoft SharePoint Foundation 2013

Microsoft SQL Server

Recovery Manager for SharePoint can restore data from backups of SharePoint content databases hosted on the following versions of Microsoft SQL Server:

- Microsoft SQL Server 2000 SP4
- Microsoft SQL Server 2005 SP1 or later
- Microsoft SQL Server 2008
- Microsoft SQL Server 2008 R2
- Microsoft SQL Server 2012
- Microsoft SQL Server 2012 R2

Supported Backup Formats

Recovery Manager for SharePoint can analyze and restore data from the following backup formats:

- **SQL Server Native Backups** including SQL Server 2008 and 2012 compressed and/or encrypted backups
- **SharePoint 2007 Backups** performed from SharePoint Central Administration, or catastrophic STSADM.exe backups created using the following command line stsadm -o backup -directory <UNC path or local drive> -backupmethod <full or differential>
- **SPSBackup Utility** backups of WSS 2.0 and SPS 2003 farms
- **Microsoft Systems Center Data Protection Manager (DPM) 2007, 2010, 2012 and 2012 R2** snapshots of WSS 3.0, MOSS 2007, SharePoint Foundation 2010 and SharePoint Server 2010 environments
- **IBM Tivoli Storage Manager (TSM) for Databases** also known as Tivoli Data Protection (TDP) for SQL. Both full and differential backups created by TSM for Databases are supported
- **Symantec NetBackup** for Microsoft SQL Server
- **Symantec Backup Exec** agent for Microsoft SQL Server
- **Hewlett-Packard Data Protector** full, differential and transaction log SQL VDI backups and full or copy SQL files VSS backups
- **BakBone NetVault Backup APM for SQL Server and AgreeYa NetVault Backup Plug-in for SQL Server** full and differential VDI and full VSS backups
- **LiteSpeed for SQL Server** including recovery from encrypted LiteSpeed backups and from LiteSpeed backups stored in Tivoli Storage Manager as TSM backups, TSM archives or TSM striped backups
- **AgreeYa vRanger Backups** of VMWare ESX/ESXi virtual machines stored in vRanger repositories
- **AgreeYa AppAssure** snapshots
- **Unattached Database Files (.mdf)** can also be added into Recovery Manager and appear as a searchable backup. Import of unattached database files can even be automated via the command line to build an ad hoc integration with a SQL Server backup solution used in the environment

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
- AgreeYa AppAssure Backup, Recovery and Replication
- LiteSpeed for SQL Server
- AgreeYa 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 AgreeYa NetVault Backup Plug-in for SQL Server

The key features that allow Recovery Manager to address both IT and business requirements for SharePoint content restore solution are:

- l [Backup Storage Efficiency](#)
- l [Granular and Flexible Restore](#)
- l [Recovery with Zero Data Loss](#)
- l [Quick Recovery](#)
- l [Emergency Access to Critical Data in SharePoint](#)
- l [SharePoint Farm Backup and Recovery](#)
- l [Simple, Unified and Repeatable Recovery Process](#)
- l [Recovery after Installing Patches/Updates](#)

Backup Storage Efficiency

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.

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- Native SQL and SharePoint backups
- Microsoft Systems Center Data Protection Manager
- AgreeYa AppAssure Backup, Recovery and Replication
- AgreeYa LiteSpeed for SQL Server
- AgreeYa 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 AgreeYa 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 state 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 AgreeYa 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.

Basic and Premier Editions

Recovery Manager for SharePoint comes in two editions, Basic and Premier:

- Basic edition is typically used in environments with only one SharePoint farm where backups are created using nativeSQL or SharePoint tools or with AgreeYa LiteSpeed for SQL Server.
- Premier 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 differences between Basic and Full Editions of Recovery Manager:

Table 1: Basic and Premier Editions of Recovery Manager

Feature	Recovery Manager Basic	Recovery Manager Premier
How many SharePoint farms?	Single farm local, installation required	Any number of SharePoint farms
Full Farm Backup/Recovery	No	Yes
Supported backup formats	Native SQL and SharePoint tools, AgreeYa LiteSpeed for SQL Server, AgreeYa vRanger Backups	All supported backup formats
Allow restore to alternate SharePoint	No	Yes
Search across multiple backups	Within farm boundaries	Yes
Web Access	No	Yes
Integration with AgreeYa Site Administrator for SharePoint	No	Yes
Integration with Storage Maximizer for SharePoint 2010 and SharePoint 2013	Yes	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:

- l [MMC Extension Snap-in](#)
- l [RMSP Discovery Task](#)
- l [Recovery Manager for SharePoint Service](#)
- l [Recovery Manager for SharePoint Logger Service](#)
- l [Recovery Manager Engine](#)
- l [Recovery Manager Backup Reader / AgreeYa LiteSpeed](#)
- l [Backup Discovery](#)
- l [Backup Analysis](#)
- l [Backup Restore](#)
- l [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 / AgreeYa LiteSpeed

With Recovery Manager Backup Reader or AgreeYa LiteSpeed 5.2 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 5.2 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 AgreeYa 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 5.2 (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.

System Requirements

Before installing AgreeYa Recovery Manager for SharePoint make sure the following system requirements are met:

Requirement	Description
Platform	Intel Pentium 1 GHz processor (x86, x64)
Memory	Minimum 512MB on the SharePoint Back-End servers. 2 GB of RAM are recommended. NOTE: Performance of processing large backup files depends greatly on the memory size available on SharePoint Back-End servers.
Operating System	One of the following: <ul style="list-style-type: none">• Microsoft Windows XP SP2 or later• Microsoft Windows Server 2003 SP1 or later• Microsoft Windows Server 2008• Microsoft Windows Server 2008 R2• Microsoft Windows Server 2012• Microsoft Windows 7
Web Browsers	One of the following: <ul style="list-style-type: none">• Microsoft Windows Internet Explorer 9 or higher• Google Chrome - the latest version• Mozilla Firefox - the latest version
Additional Software	<ul style="list-style-type: none">• Microsoft .NET Framework 3.5• LiteSpeed 6.1.0 or higher (required for enhanced backup analysis) One of the following: <ul style="list-style-type: none">• Microsoft SQL Server 2000 SP4• Microsoft SQL Server 2005 SP1 or later SPs• Microsoft SQL Server 2005 Express SP1 or later SPs• Microsoft SQL Server 2008• Microsoft SQL Server 2008 R2• Microsoft SQL Server 2012• Microsoft SQL Server 2012 R2 One of the following:

Requirement	Description
-------------	-------------

-
- Windows SharePoint Services (WSS) version 2.0
 - Windows SharePoint Services (WSS) version 3.0
 - SharePoint Portal Server (SPS) 2003
 - Office SharePoint Server (MOSS) 2007
 - Microsoft SharePoint Server 2010
 - Microsoft SharePoint Foundation 2010
 - Microsoft SharePoint Server 2013
 - Microsoft SharePoint Foundation 2013

NOTE: By default, Recovery Manager may not support backups made from SharePoint servers with certain hotfixes and patches installed. If you have applied any SharePoint updates and cannot work with backup files made from the patched servers, contact [Online Support](#) for further instructions.

Required Permissions

Before installing Recovery Manager for SharePoint, make sure the following permissions are granted to the accounts listed below:

Recovery Manager for SharePoint Service Account

- **db_owner** role for the Recovery Manager for SharePoint repository database

To discover SharePoint content database backups:

- **db_datareader** permission for configuration database of each SharePoint farm within the scope of Site Administrator for SharePoint or Management Console for SharePoint
- **db_datareader** permission for the msdb database on every SharePoint Back-End SQL server within the scope of Site Administrator for SharePoint or Management Console for SharePoint

To work with the staging location in the Original Server Mode:

- **SQL server role sysadmin** for every SharePoint Back-End SQL server that you want to work with.



NOTE: If the Recovery Manager for SharePoint Service account is a db_owner for the SharePoint content database, the system administrator role is not required. In this case the account needs the db_owner role and dbcreator server role.

To work with the staging location in the Dedicated Server Mode:

- **SQL server role sysadmin** on the dedicated server

To restore content to its original or alternate location:

- **db_owner** role for the content and configuration databases.

For Enhanced Backup Analysis and Restore:

Execute permissions for the following stored procedures on the SharePoint Back-End SQL servers:

- - xp_restore_filelistonly
- - xp_restore_headeronly
- - xp_restore_setinfo
- - xp_sqlitespeed_version
- - xp_objectrecovery_executeselect
- - xp_objectrecovery_viewcontents

To work with LiteSpeed backups:

Execute permissions for the following stored procedures on the SharePoint Back-End SQL servers:

- - xp_restore_database
- - xp_restore_filelistonly

- - xp_restore_headeronly
- - xp_restore_setinfo
- - xp_sqlitespeed_version

Recovery Manager for SharePoint Agent Service Account

- **db_owner** role for the Recovery Manager for SharePoint repository database To

restore data from SharePoint backups in the Content Migration API mode:

- SharePoint **Farm Administrator** group membership

To restore preview and Save to Disk documents from SharePoint 2013 backups:

- SharePoint **Farm Administrator** group membership

Interactive Account

- **db_owner** role for the Management Console for SharePoint (or Site Administrator for SharePoint) repository database
- **db_owner** role for the Recovery Manager cache database
- **dbcreator** server role on the SQL Server where the Management Console for SharePoint (or Site Administrator for SharePoint) repository database is located to add the backups manually. This applies to SQL Server 2008 and SQL Server 2012 only, for more information please refer to <http://msdn.microsoft.com/en-us/library/ms178569.aspx>
- **db_datareader** permission for configuration database of each SharePoint farm within the scope of Site Administrator for SharePoint or Management Console for SharePoint

To add LiteSpeed backups manually:

Execute permissions for the following stored procedures for the Management Console for SharePoint (or Site Administrator for SharePoint) repository server:

- - xp_restore_filelistonly
- - xp_restore_headeronly
- - xp_restore_setinfo
- - xp_sqlitespeed_version

SharePoint Back-End SQL Server Service Account

- Read permission for the backup files that were created on this SQL server

SQL Server hosting the Management Console for SharePoint (or Site Administrator) Database Service Account

- Read permission for the unmatched and manually added backups

SQL Server hosting the Recovery Manager Temporary Database Account

- Read, Write permission for the folder where Recovery Manager temporary database is stored.

Setting Required Permissions

You can install Recovery Manager for SharePoint as a standalone application. In this case it is installed with the integrated Management Console (MC).

You can also install or upgrade Recovery Manager on an existing installation of Site Administrator (SA).

In case of the new installation of Recovery Manager, you first need to grant appropriate permissions to Management Console for SharePoint or Site Administrator for SharePoint. Please refer to the User Guide of the MC or SA for detailed information on setting the permissions required for these products.

Recovery Manager works with the repository database of MC or SA, MSDB databases of Back-End SQL servers within the scope of MC or SA, and the SQL server used as a staging location.

Setting Permissions on SQL Databases

Create a login for the user who will install Recovery Manager for SharePoint to be able to login to the SQL server.

1. Open MS SQL Server Manager Studio.
2. Expand your SQL instance node.
3. Open the **Security** node and select the **Logins** node.
4. Right-click the **Logins** and select the **New Login** option. In the new login window enter the user name in the domain\user format.
5. Click **OK**. The login appears in the list of the **Logins** node.
6. Locate the login in the list and right-click it. The **Login Properties** page is displayed.
7. Select the database in the upper pane and set the permissions for the database in the lower pane.
8. Click **OK**.

Alternatively, you can set permissions for a database as follows:

1. Expand your SQL instance node.
2. Expand the **Databases** node. Locate the required database.
3. Go to **Security**.
4. Right-click the **Users** node and select a new user. The **Database User-New** window is displayed.
5. Specify the login name and find it in the AD.
6. Select the appropriate permission in the **Database role membership** pane.
7. Click **OK**.

Repeat these steps to grant permissions to the Recovery Manager account for the content and configuration SharePoint databases.

Setting Permissions on Stored Procedures

You need the Execute permissions for the stored procedures specified in the Required Permissions section. Perform the following to set the permissions on the stored procedures:

1. Expand your SQL instance node.
2. Expand the **Databases** node. Locate the required database.
3. Go to **Programmability | Stored Procedures**.
4. Right-click the required procedure and select **Properties** from the menu.
5. Select the appropriate permissions.
6. Click **OK**.

Granting Local Administrator Rights

On every computer where Recovery Manager is installed, perform the following:

1. Right-click **My Computer** and select **Manage** from the short-cut menu. The **Computer Management** window appears.
 2. Go to **System Tools | Local Users and Groups | Groups**.
 3. In the left pane select **Administrators**. The **Administrators Properties** window appears.
 4. Click **Add**. The **Select Users, Computers, or Groups** dialog appears.
 5. Enter the user name you want to grant administrators rights to and click **OK**.
-
1. Go to **Start | Control Panel**.
 2. In the Control Panel window, select **User Accounts**. The **User Accounts** window appears.
 3. In the **User Accounts** window select the **Add...** button. The **Add New User** window appears.
 4. Enter the domain and name of a user you want to grant permissions. Click **Next**.
 5. Select the **Other** radio button and then **Administrators** from the drop-down list.
 6. Click **Finish**.

Deployment and Administration

In this section:

- l [Installation and Upgrade](#)
- l [Recovery Manager for SharePoint Agent](#)
- l [Working with Cache and Temporary Database](#)

Installation and Upgrade

There are several options to deploy the new version of Recovery Manager for SharePoint depending on the SharePoint products installed in your environment:

- l [New installation](#)
- l [Installation on Site Administrator for SharePoint](#)
- l [Running Recovery Manager after Installation](#)
- l [Upgrade](#)

New Installation

To install Recovery Manager for SharePoint, run the setup.

The Management Console Setup wizard starts, which installs the common components and configuration for SharePoint products.

Installing Management Console for SharePoint

Perform the following steps:

1. On the Welcome screen, click **Next**.
2. On the **Configuration Database** page, specify the database name to be used as Management Console for SharePoint configuration database. Click **Next**.
3. On the **Ready to Install the Application** page, click **Next** to begin installation.
4. Click **Finish**.

After Management Console is installed, Recovery Manager for SharePoint Setup wizard starts automatically.

Installing Recovery Manager for SharePoint

Follow the Recovery Manager for SharePoint installation wizard steps:

1. On the Welcome page, read and accept the license agreement and click **Next**.
2. On the **Account credentials** page, specify the name in the domain\user format and password for the Recovery Manager Service account and click **Next**. The installation begins and the setup progress is displayed.
3. Once installation is complete, click **Finish** to exit the wizard and start the application console.

The default installation directory is C:\Program Files\AgreeYa\Recovery Manager for SharePoint. To modify the installation directory, run the `msiexec /i qrm4sp.msi INSTALLDIR=c:\RMSP` console command.

Recovery Manager Backup Reader

Customers who use LiteSpeed and SQL Server or SQL and SharePoint native tools to create database backups can leverage the enhanced analysis and recovery.

To ensure faster backup analysis and recovery switch to Original Server Mode and install Recovery Manager Backup Reader component from the installation CD package on the following servers:

SQL servers where the original SharePoint content databases are hosted to perform backup analysis and data restoration to the same location

SQL servers where the target SharePoint content databases are hosted to perform data restoration to alternate location

SQL server hosting AgreeYa Repository Database to add LiteSpeed backups manually.

If you have AgreeYa LiteSpeed 5.2 or higher installed on the SQL server Recovery Manager Backup Reader installation is not required.

The service account should be granted execute permissions for the following extended stored procedures:

- - xp_restore_filelistonly
- - xp_restore_headeronly
- - xp_restore_setinfo
- - xp_sqlitespeed_version
- - xp_objectrecovery_executeselect
- - xp_objectrecovery_viewcontents

Adding SharePoint Farms to Recovery Manager

After Recovery Manager for SharePoint is installed, you should add SharePoint farms to the product scope.

To add SharePoint farms, open the Recovery Manager console, click the Enterprise SharePoint node and select Add Server Farm from the short-cut menu. The Add Server Farm Wizard starts.

Complete the wizard as follows:

1. On the Welcome page, click **Next**.
2. On the **Specify SharePoint Front-End Server** page, specify one of the front-end servers in the SharePoint server farm you want to add. Click **Next**.
3. After the scanning server farm process completes, click **Next** and **Finish** to exit the wizard.

Installing Recovery Manager on Site Administrator

When installed on an existing instance of Site Administrator for SharePoint, Recovery Manager integrates with its management console and reuses Site Administrator repository database. Management Console will not be installed in this case.

To install Recovery Manager for SharePoint on the computer hosting Site Administrator, run the setup.

Follow the steps described in the Installing Recovery Manager for SharePoint subsection of [New Installation](#) section above.


Running Recovery Manager after Installation

When Recovery Manager for SharePoint has been installed, you can run it from **Start | Programs | AgreeYa | Management Console**.


Select the **Admin** or **Search** shortcut to start the Web Access component for Recovery Manager for SharePoint.

Upgrade

Upgrade from earlier versions of Recovery Manager for SharePoint is supported. To upgrade the version, run the new Recovery Manager for SharePoint setup.

 **NOTE:** Automatic upgrade from earlier versions of Recovery Manager for SharePoint to version 4.0.5 is not supported. To upgrade the version, uninstall the older version and install the Recovery Manager for SharePoint.

Make sure you upgrade the Recovery Manager Agents (SharePoint, Tivoli, NetBackup) when installing a newer version of the product.


 **NOTE:** Tivoli and NetBackup backups support is integrated in the Recovery Manager for SharePoint Agent version 4.0.5 and later. To upgrade your Recovery Manager Tivoli Agent or Recovery Manager Symantec NetBackup Agent, uninstall it and install Recovery Manager for SharePoint Agent 4.0.5.

Recovery Manager for SharePoint Agent

Recovery Manager for SharePoint Agent (Agent) allows you to work through the supported SharePoint API, perform a disaster recovery of SharePoint Farms/Web Applications, perform recovery of SharePoint data externalized by Storage Maximizer, and work with 3-rd party backup solutions (Tivoli, NetBackup, NVBU).

The agent uses port 9001 used for communication between Recovery Manager for SharePoint (RMSP) and the Agent.

Restore through the Supported SharePoint API

 **NOTE:** You need to install the Agent in each SharePoint farm managed by this RMSP installation. It means that you need to install Agent on one of the SharePoint front end servers in each farm.

Exporting Settings

By default Recovery Manager for SharePoint Agent uses the `INSTALLDIR\SharePointAgent\EXPORTS` folder to stage the recovery data while restoration. You can override this value in the `settings.py` configuration file located in `INSTALLDIR\SharePointAgent`.


Please, take the following information into consideration when communicating with the agent:


- **Install Agent** - RMSP tries to connect to each front end server (FE) in the farm until the agent is found. The **No agent was found on the SharePoint Farm front-end servers** message is displayed if no agent was located
- **Enable Firewall port 9001 on the Agent's side machine** - You will get the **No agent was found on the SharePoint Farm front-end servers** message if the agent is installed but the connection could not be established for some reasons
- **Grant the owner permissions to the QMC_Repository database for agent's service account** - You will get the **Login failed for user DOMAIN\user.** message, if the agent service account does not have sufficient rights to the `QMC_Repository` database.

Integration with Storage Maximizer


Recovery Manager integrates with Storage Maximizer for SharePoint, which enables organizations to improve SharePoint performance by reducing the storage burden on SQL server, while maintaining the integrity of SharePoint users' data. With Storage Maximizer, you can move large, old or unused SharePoint data from SQL server storage to a more efficient external storage. The tool helps to reduce the complexity of backing up and restoring externalized SharePoint data, and gives administrators complete control over externalized data in order to improve SharePoint performance and reduce costs.

With Recovery Manager for SharePoint you can restore SharePoint data externalized by Storage Maximizer from backups, including compressed and encrypted data.

 **NOTE:** Encrypted data can be restored only to the same location.


 **NOTE:** For Recovery Manager to be able to work with Storage Maximizer, you need to install and configure the Recovery Manager for SharePoint Agent on one of the SharePoint front end servers in each farm.

To successfully restore SharePoint data backed up on systems with enabled Storage Maximizer (SMAX), you should specify the path (paths) to the repository of the SMAX storage targets (destination for externalized data) backed up at the moment of your SQL Server backup. Recovery Manager will use this repository to search for the SharePoint data missing in a SQL Server backup.

 **NOTE:** The SharePoint content database and the SMAX storage targets should be backed up separately. The storage target backup should occur as close as possible to the end of the content database backup.

Configure the `INSTALLDIR\SharePointAgent\Settings.py` file to specify the path to the SMAX storage targets as follows:

```
BackupPaths=r"C:\SMaxBackupFolder1; C:\SMaxBackupFolder2"
```

 **NOTE:** Recovery Manager can successfully restore externalized data even if Storage Maximizer is temporarily unavailable in your SharePoint farm.

Working with Cache and Temporary Database

Recovery Manager for SharePoint uses a location on the SQL server to stage temporary copies of databases for analysis and restoration. When a backup of SharePoint content database is being analyzed or content is being restored, Recovery Manager stages a temporary copy of the content database from the backup at the configurable location on the SQL and performs analysis and recovery using this database.

Each time Recovery Manager analyzes a new backup, the previously created databases are deleted.

The Settings page offers two options to configure the location of the cache and temporary database: the Original Server mode or the Dedicated Server mode.



NOTE: If you have Backup Reader installed on the Original or Target SQL server, no temporary databases are created on the SQL servers. In this case this setting defines only the location of the Recovery Manager cache.

Original Server

By default, Recovery Manager uses the original content SQL server as a staging location to analyze and restore content from a backup of a SharePoint content database.

The backup analysis and backup content restore are performed in a distributed manner, i.e. all backup operations are performed on the same server where the backup was made.

This mode is optimum for the backup operations from the performance point of view.



NOTE: In this mode the Recovery Manager for SharePoint Backup Analyzer Service account must have the following permissions:

- **SQL server role sysadmin** for every SharePoint Back-End SQL server that you want to work with
- If the Recovery Manager for SharePoint Service account is a **db_owner**, the system administrator role is not required. In this case the account needs the **db_owner** and **db_creator** roles

Dedicated Server


This mode is used in case you have restricted permissions on the backend SharePoint servers (e.g. when the SQL production environment is controlled by database administrators and you have access to SharePoint databases on these servers only).

In this mode Recovery Manager uses the SQL server that hosts the Site Administrator repository database as a staging location to analyze or restore content from any SharePoint database backup. Recovery Manager only creates temporary operational databases on this dedicated server. If this mode is enabled, you can perform backup operations even the production server is unavailable.

When you are using this mode, make sure the RecoveryManagerTemp database is available on the production server. If this database is unavailable, the Recovery Manager account will attempt to create it on the production server.



NOTE: Your dedicated SQL server must be configured for delegation if it is not running on the computer where Recovery Manager is installed. For more information please refer to <http://msdn.microsoft.com/en-us/library/ms189580.aspx>.

 **NOTE:** The dedicated SQL server version must be equal or higher than the SharePoint content SQL server version.

 **NOTE:** In this mode the following permissions are required:

- the Recovery Manager for SharePoint service account must have the **SQL server role sysadmin** on the dedicated server
- the Recovery Manager account must have the **db_owner** role for the content and configuration databases to restore content to its original or alternate location
- the Recovery Manager account must have the **db_owner** role for the RecoveryManagerTemp database on the production server

Modifying Dedicated Staging Server Settings

You can override the default dedicated staging server settings in the product configuration.

To do it, create a record in the `RM_Settings` table of the Management Console for SharePoint (or Site Administrator for SharePoint) repository database.


Set `Name` to "StagingLocationServer", `Value` to the dedicated staging server name and `MachineName` to the repository machine name.


Modifying Temporary Database Location

Recovery Manager creates its temporary databases in the SQL server default database location. To modify the temporary database location, perform the following:

1. Run `cmd.exe`.
2. Change directory to `INSTALLDIR\Utils`, and then perform either of the following:
 - To specify a new server to be used as the staging location, run `StagingLocationManagement.cmd Add <Server> <DataFilesLocation> <LogFilesLocation>`
 - To delete the staging location for the server, run `StagingLocationManagement.cmd Del <Server>`
 - To modify the staging location, run `StagingLocationManagement.cmd Change <Server> <NewDataFilesLocation> <NewLogFilesLocation>`
 - To clear the staging location, run `StagingLocationManagement.cmd Clear`

Alternatively, you can change the staging location for the content server instance by going to the repository database and adding the information to the `RM_DataBaseFileLocation` table, specifying `ServerName`, `DatabaseFileLocation`, and `LogFileLocation`.

 **NOTE:** Make sure the folders specified already exist.

 **NOTE:** If you have Backup Reader installed on the Original or Dedicated SQL server, you do not need to configure the location of the temporary database.

Maintaining RMSP Temporary Database Availability

To ensure rapid recovery in minutes is always available for the latest backups of the most important SharePoint content databases, Recovery Manager should always keep the RM_TEMP_CONTENT database copy for the most recent backups for the specified list of content databases.

If other database backups are added for analysis/restore, these temporary databases should not be deleted. When a new backup becomes available for a content database from this list, the temporary database will be overwritten with the copy from the newer backup.

To change the list of SharePoint databases for which the temporary database will always be maintained online, uncomment the lines in the sql script below which is located in the **DatabaseRestoreManagerRules.xml** file:

```
<!--Recovery Manager will always keep a database copy from the most recent backup
(RM_TEMP_CONTENT database) for each SharePoint content database listed below.-->
<DropAllTempDatabases>

<connection type="work">

<command name="GetPreservedDatabasesList " connection="work"
table="master" type="select">
<script>

declare @limiter nvarchar(MAX)
set @limiter = ''

select @limiter = @limiter + ',' + 'rm_temp_content_b71bb5da_' + cast(id as
nvarchar (20)) + ''
from (select Id from RM_AnalyseStateTable where StateEnum = 4
--union select TOP 1 Id from RM_AnalyseStateTable where DatabaseName =
'WSS_Content' ORDER By BackupFinishDate DESC
--union select TOP 1 Id from RM_AnalyseStateTable where DatabaseName =
'WSS_Content_ 82' ORDER By BackupFinishDate DESC
--union select TOP 1 Id from RM_AnalyseStateTable where DatabaseName =
'WSS_Content_ 83' ORDER By BackupFinishDate DESC
--union select BackupId AS Id from RM_RecoveryJobs where [Percent] != 100) AS
BackupIds
SELECT @limiter AS PreservedDatabasesList


</script>
</command>
</connection>
```


To add a SharePoint content database to this list, copy the entire line and type in the database name.

To remove a database from the list, simply delete or comment the entire line containing this database's name.

Disaster Recovery of SharePoint Farms/Web Applications

Recovery Manager for SharePoint allows you to perform disaster recovery of SharePoint farms and Web applications from backups created using Recovery Manager for SharePoint Farm Backup or SharePoint Central Administration.

 **NOTE:** To ensure rapid restore, check that you have Recovery Manager Backup Reader or AgreeYa LiteSpeed installed on the SQL server where the AgreeYa repository database is located and make sure Recovery Manager agent is installed on each SharePoint server within your SharePoint environment.

 **NOTE:** The account running the Recovery Manager for SharePoint Agent must have the **db_owner** permissions for the AgreeYa repository database.

Recovery Manager for SharePoint enables you to perform MOSS 2007, SharePoint 2010 and SharePoint 2013 farm backup or recovery operations.

The new user-friendly interface makes it easy to benefit from this feature.

Preview

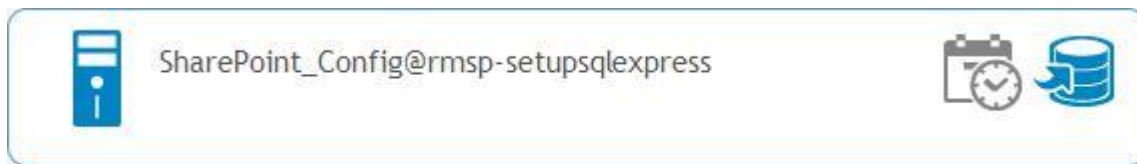
With **Preview On**, you get the information on how backup/restore would affect your environment. Recovery Manager displays the information without applying changes to your production. Turn **Preview off** to perform farm backup or restore.

Farm List

Either select a SharePoint Farm or restore a farm from a Central Administration Backup you have made before. By default, the list of all available farm backups is displayed on the right. To view the backups for a particular farm, click on the farm name.

Creating Backup

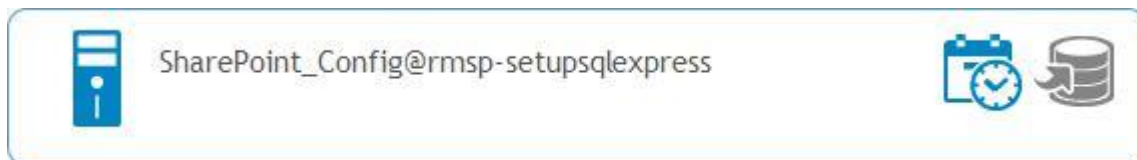
Figure 6: Creating Backup



The dialogue asking you for a backup path and method (full or differential) appears on the right. Specify the information required and submit information or cancel your operation.

Creating Backup Schedule

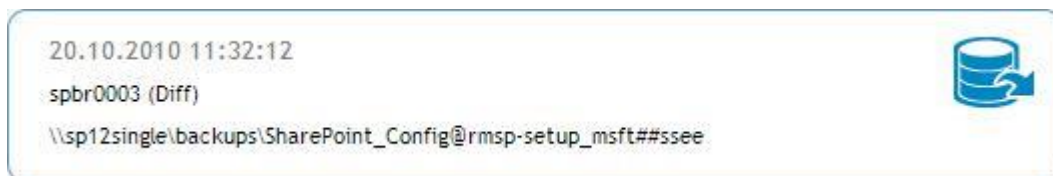
Figure 7: Creating Backup Schedule



You can either modify the default template manually, or use the Scheduled Tasks Manager. If you already have a schedule defined, Recovery Manager will display it. The schedule is displayed in the right part of the screen.

Restoring Farm

Figure 8: Restoring Farm



The process of farm recovery starts. The detailed step description is displayed in the right part of the screen.

Working with Backups

In this section:

- l [Discovering Backups](#)
- l [Analyzing Backups](#)
- l [Adding a Backup File](#)

Discovering Backups


The Recovery Manager settings page allows you to schedule backup discovery and enable/disable automatic analysis of backups.

Backup Discovery Schedule

When Recovery Manager is installed, the **RMSP-Discovery** task specifying the backup discovery time is automatically created in the **Control Panel | Scheduled Tasks** in Windows. The default backup discovery is scheduled for 2 AM daily.


To modify the backup discovery settings, go to **Control Panel | Scheduled Tasks | RMSP-Discovery** on the console machine and modify the schedule. Click **OK**.

You can view the settings in the Backup Discovery Schedule section of the settings page.

 **NOTE:** Backup discovery is not performed automatically during the product installation. To see the available SharePoint backups in the Recovery Manager Console immediately after installation, click the **Refresh** button on the backup page.

Creating Backup Discovery Schedule

In case the **RMSP-Discovery** task has been deleted, run the **createDiscoveryTask.cmd** file from the `[INSTALLDIR]\Utils\`. The console window is displayed. You will be prompted to enter the password of the currently logged on user. Supply the password and click Enter. The console window disappears and the Backup discovery schedule is set to 2 AM daily (the default setting).

 **NOTE:** If you want to create the RMSP-Discovery task specifying the backup discovery time under a different account, go to **Control panel | Scheduled tasks**, select the **RM-Discovery** task, right-click the task and select **Properties** from the context menu. Specify the user account in the **Run as** field.

Initializing Discovery

Before recovering data from a backup, Recovery Manager must analyze the structure and content of the backup.

Take the following steps to initiate backup discovery:

1. Run the Recovery Manager for SharePoint Management Console.
2. Select a SharePoint server node under Recovery Manager > Enterprise SharePoint. The backup creation date and time tabs and the list of the backups below will be displayed in the upper right pane. If the list of backups is not available, click the Refresh button to update the backup list.
3. Select a backup date tab. The hourly periods of backup creation time tabs will be displayed.
4. Select a backup time tab. The list of the backups created during the hour specified will be displayed.

For each backup the following information is available:

- Backup status
- Creation time
- SQL server name
- Content database name
- SharePoint farm
- Web application
- Storage path

5. By default, Recovery Manager does not analyze backups automatically unless it is set by the user.

Filtering Backups to Be Automatically Discovered

Not all content databases in the environment contain valuable data that needs to be available for recovery. To simplify work with Recovery Manager and avoid "noise" backups listed in Recovery Manager Console, you can configure Recovery Manager to automatically discover new backups for selected SharePoint content databases only. Backups from other databases can be added manually if needed. To change the list of SharePoint databases for which backups will be discovered automatically, modify the following lines in the **FileBasedBackupsSupportRules.xml** file:

```
<!--Discover backups for all SharePoint content databases:-->
<!--<prop_set name="contentDatabases" type="global"> = @DatabaseName </prop_set>-->
<!--Discover backups only for the listed SharePoint content databases:-->
<prop_set name="contentDatabases" type="global"> in ('WSS_Content',
'WSS_Content_82', 'WSS_Content_83')
</prop_set>
```

You can add databases to or remove databases from the list. Once the changes are saved, new backups will only be discovered for the specified content databases only.


Backup Auto Analysis

By default, Recovery Manager does not analyze backups automatically unless it is set by the user. Check the **Automatically analyze new backups when they become available** box on the settings page to enable automatic analysis of backups.

If the backup auto analysis is enabled, the most recent backup will be analyzed automatically. If the auto analysis is not enabled or if you wish to process a different backup, select the backup and click either the **Analyze** button at the top of the upper right pane, or the **Start Analysis Process** link in the lower right pane.

Backup Discovery Window

The Backup Discovery Window setting allows you to specify the time period for which Recovery Manager should discover backups. By default, only the backups created within the last fifty weeks are added to Recovery Manager. The information for the older backups is automatically deleted from the Recovery Manager Repository and Cache databases.

 **NOTE:** It is important to know that this setting influences the backup search: if you set the smaller period of time in the window for the backups to be discovered (e.g. 1 week), all the backups that have been previously analyzed will be out of scope and you will not be able to search them. If you should need the information from these backups, you will have to add them again to the Recovery Manager scope.

Working with SQL Alias

If SharePoint is configured to use SQL alias to connect to Back-End SQL Servers, the following additional configuration is required:

- On the machine, where the Recovery Manager for SharePoint console is installed:
 - Add the SQL aliases used to access the configuration and content SQL servers (use the SQL client configuration utility (cliconfg) or the registry entry) for 32 and 64 bit versions
 - Set the "SQLRedirection = True" option in the {%RMSP_INSTALLDIR%}\RMSPconfig.py file to enable SQL alias use
- On the SharePoint front-end server where Recovery Manager for SharePoint Agent is installed (in case the SharePoint API mode is used for recovery, and the Recovery Manager for SharePoint console is not installed on the front-end server):
 - Set the "SQLRedirection = True" option in the {%RMSP_INSTALLDIR%}\RMSPconfig.py file to enable SQL alias use
 - Set the "StorageMachineName=r'stmn'" option in the {%RMSP_INSTALLDIR%}\RMSPconfig.py file where "stmn" is the SQL server, hosting the Recovery Manager repository database
 - Set the "StorageName=r'QMC_Repository'" option in the {%RMSP_INSTALLDIR%}\RMSPconfig.py file where "QMC_Repository" is the repository database name

Analyzing Backups

If the backup auto analysis is enabled, the most recent backup will be analyzed automatically. If the auto analysis is not enabled or if you wish to process a different backup, select the backup and click either the **Analyze** button at the top of the upper right pane, or the **Start Analysis Process** link in the lower right pane.

For each backup the following information is available:

- Backup status
- Creation time
- SQL server name
- Content database name
- SharePoint farm
- Web application
- Storage path

Once the backup file is analyzed

Adding a Backup File

If you want to use a backup file that has not been matched with any of the discovered SharePoint Web applications, simply add it to the Recovery Manager scope, as follows:

1. Run the Recovery Manager for SharePoint Management Console.
2. In the navigation pane select the **Recovery Manager | All Backups** node. The date-based list of all available backups is displayed.
3. In the upper right pane click **Add Backup**.
4. Browse for the backup file and click **Open**.

After a backup is added, the user is automatically transferred to this backup in the backup list.


Different Backup Types


Working with DPM Backups


Recovery Manager restores the data from the snapshots created using Microsoft System Center Data Protection Manager 2007, 2010, 2012 and 2012 R2. For the Recovery Manager to work with DPM snapshots, perform the following:


- Install DPM Management Shell on the machine hosting Recovery Manager for SharePoint.
- Run the DPM Management Shell and set PowerShell execution policy using Set-ExecutionPolicy commandlet with Bypass value (Unrestricted value for PowerShell 1.0)
- Specify the DPM server name in the `INSTALLDIR\bin\BackupDiscovery.exe.config`

file. To see the snapshots in the list of the available backups, click the **Refresh** button.

 **NOTE:** If you apply latest updates to the DPM server (DPM Service pack 1 for example), make sure you apply the updates to the DPM management shell on the computer where the Recovery Manager is installed. You can test the connection to DPM server by running the DPM Management Shell Connect-DPMServer {serverName} commandlet to make sure that all updates are correctly installed and the server is accessible.

 **NOTE:** The Recovery Manager Service account should have permissions to perform the data recovery operation on the DPM server.

 **NOTE:** If you restore data to the alternate location or work in dedicated server mode make sure that the DPM protection agent is installed on the alternate/dedicated server machine.

 **NOTE:** It is strongly recommended to modify the default path on the SQL server hosting Recovery Manager temporary database before you start working with DPM snapshots. For detailed information, refer to the Modifying Temporary Database Location subsection in [Dedicated Server](#) section.

Working with HP Data Protector

Recovery Manager supports backup discovery, analysis and data restoration from HP Data Protector (HPDP) full, differential and transaction log SQL VDI backups and full or copy SQL files VSS backups.

Configuration

The HPDP User Interface component should be installed on the Recovery Manager machine.

The HPDP MS SQL Integration component should be installed on the original SharePoint backend server for the same location recovery, on the target SharePoint backend server for alternate server restoration and on the Recovery Manager repository database server to work in the Dedicated server mode.

Additional Information

Installation and licensing guide for HPDP is the following:

<http://h20000.www2.hp.com/bc/docs/support/SupportManual/c01631236/c01631236.pdf>.

There is the following information about setting up SQL Server client:

Microsoft SQL Server clients

It is assumed that your Microsoft SQL Server is up and running.


To be able to back up the Microsoft SQL Server database, you need to select the MS SQL Integration component during the installation procedure.

On Microsoft SQL Server 2005 systems, a specific package is required to enable normal operation of the Data Protector integration. The package must be installed before the MS SQL Server Integration component. You can install the package using either of the following actions:

- In the Microsoft SQL Server 2005 Setup Wizard, in the Feature Selection window, expand Client Components and select Legacy Components. Follow the Setup Wizard to complete installation.
- Download the package Microsoft SQL Server 2005 Backward Compatibility Components from the Microsoft web site <http://www.microsoft.com/downloads/details.aspx?familyid=D09C1D60-A13C-4479-9B91-9E8B9D835CDC&DisplayLang=en>, and install it.

Working with LiteSpeed Backups on TSM

Recovery Manager works with LiteSpeed backups stored in Tivoli Storage Manager (TSM) Server as a TSM backup, TSM archive or a striped backup. Both full and differential backups are supported. For Recovery Manager for SharePoint to work with LiteSpeed backups on TSM, the path to the Dsm.opt file should be specified in the **TivoliStorageManagerConfig.xml** file located in INSTALLDIR\XML.

 **NOTE:** The passwordaccess generate option should be set in the **Dsm.opt** file. For more information on the option, please, refer to the previous section.

Please refer to the section below for detailed information regarding the discovery of LiteSpeed backups on TSM and working with these backups in the Original and Dedicated Server modes as well as restoring to alternate location.

Backup Discovery and the Original Mode

To discover the backups and/or work in the Original Server mode:

1. Specify the local path to the **Dsm.opt** file in the **TivoliStorageManagerConfig.xml** configuration file. It is recommended to set the value to 'C:\Program Files\Tivoli\TSM\baclient\RM_dsm.opt' (in single quotes):

```
<prop_set name="TivoliConfigurationFile" type="global">
```

```
'C:\Program Files\Tivoli\TSM\baclient\RM_dsm.opt'  
</prop_set>
```

2. Create a file with the same name on every machine that has a SQL server with LiteSpeed for TSM installed. The Dsm.opt file should contain the source node name (this parameter may be omitted if the node name is the same as the machine NetBIOS name), the PASSWORDACCESS GENERATE option and the TSM server address:

```
nodename {sourceNodeName}  
PASSWORDACCESS GENERATE  
TCPSERVERADDRESS {tsmServer}
```

For example:

```
nodename lstsmclient  
PASSWORDACCESS GENERATE  
TCPSERVERADDRESS 10.30.37.153
```

Dedicated Mode and Restore to Alternate Location

To work in the Dedicated Server mode or/and to perform restore to alternate location, perform the following:

1. Specify the local path to the Dsm.opt file on the dedicated or alternate server machine in the TivoliStorageManagerConfig.xml configuration file. It is recommended to set the value to 'C:\Program Files\Tivoli\TSM\baclient\RM_dsm.opt' (in single quotes):

```
<prop_set name="TivoliConfigurationFile" type="global">  
  ``'C:\Program Files\Tivoli\TSM\baclient\RM_dsm.opt'  
</prop_set>
```

2. The Dsm.opt file should contain the source node name, the PASSWORDACCESS GENERATE option and the TSM server address:

```
nodename {sourceNodeName}  
PASSWORDACCESS GENERATE  
TCPSERVERADDRESS {tsmServer}
```

For example:

```
nodename lstsmclient  
PASSWORDACCESS GENERATE  
TCPSERVERADDRESS 10.30.37.153
```

3. Generate encrypted TSM registry password on the dedicated or alternate server machine by running the dsmcutil console command and specify the source node name and the source node password parameters:

```
dsmcutil updatepw /node:{sourceNodeName} /password: {sourceNodePassword}  
/optfile:"C:\Program Files\Tivoli\TSM\baclient\dsm.opt"
```

For example:

```
dsmcutil updatepw /node:lstsmclient /password:1  
/optfile:"C:\Program Files\Tivoli\TSM\baclient\dsm.opt"
```

Working with MDF Files

With the MDF file support feature you can manage the unattached SQL database files. This is helpful if you are making complete snapshots of disk volumes rather than making a backup for a particular content database.

To add MDF file to the Recovery Manager scope, use Recovery Manager Command Line API as follows:

1. Run cmd.exe.
2. Change directory to [INSTALLDIR]\MDFSUPPORT.
3. Start addMDF.cmd <SQL SERVER> <PATH TO MDF>, where <SQL SERVER> is the SQL to which the MDF file will be attached and which has access to the <PATH TO MDF>. The added MDF file will be automatically analyzed.

Example:

There is a local server named *dbserver* on which SQL Server is installed, and the MDF file is located at *C:\mdf\abc.mdf* on this server. Then, you can attach this MDF file to the SQL Server using the following command: `addMDF.cmd dbserver C:\mdf\abc.mdf`



NOTE: The MDF file must reside on one of the following devices: the local server on which SQL Server is installed, a Storage Area Network [SAN], or an iSCSI-based network. The universal naming convention (UNC) path is not supported for the MDF file. For more details, please refer the following Microsoft KB article <https://msdn.microsoft.com/en-us/library/ms176061.aspx>.

Recovery Manager will try to find all related database files (.NDF, .LDF) in the directory where the MDF file is located.

If the related database files are in a different directory, specify additional directories to be searched by modifying the [INSTALLDIR]\MDFSUPPORT\SearchPath.py file.

Recovery Manager will try to match this MDF file to an existing SharePoint Web Application.

Working with Symantec Backup Exec

Recovery Manager can analyze and restore SharePoint objects to the original and alternate location from full backups created by Symantec Backup Exec.

Recovery Manager uses Backup Exec Command Line Applet (bemcmd.exe). The following files have to be copied to the [INSTALLDIR]\bin from the **Backup Exec for Windows Servers** folder:

- bemcmd.exe
- beclass.dll
- becluster.dll
- BECrypto.dll
- besocket.dll
- bestdutil.dll

- serdll.dll
- libvxSigComp2.dll
- vxcrypto.dll
- msxcr71.dll
- msxcp71.dll



NOTE: The following files should be copied as well if you are using BackupExec 2010:

- vxicuuc24.dll
- vxicudt24l.dll
- beclass_mini.dll

This can be done by running the `INSTALLDIR\bin\InstallClient.bat` utility. The **Backup Exec for Windows Servers** folder where the files are located should be provided as an argument.



NOTE: The Backup Exec Remote Agent for Windows Systems should be installed on every backend server where the temporary database is restored.

The Recovery Manager for SharePoint service account must have the following permissions:

- the permissions to perform query and recovery operations on the Backup Exec media server
- **db_owner** role for the Backup Exec media server repository database (BEDB)



NOTE: The Recovery Manager for SharePoint service account should be added to logon accounts list on the Backup Exec media server, otherwise recovery operations will be performed using predefined "System Logon Account".

To discover and analyze the backups, the Backup Exec server options should be specified in the `INSTALLDIR\BackupExec\Settings.py` file.

The options to be specified are the following:

- **MediaServer** - Backup Exec media server name
- **MediaServerSQLInstance** - SQL server, where BackupExec media server repository database is located
- **MediaServerSQLDatabase** - Backup Exec media server repository database name

For example:

```
MediaServer='BackupExecSvr'
```

```
MediaServerSQLInstance='BackupExecSvr\BKUPEXEC'
```


```
MediaServerSQLDatabase='BEDB'
```




NOTE: Microsoft SharePoint Server Farm backups are not supported. It is recommended that you use the Backup Exec SQL backup.

Working with AgreeYa NetVault Backup (NVBU)

Recovery Manager can analyze and restore SharePoint objects to the original and an alternate location from full and differential VDI and full VSS backups created by BakBone NetVault Backup APM for SQL Server or AgreeYa NetVault Backup Plug-in for SQL Server.


 **NOTE:** The SQL Server Failover Cluster configuration is not supported.

The NVBU Server should be specified in the RMSPconfig.py file located in the Recovery Manager for SharePoint installation directory. Add the NVBUserver=r"NVBUserverName" record, where the "NVBUserverName" is the NetBios name of the NVBU Server machine.

 **NOTE:** The SQL Server APM Plugin should be installed on the original SharePoint backend server for the same location recovery, on the target SharePoint backend server for alternate server restoration and on the Recovery Manager repository database server to work in the Dedicated server mode.

Recovery Manager for SharePoint Agent must be installed on the NVBU Server.

To install Recovery Manager for SharePoint Agent, run the setup.exe file from the Recovery Manager for SharePoint Agent folder.

 **NOTE:** Recovery Manager for SharePoint Agent is installed automatically on the machine where Recovery Manager for SharePoint is installed.

The account running Recovery Manager for SharePoint Agent must have the following permissions:

- the permissions to run NVBU console command line
- the permissions to read from the registry
- the permissions to restore database from NVBU storage to the target SQL Server
- the permissions to access the Recovery Manager for SharePoint repository database


TCP Port 9001 should be available for proper communication between Recovery Manager and Recovery Manager for SharePoint Agent.

Working with Symantec NetBackups

Recovery Manager can analyze and restore SharePoint objects to the original and alternate location from full and differential backups created by Symantec Veritas NetBackup.

The Recovery Manager for SharePoint Agent and "NetBackup MS SQL Client" must be installed on all SharePoint backend SQL servers (including the dedicated server if applicable).


To install Recovery Manager for SharePoint Agent, run the **setup.exe** file from the Recovery Manager for SharePoint Agent folder.

 **NOTE:** Recovery Manager for SharePoint Agent is installed automatically on the machine where the Recovery Manager for SharePoint is installed.


The account running the Recovery Manager for SharePoint Agent must have the following permissions:

- the permissions to run NetBackup console command line
- the permissions to read from the registry
- the permissions to restore database from NetBackup storage to the target SQL Server
- the permissions to access the Recovery Manager for SharePoint repository database

TCP Port 9001 should be available for proper communication between the Recovery Manager and Recovery Manager for SharePoint Agent.

 **NOTE:** Microsoft SharePoint Server Farm backups are not supported. It is recommended that you use the NetBackup SQL backup.


Dedicated Mode and Restore to Alternate Location

 **NOTE:** Recovery Manager for SharePoint Agent should be installed on the dedicated/alternate server machine.


To restore objects to an alternate location/to work with the dedicated server, the Netbackup client (HostB) installed on this server requires access to backups created by a different Netbackup client (HostA). For detailed information, please, refer to NetBackup Administrator Guide for SQL.

To grant the access, perform either of the following on the master server:

- Create a file called `install_path\NetBackup\db\altnames\No.Restrictions`, to allow unrestricted redirected restore privileges

 **NOTE:** This configuration allows all clients of the master to access any other client's data that was backed up on the master For notes indented one level.

- Create a file called `install_path\NetBackup\db\altnames\HostB`, to allow HostB to restore HostA's data.


 **NOTE:** This configuration allows the client named HostB to access HostA's data on the master as well as any other client's data that was backed up on the master.

Working with Tivoli Backups

Recovery Manager works with IBM Tivoli Storage Manager for Databases also known as Tivoli Data Protection for SQL. Full and differential backups created with the IBM Tivoli Storage Manager for Databases in Legacy backup mode are supported.

The Recovery Manager for SharePoint Agent and "Tivoli Storage Manager for Databases" must be installed on all SharePoint backend SQL servers (including the dedicated server if applicable).

To install Recovery Manager for SharePoint Agent, run the `setup.exe` file from the Recovery Manager for SharePoint Agent folder.

 **NOTE:** Recovery Manager for SharePoint Agent is installed automatically on the machine where the Recovery Manager for SharePoint is installed.

The account running the Recovery Manager for SharePoint Agent service must have the following permissions:

- the permissions to run Tivoli Storage Manager for Databases console command line
- the permissions to read from the registry

- **SQL server role sysadmin** for every SharePoint Back-End SQL server that you want to work with
- **db_owner** role for the Recovery Manager for SharePoint repository database

TCP Port 9001 should be available for proper communication between the Recovery Manager and Recovery Manager for SharePoint Agent.

Setting Password for TSM

Tivoli Storage Manager for Databases requires a password. To ensure that the backup discovery, analysis or restore never fails because of a password, configure the **Dsm.opt** file usually located in the **Program Files\Tivoli\TSM\TDPSql** folder to store the password as follows:

1. Add the `PASSWORDACCESS GENERATE` string.
2. Set the password (e.g. 12345) by running the `tdpsqlc.exe query TSM /TSMPASSWORD="12345" console` command.
3. Check that the password is stored by running the `tdpsqlc.exe query TSM console` command. The password should no longer

Working in Cluster Environment

Recovery Manager supports backup discovery, analysis and data restoration from Tivoli backups produced by Virtual TSM nodes located on one Cluster Node. Recovery Manager for SharePoint Agent should be installed on each cluster node.

If several Virtual TSM nodes are located on one cluster node, the mapping between the server name and the TSM node configuration file should be specified in the **INSTALLDIR\Tivoli\Settings.py** file:

```
ServerConfiguration = { r"SERVER1" : r"C:\Program
Files\Tivoli\TSM\TDPSql\Server1.opt", r"SERVER2" : r"C:\Program
Files\Tivoli\TSM\TDPSql\Server2.opt",.....}
```

For more information, please see the [Server Configuration](#) section below.

Example:

There is a failover Database cluster in active/passive configuration installed to protect the SharePoint environment. Two Cluster resource groups are configured on a cluster node:

- Active Group A consisting of a **D1P\PROD01** sql server instance protected by **d1p** virtual TSM node
- Active Group B comprising **D2P\PROD02** sql server instance protected by **d2p** virtual TSM node.

Settings.py has the following mapping specified:

```
ServerConfiguration = { r"D1P\PROD01" : r"C:\Program Files\Tivoli\TSM\TDPSql\d1p.opt",
r"D2P\PROD02" : r"C:\Program Files\Tivoli\TSM\TDPSql\d2p.opt"}
```

The backup analysis and restore works file for **D1P\PROD01** and **D2P\PROD02** servers.

Dedicated Mode and Restore to Alternate Location

To work in the Dedicated Server mode or/and to perform restore to alternate location, perform the following:

1. Install Recovery Manager for SharePoint Agent on the dedicated/alternate server machine.
2. Copy the configuration opt file from the SQL server whose backups you want to work with to the dedicated/alternate server machine (e.g. to C:\Program Files\Tivoli\TSM\TDPSql\SourceDsm.opt).
3. Make sure that the **SourceDsm.opt** file contains the source node name, the PASSWORDACCESS GENERATE option and the TSM server address:

```
nodename {sourceNodeName}

PASSWORDACCESS GENERATE

TCPSEVERADDRESS {tsmServer}
```

For example:

```
nodename tsmclient

PASSWORDACCESS GENERATE

TCPSEVERADDRESS 10.30.37.153
```

4. Register the source node password by running the following command on the dedicated/alternate server machine: `QUERY TSM /TSMPassword={sourceNodePassword} /tsmoptfile="{sourceOptFileLocation}"`.
5. Specify the mapping between the source SQL Server name and the source node configuration file in the `INSTALLDIR\Tivoli\Settings.py` file of the dedicated/alternate server agent.

e.g. `QUERY TSM /TSMPassword=1 /tsmoptfile="C:\Program Files\Tivoli\TSM\TDPSql\SourceDsm.opt"`

e.g. `ServerConfiguration = { r"SOURCESQLSERVER" : r"C:\Program Files\Tivoli\TSM\TDPSql\TSMSourceDsm.opt" }`

For more information, please see the [Server Configuration](#) section below.

Server Configuration

The server configuration defines the mapping between the SQL Server name and the TSM configuration file that is being used to handle backups of this SQL Server. The configuration can be updated in the `Settings.py` file located in the Tivoli agent installation directory.

Several mappings should to be separated by commas. Each mapping has the following format: `r"SERVERNAME":r"optFilePath"`. The server name should be in upper case.

If the configuration file is not specified for a server the default configuration file is used.


e.g.:

```
ServerConfiguration = { r"SERVER1" : r"C:\Program
Files\Tivoli\TSM\TDPSql\Server1.opt" }

ServerConfiguration = { r"SERVER1" : r"C:\Program
Files\Tivoli\TSM\TDPSql\Server1.opt", r"SERVER2" :
r"C:\Program Files\Tivoli\TSM\TDPSql\Server2.opt" }
```

Working with vRanger Backup and Replication


Recovery Manager can analyze and restore SharePoint objects to the original and an alternate location from vRanger virtual machine backups.

 **NOTE:** The savepoint should contain the SharePoint content database data and log files.

The vRanger Server should be specified in the `RMSPconfig.py` file located in the Recovery Manager for SharePoint installation directory. Add the `vRangerServer=r"vRangerServerName"` record, where the "vRangerServerName" is the NetBios name of the vRanger Server machine.

The Recovery Manager for SharePoint Agent used for vRanger backups management should be installed on the machine where vRanger is installed. The Recovery Manager for SharePoint console should be installed in the SharePoint environment. TCP Port 9001 should be available for proper communication between Recovery Manager and Recovery Manager for SharePoint Agent.


To install Recovery Manager for SharePoint Agent, run the **setup.exe** file from the Recovery Manager for SharePoint Agent folder.

 **NOTE:** Recovery Manager for SharePoint Agent is installed automatically on the machine where Recovery Manager for SharePoint is installed.


The account running Recovery Manager for SharePoint Agent must have the following permissions:

- the permissions to create directories in the staging area of the target SQL server
- the permissions to copy files to the staging area of the target SQL server

The PowerShell execution policy should be configured on the vRanger server to run Recovery Manager integration. Start the PowerShell and set execution policy using `Set-ExecutionPolicy` commandlet with "Bypass" value ("Unrestricted" value for PowerShell 1.0)


 **NOTE:** The vRanger API should be initialized before it can be used by Recovery Manager. Run the vRanger console and wait for the Cmdlet list and command line prompt being displayed. The window can be closed and the API is ready for being used.

The vRanger repository password should be specified before running the backup analysis and recovery operations. To provide the password for the repository used to store SharePoint content backups, run the **RepoPass.bat** tool located in the **vRange** folder of the Recovery Manager for SharePoint agent installation directory. Provide the repository name and repository password. The password will be stored as a secure string.

 **NOTE:** In case the virtual machine computer name does not match virtual machine inventory name, the mapping should be specified in the **Settings.ps1** file located in the vRanger folder of the Recovery Manager for SharePoint agent installation directory. Several mappings should to be separated by semicolon. Each mapping has the following format: "machinename" = "vmname". Both values should be in the upper case.

Working with AppAssure Snapshots


Recovery Manager can analyze and restore SharePoint objects to the original and an alternate location from AgreeYa AppAssure disk snapshots.

 **NOTE:** The snapshot should contain the SharePoint content database data and log files.

The AppAssure Core Server should be specified in the RMSPconfig.py file located in the Recovery Manager for SharePoint installation directory. Add the `AppAssureCoreServer =r"AppAssureCoreName"` record, where the "AppAssureCoreName" is the NetBios name of the AppAssure Core Server machine.

The Recovery Manager for SharePoint Agent used for AppAssure backups management should be installed on the machine where AppAssure Core Server is installed. The Recovery Manager for SharePoint console should be installed in the SharePoint environment. TCP Port 9001 should be available for proper communication between Recovery Manager and Recovery Manager for SharePoint Agent.

To install Recovery Manager for SharePoint Agent, run the setup.exe file from the Recovery Manager for SharePoint Agent folder.

 **NOTE:** Recovery Manager for SharePoint Agent is installed automatically on the machine where Recovery Manager for SharePoint is installed.

The account running Recovery Manager for SharePoint Agent must have the following permissions:

- the permissions to create directories in the staging area of the target SQL server
- the permissions to copy files to the staging area of the target SQL server

The PowerShell execution policy should be configured on the AppAssure Core Server to run Recovery Manager integration. Start the PowerShell and set execution policy using `Set-ExecutionPolicy` commandlet with "Bypass" value ("Unrestricted" value for PowerShell 1.0).

Searching for Items

In this section:

- l [How It Works](#)
- l [Searching Items Within a Backup](#)
- l [Searching Items Across Backups](#)

How It Works

During the backup analysis Recovery Manager caches information about corresponding SharePoint hierarchy. Later, this information is used to display the hierarchy and search the backup for documents.

You can restore, save or preview an item, using Recovery Manager. A linked object, such as Web-part list, is restored to its former state, including all the related objects.

Searching Items Within a Backup

AgreeYa Recovery Manager for SharePoint offers you two ways of locating files you need to restore within a particular backup:

- **Browsing for items**

This strategy is useful if you do not remember the exact name of the file you want to restore, but you do remember where it was located, so you can browse for the file.

- **Filtering in the plain list of all files**

This strategy is useful if you know the name of the file you want to restore, so you can use the Look for function to narrow the list of files to choose from.

Searching Items Across Backups

Recovery Manager provides advanced search capabilities to look for a particular SharePoint content across all analyzed backups. Take the following steps:

1. Run the Recovery Manager for SharePoint Management Console.
2. In the navigation pane select the **Recovery Manager** node.
3. In the right pane type keywords and/or wildcard characters in the **Look for** field to narrow the search scope. The search results will be listed below. You can restrict your search by filtering the variety of analyzed backups by the time period when the backups were made and the virtual server(s) where the

backups are stored. Uncheck the **Search in Recycle Bin** option if you want to exclude the SharePoint Recycle Bin contents from the search scope.

4. To locate the desired object in the SharePoint hierarchy tree, click **Locate**. You will be carried to the proper object location.


Restoring Backup Content

When you have found the required content, you can proceed to restoring it.

Restoring Files from the Search Results List

To restore the items from the search results list:

1. Go to the search results list.
2. Browse the results to locate the file.
3. To make sure you are going to restore the right file select the desired file and click the **Preview** button. Make sure you have selected the right file and close it.
4. Click the check box next to the file and select either of the following actions:
 - If you want to restore the desired object to its original location, click **Restore**.
 - If you want to restore the desired object to the alternate location, click **Restore to**. In the **Select Target SharePoint** dialog that appears, browse the tree and select a different location to recover desired files. The description of the selected target location will be displayed below. Click **OK** to close the dialog window and start restoration process
 - If you want to save it to the file system, select the **Save As** button and specify the desired location in the dialog that appears.

 **NOTE:** When choosing the **Preview** or **Save As** option, a warning message about the time required for the backup restoration to a temporary database is displayed.

The progress bar will be displayed to indicate the restoration process and statistics. After the file is restored the progress bar disappears.

The **Save As** option is not available for lists and documents with content stored on the file system.

The **Preview** option is not available for the items found in the SharePoint Recycle Bins.


The items found in the SharePoint Recycle Bins can be restored to their original location only.

Restoring a Modified File

To restore the original version of a modified file:

1. In the lower right pane, go to the **Backup Content** tab.
2. Browse the tree to locate the file.
3. Click the check box next to the file and select either of the following actions:

- If you want to restore the desired object to its original location, click **Restore**.
- If you want to restore the desired object to the alternate location, click **Restore to**. In the **Select Target SharePoint** dialog that appears, browse the tree and select a different location to recover desired files. The description of the selected target location will be displayed below. Click **OK** to close the dialog window and start restoration process.
- If you want to save it to the file system, select the **Save As** button and specify the desired location in the dialog that appears. You can select multiple objects (folders, document libraries, documents) and save them to the file system, preserving their hierarchy.


 **NOTE:** When choosing the **Save As** option, a warning message about the time required for the backup restoration to a temporary database is displayed.

The progress bar will be displayed to indicate the progress of the restoration process and statistics. After the file is restored the progress bar disappears.

Restoring a Deleted File

To recover a deleted file:

1. In the Management Console, select the desired backup and go to the Search tab.
2. Select **Show Deleted** from the drop-down list on the toolbar. If many deleted files are listed, type the name of the file in the Look for field to narrow the search scope. The search results will be listed below.
3. To make sure you are going to restore the right file select the desired file and click the **Preview** button. Make sure you have selected the right file and close it.
4. Click the check box next to the file and choose either of the following actions:
 - If you want to restore the desired object to its original location, click **Restore**.
 - If you want to restore the desired object to the alternate location, click **Restore to**. In the **Select Target SharePoint** dialog that appears, browse the tree and select a different location to recover desired files. The description of the selected target location will be displayed below. Click **OK** to close the dialog window and start restoration process.
 - If you want to save it to the file system, select the **Save As** button and specify the desired location in the dialog that appears. You can select multiple objects (folders, document libraries, documents) and save them to the file system, preserving their hierarchy.

 **NOTE:** When choosing the **Save As** option, a warning message about the time required for the backup restoration to a temporary database is displayed.

The progress bar will be displayed to indicate the progress of the restoration process and statistics. After the file is restored the progress bar disappears.

Restoring Content to Alternate Location

The **Restore to** option enables users to restore SharePoint content to an alternate location.

Permissions

When a site collection as a whole is restored to an alternate location, all the objects of the site collection are restored with the original permissions.

When restoring sub-sites, lists, document libraries, folders, documents, items to an alternate location (a newly created site collection), their permissions are not restored.

User Information

When a site collection as a whole is restored to an alternate location, all the user information is preserved.

When restoring sub-sites, lists, document libraries, folders, documents, items to an alternate location (a newly created site collection), the creator/modifier information is reset to System Account, and other user-related information (e.g. Assigned To in the task list, etc.) may be omitted because users and groups are the objects of a Site Collection (belong to a Collection) and are restored only when a Site Collection is recreated as a whole.

Auditing Operations

Recovery Manager for SharePoint saves the information on Preview, Save As and Restore operations to the Event Log, allowing users to audit the application operations.

This feature helps monitoring internal threats to the enterprise and tightening its security policies.

To view the Recovery Manager Event Log, open Event Viewer by selecting **Start | Control Panel | Performance and Maintenance | Administrative Tools**, and then double-clicking **Event Viewer** or open the MMC console and select **Event Viewer** from it.

Select the Recovery Manager for SharePoint log to view the information on the application operations.




NOTE: When an item from a recycled container is recovered, Recovery Manager restores the container with all its content. Restoring an item located in a recycled container is logged as a container restore.

Saving Backup and Recycle Bin Objects to Disk

The **Save As** functionality is provided for objects (documents and discussion) from backups and recycle bins. The objects are saved to the file system preserving the hierarchy:

E.g.: The Web has several document libraries and discussion boards. Saving the web content to the folder on the disk results in creating a web name based folder and a number of subfolders in the target directory named according to the original containers (document libraries and discussion boards).

You can view the progress of saving objects to the disk. The progress window displays the current and total number of objects being saved, current and total content size and overall progress percentage.

 **NOTE:** Please note that saving documents to disk is not supported for SharePoint 2013.

Web Access

Recovery Manager for SharePoint Web Access is web interface allowing users to search for documents across backups and post requests to restore a particular document in a particular backup file.

The tasks of restoration and searching are now divided between the Administrator and lower level users (Helpdesk, for example).

The administrator, responsible for the product installation, backup discovery, analysis and restore, can delegate the time-consuming task of locating a required object to other users.

To activate the Web Access Search or Administration component, select the Search or Admin shortcut from **Start | Programs | AgreeYa | Recovery Manager for SharePoint**.

The Administration component (the **Admin** shortcut) allows you to add users to Web Access for Recovery Manager for SharePoint and configure e-mail notification.

The Search component (the **Search** shortcut) opens the Search Page allowing users to search for documents and post restore requests.

Administration Page

The administration page allows you to add users to the Web Access and to grant them either search only or search and restore privileges.

By default, only the user who installed Web Access for Recovery Manager for SharePoint is given access to the user administration page.

To modify the access permissions, please refer to **Location '/admin'** section in the **httpd.conf** file located in the installation directory (by default `C:\Program Files\AgreeYa\Recovery Manager for SharePoint Web Access\conf`).

For more information, please refer to <http://httpd.apache.org/docs/2.0/mod/core.html#require>

Adding Users

Type the user name in the **Add new user:** field and click **Add**. You can also specify the name of the Active Directory Security Group here to grant access to all the group members.

Check the **Can Restore** box to enable the user(s) to restore the content requested by them as well as the other users.

Removing Users

Click the **X** button to remove the user.

Configuring E-mail Notification

Recovery Manager for SharePoint Web Access can notify you on the status of your restore requests via e-mail.

To receive e-mail notifications on the status of your restore requests, specify the SMTP server and the port number on the Admin page and save your settings.

If the settings are correct, you should receive an e-mail alert within minutes. If you do not receive an e-mail, please, check your settings.

The notification message templates can be customized (e.g. translated).

Search Page (Search Privileges)

The Search shortcut from **Start | Programs | AgreeYa | Recovery Manager for SharePoint** opens the Search Page allowing you to search for documents and post restore requests. It is also displayed when you select the Search link in the left part of the search screen.

Searching for Documents

1. Specify the full title or a part of the site, document or item title.
2. Select the object(s) want to search for from the drop-down list.
3. Specify whether you want to search for objects across all Web Applications or limit the search scope to a particular set of Web Applications.
4. Check the appropriate box(es) to specify whether you want to search in Backups or/and in Recycle Bins.
5. Click **Search**. After the search is completed, you can post a restore request.

Posting a Restore Request

If you have the search only privileges, you can send the request to restore the object(s).

1. Select the checkbox next to the object(s) you wish to restore.
2. Type in an optional comment in the field above the search results list (e.g. who requires the restore, the importance of the restore, etc.)
3. Click **Send Request**. The details of your request are displayed.

Viewing Restore Requests

The **Restore Requests** link in the left part of the screen displays all your recovery requests.

To easily locate the requests you need, Recovery Manager for SharePoint Web Access provides the following views:

- **Pending** - displays all recovery requests in a pending state
- **In Progress** - displays all recovery requests that are currently in progress
- **Done** - displays all recovery requests that have been completed

Each view displays the following information for the requests available:

- **When Created** - the date when the request was created
- **Comments** - if available
- **Request Status** - current status of the request
- **Details link** - clicking the link displays the detailed information on the request

Request Details include:

- **When Created** - the date when the request was created
- **Comments** - if available
- **Title** - the name of the object
- **Location** - the path to the item
- **Date Modified** - the date when the request was changed
- **Item Status** - current status of the request

Search Page (search and restore privileges)

The **Search** shortcut from **Start | Programs | AgreeYa | Recovery Manager for SharePoint** opens the Search Page allowing you to search for documents and view the restore requests posted by all users and to create the restore jobs for their requests if you have the required privileges. The page is also displayed when you select the Search link in the left part of the search screen.

Searching for Documents

1. Specify the full title or a part of the site, document or item title.
2. Select the object(s) want to search for from the drop-down list.
3. Specify whether you want to search for objects across all Web Applications or limit the search scope to a particular set of Web Applications.
4. Check the appropriate box(es) to specify whether you want to search in Backups or/and in Recycle Bins.
5. Click **Search**. After the search is completed, you can proceed to restoring items.

Restoring Items

1. Select the checkbox next to the object(s) you wish to restore.
2. Click **Restore**. The recovery process is initiated. The details of your restore are displayed.

Viewing Restores

The **Restores** link in the left part of the screen displays all available recovery jobs.

To easily locate the recovery jobs you need, Recovery Manager for SharePoint Web Access provides the following views:

- **In Progress** - displays all recovery jobs that are currently in progress
- **Done** - displays all recovery jobs that have been completed
- **Failed** - displays all recovery jobs that have failed to complete

For each recovery job the following information is displayed:

- **Backup Path** - location of the document.
- **Backup Date** - the date when the backup was created.
- **Restore Job Created** - the date and time when the recovery job was created.
- **Restore Duration** - the job execution time.
- **Restore Job Completed** - the date and time when the recovery job was finished.
- **Result of Restore** - comments on the recovery performed.
- **The Requests** link - clicking the link displays restore related recovery requests, including the information on the user who created the request, the date and time if was created, comments if available, request status and Details.

You can also view the requests by selecting the **Restore Requests** link in the left part of the screen.

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