

Quest Recovery Manager for Active Directory
10.1.1

Release Notes



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Quest® Recovery Manager for Active Directory 10.1.1

Release Notes

These release notes provide information about the Quest® Recovery Manager for Active Directory 10.1.1 release.

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About Quest® Recovery Manager for Active Directory 10.1.1

Recovery Manager for Active Directory enables fast, online recovery. Comparison reports highlight what objects and attributes have been changed and deleted in Active Directory enabling efficient, focused recovery at the object or attribute level. Accurate backups and a quicker recovery enable you to reduce the time and costs associated with AD outages and reduce the impact on users throughout your organization.

Recovery Manager for Active Directory is based on patented technology.

Recovery Manager for Active Directory 10.1.1 is a maintenance release with new features and functionality. See [New Features and Enhancements](#).

New Features and Enhancements

This section covers new features and enhancements in Quest® Recovery Manager for Active Directory 10.1.1.

Major Features

Recovery Manager for Active Directory 10.1.1

- **Support LDAP over SSL (LDAPS) to encrypt Active Directory connection for online restore of backups**
 - Full support for both agent-based and agentless online restores of Active Directory objects.
 - New global option to specify SSL connection. Select the **Use Secure Sockets Layer (SSL) to encrypt the connection** check box in the Recovery Manager for Active Directory Settings dialog.
 - Ability to select SSL connection when connecting to a forest in the Recovery Manager console.
- **Run PowerShell Scripts before and after creating a backup** This option allows you to customize your environment by running PowerShell scripts before and/or after creating a backup. Custom scripts can be launched either on the Recovery Manager for Active Directory Console machine or on the domain controller side.

Enhancements

General

| Enhancement | ID (old) | ID (new) |
|--|-------------|------------|
| Recovery Manager for Active Directory 10.1.1 | | |
| Support LDAP over SSL (LDAPS) to encrypt Active Directory connection for online restore of backups. This includes full support for both agent-based and agentless online restores of Active Directory objects and a new global option to specify SSL connection (select the Use Secure Sockets Layer (SSL) to encrypt the connection check box in the Recovery Manager for Active Directory Settings dialog). | RMADFE-823 | ADO-222475 |
| Run PowerShell Scripts before and after creating a backup. This option allows you to customize your environment by running PowerShell scripts before and/or after creating a backup. Custom scripts can be launched either on the Recovery Manager for Active Directory Console machine or on the domain controller side. | RMADFE-2281 | ADO-218304 |
| Recovery Manager for Active Directory 10.1 HF2 | | |
| The computer collection type (System State and Bare Metal) is displayed in the Recovery Manager Console. | RMADFE-2133 | ADO-218173 |
| Full replication: A user can view collection properties and global settings in the console that is used as a replication target. All of these settings are read-only, except Logging in global settings. | RMADFE-2874 | ADO-218185 |

| Enhancement | ID (old) | ID (new) |
|---|-------------|------------|
| Hide replication sessions older than X days shown under Replication > History in Recovery Manager Console Introduced a new registry key named "ReplicationSessionLimitDays" that allows you to specify the number of days (Default: 10). The new registry key only limits the replication history shown in the Recovery Manager Console, and it does not work with the relevant PowerShell cmdlets. | RMADFE-2910 | ADO-218187 |
| The "PassedWithWarnings" antivirus scan status is shown if your antivirus database is older than the specified time limit. From this version, this limit is set to 3 days by default. | RMADFE-3230 | ADO-218220 |

Resolved Issues

General Resolved Issues

| Resolved Issue | ID (old) | ID (new) |
|---|-------------|------------|
| Recovery Manager for Active Directory 10.1.1 | | |
| Agent-based online restore can result in lsass process crash. | RMADFE-3233 | ADO-218222 |
| Unable to restore AD object when user provides smart card PIN and username hint. | RMADFE-3132 | ADO-218574 |
| Configuring a backup schedule is disabled when creating a backup from Recovery Manager for Active Directory > Create Backup . | RMADFE-3260 | ADO-219136 |
| SCOM pack Get Collections call results in Access denied errors. | RMADFE-3025 | ADO-220574 |
| Increasing number of scheduled tasks makes Console, Replication, and Cmdlets extremely slow. | RMADFE-1837 | ADO-223040 |
| RMAD console crashed due to missing DLL Microsoft.Xaml.Behaviors.dll. | N/A | ADO-226682 |
| After restore a User Object Member Of is different than in Active Directory. | N/A | ADO-230090 |
| Recovery Manager for Active Directory 10.1 HF2 | | |
| Cannot replicate a password from the E-mail tab in the Recovery Manager for Active Directory Settings dialog during full replication. | RMADFE-2999 | ADO-218191 |
| Recovery Manager Console cannot replicate AD LDS (ADAM) instances from an untrusted domain in a collection. | RMADFE-3099 | ADO-218203 |
| Recovery Manager Portal installation using SQL Server authentication fails with an error indicating the specified credentials do not have sufficient privileges on target SQL Server. | RMADFE-3064 | ADO-218197 |

| Resolved Issue | ID (old) | ID (new) |
|--|-------------|------------|
| Recovery Manager for Active Directory 10.1 HF1 | | |
| Now the backup collecting schedule can be configured for the selected day of the week. | RMADFE-3029 | ADO-218556 |
| Recovery Manager for Active Directory does not restore GPO template files because they are considered as DFSR conflicts and are removed. | RMADFE-2800 | ADO-218518 |
| The Group Policy Restore Wizard cannot connect to a domain controller because it mistakenly tries to connect to another domain controller that is not available. | RMADFE-2554 | ADO-218510 |
| Full replication fails with the "No such host is known" error when the slave console has an unreachable DC in the Backup Agent Management list. | RMADFE-2625 | ADO-225873 |
| The Online Restore Wizard cannot accept long paths (longer than 22 symbols) to the Change Auditor database. | RMADFE-2567 | ADO-225869 |
| A list of registered backups opens with a delay in Online Restore Wizard. | RMADFE-2715 | ADO-218318 |
| The text on the "Unpacked Backups" (global settings) tab in the "Settings" dialog box has been improved. | RMADFE-2775 | ADO-218324 |
| Recovery Manager Console cannot replicate AD sites from an untrusted domain in a collection. | RMADFE-2844 | ADO-218523 |
| Full replication fails when a DC is selected for the option 'Unpack each backup upon its creation' in the primary console. | RMADFE-1858 | ADO-225860 |

Known Issues

General Known Issues

| Known Issue | ID (old) | ID (new) |
|--|-------------|------------|
| Cannot perform RMAD upgrade if the SQL Server Always On group is enabled for the reporting database. | RMADFE-1146 | ADO-220503 |
| When a user cancels the data replication process by Ctrl + C, by logoff, etc, the status of the replication session is stuck at "Running". | RMADFE-1271 | ADO-220508 |
| Customer can add a few instances of the same RMAD console (by domain name and by IP). | RMADFE-1276 | ADO-220509 |
| Cannot disable replication schedule when there is no replication console (the replication console was deleted). | RMADFE-1283 | ADO-220511 |
| Backups may contain invalid FQDNs that are registered automatically, so they cannot be selected in the Forest Recovery Console. Workaround: Use the Active Directory browse method to add the DCs to a collection when creating backups, or perform backup creation for the DCs (with correct FQDN) directly. To use the Active | RMADFE-2851 | ADO-220570 |

| Known Issue | ID (old) | ID (new) |
|--|-------------|------------|
| Directory browse method, click All Domain Controllers in the console tree, right-click a domain controller on the right pane and press Add to Collection . | | |
| Recovery Manager for Active Directory does not show changes to GPO administrative templates in the GPO comparison report. | RMADFE-805 | ADO-220632 |
| Group Policy restore might fail with the error "Network access is denied". | RMADFE-2162 | ADO-226664 |
| Online Restore Wizard does not work on Windows Server 2016 with LSA protection and Secure Boot enabled. | RMADFE-1996 | ADO-226670 |
| Recovery Manager Portal upgrade fails when upgrading from 10.1 HF1 or earlier to 10.1 HF2 or later. You must reinstall the Recovery Manager Portal when upgrading instead. | RMADFE-3122 | ADO-229151 |

System Requirements

Before installing Recovery Manager for Active Directory, ensure that your system meets the following minimum hardware and software requirements.

NOTE

- Recovery Manager for Active Directory supports only IPv4 or mixed IPv4/IPv6 networks.

Recovery Manager for Active Directory requirements

Processor

Minimum: 1.4 GHz

Recommended: 2.0 GHz or faster

Memory

Minimum: 1 GB

Recommended: 2 GB

These figures apply only if the Active Directory domains managed by Recovery Manager for Active Directory include 1 million objects or less. Increase RAM size by 512 MB for every additional 1 million objects.

Hard disk space

Full installation including the prerequisite software: 2.7 GB of free disk space

In case all the prerequisite software is already installed: 260 MB of free disk space

NOTE

Additional storage space is required for a backup repository, at least the size of the backed-up Active Directory database file (**Ntds.dit**) and the **SYSVOL** folder plus 40MB for the transaction log files.

Display

SVGA at 1024 x 768 or higher

Operating system

NOTE

- Machine that hosts the Recovery Manager for Active Directory console must have same or higher version of Windows operating system than the processed domain controllers. Otherwise, the online compare and object search in a backup during the online restore operation may fail.
- 32-bit operating systems are not supported.

Installation

- Microsoft Windows Server 2019
- Microsoft Windows Server 2016
- Microsoft Windows Server 2012 R2 with or without any Service Pack
- Microsoft Windows Server 2012 with or without any Service Pack
- Microsoft Windows Server 2008 R2 without Service Pack or with Service Pack 1
- Microsoft Windows Server 2008 x64 with Service Pack 1 or Service Pack 2
- Microsoft Windows 10 x64
- Microsoft Windows 8.1 x64 with or without any Service Pack
- Microsoft Windows 8 x64 with or without any Service Pack
- Microsoft Windows 7 x64 without Service Pack or with Service Pack 1
- Microsoft Windows Vista x64 with Service Pack 2

Targets for backup, restore, or compare operations

- Microsoft Windows Server 2019 including Server Core installation
- Microsoft Windows Server 2016 including Server Core installation
- Microsoft Windows Server 2012 R2 with or without any Service Pack (including Server Core installation)
- Microsoft Windows Server 2012 with or without any Service Pack (including Server Core installation)
- Microsoft Windows Server 2008 R2 without Service Pack or with Service Pack 1 (including Server Core installation)
- Microsoft Windows Server 2008 x64 with Service Pack 1 or Service Pack 2 (including Server Core installation)

The Windows Server Backup feature is supported for Windows Server 2008 R2 or higher. Make sure that the feature is installed on all domain controllers in your environment.

Microsoft .NET Framework

Microsoft .NET Framework version 4.5.2 or higher

Microsoft SQL Server and its components

Microsoft SQL Server versions

Microsoft SQL Server is required for the following Recovery Manager for Active Directory features: Comparison Reporting, Forest Recovery Persistence and Recovery Manager Portal.

Supported SQL Server versions:

- Microsoft SQL Server 2019 with or without any Service Pack (Enterprise, Business Intelligence, Standard, Express, Web, or Developer Edition)

- Microsoft SQL Server 2017 with or without any Service Pack (Enterprise, Business Intelligence, Standard, Express, Web, or Developer Edition)
- Microsoft SQL Server 2016 with or without any Service Pack (Enterprise, Business Intelligence, Standard, Express, Web, or Developer Edition)

NOTE | For Microsoft Windows Server 2008 R2, you should manually install the appropriate version of SQL Server. This operation cannot be performed automatically using the Setup Wizard.

Microsoft SQL Server components

Microsoft System CLR Types for SQL Server 2012

If this component is not installed, it will be installed automatically by the RMAN setup.

Microsoft SQL Server Reporting Services

To display reports, Recovery Manager for Active Directory can integrate with Microsoft SQL Server Reporting Services (SRSS) 2012, 2014, 2016, and 2019.

Microsoft Windows PowerShell

Microsoft Windows PowerShell version 3.0 or later

Microsoft Windows Installer

Microsoft Windows Installer 4.5

Microsoft Management Console

Microsoft Management Console 3.0

Integration with ChangeAuditor for Active Directory

Supported versions of Change Auditor for Active Directory: from 6.x to 7.0.1.

If any prerequisite software is not installed, the Setup program automatically installs it for you before installing Recovery Manager for Active Directory. If the prerequisite software to be installed is not included in this release package, it is automatically downloaded.

Continuous recovery: From version 10.0.1, Recovery Manager for Active Directory together with Change Auditor can restore the deleted object(s) and continuously restores the last change (if any) that was made to the object attributes after creating the backup, using the data from the Change Auditor database.

Forest Recovery Agent requirements

Processor

450 MHz or faster

Memory

256 MB (1 GB recommended)

Hard disk space

2 GB or more

Operating system

One of the following operating systems:

- Microsoft Windows Server 2019 including Server Core installation
- Microsoft Windows Server 2016 including Server Core installation
- Microsoft Windows Server 2012 R2 with or without any Service Pack (including Server Core installation)
- Microsoft Windows Server 2012 with or without any Service Pack (including Server Core installation)
- Microsoft Windows Server 2008 R2 without Service Pack or with Service Pack 1 (including Server Core installation)
- Microsoft Windows Server 2008 x64 with Service Pack 1 or Service Pack 2 (including Server Core installation)

Prerequisite software

Microsoft Windows Installer 4.5 or later must be installed.

Active Directory Virtual Lab requirements

Microsoft System Center Virtual Machine Manager (SCVMM) 2012 without Service Pack or with Service Pack 1

Software that must be installed on the Active Directory Virtual Lab computer:

- Microsoft SCVMM Console (supplied with the SCVMM version you plan to use)

Software that is installed on the source computer by Active Directory Virtual Lab console:

- Microsoft SCVMM Agent

Supported operating systems for the Hyper-V host:

- Microsoft Windows Server 2008/2008 R2

Microsoft System Center Virtual Machine Manager (SCVMM) 2012 R2 or 2016

Software that must be installed on the Active Directory Virtual Lab computer:

- Microsoft SCVMM Console (supplied with the SCVMM version you plan to use)

Software that is installed on the source computer by Active Directory Virtual Lab console:

- Disk2vhd v2.01 utility

For for more details, see the *Working with SCVMM 2012 R2 or higher* section in User Guide.

Supported operating systems for the Hyper-V host:

- Microsoft Windows Server 2012 or higher.

VMware vCenter/ESX Server 6.0, 6.5 and 6.7

- Active Directory Virtual Lab does not support conversion of Windows Server 2019 Domain Controllers using VMWare ESXi/vCenter server.
- Active Directory Virtual Lab does not support VMware ESXi 6.0.

- vCenter Converter 6.2 must be installed in your environment using the Client-Server installation setup option.
- vCenter Converter must be accessible to the Active Directory Virtual Lab.
- If the TLS 1.0 protocol is disabled on vCenter Converter and vCenter servers, then switch to TLS 1.2 on the ADVL server. For more details, see the following KB articles:
 - <https://kb.vmware.com/s/article/2145796>.
 - <https://docs.microsoft.com/en-us/security-updates/SecurityAdvisories/2015/2960358>

Recovery Manager Portal requirements

Processor

1 GHz or faster

Memory

512 MB or more

Hard disk space

- **x64 system:** 2 GB or more

Display

SVGA at 1024 x 768 or higher

Operating system

You can install the Recovery Manager Portal on a computer running one of the following x64 operating systems:

- Microsoft Windows Server 2019
- Microsoft Windows Server 2016
- Microsoft Windows Server 2012 R2 with or without any Service Pack
- Microsoft Windows Server 2012 with or without any Service Pack
- Microsoft Windows Server 2008 R2 with Service Pack 1 or later
- Microsoft Windows Server 2008 with Service Pack 2 or later

Microsoft .NET Framework

Microsoft .NET Framework version 4.5.2 or higher

Microsoft Internet Information Server (IIS)

Microsoft Internet Information Services (IIS) 8.5, 8.0, 7.5, or 7.0.

Microsoft SQL Server and its components

Microsoft SQL Server versions

One of the following versions is required:

- Microsoft SQL Server 2019 with or without any Service Pack (Enterprise, Business Intelligence, Standard, Express, Web, or Developer Edition)

- Microsoft SQL Server 2017 with or without any Service Pack (Enterprise, Business Intelligence, Standard, Express, Web, or Developer Edition)
- Microsoft SQL Server 2016 with or without any Service Pack (Enterprise, Business Intelligence, Standard, Express, Web, or Developer Edition)
- Microsoft SQL Server 2014 with or without any Service Pack (Enterprise, Business Intelligence, Standard, Express, Web, or Developer Edition)
- Microsoft SQL Server 2012 with or without any Service Pack (Enterprise, Business Intelligence, Standard, Express, Web, or Developer Edition)

Required Microsoft SQL Server components

- Microsoft System CLR Types for SQL Server 2012

If this component is not installed, it will be installed automatically by the RMAD setup.

Password and SIDHistory Recoverability Tool

You can only use the Password and SIDHistory Recoverability Tool if Microsoft's Active Directory Recycle Bin is not enabled in your environment.

Product Licensing

The Recovery Manager for Active Directory license specifies the licensed number of user accounts in the Active Directory domains protected with the product. If the actual number of user accounts exceeds the licensed number, Recovery Manager for Active Directory does not stop functioning but displays a warning message each time you back up data. In this case, you need to purchase and install a new license key file allowing you to back up a greater number of user accounts or revoke licenses from the domains whose backups you no longer need.

To view information about and manage the installed license key file, you can use the License tab in the **About** dialog box: in the Recovery Manager Console, right-click the Recovery Manager for Active Directory console tree root, and then click **About**.

Installing license key file

You need to supply a valid license key file when installing Recovery Manager for Active Directory.

To install a license key file

1. In the Setup Wizard, on the **User Information** page, click **Browse license** to display the **Select License File** dialog box.
2. Locate the Quest license file (*.dlv) and click **Open**.

Updating license key file

If you have purchased a new license key file, use the Recovery Manager Console to update the license key file.

To update the license key file

1. In the Recovery Manager Console, right-click the **Recovery Manager for Active Directory** console tree root, and then click **About**.
2. In the **About** dialog box, click the **License** tab, and then click **Install License File**.

3. In the **Update License** dialog box, enter the path and name of the license key file, and then click **OK**.

Revoking licenses

When the actual number of user accounts exceeds the licensed number, Recovery Manager for Active Directory returns a warning message each time you back up data. In this case, you can revoke licenses from the domains whose backups you no longer need. The revoked licenses are returned to the pool of available licenses and you can allocate them to a different domain.

CAUTION | When you revoke licenses from a domain, all backups created by Recovery Manager for Active Directory for that domain get deleted. You should only revoke licenses from a domain if you no longer need backups created for that domain.

To revoke licenses from a domain

1. In the console tree, right-click the root node, and then click **About**.
2. In the About dialog box, click the **License** tab.
3. On the **License** tab, select the domain from the **License Usage** list, and then click **Revoke**.
4. In the confirmation message box, click **Yes**.

Getting Started

Upgrade and installation instructions

NOTE | For Recovery Manager for Active Directory 10.1 or higher: Make sure that you use the Backup Agent version supplied with this release of Recovery Manager for Active Directory.

Recovery Manager for Active Directory supports a direct upgrade from version 9.0.1 and higher. If you have an earlier version of Recovery Manager for Active Directory, the best practice is to upgrade the product to any of the supported versions, and then upgrade it to the latest version.

Alternatively, you can install the latest version of Recovery Manager for Active Directory on a new clean machine and perform a full replication. The Full replication feature allows you to create a full copy of the master Recovery Manager Console settings on the new console instance. This option is supported starting from Recovery Manager for Active Directory version 9.0.1. For details, see the *Full Replication* section in User Guide.

Additional resources

Additional information is available from the following:

- Online product documentation [Support Portal](#)
- Recovery Manager Community <https://www.quest.com/community/products/recovery-manager/f/forum>

Globalization

This section contains information about installing and operating this product in non-English configurations, such as those needed by customers outside of North America. This section does not replace the materials about supported platforms and configurations found elsewhere in the product documentation.

This release is Unicode-enabled and supports any character set. In this release, all product components should be configured to use the same or compatible character encodings and should be installed to use the same locale and regional options. This release is targeted to support operations in the following regions: North America, Western Europe and Latin America, Central and Eastern Europe, Far-East Asia, Japan.

Third-Party Contributions

This product contains the third-party components listed below. For third-party license information, go to <http://quest.com/legal/license-agreements.aspx>. Source code for components marked with an asterisk (*) is available at <http://opensource.quest.com>.

List of third-party contributions

| Component | License or acknowledgment |
|--|--|
| 7-ZIP 19.0 | 7-ZIP 19.0 |
| AeroWizard 2.2.3 | MIT 1.0 |
| Boost 1.34.1 | Boost 1.0 |
| Fody 1.29.3 | MIT |
| Group Controls 1.8 | Apache 2.0 Copyright Notice - Group Controls 1.5.3 |
| MinHook 1.3.2.1 | MinHook 1.0 Copyright 2009 Tsuda Kageyu All rights reserved. |
| RazorEngine 3.10.0 | Apache 2.0 |
| Newtonsoft.Json.dll 6.0.6 | MIT |
| PropertyChanged.Fody 1.50.3 | MIT |
| TaskScheduler 2.8.18 | MIT |
| Task Scheduler Managed Wrapper 2.8.18 | MIT |
| TimeSpan Helper Library 2.2 | New BSD N/A |
| Windows Installer XML Toolset (aka WiX) 3.14 | Microsoft Reciprocal License (MS-RL) N/A |
| ZLib 1.1.4 | zlib 1.2.3 |

zlib 1.2.3 License

License

/* zlib.h -- interface of the 'zlib' general purpose compression library

version 1.2.3, July 18th, 2005

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Jean-loup Gailly jloup@gzip.org

Mark Adler madler@alumni.caltech.edu

*/

MinHook - The Minimalistic API Hooking Library for x64/x86

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