Quest

Quest Recovery Manager for Active Directory
Disaster Recovery Edition 10.3.2

Release Notes

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Quest® Recovery Manager for Active Directory Disaster Recovery Edition 10.3.2

Release Notes

These release notes provide information about the Quest® Recovery Manager for Active Directory Disaster Recovery Edition 10.3.2 release.

- New Features and Enhancements
- Resolved Issues
- Security Fixes
- Known Issues
- System Requirements
- Product Licensing
- Getting Started with Recovery Manager for Active Directory
- Globalization
- Third-Party Contributions

About Quest® Recovery Manager for Active Directory Disaster Recovery Edition 10.3.2

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 10.3.2 is a 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 10.3.2.

Major Features

Enhanced logging of actions in RMAD Console and Forest Recovery Console

Event logging has been enhanced for actions that are performed in the RMAD console and Forest Recovery Console. Using the event viewer, actions on computer collections, forest recovery projects and much more can be audited.

Create virtual machines in Microsoft Hyper-V and VMWare ESXi

New ability to create virtual machines in Microsoft Hyper-V or VMWare ESXi and use the Restore Active Directory® to Clean OS recovery method or the Install Active Directory recovery method. To configure Microsoft Hyper-V or VMWare ESXi, new infrastructure templates are available.

Security Guide

With the 10.3.2 release, a new guide is available detailing all security information for Recovery Manager for Active Directory. This guide contains details on network communications, encryption algorithms, protection of data and much more.

Microsoft Windows Server 2025

Recovery Manager for Active Directory version 10.3.2 now supports the operating system Microsoft Windows Server 2025 for product installation, backups and recovery.

Support Virtual Machine Creation for Install from Media and Install Active Directory recovery methods

Ability to create virtual machines in Azure, Microsoft Hyper-V and VMWare ESXi when using Install AD and Install from Media recovery methods. RMAD automatically creates the virtual machine and installs the Operating System using the provided image and settings from the Forest Recovery project and metadata in the backup.

Run Phase 2 (Repromotion) of Recovery without Phase 1

Using the phased recovery feature in Recovery Manager for Active Directory, you can now run the phase 2 (repromotion) without phase 1 to recover domain controllers directly through Repromotion method, providing even more flexibility to your forest recovery project.

Promote Standalone Servers to Domain Controllers in Bulk

Using the forest recovery project, manage your Active Directory by automating the promotion of domain controllers. New feature allows you to use the recovery process to promote standalone servers to domain controllers either as an operational task in a healthy environment or as part of the AD recovery.

Enhancements

General

Enhancement	ID (old)	Azure DevOps
Recovery Manager for Active Directory 10.3.2		
Increase event viewer logging for console actions		234185
INTEGRITY CHECKS: Backups on remote storage must be checked by the backup agent		445485
Allow multi-select when using "Register Backup File" in RMAD and FR consoles		463748
Password Complexity Check on Backup Encryption Password		473827
Replication engine should enforce backup retention policy		500287
DNS forwarder zone information is lost when reading backup computer info		533935
Allow for blank backup access credentials when backup is located on DC		539083
Recovery Manager for Active Directory 10.3.1 Hotfix 3		
Use different method other than SMB for "Get information about computer from backup" during recovery	N/A	506275
Support restore from backup in no NTLM environment when backup stored on DC	N/A	506551
Recovery Manager for Active Directory 10.3.1		
Create new PowerShell cmdlet - Remove-RMADSession cmdlet	N/A	370687

Enhancement	ID (old)	Azure DevOps
Email notifications during integrity checks	N/A	395979
Allow to add a folder path for Forest Recovery projects to be included in backup	N/A	396047
Add support for US government GCC high accounts in exchange Oauth2 notifications	N/A	402135
Add collection Name/Id to PowerShell script parameters	N/A	410125
Allow to ignore missing/malfunctioning VSS writers	N/A	412323
Deprecate SCOM	N/A	416078
Diagnostic log BackupAgent64 - Allow for threshold on file size and overwrite	N/A	418052
Use remote storage credentials to access the backup storage when running integrity check for backups located on a domain controller	N/A	421517
Add an option to disable automatic checking of manual and scheduled backups	N/A	429365
Remove Support for 2012 and 2012 R2 from supported operating systems and SQL Server 2012	N/A	437548
Support using of LocalSystem account in scheduled backup	N/A	437699
Recovery Manager for Active Directory 10.3		
Salting mechanism for forest recovery project password hashes	N/A	412667
Show AD tombstone lifetime settings somewhere in a product UI	N/A	353685
Allow for password complexity	N/A	253917
BackupAgent does not respect global logging setting 'Create a new set of log files: Never' on the DC side.	N/A	381957
TLS 1.2 - Enforce in Hybrid Connect Service for communication to On Demand	N/A	384624

Forest Recovery Edition

Enhancement	ID (old)	Azure DevOps
Recovery Manager for Active Directory 10.3.2		
User should be able to recovery on second phase (Repromotion) without running Phase 1	RMADFE-2618	242096
Reinstall DC on 2nd phase may fail if DC metadata retained in AD	RMADFE-2642	242099
Reuse (cache) backup already copied to DC between several Verify attempts, and especially between Verify and Recovery		253786

Enhancement	ID (old)	Azure DevOps
Allow user to specify the Replication DC used to Promote DC or join the domain from FR Console		260108
Ability to provision a new DC in Forest Recovery Project (using IFM or Install AD for provisioning a new DC)		364379
Add last modified date for computer collections		386967
Show console configuration backups stored on secure storage server in RMAD console		413892
Assign registry forwarder to primary forest root DNS server for all other DNS servers in forest		493179
Allow forest recovery without prior project verification		514577
Recovery Manager for Active Directory 10.3.1		
Verify setting should warn if target windows version doesn't match backup windows version	N/A	370842
FR Console - Allow Integrity Check to be optional for backups during Verify Settings	N/A	400616
Deprecate ADVL	N/A	414943
Extend Collect Diagnostic Data Feature: Usage of Forest Recovery Agent instead of Separate Process	N/A	417491
Recovery Manager for Active Directory 10.3 Hotfix 1		
Allow for password complexity on forest recovery project files	N/A	253917
Soften default FR project password complexity rules; make them customizable via config file.	N/A	422735
Recovery Manager for Active Directory 10.3		
Forest level option to Resume all DC's without selecting them during recovery while paused in DSRM mode	N/A	367808
Have the Forest project files replicated using the RMAD replication feature	N/A	374869
Malware Remediation button to also include global malware scanning option	N/A	369597
Detect DNS server based on server capabilities	RMADFE-2242	242068
Implement primary DNS approach as default option for Automatic DNS selection	N/A	358394
Support multizone DNS delegation restore	N/A	363514
Automatic DNS selection on Repromotion phase should select restored DNS server on Recovery phase	N/A	259424

Disaster Recovery Edition

Enhancement	ID (old)	Azure DevOps
Recovery Manager for Active Directory 10.3.2		
Azure VM Creation: Support Azure Zone restrictions with Virtual machine size selection		436655
Support VMWare vSphere with Restore CleanOS		443708
Clean OS restore to Azure: Install only required Az Powershell modules		455726
Recovery Manager for Active Directory 10.3.1 Hotfix 1		
Validate version of Secure Storage agent from Secure Storage node	N/A	473444
Restore NETBIOS name during Clean OS recovery	N/A	264188
Recovery Manager for Active Directory 10.3.1		
Avoid install DNS server in case of external DNS used for Restore to Clean OS - Multi Tree Forest	RMADFE-2413	242083
Azure VM Creation: Do not create VMs with Public IPs	N/A	352419
Warning and information about required workaround: MSFT issue: BMR recovery on 2019 may fail with WinRE crash	N/A	378305
PreInstall windows features required for Clean OS	N/A	408824
Have restore Clean OS option to use Domain account for accessing clean machine if possible	N/A	420196
Send email notifications (alerts) on a failed backup upload to the cloud storage	N/A	428425
Support credentials that have access to multiple tenants	N/A	437052
Add support for Secure Storage agent on Windows Server Core	N/A	444928
Recovery Manager for Active Directory 10.3 Hotfix 1		
Allow to specify a region for Amazon S3 cloud storage	N/A	423903
Recovery Manager for Active Directory 10.3		
Display status of secure storage server when hardened with exceptions	N/A	372705
Azure VMs created in different Resource Group to Network Infrastructure	N/A	352418
Support shared Access Signature (SAS) for accessing Azure Storage	N/A	388808
Provide ability to export list of cloud storage and list of secure storage servers	N/A	318697

Resolved Issues

General Resolved Issues

Resolved Issues	ID (old)	Azure DevOps
Recovery Manager for Active Directory 10.3.2		
Performance difference between local and remote storage	N/A	370691
IFM method store temporary extracted backup on C:\ drive instead of Temp folder	N/A	488677
Log rotation interval not working as expected with logs found in root log folder	N/A	515418
Intermittent backup failures with error: Failed to connect to backup agent: Access is denied	N/A	532286
The DIT Database component cannot be backed up because the NTDS VSS writer is unavailable or does not work properly	N/A	539934
Recovery Manager for Active Directory 10.3.1 Hotfix 3		
Change "Full" to "AD" in "Retain recent backups"	N/A	513320
Domain recovery deletes DNS conditional forwarder to root domain	N/A	519110
RMAD Console "The server threw an exception" when accessing computer collection settings Advanced Run Scripts after moving database to a new host	N/A	523958
Recovery Manager for Active Directory 10.3.1 Hotfix 2		
DNS should cleanup all non-relevant NS records	N/A	487775
Handle null values which can be returned from Change Auditor database query	N/A	498663
Static Analysis Security Issue: Out-of-bounds read/access for ud3convert	N/A	498947
Hybrid Restore Service: Time zone settings set to UTC - (negative offset) causes ODR restore objects fail with "No results received from the agent".	N/A	504110
Hybrid Restore Service: Issue with database upgrade when upgrading RMAD product	N/A	505343
Recovery Manager for Active Directory 10.3.1 Hotfix 1		
Hybrid Restore Service: Timezone and region settings set to UTC+ causes ODR Diff restore objects to hang on "Synchronizing object changes with Azure AD"	N/A	444355
Expand-RMADBackup crashes when it's executed simultaneously for multiple backups	N/A	465177
Poor performance of backup replication in Full Mode	N/A	472789
Invalid Version String in the rmad.db3 crashes the Console	N/A	478037

Resolved Issues	ID (old)	Azure DevOps
Correct User Guide about permissions required for online restore	N/A	480678
Disable IPv6 loopback for AD integrated DNS server	N/A	487979
Child domain forest-wide DNS zone gets wrong IP address	N/A	487991
Recovery Manager for Active Directory 10.3.1		
FSMO roles doesn't removed from non-recovered DC	N/A	408607
OnlineRestoreAgent.msi uninstalls Backup agent on DC if Backup agent exists. Backup agent also uninstalls ORA on DC if exists before install Backup Agent.	N/A	421201
Perform integrity check after scheduled backup' option works incorrectly	N/A	430626
GPO Comparison Report error: "Uncaught Reference Error: Enumerator is not defined"	N/A	431908
Using Online Restore Wizard, any GPO Comparison Reports do not show the changes/differences because the information is hidden	N/A	434960
Do not store user account credential in the task for scheduled console config backup	N/A	437559
Too long replication in full mode	N/A	438621
Restore-RMADDeletedObject cmdlet throws "Invalid Password Cannot decrypt data" when backup is not accessible - improve error message	N/A	440174
DC side PowerShell script account requires SeInteractiveLogonRight, or the logon will fail.	N/A	444542
Get information about computer from Backup takes too long to fail if backup access credentials are incorrect	N/A	448638
When forest domain is forest-wide replicated all DCs in forest should use its DC as primary DNS server	N/A	468637
Email notifications: SMTP authentication long password truncated after saving and reopening Recovery Manager Settings dialog	N/A	470665
Recovery Manager for Active Directory 10.3 Hotfix 2		
Online Restore Agent attempts to connect to a wrong domain controller when trying to perform an online recovery	N/A	431481
Integrity checks of collections with backups to be stored in Azure Files (SMB share) fail.	N/A	435383
RMAD console crashes during Online Restore Wizard for AD LDS (ADAM) due to large number of objects.	N/A	437753
Online restore is failing with the error: Failed to create a remote object. DCOM configuration required.	N/A	440746

Resolved Issues	ID (old)	Azure DevOps
Support gMSA accounts for scheduled collections when "Network access: Do not allow storage of passwords and credentials for network authentication" is enabled.	N/A	444925
Recovery Manager for Active Directory 10.3 Hotfix 1		
Cleanup CNAME DC record	RMADFE-2746	242105
Hybrid Restore selection is not being verified in installer when remote SQL and windows creds are being used.	N/A	359203
Online Restore Wizard: "Objects to Be Processed" Add button browse not working properly	N/A	411383
New-RMADSchedule cmdlet doesn't support several weeks trigger	N/A	414124
Read zone info from inconsistent/partial registry key	N/A	419904
Hybrid restore may fail with the 'database is locked' error when restoring 50..100 objects	N/A	424314
Apply Group Policy step hangs if root domain DNS zone is forest-wide replicated	N/A	427816
Recovery Manager for Active Directory 10.3		
Online Restore Wizard: Reporting on Unchanged Objects	N/A	377277
Incorrect email subject message after unsuccessful/incomplete recovery	N/A	406720
Computer Column - Timing column for the backup jobs to assist users in estimating job lengths	N/A	351058
When the Additional path is offline, then a job that's only using local-storage completes with a warning. With Remote Storage, the job fails with an error.	N/A	370690
ISO boot fails with a BSOD on Windows 2022 lab. To fix the issue, you need to add the latest cumulative update (any update after 7C-KB5015879) into WinRE.wim. Download the LCU September 13, 2022 — KB5017316 (OS Build 20348.1006) (microsoft.com). See the Quest Knowledge Base article KB4368806 for commands that need to be run.	N/A	376632
Online Restore Wizard Directory object not found when restoring with old 2012 R2 backup to 2019 DC	N/A	380226
Issue with install - invalid SQL hostname during install/upgrade	N/A	388182
FSMO Roles are not displayed in the recovery report after restore	N/A	376235
Tab order on SQL Installer page is wrong	N/A	397266

Forest Recovery Resolved Issues

Resolved Issue	ID (old)	Azure DevOps
Recovery Manager for Active Directory 10.3.2		
Console configuration backup fails when password contains double quotes.	N/A	443231
Scheduled verify task succeeds when frproj has validation issues	N/A	476407
Open-RMADFEProject cmdlet does not work with relative path	N/A	523257
Console configuration backups do not support passwords containing spaces	N/A	539417
Recovery Manager for Active Directory 10.3.1 Hotfix 3		
Invalid password. Cannot decrypt data at GetComputerInfoFromBackup step	N/A	490646
Forest Recovery should reset GC occupancy level to original value	N/A	505147
FRAgent crashes on DSRM reboot step	N/A	510813
Recovery report doesn't show quarantined files if the recovery was crashed/interrupted	N/A	511476
Error on FR console open: Unable to sort because the IComparer.Compare() method returns inconsistent results	N/A	511477
Recovery Report: Data retrieval fail for the subreport, 'DCReport', located at: DCReport. Please check the log files for more information	N/A	518248
Remove obsolete NS records for forest replicated zones	N/A	520205
Recovery Manager for Active Directory 10.3.1 Hotfix 2		
Recovery project verification may fail with "Invalid password. Cannot decrypt data" error	N/A	506570
Recovery Manager for Active Directory 10.3.1 Hotfix 1		
Azure VM Creation: Unable to verify settings on the cloned Azure infrastructure template	N/A	483661
LSA protection enabled and online restore gets access denied on Windows 2022	N/A	486528
Selected network adapter is not applied during HyperV/VMWare VM creation	N/A	492184
Invalid default subnetwork selected when configuring new resource group for Azure VM creation	N/A	493636
Unable to connect Azure to configure the infrastructure with Az 12.0 or Az.Accounts 3.0 modules	N/A	494885
"The term Get-AzLocation is not recognized…" error is displayed when configuring Azure infrastructure template	N/A	495398

Resolved Issue	ID (old)	Azure DevOps
Recovery Manager for Active Directory 10.3.1		
Avoid install DNS server in case of external DNS used for Restore to Clean OS - Multi Tree Forest	RMADFE-2413	242083
Unable to Retry All operation for failed DC after FRC process restarted	N/A	422083
Backup access failed with user unfriendly error message	N/A	422251
Verify setting and recovery should show error if target windows version older than version in the backup	N/A	432655
Domain Removal during recovery leaves Trust account	N/A	449224
"Do Not Recover" checkbox state is not synced between "Advanced Actions" and "Configure Advanced Actions" dialogs	N/A	450812
Retry last fails with: "Object reference not set to an instance of an object" after canceling DC on SetPrefferedDns then close/reopen FR console to resume recovery	N/A	456538
Forest Recovery Console crashes after project verification or forest recovery if email notification throws an error	N/A	467130
FR console crashes with Alerts configured after Verify Settings or Recovery if notification "From address" is invalid	N/A	467637
Recovery Manager for Active Directory 10.3 Hotfix 2		
Automatic DNS configuration for forest replicated root domain zone	N/A	423045
Automatic Backup selection criteria always chooses remote backup even if local backup is newer.	N/A	433601
Inform user about the issues with DNS selection.	N/A	440127
Recovery Manager for Active Directory 10.3 Hotfix 1		
Alternate paths are not provided to FR agent if UNC server name contains some special characters	N/A	420386
Last Integrity Check shows wrong time	N/A	422094
Custom action RemoveDllReference fails if no dll references are present in FRConsole.exe.config file	N/A	422727
Console Configuration Backup: unable to create backup on remote share with remote share credential specified	N/A	422883
Recovery Manager for Active Directory 10.3		
No warning when accounts are missed on password reset	N/A	302503
Issues occur with Forest recovery if Administrator and Guest builtin accounts have been renamed	N/A	273145

Resolved Issue	ID (old)	Azure DevOps
The "DC for auth restore of Sysvol" dropdown is empty in the FR project settings	N/A	412284
Cannot access the recovery plan if no printer exists, or printer is not functioning properly	N/A	375548
Persistence restore session can become "stuck"	N/A	365894
Verify operation should check FSMO owners consistency in frproj	N/A	370975
Date format used to display date/time on progress screen in Forest Recovery Console does not follow the configured date/time format on the server	N/A	374429
Same domain name appears twice with different letter cases on project settings dialog	N/A	252242
iLO access password is logged in clear text	N/A	317963
'Configure the domain controller as global catalog server' option is shown on FR console when the 'Restore Active Directory on Clean OS' recovery method is used	RMADFE-2830	242200
DNS is not working correctly after BMR recovery with multiple DNS domains hosted in one zone	RMADFE-2173	242184
Do not show skipped "Apply group policy" step on progress tab	N/A	414312

Disaster Recovery Resolved Issues

Resolved Issue	ID (old)	Azure DevOps
Recovery Manager for Active Directory 10.3.2		
"Cannot index into a null array" error on adding secure storage server. Secure storage server status when SMB registry configuration is corrupted.	N/A	316435
Secure Storage: Blank FRConsoleSettings.xml causes "The type initializer for 'QuestSoftware.RecoveryManager.FR.Settings.Settings' threw an exception."	N/A	443993
Verify for "Restore from BMR backup" recreate ISO for every new backup	N/A	476409
Restore on Clean OS fails if DSRM password contains special characters	N/A	476438
Any backup on Secure Storage that was created while the Secure Storage server was added by Name, will not appear if you remove the Secure Storage Server and add it again by IP address	N/A	480487
Command injection is possible when adding secure storage server	N/A	482729
Previous backups are not shown when secure storage server name has been changed	N/A	499695
Secure Storage Agent version check ignores build number	N/A	501169

Resolved Issue	ID (old)	Azure DevOps
Validate user input for Secure Storage Host name to mitigate command injection risks	N/A	520906
RMAD console crashes after migrating product databases and re-entering the cloud storage connection string	N/A	540068
Recovery Manager for Active Directory 10.3.1 Hotfix 3		
When FR project was created from a backup (BMR or CleanOS), FSMO role owners after recovery do not reflect original FSMO roles distribution	RMADFE-1997	242050
Correct User Guide around Secondary Storage and Secure Storage/Cloud Storage	N/A	477761
Remove confusing message about excessive network traffic when copying backups to secure storage	N/A	513325
"Failed to negotiate key exchange algorithm." error when automatically booting iDrac server	N/A	517423
Recovery Manager for Active Directory 10.3.1 Hotfix 2		
Hyper-V: Blue screen during Bare Metal Recovery at Restart domain controller in normal mode step if D: volume contains AD files such as NTDS.dit Stop code: 0xc00002e2	N/A	286589
Cloud-Storage AWS: Console does not accept IAM user without access to all containers.	N/A	490737
Registering backups from secure storage server corrupts backup paths if PowerShell profile script contains custom output	N/A	495345
Replicated Secure Storage backups disappear on subsequent replications	N/A	501520
"Failed to connect to backup agent: Unable to perform request (101)." error when copying backup to secure storage	N/A	504006
Cloud Storage all stuck in Queued state and sending out massive amounts of failure emails	N/A	504712
Secure Storage engine should not use the FE/DRE Fault Tolerance connection strings	N/A	509301
Recovery Manager for Active Directory 10.3.1 Hotfix 1		
Azure VM Creation: Unable to verify settings on the cloned Azure infrastructure template	N/A	483661
LSA protection enabled and online restore gets access denied on Windows 2022	N/A	486528
Selected network adapter is not applied during HyperV/VMWare VM creation	N/A	492184
Invalid default subnetwork selected when configuring new resource group for Azure VM creation	N/A	493636

Resolved Issue	ID (old)	Azure DevOps
Unable to connect Azure to configure the infrastructure with Az 12.0 or Az.Accounts 3.0 modules	N/A	494885
"The term Get-AzLocation is not recognized…" error is displayed when configuring Azure infrastructure template	N/A	495398
Recovery Manager for Active Directory 10.3.1		
Backup file might be failed to be copied when secure storage option is set for collection	N/A	375340
"Last Integrity Check" column doesn't get updated in secure storage node	N/A	425603
Improve error message for verify settings Clean OS	N/A	438269
Fix integrity check settings for BMR backups	N/A	445484
Pulling backups from servers in NTLM restriction environment is not supported.	N/A	447207
Clean OS recovery failed when Sysvol path match NTDS path	N/A	461548
Cloud Storage: For some reason the backup/upload process doesn't cleanup the shares it maps every once in a while	N/A	464935
Recovery Manager for Active Directory 10.3 Hotfix 2		
Replicate FSMO owners retry during recovery when step is run on child domain dc "Replication don't work. Error#"	N/A	428528
Reset computer account password operation fails during BMR recovery.	N/A	433325
Verify Settings fails on Check Free Space if ComputerName or DomainName is not provided in Backup Access Credentials.	N/A	437727
Reset Trust Password step hangs when GC configured to rebuild	N/A	445231
Recovery Manager for Active Directory 10.3		
When **overwrite VM if exists** is not selected, event says creating VM when VM already exists	N/A	318198
Cloud Storage: AWS S3 upload fails with error after retention enabled on immutable bucket	N/A	397464
GC option does not work for Restore AD on clean OS	N/A	384398
Email notification feature new dependencies incompatible with latest Azure VM PowerShell Cmdlets and causes issues with Azure VM Provisioning	N/A	406811
Azure VM creation fails with "Cannot boot Hypervisor Generation 1… error"	N/A	409019
Target Virtual Machine populates with the word fake	N/A	368647
Cloud Storage: Default Add Storage dialog window size causes issues reading all content when adding AWS immutable cloud storage	N/A	374915

Resolved Issue	ID (old)	Azure DevOps
Update permissions required for AWS list operations required in UI	N/A	396392
PowerShell Module does not auto-import for SS agent	N/A	373608
Backup may be missing on secure storage server after collection backup completed	N/A	372682
Cloud Upload Session order keeps changing	N/A	397267

Security Information

Recovery Manager for Active Directory fully supports Transport Layer Security (TLS) 1.2. It is recommended that you upgrade to TLS 1.2 for secure communications.

Security Resolved Issue	ID (old)	Azure DevOps
Recovery Manager for Active Directory 10.3.1 Hotfix 3		
Insecure SSL/TLS: bad certificate verifier - CWE-295, CWE-296, CWE-300	N/A	498948
Recovery Manager for Active Directory 10.3		
Salting mechanism for forest recovery project and ADVL project password hashes	N/A	412667
Enforce password complexity on Forest Recovery project	N/A	253917
TLS 1.2 - Enforce in Hybrid Connect Service for communication to On Demand	N/A	384624

Known Issues

Upgrade Known Issues

Known Issue	ID (old)	Azure DevOps
When upgrading to RMAD 10.3.2, if an older version of SQL Server Express is already installed and the database exists, the version of SQL Server Express will not be upgraded by the installer. The existing database will be upgraded.	N/A	546861

General Known Issues

Known Issue	ID (old)	Azure DevOps
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 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**.	RMADFE-2851	220570
Recovery Manager for Active Directory does not show changes to GPO administrative templates in the GPO comparison report.	RMADFE-805	220632
Group Policy restore might fail with the error "Network access is denied" if you run the RMAD console under a local account, and this account has the same username and password as the domain account you use to restore Group Policy in the domain.	RMADFE-2162	226664

Forest Recovery Known Issues

Known Issue	ID (old)	Azure DevOps
When running a BMR project **Verify Settings**, it succeeds, but when running the actual restore task, the VMs are created, but after running for a while the VMs will blue screen and go into automatic repair mode. A procedure to assist with this issue has been included in the Use Guide in the section, **Bare metal recovery requirements and limitations**.	N\A	378305
Recovery Manager for Active Directory Forest Edition (Disaster Recovery Edition) does not check version of Forest Recovery Agent inside the ISO image file.	N/A	226671
The start type of Windows Defender Firewall service cannot be restored in Windows Server® 2019.	N/A	226672

Known Issue	ID (old)	Azure DevOps
Recovery Manager for Active Directory does not support the use of MSA/gMSA for verification of forest recovery projects by schedule	RMADFE-3063	350182
Recovery Manager for Active Directory does not support the use of MSA/gMSA for PowerShell custom scripts on console	N/A	363891
Cannot create an encrypted BMR backup if 'Enforce drive encryption type on fixed data drives' policy is set to 'Full encryption' on the domain controller	N/A	346181
Console configuration backup fails when password contains double quotes.	N/A	443231
Pulling backups from servers in NTLM restricted environment is not supported. Secure Storage copy backup will result in error "Network Path is not found".	N/A	472556

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.

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NOTE Recovery Manager for Active Directory Forest Edition can backup and restore domain controllers that are running on virtual machines in Amazon Web Services (AWS) or Microsoft Azure®. Note that such domain controllers cannot be restored with the Bare Metal Active Directory Recovery method because there is no way to boot them from an ISO image.

Recovery Manager for Active Directory requirements

Processor

Minimum: 2.0 GHz

Recommended: 2.0 GHz or faster

CPU Cores

Minimum: 2 CPU cores

Recommended: 4 CPU cores

Memory

Minimum: 4 GB

Recommended: 8 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 512MB 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 40 MB for the transaction log files.

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® 2025, 2022, 2019, and 2016

Targets for backup, restore, or compare operations

- Microsoft Windows Server® 2025, 2022, 2019, and 2016 (including Server Core installation)

Microsoft .NET Framework

Microsoft .NET Framework version 4.8 or higher is needed on the console system.

NOTE Microsoft .NET 4.8 is not required to be installed on the systems where the Forest Recovery and Backup agents are to be installed. The Secure Storage Agent does use .NET and it is recommended to install 4.8 on the Secure Storage system, but the agent will work with older versions.

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 and Forest Recovery Persistence.

Supported SQL Server® versions:

- Microsoft SQL Server® 2022, 2019, 2017, 2016, and 2014 (Enterprise, Business Intelligence, Standard, Express, Web, or Developer Edition)

Microsoft SQL Server® components

Microsoft System CLR Types for SQL Server® 2014
If this component is not installed, it will be installed automatically by the RMAD setup.

Microsoft SQL Server Reporting Services

To display reports, Recovery Manager for Active Directory can integrate with Microsoft SQL Server® Reporting Services (SRSS) 2016, 2017, 2019, and 2022.

Microsoft Windows PowerShell

Microsoft Windows PowerShell® version 5.0 or later

Integration with Change Auditor for Active Directory

Supported versions of Change Auditor for Active Directory: from 6.x to 7.x.

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.

Antivirus software that is supported for backup antimalware checks

The anti-virus checks are performed on the Forest Recovery Console machine running Windows Server 2016 or higher by means of antivirus software installed on the machine.

- Microsoft Defender
- Symantec™ Endpoint Protection 14.x
- Broadcom Endpoint Security (former name: Symantec™ Endpoint Protection 15)

Supported server management systems

- Integrated Dell™ Remote Access Controller (iDRAC) 8 and 9
- HPE® ProLiant® iLO Management Engine (iLO) 3, 4 and 5
- VMware vCenter® / VMware ESX® Server 6.0, 6.5, 6.7, 7.0 and 8.0
- Microsoft Hyper-V® Server 2016 or higher

Forest Recovery Agent requirements

Memory

1 GB (2 GB recommended)

Hard disk space

2 GB or more

Operating system

One of the following operating systems:

- Microsoft Windows Server® 2025, 2022, 2019, and 2016 (including Server Core installation)

Secure Storage Server requirements

Processor

Minimum: 2.0 GHz

Recommended: 2.0 GHz or faster

CPU Cores

Minimum: 2 CPU Cores

Recommended: 4 CPU Cores

Memory

Minimum: 4 GB

Recommended: 8 GB

- Operating system: Microsoft Windows® 2016 or higher (including Server Core installation).
- A stand-alone server to be used as your Secure Storage server. This server should be a workgroup server and not joined to an Active Directory domain.
- An account that will be used to deploy the Storage Agent on the Secure Storage server. This account must also be a local Administrator on the Secure Storage server.
- Physical access to the Secure Storage server. Once the server is hardened access with regular methods will be disabled.
- Sufficient storage space on the Secure Storage server for all backup files. For one backup file, the space required is at least the size of the backed-up Active Directory® database file (Ntds.dit) and the SYSVOL folder plus 40 MB for the transaction log files.

Cloud Storage requirements

- Internet access available on the Recovery Manager for Active Directory console. A standard outbound HTTPS port 443 is used to upload data to Azure® Blob and Amazon S3 Storage.
- Azure and Amazon S3 subscription(s) to create and manage Azure and Amazon S3 Storage accounts and containers.
- A method of creating and managing Azure and Amazon S3 Storage accounts, containers, and policies for the storage account (lifecycle, immutability and replication policies).

VMware vCenter® / VMware ESX® Server 6.0, 6.5, 6.7, 7.0 and 8.0

- Active Directory Virtual Lab does not support conversion of Windows Server® 2019 Domain Controllers using VMWare ESXi™ / VMware vCenter® server.
- Active Directory Virtual Lab does not support VMware ESXi™ 6.0.
- VMware vCenter® Converter™ 6.2 must be installed in your environment using the Client-Server installation setup option.
- VMware vCenter® Converter™ must be accessible to the Active Directory Virtual Lab.

- If the TLS 1.0 protocol is disabled on VMware vCenter® Converter™ and VMware vCenter® servers, then switch to TLS 1.2 on the ADVL server. For more details, see the following KB articles:
  - Status of TLSv1.1/1.2 Enablement and TLSv1.0 Disablement across VMware products (2145796).
  - Microsoft Security Advisory 2960358

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(RMAD) 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, RMAD 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 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(RMAD) supports a direct upgrade from version 10.1 and higher. If you have an earlier version of RMAD, 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 RMAD on a new clean machine and perform a full replication. The Full replication feature allows you to create a full copy of the primary 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.

For Recovery Manager for Active Directory Disaster Recovery Edition, after upgrade of Recovery Manager for Active Directory, upgrade the Secure Storage agent on the Secure Storage server to the same version. With a hardened Secure Storage server, Recovery Manager for Active Directory does not automatically upgrade the agent and this must be completed with console (physical) access to the server.

NOTE **Microsoft SQL Server Express Advanced 2022** is now included with Recovery Manager for Active Directory. Microsoft SQL Server 2022 Express Advanced introduces new functionality from Microsoft that enables Customer Experience Improvement Program (CEIP) and at the same time, by default, communicates data back to Microsoft such as IP address, username, email, and location. To disable this telemetry activity that reports back to Microsoft, follow instructions found at Configure usage and diagnostic data collection for SQL Server (CEIP)
You can review a complete list of sub-processors and our privacy policy at https://support.quest.com/subprocessor.

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 https://www.quest.com/legal/third-party-licenses.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	Copyright 1999-2019 Igor Pavlov Copyright 2015-2016 Apple Inc. All rights reserved.
AeroWizard 2.2.3	MIT 1.0
AWSSDK.Core 3.7.9.2	Apache 2.0
AWSSDK.S3 3.7.8.12	Apache 2.0
Azure.Core 1.45.0	MIT Template 2020
Azure.Core.Amqp 1.3.1	MIT Template 2020

Component	License or acknowledgment
Azure.Messaging.ServiceBus 7.18.4	MIT 1.0
Azure.Storage.Blobs 12.23.0	Template 2020
Azure.Storage.Common 12.22.0	MIT Template 2020
Boost 1.72.0	Boost 1.0
EntityFramework 6.4.4	Apache 2.0
DiscUtils 1.15.1	DiscUtils Kenneth Bell N/A
Fody 4.2.1	MIT N/A
FontAwesome.WPF 4.7.0.9	MIT N/A
Group Controls 1.8	Apache 2.0 Copyright Notice - Group Controls 1.5.3
Microsoft .Net Framework 4.8	Microsoft .Net Framework 4.8
Microsoft.Azure.Amqp 2.6.9	MIT Template 2020
Microsoft.Bcl.AsyncInterfaces 9.0.2	MIT Template 2020
Microsoft.Dism 2.0.20	MIT N/A
Microsoft.Extensions.DependencyInjecttion.Abstractions 9.0.2	MIT Template 2020
Microsoft.Extensions.Logging.Abstractions 9.0.2	MIT Template 2020
Microsoft.PowerShell.3.ReferenceAssemblies 1.0.0	MIT N/A
Microsoft.PowerShell.5.ReferenceAssemblies 1.1.0	MIT N/A
Microsoft.SqlServer.TransactSql.ScriptDom.dll 12.0.1	Microsoft Component Copyright 2002
Microsoft.SqlServer.Types 12.0.5000.0	MIT
Microsoft.Xaml.Behaviors.Wpf 1.1.19	MIT N/A
MinHook 1.3.2.1	BSD - MinHook 1.0 Copyright 2009 Tsuda Kageyu All rights reserved.
MinHook 1.3.3	BSD - MinHook 1.0 Copyright 2009 Tsuda Kageyu All rights reserved.
Newtonsoft.Json 13.0.3	MIT Template 2020
PropertyChanged.Fody 2.6.1	MIT N/A
RazorEngine 3.10.0	Apache 2.0
SQLiteCodeFirst 1.7.0.34	Apache 2.0
SSH.Net 2024.0.0 2024.0.0	MIT N/A

Component	License or acknowledgment
System.Buffers 4.6.0	MIT N/A
System.ClientModel 1.3.0	MIT Template 2020
System.Diagnostics.DiagnosticSource 9.0.2	MIT Template 2020
System.IO.Hashing 6.0.0	MIT Template 2020
System.IO.Pipelines 9.0.2	MIT Template 2020
System.Management.Automation 6.2.3	MIT Template 2020
System.Memory 4.5.5	License: MIT 1.0
System.Memory.Data 9.0.2	License: MIT 1.0
System.Numerics.Vectors 4.6.0	LIcense: MIT 1.0
System.Runtime.CompilerServices.Unsafe 6.1.0	License: MIT Template 2020
System.Text.Encodings.Web 9.0.2	MIT Template 2020
System.Text.Json 9.0.2	MIT Template 2020
System.Threading.Channels 9.0.2	MIT Template 2020
System.Threading.Tasks.Extensions 4.6.0	MIT 1.0
System.ValueTuple 4.5.0	MIT 1.0
TaskScheduler 2.8.18	MIT
Task Scheduler Managed Wrapper 2.8.18	MIT N/A
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 Copyright (C) 1995-2005 Jean-loup Gailly and Mark Adler

About us

Quest creates software solutions that make the benefits of new technology real in an increasingly complex IT landscape. From database and systems management, to Active Directory and Microsoft 365 management, and cyber security resilience, Quest helps customers solve their next IT challenge now. Around the globe, more than 130,000 companies and 95% of the Fortune 500 count on Quest to deliver proactive management and monitoring for the next enterprise initiative, find the next solution for complex Microsoft challenges and stay ahead of the next threat. Quest Software. Where next meets now. For more information, visit www.quest.com.

Technical support resources

Technical support is available to Quest customers with a valid maintenance contract and customers who have trial versions. You can access the Quest Support Portal at https://support.quest.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. The Support Portal enables you to:

- Submit and manage a Service Request
- View Knowledge Base articles
- Sign up for product notifications
- Download software and technical documentation
- View how-to-videos
- Engage in community discussions
- Chat with support engineers online
- View services to assist you with your product.