



Quest®
Recovery Manager 7.10
for Active Directory

Forest Edition



What's New

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If you have any questions regarding your potential use of this material, contact:

Quest Software World Headquarters
LEGAL Dept
5 Polaris Way
Aliso Viejo, CA 92656

www.quest.com
email: legal@quest.com

Refer to our Web site for regional and international office information.

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Recovery Manager for Active Directory Forest Edition - What's New
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Intended Audience

This document has been prepared to assist you in becoming familiar with Recovery Manager for Active Directory Forest Edition. The What's New contains the information required to install and use Recovery Manager for Active Directory Forest Edition. It is intended for network administrators, consultants, analysts, and any other IT professionals using the product.

Conventions

In order to help you get the most out of this guide, we have used specific formatting conventions. These conventions apply to procedures, icons, keystrokes and cross-references.

ELEMENT	CONVENTION
Select	This word refers to actions such as choosing or highlighting various interface elements, such as files and radio buttons.
Bolded text	Interface elements that appear in Quest Software products, such as menus and commands.
<i>Italic text</i>	Used for comments.
<i>Bold Italic text</i>	Used for emphasis.
Blue text	Indicates a cross-reference. When viewed in Adobe® Reader®, this format can be used as a hyperlink.
	Used to highlight additional information pertinent to the process being described.
	Used to provide Best Practice information. A best practice details the recommended course of action for the best result.
	Used to highlight processes that should be performed with care.
+	A plus sign between two keystrokes means that you must press them at the same time.
	A pipe sign between elements means that you must select the elements in that particular sequence.

About Quest Software, Inc.

Quest Software, Inc., a two-time winner of Microsoft's Global Independent Software Vendor Partner of the Year award, delivers innovative products that help organizations get more performance and productivity from their applications, databases Windows infrastructure and virtual environments. Through a deep expertise in IT operations and a continued focus on what works best, Quest helps more than 100,000 customers worldwide meet higher expectations for enterprise IT. Quest's Windows management solutions simplify, automate secure and extend Active Directory, Exchange Server, SharePoint, SQL Server, .NET and Windows Server as well as integrating Unix, Linux and Java into the managed environment. Quest Software can be found in offices around the globe and at www.quest.com.

Contacting Quest Software

Email	info@quest.com
Mail	Quest Software, Inc. World Headquarters 5 Polaris Way Aliso Viejo, CA 92656 USA
Web site	www.quest.com

Refer to our Web site for regional and international office information.

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From SupportLink, you can do the following:

- Quickly find thousands of solutions (Knowledgebase articles/documents).
- Download patches and upgrades.
- Seek help from a Support engineer.
- Log and update your case, and check its status.

View the **Global Support Guide** for a detailed explanation of support programs, online services, contact information, and policy and procedures. The guide is available at: [http://support.quest.com/pdfs/Global Support Guide.pdf](http://support.quest.com/pdfs/Global%20Support%20Guide.pdf).

Note: This document is only available in English.

What's New in Recovery Manager for Active Directory Forest Edition 7.10

As a result of ongoing research and development, and in response to customer feedback, this version of Recovery Manager for Active Directory Forest Edition provides support for Windows Server 2008 R2 and offers improved management of deleted directory objects. The next sections provide more information on these new features.

Support for Windows Server 2008 R2

This release of Recovery Manager Forest Edition fully supports Windows Server 2008 R2, a new version of the Windows operating system.

The Windows Server 2008 R2 support enables you to

- Install and use Recovery Manager Forest Edition on a computer running any edition of Windows Server 2008 R2.
- Back up and restore Active Directory data in a domain or forest whose functional level is Windows Sever 2008 R2.
- Perform a number of tasks based on Microsoft's Active Directory Recycle Bin, a new feature in the Active Directory version supplied with Windows Server 2008 R2. For more information, see ["Perform Tasks Based on Microsoft's Active Directory Recycle Bin Feature"](#) on page 8.

Improved Management of Deleted Objects

This version of Recovery Manager Forest Edition offers improved management of deleted directory objects, allowing you to

- More easily locate and recover specific objects in the **Deleted Objects** container provided by Recovery Manager Forest Edition.
- Perform a number of tasks based on Microsoft's Active Directory Recycle Bin feature.
- Recover deleted objects along with their parents.

More Easily Locate and Recover Specific Deleted Objects

To locate and recover specific deleted objects with Recovery Manager Forest Edition, you can use the **Deleted Objects** container that is provided for each domain displayed in the Recovery Manager console and Active Directory Users and Computers tool (ADUC) on the Recovery Manager Forest Edition computer. Regardless of where you access that container (in the Recovery Manager console or ADUC), it provides you with uniform functionality to locate and selectively undelete particular objects or restore them from a backup created with Recovery Manager Forest Edition.

The new functionality implemented in the **Deleted Objects** container helps you to more easily locate specific deleted objects in a domain. When viewing the contents of the **Deleted Objects** container, you can now use the Recovery Manager console and ADUC to sort, group, or filter the objects by such criteria as name, type, deletion date, tombstone lifetime, or deleted object lifetime if Microsoft's Active Directory Recycle Bin feature is enabled.

When viewing the contents of the **Deleted Objects** container, you can now use the Recovery Manager console and ADUC to sort, group, or filter the objects by such criteria as name, type, deletion date, and lifetime end (when the object's tombstone lifetime expires or when the object's deleted object lifetime expires, if the object is deleted in a Windows Server 2008 R2 environment with Microsoft's Active Directory Recycle Bin feature enabled).

You can now select how you want the contents of the **Deleted Objects** container to be presented: in hierarchy or as a flat list.

The hierarchical view shows deleted objects and containers (organizational units or OUs) and existing containers that include deleted objects. In this view, each deleted object is shown in the organizational structure level where it resided right before deletion. While using the hierarchical view, you can select and recover specific deleted items or recover all deleted items in a particular existing container (OU) at once by performing the **Recover Deleted Objects** command on that container.

The flat list view presents the contents of the **Deleted Objects** container as a plain, one-level list of deleted items. This view hides existing containers, allowing you to concentrate on the deleted items you may need to undelete or restore from backup.

Perform Tasks Based on Microsoft's Active Directory Recycle Bin Feature

The Active Directory version supplied with Windows Server 2008 R2 operating system introduces a new feature—Microsoft's Active Directory Recycle Bin. Recovery Manager Forest Edition integrates with this Microsoft's Active Directory Recycle Bin feature to

- Selectively undelete objects.
- Transfer a deleted object's state to "recycled".
- Display a list of recycled objects in a domain.

When enabled in your forest, Microsoft's Active Directory Recycle Bin feature significantly changes the deleted object lifecycle: deleting a directory object results in the object going through the following successive states:

- State 1: Deleted
- State 2: Recycled

Upon its deletion, the object's state is changed to "deleted" and the object appears in the **Deleted Objects** container provided by Recovery Manager Forest Edition. The deleted object, however, retains all its attributes, links, and group memberships that existed at the moment of deletion (unlike in pre-Windows Server 2008 R2 versions of Active Directory, where each deleted object retained only a partial set of its attributes). The object remains in the deleted state for a specified configurable period of time that is called *deleted object lifetime*. When the applicable deleted object lifetime period expires, the object is transferred to the next state—"recycled".

While a deleted object remains in the "deleted" state, you can use the **Deleted Objects** container provided by Recovery Manager Forest Edition to undelete the object with all its attributes, links, and group memberships that existed immediately before deletion. Alternatively, you can use a backup created with Recovery Manager Forest Edition to restore the object to a specific backed-up state.

In an environment where Microsoft's Active Directory Recycle Bin feature is enabled, you can use Product Name to override the applicable deleted object lifetime setting and manually change a deleted object's state from "deleted" to "recycled".

After a deleted object is transferred to the "recycled" state, most of the object's attributes are purged (stripped away), and the object retains only those few attributes that are essential to replicate the object's new state to other domain controllers in the forest. The object remains in the recycled state for a specified configurable period of time that is called *recycled object lifetime*. You can use the **Deleted Objects** container provided by Recovery Manager Forest Edition to view a list of recycled objects in a domain.

Recover Deleted Objects Along with Their Parents

This new version of Recovery Manager Forest Edition makes it possible to recover a deleted Active Directory object even if its parent container is also deleted. When recovering such an object, Recovery Manager Forest Edition identifies the object's last known parent by retrieving the value of the object's LastKnownParent attribute. If the last known parent is deleted, Recovery Manager Forest Edition recovers the deleted object along with its parent.

What's New in Recovery Manager for Active Directory Forest Edition 7.9

As a result of ongoing research and development, and in response to customer feedback, this latest release of Recovery Manager Forest Edition includes the major new features described in the next subsections.

Granular, Domain-Level Recovery

This version of Recovery Manager Forest Edition makes it possible to selectively recover domains in an Active Directory forest. Instead of restoring the entire forest, you can now run the restore operation on one or more domains the forest includes. This method can be useful if you have located the domains that include dangerous or unwanted data and want to selectively recover them. Before you proceed with the selective recovery of domains, it is highly recommended you make absolutely sure the dangerous or unwanted data is not replicated to other domains in the forest.

To selectively recover domains, you can either create a new recovery project that will only include the domains you want to recover, or open an existing project for the entire forest, and then select the domains you want to recover in that project.

Domain Controller Demotion

A new restore method—uninstall Active Directory—is available in this new version of Recovery Manager Forest Edition. With this method, you can use the capability provided by the Dcpromo tool to uninstall Active Directory from domain controllers in a recovery project, demoting them to member servers in their original home domains.

Recovery Alerts

This version of Recovery Manager Forest Edition allows you to create, manage, and monitor alerts in your recovery project.

An *alert* is an information message that displays in the Forest Recovery Console to provide you with the real-time information about the DC recovery process. You can configure your recovery project to display an alert after one or more DCs complete the recovery stage you have specified in the alert's properties. For each recovery project, you can create and configure multiple alerts. You can also edit the properties for existing alerts and delete alerts as necessary.

Recovery Pauses

This version of Recovery Manager Forest Edition allows you to create, manage, and monitor pauses in your recovery project.

A *pause* allows you to automatically suspend the recovery of one or more DCs right before they enter the recovery stage you have specified in the pause properties. You can then manually resume the recovery of these DCs from the point where it was paused. This new capability allows for situations where it is necessary to suspend the recovery effort while manual action is taken outside of Recovery Manager Forest Edition, or to implement a follow-the-sun approach to restoring all the sites in Active Directory.

For each pause, you can specify the DCs the pause will apply to and one or more recovery stages before which you want to activate the pause. In a recovery project, you can create multiple pauses for different DCs. You can also edit the properties for existing pauses and delete the pauses you created earlier.

Recovery Plan

The Recovery Plan feature implemented in this version of Recovery Manager Forest Edition is designed to improve the overall transparency of the recovery process. The plan is a detailed recovery process roadmap you can generate and view for the current recovery project in the Forest Recovery Console. The plan provides an overview of every recovery stage and operation the DCs in the project will go through after you start the recovery, thus allowing you to gain a better understanding and control of every aspect of the forest or domain recovery operation.

Generating and reviewing the recovery plan before you proceed with the recovery operation helps you to become aware of and avoid any unwanted recovery actions by adjusting the project settings appropriately. If necessary, you can print out the generated project recovery plan or export it to a number of presentation formats provided by Microsoft SQL Server Reporting Services (SRSS) on which the Recovery Plan feature builds, such as PDF, XML, CSV, TIFF, and Excel.

Forest Recovery Console/Forest Recovery Agent Communication Stability

The communication between the Forest Recovery Console and Forest Recovery Agent has been improved to make the recovery operation possible even if the Forest Recovery Console cannot access the specified DNS server to connect to Forest Recovery Agent installed on the DCs to be recovered.

The new version of the Forest Recovery Console supplied with this release stores the IP address of each DC added to a recovery project. This improves the overall persistence and stability of the Forest Recovery Console/Forest Recovery Agent communication link and eliminates the need to have a functional DNS server to perform a successful recovery.

Forest Recovery Agent Management

The Forest Recovery Console also features a new user interface that helps you to monitor and manage Forest Recovery Agent on the DCs added to a recovery project. With this new interface, you can install, update, and remove Forest Recovery Agent, as well as check the agent's version currently installed on the DCs in the project.

User Interface Improvements

The Forest Recovery Console user interface has been improved to eliminate unnecessary elements and become cleaner, simpler, and more intuitive without sacrificing the existing functionality. The user interface improvements include the capability to group, sort, and filter DCs in your project by a number of criteria, such as DC name, recovery method, home domain or site, and FSMO roles.

Now you can also specify the maximum allowed difference (in hours) between the creation times of the backups you want to use to recover the DCs in a project. If the difference is greater than the value you specify, the Forest Recovery Console will display a warning message.

Running Custom Scripts

You can configure Recovery Manager Forest Edition to automatically run custom scripts on the Recovery Manager Forest Edition computer before, after, or during the recovery operation.

This version of Recovery Manager Forest Edition is supplied with the Microsoft Windows Script File (.wsf) file that serves as a template where you can insert your custom scripts written in the VBScript or JScript language.

The .wsf file has a number of XML elements where you can insert your scripts. Depending on the XML element where you insert it, your script will run

- Before the recovery operation starts in the current project.
- Each time before the restore from backup operation starts for a DC in the current project.
- After the restore from backup operation completes for all DCs in the current project.
- Before the reinstall Active Directory operation starts in the current project.
- Each time before the reinstall Active Directory operation starts for a DC in the current project.
- Each time the reinstall Active Directory operation completes for a DC in the current project.
- After the recovery operation completes in the current project.

Ability to Not Rebuild Global Catalog Database

In the Forest Recovery Console, you can now specify whether or not to rebuild the forest's global catalog database after its restoration from backup. This feature can be useful if you want to restore the functionality of your Exchange organization fast by using the global catalog data saved in an Active Directory backup.

While leaving the restored global catalog intact might help you to quickly restore Exchange services in your organization, this approach can result in the recovered forest not functioning properly. It is recommended to rebuild the global catalog database right after its restoration from backup so that the global catalog reflects the changes in the recovered forest.

Recovery Report Export

The Recovery Report feature, built on Microsoft SQL Server Reporting Services (SSRS), now allows you to export the recovery report generated in the Forest Recovery Console to a number of presentation formats, including PDF, XML, CSV, TIFF, and Excel.

Backup Filter

The new version of the Forest Recovery Console includes a backup filter where you can specify criteria for the registered backups you want to use to recover DCs in a project. The filter is designed to conceal the registered backups that do not meet your criteria and help you to focus in on the backups you really need for the recovery.

The criteria you specify in the backup filter are project-specific and apply when you are using the Forest Recovery Console to

- Automatically select more recent backups for the DCs in a recovery project.

- View a list of backups registered in the Recovery Manager for Active Directory database. For example, when you are selecting a backup for a DC in the Forest Recovery Console.

Support for Internet Protocol Version 6 (IPv6)

This release of Recovery Manager Forest Edition fully supports IPv6, the new more secure version of the Internet Protocol, which is installed and enabled by default on domain controllers running the Windows Server 2008 or Windows Vista operating system.

Now Recovery Manager Forest Edition runs equally smoothly both in mixed (IPv4 and IPv6) and in native IPv6 environments.

What's New in Recovery Manager for Active Directory Forest Edition 7.8

As a result of ongoing research and development, and in response to customer feedback, this latest release of Recovery Manager Forest Edition includes the major new features described in the following subsections.

Support for Windows Server 2008

Recovery Manager Forest Edition can now be installed and used on a computer running a 32-bit or a 64-bit version of Windows Server 2008. The Active Directory version supplied with Windows Server 2008 is also fully supported.

Forest Recovery Persistence

This new feature implements the protection mechanism that allows you to resume the last forest recovery session in case it was unexpectedly terminated.

Recovery Manager Forest Edition saves the forest recovery session state in a situation where the recovery session was unexpectedly terminated, for example, if the Forest Recovery console was forced to shut down due to a system failure. In this case, the next time you start the Forest Recovery console, it will prompt you to resume the last forest recovery operation from the point at which it was interrupted.