



Frequently asked questions: Windows Server 2012 Recycle Bin and Recovery Manager for Active Directory



What is new with Active Directory (AD) recovery in Windows Server 2012?

Among the functionality in Windows Server 2012 are improvements to the Active Directory "Recycle Bin" feature. This capability enables organizations to store deleted AD objects, including their attribute information and object group membership, in the Recycle Bin container so it can be restored later without having to do an authoritative restore.

Although Recycle Bin functionality was added to Windows Server 2008 R2, Windows Server 2012 now includes a GUI. While on the surface it sounds like this feature addresses concerns that Microsoft customers have had since AD was first introduced, as is typically the case, it is not the solution to all the AD recovery concerns that most organizations have.

What does the Recycle Bin in Windows Server 2012 do?

When an object is deleted in Windows Server 2008 (and previous versions) it gets "tombstoned." Basic information is retained about the object for a period of time but most of the attributes are stripped. The object can still be reanimated, but most of the attributes are missing and need to be recovered manually or via scripting.

When an object is deleted in Windows Server 2008 R2 and 2012 it is placed in the Windows Recycle Bin where all of the objects' attributes are maintained for a configurable time period. If the object needs to be "undeleted" during this time period, the object can be searched, filtered and completely "undeleted" using the Windows Server 2012 Recycle Bin GUI – Active Directory Administrative Center (ADAC).

WS08 R2 and Windows Server 2012 only provide the capability to restore an object that has been deleted; Recovery Manager for Active Directory allows you to roll back improper or unwanted changes.

Are there any limitations or details that organizations should consider before enabling the AD Recycle Bin?

There are a number of limitations and details that are important for organizations to know about this updated capability:

- In order to use the AD Recycle Bin, it is necessary to upgrade your AD forest to Windows 2008 R2 forest functional mode. *To upgrade your forest all domain controllers (DCs) in the forest must first be upgraded to WS08 R2 or higher.*
- The AD Recycle Bin is disabled by default and must be specifically enabled before it can be used.
- Once the Recycle Bin function has been enabled, it is not possible to disable it at a later time.
- The action of restoring objects from the Recycle Bin cannot be delegated. It is necessary to be a full administrator in order to recover deleted objects.
- After a period of time (the Deleted Object Lifetime) the object is moved from the deleted state to a recycled state, where it can no longer be recovered.
- Retaining all deleted object information can cause significant growth of the Active Directory database.
- It is designed for object deletion not attribute modification accidentally caused by an admin or HR system.

What are the differences between the new features in WS08 R2, WS12 and Recovery Manager for Active Directory?

While it's easier to recover a single deleted object in WS08 R2 and Windows Server 2012 with the new Recycle Bin GUI, it is still not a solution to the AD recovery challenges facing enterprise organizations. Recovery Manager for Active Directory continues to provide superior recovery functionality, including the following key differentiators:

Comparison reporting

One of the most time-consuming aspects of an Active Directory recovery project is determining the objects that need restored. In WS08 R2 and Windows Server 2012, IT administrators must manually review and compare backups to the current state of Active Directory to determine what has changed. Aside from being tedious and incomplete, it prolongs downtime by adding to the overall recovery time. Recovery Manager's Comparison Reports automate this comparison process.

Attribute roll-back

Disasters that can occur to AD data include objects that are deleted, but can also include attribute information being overwritten or deleted. In the case of the latter, it is even more difficult to determine what information needs to be restored, and Recovery Manager's Comparison Reports are even more critical. WS08 R2 and Windows Server 2012 only provide the capability to restore an object that has been deleted; Recovery Manager for Active Directory allows you to roll back improper or unwanted changes.

Restore capability of Group Policy Objects (GPOs)

GPOs store some of their information in AD but also store information in configuration files. Because the entire GPO is not stored in the directory, it is not possible to restore GPOs with WS08 R2 or Windows Server 2012. Recovery Manager allows you to recover any object, including GPOs, in a manner of minutes.

Forest-recovery functionality

Most organizations have a critical dependence on Active Directory and realize the detrimental effect it would have on the business if it went down. To ensure total protection, organizations need a solution in the event of corrupted schema extensions or physical disaster. While the features in WS08 R2 and Windows Server 2012 are focused on object-level recovery only, Recovery

Manager for Active Directory Forest Edition allows organizations to address all of their disaster recovery challenges, including domain and forest recovery.

Future Recovery Manager for Active Directory features

In Recovery Manager for Active Directory 8.5 we will have the ability to delegate access to users to perform restores. It will also restore objects faster without the need to restore the system state data, as well as restore recycled objects with the agent restore. The 8.5 release is scheduled for later in 2012.

For more information about the AD Recycle Bin feature and its limitations visit: *The Active Directory Recycle Bin: The End of Third Party Tools?*

References

- *Windows Server 2012 "Server 8 Beta" Active Directory Recycle bin "Now Objects Restoration can be done from GUI" (Microsoft)*
- *Active Directory Recycle Bin in Windows Server 2012 – Part 1: Enable (4sysops blog)*
- *What's New in AD DS: Active Directory Recycle Bin (Microsoft)*
- *Windows Server Backup (Microsoft)*
- *Create and View Active Directory Snapshots (4sysops blog)*

Recovery Manager for Active Directory and Forest Edition (RMAD/RMAD FE) Feature Comparisons to Windows Server

	RMAD/ RMAD FE	Windows Server 2003/2008/2008 R2	Windows Server 2008 R2/2012
Environment changes:			
Permanently enable the AD Recycle Bin	No	Yes	Yes
Upgrade to Forest Functional Mode	No	Yes	Yes
Restore in bulk modified attributes	Yes	No	No
Undelete features:			
UI for deleted objects	Yes	No	Yes
Undelete deleted objects	Yes	Partially (attribute values lost)	Yes
Hierarchical view of deleted objects	Yes	No	No
Delegation for undelete	No*	No	No
Automatically identify multiple simultaneously deleted objects with hierarchy	Yes (Comparison Report)	No	No
Undelete containers with child objects	Yes	No (requires other tools to see hierarchy)	No (requires other tools to see hierarchy)
Average time of operation (identify object and undelete it)	< 10 minutes	> 30 minutes	> 10 minutes
Restore features:			
Restore single object from backup	Yes	No UI	No UI
Granular (on attribute level) restore of single/multiple objects from backup	Yes	No	No

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	RMAD/ RMAD FE	Windows Server 2003/2008/2008 R2	Windows Server 2008 R2/2012
Restore features <i>(continued)</i> :			
Restore containers with all child objects	Yes	No UI	No UI
Average time of operation	< 10 minutes	> 30 minutes	> 30 minutes
Restore one or more GPO	Yes	No UI All links will be lost	Yes All links will be lost
Restore with Powershell API	Yes	No	No
Restore full DC in offline mode	Yes	Yes	Yes
Monitoring and analysis features:			
Identify which objects have changed/been deleted between backups	Yes	No	No
Detect password change	Yes	No	No
Find exact event of object's modification or deletion	Yes	No	No
Prevent accidental deletion of AD objects	No	No	Yes
Monitor "backing" process	Yes + SCOM	No	No
Backup features:			
Backup automatically by schedule	Yes	Yes	Yes
Centralize administration of backup/recovery	Yes	No	No
Back up AD state on specific "point in time"	Yes	Yes	Yes
Protect backups with passwords	Yes	No	No
Other features:			
Restore functionality can be used from native UI	Yes (ADUC)	NA	NA
Recycle objects	Yes	NA	Via Powershell
Restore recycled	No*	NA	No
UI for AD LDS backup and granular recovery	Yes	No	No
Forest recovery features:			
Automate domain/forest recovery	Yes	No	No
Create virtual environment with production data	Yes	No	No

Key * Coming in future RMAD release

Recovery Manager for Active Directory Forest Edition allows organizations to address all of their disaster recovery challenges, including domain and forest recovery.

For More Information:

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