

Self-Healing NTFS

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Updated: January 21, 2008

Applies To: Windows Server 2008

Traditionally, you have had to use the Chkdsk.exe tool to fix corruptions of NTFS file system volumes on a disk. This process is intrusive and disrupts the availability of Windows systems. In the Windows Server® 2008 operating system you can now use Self-healing NTFS to protect your entire file system efficiently and reliably, without having to be concerned about the details of file system technology. Because much of the self-healing process is enabled by default, you can focus more on productivity, and less on the state of your file systems. In the event of a major file system issue, you will be notified about the problem and will be provided with possible solutions.

What does self-healing NTFS do?

Self-healing NTFS attempts to correct corruptions of the NTFS file system online, without requiring Chkdsk.exe to be run. The enhancements to the NTFS kernel code base help to correct disk inconsistencies and allow this feature to function without negative impacts to the system.

Who will be interested in this feature?

Self-healing NTFS is intended for use by all users.

What new functionality does this feature provide?

Self-healing NTFS provides the following functionality:

- **Helps provide continuous availability.** The file system is always available, NTFS corrects all detected problems while the system is running, and Chkdsk.exe does not have to run in its exclusive mode except in extreme conditions.
- **Preserves data.** Self-healing NTFS preserves as much data as possible, based on the type of corruption detected.
- **Reduces failed file system mounting requests that occur because of inconsistencies during restart or for an online volume.** Self-healing NTFS accepts the mount request, but if the volume is known to have some form of corruption, a repair is initiated immediately. The exception to this would be a catastrophic failure that requires an offline recovery method—such as manual recovery—to minimize the loss of data.

- **Provides better reporting.** Self-healing NTFS reports changes made to the volume during repair through existing Chkdsk.exe mechanisms, directory notifications, and update sequence number (USN) journal entries.
- **Allows authorized users to administer and monitor repair operations.** This includes initiating on-disk verification, waiting for repair completion, and receiving progress status.
- **Recovers a volume if the boot sector is readable but does not identify an NTFS volume.** In this case, the user needs to run an offline tool that repairs the boot sector. Self-healing NTFS can then initiate whatever scan is necessary to recover the volume.
- **Validates and preserves data within critical system files.** For example, NTFS will not consider Win32k.sys to be a special file. If it repairs corruption in this file, it might leave the system in a state where the system cannot run. The user might be required to use system restore and repair tools.

Additional references

For information about other features in File Services, see the [File Services Role](#) topic.

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