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Preventing Broken Links During Server OS Migrations

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Server Operating System (OS) migrations introduce the potential for broken file links — a major problem that can have a dramatic impact on usability and productivity.

Compared to moving, for example, a folder or a network drive, an OS migration is much more complex. Consider that, at a minimum, most organizations leverage the server OS for file, print and directory services. And since embedded links in application files often contain the server name, directory paths, volume names and other information, an OS change requires special attention.

Whether it's a Novell® SUSE® Linux Enterprise migration to Windows® Server® 2003, a Windows NT® to Windows Server 2003, or any server OS to Windows Server 2008, problems can occur.

And the pace of OS migrations is picking up.

Sixty-two percent of the 220 companies surveyed by *CIO Insight*, in its 2009 IT spending research study, indicated that they budgeted for operating systems upgrades. Such large-scale migrations typically involve changing server hardware, which leads to the moving or renaming of many files and folders.

SERVER OS MIGRATION WILL LIKELY RESULT IN CHANGES TO FILE NAMES, THE SERVER NAME AND THE NAMES OF PATHS POINTING TO OTHER DATA, FILES OR FOLDERS.

Another factor driving server OS changes and migrations is the desire to cut operating costs through server consolidation and application virtualization. When *CIO Insight* asked companies about their spending plans for 60 different technologies, consolidation/virtualization was found to have the largest budget percent increase from 2008 to 2009. Additionally, the respondents believe consolidation/virtualization may have the most wide-reaching implications on their operations in the year ahead.

An additional impact of these changes is that, when making a server hardware or OS change, companies often use that opportunity to also upgrade their e-mail, database and other core applications. In many cases, the new versions of applications are optimized for the most recent server operating system. For instance, many new database programs, while suited to run on older OSes, offer a boost in performance or the number of simultaneous users supported by tapping built-in virtualization features in newer versions of the same operating system.

SCOPE OF THE PROBLEM

Applications running on one server often produce data and files with embedded links to data or files on secondary servers. A server OS migration will likely result in changes to file names, the server name and the names of paths pointing to other data, files or folders.

This can lead to broken links, which *must* be avoided.

Broken links disrupt employees' work and lower productivity as they encounter inaccessible data. Business partners, clients and customers who experience problems with broken links may lose confidence in a company's ability to meet their needs.

Fixing broken links after an OS migration is a tedious and labor-intensive process. And since it requires time to correct, it may be weeks or longer during which workers cannot access the information they need to do their jobs or conduct business.

What's needed is a solution that automates the process of identifying links, repairs them if they are broken and ensures link integrity when a server operating system is changed.

LINKTEK™ AS YOUR TECHNOLOGY PARTNER

For organizations planning data migrations, LinkTek Corporation offers *LinkFixerPlus*™, a software application that can automatically find and repair broken links in the most common file formats used today.

Using patented technology, *LinkFixerPlus* enables companies to move or rename Microsoft Word, Excel, PowerPoint, Access, Windows shortcuts, Autodesk AutoCAD, Bentley MicroStation, Adobe Acrobat, InDesign, PageMaker, HTML, Flash and CSS files in batch, including the files they point to. The links in those files are then automatically maintained as files and folders are moved, renamed or reorganized.

To that end, the software provides four distinct services that help maintain link integrity.

First, before an OS migration is undertaken, *LinkFixerPlus* allows

companies to quickly catalog all embedded links. The software works using what LinkTek calls "parent-child" file relationships. The "parent" files are those that contain the links; the "child" files are the files that those links point to.

Users initially choose all the parent files to be examined by selecting individual files, folders or drives, and optionally, files of a particular type (*.doc, for example) using filename filtering. The program then analyzes the selected files, identifies the embedded links and validates the integrity of each link. Next, *LinkFixerPlus* generates a detailed report summarizing the total number of files and links it examined, itemizes the files processed and lists the complete set of links within each file, noting which are okay and which are broken.

Second, *LinkFixerPlus* allows companies to "inoculate" the files using the company's patented technology. Similar to an inoculation of a person against a disease, the process protects the integrity of links in case any changes are made which result in the links becoming broken. Specifically, files selected for inoculation are examined, links are validated and both the embedded links and the associated child files are assigned a unique "link ID."

LINKFIXERPLUS' FUNCTIONS ELIMINATE THE TIME-CONSUMING AND TEDIOUS PROCESS OF FINDING AND FIXING BROKEN LINKS MANUALLY.

Third, after the inoculation process is complete, the files and folders can be migrated, moved, renamed or reorganized — via Windows Explorer or any other method that causes broken links — and have their broken links fixed automatically. This is accomplished by running the complementary "Cure" process in *LinkFixerPlus*, which uses the information about previously validated parent-child links and their associated link IDs. For broken links, it automatically finds the moved or renamed child files, using the previously assigned unique link IDs and then repairs and re-establishes each link.

Fourth, and separate from the inoculate and cure process, is that *LinkFixerPlus*' "move and rename" process can be used, in lieu of Windows Explorer or other applications, in a way that ensures links are automatically kept intact as files are moved or renamed. This is done by the software letting the user select which files are to be moved or renamed. The selection process can be as granular (one file, for example) or as universal (all *.pdf files and *.xls files on the C: drive) as desired. The files chosen can be either parent or child files. Once the files are selected, *LinkFixerPlus* carries out the moving or renaming, all while maintaining the links.

This is particularly useful in an OS migration. Using the "rename/move" capabilities of *LinkFixerPlus*, an IT manager can define sophisticated rename rules specifying how to modify the contents of links — including server names, folder names, file names and more — contained in a batch of parent files.

Additionally, *LinkFixerPlus* is able to process Universal Naming Convention (UNC) formatted links, HTTP links, WebDAV links, mapped-drive formatted links and relative path formatted links. By default, *LinkFixerPlus* recognizes the format used in a link and maintains the same formatting automatically when the link is repaired.

LinkFixerPlus eliminates the time-consuming and tedious process of finding and fixing broken links manually. Its patented Inoculate function helps companies safeguard links in large sets of files prior to moving or renaming them, so that the program's Cure function can fix all the broken links automatically after the files and folders have been moved or renamed.

ABOUT LINKTEK

Headquartered in Clearwater, Florida, LinkTek Corporation provides software solutions for automating the management and repair of links contained within a wide variety of prevalent file formats.

LinkTek's patented flagship product, *LinkFixerPlus*, breaks new ground and introduces the new software category of "automatic link repair." It is a leading data migration tool used by some of the world's largest corporations. *LinkFixerPlus* is the first application designed to automatically fix broken links when files are moved or renamed.

LinkTek Corporation offers a free, live, online demonstration for qualified IT professionals, showing exactly how *LinkFixerPlus* has removed the complexity of fixing broken links so that you can experience the process for yourself! □

Salvatore Salamone is an executive editor in Ziff Davis Enterprise's Strategic Content Group. He is author of three business technology books and has been writing about science and information technology for 20 years, serving as a senior editor at many major publications including *Network World, Byte, Data Communications, LAN Times,* and *InternetWeek*.