

Vista is no better than its predecessors at accessing Linux partitions. If you need to access a Linux filesystem from Vista, you will need a third-party tool.

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Accessing Linux partitions with Vista

THE BIGGER PICTURE

Windows has traditionally avoided the challenge of providing access to Linux filesystems. If you run Linux and Windows on a single machine, for example, you must either rely on the legacy approach of saving shared files with the FAT filesystem or experiment with some of the new Linux tools for accessing NTFS partitions. (For a thorough look at NTFS with Linux, see the January 2007 issue of *Linux Magazine*.)

In the past, various third-party tools have offered access to Linux partitions from Windows. Some of these tools integrate seamlessly with Windows and support transparent access – just like native Windows drives – other tools rely on their own file manager.

In the lab, we sought to discover whether these common tools are able to run just as reliably on Vista as they did on Windows XP.

Ext2IFS

The free Ext2IFS (Ext2 Installable File System for Windows) [1] tool is probably the most popular candidate in the field. Ext2IFS gives Windows the ability to read and write Ext2/3 partitions.

To install Ext2IFS on Windows Vista, you need to download the setup program from the Ext2IFS website, right-click the program icon, and select *Run as administrator* in the drop-down menu.

Our first attempt to install the software failed. However, the Windows Vista *Program compatibility wizard* quickly stepped in to resolve the problem. The installation that followed took us to a selection dialog in which we could assign drive letters to existing Linux partitions (see Figure 1).

After restarting our machine, the Linux filesystem was acces-

sible via Windows Explorer just like any normal NTFS drive. To change drive mappings or to add new Linux filesystems, you just click on *IFS Drives* in *System Controls*. Again, you will need to restart Vista in order to see your changes.

On some Vista machines, the new security posture prevents users from



Figure 1: The Ext2IFS drive manager gives users the ability to assign drive letters to Ext2/3 partitions. The letters then appear in Windows Explorer.

launching the Ext2IFS drive manager. If this is the case on your machine, proceed as follows:

- Open the *System properties* window in *Start | System Controls | System | Extended System Settings*.
- In the *Performance* tab, click *Settings...*
- In the new view, change to *File execution prevention* and enable the *Enable file execution prevention for all programs and services except selected*.
- Next, press the *Add...* button and select the *C:\Windows\System32* directory. In the text box at the bottom of the dialog, type the name *IfsDrives.cpl* – Vista will only show you programs with known file extensions; it does not know the *.cpl* extension.

After restarting, Vista will let you run the IFS Drives manager – in most cases. Tests on multiple systems showed two different patterns of behavior. In some cases, Vista requires you to be a local administrator to run the file; the up side of this is that the program compatibility wizard, which then launches, will make sure the program launches.

Other systems failed to launch the manager. Attempts to work around the problem by running *C:\Windows\System32\IfsDrives.cpl* as the administrator via the drop-down menu failed with a *rundll32.exe* access error message. We needed to enable execution of *rundll32.exe* in *Data execution prevention* to run *IfsDrives.cpl* as the administrator.

Ext2Fsd

Ext2Fsd [2] seamlessly integrates Ext2/3 partitions into the Windows filesystem, thus supporting read and write access. The *Ext2 Volume Manager* (Figure 2) not only

supports drive mappings, it also supports changes to the current character set.

According to the Ext2Fsd developers, after completing the install, you need to boot Vista in *Disable force driver signature* mode ([F8]). This setting only applies to the current session, and you need to repeat it whenever you reboot your machine.

Again, the software showed different behavior patterns on different machines. In some cases, the drives were accessible, and in other cases, the Volume Manager merely showed the DVD drive.

Part-Time Job

Explore2fs [3] is a useful tool for occasional access to Ext2/3 filesystems. The tool will show you the existing partitions when run, but in read-only mode. You can then drag and drop in the Explore2fs file manager to copy files to the Windows partition where you need them.

Paragon [4] used to have a couple of commercial solutions for accessing Ext2/3 partitions on Windows: “Mount Everything” or “Ext2FS Anywhere.” According to the vendor, these products do not support Windows Vista right now, as our test results confirmed. On a brighter note, Paragon will be releasing Vista-compatible versions of its programs in the near future.

Vista and ReiserFS

First the bad news: If you need to access a ReiserFS partition from Windows Vista, access will be read-only; none of the current crop of tools support write access. This also applies to the *rfstool* [5] command-line program. To run *rfstool*, you first unpack the zip archive in any directory and then, working as the administrator, change

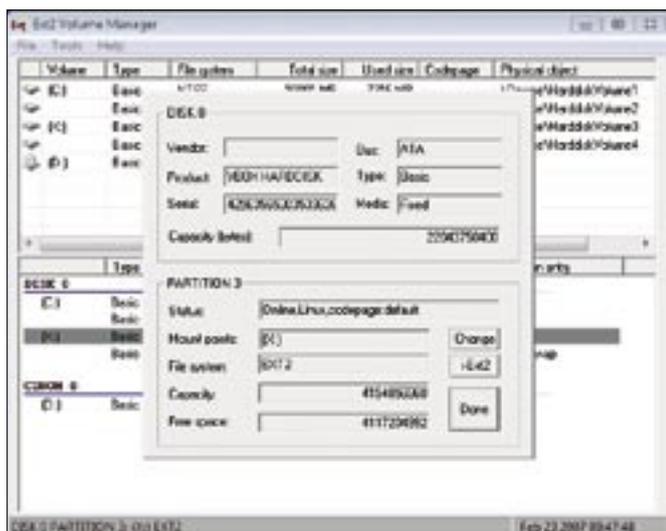


Figure 2: The convenient management front-end with Ext2Fsd has far more options than Ext2IFS. However, drive access was not fully supported on Vista.

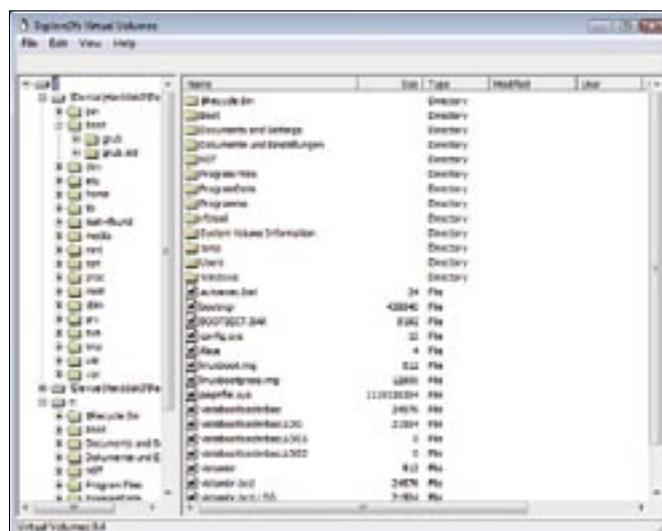


Figure 3: Virtual Volumes will mount ReiserFS partitions in read-only mode and Ext2/3 filesystems in write mode, although write access is broken right now.

to the directory. Typing `rfstools --help` at the command line outputs instructions on using the program. Because `rfstools` is fairly complex, you might like to install the `rfsgui` [6] front-end, which makes the whole process far more intuitive.

The front-end requires version 7.1 of the MS Visual C++ Runtime Library (`msvcr71.dll`), which you can download [7]. After copying the file to `C:\Windows\System32`, you can launch `rfsgui` as the administrator.

YAReG (Yet Another ReiserFStool GUI) [8] is another front-end for `rfstool` that resembles the familiar Windows Explorer. YAReG also supports drag and drop copying between Reiser and Windows partitions. The program needs administrative privileges to run properly.

Rfstd Reiser Driver

The `rfstd` ReiserDriver [9] is possibly the most interesting approach. It works in a way similar to Ext2IFS, integrating Reiser partitions transparently into Windows, but again in read-only mode. After downloading and unpacking the program archive, you should copy the `rfstdfsd.sys` file to your `C:\Windows\System32\drivers\` directory then add the `rfstdfsd.reg` to your Registry by double-clicking the file.

To map Reiser drives, you need to launch the Registry editor by typing `regedit` in the search bar (*Start search...*) of the start menu. First, you navigate to the `HKEY_LOCAL_MACHINE\SYSTEM\`

`CurrentControlSet\Control\Session Manager\DOS Devices` Registry entry and create a new string, which you will be using as the name of the drive you want to map, such as X:. The partition designation should be assigned a value such as `\Device\Harddisk0\Partition9`. Note that Windows starts enumerating drives at 0, but counts partitions from 1. Thus, `\Device\Harddisk0\Partition9` is the ninth partition on the first hard disk.

To apply the changes to the Registry, you need to reboot. After rebooting, you also need to launch the `rfstd` service manually. To do so, enter `net start rfstdfsd` at the command line, working as the administrator.

Our test quickly revealed that the driver is not yet suitable for use with Vista; our attempts to access files with, say, a text editor simply crashed the Windows machine.

Multi-Talented Virtual Volumes

Virtual Volumes [10] (Figure 3) is still beta, but it has an amazing feature set. Among other things, it supports read and write access to Ext2/3 and VMware disks via LVM2 and SFTP, and it can read ReiserFS partitions.

Although the developers are still working on Vista support, the software will already install and launch. After completing the install, you can use the graphical interface to map the required Linux partitions as Windows drives and then drag and drop files from Linux to

your Vista partitions.

Access is read-only right now. Although Virtual Volumes will let you mount Ext2/3 partitions in write mode, our attempts to store data from Windows partitions on Ext2/3 failed.

Conclusions

Transparent support for Linux filesystems on Windows Vista is far from complete right now. Neither Ext2IFS nor Ext2Fsd will cooperate gracefully with Microsoft's latest operating system. Instant variants that use their own file browsers for access will at least run on Vista for the most part. ■

INFO

- [1] Ext2IFS: <http://www.fs-driver.org>
- [2] Ext2Fsd: <http://ext2fsd.sourceforge.net>
- [3] Explore2fs: <http://www.chrysocome.net/explore2fs>
- [4] Paragon's "Mount Everything": <http://www.mount-everything.com>
- [5] Rfstool: <http://p-nand-q.com/download/rfstool.html>
- [6] Rfsgui: <http://www.wolfsheep.com/map/rfsgui/>
- [7] `msvcr71.dll`: <http://www.dlldump.com/download-dll-files.php/dllfiles/M/MSVCR71.dll/download.html>
- [8] YAReG: <http://yareg.akucom.de>
- [9] Rfstd: <http://rfstd.sourceforge.net>
- [10] Virtual Volumes: <http://www.chrysocome.net/virtualvolumes>