

Notes for Comparison with Applications for Making Back-up Copies

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The purpose of this notes is to suggest a good application for making back-up copies of files, directories, and entire drives. V2i, Retrospect, and Backup Master 5 (Bkm5) are compared with each other. In conclusion, Bkm5 is the best. Some other subjects, such as comparison with free softwares and encryption of back-up images, are remained in future work.

Key words: Microsoft Windows, Back-up Copies, NAS.

1 Introduction

■Purpose of this notes

Human people, especially I, make mistakes. When files in a personal computer (PC) is removed or changed, then they can not go back to original one for anything. If, however, there is a back-up copy of a damaged file, then the copy is a guarantee.

Three application software for making back-up copies are described and compared in this paper. The purpose of this notes is to suggest a good application for PC users.

■Environment

Operating System: Microsoft, Windows 2000 Professional.

Target Object: The "C:" drive in Windows and some files.

Storage Device: Logitec, LHD-LAN 160.

2 Applications

2.1 Power Quest, V2i Protector

■Version

Desktop Edition, 2.0

■Target

This application software, V2i Protector, can make back-up copies of an entire drive or partition. Users can not select folders and files in the drive. Only local drives are supported. Drives attached into a network (network attached storages, NAS) are not supported, even if they have drive letters.

■Device

Back-up copies can be stored into any storage device recognized by the Windows operating system (OS), such as local hard disk drives (HDD), local CD-R/RW drives, and NAS drives. If a NAS drive is specified as the storage, then the right for reading and writing (access right) to it must be given.

A NAS drive is not recognized as a local drive, even if the drive has a drive letter, such as "N:",

According to the user guide, the access right is given by setting a user name and its password to a service named "V2i Protector," which is placed into the control panel. The author, however, failed to set them to the service and to make a back-up copy.

■Restore

This section is described according to the user guide and descriptions were not checked the truth.

In order to restore from a back-up copy, users use Backup Image Browser. It mounts the copy, shows the list of files and folders, and restores any choosen items to any target place in any drive.

Because of a certain disaster if the OS does not boot up, then users can use Power Quest Recovery Environment (PQRE). PQRE is a small OS based on Windows PE. PQRE can recognize some devices such as USB and NAS drives.

■Shutdown

V2i Protector does not have a facility for shutting PC down after a back-up job finished.

■Other Feature

V2i Protector has a facility for copying one entire HDD to another HDD without making back-up files. This feature is called "Drive Copy." With Drive Copy, when the free space of a HDD is small, the entire contents in the HDD can be moved into another HDD that has a lager free space.

The author is successful to move contents in an small HDD into a lager HDD.

2.2 Dantz, Retrospect

■Version

Professional, 6.5

■Target

This application software, Retrospect, can make back-up copies of any files, folders, and entire drives. It can make back-up copies of NAS drives, if they have drive letters.

■Device

Back-up copies can be stored into any devices to which the OS has the access right.

Before a NAS drive is specified as a storage device, the access right must be given. The means of giving is not peculiar to Retrospect. Any standard method by provided by OS can be used. The author was successful to use a NAS drive as a storage device.

■Restore

In restoring, any files and directories in a back-up copy can be specified. A target storage device also can be specified. A device other than the original storage device can be specified as a target.

■Shutdown

According to the manual "user guide," Retrospect can shut PC down when backup job is completed. The author, however, failed to make Retrospect do so.

■Other Feature

Retrospect includes network-client licenses as accessories. The number of licenses is depend on the version. The version of Retrospect Professional has two licenses. Clients can run on UNIX, Mac OS, and Windows. The author is successful to run it on Mac OS X and to make back-up copies of the home directory.

2.3 Frontline, Backup Master

■Version

Package, 5.

■Target

Similarly to Retrospect, this application software, Backup Master 5 (Bkm5), can make back-up copies of any files, folders, and drives. If the access right is given by means of OS, then it can make back-up copies of NAS drives.

■Device

Any target devices can used for the storage. When a NAS drive is used, then a drive letter must be given to it. The copy is created into an image file in general. When the image is large, it is split into some smaller

files. Users can specify the size of files.

■Recovery

The restore tool is included in the Bkm5 package. It can read image files. Users can decide to restore the entire contents in the image or to restore specified files. Users also can specify where they are restored, i.e., the same place from which back-up copies are created or another place.

■Shutdown

Bkm5 can shut PC down after a back-up job finished. The author was successful to make Bkm5 do so. Users can use this feature to make back-up copies of important files and to power off PC automatically. If it takes a long time to make a back-up copies, then there is no need to wait until the backup job finished.

■Other Feature

There is no particular feature to explain.

3 Comparison

3.1 Target

All of V2i, Retrospect, Bkm5 can make back-up copies of an entire drive or partition. Only Retrospect and Bkm5 can make back-up copies of specified files and directories. V2i can not specify them. Retrospect and Bkm5 can make back-up copies from NAS drives, but V2i can not.

3.2 Device

All of V2i, Retrospect, and Bkm5 can store copies into any local drives, such as HDD, CD -R/RW, ZIP and so on. According to the user's guide, all of them can store into NAS drives, but the author failed to do so with V2i. The reason why the access rights can not be given is unclear.

3.3 Recovery

With all of three application, to recovery from stored copies, an application-specific software must be used. When the back-up copies is needed, PC and OS have some trouble. It is to be desired that there is no need to use any special software in recovering.

This, however, is subjective to the author and therefore is not a well grounded opinion.

3.4 Shutdown

With Bkm5, the author is successful to shut PC down automatically after the backup job finished. V2i does not have such feature at all. Retrospect has it, but with unclear reason, the author failed to do.

4 Conclusion and Future Work

In conclusion (*c.f.*, Tbl. 1), Bkm5 is the best for personal use. If there are a few PCs in a network, then Retrospect is the one considered, because it includes networkclient licenses. Because V2i was bought by Symantec corp., it may be disappeared from markets.

Tbl. 1 Comparison with Applications

	Target	Dev.	Rest.	Down
V2i	drive	any?	PQRE	no
Retr.	any	any	app.	yes?
Bkm5	any	any	app.	yes

In this paper, rsync and Microsoft Backup & Restore are not taken up. They are remained in future works. Especially rsync is a free and has many functions. The author is very interested in it.

Though not taken up in this paper, all of three applications have a function to encrypt back-up images. In order to ensure safety of the images, it is an important function. Comparison with pgp and gpg, which are free software to encrypt files, is also remained in future work.

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URL List

Logitech <http://www.logitech.co.jp/>

Power Quest

<http://www.powerquest.com/>

It was bought by Symantec corp.

(<http://www.symantec.com/>)

in 2003.

Dantz <http://www.dantz.com/>

It was bought by EMC corp.

(<http://www.emc.com/>) in 2004.

Frontline <http://www.fli.co.jp/>

rsync <http://www.rsync.org/>

PGP <http://www.pgpi.org/>

GPG <http://www.gnupg.org/>