

Computer Backup Demo

BSC Computer Club Seminar – Oct 2008

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you can download the slides from
<http://home.comcast.net/~bscclub/training.htm>

Some Situations

Situation

- Ooops, I deleted a file
- I overwrote a file
- An application fails
- Windows boots, but is UNSAT
 - Maleware / Virus??
 - Registry corruption
- Windows won't boot
 - “Blue Screen of Death”
 - Disk crash

Possible Solution

Data Backup

- Use “Recycle Bin”
- Restore from an archive
- Reinstall / Restore from an archive

System Backup

- Virus scan / scrub
- Restore registry
- (Ghost, NTBackup?)
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ZIP programs (Data Backup)

PKZIP25 ([last personal freeware version](#))

1998 DOS command-line program

Usage: pkzip25 [command] [options] zipfile [@list] [files...]

Examples:

View .ZIP file contents: **pkzip25 zipfile**

Create a .ZIP file: **pkzip25 -add zipfile file(s)...**

Extract files from .ZIP: **pkzip25 -extract zipfile**

ZIP Reader ([from PKWare](#)) - but WinXP does this too!

WinZip ([from Tucows](#), [from FileHippo](#))

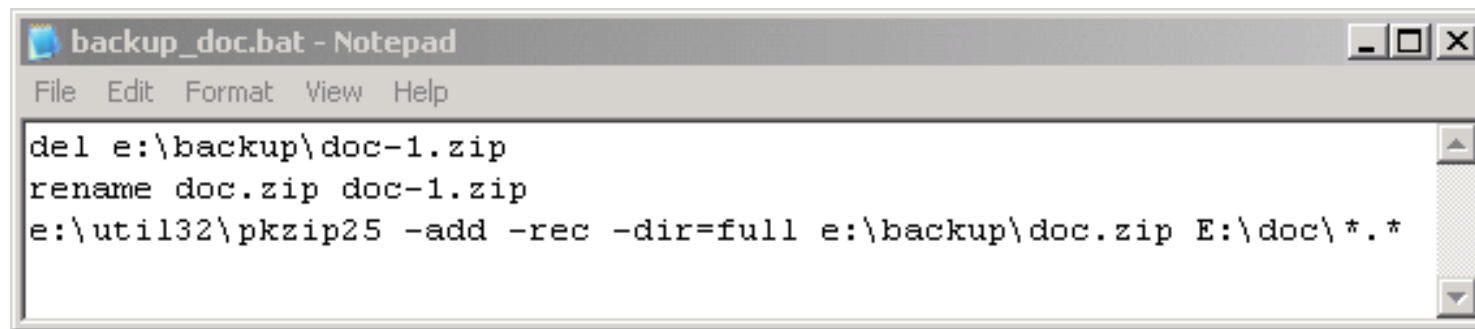
Windows program – \$29, but free in Google toolbar bundle(?)

7-Zip ([from Tucows](#), [from FileHippo](#))

Windows & command-line program, current, free

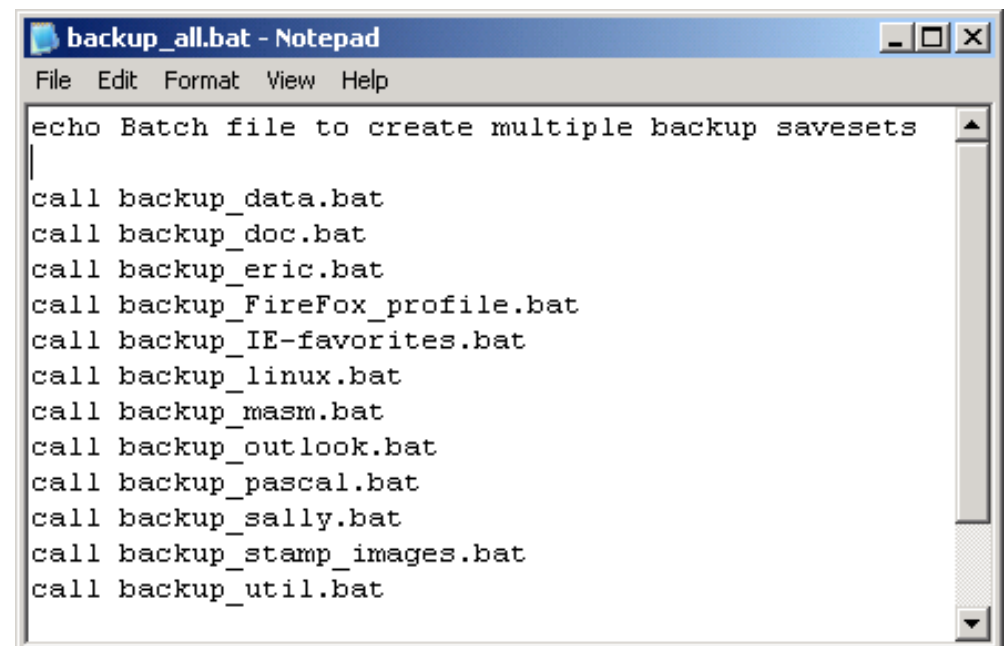
Recommendations for Data Backups

- Any of these approaches work! Pick one *and practice with it.*
- I like to use a command-line program (PKZIP or 7-Zip) to create the exact saveset you want. Save this command(s) in a batch file.



```
del e:\backup\doc-1.zip
rename doc.zip doc-1.zip
e:\util32\pkzip25 -add -rec -dir=full e:\backup\doc.zip E:\doc\*.*
```

- Create saveset(s) by double-clicking the corresponding *.bat file
- This works for everything except the C: drive (can't do the registry or boot record)



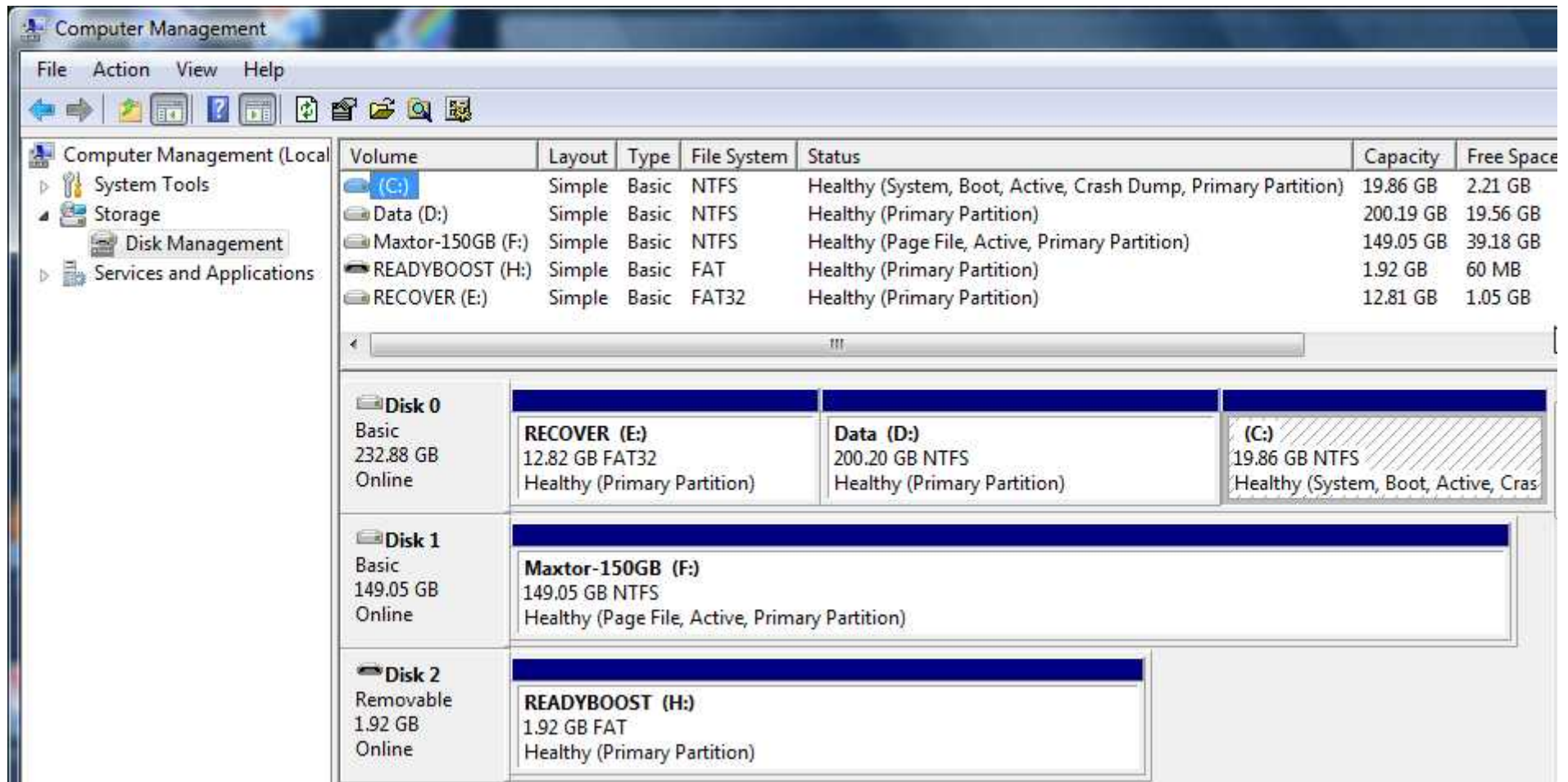
```
echo Batch file to create multiple backup savesets

call backup_data.bat
call backup_doc.bat
call backup_eric.bat
call backup_FireFox_profile.bat
call backup_IE-favorites.bat
call backup_linux.bat
call backup_masm.bat
call backup_outlook.bat
call backup_pascal.bat
call backup_sally.bat
call backup_stamp_images.bat
call backup_util.bat
```

Recommendations for System Backups

- Partition your disk so that the C:/ is as small as possible (holding only the Operating System, the “Documents & Settings” directory, and those programs that refuse to install anywhere else). Move the “My Documents” directory, “TEMP”, and “Temporary Internet Files” elsewhere.
- Use Ghost to backup C: to another partition (e.g. D: - which may be on the same physical hard drive). I like to use the DOS command-line version (only available with Ghost 2003 & earlier). Newer versions of Ghost boot a windows-like OS from a CD (not a floppy) and take longer.
- After a saveset is made (e.g. to D:), make a copy of it on media that is not physically in the computer (e.g. move it to a networked computer or a USB hard drive). You could write it to a DVD (not recommended) – or to many CDs.
- Wherever you place it, **be sure that a crippled computer (booted from a floppy or CD) will be able to access it!**

- >Control Panel
 - >Administrator Tools
 - >Computer Management
 - >Disk Management



C: has 18GB of data. Where could you create its saveset?

Where to Place the Saveset

The destination partition:

- Must be reachable by the Operating System used by Ghost (DOS? / “Symantec-Windows”?). “Questionable situations” include: NTFS formatted partitions, USB disks, network disks. All are possible (sometimes).
- Must be big enough. Ghost's “fast” compression is ~50%. The C: disk had 18GB of data. The saveset destination needs >9GB of free space.

Using Ghost v8

1) Boot a DOS operating system (from floppy, CD or USB thumb_drive). The autoexec.bat will start Ghost (you may have to insert a 2nd floppy when prompted).

2) Ghost v8 menu tree:

Local

Disk

to Disk

to Image

from Disk

Partition

to Partition

to Image

from Image

Peer-to-peer (i.e. over a “network”)

3) then select source HD, source partition, destination file, and compression (high / fast / none).

Ghost v8 Image File

Using >Local >Partition >to_Image typically results in a single image file (*.gho). You can have Ghost split that up into multiple files of a specified max size – so you can move them to a FAT32 partition (max of 2 GB/file) or to CD / DVDs.

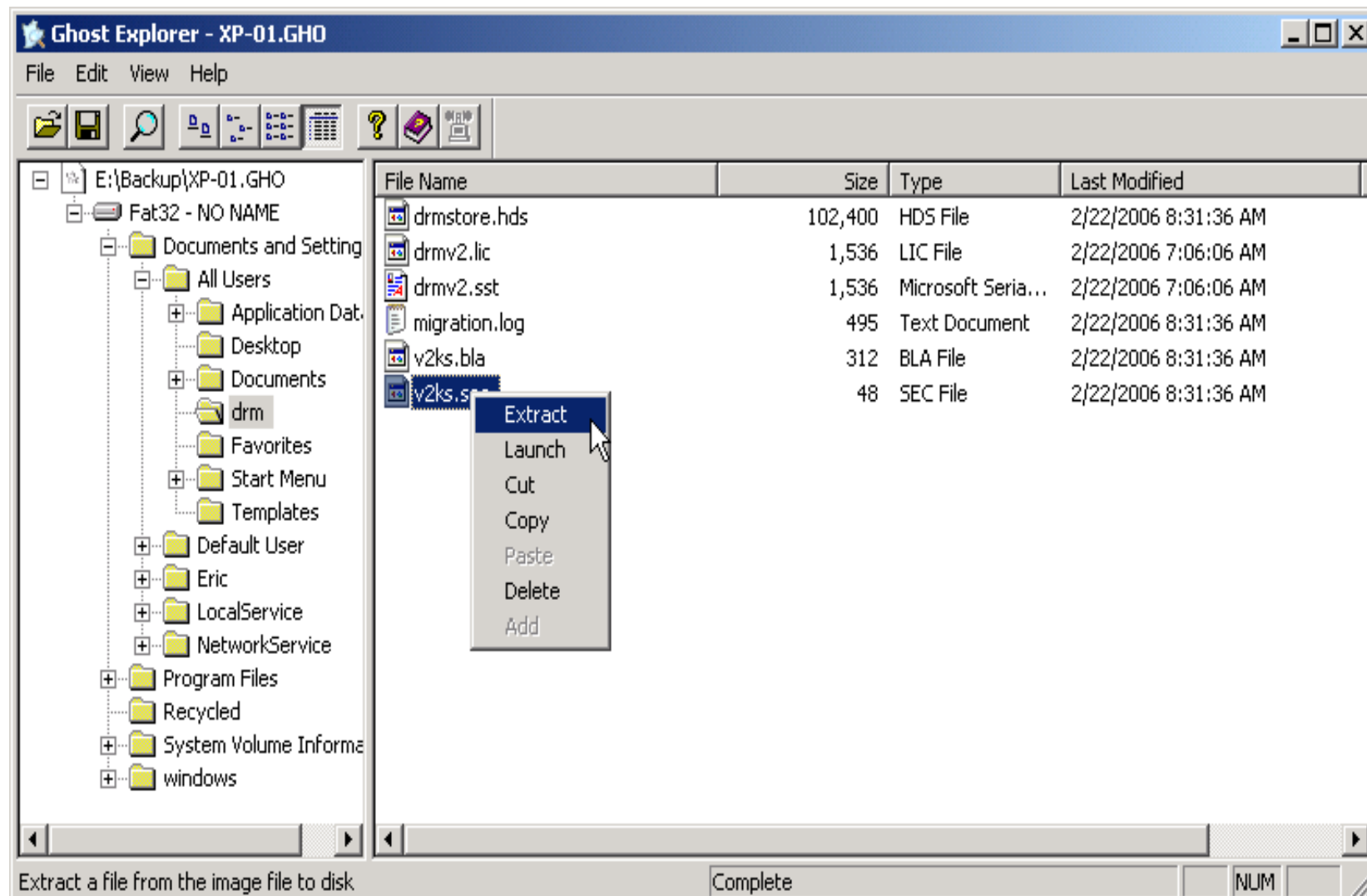
On my 6-year old computer, GHOST v8 backs up at 700MB/min, and restores at 1200 MB/min.

Ghost Explorer (GhostExp.exe) allows you to look into a saveset from Windows and selectively restore files.

A backup of the C: partition contains the boot record, and the registry!

Ghost v8 Explorer

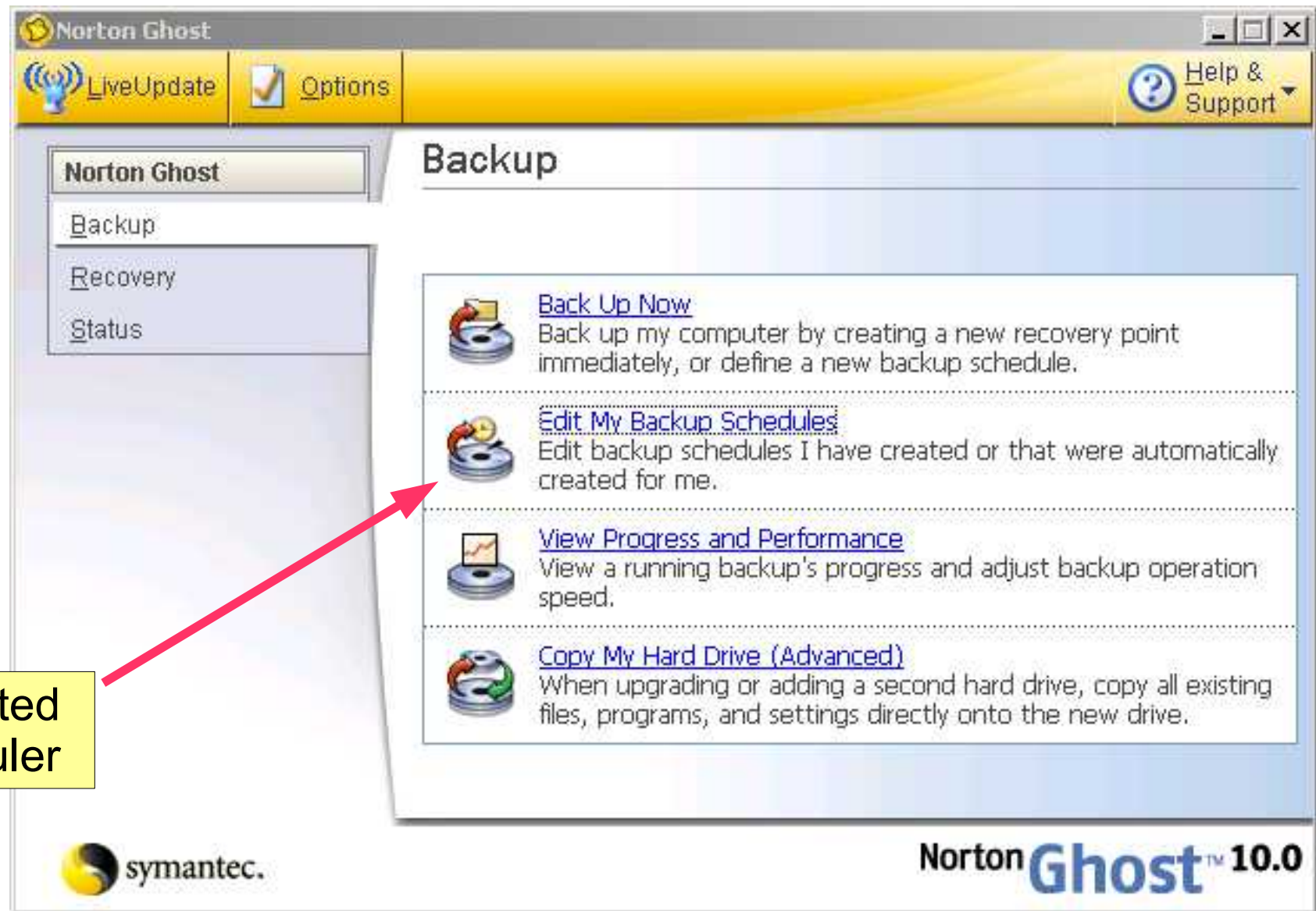
Browse the saveset, double-click to view, right-click to “Extract”



GHOST's Newer Versions

- With v10, the significant new feature added was the ability to backup the Windows partition (and boot record, and registry) while Windows is running. This makes incremental backups much more viable.
- To restore after a disk crash, you boot a Symantec operating system from a CD (or USB drive?).
- V12 added Vista compatibility.

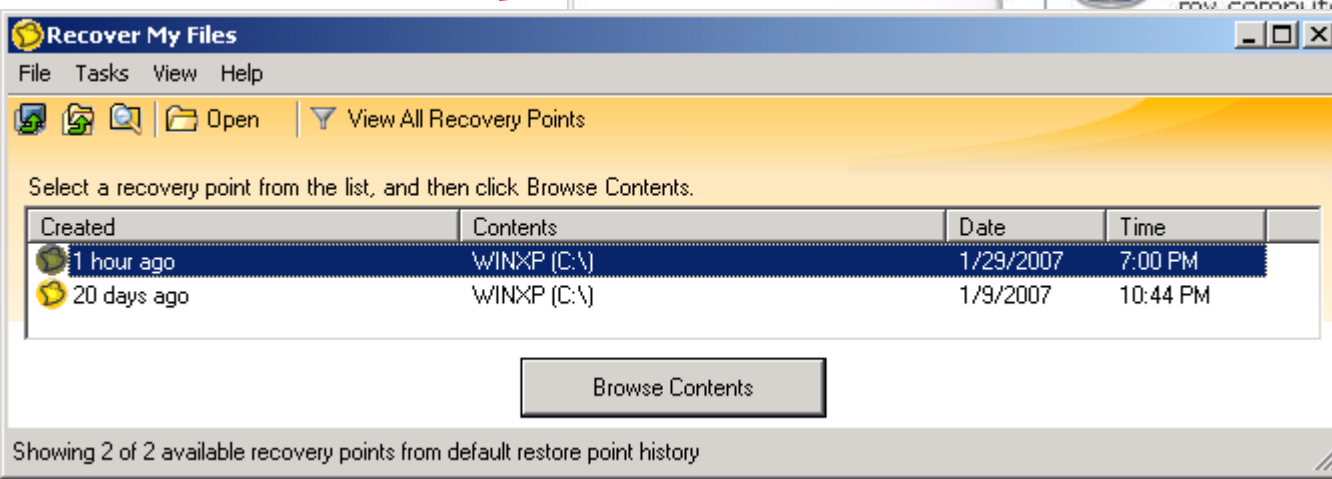
Ghost v10 - Backup



Integrated
Scheduler

Ghost v10 - Recovery

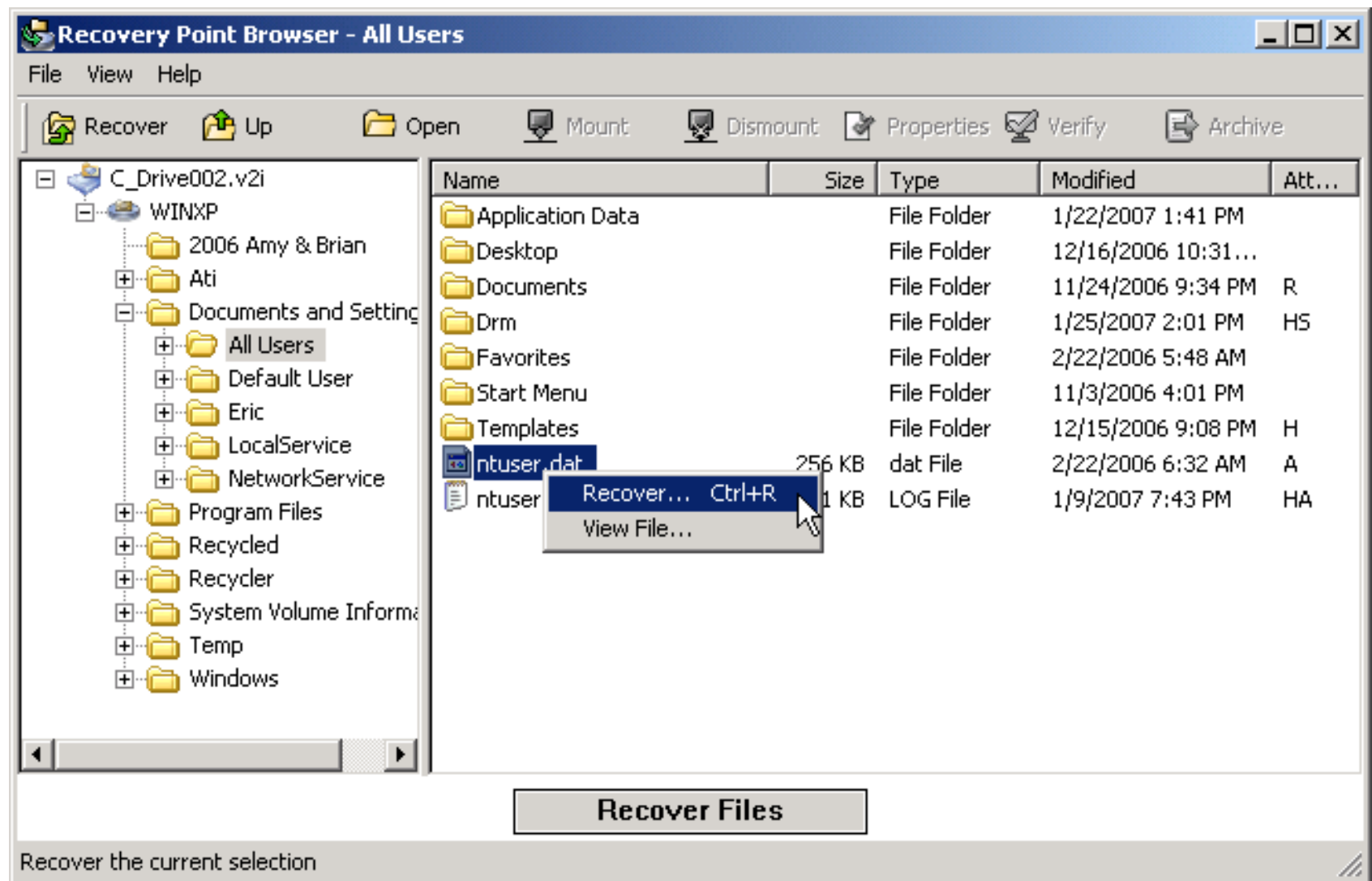
Restore Points
are snapshots
in time of
specified files
from the
partition(s)
being protected.



Norton Ghost™ 10.0

Ghost v10 - Recovery

Another GUI similar to Windows Explorer.



Summary

We've covered how to:

- backup arbitrary data files
- the boot record & Operating System

Any questions ?

Remember, if you haven't practiced restoring from a saveset, you can't be sure that you really can.