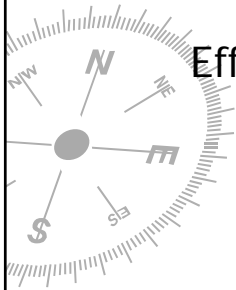# Symantec Ghost

Effective Disk Cloning Software

What is Ghost?

► "Ghost is a software product from Symantec that can clone (copy) the entire contents of a hard disk to another computer's hard disk or to storage media, automatically formatting and partitioning the target disk. This product is especially useful where one system is to be replicated on a number of computers or when someone wants to back up everything on their personal computer."

► http://searchstorage.techtarget.com/sDefinition/0,,sid5_gci212185,00.html
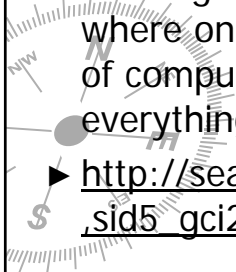
This definition only begins to tell part of what the program will do. Other uses include:

- Forensics, making exact copies of media for legal purposes.
- Transferring exact copies to new hard drives for replacement or upgrade.
- OIT uses Ghost to image all lab and staff computers.
- Images can be used to move instances of physical computers to virtual environments
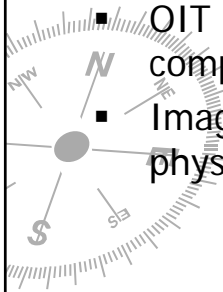
Some functional utilities included with Ghost Enterprise Edition:

- Image Builder makes a computer image to fit several different hardware configurations. (OII image will work on a multitude of computer architectures).
- AI builder makes executables for rolling out upgrades and changes
- PXE boot configuration for remote installation and management
- Gdisk writes multiple passes of zeros on hard drives to prevent compromise of residual data.
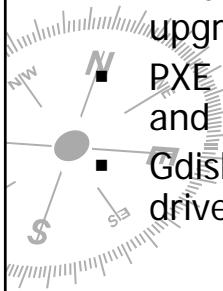
Issues to be aware of:

- Legal concerns involving software licensing.
- Windows XP authentication problems when transferring operating system to a different machine.
- Corrupted images.
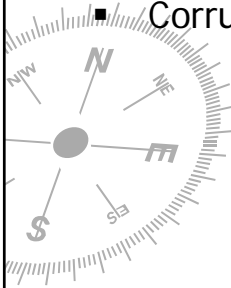
Ghost Image can be transferred from:

► Ghost Image can be transferred from:
  - Hard drive (disk to disk or image to disk) (destination disk must be as large or larger than source disk)
  - Bootable CD or DVD (image to disk) (size of image an issue)
  - Server (broadcast, multi-cast, or uni-cast)
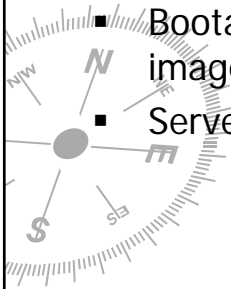
Begin by booting Ghost to media (floppy, CD DVD, or PXE (network) boot)

► When working with server based images bootable media must have network interface drivers included to initiate communication

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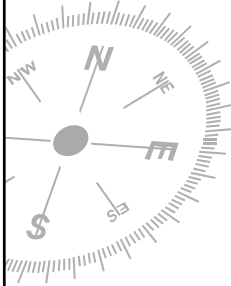
Ghost interface will come up after boot. Choose Local for disk and disk based direct image transfers or pick multicasting for server applications.

Norton Ghost 2002   Copyright (C) 1998-2001 Symantec Corp.

Local ►
LPT
USB
Multicasting
TCP/IP
Options
Quit

Symantec

symantec.
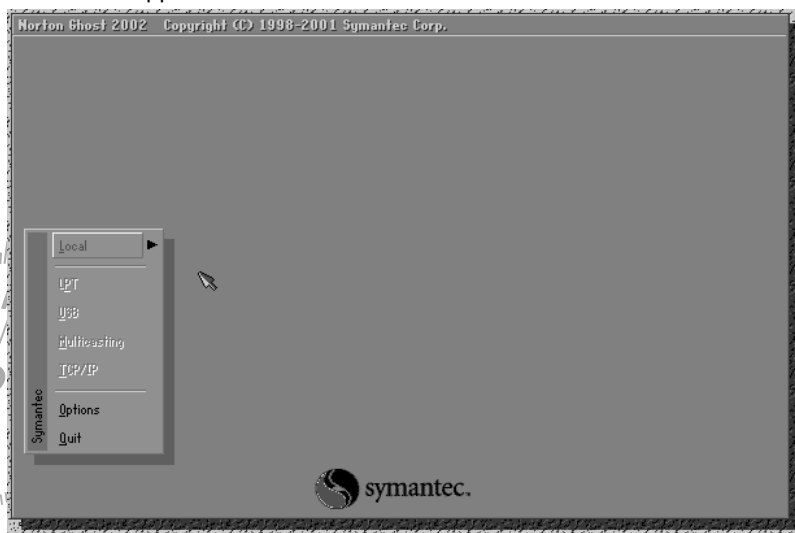
Choose Disk → To Partition to build an image or
From Image to restore an image. Also at this
point one can choose disk to disk
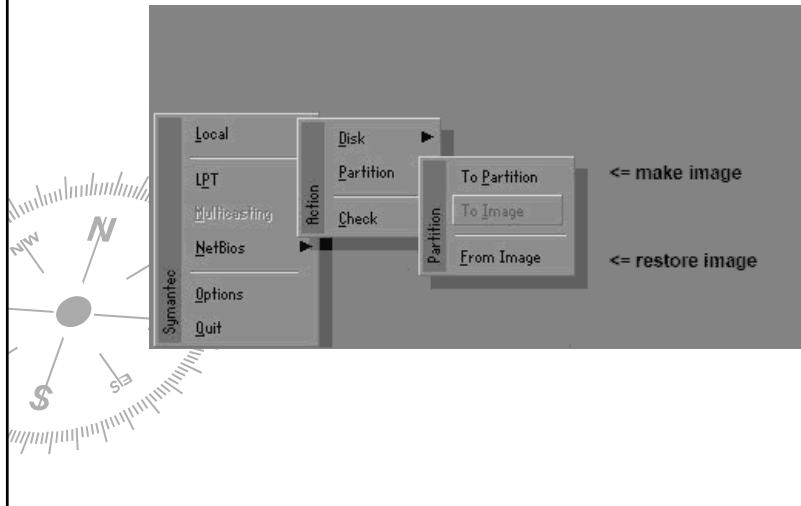
Select proper source drive
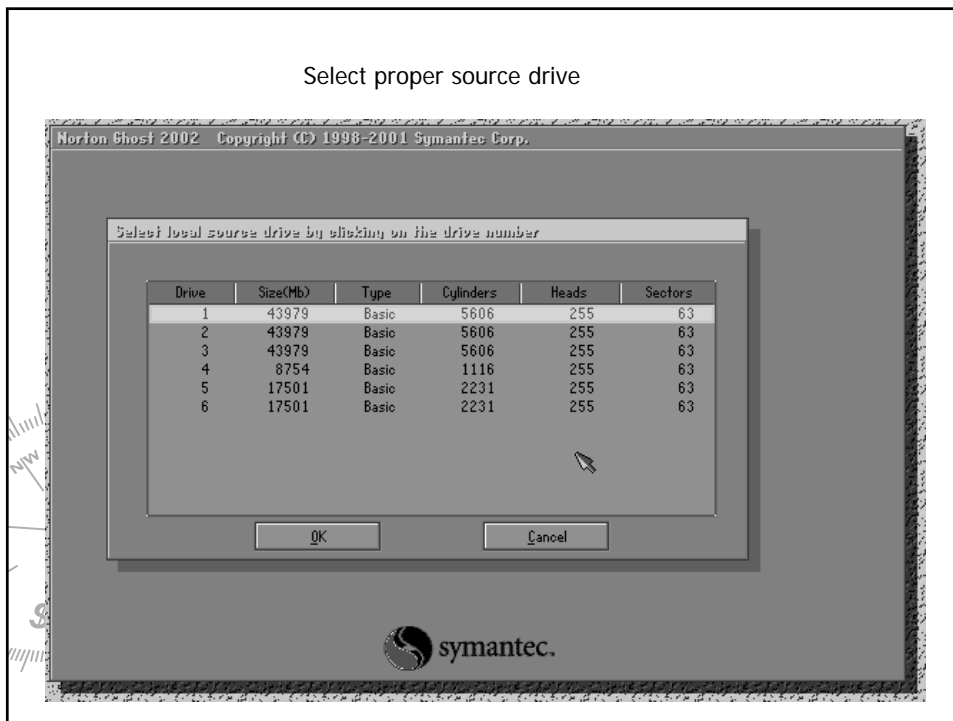
Select proper destination drive (very important if you ghost a blank drive to a full drive you will end up with a very useless piece of hardware)

Norton Ghost 2002   Copyright (C) 1998-2001 Symantec Corp.
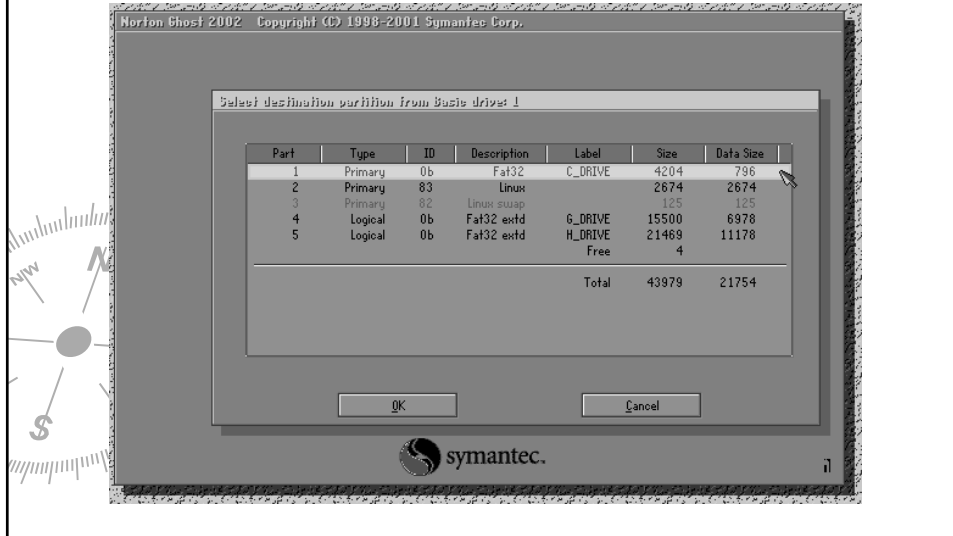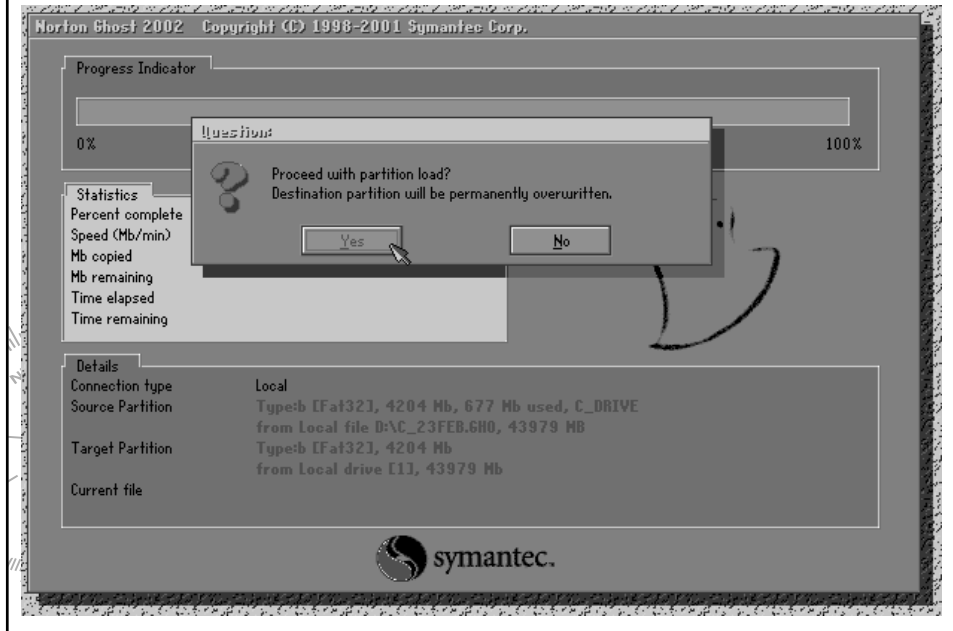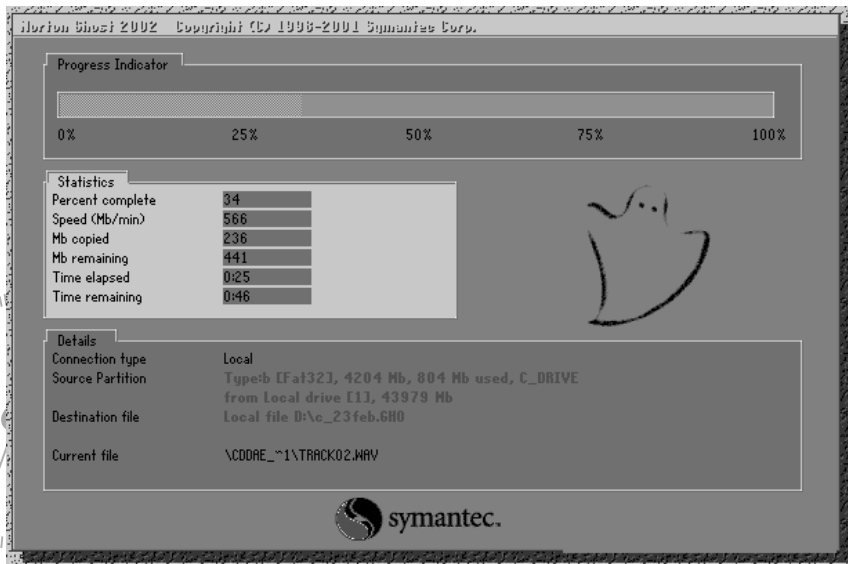
Select destination partition from Basic drive: 1

Part	Type	ID	Description	Label	Size	Data Size
1	Primary	0b	Fat32	C_DRIVE	4204	796
2	Primary	83	Linux		2674	2674
3	Primary	82	Linux swap		125	125
4	Logical	0b	Fat32 extd	G_DRIVE	15500	6978
5	Logical	0b	Fat32 extd	H_DRIVE	21469	11178
				Free	4	
				Total	43979	21754

OK   Cancel

symantec.

Ghost will warn you

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Progress Indicator

0%   100%

Question:

Proceed with partition load?
Destination partition will be permanently overwritten.

Yes   No

Statistics
Percent complete
Speed (Mb/min)
Mb copied
Mb remaining
Time elapsed
Time remaining

Details
Connection type   Local
Source Partition   Type:b [Fat32], 4204 Mb, 677 Mb used, C_DRIVE
                        from Local file D:\C_23FEB.GHO, 43979 MB
Target Partition   Type:b [Fat32], 4204 Mb
                        from Local drive [1], 43979 Mb
Current file

symantec.

Ghost than begins transfer process

When you are finished exit and confirm you want to quit
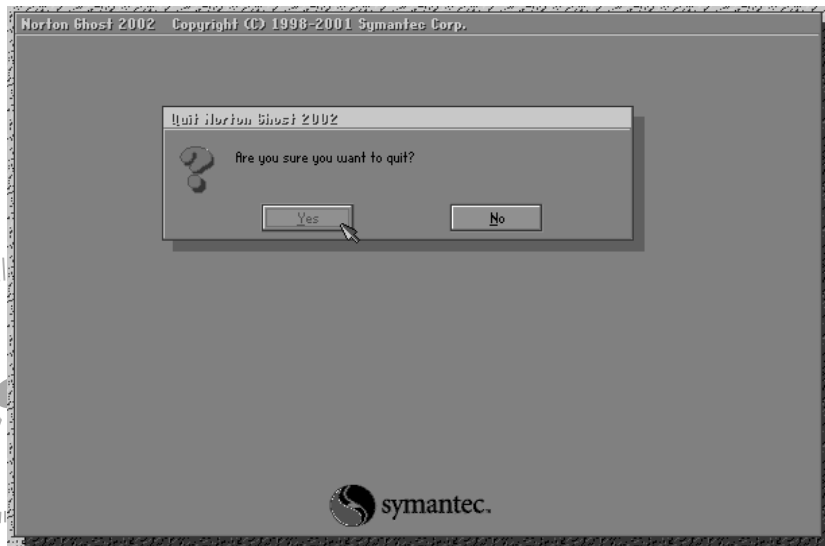
Final Thoughts

► This tool is used by most major IT departments for application deployment and management

► The Ghosting process is usually script driven to automate image transfers

► This only demonstrates a small part of Ghost's functionality

References

► Techtarget.com
  - http://searchstorage.techtarget.com/sDefinition/0,,sid5_gci212185,00.html

► Radified.com
  - http://ghost.radified.com/

► Symantec
  - http://www.symantec.com/