

Dual Boot Installation of OpenSolaris on a Laptop

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Goals

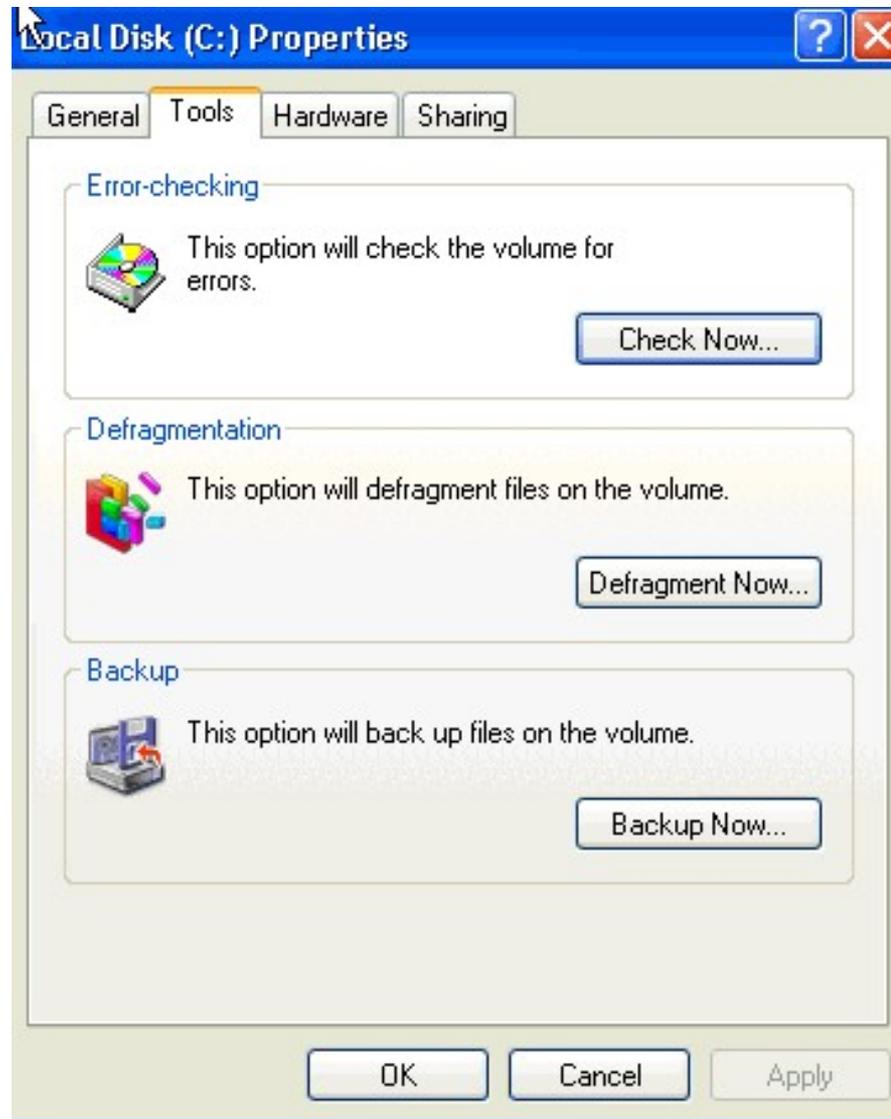
- ➔ Dual Boot OpenSolaris and Windows
- ➔ Use existing Windows partitions
- ➔ No reformatting of drive.
- ➔ No data loss
- ➔ Install OpenSolaris and Sun Studio 11 tools
- ➔ Make a portable software development station

Three Easy Steps

- ➔ Back up disk using G4U
- ➔ Repartition drive using QT_PARTED
- ➔ Installation of OpenSolaris and Sun Studio Tools on newly created partition

Step 1: Backing Up Your Laptop

Before You Back Up, Run Scandisk and Disk Defragmentation



G4U

- ➔ G4U (Ghost for Unix). It's like Norton Ghost, but it's free.
- ➔ A bootable CD that does a “dd” of the drive, compresses it, and puts a copy of that image on an FTP server.
- ➔ <http://www.feyrer.de/g4u>
- ➔ Works for X86 based O/S.
- ➔ Can also perform a disk-to-disk backup

Back Up the Disk

```
wd2 wd3 sd0 sd1 sd2 sd3.
-----
Welcome to g4u Harddisk Image Cloning U2.1!

Commands:
* Upload disk-image to FTP:      [GZIP=1] uploaddisk serverIP [image] [disk]
* Upload partition to FTP:      [GZIP=1] uploadpart serverIP [image] [disk+part]
* Install harddisk from FTP:    slurpdisk serverIP [image] [disk]
* Install partition from FTP:   slurppart serverIP [image] [disk+part]
* Copy disks locally:          copydisk disk0 disk1
* Copy partitions locally:     copypart disk+part0 disk+part1
* List all disks:              disks
* List partitions:            parts disk
* See all devices:            dmesg
* This screen:                help

[disk] defaults to wd0 for first IDE disk, [disk+part] defaults to wd0d for
the whole first IDE disk. Use wd1 for second IDE disk, sd0 for first SCSI
disk, etc. Default image for slurpdisk is 'rwd0d.gz'.

Enjoy!                               Send comments to hubert@feyrer.de
                                     Donate at paypal@feyrer.de !
                                     http://www.feyrer.de/g4u/
-----
g4u> █
```

- ➔ To back up the disk:
 - uploaddisk 172.20.27.182 mylaptop.gz wd0
- ➔ If we have to restore the disk
 - slurpdisk 172.20.27.182 mylaptop.gz wd0

Step 2: Repartitioning the Disk

QT_Parted

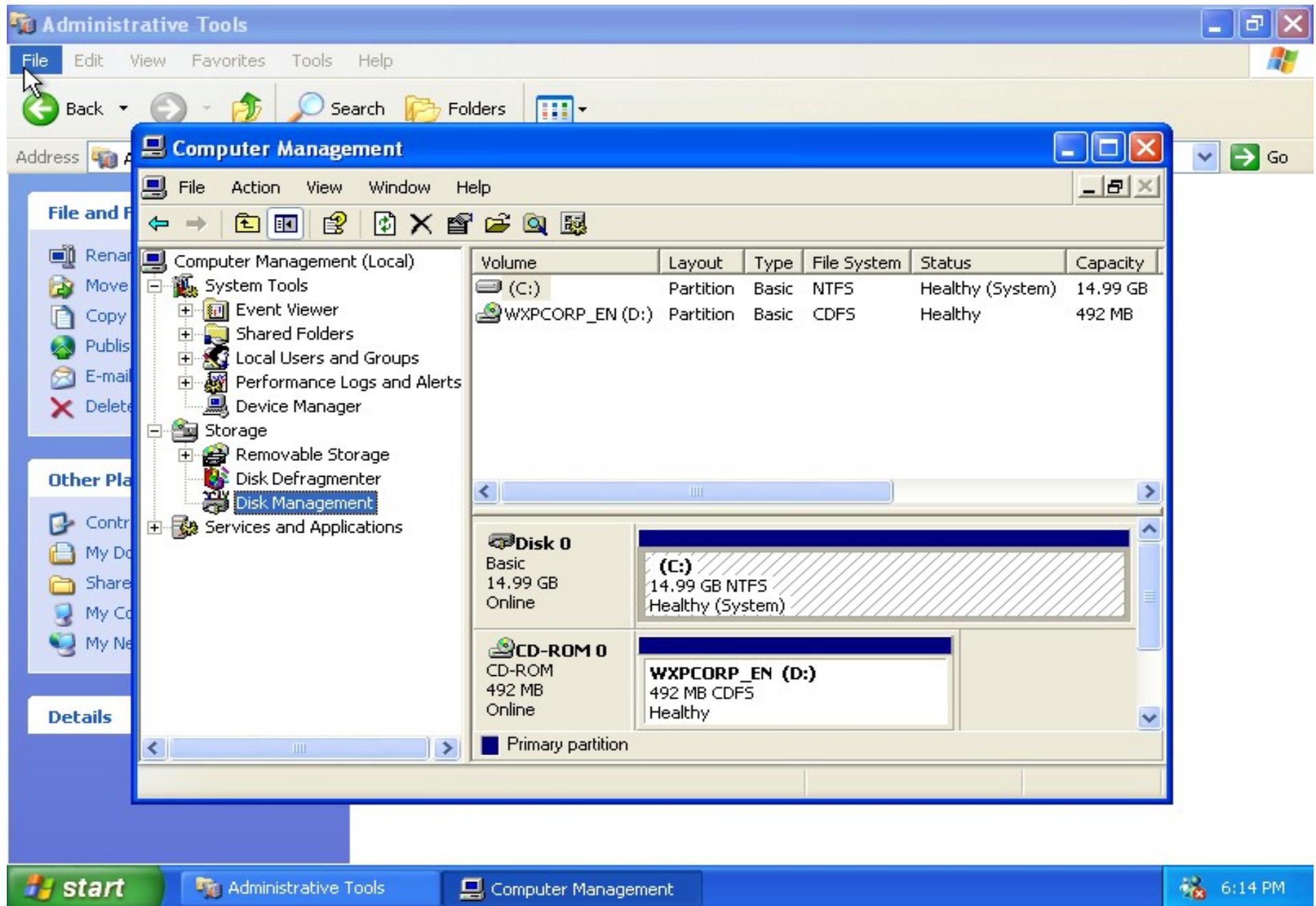
- ⇒ Parted is an open source partitioning utility
- ⇒ QT_Parted is Parted with a GUI front end
- ⇒ We will use it to create an fdisk partition that will contain Solaris
- ⇒ Very similar to Partition Magic, but free
- ⇒ Available on System Rescue CD
- ⇒ <http://www.sysresccd.org/>

Fdisk and Solaris Partitions



- ➔ Solaris partition is one of the fdisk partitions

[1] Repartition: Windows Before Using QTparted



The screenshot shows the Windows Administrative Tools window with the Computer Management console open. The Disk Management snap-in is selected, displaying the following information:

Volume	Layout	Type	File System	Status	Capacity
(C:)	Partition	Basic	NTFS	Healthy (System)	14.99 GB
WXPCORP_EN (D:)	Partition	Basic	CDFS	Healthy	492 MB

Disk	Format	Capacity	Health
Disk 0	Basic	14.99 GB	Online
CD-ROM 0	CD-ROM	492 MB	Online

The Disk Management console also shows a graphical representation of the disk layout, with the (C:) partition shaded with diagonal lines and the WXPCORP_EN (D:) partition shown as a white bar. A legend at the bottom indicates that the shaded area represents a Primary partition.

[2] Repartition : Boot System Rescue CD



System Rescue-CD

- * Linux kernel-2.6.15
(with Reiser4 and FrameBuffer)
- * Logical Volumes (EVMS, LVM)
- * Hardware autodetection
- * QtParted (graphical partition tool)
- * Most important system tools
(parted, partimage, dump/restore, sfdisk, dar, *fs-tools, ClamAV)
- * Midnight Commander (mc)
- * Editors (vim, nano, QTinyEditor)
- * Network tools
(Samba, NFS, LUFS, SSH)

<http://www.sysresccd.org>

```
Welcome to SystemRescueCd version 0.2.18
F2,F3,F4 for boot options help, or menu
Enter to boot.
boot: _
```

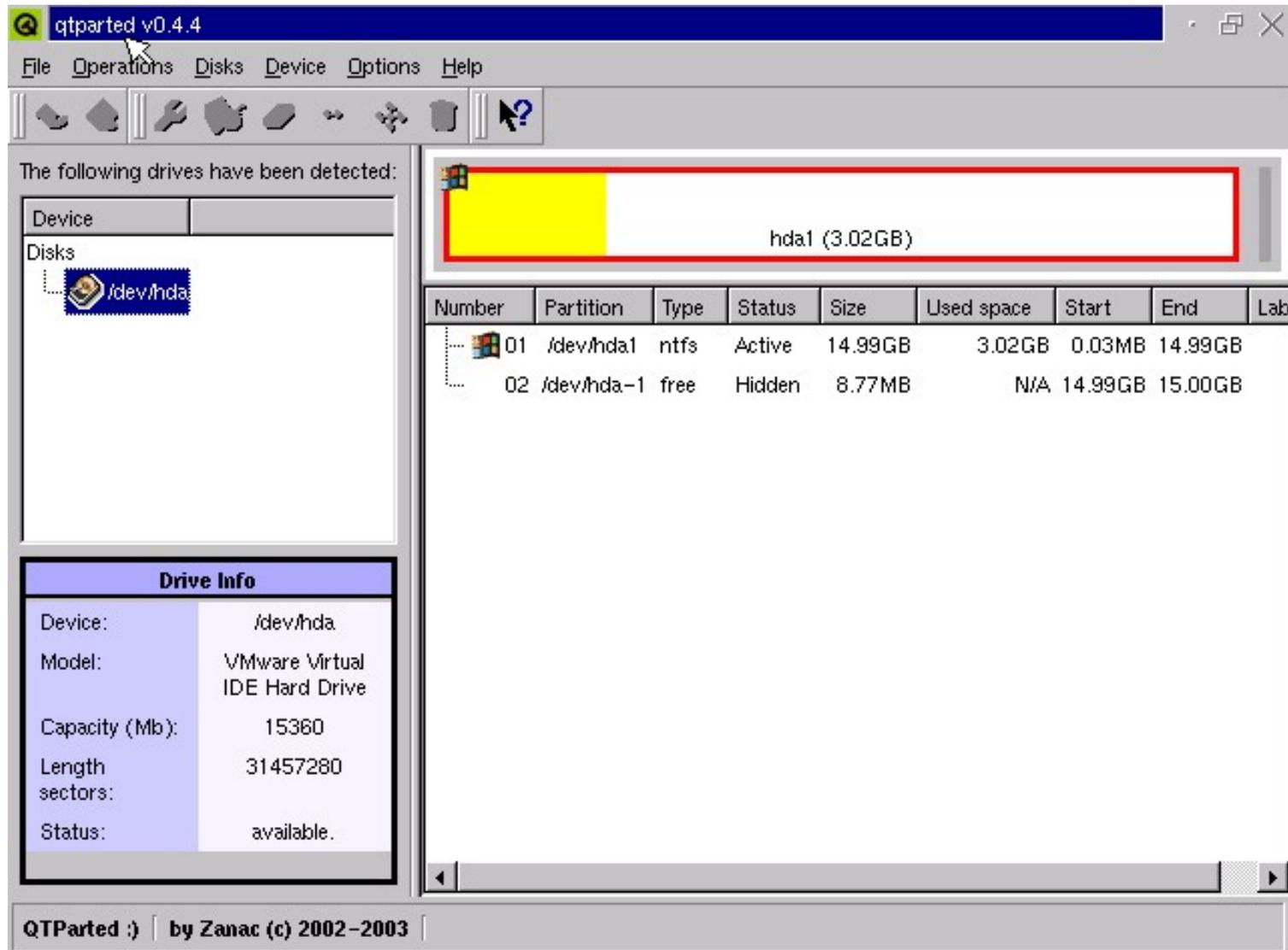
[3] Repartition: Run QtParted

```
* Type net-setup eth0 to specify eth0 configuration by hand.
* Available editors : vim, nano and run_qtineditor.
* Two partimage clients available : partimage, and partimagessl.
* You can run the QtParted graphical partition tool. It's a free
  Partition Magic clone for Linux. Just type run_qtparted.
WARNING : This graphical tool won't work if you started without the
  FrameBuffer option. (hit F2 at startup for more details)
* To start an ssh server on this system, type /etc/init.d/sshd start.
* You can enable the graphical mode in the links web browser
  by typing links -g www.web-site.org.
* You can browse the HTML online manual with the following command:
  links -g /root/manual-en/index.html. (you can use lynx too)
* WARNING : Never mount anything on /mnt! It would freeze the system.
  Use mkdir /mnt/mydir and mount on /mnt/mydir instead.
* Captive-Ntfs : If you need a full Read-Write NTFS access, use Captive.
  Copy ntoskrnl.exe and ntfs.sys to /var/lib/captive
  Mount the partition: mount.captive-ntfs /dev/xxx /mnt/part (replace xxx)

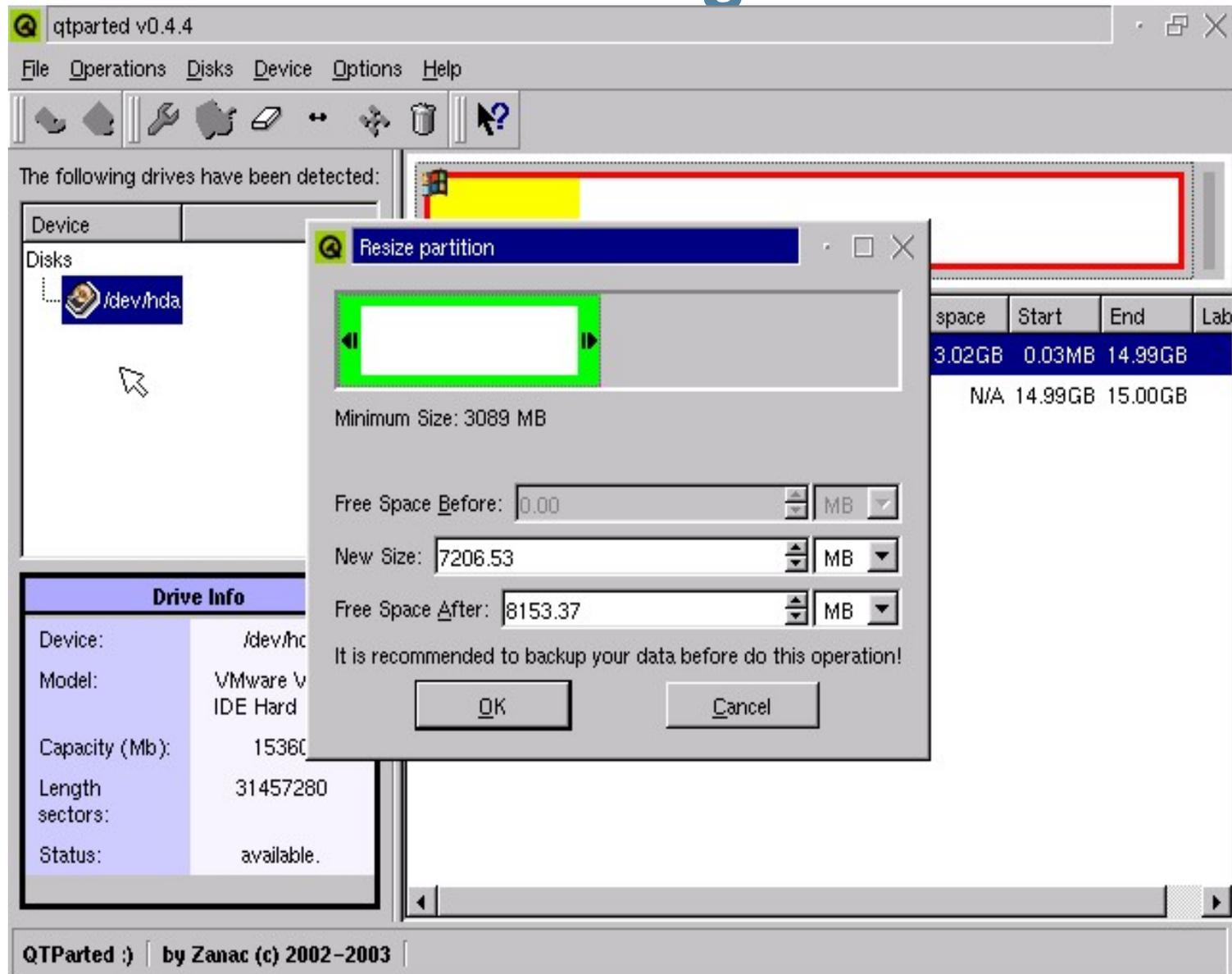
Linux Virtual Console #1/6

18:20 root@sysresccd /root % run_qtparted
```

[4] Repartition: Qtparted view of the disk before repartitioning



[5] Repartition: Open The Resize Partition Dialogue Box



[6] Repartition: After Repartition and before Committing Changes

The screenshot shows the QtParted v0.4.4 application window. The title bar reads "qtparted v0.4.4". The menu bar includes "File", "Operations", "Disks", "Device", "Options", and "Help". The toolbar contains various icons for file operations. The main window is divided into several sections:

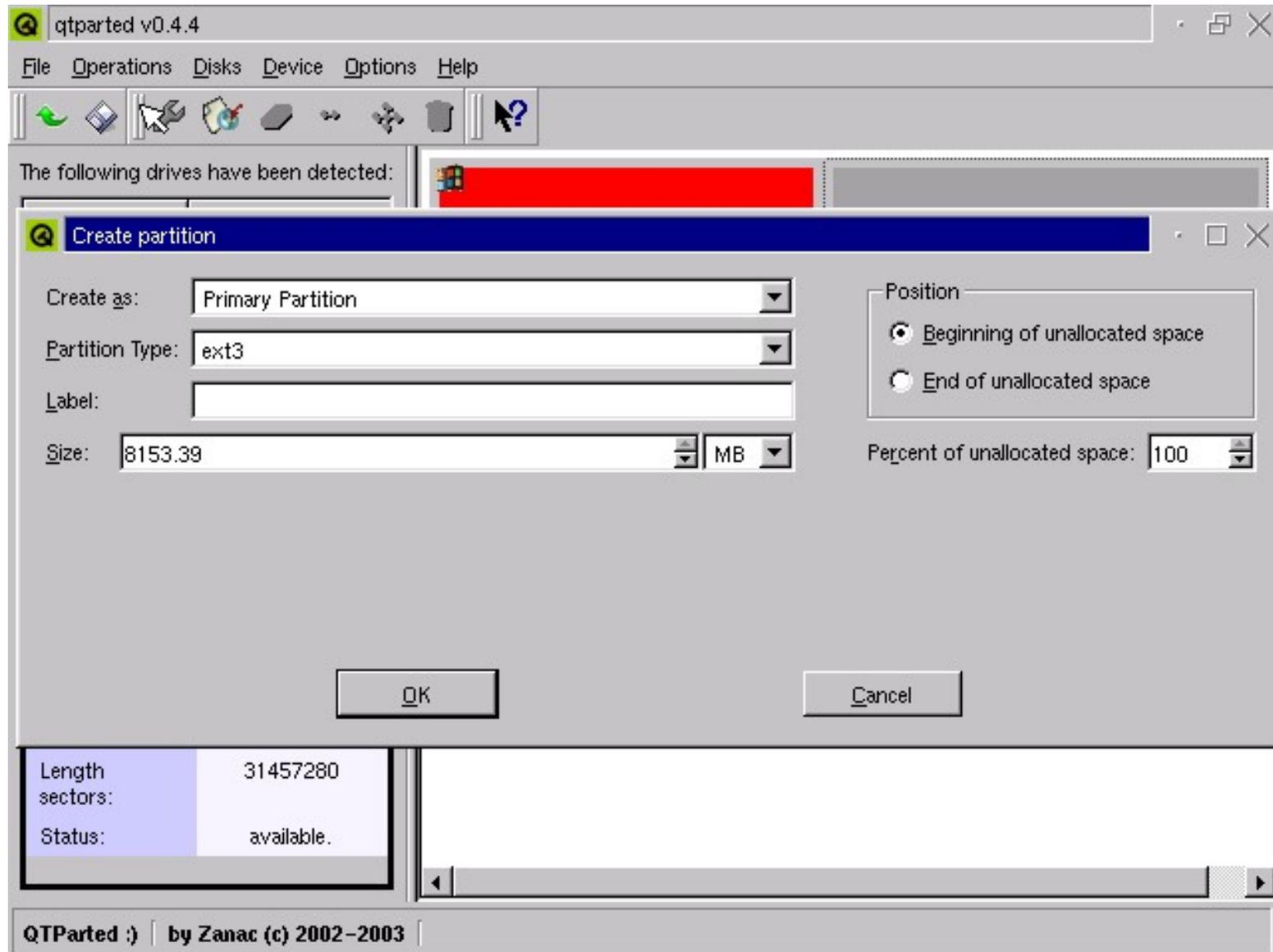
- Left Panel:** A tree view showing the detected drive `/dev/hda`.
- Bottom-Left Panel (Drive Info):**

Drive Info	
Device:	<code>/dev/hda</code>
Model:	VMware Virtual IDE Hard Drive
Capacity (Mb):	15360
Length sectors:	31457280
Status:	available.
- Top-Right Panel:** A visual representation of the disk `hda` (red bar) and its partition `hda-1` (grey bar).
- Bottom-Right Panel:** A table listing the partitions:

Number	Partition	Type	Status	Size	Used space	Start	End	Label
01	<code>/dev/hda1</code>	ntfs	Active	7.04GB	N/A	0.03MB	7.04GB	
02	<code>/dev/hda-1</code>	free		7.96GB	N/A	7.04GB	15.00GB	

The status bar at the bottom reads "QTParted :) | by Zanic (c) 2002-2003".

[7] Repartition: Create Partition From Newly Created Free Space



[8] Repartition: New Partition Created

The screenshot shows the qtparted v0.4.4 application window. The interface includes a menu bar (File, Operations, Disks, Device, Options, Help) and a toolbar with various icons. The main area is divided into several sections:

- Detected Drives:** A list of detected drives, showing `/dev/hda`.
- Drive Info:** A section providing details for the selected drive `/dev/hda`:
 - Device: `/dev/hda`
 - Model: VMware Virtual IDE Hard Drive
 - Capacity (Mb): 15360
 - Length sectors: 31457280
 - Status: available.
- Partition Table:** A table showing the current partitioning of the disk:

Number	Partition	Type	Status	Size	Used space	Start	End	Label
01	<code>/dev/hda1</code>	ntfs	Active	7.04GB	N/A	0.03MB	7.04GB	
02	<code>/dev/hda2</code>	ext3		7.96GB	N/A	7.04GB	15.00GB	

At the bottom of the window, the text reads: QTParted :) | by Zanaac (c) 2002-2003

[9] Repartition: Commit

The screenshot shows the QtParted v0.4.4 application window. The main window displays detected drives and a table of partitions. A warning dialog box is overlaid on the main window, asking for confirmation to commit changes.

The main window shows the following drives detected:

Device	Model	Capacity (Mb)	Length sectors	Status
/dev/hda	VMware Virtual IDE Hard Drive	15360	31457280	available.

The main window also displays a table of partitions:

Number	Partition	Type	Status	Size	Used space	Start	End	Label
01	/dev/hda1	ntfs	Active	7.04GB	N/A	0.03MB	7.04GB	
						04GB	15.00GB	

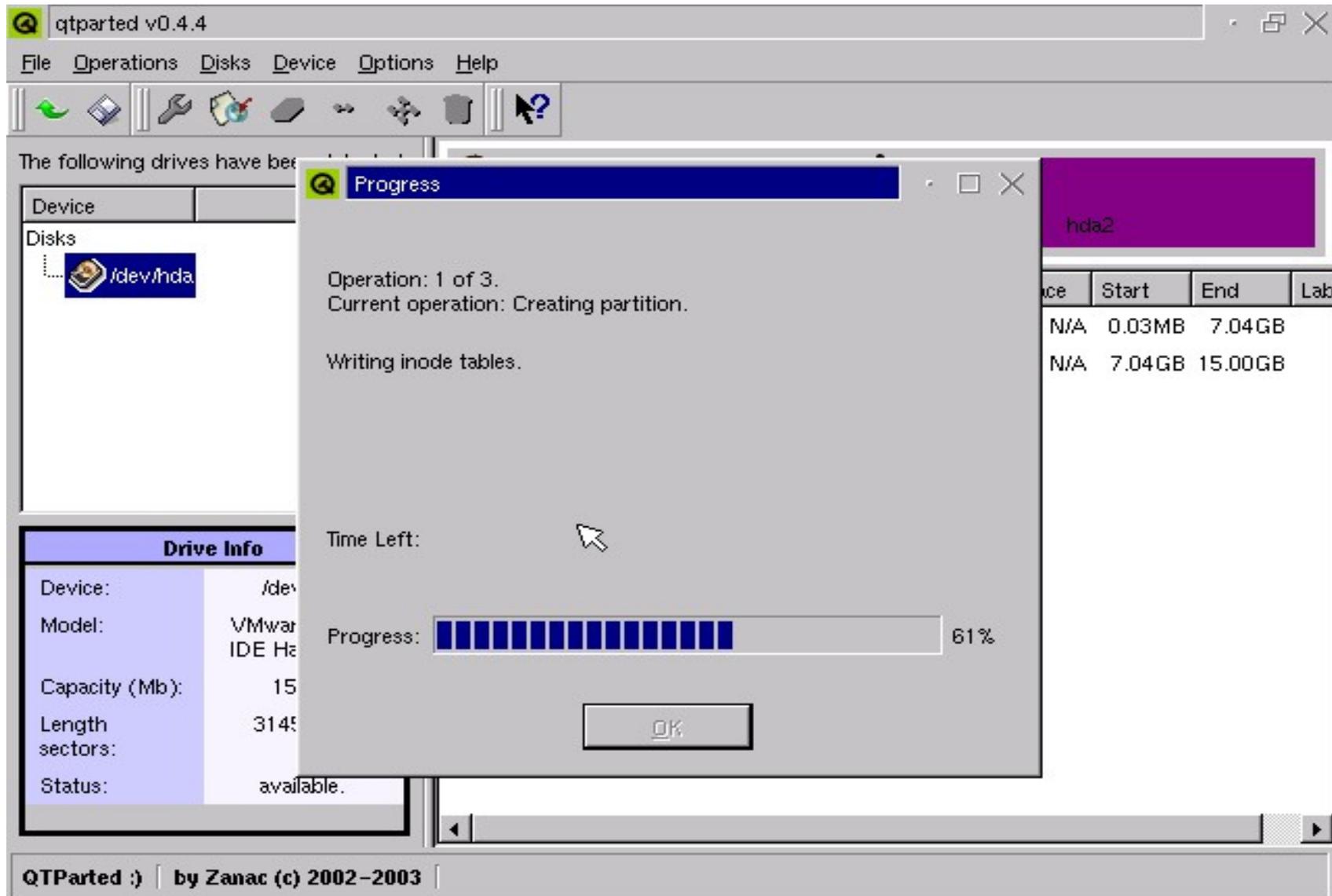
The warning dialog box contains the following text:

You're committing all changes. Warning, you can lost data!
Make sure also that you're not committing a busy device...
In other word PLEASE Umount ALL PARTITIONS before committing changes!

The dialog box has two buttons: **Yes** and **No**.

At the bottom of the main window, it says: QTParted :) | by Zanic (c) 2002-2003

[10] Repartition: Watching The Commit



[11] Repartition: Commit Complete

The screenshot shows the QTParted v0.4.4 application window. A 'Progress' dialog box is open in the foreground, displaying the following text:

Operation: 3 of 3.
Current operation: All operations completed.

Scanning all disk partitions.

Operations completed successfully.

Time Left:

Progress:  100%

OK

In the background, the main application window shows a list of disks. The 'Drive Info' section for the selected disk is visible:

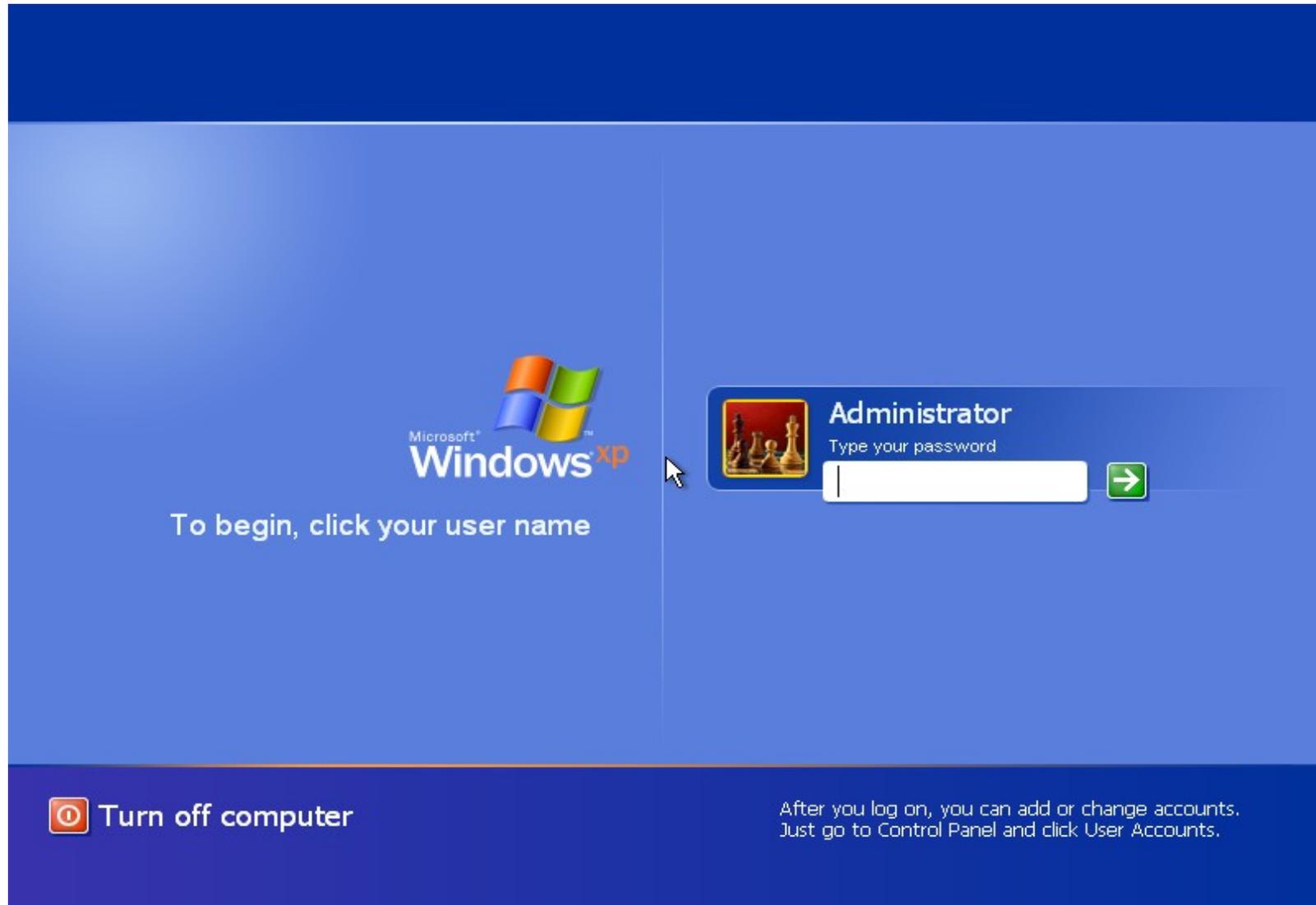
Drive Info	
Device:	/dev/hda
Model:	VMware IDE Hard Drive
Capacity (Mb):	15
Length sectors:	3145728
Status:	available.

At the bottom of the application window, the footer reads: QTParted :) | by Zanic (c) 2002-2003

[12] Repartition: Exit Qtparted and Reboot Back Into Windows

```
18:30 root@sysresccd /root % reboot
INIT: Switching to runlevel: 6
INIT: Sending processes the TERM signal
INIT: Sending processes the KILL signal
* Caching service dependencies ... [ ok ]
* Stopping metalog ... [ ok ]
* Stopping hdparm ... [ ok ]
* Stopping lo
* Shutting down lo ... [ ok ]
* Unmounting filesystems ... [ ok ]
* Remounting remaining filesystems readonly ... [ ok ]
```

[13] Repartition: Windows Still Works



Restore the Disk

```
wd2 wd3 sd0 sd1 sd2 sd3.
-----
Welcome to g4u Harddisk Image Cloning U2.1!

Commands:
* Upload disk-image to FTP:   [GZIP=1] uploaddisk serverIP [image] [disk]
* Upload partition to FTP:   [GZIP=1] uploadpart serverIP [image] [disk+part]
* Install harddisk from FTP:  slurpdisk serverIP [image] [disk]
* Install partition from FTP: slurppart serverIP [image] [disk+part]
* Copy disks locally:        copydisk disk0 disk1
* Copy partitions locally:   cypypart disk+part0 disk+part1
* List all disks:            disks
* List partitions:          parts disk
* See all devices:          dmesg
* This screen:              help

[disk] defaults to wd0 for first IDE disk, [disk+part] defaults to wd0d for
the whole first IDE disk. Use wd1 for second IDE disk, sd0 for first SCSI
disk, etc. Default image for slurpdisk is 'rwd0d.gz'.

Enjoy!                                     Send comments to hubert@feyrer.de
                                           Donate at paypal@feyrer.de !
                                           http://www.feyrer.de/g4u/
-----
g4u> █
```

- ➔ If we have to restore the disk
 - slurpdisk 172.20.27.182 mylaptop.gz wd0

Email addresses

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