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Rescue Kit™ 11 Professional

User Manual

Contents

Introduction

Paragon Rescue Kit™ 11 is an integrated set of powerful tools that is specially designed to tackle most of the problems you might face while using PC. Its primary objective is to provide all the necessary facilities to get the system back on track when it fails to boot or at least to retrieve valuable data from the failed hard disk. But that is not all the product can be used for. With Rescue Kit 11 you can easily recover an accidentally deleted partition, clean user passwords for Windows NT/2000/XP/Vista/2003/7/2008, securely utilize an outdated hard disk, etc.

In this manual you will find the answers to many of the technical questions, which might arise while using the program.

Our company is constantly releasing new versions and updates to its software, that's why images shown in this manual may be different from what you see on your screen.

What's New in Rescue Kit 11

- **The updated P2P Adjust OS Wizard** to successfully start up a Windows physical system on a different hardware platform (P2P) by allowing injection of all required drivers and the other actions crucial for this type of migration. Including the third generation of Paragon's Adaptive Restore™ technology, it now can:
  - Analyze all installed drivers inside a target system to report on devices without drivers.
  - Search for and install lacking drivers from the built-in Windows repository.
  - Notify the user about boot critical devices without drivers (HDD/RAID controllers, etc.), automatically prompting to provide a path to a driver repository.
  - Name all devices according to their model description, not some alphanumeric code, which requires additional deciphering.
  - Determine and install drivers not only for boot critical devices, but for physically connected NICs as well.
- **Boot Corrector for WinPE** to fix most of the system boot problems not only with the Linux and PTS DOS bootable recovery environments, but WinPE 3.0 as well.
- **The latest Linux kernel** to enjoy support of a wider range of hardware configurations, including the brand new Intel ICH9 chipset.
- **WinPE 3.0 based bootable recovery environment** to enjoy support of a wider range of hardware configurations with the option to add drivers for specific hardware on-the-fly.
- **Support for exFAT (Extended File Allocation Table) file system** (backup, restore) developed by Microsoft Corporation particularly for flash storages. It supports drives up to 16 exbibytes, files much larger than 4GB, larger cluster sizes, etc.
- **Better support for 64-bit platforms** to reboot your computer to one of the three special modes (Windows native, Linux, or DOS) to automatically complete operations, which cannot be accomplished under 64-bit Windows.
- **Better support for GUID Partition Table (GPT)** to back up and restore not only single GPT volumes but entire disks, including the option of resize during the restore operation.
- **Better support for the Apple Boot Camp Configuration** with the option not only to back up and restore this kind of configurations, but to copy single volumes or entire disks with resize.
- **Better support for Linux ExtFS** starting from Ext2FS up to the brand new Ext4FS.
- **AFD (Advanced Format Drive) ready**.
- **Support of 2TB+ and non-512B sector size drives**.

- **USB 3.0 ready**.

Product Components

In order to cope with different tasks, the product contains several components:

- **Linux/DOS based recovery environment** is a multi-platform bootable media that enables to run utilities under Linux or PTS DOS, and that way to get access to your hard disk for maintenance or recovery purposes. Both platforms have their strong sides, for instance Linux can boast support of FireWire (i.e. IEEE1394) or USB devices. It enables to burn CD/DVD disks. However there can be some difficulties with detecting new hardware. DOS in its turn has no problems of that kind but is limited in features. The Linux/DOS recovery environment requires no installation and can be of great help when the system fails to boot. Besides it offers a Windows XP like environment.
- **WinPE based recovery environment**. Especially for keen followers of Windows, our product also offers a WinPE 3.0 based bootable media. Unlike the Linux/DOS recovery environment it can boast an excellent hardware support and the same interface as the Windows version can. However its system requirements are much tougher.

Features Overview

This chapter dwells upon key benefits and technical highlights of the product.

Key Features

Let us list some of the key features:

- **A handy Launcher** to easily find and run the required tasks.
- **Support of all present day techniques to store backup images**:

  - *Backup to local mounted/unmounted (without drive letter assigned) partitions*;

  - *Backup to an external mounted storage* to provide for a higher level of data protection and system independence;

  - *Backup to a special secured place on the hard disk called the Backup Capsule* that has an independent system layout (e.g. a separate partition) and will stay operable should the active file system be damaged. To avoid an accidental removing or unauthorized access of the backup data, this partition is hidden and thus cannot be mounted in the operating system;

  - *Backup to external media (CD/DVD)* to guarantee a high level of data protection as long as the backup media is kept secure;

  - *Backup to a network drive* to stand a better chance of success in case of a hard disk failure;
- **Sector backup** to save not only all on-disk information but also the system service structures. It is ideal for making a backup image of an entire hard disk or system partitions to guarantee the operating system's working capability.
- **Restore an entire disk, separate partitions or only files you need** from the previously created backup image.
- **Adaptive Restore** to successfully migrate a Windows physical system to a different hardware platform (P2P) by allowing automatic injection of all required drivers and the other actions crucial for a migration of this kind.
- **Undelete Partitions Wizard** to recover an accidentally deleted partition.

- **Registry Editor** to view and modify settings of any Windows System Registry in the offline mode, i.e. when your operating system has not been started up. It is organized just the way Windows built-in editor is, so you can feel comfortable with it.

It is only available for the Linux/DOS recovery environment.

- Password Cleaner to clean user passwords for Windows NT/2000/XP/Vista/7/2003/2008. With its help you can easily change any user password, including Administrator's to a blank one, thus providing the possibility to freely log in to your operating system. Even if your password has been encrypted with the Syskey utility, you can still clean it up.

It is only available for the Linux/DOS recovery environment.

- Data wiping to successfully destroy all on-disk information including the standard bootstrap code and other system service structures.
- Free space clearing to destroy any remnants of deleted files/directories left on disk without affecting the used data.
- File Transfer Wizard to make such operations as transferring of files/directories or burning of them to CD/DVD as easy and convenient as possible. Providing access to Paragon backups as regular folders, it may also help to replace corrupted data from a previously created image in case of an operating system failure.
- **Recovery Media Builder** to create a bootable recovery media based on Linux/DOS or WinPE 3.0 on a CD, DVD disc, or flash memory, which can later be used to boot and recover your computer in case of an operating system failure. Moreover, with its help you can save data from partitions of your hard disk directly to compact discs or burn ISO-images. The utility supports various formats of laser discs: CD-R/RW, DVD-R/RW, DVD+R/RW, DVD-R, DVD+R double layer, Blu-ray and can handle multi-session burning.
- Network Configuration Wizard to establish a network connection under Linux or WinPE either to save a backup of a partition/hard disk or just several files on a network computer or retrieve a previously made backup from a network computer for recovery purposes.
- Boot Corrector to fix most of the system boot problems that can be a result of a human factor, program error or a boot virus activity.

Supported Technologies

Along with using innovative technologies from outside, Paragon has developed a number of its own original technologies that make its products unique and attractive for customers:

- **Paragon UFSD™** technology to browse partitions of any file system including hidden and unmounted, modify and copy files and folders, etc.
- **Microsoft Dynamic Disk** (simple, spanned, striped, mirrored, RAID-5) to offer more management flexibility without the partition limitation of basic disks. Dynamic storage can be particularly beneficial for large-scale businesses when dealing with many physical hard disks involving complex setup.
- **GUID Partition Table** (GPT). It is the next generation of a hard disk partitioning scheme developed to lift restrictions of the old MBR. GPT disks are now supported by Windows Vista/7, Server 2008, Mac OS X and Linux.

Supported File Systems

- Full read/write access to FAT16/FAT32/exFAT partitions.

- Full read/write access to NTFS (Basic and all five types of Dynamic Disks) under Windows 95/98/ME, Linux and PTS DOS. Compressed NTFS files are also supported.
- Full read/write access to Ext2FS/Ext3FS/Ext4FS partitions under all versions of Windows, DOS 5.0 and later.
- Limited read/write access to Apple HFS+ partitions.

Unfortunately, support of non-Roman characters for the HFS+ file system is unavailable at the moment. The company is about to implement it in the nearest future.

Supported Media

- Support of both MBR and GPT hard disks (2.2TB+ disks included)
- IDE, SCSI and SATA hard disks
- SSD (Solid State Drive)
- AFD (Advanced Format Drive)
- Non-512B sector size drives
- CD-R, CD-RW, DVD-R, DVD+R, DVD-RW, DVD+RW, DVD-R, DVD+R double layer and also Blu-ray discs
- FireWire (i.e. IEEE1394), USB 1.0, USB 2.0, USB 3.0 hard disks
- PC card storage devices (MBR and GPT flash memory, etc.)

Getting Started

In this chapter you will find all the information necessary to get the product ready to use.

Contacting Paragon Software GmbH

If you have any questions about the company products, please do not hesitate to contact Paragon Software GmbH.

Service	Contact
Visit Paragon GmbH web site	www.paragon-software.com
Registration & updates web-service	www.paragon-software.com/support
Knowledge Base & Technical Support	kb.paragon-software.com
Pre-sale information	sales@paragon-software.com

System Requirements

Linux/DOS based recovery environment

To use the Linux/DOS recovery environment on your computer (it doesn't matter what operating system is installed), please make sure that it meets the following minimum system requirements:

- IBM AT compatible computer with i486 or higher CPU
- 256 MB of RAM
- SVGA-compatible monitor
- Mouse (recommended)

WinPE based recovery environment

To use the WinPE based recovery environment on your computer, (it doesn't matter what operating system is installed), please make sure that it meets the following minimum system requirements:

- Intel Pentium III CPU or its equivalent, with 1000 MHz processor clock speed
- At least 512 MB of RAM
- SVGA-compatible monitor
- Mouse (recommended)

Additional requirements

There may be additional requirements if you want to use advanced features:

- Network card to send/retrieve data to/from a network computer
- Recordable CD/DVD drive to burn data to compact discs
- External USB hard drive to store backup data.

Booting from the Linux/DOS Recovery Media

The Linux/DOS recovery environment can be used to boot your computer into Linux or PTS DOS to get access to your hard disk for maintenance or recovery purposes. It also has the PTS DOS safe mode, which may help in a number of non-standard situations such as interfering hardware settings or serious problems on the hardware level. In this case, only basic files and drivers (such as hard disk drivers, a monitor driver, and a keyboard driver) will be loaded.

Startup

To start working with the Linux/DOS recovery environment, please take the following steps:

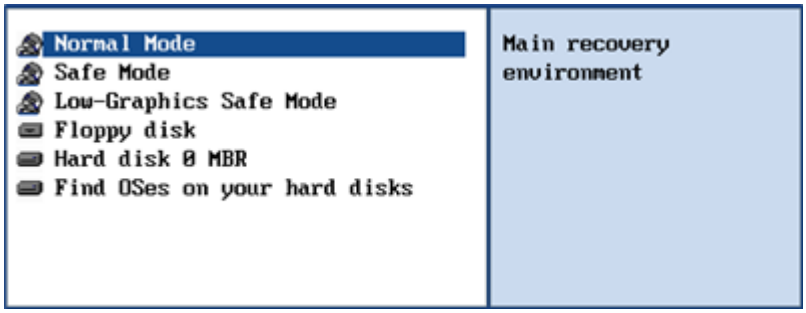
1. Start up the computer from our Linux/DOS recovery media.
2. Launch a boot mode you need (Normal, Safe, Low-Graphics Safe) in the Boot menu.

By default the Normal Mode will be automatically initiated after a 10 second idle period.

3. Click on the required operation to start. Hints on the selected at the moment item will help you make the right choice.
4. Consult the help system by pressing **ALT+F1** to know more on the subject.

Boot menu

The Boot menu contains the following commands:



- **Normal Mode**. Boot into the Linux normal mode. This mode uses the full set of drivers (recommended);
- **Safe Mode**. Boot into the PTS DOS mode. This mode can be used as an alternative of the Linux normal mode if it fails to work properly;

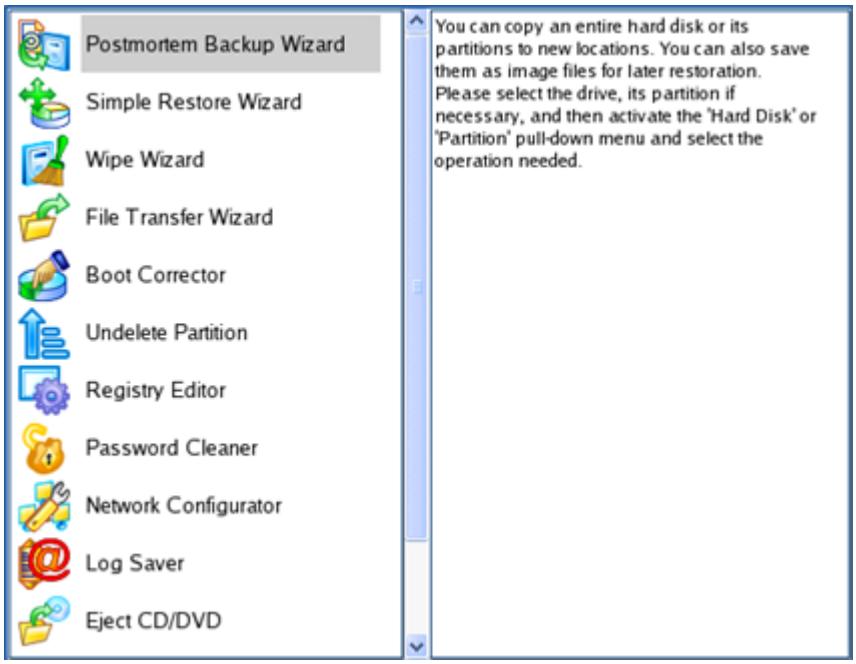
- **Low-Graphics Safe Mode**. Boot into the PTS DOS safe mode. In this case, only the minimal set of drivers will be included, like hard disk, monitor, and keyboard drivers. This mode has simple graphics and a simple menu;
- **Floppy Disk**. Reboot the computer from a system floppy disk;
- **Hard Disk 0**. Boot from the primary hard disk;
- **Find OS(s) on your hard disks**. The program will scan hard disks of your computer to find any bootable operating system.

To move within the menu, please use the arrow keys of the computer keyboard.

While working with the recovery environment you might experience some inconvenience caused by possible video artifacts. It is just a result of changing video modes and in no way will affect the program functionality. If this is the case, please wait a bit and everything will be OK.

Normal Mode

When the Normal mode is selected, the Linux launch menu appears:



- **Hard Disk Manager** (enables to copy and back up separate partitions or entire hard disks, carry out partitioning operations, etc.);
- **Simple Restore Wizard** (allows restoring hard disks and partitions);
- **Wipe Wizard** (enables to destroy all on-disk information or only remnants of deleted files/directories);
- **File Transfer Wizard** (allows coping files/folders to another disk or a partition as well as recording them to CD/DVD);
- **Boot Corrector** (helps to correct the Windows System Registry without Windows being loaded);
- **Undelete Partition** (enables to recover an accidentally deleted partition);
- **Registry Editor** (helps to view and modify settings of any Windows System Registry in the offline mode);
- **Password Cleaner** (allows cleaning user passwords for Windows NT/2000/XP/Vista/7/2003/2008);
- **Network Configurator** (enables to establish a network connection under Linux);

If you are going to use network resources, first launch the Network Configuration Wizard to establish a network connection.

- **Log Saver** (helps to collect and send the necessary log files to the Technical Support);
- **Eject CD/DVD**;
- **Reboot the computer**;
- **Power off the computer**.

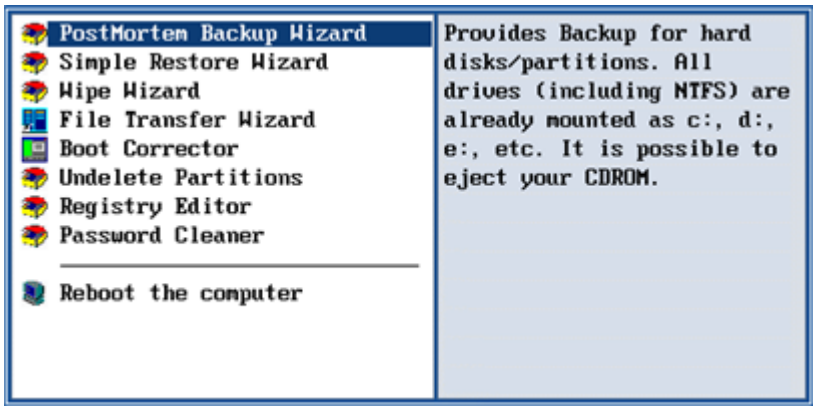
To move within the menu, please use the arrow keys of the computer keyboard.

Safe Mode

When the Safe mode is selected, the PTS DOS launch menu appears. It has nearly the same functionality as for the Normal mode except the **Network Configurator** and **Log Saver** commands. Besides due to certain limitations of the PTS DOS environment, there is no possibility to burn CD/DVD discs.

Low Graphics Safe Mode

When the Low Graphics mode is selected, the PTS DOS launch menu appears. It has the same functionality and looks similar to the Safe mode but graphically simpler.



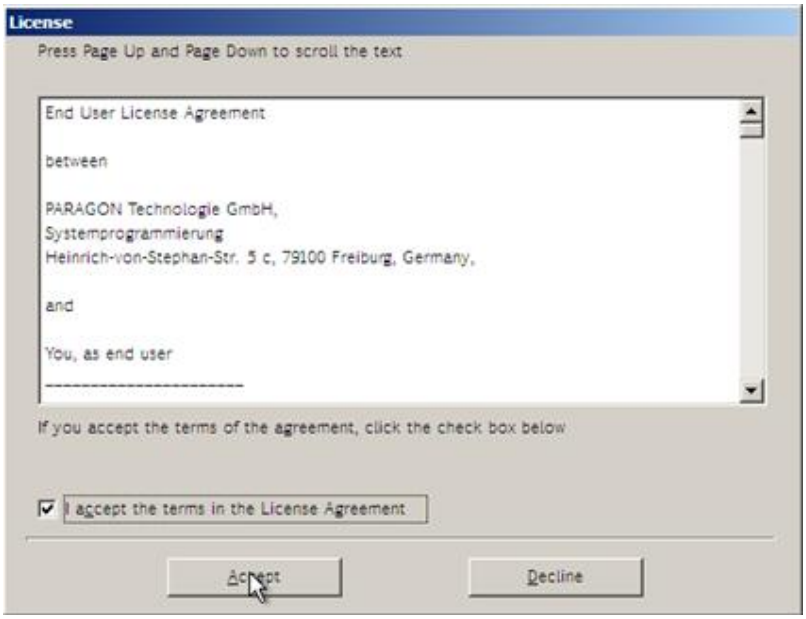
Booting from the WinPE Recovery Media

The WinPE recovery environment can be a real alternative to the Linux/DOS recovery environment. Providing nearly the same level of functionality it offers an excellent hardware support and the same interface as the Windows version does.

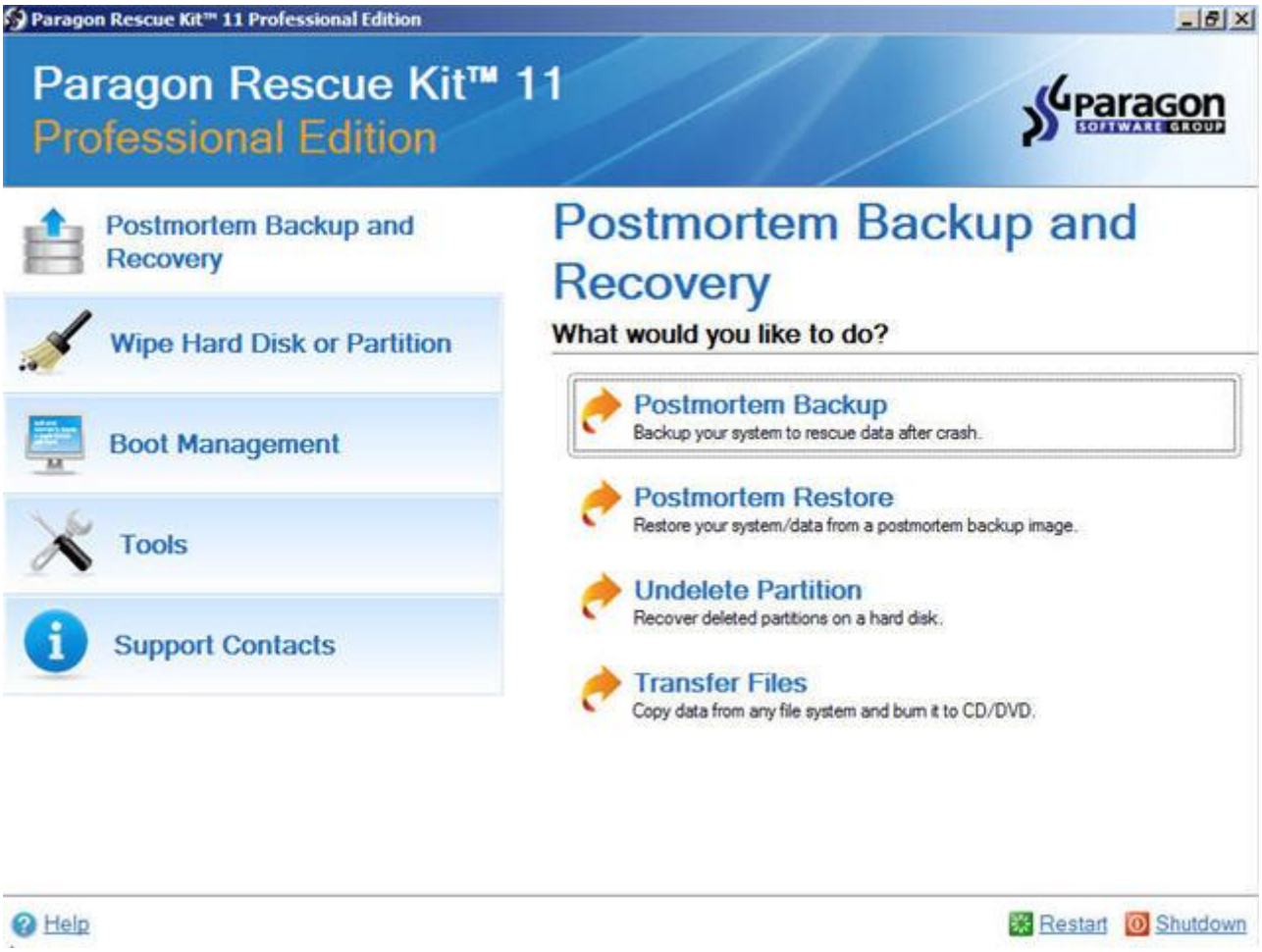
Startup

To start working with the WinPE recovery environment, please take the following steps:

1. Start up the computer from our WinPE recovery media.
2. Once it has been loaded, you will see the License Agreement. Read the agreement and then mark the appropriate checkbox to accept. If you do not agree with any conditions stated there, you won't be able to use the program.



3. Once you accept the agreement, you will see the Universal Application Launcher. In general it enables to run components of the product, load drivers for undefined hardware or establish a network connection.



4. Click on the required operation to start. Hints on the selected at the moment item will help you make the right choice.
5. Consult the help system by pressing **ALT+F1** to know more on the subject.

Our WinPE 3.0 based recovery environment offers excellent hardware support. However in case it doesn't have a driver for your disk controller, your hard disks will be unavailable. Please consult the Adding specific drivers scenario to know how to tackle this issue.

Basic Concepts

This chapter explains terms and ideas that show how the program works. To understand these helps to obtain a general notion of the operation performance and makes it easier for the user to operate the program.

System and Data Protection

The data protection issue is a growing cause of worrying for more and more people today. Indeed, it is hardly to find a person who will be particularly happy when all precious information on the hard disk is irreversible lost as a result of its malfunction. So how this tragedy can be prevented?

Full Sector Backups

A full sector-based backup image includes all contents of a partition or a hard disk at the moment of its creation. If you roll back your system to the initial state on a regular basis, that's exactly what you're looking for. But if you want to have multiple backup archives of the same partition reflecting certain time stamps, unchanged data will inevitable be duplicated in all archives and take additional space on backup media.

Backup Storage

Our program supports all present day techniques of storing backup images. Let's take a closer look at them all to understand what kind of storage is able to provide better security:

- You can place a backup image to a local mounted or unmounted (without drive letter assigned) partition. Despite the fact that it is the most convenient way, try not to use it. You can delete your backup just by accident or lose it as a result of a hardware malfunction, or a virus attack;
- You can place a backup image to an external mounted storage to provide for a higher level of data protection and system independence;
- You can place a backup image to a special secured place on the hard disk called the Backup Capsule that has an independent system layout (e.g. a separate partition) and will stay operable should the active file system be damaged. To avoid an accidental removing or unauthorized access of the backup data, this partition is hidden and thus cannot be mounted in the operating system. However it won't help you in case of a hardware malfunction;
- You can place a backup image to external media (CD/DVD) to guarantee a high level of data protection as long as the backup media is kept secure;
- You can place a backup image to a network drive to stand a better chance of success in case of a hard disk failure. Moreover, by storing it on a special-purpose server you may be pretty sure nothing will happen to it;

Adaptive Restore

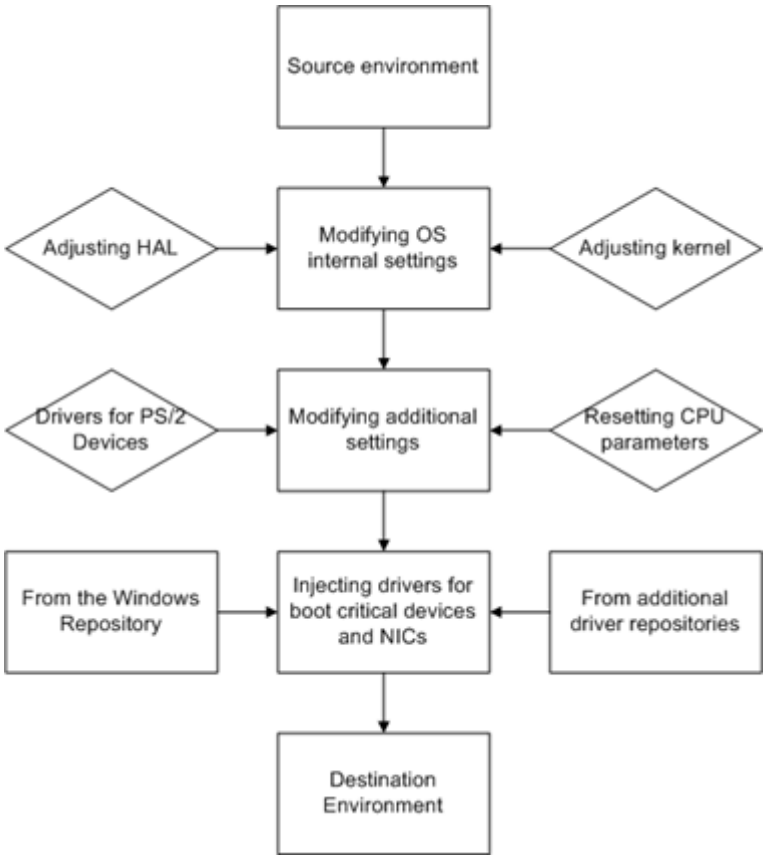
Technology Background

Windows family operating systems are notorious for their excessive sensibility to hardware, especially when it turns to replacement of such a crucial device as HDD controller or motherboard – actually Windows will most likely fail to boot as a result of this operation.

In 2008 our company came with an exclusive technology called Paragon Adaptive Restore™. Initially aimed at restore of Windows Vista or Server 2008 from a backup to a different hardware configuration, its current realization, available in the P2P Adjust OS Wizard, enables to make any Windows since XP bootable on dissimilar hardware by allowing automatic injection of all required drivers and the other actions crucial for this type of migration.

Technology Concept

Let's take a closer look at how Paragon Adaptive Restore works.



As you see, successful migration of a Windows system to a different hardware platform involves several actions:

1. **Change of the Windows kernel settings according to the new configuration**. The program detects the given hardware profile and automatically installs the appropriate Windows HAL and kernel.
2. **Installation of drivers for boot critical devices**. The program detects those without drivers and automatically tries to install lacking drivers from the built-in Windows repository. If there's no driver in the repository, it prompts the user to set a path to an additional driver repository, strongly recommending not to proceed until all drivers for the found boot critical devices are installed. In case drivers for these devices are installed, but disabled, they will be enabled.
3. **Installation of drivers for a PS/2 mouse and keyboard**. This action will only be accomplished for Windows XP/Server 2003.
4. **Installation of drivers for network cards**. The program detects those without drivers and automatically tries to install lacking drivers from the built-in Windows repository. If there's no driver in the repository, it prompts the user to set a path to an additional driver repository.

These actions guarantee a Windows system will start up on dissimilar hardware. After the startup, Windows will initiate reconfiguration of all Plug'n'Play devices. It's a standard procedure, so please don't worry and prepare the latest drivers at this step to get the most out of the system.

Though all Windows systems have built-in driver repositories, please be prepared to have additional drivers when dealing with Windows XP/Server 2003, because for these systems they are very modest.

Technology Application

Let's consider a number of situations when the Adaptive Restore technology can help you out:

- If you need to migrate to a different hardware platform with minimal effort

- If you need to upgrade hardware while keeping all programs and settings intact
- If you need to replace failed hardware and cannot find an exact match for original system specifications

Known Issues

1. After transferring Microsoft Vista and later versions to different hardware, you will need to re-activate license of the system. It's normal behavior as these systems keep tracking any change of hardware. Re-activation is legally justified in this case, as you transfer your system to another PC.
2. If you've installed several operating systems on one partition, we can only add drivers to the latest version of OS. Microsoft highly recommends that you install an operating system on a separate partition.
3. Please note drivers are not cached during selection. That's why if you select a driver to add to the system, but it's already unavailable during the operation, the program will end the operation with an error.

Data Sanitization

Data security is a two-sided problem. It is to be made clear, that providing confidentiality implies not only information to be stored properly, but also be destroyed according to certain rules. The first step to protecting yourself is to know exactly which security precautions work and which do not.

Many people believe the misconception that repartitioning a disk will result in complete destruction of its contents. Actually that is not quite so. Repartitioning the drive only alters references to partitions in the Partition Table, leaving all file data intact. In fact, there are a number of programs available to successfully recover previously deleted partitions.

Formatting a drive also does not guarantee data destruction. Formatting procedure implies modification of the Master File Table (MFT) that keeps track of where file contents are stored on the disk and verification of each sector for consistency. Even a low-level format does not actually erase the file contents for good, since they can still be resurrected from their deleted state with minimal effort by using the popular today Magnetic Force Microscopy technology.

The only way to make sure that all the data has been erased from a hard drive is to overwrite all on-disk sectors with random patterns of ones and zeros. Although this sounds complex, there is an easy way to do this.

The process of deliberately, irreversibly removing or destroying the data stored on a memory device (magnetic disks, flash memory drives, etc.) is generally known as Data Sanitization. A device that has been sanitized has no usable residual data and even advanced forensic tools should not ever be able to recover it, thus providing maximum level of security.

Data Backup and Rescue

In this chapter you will find all the information necessary to establish a reliable data protection system.

Postmortem Backup

By going through steps of the wizard, you configure all the necessary settings to launch the backup operation. To minimize the possibility of making any mistake, the wizard provides auxiliary information on every single option. Moreover you can get an in-depth description to any setting, control, or field of the wizard just by clicking the hint button and then the object you need.

Startup

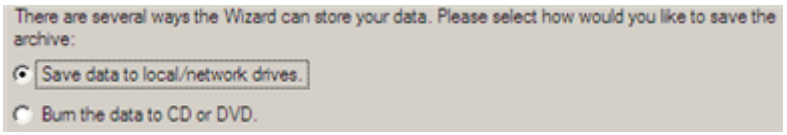
- Click the **Postmortem Backup** button.

Setup

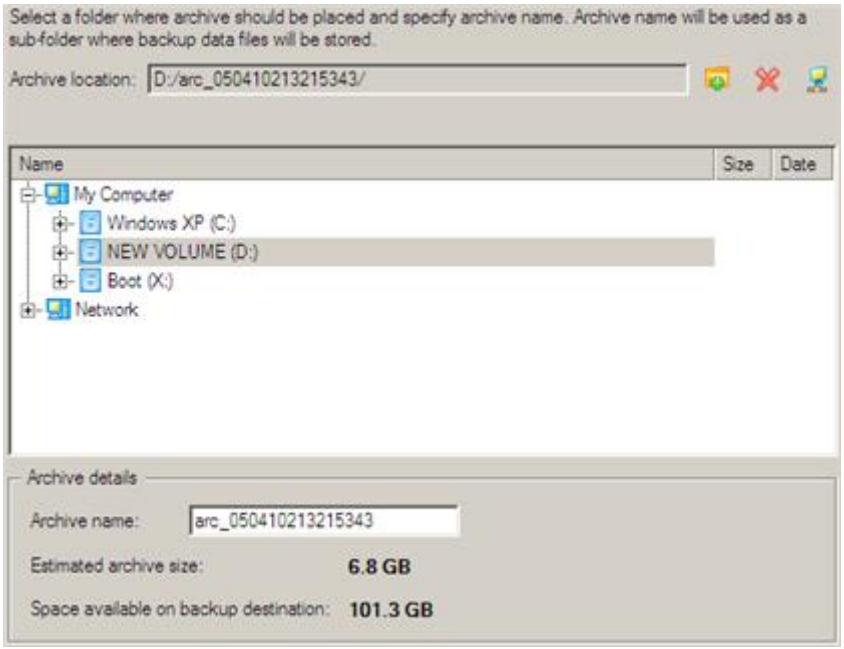
The wizard offers the following steps to accomplish the backup operation:

- **The object to back up**. You can back up either an entire disk or separate partitions of the disk (primary, extended or logical). In case of backing up an entire disk, you've got the possibility to include into the image such disk elements as the Master Boot Record (MBR) and the first track of the hard disk. This can be very helpful for serious disk recovery procedures.

- **Backup destination**. The wizard allows saving backup archives to local or network drives or burning them to CD/DVDs. You need to select a destination, taking the estimated archive size and available space on the backup destination into account.

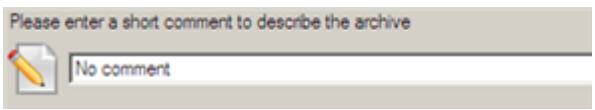


- **Name and location of the resulted image**. Provide a file name for the new image and its exact location. The program automatically offers an easy to understand name containing the date and the time of the archive creation, which can anyway be modified.



The program automatically calculates size of the future archive and informs the user about space available on the selected destination.

- **Archive Comment**. You can add some additional description to the archive that will later help to distinguish it from the others.



In addition, there is the possibility to make further detailed settings (although the default values will do in most cases). To activate the advance mode, you need to mark the appropriate option on the second page of the wizard. When it is marked, the next page enables to define:

- Whether the archive integrity will be controlled.

Checking archive integrity enables to guarantee that all backup images created with the program are 100 percent flawless. Nevertheless if you decided not to control the archive integrity, the backup operation would take about 3-5% less time.

- Whether image file names will be set automatically in complex archives.
- Compression level for the backup image (including the No compression variant).
- Whether the archive will be split (if yes, you can set the maximum size for the archive files).

Splitting images enables to tackle issues caused by a file size limitation of some file systems.

- Whether the archive will be protected by password.
- Whether the selected disk (or the selected partition) will be copied in the sector-to-sector mode (including unused sectors as well).
- Whether the OS auxiliary files (pagefile.sys, hyberfil.sys) will be included in the backup image.
- Whether the operation will be performed without rebooting the system. The program needs to reboot the system in order to have exclusive access to processing data. In a Windows environment this is difficult to achieve because even when all the other applications are closed, the system service programs are still running. However, there is a way to avoid rebooting. The mode of processing the backup operation without rebooting is named Hot Processing. You can also define specific parameters for the Hot Processing mode.
- The data to be automatically excluded from the resulted backup.

Result

After the backup operation is completed you receive an image of the selected disk (or the selected partition). This image is placed into the specified destination, its features defined by the wizard.

Postmortem Restore

Startup

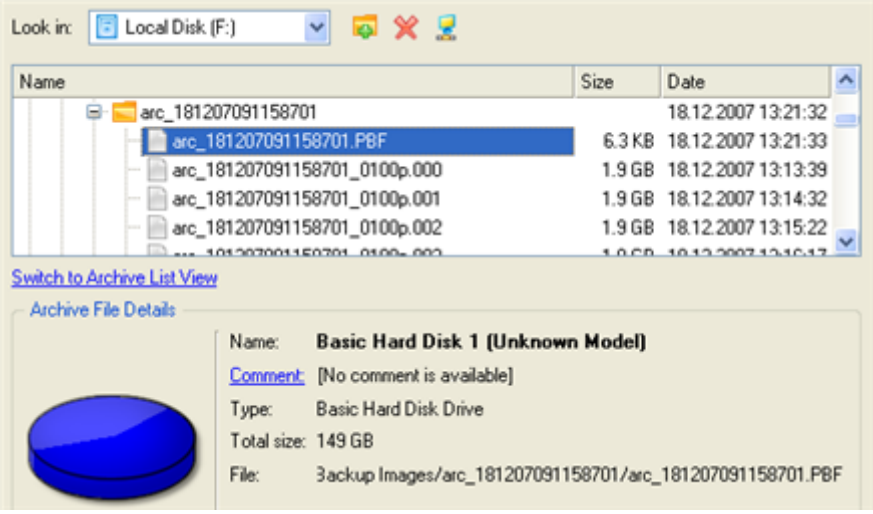
- Click the **Postmortem Restore** button.

Setup

The wizard offers the following steps to accomplish the restore operation:

- **A backup image to be restored**. The Browse for Archive page enables to find a backup image you need.

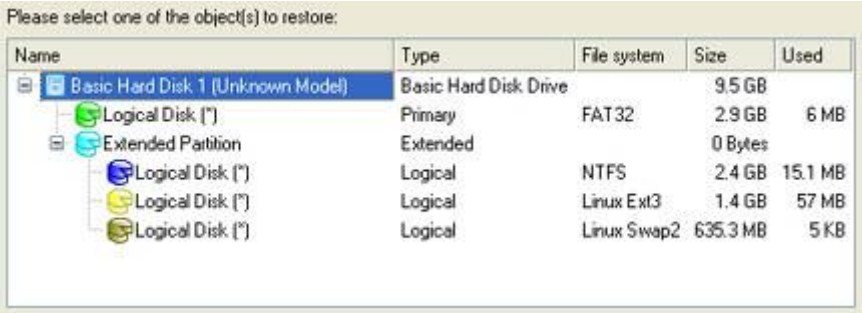
  You can find the required image in the browser-like window. The section below (i.e. Archive File Details) will also display a short description of the selected image.



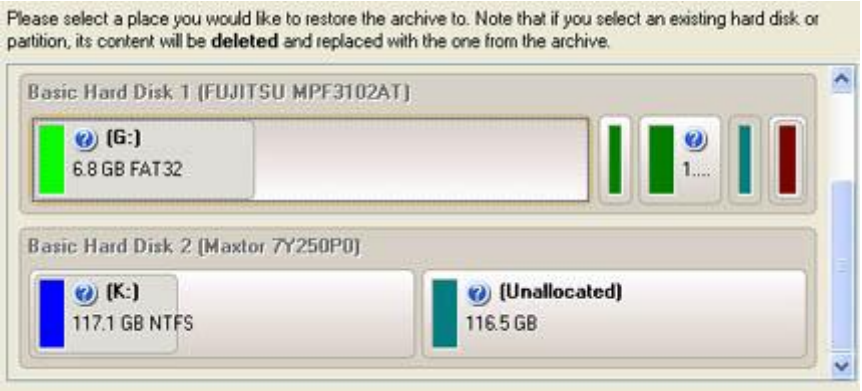
Moreover, on this page you've got the possibility to create new folders, delete existing files/folders or map network drives by clicking the appropriate buttons.

Sector Backup Restore

- **Data to restore.** An item of the selected archive to be restored. The program allows you to restore not only an entire archive, but also separate items of the archive. It is very convenient in case of restoring separate partitions from the entire disk archive.



- **A place to restore**. Selecting the destination, please note - all contents on the disk selected for restoring purposes will be deleted during the operation.

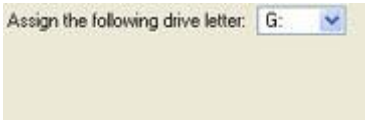


To help you get a clear-cut picture of the operation outcome, the program allows inspecting the resulted disk layout.

Restoring Partition:

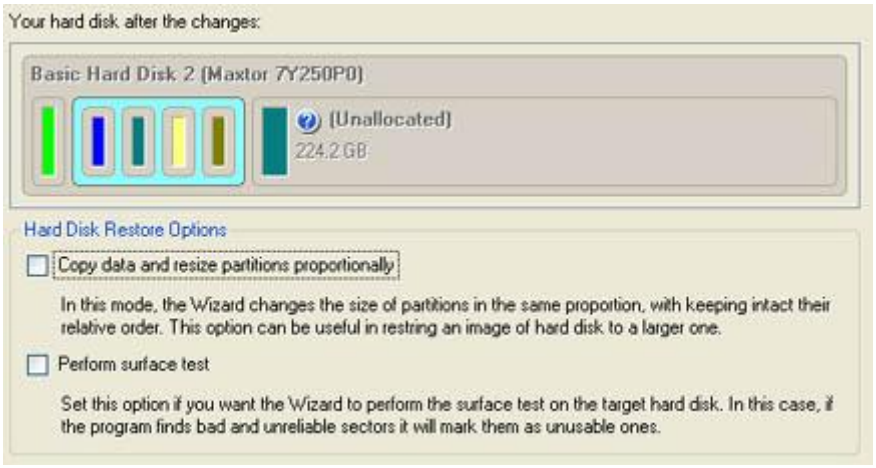
- **Size of the restored volume and free space before and after it on the disk.**

- **Drive letter assignment after restore**. The pull-down list contains vacant drive letters that can be associated with the restored partition.



Restoring Hard Disk:

- **Copy data and resize partitions proportionally**. If this option is activated, the program proportionally changes the size of partitions keeping their relative order intact. The option can be useful when restoring to a larger hard disk.
- **Perform surface test**. Define whether the surface test will be accomplished during the operation or not.



All contents on the disk selected for restoring purposes will be deleted during the operation.

Result

The wizard will restore the archived data, and make it available to use in the operating system.

To make a Windows bootable on different hardware, please additionally complete the P2P Adjust OS Wizard.

Undeleting Partitions

When simply deleting a partition (without additional wiping) disk management software only removes references to it in the Partition Table, thus leaving the possibility to recover it later.

The program enables to find and recover these partitions. A restored partition will be fully functional, as long as other partitions were not created, moved or exceeded the disk space occupied by that partition. That is why the program offers this function only for blocks of free space.

The operation can be accomplished with the Undelete Partition Wizard.

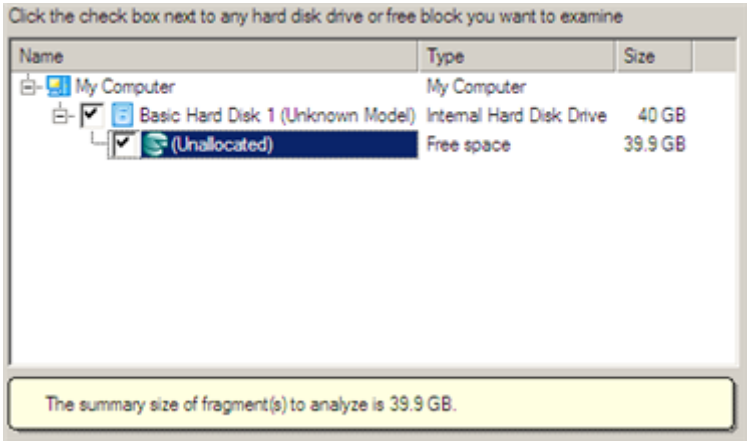
Startup

- Click the **Undelete Partition** button.

Setup

The wizard offers the following steps to accomplish the undelete partition operation:

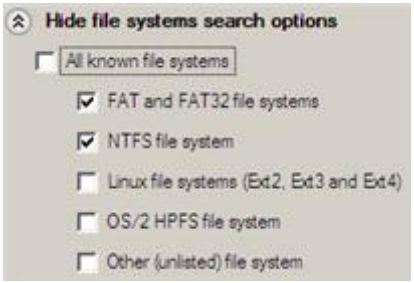
- **Free blocks to scan for lost partitions**. Choose a free block from a tree-like list of available hard disks.



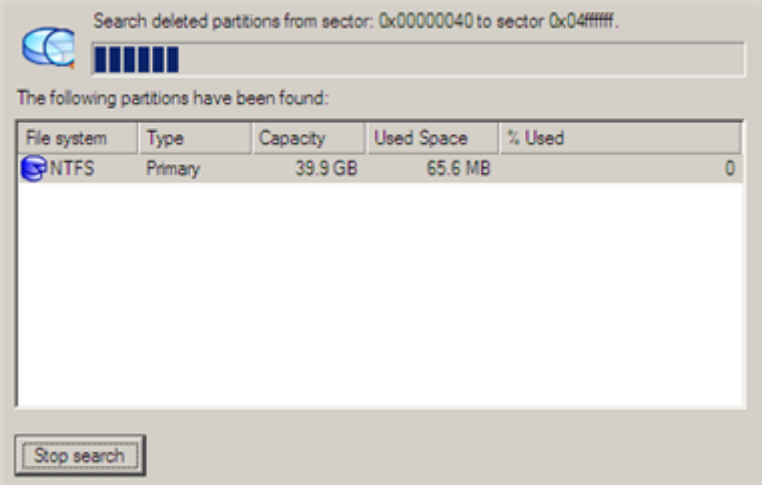
- **Search method**. By default, the wizard selects the fastest search method for your operating system. In most cases that will do to find any accidentally deleted partition. However if you're under Windows XP for instance (the Conventional Search option is selected), but the deleted partition you're looking for has been created with the Disk Management utility under Vista, the wizard won't be able to find this partition, unless you manually select the appropriate option (Quick Search for Partitions Created by Vista or Later OS). Moreover if the wizard still fails to find the partition you need, you can select the Thorough Search option to scan every single sector in the specified search area to get the most accurate results.

To know more on the available search methods, please use the context sensitive hint system.

- **File system filter**. By default, the wizard will search for all known file systems. However, by clicking on the appropriate option on the second page of the wizard, you can specify only those file systems you need.



- **A partition to undelete** (if several). By default, the program searches records of any deleted partition ever existed on the selected block of free space. So you can get several partitions to choose from.



Most likely the required partition will be found first. If so, you may abort the search operation by pressing the Stop search button.

Result

After the operation is completed you receive a fully functional partition.

Wipe Tasks

In this chapter you will find all the information necessary to wipe a hard disk/partition of any file system or only destroy any remnants of deleted files/directories left on disk without affecting the used data, thus providing high level of security.

The operation can be accomplished with the Wipe Wizard or corresponding dialogs.

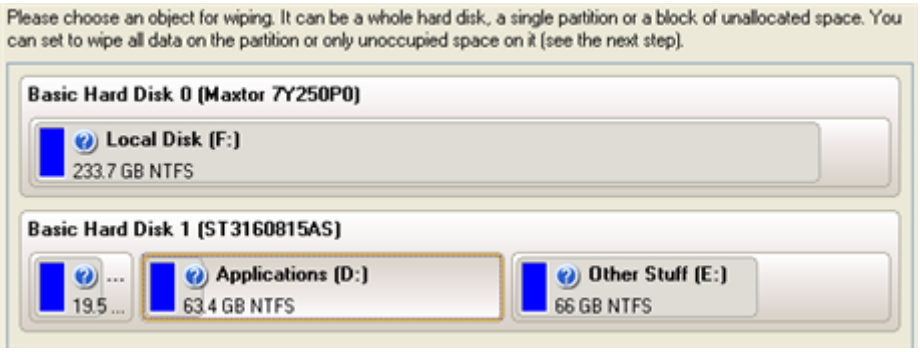
Wizard Startup

- Click the **Wipe Hard Disk or Partition** button.

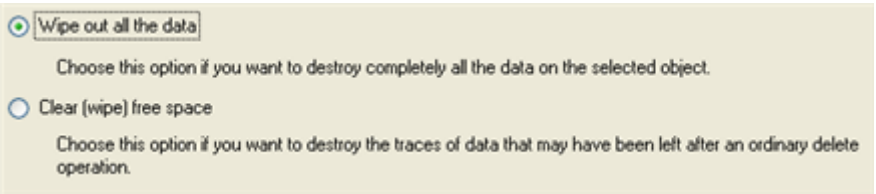
Wizard Setup

The wizard offers the following steps to accomplish the operation:

- **The hard disk/partition to wipe**. Select a hard disk/partition the data of which you want to destroy.



- **Wipe mode**. This section enables to switch between two options:



- **Wipe out all data**. Select the option to irreversibly destroy all on-disk data of the selected object.

- **Clear (wipe) free space**. Select the option to destroy any remnants of deleted files/directories left on disk without affecting the used data.

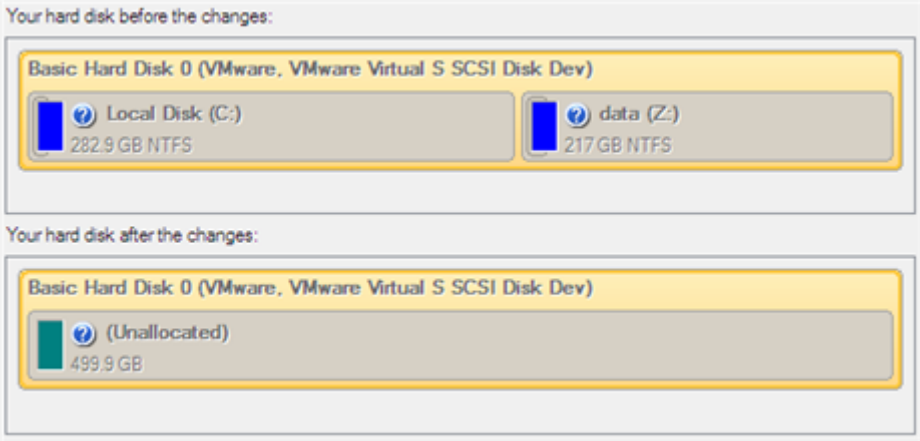
The Clear Free Space operation is available only for Logical and Primary partitions of known file systems.

- **Wipe method**. Here you can select a specific data erasure algorithm or create a customized method by marking the appropriate option.

  - In case you preferred to use a specific algorithm, the next page of the wizard enables to get detailed information on the selected algorithm, choose whether to carry out residual data verification or not specifying the percentage of sectors to check and estimate the time required to accomplish the operation.

  - In case you preferred to create a customized algorithm, the next page of the wizard enables to define up to 4 wiping patterns, number of passes for each wiping pattern and for the group of patterns. The Mask spinner control allows you to set a two-figure hexadecimal character value ("00" by default). The available range is from "00" to "FF". You can also choose whether to carry out residual data verification or not specifying the percentage of sectors to check.

- **Revise your changes**. This page informs on all the actions to be made in the wizard in a bright, graphical form.

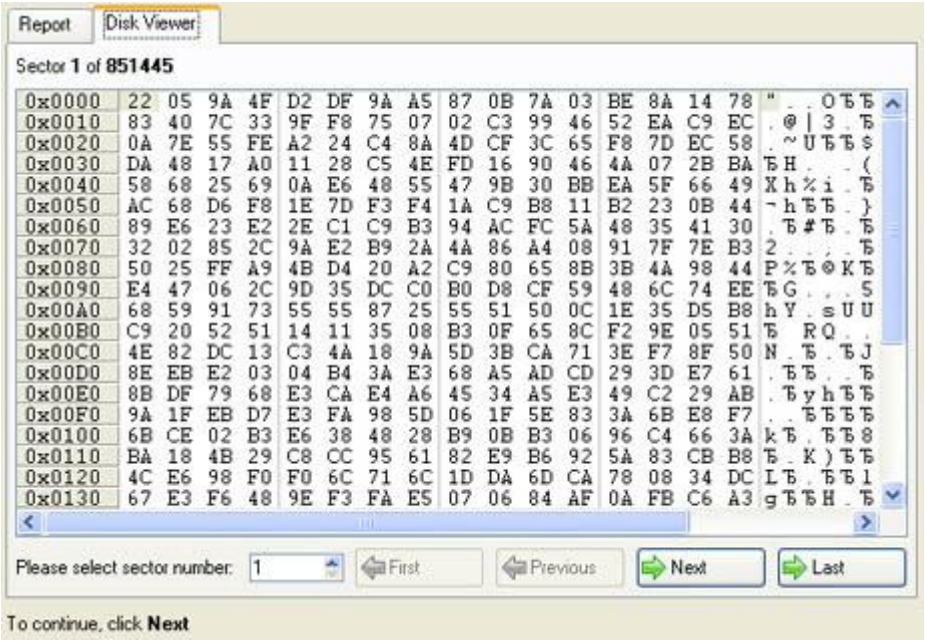


Wizard Result

After the operation is completed you can see a well informative summary page, providing structurally divided in-depth information on all the actions made in the wizard.

The program also enables to store the resulted report. To do that, just press the Save button and choose the exact location in the opened dialog.

To make sure that all on-disk data is irreversibly destroyed call the Disk Viewer dialog by clicking the appropriate tab and see it for yourself.



Transfer Files

File Transfer Wizard is designed to make such operations as copying of separate files/directories or burning of them to CD/DVD as easy and convenient as possible. It may be of particular use in case of a system malfunction, caused either by a virus attack or files corruption, in order to get the system back on track again. Besides it provides access to Paragon backups as regular folders to browse through their contents or copy required files.

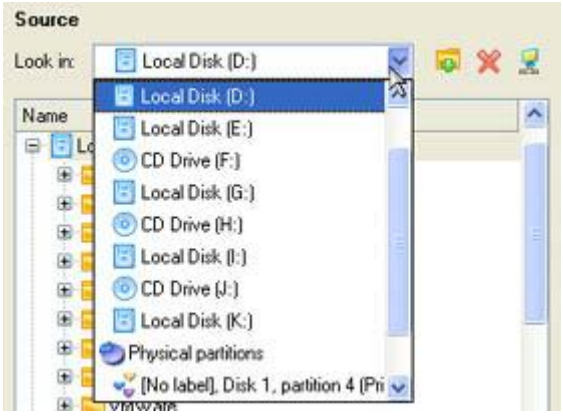
Startup

- Click the **Transfer Files** button.

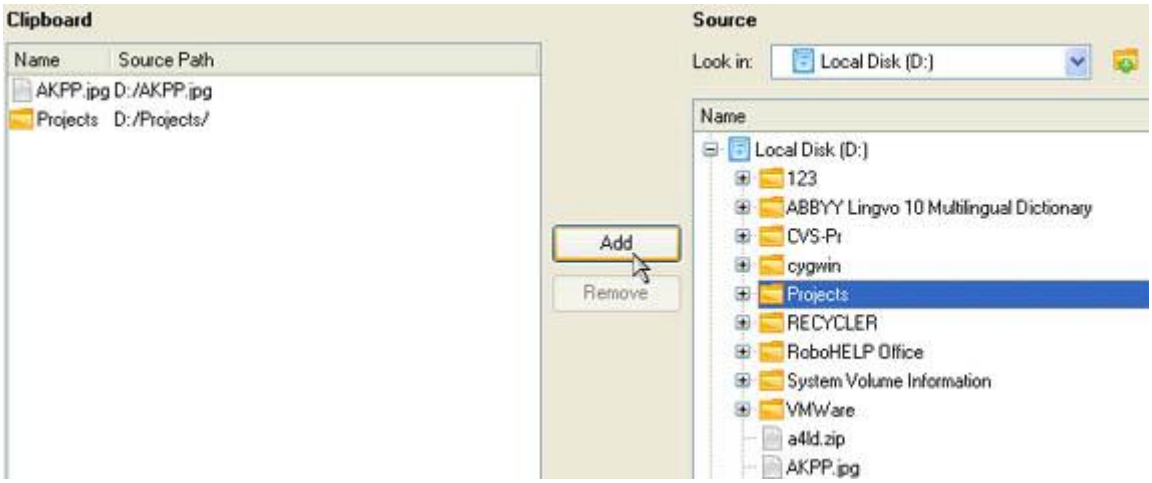
Setup

The wizard offers the following steps to accomplish the transfer operation:

- **Place to look for files/directories**. Select a source disk from the pull-down list in the left pane of the page. The program enables to process both mounted and unmounted (without drive letter assigned) partitions. Besides it is possible to map a network drive.

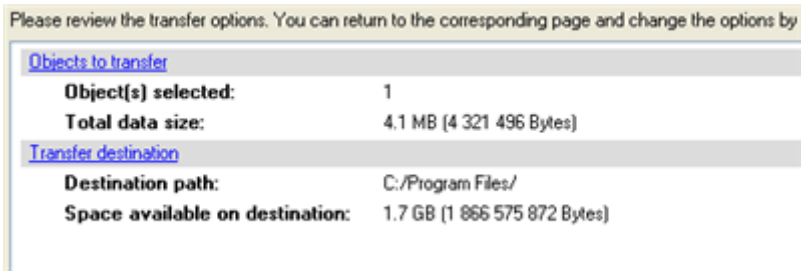


- **Object(s) of operation**. Choose files/directories you want to copy and place them to Clipboard by pressing the Add button. To delete a file/directory from the Clipboard, select it in the Clipboard pane and press the Remove button. You can also create a new folder, rename or irreversibly delete existing files/directories of the left pane by pressing the appropriate buttons.



Files/directories deleted from the Clipboard remain intact on source disks.

- **Destination to store the object(s)**. The File Transfer Wizard allows copying data to local or network drives or burning them to CD/DVDs. Choose the way the data will be stored.
- **Revision of changes**. The Transfer Summary page provides structurally divided information on all the actions made in the wizard. Check the changes and come back to any step of the wizard (if necessary) by following the required hyperlink.



Result

After the operation is completed the required data will be placed into the specified destination.

Typical Scenarios

This chapter lists a number of the most frequently used scenarios that may be accomplished with the program. You can find here useful recommendations and descriptions of operations.

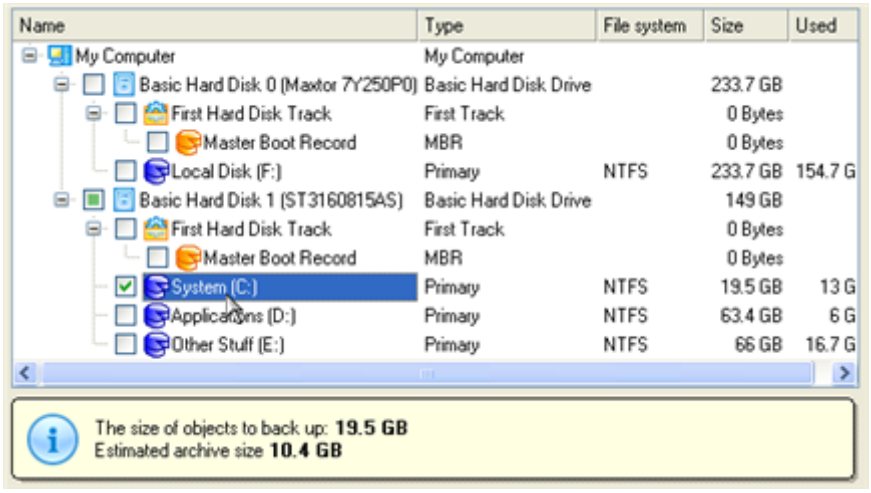
Backup Scenarios

Backing up a hard disk or partition to external media (CD/DVD)

To back up an entire hard disk or a separate partition and then burn the resulted image to CD/DVD, please do the following:

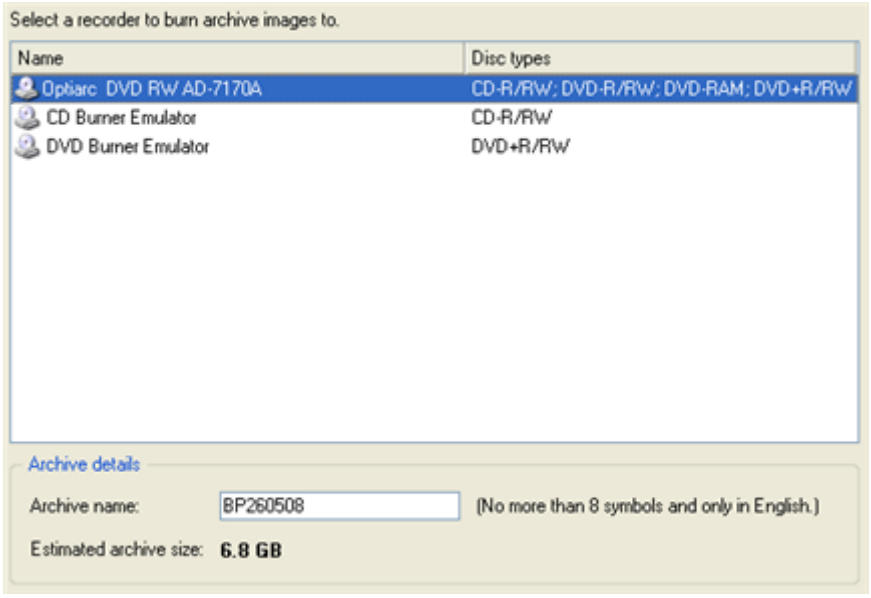
Launcher

1. Click the **Postmortem Backup** button.
2. On the Wizard's Welcome page, click the Next button.
3. On the What to back up page, mark the appropriate option opposite a hard disk's name or a partition's name depending on the chosen task.



You've got the option to modify the default backup settings by marking the appropriate checkbox on this page.

4. On the Backup Destination page, select the **Burn the data to CD or DVD** option.
5. Select a recordable device on the list of available CD/DVD devices and edit the archive name, if necessary.



Please take into account the Estimated archive size value. It can give you a hint about the number of CD/DVD discs required for the operation.

6. Add comments to your backup describing its contents.

7. On the Backup Summary page review all parameters of the operation and modify them if necessary. Click the Next button to start the backup process.

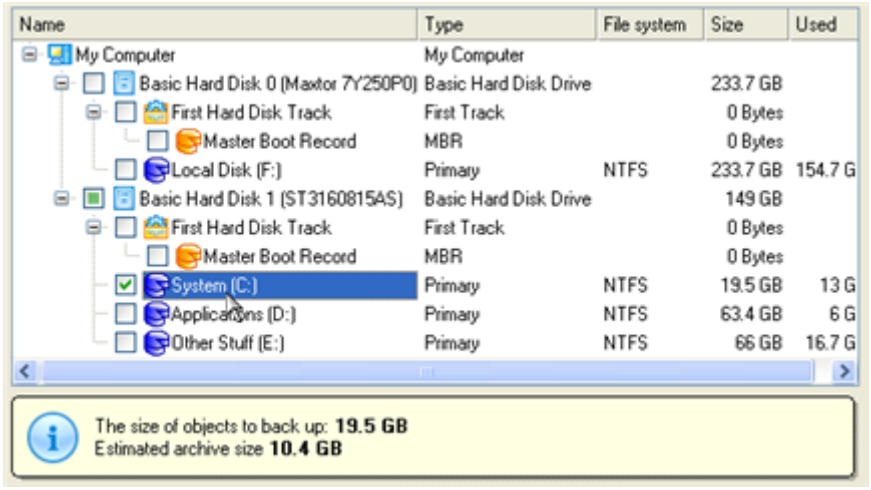
Backing up a hard disk or partition to a network drive

To back up an entire hard disk or a separate partition and then place the resulted image to a network share, please do the following:

Launcher

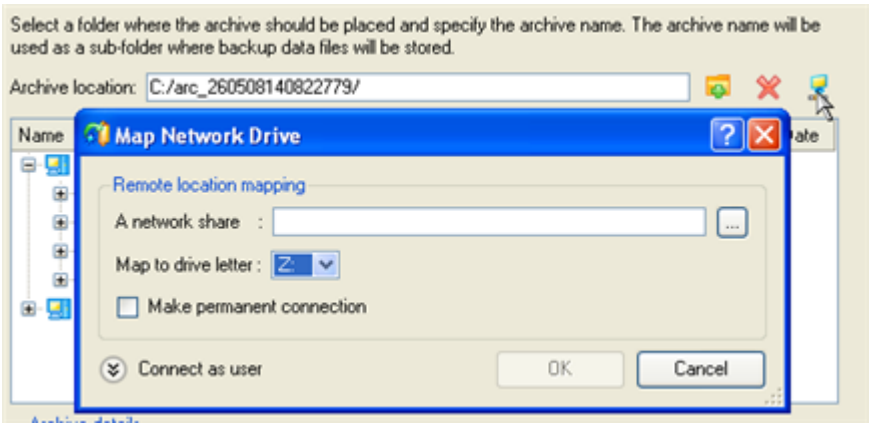
1. Click the **Postmortem Backup** button.

2. On the Wizard's Welcome page, click the Next button.
3. On the What to back up page, mark the appropriate option opposite a hard disk's name or a partition's name depending on the chosen task.

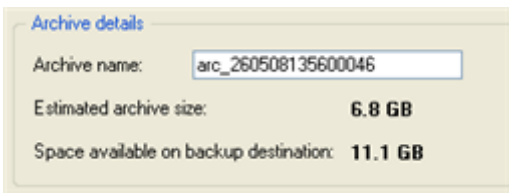


You've got the option to modify the default backup settings by marking the appropriate checkbox on this page.

4. On the Backup Destination page, select the **Save data to local/network drives** option.
5. Map a network disk to place your backup image to:
   - Call the Map Network Drive dialog by clicking the appropriate button;



   - Click the standard browse button [...] to browse for the required network share or manually enter a path to it;
   - Define a letter from the pull-down list of available drive letters;
   - Mark the checkbox to make this connection permanent. Otherwise it will only be available for the current Windows session;
   - Click the Connect as user button at the foot of the dialog page to specify a user name and password to access the selected network share if necessary.
6. Edit the archive name if necessary.



Please take into account values of the parameters Estimated archive size and Space available on backup destination - if the archive size exceeds the available space, another network drive needs to be selected.

7. Add comments to your backup describing its contents.

8. On the Backup Summary page review all parameters of the operation and modify them if necessary. Click the Next button to start the backup process.

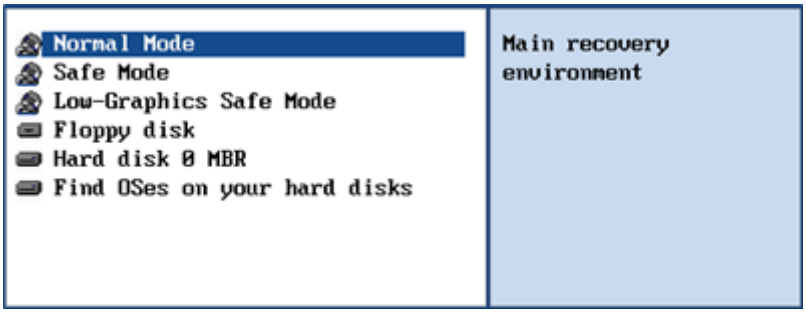
Recovery Scenarios

Fixing MBR after a boot virus attack

Let's assume that the MBR (Master Boot Record) of your hard disk has been corrupted as a result of a boot virus attack, thus your system fails to boot.

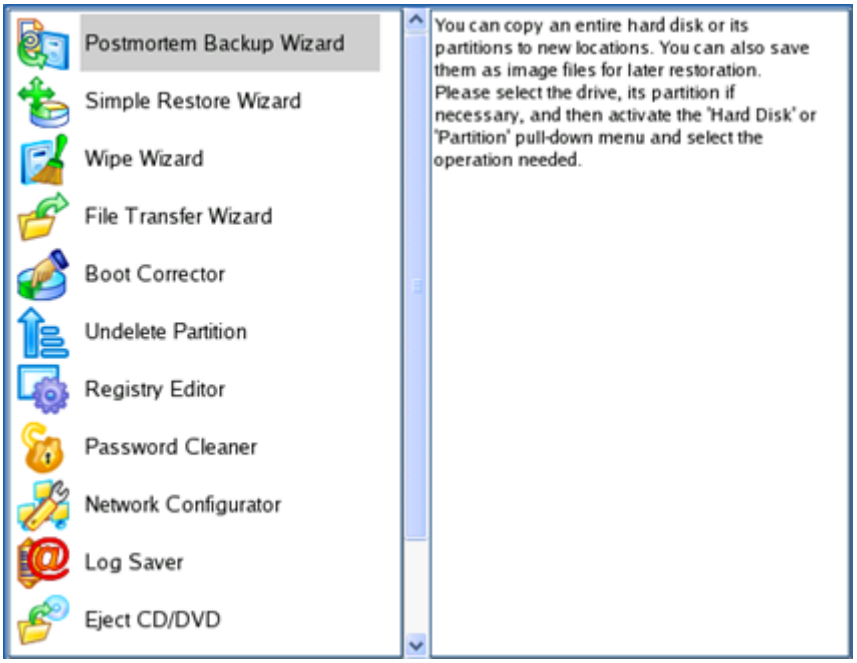
To fix the MBR of your hard disk, please do the following:

1. Start up the computer from our Linux/DOS recovery media.
2. In the boot menu select **Normal Mode** to use the Linux recovery environment (more preferable) or **Safe Mode** to use the PTS DOS recovery environment (in case you've got problems with Linux). Moreover you've got the option to boot into the **Low-Graphics Safe Mode** (PTS DOS safe mode) to cope with a serious hardware incompatibility. In this case, only the minimal set of drivers will be included, like hard disk, monitor, and keyboard drivers. This mode has simple graphics and a simple menu.

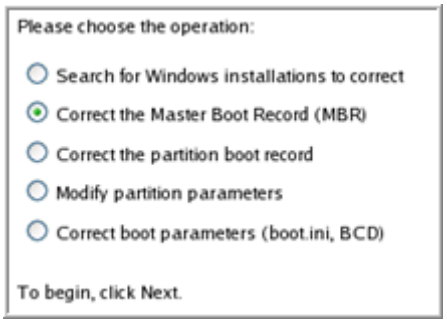


By default the Normal Mode will be automatically initiated after a 10 second idle period.

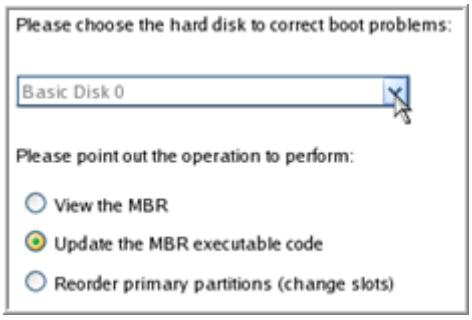
3. In the Linux launch menu select Boot Corrector. You can find it in PTS DOS as well.



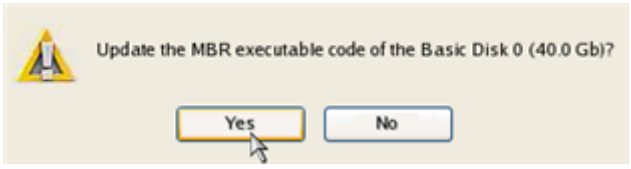
4. On the Wizard's Welcome page, select the **Correct the Master Boot Record (MBR)** option.



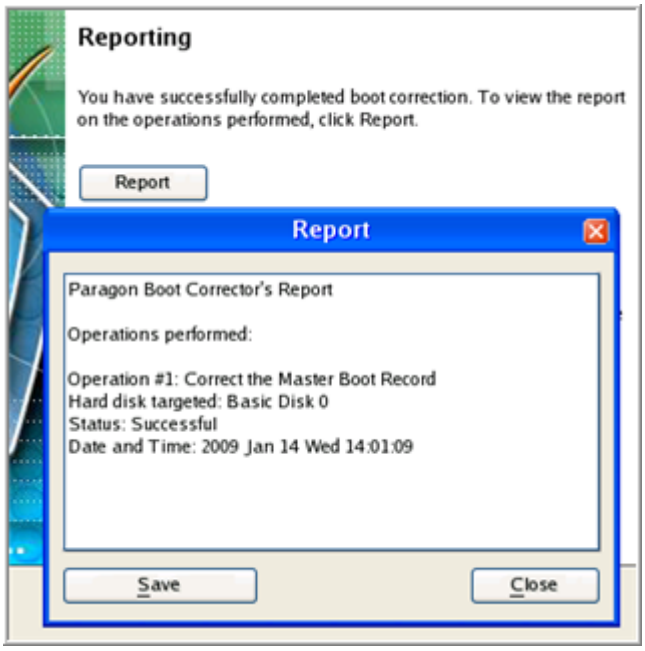
5. On the next page choose the required hard disk from the pull-down list (if several) and then select the **Update the MBR executable code** option.



6. Confirm the operation.



7. After the operation is completed click the Report button to see a well informative summary page. The program also enables to store the resulted report. To do that, just press the Save button and choose the exact location in the opened dialog.

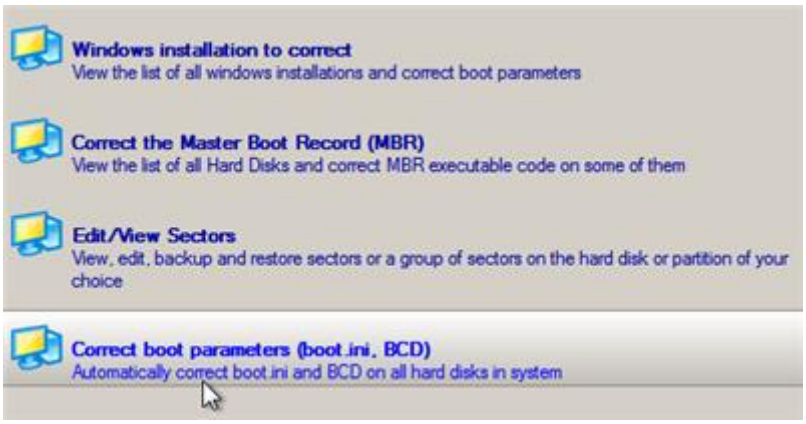


8. Click the Finish button to close Boot Corrector.
9. Reboot the computer.

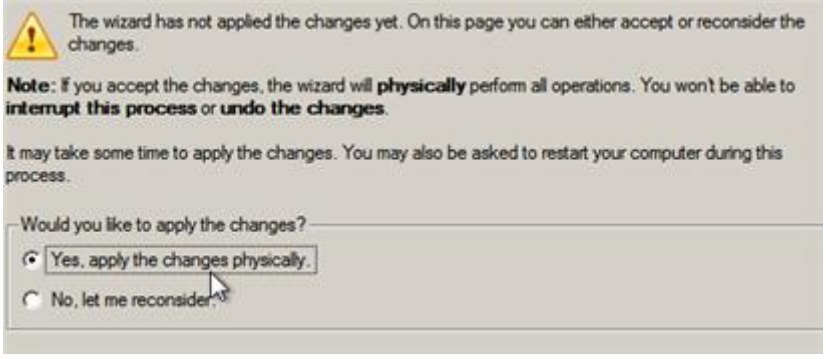
Correcting BCD (Boot Configuration Data)

To automatically correct Windows BCD, please do the following:

1. Start up the computer from our WinPE recovery media.
2. Launch **Boot Corrector**.
3. On the Wizard's Welcome page, click the Next button.
4. Select **Correct boot parameters…** to let the wizard fix BCD in all found Windows installations.



5. The wizard will ask you to confirm the operation. Apply the changes to complete.



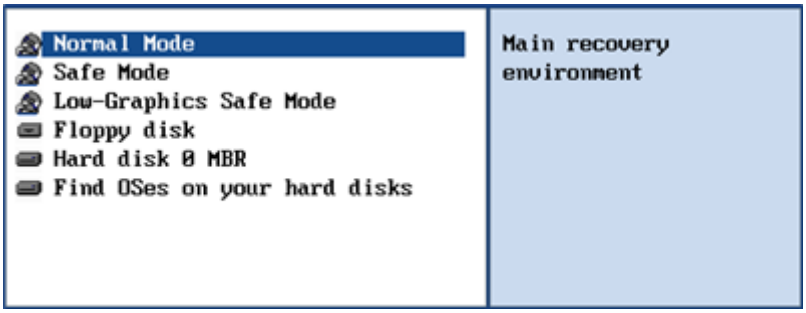
After completing the operation close the wizard, and then reboot the computer.

Fixing Windows startup ability

Let's assume that due to an unknown reason your Windows fails to complete the startup procedure. At first everything seems quite OK, you can see the standard startup messages on the screen, but at some moment it hangs up.

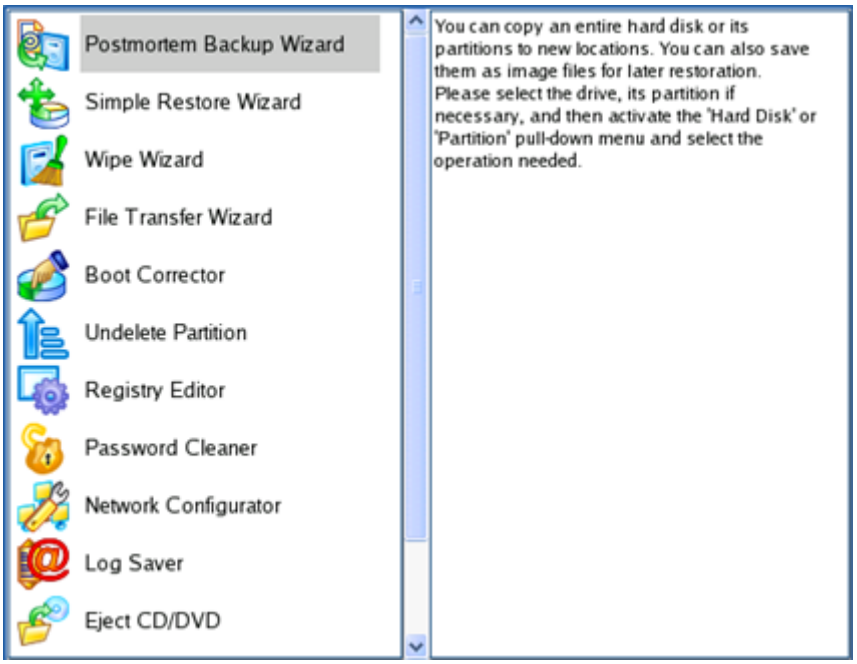
To fix your Windows startup ability, please do the following:

1. Start up the computer from our Linux/DOS recovery media.
2. In the boot menu select **Normal Mode** to use the Linux recovery environment (more preferable) or **Safe Mode** to use the PTS DOS recovery environment (in case you've got problems with Linux). Moreover you've got the option to boot into the **Low-Graphics Safe Mode** (PTS DOS safe mode) to cope with a serious hardware incompatibility. In this case, only the minimal set of drivers will be included, like hard disk, monitor, and keyboard drivers. This mode has simple graphics and a simple menu.

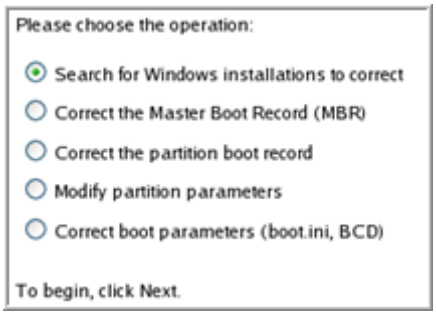


By default the Normal Mode will be automatically initiated after a 10 second idle period.

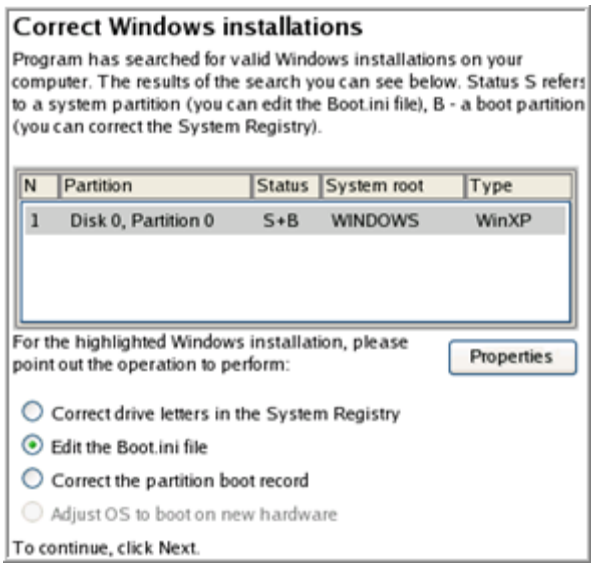
3. In the Linux launch menu select Boot Corrector. You can find it in PTS DOS as well.



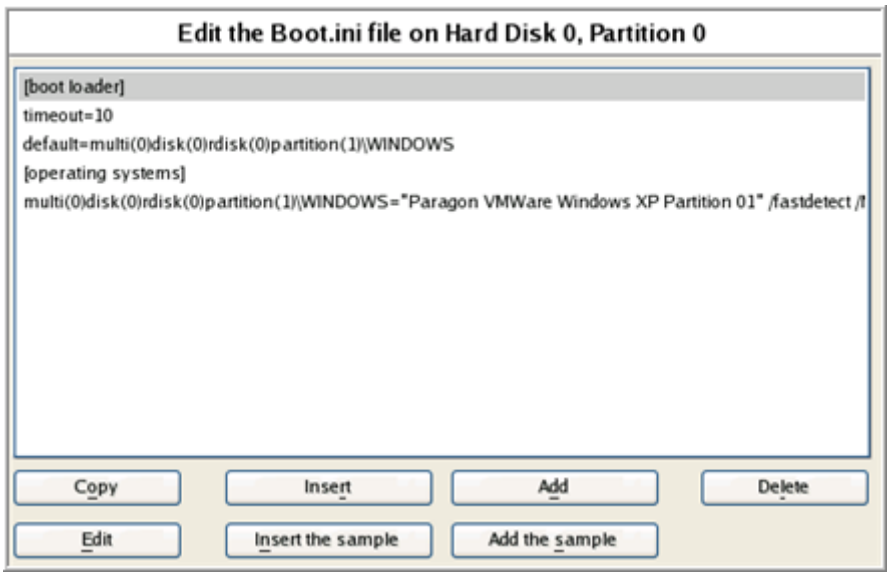
4. On the Wizard's Welcome page, select the **Search for Windows installations to correct** option.



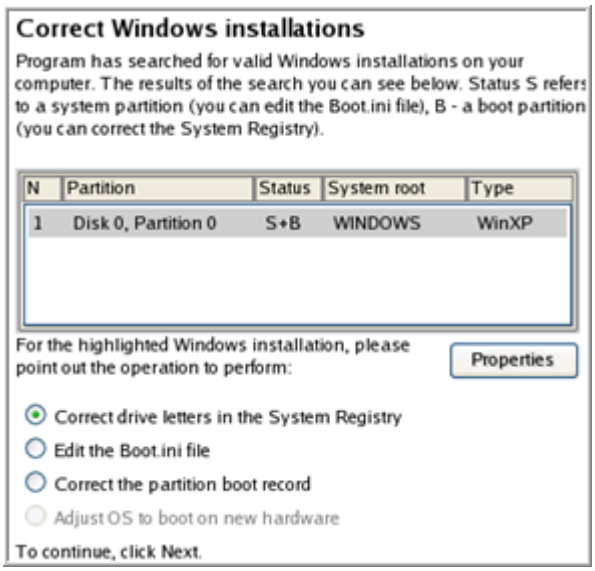
5. On the next page choose the required Windows installation from the list of found installations (if several), then select the **Edit the Boot.ini file** option. If you're not sure which installation you need, please use the Properties button to get more info on the selected item.



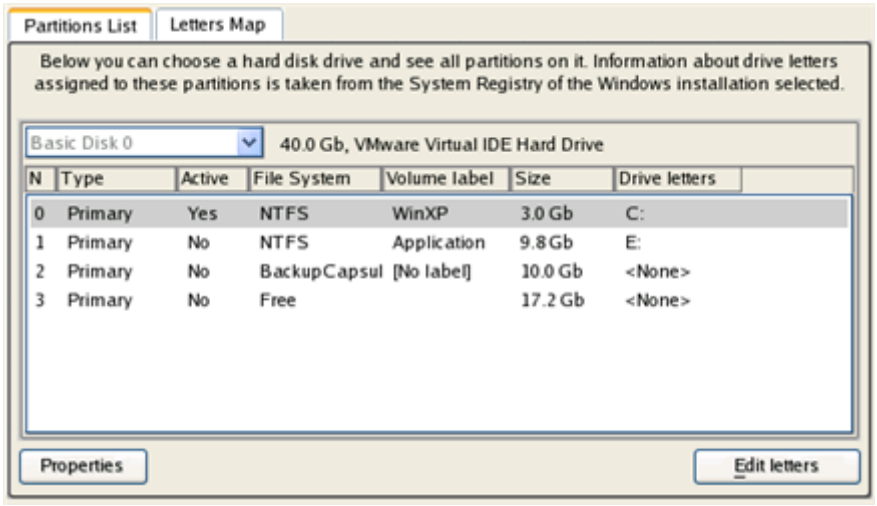
6. Examine the file – maybe that's where the problem is. If it contains a mistake, correct it by using the appropriate buttons.



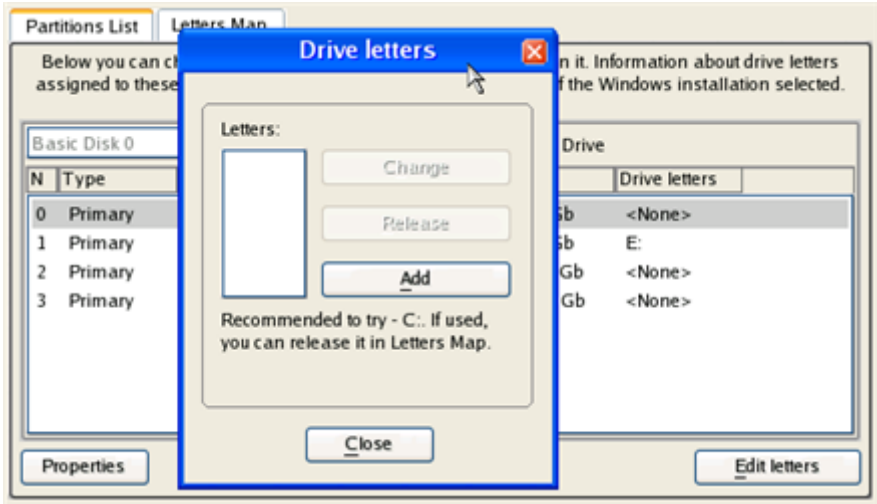
7. If the Boot.ini file does not contain any mistake, please return to the Correct Windows Installations page to correct drive letters in the Windows System Registry.



8. On the next page choose a hard disk from the pull-down list (if several), then the required partition. If you're not sure which installation you need, please use the Properties button to get more info on the selected item.

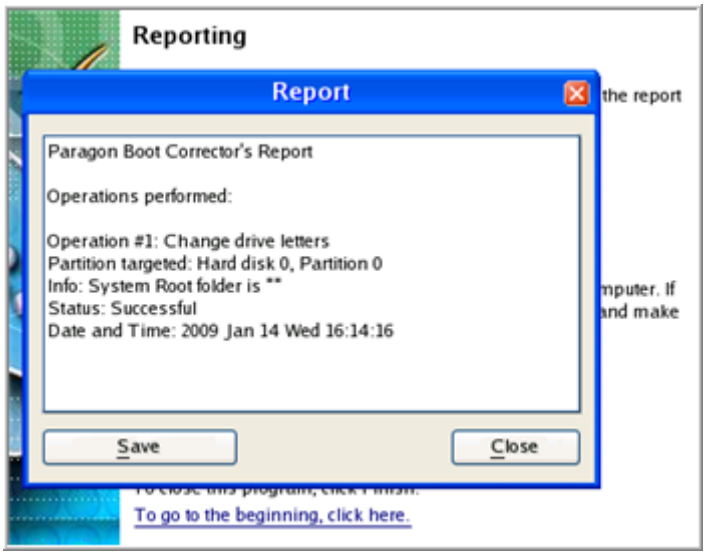


9. Click the Edit Letters button to correct an existing drive letter or assign a new one in the Windows System Registry.



10. Once you've assigned the appropriate drive letter, close the dialog, then click the Apply button.
11. Confirm the operation.

12. After the operation is completed click the Report button to see a well informative summary page. The program also enables to store the resulted report. To do that, just press the Save button and choose the exact location in the opened dialog.



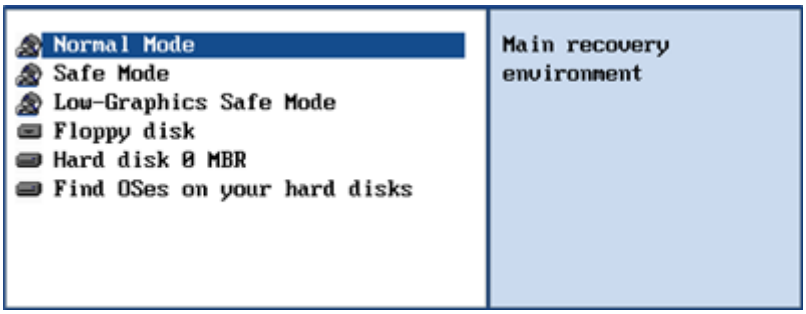
13. Click the Finish button to close Boot Corrector.
14. Reboot the computer.

Restoring a system partition from external media (CD/DVD)

Let's assume that your computer fails to boot because of a virus attack or corruption of some system critical files. But you've got a backup of your system partition on a bootable DVD disc. That's just enough to easily get your system back on track again.

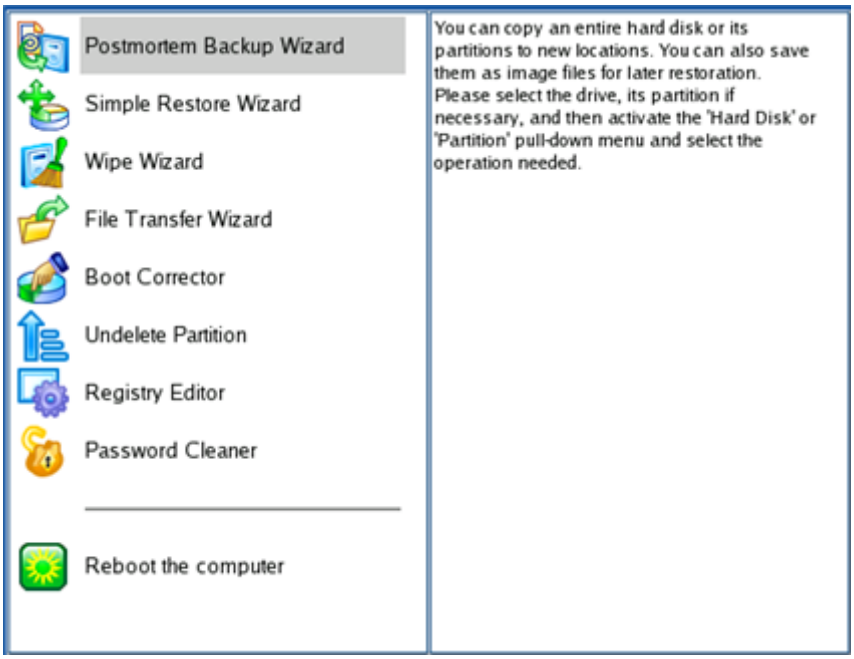
To restore your system partition from a backup image located on CD/DVD when the current OS is down, please do the following:

1. In the boot menu select **Normal Mode** to use the Linux recovery environment (more preferable) or **Safe Mode** to use the PTS DOS recovery environment (in case you've got problems with Linux). Moreover you've got the option to boot into the **Low-Graphics Safe Mode** (PTS DOS safe mode) to cope with a serious hardware incompatibility. In this case, only the minimal set of drivers will be included, like hard disk, monitor, and keyboard drivers. This mode has simple graphics and a simple menu.

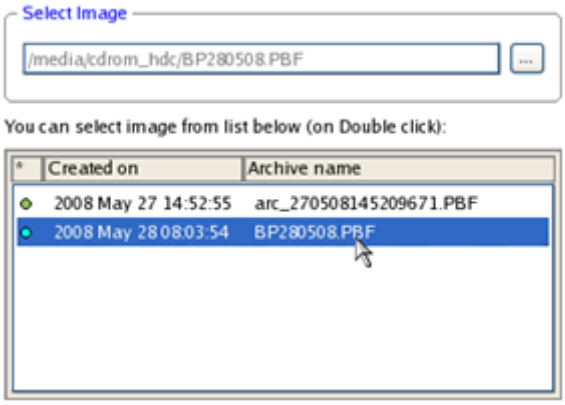


By default the Normal Mode will be automatically initiated after a 10 second idle period.

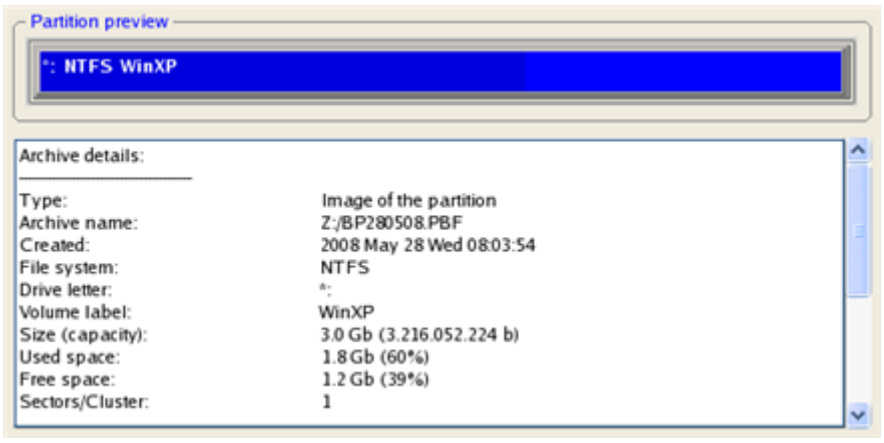
2. In the PTS DOS launch menu select the Simple Restore Wizard. You can find the same wizard in Linux as well.



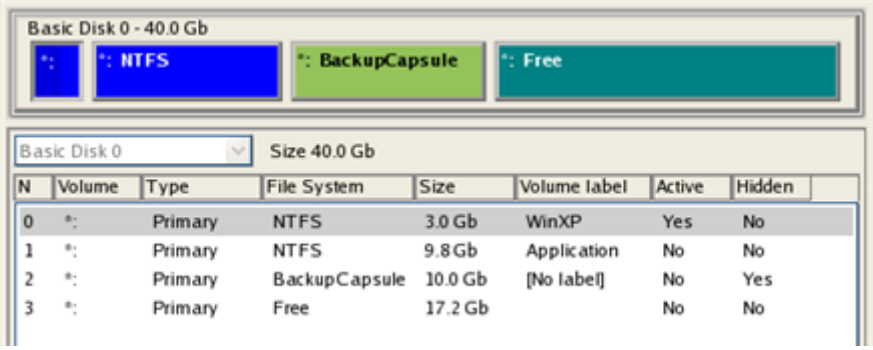
3. On the Wizard's Welcome page, click the Next button.
4. On the What to Restore page, you can see a list of available images (if several). Most likely the required archive will be there too. If not, click the standard browse button [...] to find it. When you find your image, double click on it to proceed.



5. On the Image Properties page, make sure that you select the correct image by viewing the provided information about the archive.

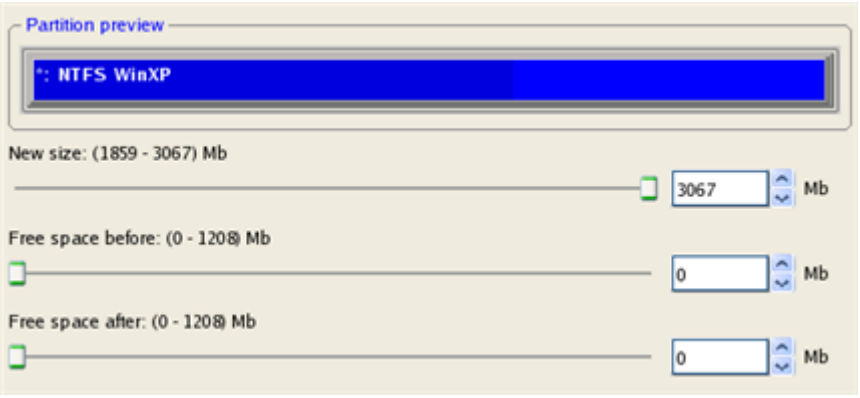


6. On the next page specify a hard disk, then one of its partitions to restore the image to (if several in your computer). By default, the program offers to restore the archive exactly where it belongs. That’s what we actually need.

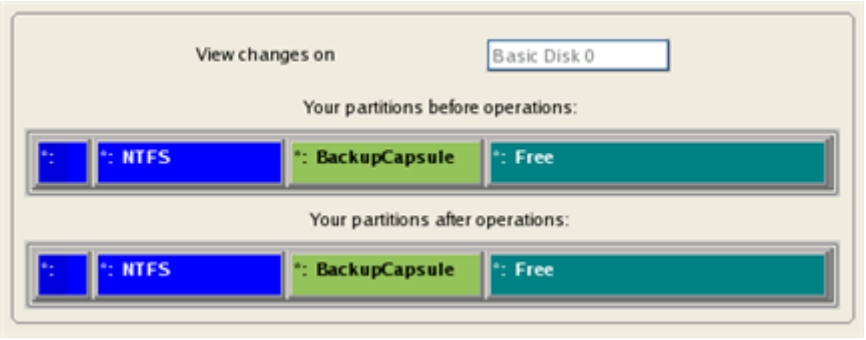


All contents on the partition selected for restoring purposes will be deleted during the operation.

7. On the Partition Start and Size page you can change size of the partition and its location if necessary.



8. On the Restore Summary page you can see your hard disk layout before and after the operation. Click the Next button to initiate the restore process.



9. In the Progress window you can see in real-time a detailed report on all actions carried out by the program.
10. After completing the operation close the wizard, and then reboot the computer.

This operation can also be accomplished with the WinPE recovery environment.

To make a Windows bootable on different hardware, please additionally complete the P2P Adjust OS Wizard.

Restoring a system partition from a network drive

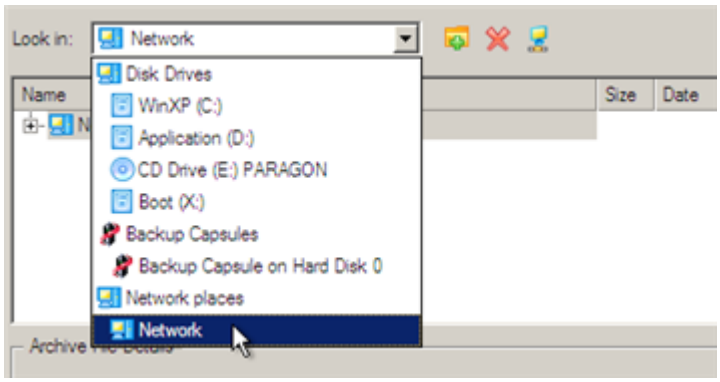
Let's assume that your computer fails to boot because of a virus attack or corruption of some system critical files. But you've got a backup of your hard disk on a remote backup server. That's just enough to easily get your system back on track again.

To restore your system partition from a backup image located on a network drive, please do the following:

1. Start up the computer from our WinPE recovery media.

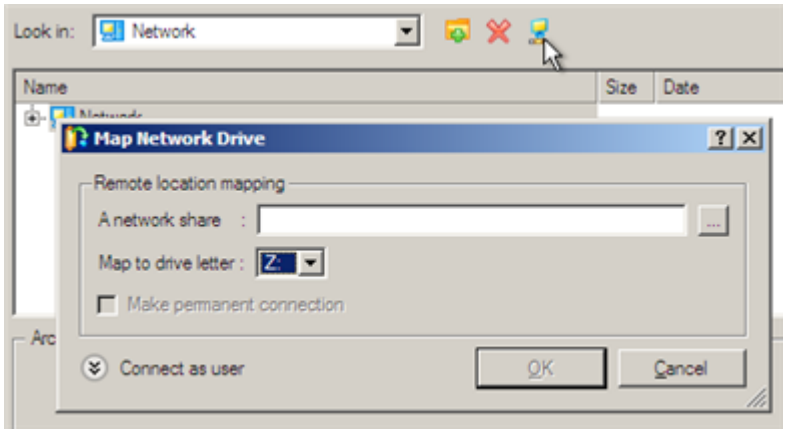
2. Once you accept the agreement, you will see the Universal Application Launcher. Select **Postmortem Restore**.
3. On the Restore Wizard's Welcome page, click the Next button.
4. On the Browse for Archive page you need to specify the required backup image. So you should take the following steps to do that:

   - Select **Network** as a backup destination;



   - Map a network disk where your archives are placed:

     - Call the Map Network Drive dialog by clicking the appropriate button;



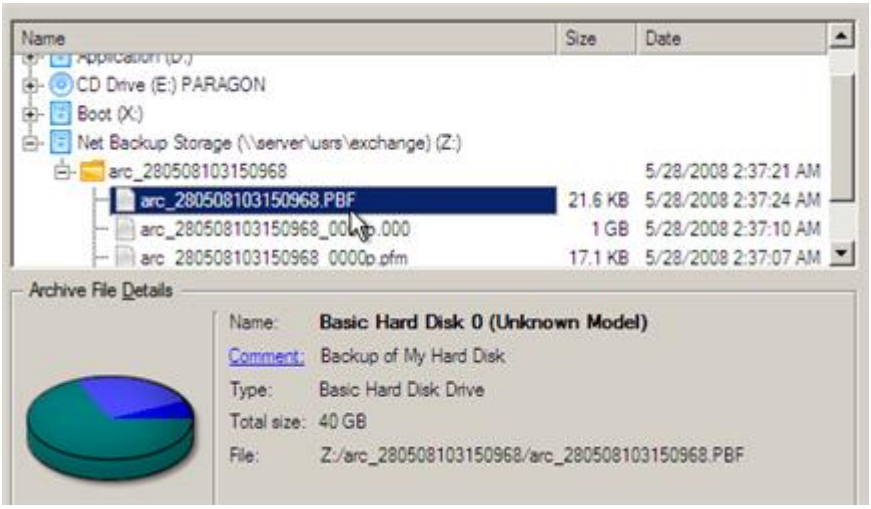
     - Click the standard browse button [...] to browse for the required network share or manually enter a path to it;

     - Define a letter from the pull-down list of available drive letters;

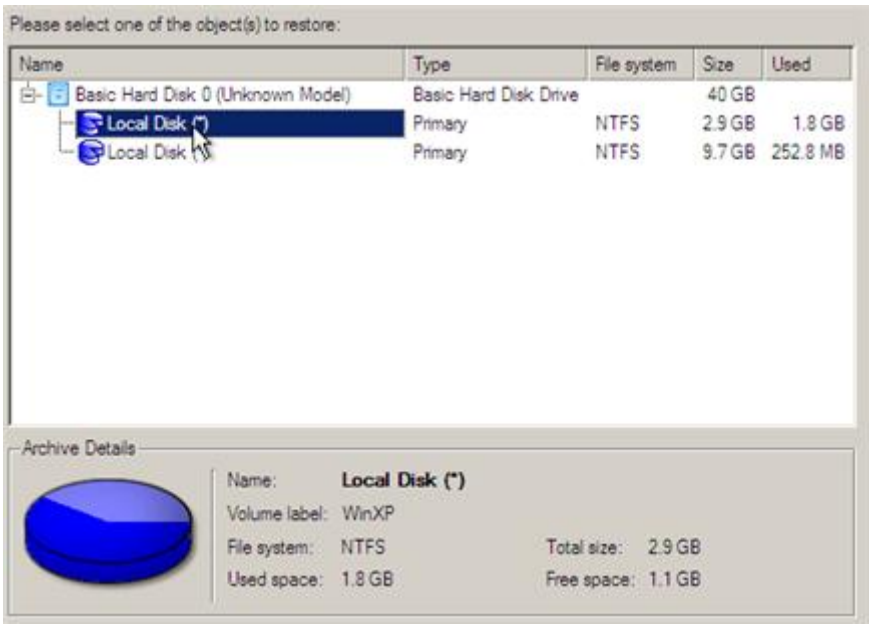
     - Click the Connect as user button at the foot of the dialog page to specify a user name and password to access the selected network share if necessary.

You can also map a network disk with Network Configurator.

   - Choose the required archive in the browser-like window. The Archive File Details section displays a short description of the selected image.



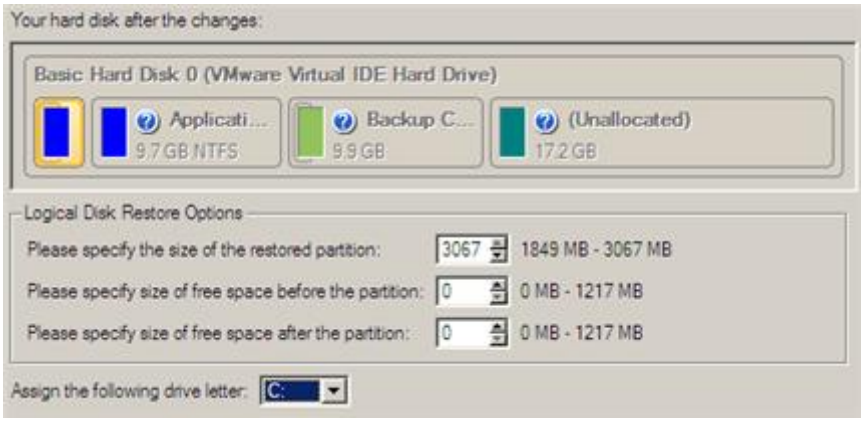
5. The What to Restore page displays detailed information about the contents of the archive. Select the required item to restore. In our case it is the first partition of the disk.



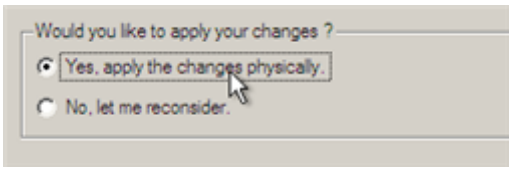
6. On the Where to Restore page specify a hard disk, then one of its partitions to restore the image to (if several in your computer). By default, the program offers to restore the archive exactly where it belongs. That's what we actually need.

All contents on the partition selected for restoring purposes will be deleted during the operation.

7. On the Restore Results page you can see the resulted disk layout. Besides there's the possibility to change size of the partition and its location if necessary as well as assign a particular drive letter.



8. On the next page of the wizard confirm the operation by selecting the appropriate option.



9. In the Progress window you can see in real-time a detailed report on all actions carried out by the program.

   Mark the checkbox at the bottom of the window to automatically switch off the computer on the successful accomplishment of the restore operation.

10. After completing the operation close the wizard, and then reboot the computer.

This operation can also be accomplished with the Linux/DOS recovery environment.

To make a Windows bootable on different hardware, please additionally complete the P2P Adjust OS Wizard.

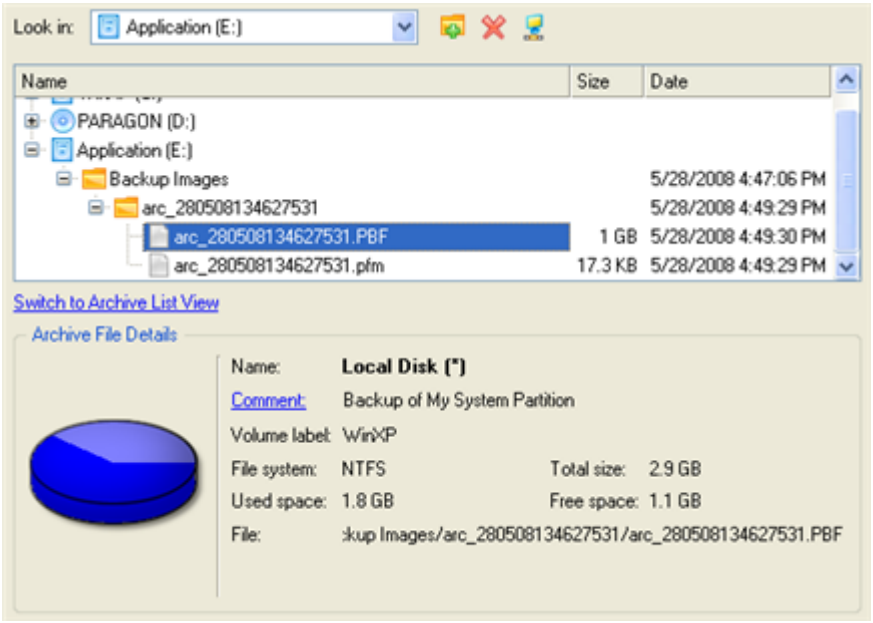
Restoring a system partition from a local drive

Let's assume that your operating system gives trouble after having installed brand new software. But you've got a backup of the system partition on a local disk. That's just enough to easily roll it back to the point when run smoothly.

To restore your system partition from a backup image located on a local disk, please do the following:

Launcher

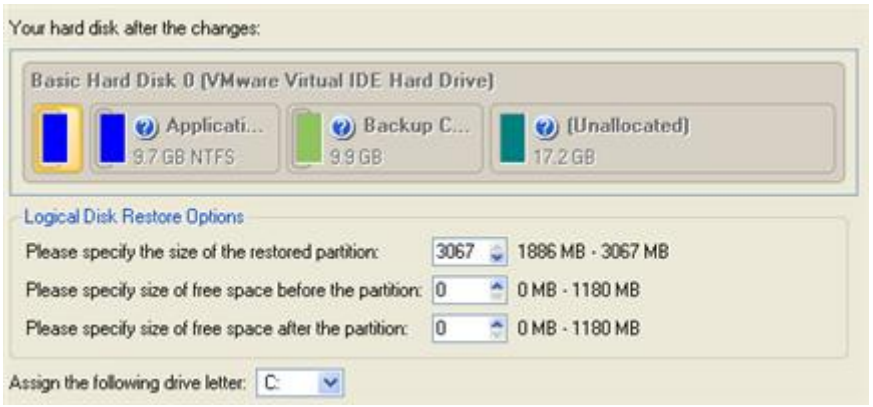
1. Click the **Postmortem**.
2. On the Restore Wizard's Welcome page, click the Next button.
3. On the Browse for Archive page, specify the required archive:



4. On the Where to Restore page specify a hard disk, then one of its partitions to restore the image to (if several in your computer). By default, the program offers to restore the archive exactly where it belongs. That's what we actually need.

All contents on the partition selected for restoring purposes will be deleted during the operation.

5. On the Restore Results page you can see the resulted disk layout. Besides there's the possibility to change size of the partition and its location if necessary as well as assign a particular drive letter.



6. Complete the wizard.

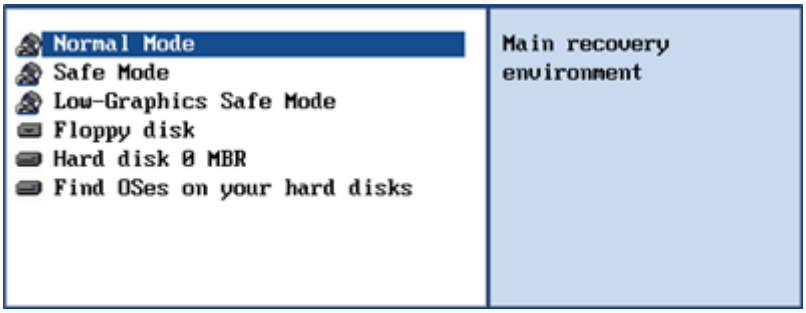
This operation can also be accomplished with the Linux/DOS or WinPE recovery environments.

To make a Windows bootable on different hardware, please additionally complete the [P2P Adjust OS Wizard].

Copying of data from the corrupted system disk to another hard disk

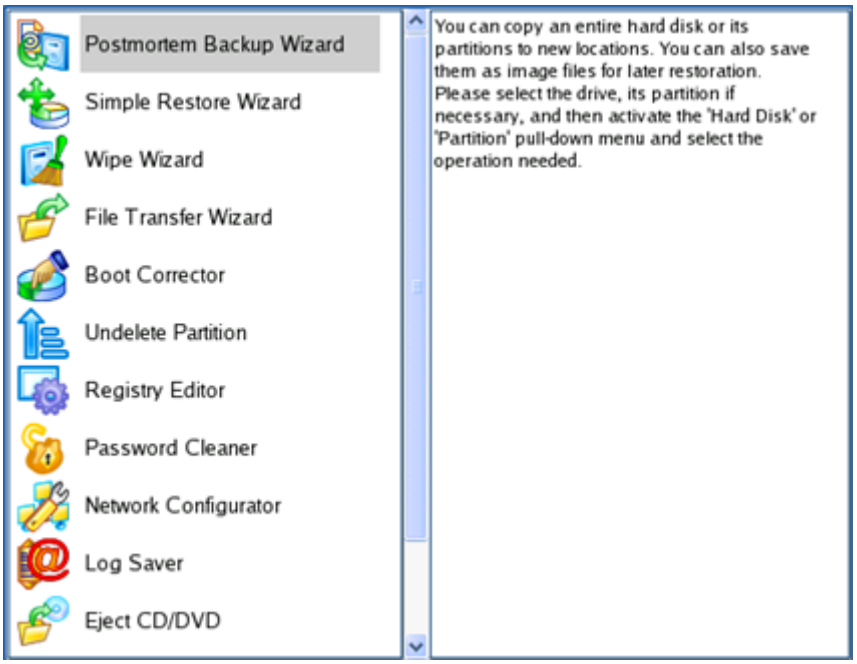
To retrieve valuable information from your hard disk and copy it to another hard disk when the system fails to boot, please do the following:

1. Connect the second hard disk to the computer.
2. Start up the computer from our Linux/DOS recovery media.
3. In the boot menu select **Normal Mode** to use the Linux recovery environment (more preferable) or **Safe Mode** to use the PTS DOS recovery environment (in case you've got problems with Linux). Moreover you've got the option to boot into the **Low-Graphics Safe Mode** (PTS DOS safe mode) to cope with a serious hardware incompatibility. In this case, only the minimal set of drivers will be included, like hard disk, monitor, and keyboard drivers. This mode has simple graphics and a simple menu.



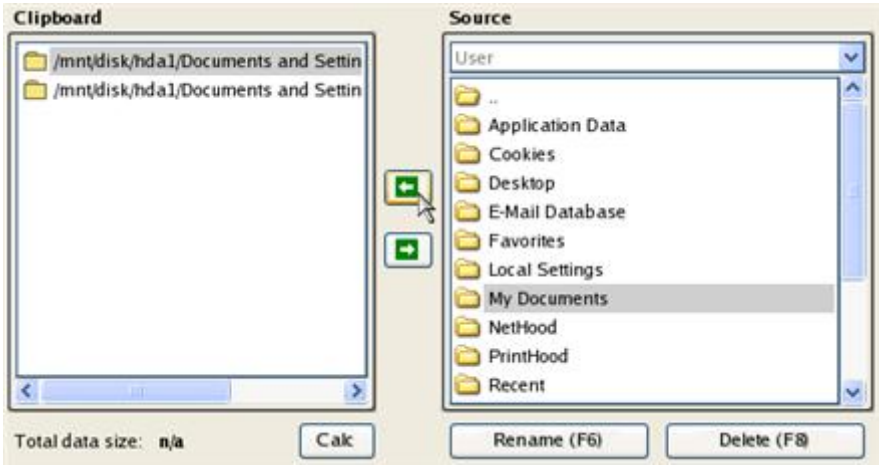
By default the Normal Mode will be automatically initiated after a 10 second idle period.

4. In the Linux launch menu select the File Transfer Wizard. You can find the same wizard in PTS DOS as well.



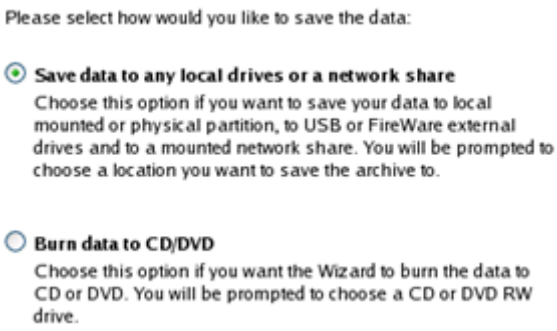
5. On the Wizard's Welcome page, click the Next button.
6. Select a disk where the files you need are stored from the pull-down list in the right pane of the page.

7. Select files you want to copy and place them to Clipboard by pressing the left arrow-button.

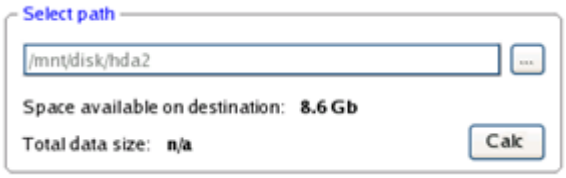


Click the Calc button to estimate the resulted data size.

8. On the Select Destination Type, choose the way the data will be stored. Select the **Save data to any local drive or a network share** item.



9. On the Select Destination Path page, select a hard disk to copy the data to by pressing the standard browse button [...].



10. On the Transfer Summary page check all parameters of the operation. Click the Next button to accomplish the operation.
11. In the Progress window you can see in real-time a detailed report on all actions carried out by the program.
12. After the operation is completed, close the wizard by pressing the appropriate button.

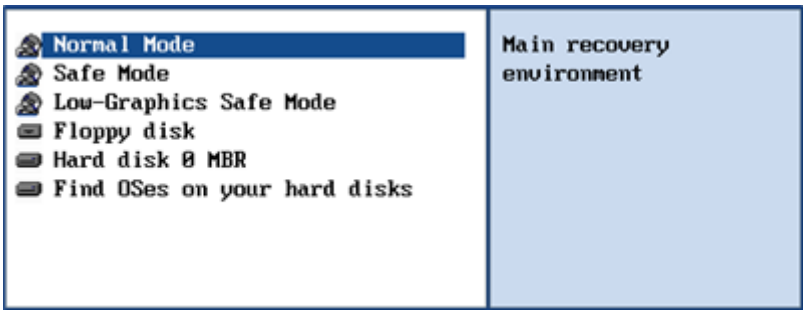
13. Turn off the computer.

This operation can also be accomplished with the WinPE recovery environment.

Burning of data from the corrupted system disk to CD/DVD

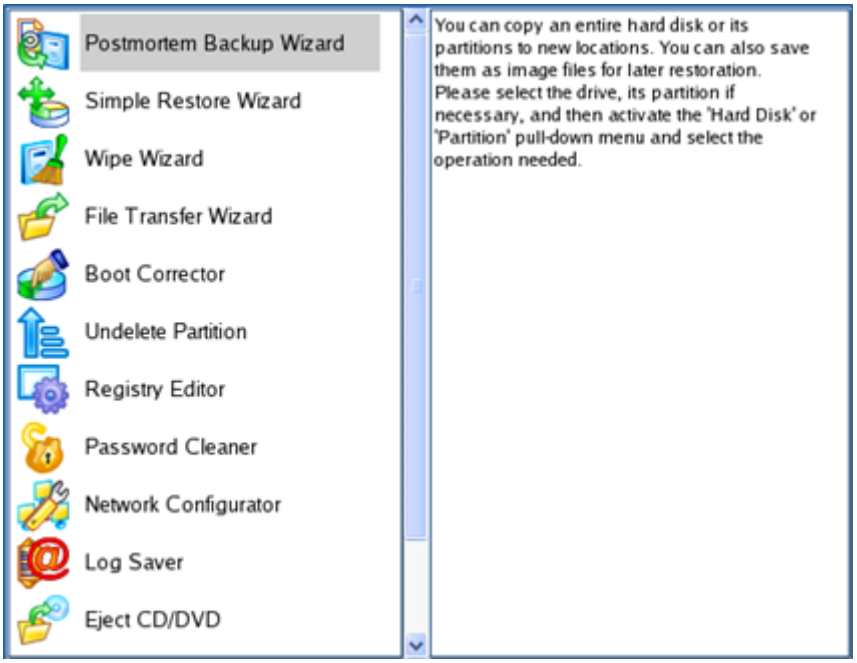
To retrieve valuable information from your hard disk and burn it to CD/DVD when the system fails to boot, please do the following:

1. Start up the computer from our Linux/DOS recovery media.
2. In the boot menu select **Normal Mode** to use the Linux recovery environment, since it's the only mode that enables to burn CD/DVD discs.



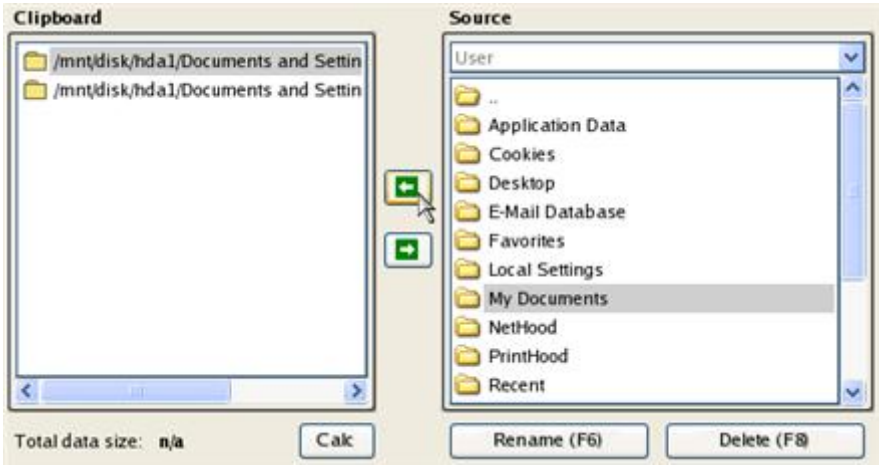
By default the Normal Mode will be automatically initiated after a 10 second idle period.

3. In the Linux launch menu select the File Transfer Wizard. You can find the same wizard in PTS DOS as well.



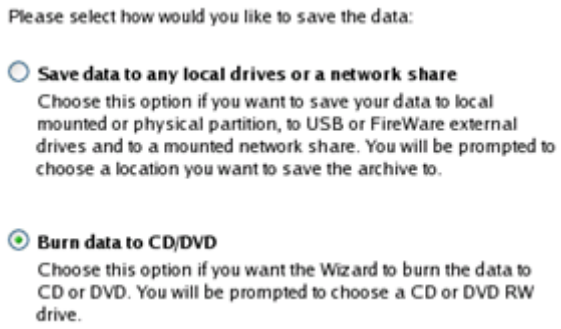
4. On the Wizard's Welcome page, click the Next button.
5. Select a disk where the files you need are stored from the pull-down list in the right pane of the page.

6. Select files you want to copy and place them to Clipboard by pressing the left arrow-button.

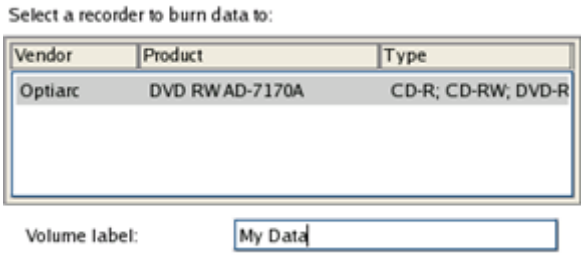


Click the Calc button to estimate the resulted data size.

7. On the Select Destination Type, choose the way the data will be stored. Select the **Burn data to CD/DVD** item.



8. On the Choose a Recorder page, select a recorder from the list of available devices and then set a volume label by entering it in the appropriate field.



9. On the Transfer Summary page check all parameters of the operation. Click the Next button to accomplish the operation.
10. In the Progress window you can see in real-time a detailed report on all actions carried out by the program.

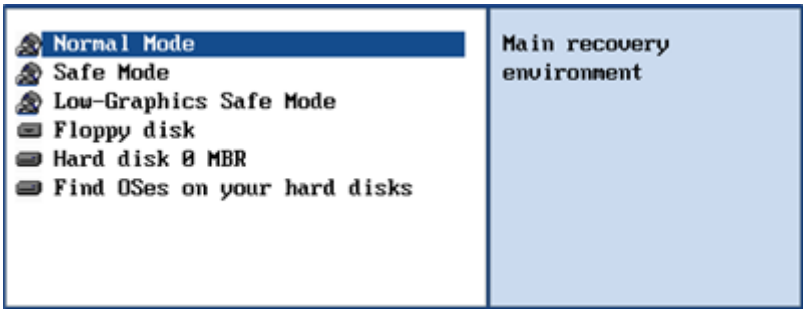
11. After the operation is completed, close the wizard by pressing the appropriate button.
12. Turn off the computer.

This operation can also be accomplished with the WinPE recovery environment.

Copying of data from a backup to the corrupted system partition

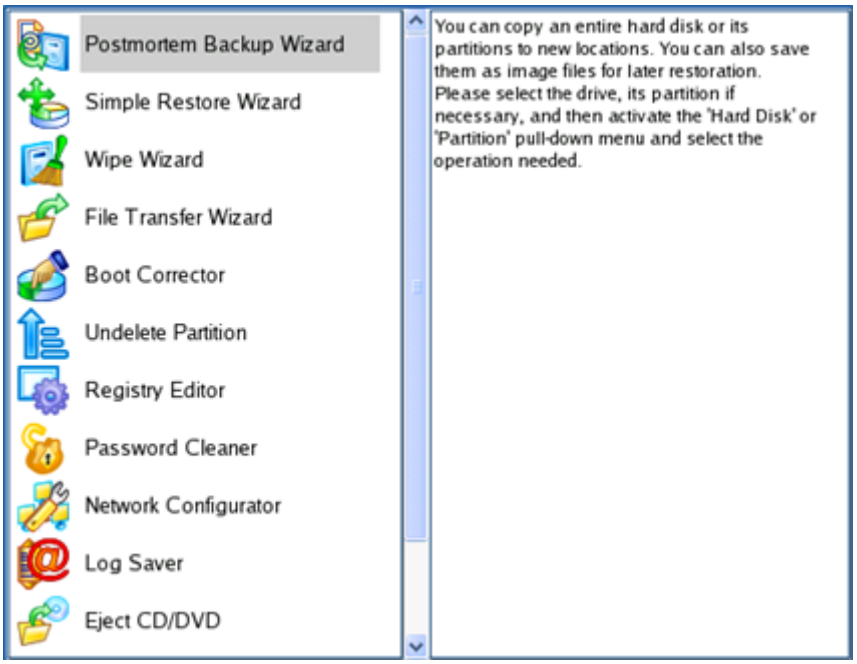
The system fails to boot since some files are damaged. If you have a backup of the system partition, you can recopy these files to make the system be operable again:

1. Start up the computer from our Linux/DOS recovery media.
2. In the boot menu select **Normal Mode** to use the Linux recovery environment (more preferable) or **Safe Mode** to use the PTS DOS recovery environment (in case you've got problems with Linux). Moreover you've got the option to boot into the **Low-Graphics Safe Mode** (PTS DOS safe mode) to cope with a serious hardware incompatibility. In this case, only the minimal set of drivers will be included, like hard disk, monitor, and keyboard drivers. This mode has simple graphics and a simple menu.

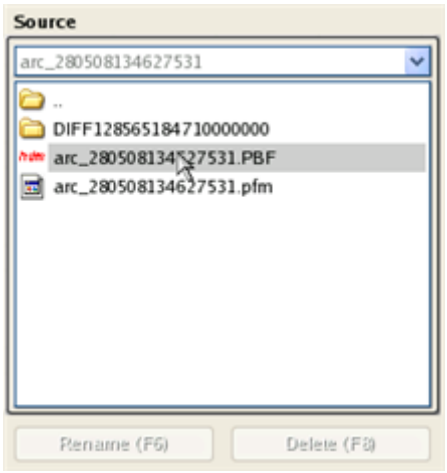


By default the Normal Mode will be automatically initiated after a 10 second idle period.

3. In the Linux launch menu select the File Transfer Wizard. You can find the same wizard in PTS DOS as well.

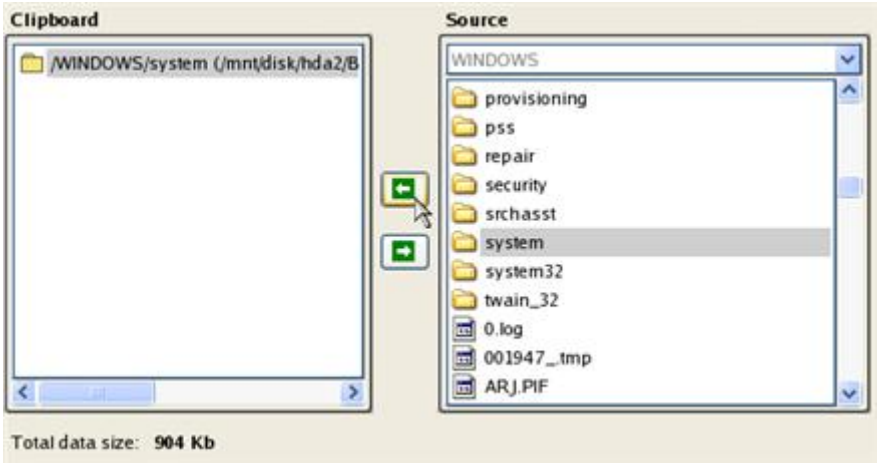


4. On the Wizard's Welcome page, click the Next button.
5. Select a disk where the system backup is stored from the pull-down list in the right pane of the page.



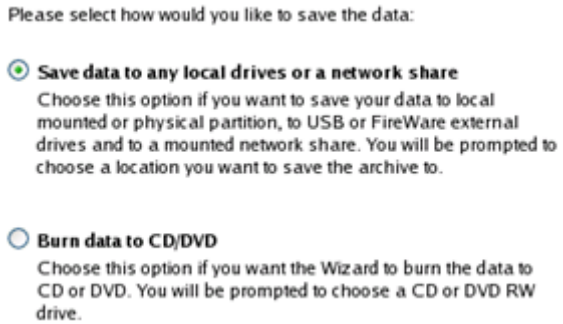
6. Double click on the required backup to open.

7. Select files you want to copy and place them to Clipboard by pressing the left arrow-button.

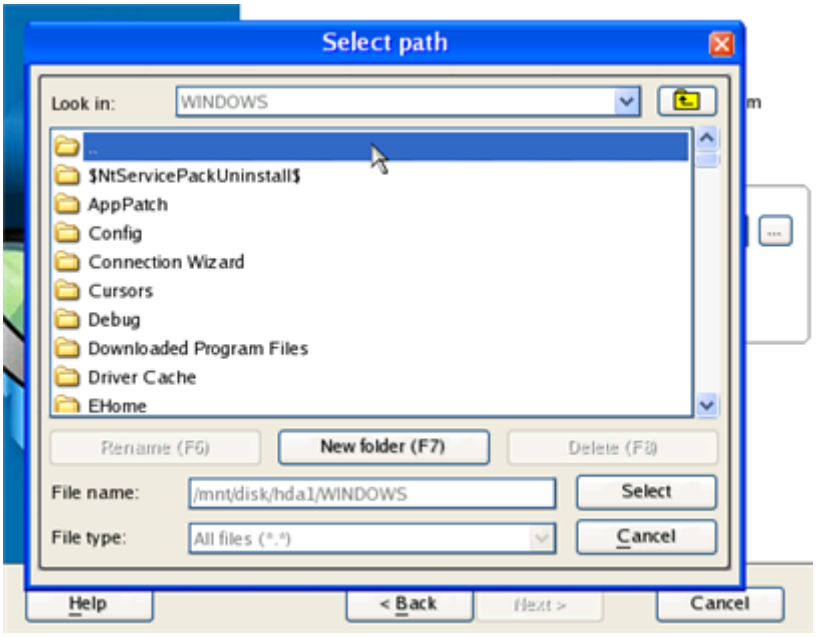


Click the Calc button to estimate the resulted data size.

8. On the Select Destination Type, choose the way the data will be stored. Select the **Save data to any local drive or a network share** item.



9. On the Select Destination Path page, select your system disk to copy the data to by pressing the standard browse button [...].



10. On the Transfer Summary page check all parameters of the operation. Click the Next button to accomplish the operation.
11. In the Progress window you can see in real-time a detailed report on all actions carried out by the program.
12. After the operation is completed, close the wizard by pressing the appropriate button.
13. Turn off the computer.

This operation can also be accomplished with the WinPE recovery environment.

Restoring separate files and folders from a backup

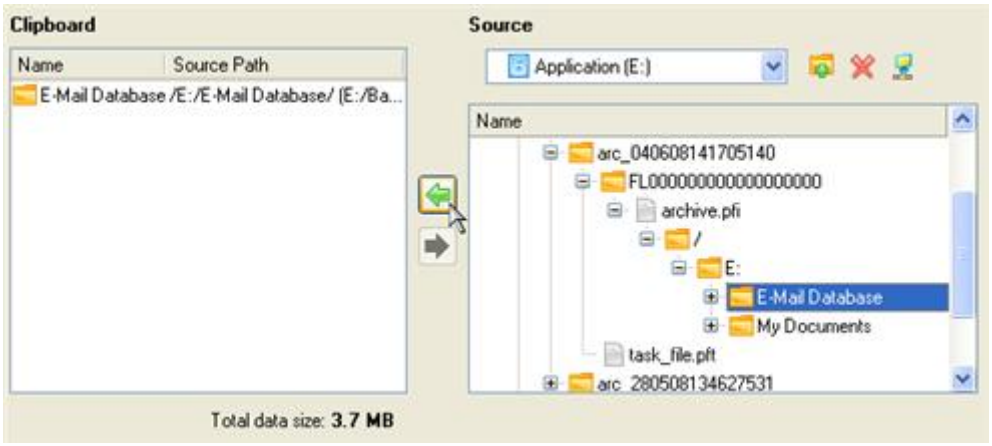
The program provides a very convenient option to access backup archives and restore only data you need (the so called selective restore functionality). This operation can be accomplished either with the Restore Wizard, File Transfer Wizard or Volume Explorer.

File Transfer Wizard

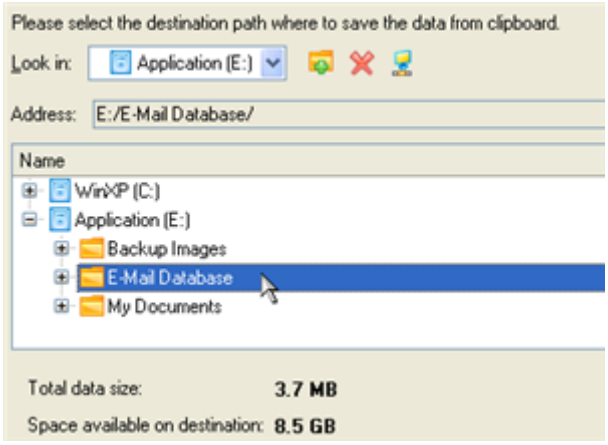
To restore separate files and folders from a backup image with the File Transfer Wizard, please do the following:

Launcher

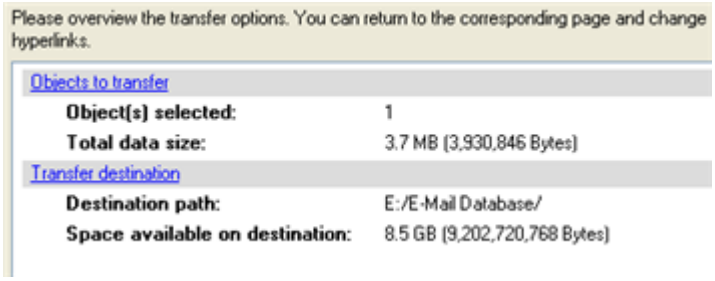
1. Click the **Transfer Files** button.
2. Find the archive files and open it by double click.
3. Select files you want to copy and place them to Clipboard by pressing the left arrow-button.



4. On the Select Destination Type, choose the way the data will be stored. Select the **Save data to any local drive or a network share** item.
5. On the Select Destination Path page, specify the exact place to copy the data to.



6. On the Transfer Summary page check all parameters of the operation. Click the Next button to accomplish the operation.



7. After the operation is completed, close the wizard by pressing the appropriate button.

Making System Bootable on Different Hardware (P2P Adjust OS)

Let's assume you had to migrate to a new hardware platform. You connected your system hard disk to the brand new PC and tried to start up the operating system - you do know for sure now that this operation had been doomed to failure from the very beginning. With our program you can easily tackle this naughty problem.

Before you start, please make sure the following conditions are met:

- You've got drivers for the new hardware ready to use, not zipped or in .exe files.
- Your OS is unrolled on the new computer, not in a backup image.

To make a Windows physical system bootable on different hardware, please do the following:

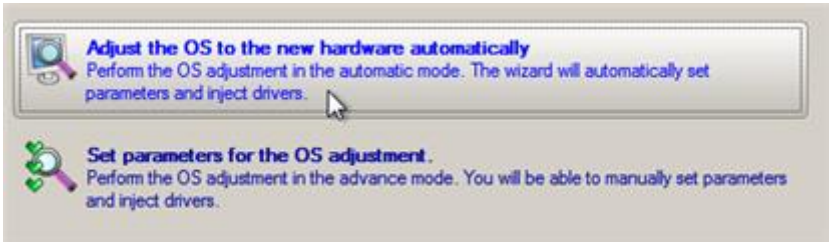
1. Start up the computer from our WinPE recovery media.

2. Launch the **P2P Adjust OS Wizard**.

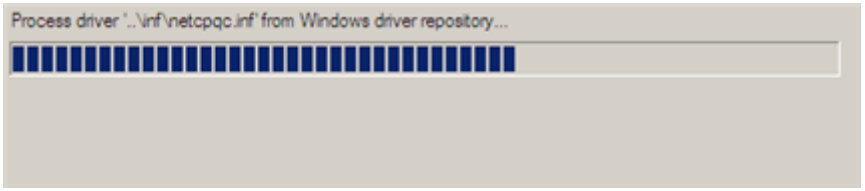
Our WinPE 3.0 based environment offers excellent hardware support. However in case it doesn't have a driver for your disk controller, your hard disks will be unavailable. Please consult the Adding specific drivers scenario to know how to tackle this issue.

3. On the Wizard's Welcome page, click the Next button.
4. From the list of all found Windows systems (if several) select one you need to adjust to the new hardware. If you're willing to adjust them all, just re-launch this wizard for each.

5. There are two execution modes to choose from: **fully automatic** and **advance**. Below we will go set-by-step through the automatic scenario to show the whole process, and then take a closer look at specifics of the advance scenario.



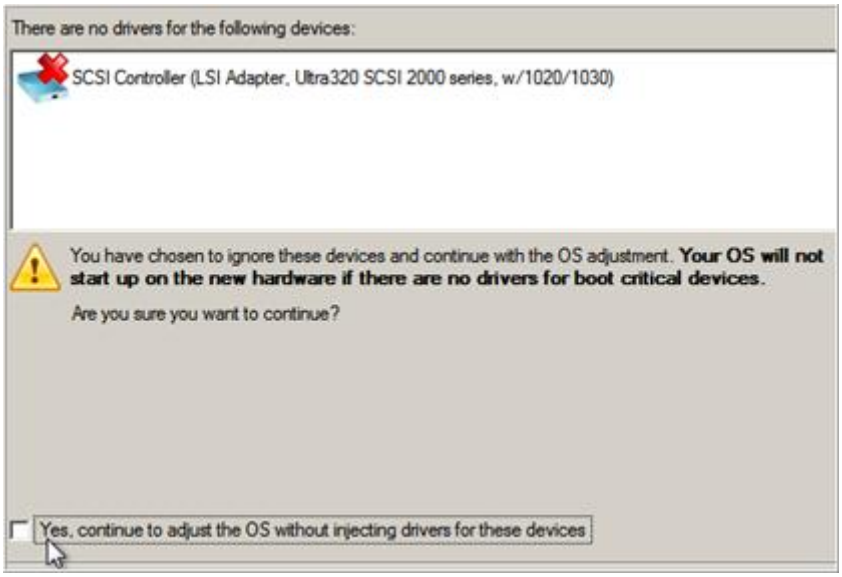
6. Select **Adjust the OS to the new hardware automatically**.
7. The wizard will automatically accomplish all the necessary actions.



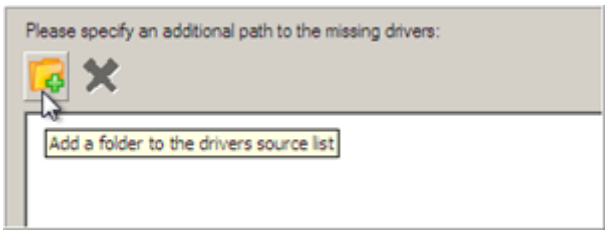
8. The only action that might be required from your side is to set a path to an additional driver repository in case the wizard has failed to find drivers for some boot critical devices in the built-in Windows repository. Generally together with new hardware you get its drivers for different operating systems on removable media (mostly CD or DVD). By collecting all these drivers in one folder you can let the wizard automatically pick and install only those required for your OS. Select **Search for drivers in a specific folder**.

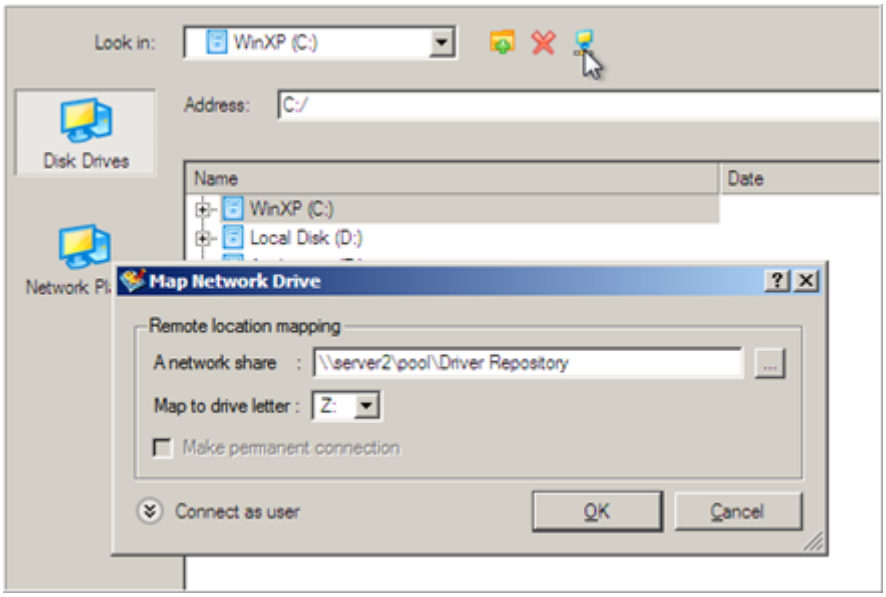
Click on the link at the bottom of the page to see what boot critical devices have no drivers. The wizard names all devices according to their model description, not some alphanumeric code, which is very convenient.

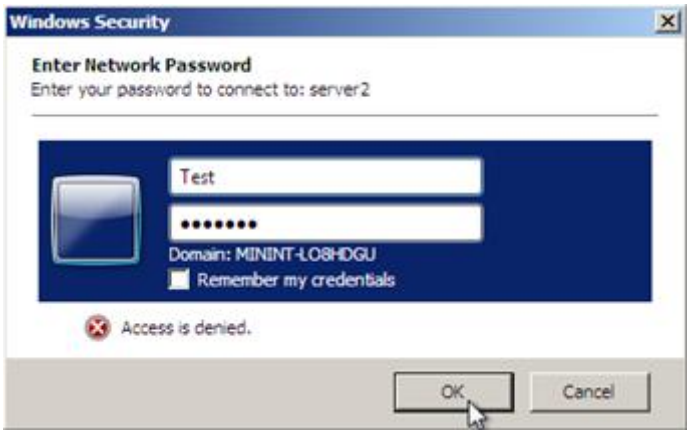
9. Though you've got the option to continue without injecting missing drivers for boot critical devices (The **Ignore all missing drivers** option), we strongly recommend you not to do it. Otherwise we cannot guarantee your Windows will start up on the new hardware.



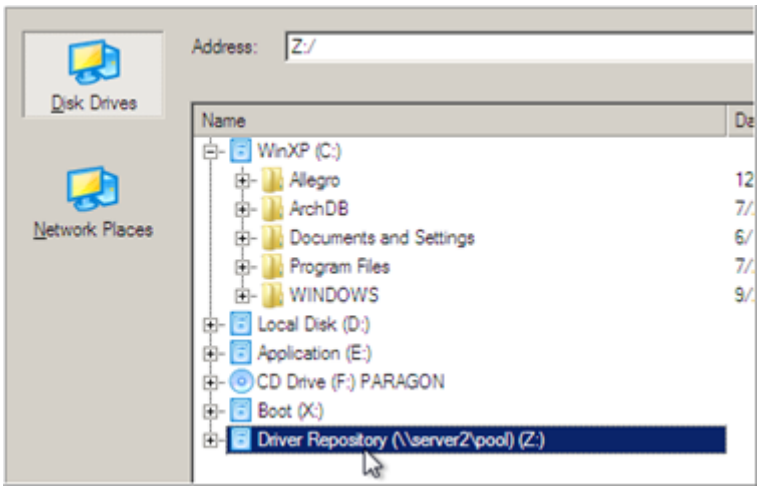
10. The wizard can search for drivers on a local disk or a mapped network share. In our case it's on a network share, this is why we need to map it first.

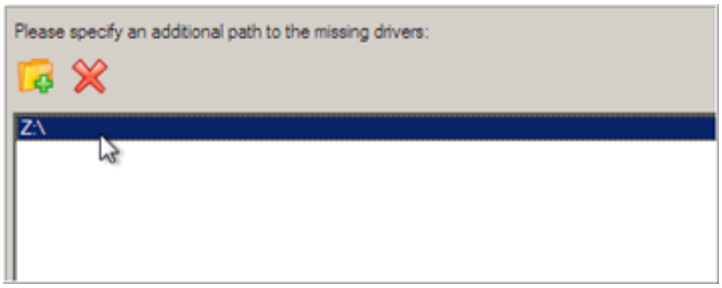






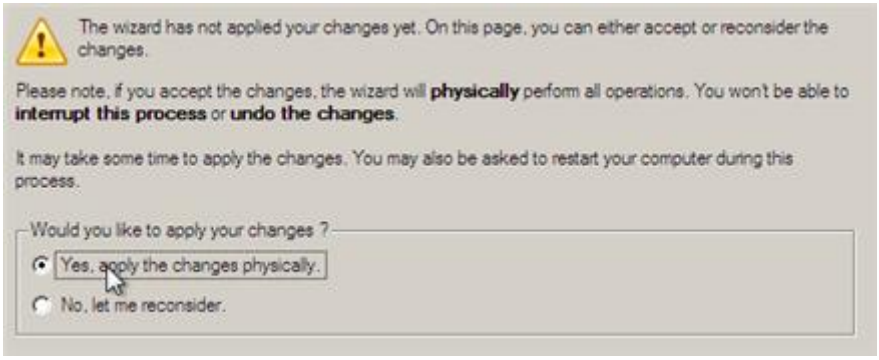
11. When done, we can select it as target.





The wizard enables to specify several driver repositories.

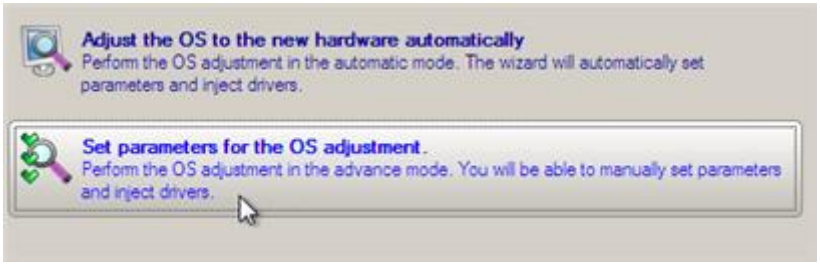
12. If the wizard has found all missing drivers, it will ask you to confirm the operation. Apply the changes to complete.



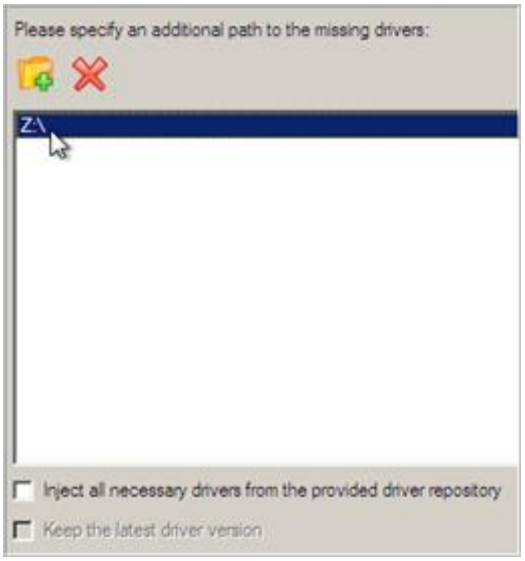
After the operation is completed the system will be bootable on the new hardware. After the startup, Windows will initiate reconfiguration of all Plug'n'Play devices. It's a standard procedure, so please don't worry and prepare the latest drivers at this step to get the most out of the system.

Advance scenario specifics

1. To launch the advance mode, select **Set parameters for the OS adjustment**.



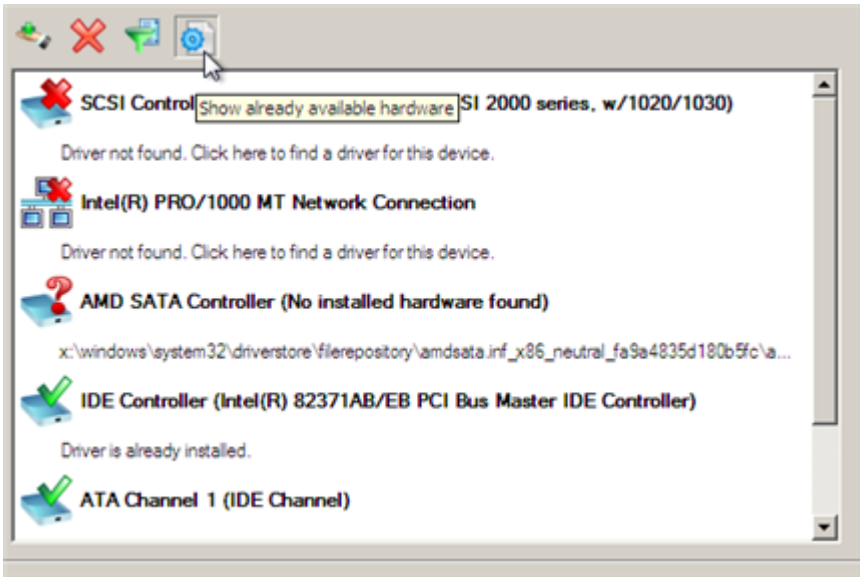
2. When setting additional driver repositories, you can specify how to process drivers for found hardware.



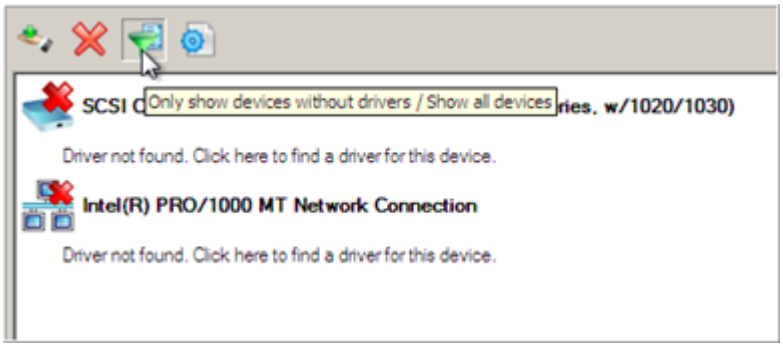
- **Inject all necessary drivers…** Mark the checkbox to force injection of all drivers for your devices from the given driver repository(s), even if there are already installed drivers for some hardware. Please use this option if you suspect any of the installed drivers of not matching your hardware.
- **Keep the latest driver version**. Mark the checkbox to keep the latest version of drivers during the forced re-injection. You can use this option only when the above option is active.

3. Just before the OS adjustment, you can additionally:

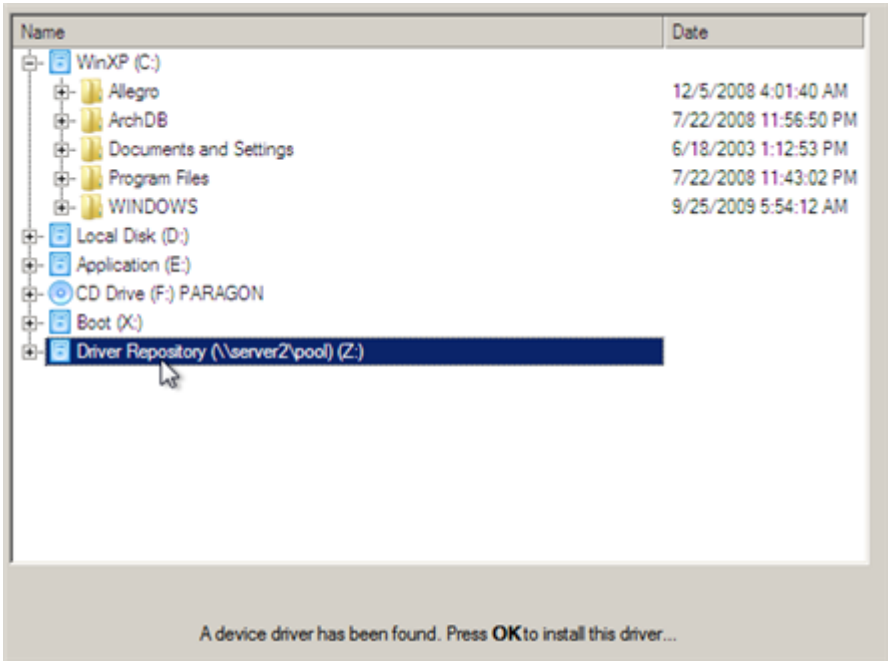
- View all found hardware devices and their driver status by clicking  . The wizard names all devices according to their model description, not some alphanumeric code, which is very convenient. So you can compare the listed devices with the given hardware to make sure the wizard has analyzed your system correctly.

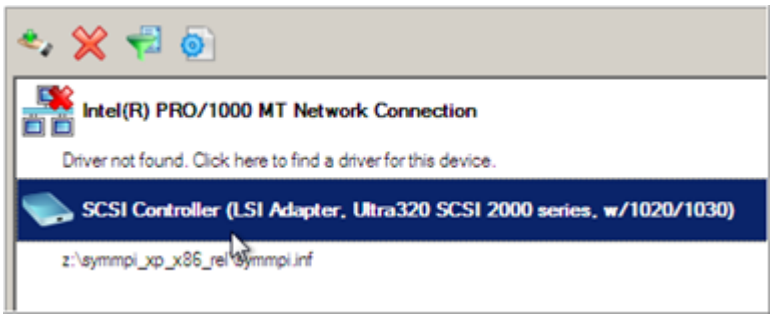


- Filter devices without drivers by clicking  . Unlike the automatic mode, where only boot critical devices (storage controllers) without drivers are being reported, here you can view and inject drivers for network cards as well.

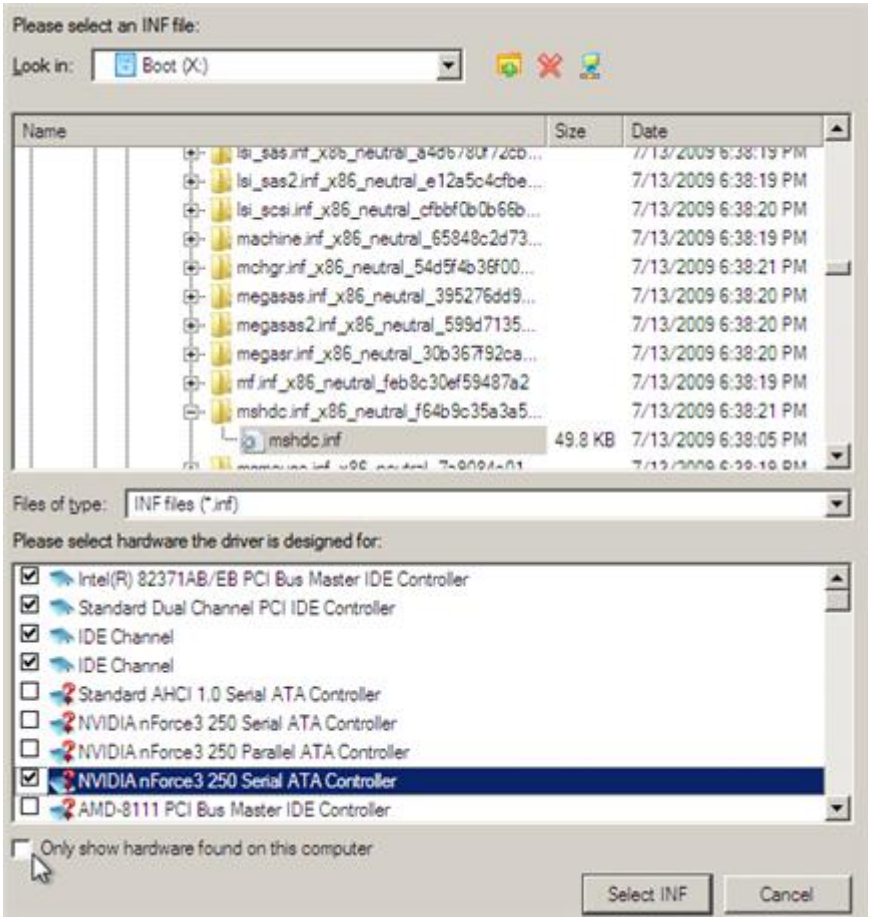


- Add a driver for each device that lacks it by clicking on the device, then browsing for the required location. The wizard will then match the device with drivers inside the given location and pick the right one.



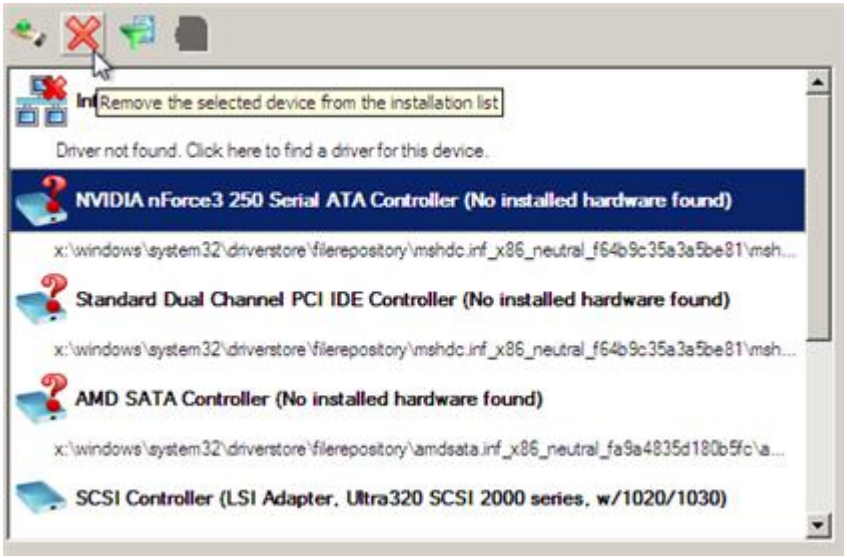


- Manually add a driver for a device that has not been found by our wizard by clicking  , then specifying the required .INF file.



When selecting an .INF file that contains several driver records for hardware you both, have in the system and don't have, you can filter the list by marking the appropriate checkbox.

- Remove a driver for a device, which has not been found in the system.

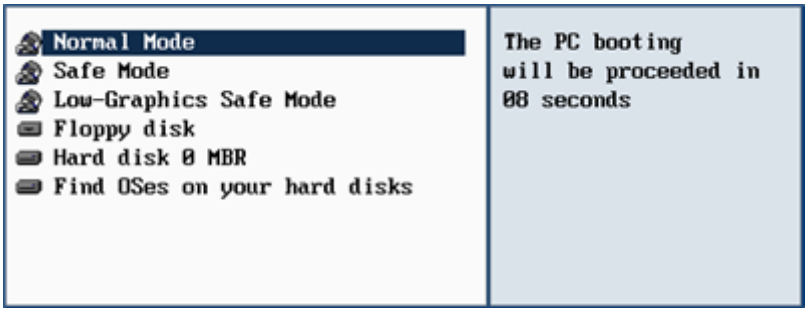


Cleaning User Passwords for Windows

Let's assume that after a busy business trip you've come home and realized that you've completely forgotten your Windows user password. That's no great tragedy any more.

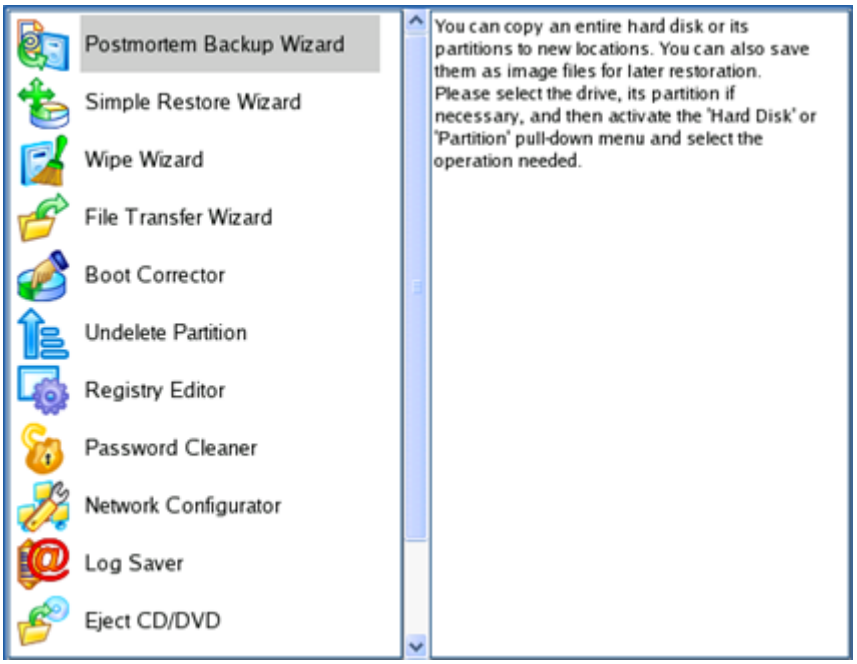
To clean a user password of the required Windows installation, please do the following:

1. Insert Paragon Linux/DOS Recovery CD (the BIOS must be enabled to boot the system from the CD/DVD device).
2. Restart the computer.
3. In the boot menu select **Normal Mode** to use the Linux recovery environment (more preferable) or **Safe Mode** to use the PTS DOS recovery environment (in case you've got problems with Linux). Moreover you've got the option to boot into the **Low-Graphics Safe Mode** (PTS DOS safe mode) to cope with a serious hardware incompatibility. In this case, only the minimal set of drivers will be included, like hard disk, monitor, and keyboard drivers. This mode has simple graphics and a simple menu.

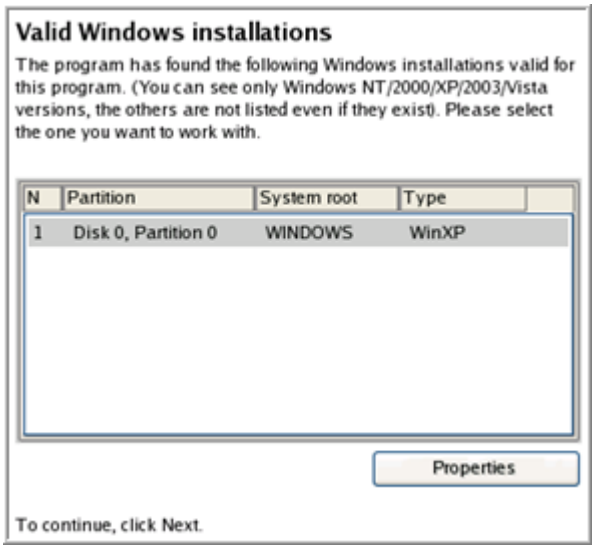


By default the Normal Mode will be automatically initiated after a 10 second idle period.

4. In the Linux launch menu select Password Cleaner. You can find the same wizard in PTS DOS as well.



5. On the Wizard's Welcome page, click the Next button.
6. On the next page choose the required Windows installation from the list of found installations (if several). If you're not sure which installation you need, please use the Properties button to get more info on the selected item.



7. On the next page you can see a list of all users of the selected Windows installation. Select the user, which password you'd like to make blank, then click the Clean button to accomplish the operation. Or just click the Clean All button to clean all user passwords at once.

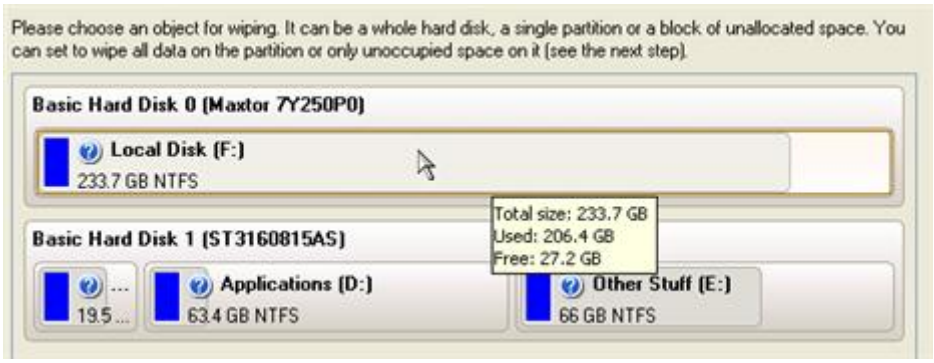
8. After the operation is completed, close the wizard by pressing the appropriate button.
9. Eject the CD.
10. Reboot the computer.

Hard Disk Utilization

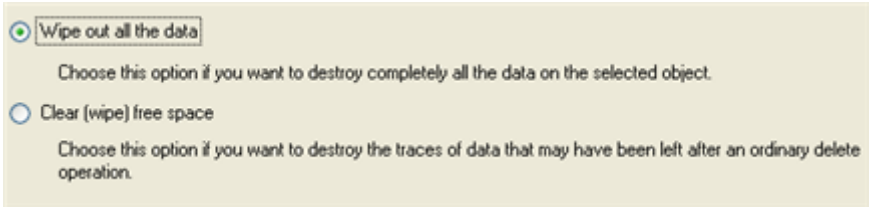
To irreversibly destroy all on-disk information without any possibility to recover and that way providing the maximum level of security, please do the following:

Launch the Wipe Wizard:

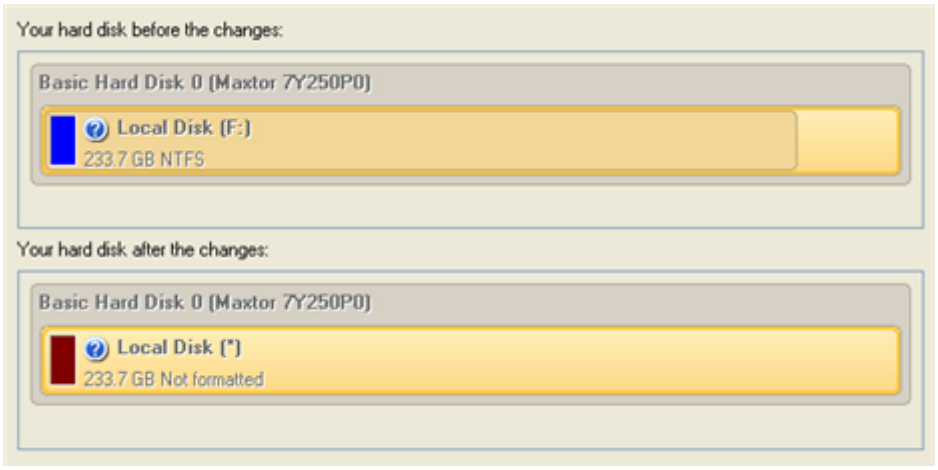
- Click the **Wipe Hard Disk or Partition** button.



1. On the Wipe Mode page, select the wipe out all the data to irreversible destroy all on-disk information.



2. On the Wipe Method page select a specific data erasure algorithm or choose to create a customized one.
3. The next page of the wizard enables to get detailed information on the selected algorithm, choose whether to carry out residual data verification or not specifying the percentage of sectors to check and estimate the time required to accomplish the operation.
4. Review all parameters of the operation and modify them if necessary.



5. Complete the wizard and then apply the pending changes.

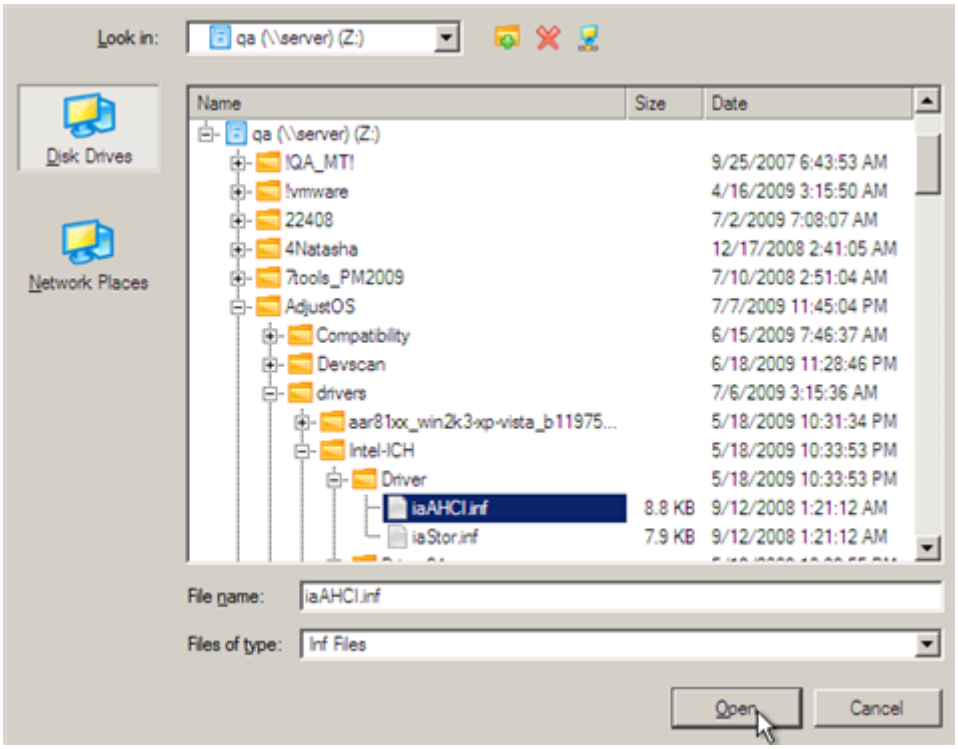
Extra Scenarios for WinPE

Adding specific drivers

Our WinPE 3.0 based recovery environment offers excellent hardware support. Anyway you've got the option to add drivers for specific hardware with a handy dialog.

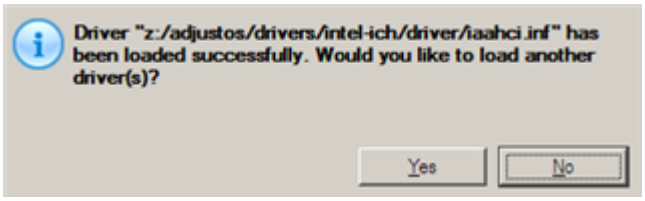
To add drivers for specific hardware, please do the following:

1. Once you accept the agreement, you will see the Universal Application Launcher. Click **Load Drivers**.
2. In the opened dialog browse for an .INF file of the required driver package located on a floppy disk, local disk, CD/DVD or a network share. Then click the **Open** button to initiate the operation



To know how to map a network share, please consult the Configuring network scenario.

3. You will be notified on the successful accomplishment of the operation. Click **Yes** to load another driver or **No** to close the dialog.



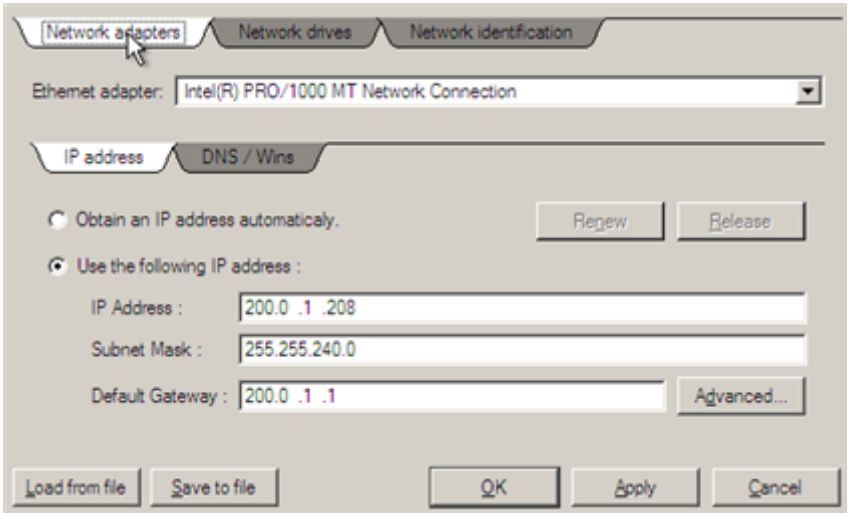
Our WinPE 3.0 recovery environment is 32-based, thus you need to use 32-bit drivers for injection.

Configuring network

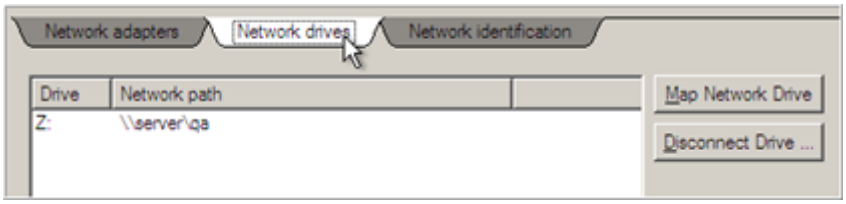
If your local network has a DHCP server, a network connection will be automatically configured once our WinPE recovery environment has been started up. Otherwise you will need to do it manually with a handy dialog by providing an IP address, a network mask, default gateway, etc. Besides with its help you can easily map network shares.

To manually set up a network connection and map a network share, please do the following:

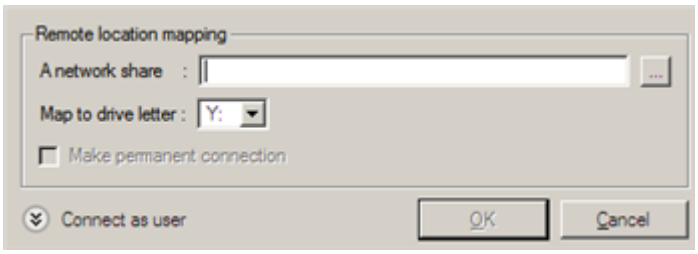
1. Once you accept the agreement, you will see the Universal Application Launcher. Click **Configure Network**.
2. In the opened dialog provide an IP address, a network mask, default gateway, etc. for your network device.



3. Click the **Network drivers** tab to map a network share.



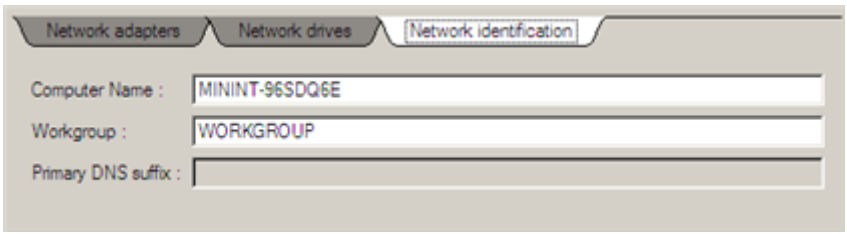
4. Click **Map Network Drive** and provide all the necessary information to map a network share in the opened dialog:



- Click the standard browse button [...] to browse for the required network share or manually enter a path to it;
- Define a letter from the pull-down list of available drive letters;
- Click the **Connect as user** button at the foot of the dialog page to specify a user name and password to access the selected network share if necessary.

By clicking **Disconnect Drive…** you can delete an existing network share if necessary.

5. Click the **Network identification** tab to change a network name of your computer (generated automatically) and a workgroup name.



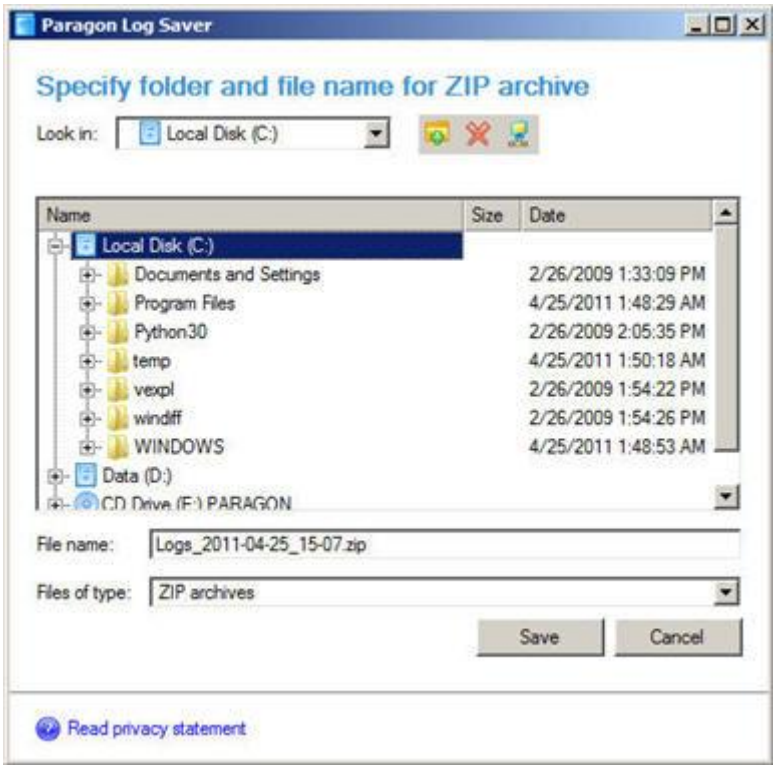
6. By default, the wizard saves all network settings in the netconf.ini file located on the WinPE RAM drive, thus it will only be available until you restart the computer. However, you can just once configure your network device and then save this file to some other destination, for instance a local drive, and this way avoid constant re-configuration, just by providing a path to it. So Click **Save to file** to save the netconfig.ini file to the required destination.

Saving log files

The program enables to simplify the procedure of sending support requests to the Paragon Support Team. In case of having difficulties with handling the program, you, with the help of this very function, can address the company support engineers and provide them with all the information they need such as the disk layout, performed operations, etc. in order to tackle the encountered problem. Information of that kind is stored in log files.

To prepare a log files package, please do the following:

1. Once you accept the agreement, you will see the Universal Application Launcher. Click **Log Saver**.
2. In the opened dialog browse for the required location of the log files package or manually provide a full path to it. Click **Save** to initiate the operation.



Log files do not contain any confidential information on the operating system settings or the user documents.

Troubleshooter

Here you can find answers to the most frequently asked questions that might arise while using the program.

1. I try to run an operation, but the program claims my partition is in use and suggests restarting the computer.

   There are a number of operations that cannot be performed while your partition is in use (or locked in other words). Please agree to reboot your machine to make the program accomplish the operation in a special boot-up mode.

2. I run an operation and restart the machine as required, but it just boots back into Windows without accomplishing the operation.

   Please run 'chkdsk /f' for the partition in question.

3. I cannot create a new partition on the disk.

   There can be a number of reasons for that:

   - The program cannot create a new partition on a dynamic disk, but only on a hard disk that uses the DOS partitioning scheme.

- According to the rules of the DOS partitioning scheme, the following combinations of partitions cannot be created:

  - Two Extended Partitions on one hard disk;

  - Five or more Primary partitions on one hard disk;

  - If there is an Extended Partition on the disk, only three Primary partitions are allowed.

- The program allows creating new partitions only within blocks of un-partitioned space. It cannot convert a free space on an existing partition to a new partition.

4. I cannot do anything with my USB flash drive. I get a crossed circle sign when trying to select any area on it.

   Some USB flash drives don't have the MBR (Master Boot Record), that's the cause of your problem. To fix the issue please use the Update MBR function of our program or 'fixmbr' of the Windows installation disc to write a standard code to your flash drive.

5. When trying to back up my system the program asks to restart the computer.

   Most likely the Hot Processing mode is disabled. Please make it active in the program settings.

6. When running a backup operation with the Paragon Hot Processing mode enabled, I get an error: error code 0x1200e "Internal error during Hot Backup"

   Most likely your hard disk contains bad blocks. Please fix the issue with your HDD manufacturer's tool.

   You can find a name of the tool you need here: http://kb.paragon-software.com

7. When trying to back up to a network share, I get the following error: "i/o error" or "can't open/create file"

   Please check whether you've got a permission to write to the selected destination or not.

8. When trying to restore a backup archive, I get the following error: "Can't restore to current selection" or "Archive does not fit"

   Most likely you're trying to restore a backup of the whole hard disk to a partition or vice versa.