Acronis True Image OEM Edition

User Guide

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Chapter 1. Introduction

1.1 What is Acronis True Image OEM Edition?

Acronis True Image OEM Edition solves all backup problems, ensuring the safety of all information on your PC.

Using it, you'll be able to create exact hard disk images, including all operating systems, applications and configuration files, software updates, personal settings and all of your data.

If failures occur that block access to information or affect system operation, or if you accidentally delete necessary files, you'll be able to restore the system and lost data easily.

You won't have to select files and folders for backup, as many backup applications require. Instead, you will store all your disk data. As a result, Acronis True Image OEM Edition is simpler and faster than competitive applications.

You can create images on local hard disks, CD-R/RW, DVD+R/RW, DVD-RW, or a variety of removable media, such as FireWire (IEEE-1394) and USB (1.0, 1.1 and 2.0) devices.

You can restore the partition or lost data from an image any time. You can also connect an image as a virtual drive, browse its contents and extract selected files to the hard disk.

The unique technology developed by Acronis and implemented in Acronis True Image OEM Edition allows you to create exact, sector-by-sector disk images and restore their content **directly from Windows** without the reboots typical for similar products.

Wizards and a user-friendly, Windows XP-styled interface will make your work even more convenient. Just answer some simple questions and let Acronis True Image OEM Edition take care of everything else! When a problem occurs, it will get you up and running in short order.

1.2 What's new in Acronis True Image OEM Edition?

Acronis True Image OEM Edition has several new features:

- Excluding paging/hibernate files from images thereby decreasing the image file size
- Partition/disk image integrity check before restoration
- Partition/disk file system integrity check after restoration
- Two boot disk variants: complete and safe

- Improved interface and performance

1.3 What is a disk image?

A disk (partition) image is a file that contains a copy of all information stored on a disk. The image stores the installed operating system, all programs, and all documents and settings.

By backing up your information regularly, you will protect yourself from data loss in case of system failure or PC malfunctions.

By default, Acronis True Image OEM Edition image files have a ".tib" extension and can contain images of several partitions or disks.

Images of large partitions or several disks could be quite large. If so, they can be split into several files that together make an original image. A single image can also be split for burning to removable media. A single image that is split across multiple CDs is sometimes called a "spanned volume."

Acronis True Image OEM Edition stores only those hard disk parts that contain data (for supported partition types). This reduces image size and speeds up image creation and restoration from.

A partition image includes all files and folders independent of their attributes (including hidden and system files), boot record, FAT (file allocation table) and root.

A disk image includes images of all disk partitions as well as the zero track with master boot record (MBR).

1.4 Software usage terms and conditions

The conditions for Acronis True Image OEM Edition software usage are described in the «License Agreement» (page 3 of this manual). The unique registration number is a confirmation of your legal purchase and usage of Acronis True Image OEM Edition on your system.

Under current legislation, the «License Agreement» is considered a contract between you and Acronis Inc. The contract is a legal document and its violation may result in legal action.

Illegal use and/or distribution of this software will be prosecuted.

Chapter 2. Installation and operation

2.1 System requirements

Acronis True Image OEM Edition requires the following hardware:

- Pentium CPU and higher
- 64 MB RAM
- floppy disk drive or CD-RW drive for bootable media creating
- mouse (recommended)

2.2 Acronis True Image OEM Edition installation

To install Acronis True Image OEM Edition:

1. Insert the installation CD into your drive.

2. Follow the instructions on the screen.

3. After making your installation choices and copying Acronis True Image OEM Edition files onto your hard disk, you will be prompted to create a **bootable diskette or CD-R/W**. While Acronis True Image OEM Edition creates disk images in Windows, it might be necessary to run restoration procedure from a bootable disk. Therefore, it is strongly recommended that you create one. However, you can do that after the installation as well.

After installation of Acronis True Image OEM Edition is completed, you should restart your computer.

You can also install Acronis True Image OEM Edition unattendedly using command line or **Run** box in the **Start** menu. To do this:

type in a command line or in **Run** box a command:

<setup file> /silent /serial = "AAAAA-BBBBB-CCCCC-DDDDD-EEEEE"

where *AAAAA-BBBBB-CCCCC-DDDDD-EEEEE* is a serial number of your personal copy of Acronis True Image OEM Edition.

2.3 Running Acronis True Image OEM Edition

In normal mode, you can run Acronis True Image OEM Edition from Windows by selecting **Acronis** → **True Image** → **Acronis True Image OEM Edition** from **Start** → **Programs**. This will bring the program window onto the screen.

If your operating system does not load for some reason, you can run Acronis Startup Recovery Manager. However, this must be activated prior to use; see

"Acronis Startup Recovery Manager" to learn more about this procedure. To run the program, press F11 during PC bootup, when you see a corresponding message that tells you to press that key. Acronis True Image OEM Edition will be run in the standalone mode, allowing you to restore previously created images or an image from the Acronis OEM Zone.

If your disk data is totally corrupted and you can not boot (or if you have not activated Acronis Startup Recovery Manager), you should use the bootable media created during the installation procedure or later. It will automatically load Acronis True Image OEM Edition, allowing you to recover the damaged partitions.

2.4 Removing the program

To remove Acronis True Image OEM Edition from your PC, select **Acronis → True Image → Uninstall Acronis True Image OEM Edition** in the Programs menu. You will see a dialog to confirm the program removal. Click **Yes** to confirm and Acronis True Image OEM Edition will be completely removed. You may have to reboot your computer afterwards to complete the task.

Chapter 3. General program information

3.1 Main program window

The main program window contains the menu, toolbar and the Windows XP Explorer-like interface divided into two areas. The right area contains operation icons; the left one has corresponding action descriptions, typical actions and additional tools.

The main program window

The menu, toolbar and menu items in the left area duplicate themselves, providing more convenience.

Having selected (clicked) an operation, you can execute it in several ways: by double-clicking its icon, by selecting **Start Now** in the **Operations** menu, by selecting the same operation in the **Operations** window, or by clicking **Start** on the toolbar.

The main window contains disk imaging operation icons:

- **Create Image** – create a disk (partition) image
- **Restore Image** – restore a disk (partition) from a previously created image
- **Explore Image** – connect and view an image as a virtual drive
- **Unplug Image** – disconnect the connected virtual drive

3.1.1 Program menu

The program menu line contains the **Operations**, **View**, **Tools** and **Help** items.

The **Operations** menu contains **Start Now** item to execute the selected operation and **Exit** to exit the application.

The **View** menu contains items for managing the program window look:

- **Toolbars** – contains commands that control toolbar icons
- **Common Task Bar** – enables/disables common task panel in the left area
- **Status Bar** – enables/disables the status bar
- **Refresh** – refreshes the main program window

The **Tools** menu contains the following items:

- **Activate Acronis Startup Recovery Manager** – activates the boot restoration manager
- **Check Image** – runs disk (partition) integrity checking procedure
- **Create Bootable Rescue Media** – runs the bootable media creation procedure

The **Help** menu allows you to invoke help and get information about Acronis True Image OEM Edition.

3.1.2 Status bar

In the bottom of the main window, there is a status bar. Its left part briefly describes the selected operation.

3.1.3 Disk and partition information

You can change disk schemes and data representation in all schemes you see in various wizards.

To the right are three icons: **Arrange Icons by**, **Choose Details** and **i** (**Display the properties of the selected item)** (the last duplicated in the context menu invoked by right-clicking objects).

To sort messages by a particular column, click the header (another click will switch to the opposite order) or **Arrange Icons by** button and select the column.

To select columns to view, right-click the headers line or left-click the **Choose Details** button. Then flag the columns you want to display.

If you click the **i** (**Display the properties of the selected item)** button, you will see the selected partition or disk properties window.

This window contains two panels. The left panel contains the properties tree and the right describes the selected property in detail. The disk information includes its physical parameters (connection type, device type, size, etc.); partition information includes both physical (sectors, location, etc.), and logical (file system, free space, assigned letter, etc.) parameters.

You can change the width of columns by dragging their borders with the mouse.

3.2 Acronis OEM Zone

Acronis OEM Zone is a special, hidden system partition, containing the initial image of your hard disk, i.e. your system factory configuration. Ordinary applications cannot access it, for image security purposes.

The Acronis OEM Zone is meant to be used with Acronis Startup Recovery Manager (see below) for restoring the factory default status of your computer.

3.3 Acronis Startup Recovery Manager

Acronis True Image OEM Edition provides Acronis Startup Recovery Manager to run the program without loading the operating system. This feature is useful if Windows won't load for some reason. Using it, you can run Acronis True Image OEM Edition by itself to restore the factory defaults (the hard disk formatting and OS) for your computer. Having restored the original configuration, you may then restore applications and user data from images, stored on removable media or on surviving partitions of the hard disk.

To use Acronis Startup Recovery Manager (it must be activated), turn on your PC and press F11, when you see the "Press F11 for Acronis Startup Recovery Manager" message. This will run a standalone version of Acronis True Image OEM Edition that only slightly differs from the complete version. For information on restoring damaged partitions, see Chapter 5.

Be careful! Disk letters in standalone Acronis True Image OEM Edition might sometimes differ from Windows notation.

To activate the program, click **Activate Acronis Startup Recovery Manager**.

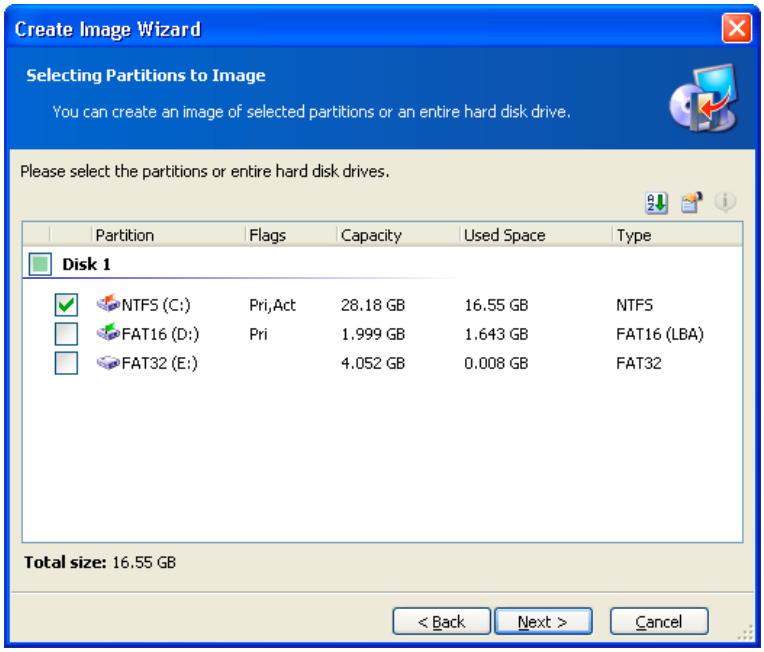
If there is Acronis OEM Zone on your PC, the boot manager will be activated immediately.

When Acronis Startup Recovery Manager is activated it overwrites the Master Boot Record (MBR) with its own boot code. If you have any third party boot managers installed, then you will have to reactivate them after activating the Startup Recovery Manager. For Linux loaders (e.g. LiLo and GRUB) you might consider installing them to a Linux root (or boot) partition boot record instead of MBR before activating Acronis Startup Recovery Manager.

Chapter 4. Creating a partition (disk) image

4.1 Selecting partitions

In the **Selecting partitions to Image** window, you will see the hard disk layout of your PC. Flag a partition to select it. Flag a whole disk to select all its partitions to image. You can select one or more hard disks or any combination of partitions and hard disks.



Disk and partition layout

Having selected partitions and/or disks, click **Next**. Note that this button is disabled if no partitions or disks are selected.

4.2 Selecting image location

Specify the image location on the hard disk, CD-R/RW, DVD-recordable, or removable media, such as FireWire (IEEE-1394) or USB (1.0, 1.1 and 2.0) device.

You should have DVD UDF recording software installed for burning images on DVD disks, for example: Roxio DirectCD, Ahead InCD and other the same.

Image location selection

Select the image location in the disk tree. In the **File name** field, enter image file name.

If there's already an image file with that name, Acronis True Image OEM Edition will ask if you want to overwrite it.

You can store several partitions and/or disks images in a single file.

The program can generate an unique filename. Just click **Generate file name for a new file** button at the right.

4.3 Selecting image file size

With this step, you can specify if the program should create a single file or split it into equal smaller images.

If you select **Automatic**, Acronis True Image OEM Edition will try to decide this for every case. If there's enough space on the selected disk, the program will create a single image file.

If there is not enough space, Acronis True Image OEM Edition will warn you and wait for your decision. You can try to free some additional space and continue or stop Acronis True Image OEM Edition, free some space and re-execute the procedure.

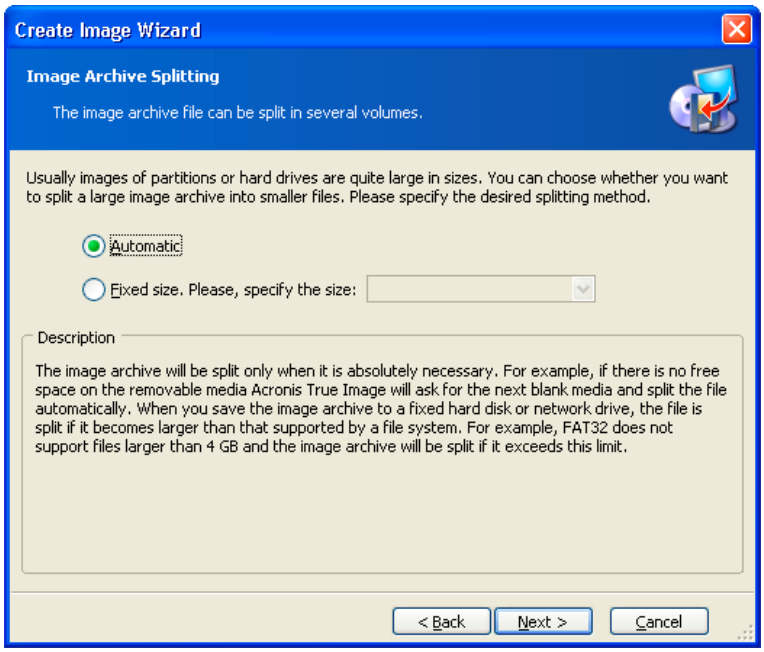


Image file size selection

If the image is destined for removable media, the image file size is set automatically.

FAT16 and FAT32 file systems have a 4 GB limit for maximum file sizes. FAT32 is currently the most popular end user file system. At the same time, existing hard drives have capacities of 160GB and larger! Therefore, an image file might easily exceed this limit. In that case, Acronis True Image OEM Edition will automatically split the image into several files.

When creating an image **automatically** on CD-R/RW, DVD-RW, DVD+R/RW media, Acronis True Image OEM Edition asks you to insert a new disk when the previous one is full.

You can also fix image file size by selecting **Fixed size** and entering the desired size or selecting it from the drop-down list. By default, the value is in bytes, but you can also use kilobytes and megabytes.

You can split the image file into several volumes when storing it on a hard drive. Later you'll be able to easily transfer these files onto CD-R/RW, DVD-R/RW, DVD+R/RW. Creating images directly on CD-R/RW, DVD-RW, DVD+R/RW might take considerably longer time than it would on a hard disk.

4.4 Selecting data compression level

Now you must select the data compression level for the image to be created.

If you select **None**, all data will be transferred into an image file as they are, increasing the image size. Maximum compression might reduce the program performance and prolong image creation.

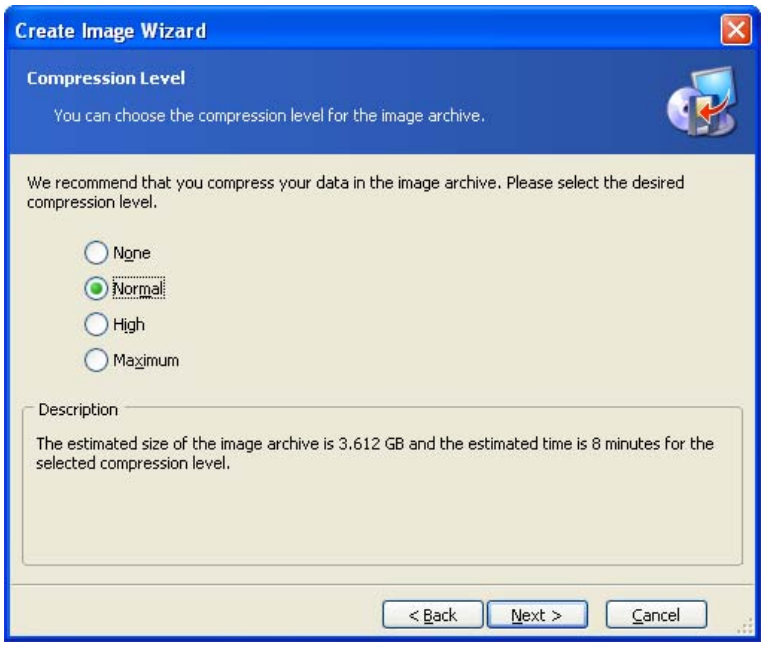


Image data compression level selection

The optimal data compression level depends on disk (partition) file types and can only be understood empirically.

Usually, it is recommended that you leave the switch in the **Normal** position. If you need to burn an image to removable media, you can select **Maximum** compression.

4.5 Protecting images with passwords

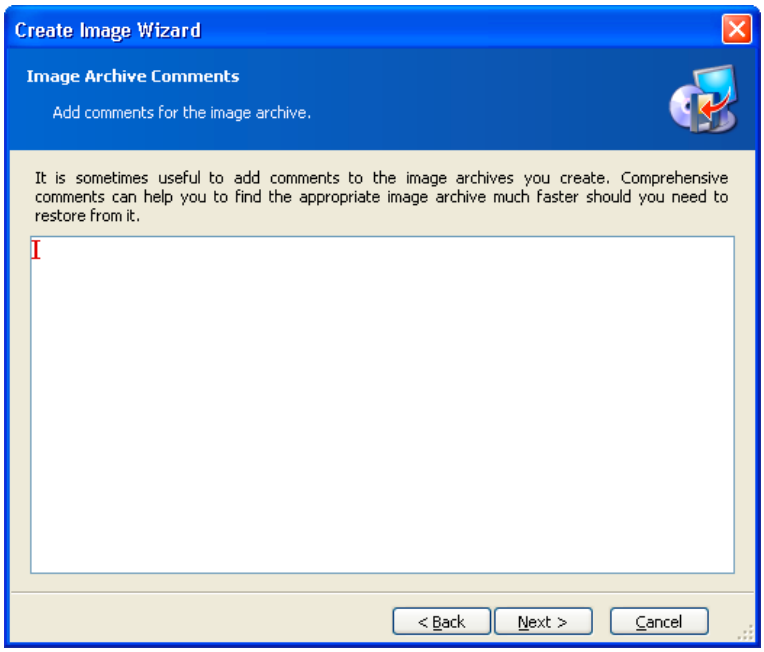
An archive file with a partition (disk) image can be protected with a password. To protect a partition (disk) from being restored by anybody except you, enter a **password** and its confirmation into the text fields of the wizard page **Image Archive Protection**. A password should consist of at least eight symbols and contain both letters (in the upper and lower cases preferably) and numbers to make it more difficult to guess.

Image password protection

If you try to restore data from a password-protected image, Acronis True Image OEM Edition will ask for the password in a special window, allowing access only to authorized users.

4.6 Providing comments

On the **Image Archive Comments** wizard page**,** you'll be able to provide an archive file with comments about the PC and its user, the hard disk, partition data, image creation time, and any peculiarities and conditions.



An image comment

The more details you provide in the comments, the better. If you don't provide comments, you might mistake images and restore the wrong system partition, for example.

4.7 Image creation script

In the next window, you will see a disk or partition image creation script containing a list of operations to be performed.

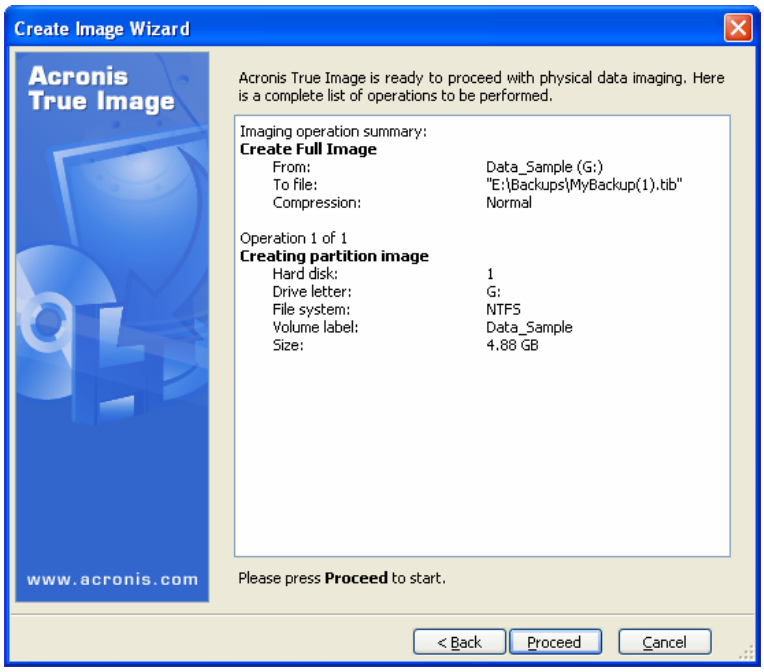


Image creation script

All operations of a partition (disk) image creation in an archive file are delayed in Acronis True Image OEM Edition. A partition (disk) image creation script is created first; then it is executed.

After you click **Proceed**, Acronis True Image OEM Edition will start creating an image, indicating the progress in the special window. You can stop this procedure by clicking **Cancel**.

You can also close the progress window by clicking **Close**. Image creation will continue, but you will be able to start another operation or close the main program window. In the latter case, the program will continue working in the background and will automatically close once the image is ready. If you prepare some more image creation operations, they'll be queued after the current one.

If you are to burn an image to several removable media, be sure to number them, since you will have to insert them in order during the restoration.

Chapter 5. Restoring a disk (partition) from an image

As mentioned above (see "Running Acronis True Image OEM Edition"), Acronis True Image OEM Edition can be run in several ways. However, disk restoration is always performed just one way.

We recommend that you restore disks using Windows, only using other methods if Windows doesn't load.

The boot disk (e.g. a CD) from which you loaded the program does not keep you from using other CDs with images. Acronis True Image OEM Edition is loaded entirely into RAM, so you can remove the bootable CD to insert an image disk.

To restore a partition (disk) from an image, Acronis True Image OEM Edition must obtain **exclusive access** to this partition (disk). This means no other applications can access it at that time. If you receive a message stating that the partition (disk) can not be blocked, close applications that use this partition (disk) and start over. If you can not determine which applications use the partition (disk), close them all.

5.1 Selecting an image to restore from

Find and select a file containing an image of the required partition. The **File Name** field will reflect its name and the **Next** will become available.

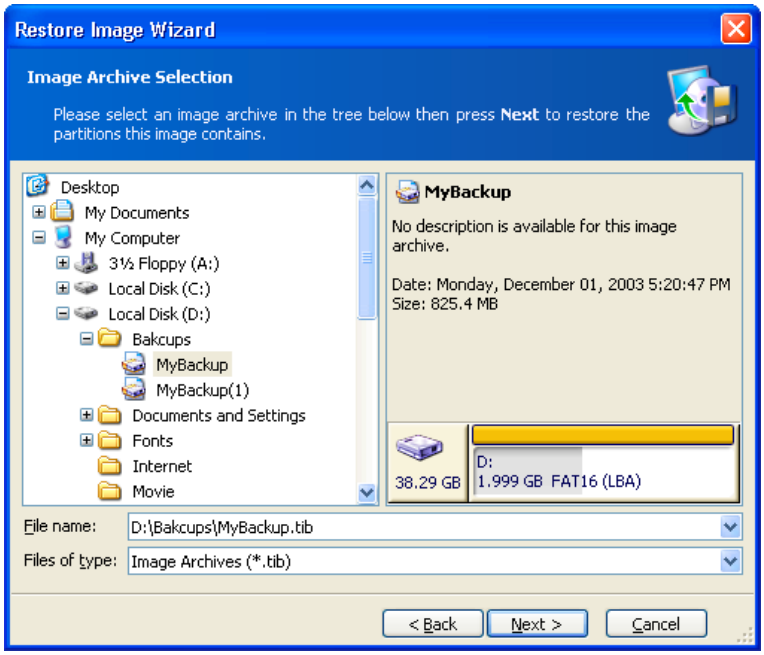


Image selection for restoration

If you are to restore an image from removable media, e.g. CD, first insert the last CD and then follow instructions of the Restore Image Wizard.

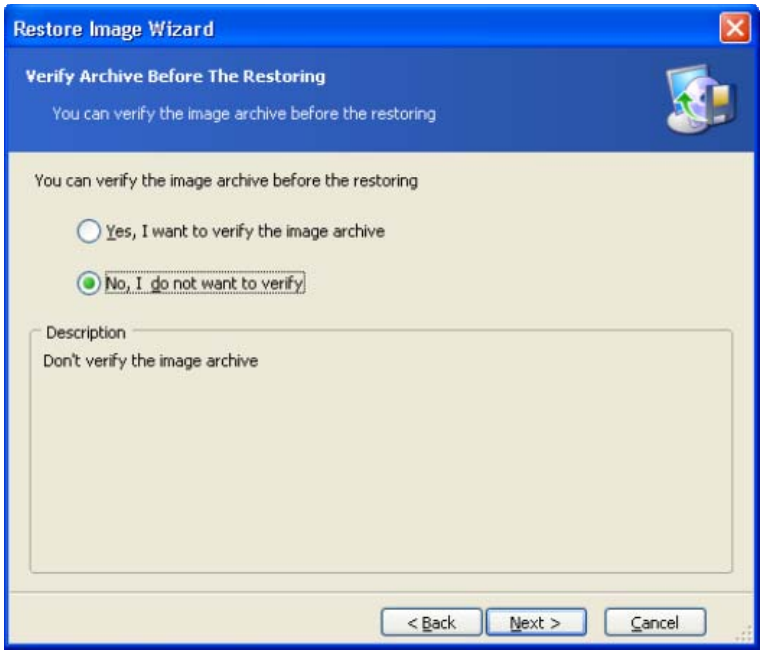
If you provided a comment to the image, it will help you know if you selected the right image to restore. The comment is displayed in the right part of the window. Note that the comment can be seen without entering a password for a protected image. However, the contents of such an image will still require a password.

If an image was protected with a password, Acronis True Image OEM Edition will ask for it. The **Next** button will be disabled until you enter the correct password.

5.2 Checking image integrity before restoration

Before an image is restored, Acronis True Image OEM Edition can check its integrity.

To do this, flag **Yes, I want to verify the image archive** on the **Verify Archive Before the Restoring** page of the image restoration wizard.

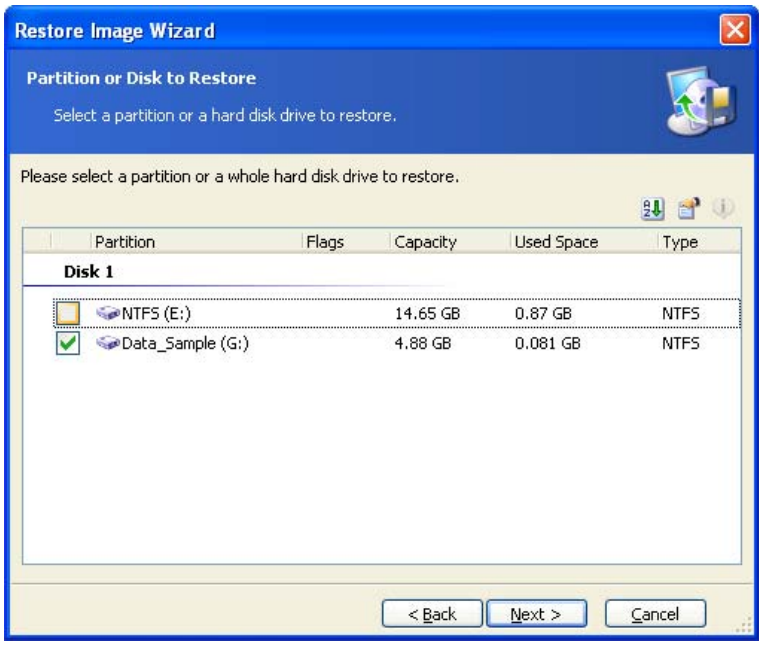


Checking image integrity before restoration

This is disabled by default in Acronis True Image OEM Edition.

5.3 Selecting a partition to restore

A single file might contain images of several partitions or even disks, as shown in the figure below.



Select a partition to restore

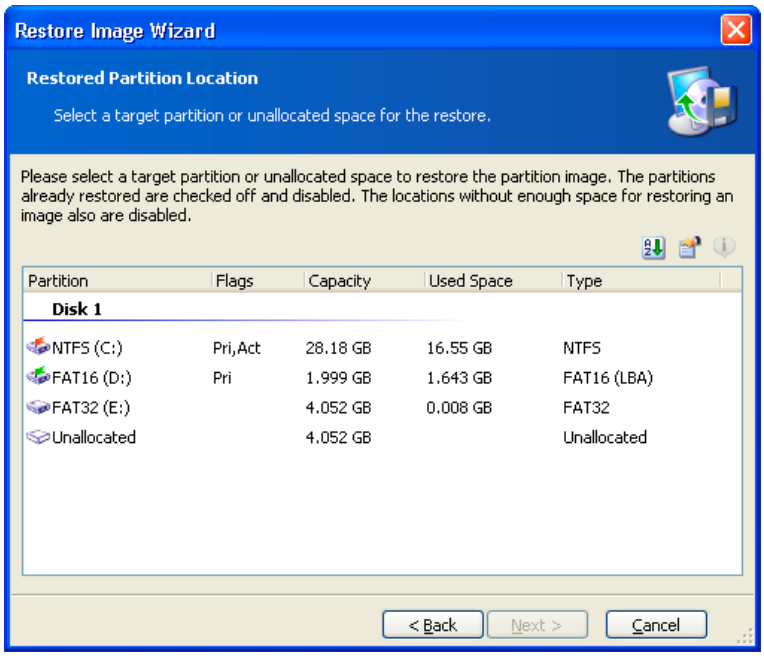
During a single session, you can restore several partitions or disks, one by one, by selecting one disk and setting its parameters first and then repeating these actions for every partition or disk to be restored.

Select the necessary partition and click **Next**.

5.4 Selecting a location to restore to

As a rule, you should restore an image to the same partition from which the image was created.

It is possible to restore an image to another partition. A partition should be at least the same size as the uncompressed image data.



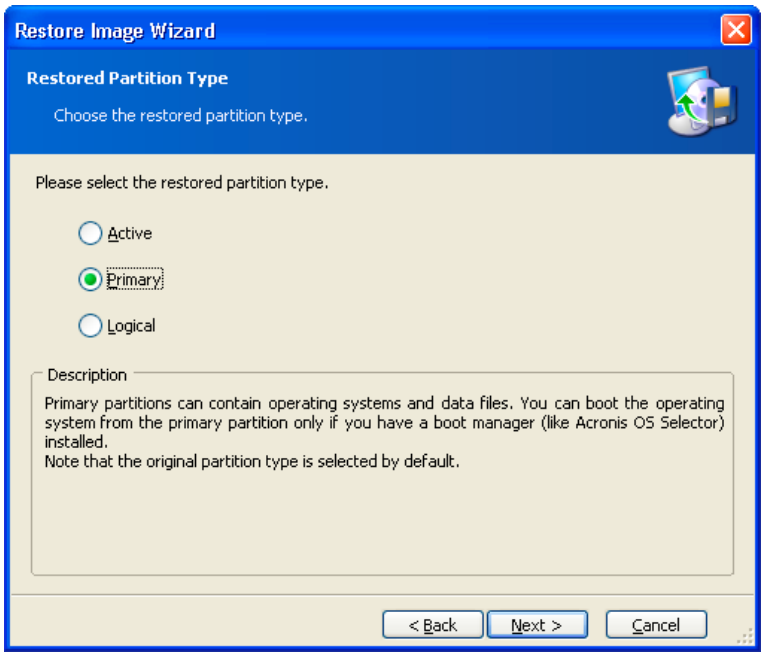
Select partition to restore image to

All the data stored on the restored partition will be replaced by the image data, so be careful and watch for non-backed-up data that you might need.

5.5 Selecting partition type

When restoring a partition, you can change its type, though it's not required in most cases.

To explain why you might need to do this, let's imagine that both OS and data were stored on the same primary partition on the damaged disk. You are forced to restore the partition from a backup to another hard disk with its own partitions and OS.



Select partition type

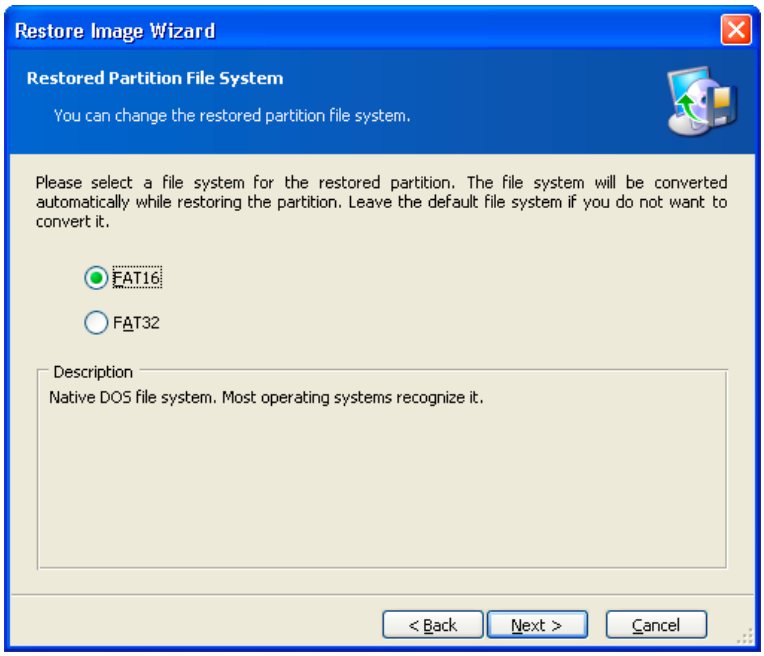
If you need only the data, you do not have to create another primary partition. In this case, you can restore the partition as a logical partition to access the data only.

But if you are to restore a system partition, you should select the **Primary** type for it. Finally, if you want to load an operating system from it, select **Active** as well.

Selecting **Active** for a partition without an installed operating system could prevent your PC from booting.

5.6 Selecting a file system

Though it is seldom required to change a partition file system, you can change it during its restoration. For partitions with FAT native file systems you can choose between FAT16 and FAT32. For partitions with Ext native file systems you can choose between Ext2 and Ext3. For partitions with other native file systems this option is not available.



Select a file system

Let's imagine you are to restore a partition from an old, low-capacity FAT16 disk to a newer disk. FAT16 would not be effective and might even be impossible to set on the high-capacity hard disk. That's because FAT16 supports files up to 4 GB, so you won't be able to restore a 4 GB FAT16 partition to a disk that exceeds that threshold without changing the file system.

It would make sense here to change the file system from FAT16 to FAT32 by setting the appropriate software switch.

But you must also keep in mind that not all operating systems support FAT32. MS-DOS, Windows 95 and Windows NT 3.x, 4.x do not support FAT32 and will not be operable after you restore a partition and change its file system. These can be normally restored on a FAT16 partition only.

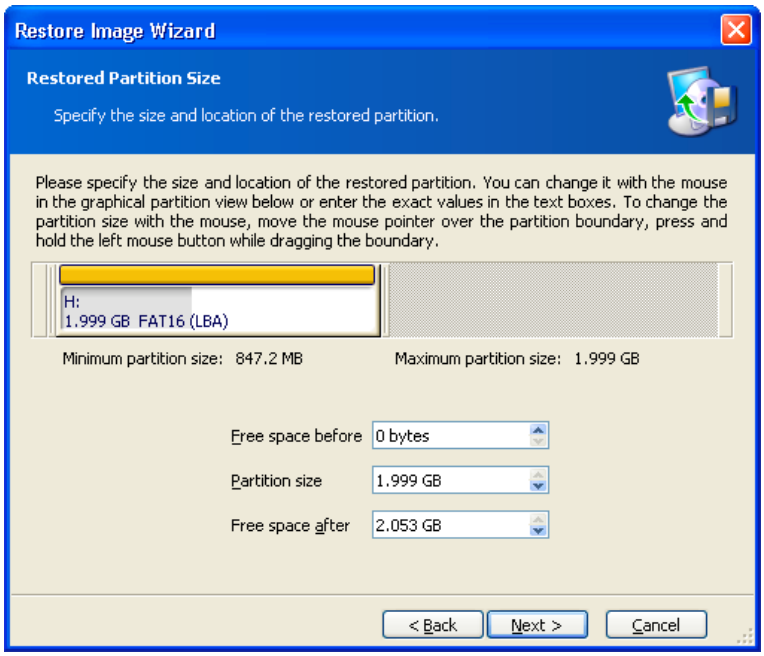
However, you can easily convert a FAT16 partition with newer OS into FAT32.

The operating systems summary is provided in Appendix A.

5.7 Selecting restored partition size

In some cases, you might need to change the partition configuration and size during restoration. Acronis True Image OEM Edition is flexible enough to do this.

You can resize and relocate a partition by dragging it or its borders with mouse or by entering corresponding values into the appropriate fields.



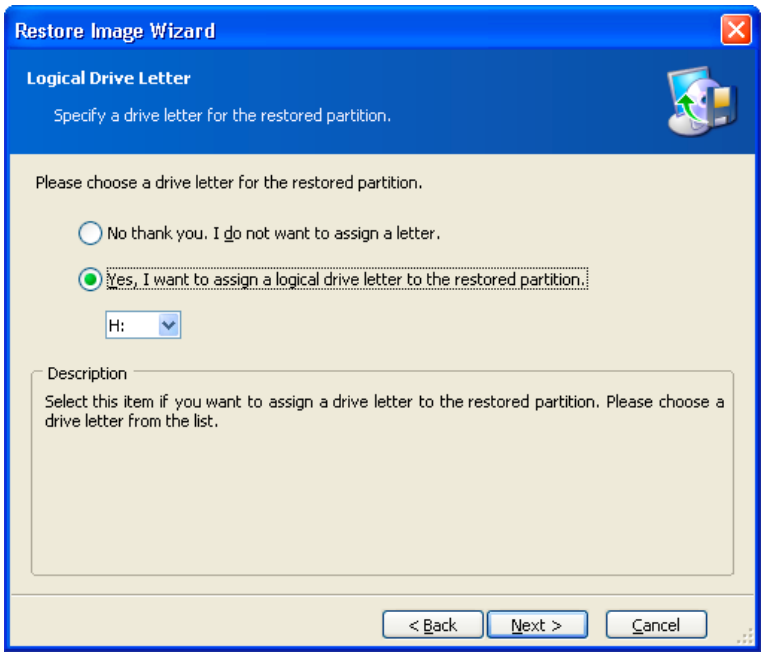
Select partition size and location

You might need to resize and relocate a partition in order to redistribute the disk space between existing partitions. In this case, you will have to restore the partition to be reduced first.

5.8 Assigning a letter to a partition

Windows utilizes letters to identify disks and partitions, automatically assigning them at loading.

Under Windows NT/2000/XP, Acronis True Image OEM Edition enables you to assign any unused letter to a restored partition (logical disk). To do this, select **Yes, I want to assign a logical drive letter to restored partition**. If you don't set this switch, no letters will be assigned to the restored partition, hiding it from OS. Under Windows 9x/Me, this step is bypassed since letters are assigned automatically.



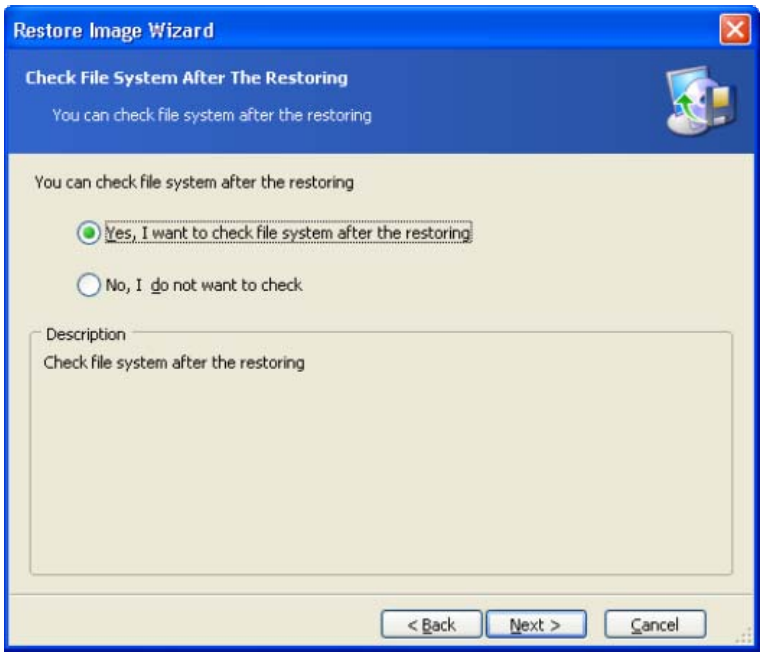
Assign any unused letter to a partition

You should not assign letters to partitions inaccessible to Windows, such as to those other than FAT and NTFS.

5.9 Checking file system integrity

Having restored a disk/partition from an image under Windows NT/2000/XP, Acronis True Image OEM Edition can check the integrity of its file system.

To do this, flag Yes, I want to check file system after the restoring on the Check File System After the Restoring page of the image restoration wizard.



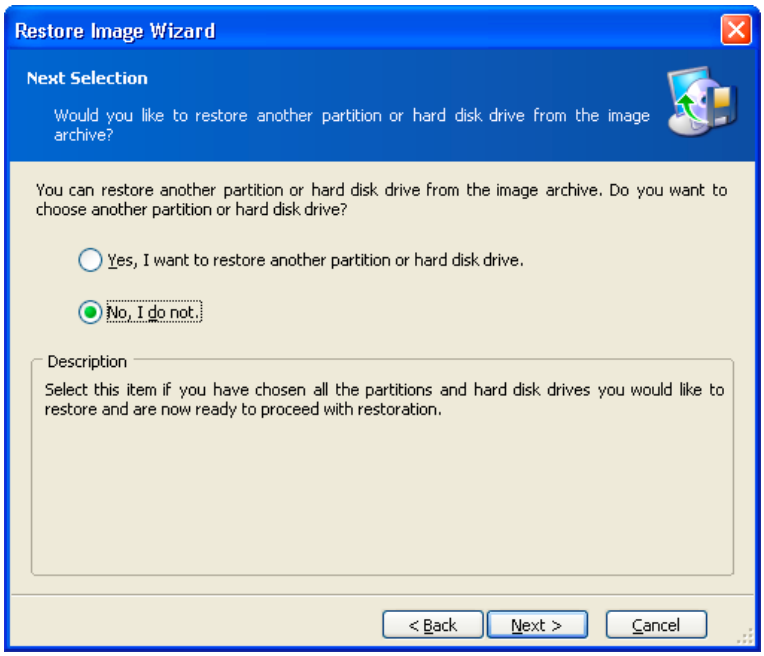
Checking file system integrity after restoration

This is disabled by default in Acronis True Image OEM Edition.

Only FAT16/32 and NTFS file systems integrity can be checked.

5.10 Restoring several partitions at once

You can restore several partitions during a single session. To do this, select **Yes, I want to restore another partition or hard disk drive** in the **Next Selection** window and click **Next**.



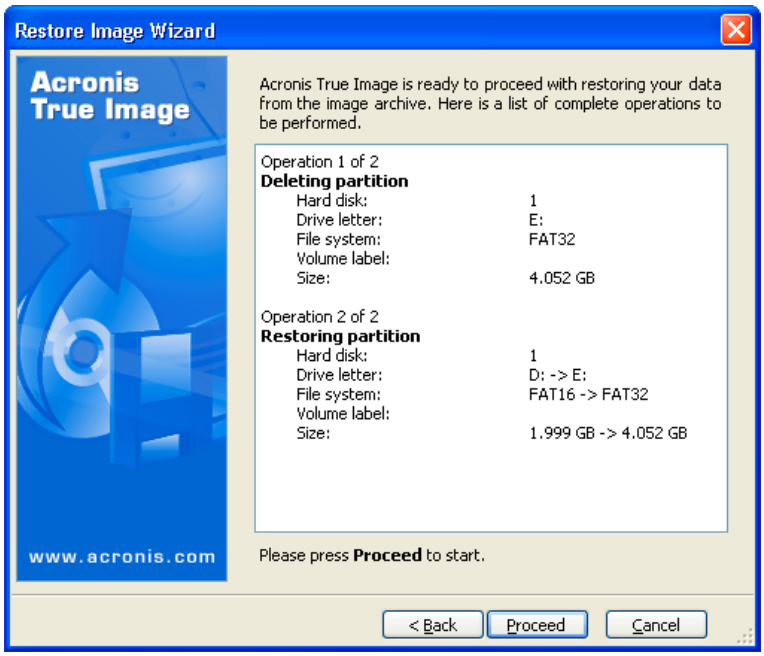
You can restore another partition during this operation

After this, you will see the partition selection window again and will have to repeat the actions mentioned above.

If you want to restore only one disk (partition) or have already selected all of the partitions you need, don't set this switch and click **Next**.

5.11 Restoration script

In the next window, you will see a disk or partition image restoration script containing a list of operations to be performed.



Restoration script

After you click **Proceed**, Acronis True Image OEM Edition will start image restoration, indicating the progress in the special window. If you click **Cancel**, no changes will be made to disk(s).

You can also stop the procedure by clicking **Cancel**. However, it is critical to note that the partition that should have been restored from the image will be deleted and its space unallocated – the same result you will get if the restoration is unsuccessful. To recover the "lost" partition, you will have to restore it from the image again.

After the restoration is finished, you will see a message about its results.

Chapter 6. Browsing and restoring individual files

To browse and restore individual files, Acronis True Image OEM Edition can **connect images as virtual drives,** thus letting you access them as though they were a physical drive. This means that:

- A new disk with its own letter will appear in the drives list
- Using Windows Explorer and other file managers, you will be able to see image files as if they were located on a physical disk or partition
- You'll be able to find necessary files or folders in order to copy them from the virtual disk to the real one

The connected virtual drive will be read-only and you won't be able to change anything within it.

6.1 Connecting a virtual disk

Use **Explore Image** to connect an image as a virtual disk and click **Next** in the first wizard window.

6.1.1 Selecting an image

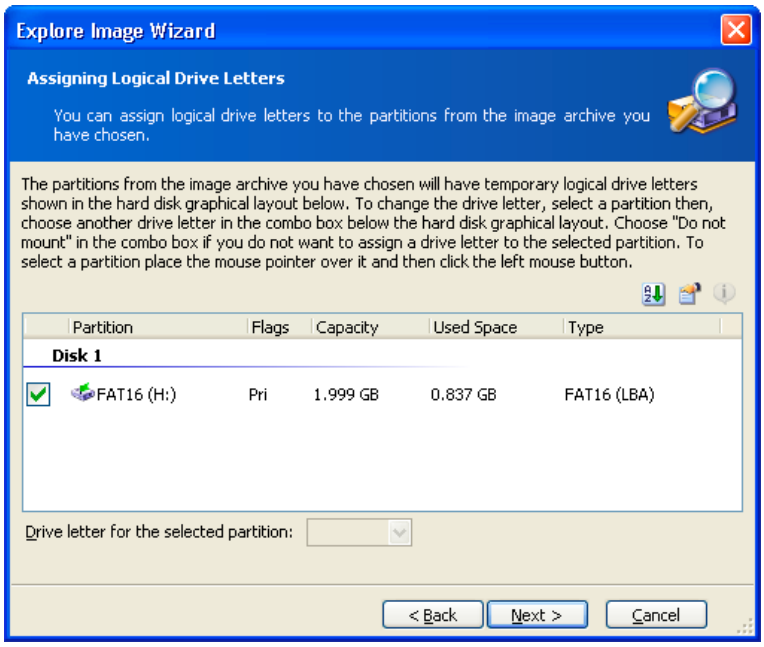
In the next window, specify the image you want to open as a virtual disk.

Select image to connect

If the selected image file is not protected by a password, you will immediately see the image comment along with the list of stored partitions. If the file is protected by a password, you will see only the comment.

6.1.2 Selecting partitions to connect and letter assignment

You must select a partition to connect as a virtual disk. Note that you can't connect the entire disk.



Select partition to connect

You can also select a letter to be assigned to the connected disk (from the partition letter drop-down list.)

In the next window, you will see a disk-connection script containing a single operation. Click **Proceed** to connect the image as a virtual disk.

After the disk is connected, the program will run Windows Explorer showing its contents.

Now you can easily copy any file (or folder) from the virtual disk to the real one using Windows Explorer or a similar file manager.

6.2 Unplugging a virtual disk

We recommend that you unplug a virtual disk after all necessary files and folders are copied. However, the virtual disk will disappear after your PC is turned off.

To disconnect the virtual disk, select **Unplug**.

You can also unplug the disk by clicking **Unplug Image** in the Acronis True Image OEM Edition main window.

Chapter 7. Other operations

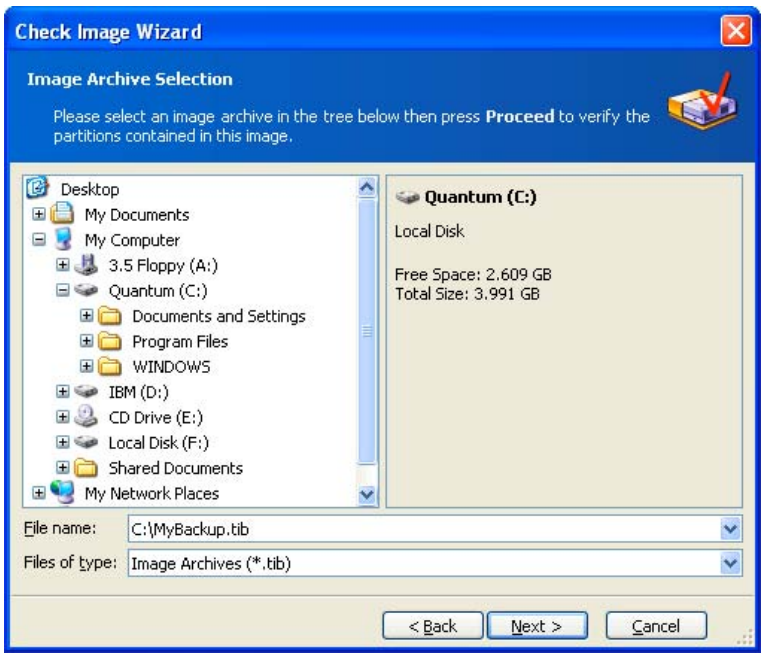
7.1 Checking images

To be assured that your images are not damaged, you can check their integrity. To do this, select **Check Image** in the **Tools** group (expand it if it's not) or click **Check Image** on the toolbar. You will see the first wizard window. Click **Next** to continue.

7.1.1 Selecting image for checking

In this window, you will see the complete list of connected storage devices, including hard disks and other drives. Using Windows Explorer, locate the image file to be checked and select it.

Its name will appear in the **File Name** field and the **Next** button will be enabled.



Select image to check

Click **Proceed** to continue. Progress will be indicated in the new window.

You can cancel checking by clicking **Cancel**.

After checking is complete, you will see the results window.

7.2 Creating bootable media

In some cases, Acronis True Image OEM Edition can be run only from a special bootable diskette or CD. Such a case might be if your PC doesn't boot up normally.

You can create bootable media during or after the installation.

For this, you will need a CD-R/RW blank, five formatted diskettes (or two for the safe variant), or any other media your PC can boot from, such as a Zip drive.

Click **Create Rescue Media** on the toolbar or in the left part of the main window, or select **Create Rescue Media** from the **Tools** menu.

You can also create bootable media without loading Acronis True Image OEM Edition itself by selecting **Programs → Acronis → True Image → Bootable Rescue Media Builder** from the **Start** menu.

You will see the bootable media wizard that will ask you to select either complete or safe loader version. The latter doesn't have some devices drivers and is useful only in case the complete version doesn’t work.

After you create a boot disk, identify it and keep it in a safe place.

Chapter 8. Troubleshooting

8.1 Recovering Acronis True Image OEM Edition

If Acronis True Image OEM Edition ceases running or produces errors, its files might be corrupted. To fix it, you will have to recover the program. To do this, run the installer again. It will detect Acronis True Image OEM Edition on your PC and will ask you if you want to recover (update) or remove it.

Click **Recover** and click **Proceed**.

8.2 Frequently asked questions

How do I use Acronis True Image OEM Edition on a Linux-based PC?

Acronis True Image OEM Edition supports the most popular Linux file systems, including Ext2, Ext3 and ReiserFS.

Acronis True Image OEM Edition can be run from a special bootable diskette or CD independently of operating system installed.

Having been run this way, it allows you to perform any disk (partition) image creation or restoration operations on a Linux-based PC.

What storage devices does Acronis True Image OEM Edition support for keeping backups?

Backups can be created on hard disks, and other storage devices supported by Windows 98/Me/NT 4/ 2000/XP.

What is the purpose of specifying image file size?

The PC hard disk is the fastest and most effective storage device. It can write a disk (partition) image considerably faster than any other device, such as a CD-R/RW. Having specified image volume size equal to 600–650Mb, you can quickly create image files on your hard disk that you can burn to CD-R/RW media afterwards. This allows you to do the entire task much more quickly.

What devices can a system partition be restored from if Acronis True Image OEM Edition is loaded from its bootable diskette or CD?

Acronis True Image OEM Edition supports any connected hard disks as well as CD-R/RW, DVD+R/RW, DVD-RW and a wide variety of FireWire (IEEE-1394) and USB (1.0, 1.1, 2.0) devices.

Can Easy CD Creator 4.x–5.0 impede Acronis True Image OEM Edition?

Easy CD Creator 4.x and 5.0 automatically installs an old version of Take Two® backup utility that is no longer supported by its manufacturer, Roxio. If Acronis True Image OEM Edition detects this utility, it shows you the following message in the beginning of image creation:

"Can't create the image of the logical disk, as it's already used by a running application. Please close all other applications and try again."

We recommend that you update your Easy CD Creator to Version 5.1 or newer and/or completely remove Take Two®.

For more information, visit
http://www.roxio.com/en/support/roxio_support/taketwo.html

Is Acronis True Image OEM Edition compatible with Roxio GoBack?

Yes, Acronis True Image OEM Edition is compatible with Roxio GoBack under Windows. If you want to load Acronis True Image OEM Edition from its bootable media, you will have to disable Roxio GoBack first.

Note that Roxio GoBack will be deleted from your hard disk during the restoration.

I created an image on CD-R/RW disks, but when I try to browse it, Acronis True Image OEM Edition tells me it can't connect this image as a virtual disk.

The current version of Acronis True Image OEM Edition can connect images only if their files are located in the same place. If your image is located on several CD-R/RW or hard disks, you will have to copy all its files to a single folder on your hard disk.

I received the "Can't create image of disk D:, because it's already used by applications or contains bad sectors" error message, where D: stands for my logical disk, when I tried to create an image under Windows.

Your logical disk might contain bad sectors. We recommend that you run a complete disk surface test. Under Windows 98/Me, run scandisk and perform the complete disk check. Under Windows NT/2000/XP, type "chkdsk /R D:" in the command line and reboot.

How can I burn Acronis True Image OEM Edition images to DVD?

Acronis True Image OEM Edition can burn images to DVD under Windows, if you have DVD UDF recording software installed. The DVD must be formatted. Currently, the program supports at least the following DVD recording software:

- Roxio DirectCD — optional component of Roxio Easy CD Creator;
- Ahead InCD — available on Nero website freely for Ahead Nero Burning Rom users (usually bundled with Nero);

- Veritas DLA and all its OEM versions (e.g. HP DLA);
- Pinnacle InstantCD/DVD

In general, the program also supports all other DVD UDF burst recording software, but the aforementioned applications were tested by Acronis for compatibility with Acronis True Image OEM Edition.

To enable image recording to DVD in Acronis True Image OEM Edition, you should do the following:

- Install DVD UDF recording software.
- Format DVD disks. DVD+RW and DVD-RW disks can be formatted in any of the aforementioned applications, while DVD+R formatting is currently supported by Roxio DirectCD only.
- Run Acronis True Image OEM Edition, insert a formatted DVD into your DVD+RW or DVD-RW drive and create an image. No other special actions are required.

Images stored on DVD can be restored under Windows and when Acronis True Image OEM Edition is loaded from its boot disk.

There is another way to burn an image to DVD. Using Acronis True Image OEM Edition, you can create an image on your hard disk and burn it using the installed DVD recording application to a DVD disk afterwards. You will be able to restore images from such disks under Windows and when Acronis True Image OEM Edition is loaded from the bootable media.

8.3 Technical support

Users of legally purchased copies of Acronis True Image OEM Edition are entitled to free e-mail technical support from Acronis. If you have installation or working problems that you can't solve by yourself using this manual and the readme.txt file, e-mail the technical support team.

Before you do this, you will have to register your copy at http://www.acronis.com/registration/ or by mail.

When e-mailing technical support, you must provide the number of your Acronis True Image OEM Edition copy bundled with the program. This number is made up of five sets of five characters separated by hyphens; there is a total of 25 letters and numbers.

For more information visit http://www.acronis.com/support/

Technical support e-mail address: support@acronis.com.

Appendix A. Partitions and file systems

A.1 Hard disk partitions

The mechanism that allows you to install several operating systems on a single PC or to carve up a single physical disk drive into multiple "logical" disk drives is called **partitioning**.

Partitioning is performed by special applications. In MS-DOS and Windows, these are FDISK and Disk Administrator.

Partitioning programs perform the following:

- create a primary partition
- create an extended partition that can be split into several logical disks
- set an active partition (applied to a single primary partition only)

Information about partitions on a hard disk is stored in a special disk area – in the 1st sector of cylinder 0, header 0, which is called the partition table. This sector is called the master boot record, or MBR.

A physical hard disk might contain up to 4 partitions. This limit is forced by the partition table that is suitable for 4 strings only. However, this does not mean you can have only 4 operating systems on your PC! Actually, existing applications called disk managers support far more operating systems on disks. For example, Acronis OS Selector enables you to install up to 100 operating systems!

A.2 File systems

An operating system gives the user the ability to work with data by supporting some type of **file system** on a partition.

All file systems are made of structures that are necessary to store and manage data. These structures are usually composed of operating system boot sectors, folders and files. File systems perform the following basic functions:

- track occupied and free disk space (and bad sectors, if any)
- support folders and file names
- track physical location of files on disks

Different operating systems use different file systems. Some operating systems are able to work with only one file system while others can use several of them. Here are some of the most widely used file systems .

A.2.1 FAT16

The FAT16 file system is widely used by DOS (DR-DOS, MS-DOS, PC-DOS, PTS-DOS and other), Windows 98/Me, and Windows NT/2000/XP operating systems and is supported by most other systems.

Main features of FAT16 are the file allocation table (FAT) and clusters. FAT is the core of the file system. To increase data safety, it is possible to have several copies of the FAT (there are usually two of them) on a single disk. A cluster is a minimum data storage unit in FAT16 file system. One cluster contains a fixed number of sectors. FAT stores information about what clusters are free, what clusters are bad, and also defines in which clusters files are stored.

The FAT16 file system has a 2GB limit that permits a maximum 65,507 clusters that are 32Kb in size. (Windows NT/2000/XP support partitions up to 4GB with up to 64Kb clusters). Usually the smallest cluster size is used to make the total cluster amount within the 65,507 range. The larger a partition is, the larger its clusters are.

Usually the larger the cluster size, the more disk space is wasted. A single byte of data could use up one cluster, whether the cluster size is 32Kb or 64Kb.

Like many other file systems, the FAT16 file system has a root folder. Unlike others, however, its root folder is stored in a special place and is limited in size (standard formatting produces a 512-item root folder).

Initially, FAT16 had limitations on file names. They could only be eight characters long, plus a dot, plus three characters of name extension. However, long-name support in Windows 95 and Windows NT bypasses this limitation. The OS/2 operating system also supports long names, but does so in a different way.

A.2.2 FAT32

The FAT32 file system was introduced in Windows 95 OSR2. It is also supported by Windows 98/Me/2000/XP. FAT32 is an evolved version of FAT16. Its main differences from FAT16 are 28-bit cluster numbers and a more flexible root, whose size is unlimited. The reasons FAT32 appeared are the support of large hard disks (over 8GB in capacity) and the impossibility to implement any more complex file system into MS-DOS, which is still the base for Windows 98/Me.

The maximum FAT32 disk size is 2 terabytes (1 terabyte, or TB, is equal to 1024 gigabytes, or GB).

A.2.3 NTFS

NTFS is the main file system for Windows NT/2000/XP. Its structure is closed, so no other operating system is fully supported. The main structure of NTFS is the MFT (master file table). NTFS stores a copy of the critical part of the MFT to reduce the possibility of data damage and loss. All other NTFS data structures are special files. NTFS stands for NT File System.

Like FAT, NTFS uses clusters to store files, but cluster size does not depend on partition size. NTFS is a 64-bit file system. It uses unicode to store file names. It is also a journaling (failure-protected) file system, and supports compression and encryption.

Files in folders are indexed to speed up file search.

A.2.4 Linux Ext2

Ext2 is one of the main file systems for the Linux operating system. Ext2 is a 32-bit system. Its maximum size is 16TB. The main data structure that describes a file is an i–node. A place to store the table of all i-nodes has to be allocated in advance (during formatting).

A.2.5 Linux Ext3

Officially introduced with its version 7.2 of the Linux operating system, Ext3 is the Red Hat Linux journaling file system. It is forward and backward compatible with Linux ext2. It has multiple journaling modes and broad cross-platform compatibility in both 32- and 64-bit architectures.

A.2.6 Linux ReiserFS

ReiserFS was officially introduced to Linux in 2001. ReiserFS overcomes many Ext2 disadvantages. It is a 64-bit journaling file system that dynamically allocates space for data substructures.

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