

 O&O DiskImage 6

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Rev. 6/8/2011 1:46 PM

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## About O&O DiskImage 6.0

Thank you for choosing O&O DiskImage!

This is something you probably know all too well: how suddenly important data can be lost as a result of a system crash or viral attack. O&O DiskImage is the ideal tool for quickly and easily taking the trouble out of such inconveniences! O&O DiskImage enables the convenient duplication or archiving of entire operating systems and individual disks. It even supports dynamic drives and RAID systems.

Create image files of your drives on a regular basis and you'll be fully protected against data loss!

You can customize the imaging methods to suit your own individual needs. Even a 1:1 image of your system or user-defined images are possible. O&O DiskImage features many other options for creating and restoring images exactly the way you'd like. As a result of the special O&O DiskImage program settings, a substantial amount of computer performance is saved, allowing you to continue working on your PC parallel to the imaging!

The following chapters will explain how you can get started and obtain the optimum usage from O&O DiskImage.

We hope you enjoy our product and that it saves you valuable time, both at work and at home!

Yours O&O Software

<http://www.oo-software.com>

### Quick Start

[One-click imaging - Create an image of the entire computer](#)

[Image individual drives](#)

[Image single files and folders](#)

[Restore drives](#)

[Restore single files and folders](#)

**Note:** The Start CD, designed for running O&O DiskImage without an operating system and for restoring a system partition, is not included in the Special Edition.

## Differences between the three Editions

O&O DiskImage 6.0 is available in three Editions:

- O&O DiskImage 6.0 Professional Edition
- O&O DiskImage 6.0 Workstation Edition and
- O&O DiskImage 6.0 Server Edition

The Professional Edition is intended for imaging a desktop computer or individual drives. It cannot be used on a Server operating system and has no network capabilities.

The Workstation Edition contains interfaces for running O&O DiskImage across a network in conjunction with O&O Enterprise Management Console 2. The Workstation Edition can only be applied on desktop computers.

The Server Edition contains interfaces for running O&O DiskImage across a network in conjunction with O&O Enterprise Management Console. It can be used on both Servers and Workstations, the latter making more sense when the administrator wishes to control and monitor the defragmentation process from his computer.

## Additional properties of the Workstation and Server Editions

You can run the following network functions when using O&O DiskImage Workstation and Server Editions in conjunction with O&O Enterprise Management Console:

- Images of the entire business network
- Manage your computers in sites
- Define settings for sites
- Plan a schedule for the automatic imaging of computers or sites across a network, with just a few clicks of the mouse
- Automatic remote installation of O&O DiskImage on network computers
- Execute Windows commands (batches) before and after the running of a job across a network

The O&O Enterprise Management Console is part of your software delivery when you have acquired licenses in the O&O EasyLicensing volume license program. We will happily advise you on applying O&O Enterprise Management Console in your company.

E-Mail: [sales@oo-software.com](mailto:sales@oo-software.com)

## General Terms and Definitions

To simplify working with O&O DiskImage, certain terms will be explained in the following chapters:

### Drive/Partition

A drive is a reserved area of the hard disk. Multiple drives can be found on a hard disk. In the following text, the term "drive" will be used to depict (single) partitions as well as logical drives in extended partitions and volumes.

Drives are used, for example, to separate documents from programs. A division in two partitions has become generally accepted:

- Drive C: for operating systems and programs
- Drive D: for documents, e.g. photos, Office documents, music, etc.

This, for example, facilitates the division of data and system images with O&O DiskImage.

### Image

An image is a "mirror" of your drive (partitions). This "copy" contains all information taken from the original. A special feature of an image is that the file format is specially compressed and takes up much less disk space than the original. The more often you create images of your drive, the less you need worry about data loss. Should data on the original drive be lost or damaged, you can restore your last image with all its data onto your computer. With just a few mouse clicks, you can recover the original status of your drive before the last imaging.

An image can be made up of multiple [image files](#) (\*.omg). For example if one disk is not sufficient to store the image and more are needed, e.g. CD/DVDs.

The term image is also used in a wide sense for file backups.

### Difference File backup and Drive image

Files are backed up directly in the form of data. This type of image includes only file information, no drive information is imaged. The file format is OBK (\*.obk).

A drive image stores all used or all sectors of a drive. This automatically also creates an image of the file system and all files and folders. The file format is OMG (\*.omg).

## Image file

An image can be made up of one or more image files (\*.omg). If, for example, the disk where you want to save the image isn't large enough, you can split the image onto multiple disks. When you split your image onto several disks, a new image file will be created on each disk and together, these image files will be parts of one entire image. It's important to number the disks (CD/DVD) in case you want to later restore a drive using the image, or use it as a base for an incremental imaging.

## File formats

O&O DiskImage creates its own file formats for their images, but it can also process other file formats.

### File format OMG

O&O DiskImage creates images with the file extension (\*.OMG) of your entire computer or single drives. This file type can be used for further activities by O&O DiskImage, such as restoration, validation or conversion.

### File format OBK

While creating a file backup using O&O DiskImage, the files and folder are compressed and stored as OBK file (\*.obk). An advantage of the OBK files are that they can also use and unpack the data included with a decompression program like for instance WinZip. They don't necessarily need O&O DiskImage to be unpacked. Encrypted file backups are the exception. They can only be processed with O&O DiskImage.

### File format VHD

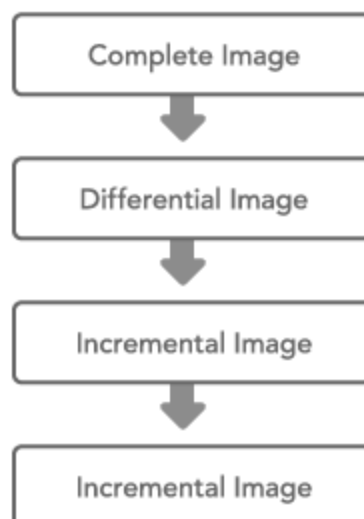
O&O DiskImage is able to create and edit file formats for virtual computers (VPC/VM-Ware). In that way, you can also mount a drive from an image to a virtual drive in the VPC or your VW-Ware.

## Complete image

Using the Complete image method, the data selected for imaging will be imaged all over again and stored in a folder on the target disk. Complete images can be created using the "Used sector", "Forensic", or "Direct forensic" methods.

## Differentiation: Image of the changes

If you only want to image changes of your hard disk or drives, you need to have created [complete image](#) previously. Changes made can be saved as [differential](#) and [incremental](#) images.



## Connection between image types

### Incremental images

Incremental images only store the changes made since the last [base image](#). As a rule, data is compared using checksums in O&O DiskImage, so that the incremental image does not require a [complete image](#) as base image. The last incremental or differential image is sufficient for this. To restore an incremental image, you need the last complete image as well as all the following images recording any changes.

### Differential images

Differential images compare present data with the last complete image and store only the changes. The first "successive" image after the complete image is always a differential image. To restore a differential image, you will need both the complete image and the differential image.

### Base image

A base image is an image that serves as a basis for any further image of the changes. Differential images require a complete image as a base image. Incremental images can usually be made using the last image of the changes as their base image. It's possible, for example, to use a differential image as a base image for an incremental image. In this way, an incremental image can also serve as base image for further incremental images. Also see picture in chapter [Image of the changes](#).

## System requirements

- The system requirement of each operating system have to be fulfilled
- 30 MB free hard disk space
- Supports 32 and 64-bit operating systems
- Windows® XP till Windows® Server 2008 R2 (all editions):

	<b>Professional Edition/ Special Edition</b>	<b>Workstation Edition</b>	<b>Server edition</b>
Windows® 7	yes	yes	yes
Windows® Vista®	yes	yes	yes
Windows® XP	yes	yes	yes
Windows® Server 2003	no	no	yes
Windows® Server 2008	no	no	yes
Windows® Server 2008 R2	no	no	yes

**Note:** For booting with the Start CD at least 1GB RAM is necessary.

**Note:** When using O&O DiskImage, please make sure that the disk drivers needed by your operating system are all the most current versions available. If you're unsure about this, refresh the driver(s).

### Access permissions

In order to install and register O&O DiskImage you must be a member of a local administrator group or possess an equivalent level of permissions. Domain administrators normally already possess these permissions.

## Features at a glance

O&O DiskImage is a reliable and affordable solution for protecting your private or professional data. O&O DiskImage offers everything you need to professionally protect your data: from the imaging and restoration of entire Server systems up to the restoration of individual files.

### New functions

In addition to the on-going perfecting of existing program components, you'll find several additional new and helpful features in Version 6.0.

#### Monitoring your drives

In the control center of O&O DiskImage you get an overview of the security status of your drives.

If you have not created an image before, you will receive a security warning. This is also valid for drives, where the last imaging took place more than 10 days ago. In only a couple of steps you can image your security critical drives easily and comfortably. In this way, you are protected against data loss at all times.

#### File backup

O&O DiskImage makes it possible to backup and restore single files and folders. O&O DiskImage creates an image file (\*.obk) of the selected folders and files during a file backup. If you need the files and folders from the image, you can use or unpack the image file with the help of O&O DiskImage or a decompression program, such as WinZip. You don't necessarily need O&O DiskImage to unpack the OBK file.

Compared to a drive image, the file backup does not store the drive information. The advantage of a regular "Backup" of your files is that the backup takes up much less time. In addition, you can create a job to schedule regular backups. Regular backups ensure that your file backups are constantly updated and thus secure.

#### Better user guidance

O&O DiskImage is always adapted to current user habits. In the newest version, you will be warned by the control center if data loss is at stake, whenever your drives not been imaged for some time or not at all.

The Quick access bar contains often used functions. You will easily be able to reach all important functions from there, e.g. drive image and restoration. You can use advanced functions via the menu bar of O&O DiskImage.

#### Mount files from ISO file

You have the possibility to mount a ISO file as drive. The ISO file will be treated as a separate drive. You can see and use the contents of the ISO file in the Windows-Explorer. This is helpful, if you download an ISO file for a program installation. Instead of burning the ISO file on CD, to run the installation, you will now be able to mount the ISO file as drive with O&O DiskImage, start the Setup and run the installation.

#### Start CD is based on Windows Server 2008 R2

The Start CD is based on the most current Windows technologies. All needed Windows drivers are included so that no manual installation is necessary. If additional drivers are needed for certain devices, you can easily download them using the integrated O&O DriverLoader before the program start.

## Image

You can create images of entire systems, single drives and certain files and folders with O&O DiskImage, without being kept from your work. The Snapshot function with integrated buffer memory ensures that the imaged data is remains exactly as it was when the image started to be created: changes to the data caused by usage or the user do not affect the image while it's being created. This ensures consistent images of systems without any interruptions.

Once you have an image, all your data and the installed environment is available immediately if ever you have a problem. And thanks to the O&O DiskImage Start CD (BareMetal-Technology), this is also possible without any previous installation.

\* Imaging and restoring Server systems is only possible with the O&O DiskImage Server Edition.

### One-click imaging

The one-click imaging is the fastest and easiest way to create a complete image of your computer including all data and settings. One-click imaging is especially useful if you are using O&O DiskImage for the first time, or have not yet created an image of your computer.

### Imaging complete disks

You can create an image of one or more disks, e.g. hard disks. All drives located on the disk will be automatically imaged. The following disk types are supported by O&O DiskImage:

- Imaging MBR disks
- Imaging GPT disks
- Imaging dynamical disks

### Imaging single drives

You are not only able to image entire hard disks, but also individual drives. This incorporates the hard disk layout. You can create images of the following drive types using O&O DiskImage:

- Imaging individual partitions and volumes.
- Imaging primary, extended and logical partitions.
- Imaging simple, spanned, mirrored volumes.
- Imaging the system areas
- Imaging the Master boot records (MBR)
- Imaging the system partitions (e.g. Microsoft reserved partition)
- Imaging of encrypted partitions, volumes or hard disks (e.g. SafeGuard easy of Ultimaco, TrueCrypt or Microsoft Bitlocker)
- Storing of a combination from the above mentioned objects (various hard disks, partitions, volumes or similar in an image)

### Different imaging methods

Different imaging methods allow the image to be adjusted for different purposes. You get a space saving image, if you select the setting "only used sectors". If you want to rescue data from a damaged hard disk, then we recommend a forensic image - all sectors are imaged exactly according to their structure. This enables a later data rescue with special software e.g. O&O DiskRecovery, without affecting the original disk.

- Imaging the used sectors of drives (partitions/volumes) - unencrypted data are gathered in the image.
- Complete image of all sectors of the object to be imaged (forensic image)
- Direct forensic image - encrypted data is also gathered in the image.

After a basic imaging, you can create the following images as incremental or differential to store only the changes:

## Features at a glance

- Incremental image - the changes of the previous images and the current disks are gathered.
- Differential image - the changes between the first image and the current status of the disk are gathered.

## Save image

After creating the image, you can save it on all Windows recognized disks. You only need to enter the network path before starting the imaging process. The following destinations can be used to store the images:

- Local drives
- External USB or firewire hard disks
- Drive/Folder in the network
- Storing images as ISO files to burn them later

## Integrated burn function

Besides the burn function, O&O DiskImage supports CD/DVDs, Blue-Ray Disks and HD/DVDs. You also create ISO files from your images.

**Note:** Before being able to burn an image (\*.omg) onto an optical data carrier, you need to buffer it. It is not possible to burn a volume during its imaging.

## Edit image file

Further editing possibility are available:

- Merging complete images of different data carriers to one image file
- Merging incremental/differential images
- Manual and automatic separation of images
- Extracting image objects of images
- Changing the encryption and/or compression method of an image
- Changing the size of the image, by dividing or merging individual images

## Compress image

To save even more space, you can also compress an image. Besides LZNT1- it is also possible to compress an image in BZIP2.

## Encryption

You can encrypt the image using the AES algorithm (128, 192, 256 Bit) to block access for unauthorized persons.

## Exclude files

If you want to exclude certain files from the imaging process, you can specify O&O DiskImage, to exclude them during the imaging process (Wildcards not possible for the exclusion).

## Process virtual hard disks (VHD)

To simplify the work with Microsoft Virtual PCs (VPC), you can now convert images into virtual drives (VHD). The converted image can be included as a virtual drive in the VPC, without having to install O&O DiskImage there. Also, images (OMG) can be created from virtual drives (VHD) of the VPCs, or can be restored directly.

## Mount image as virtual drive

- Mount image as virtual drive/hard disk.
- Unmount virtual drive/hard disk



## Features at a glance

### **Check image**

To make sure that your image was created correctly or can be restored without errors, you can validate your image file. You can also check the disk to be image before the process is run with the Check disk function.

### **Email notification on the progress of the activity**

The notification feature is an option that will keep you informed about the status of a task such as the running of a job. You'll also be notified immediately about errors so that you can identify and resolve them faster.

## Restoration

Restoring your data is as easy as creating an image. If you want to restore image drives, you only need to start O&O DiskImage under Windows.

For the restoration of your entire computer or the system partition, you will need to use the Start CD of O&O DiskImage. The Start CD is included in the Box version. If you bought the program electronically, you will receive the ISO file via Email, in order to create your own Start CD/DVD. O&O DiskImage starts directly from there without a previous installation. The additional integrated system rescue tools also offer the chance to restore the original system and identify mistakes.

### Restoring entire disks

O&O DiskImage can also assist you when installing/configuring new acquired computers. After configuring your computer, create an image of your entire system and do this for as many computers as you have Windows licenses:

- Restoration of an entire storage volume
- Restoration to or as MBR disks
- Restoration to or as GPT disks
- Restoration to or as dynamic disks

### Restoring single drives

O&O DiskImage enables you to restore single drives from existing images. It doesn't matter how many drives were included in one image. The following drive types can be restored from an image:

- Restoration of single drives (Partitions/volumes)
- Restoration of primary, extended and logical partitions
- Restoration of simple, spanned, mirrored volumes
- Restoration of the system areas
- Restoration of the Master boot records (MBR)
- Creating system partitions (e.g. Microsoft reserved partition)
- Exclusive restoration of the Master boot records (MBR)
- Restoring a combination from the above mentioned objects (various hard disks, partitions, volumes or similar in an image)

### Mount drives from images

You can also restore single files from an image fast and easy. Mount drives from images as virtual drives. Doing this will allow you to copy files and folders from the image onto existing drives. Making changes to the image, however, such as deleting or adding files, is not possible.

### Modifications for the restoration

Several settings can be specified for the restoration. Depending on the application, you can adapt the restoration to your needs.

- Bare Metal restoration, including bootable disk, which includes Windows PE.
- Restoration of multi boot systems
- Restoration of encrypted partitions, hard disks from a direct forensic image
- Image Restoration with damaged or missing parts, e.g. due to disk loss or disk errors
- Restoration of damaged images, if the structural integrity of the image is ok, e.g. due to purposeful destruction or disk errors.
- Direct restoration of a Microsoft Virtual PC Disk (VHD)
- [M.I.R.](#) (Machine Independent Restoring) Adapting to different hardware

## Bootable disks

The bootable disk contains Windows PE with all default drivers, which are necessary to run O&O DiskImage without installation and without Windows operating system. This enables you to for instance run a system restoration, which is not possible otherwise.

- Bootable disk to use O&O DiskImage without prior installation, including useful system rescue programs from O&O BlueCon
- Windows based interface - O&O Tasktray and Start menu as well as program shortcuts
- Loading drivers for hardware, which is not recognized immediately, e.g. Hard disk controllers or network card drivers
- O&O FileExplorer for the file and folder management (Create, delete, copy, moving folders and/or files)
- O&O SRP-Manager to manage existing system restore points (Only for Windows XP)
- O&O RegEditor to display and change the Windows system registry
- O&O DiskManager for the management of your hard disk(s)

## Machine Independent Restoration (M.I.R.)

The Machine Independent Restoration technology (M.I.R.) offers the possibility to restore an image, containing the system partition onto a computer, where the hardware is different from the one imaged. This means that a restoration of a system image or clone can be carried out not only on devices with identical hardware, but on those where, for example, the motherboard or processor has been replaced.

## Adapt size of the target drive for restoration and cloning

If the target for the restoration or cloning is an empty area, then the size of the target drives can be adapted to the actual data volume of the source drive by the user. When, for example, the drive being imaged has 5 GB but the data on it is only taking up half its space, a smaller drive of 3 GB, for instance, can be entered as a target during restoration.

## Cloning

Entire storage volumes or individual drives can be cloned, which in turn can be used instead of the originals. With this function you will generate clones from storage volumes or individual drives including the information on the hard disk layout with all data stored on it. You do, however, require a lot more storage space for a clone than for an image.

Unlike images, there are **no** incremental or differential clones possible for reducing the data volume of successive clones. In addition, a clone **cannot** be compressed or encrypted compared to an image.

### Cloning disks

You can create a clone from one or more drives, e.g. hard disk. This will clone all drives located on a hard disks. The following hard disks layouts are supported by O&O DiskImage:

- Cloning a hard disk
- Cloning to or as MBR hard disk
- Cloning to or as GPT hard disk
- Cloning to or as dynamic hard disk

### Cloning single drives

You are also able to clone single drives and not only complete hard disks. This incorporates the hard disk layout. The following cloning options are supported by O&O DiskImage:

- Cloning single partitions/volumes
- Cloning primary, extended and logical partitions
- Cloning simple, spanned, mirrored volumes
- Cloning the system areas
- Cloning the Master boot records (MBR)
- Exclusive cloning of the Master boot records (MBR)
- Storing of a combination from the above mentioned objects (various hard disks, partitions, volumes or similar in an image)

### Modifications for cloning

You can make various adaptations for the cloning process. They will be specified in parts automatically, but can also be specified. The following adaptations can be specified:

- Buffering the original data before a change (Snapshot)
- Automatic conversion of the free areas to a spanned partition, if the areas are larger than the partition to be cloned and no spanned partition exists.
- MIR (Machine Independent Restoration), adapting of different hardware of the clone.

## Management functions

The management function offers several possibilities to adapt O&O DiskImage to your individual requirements and automate activities.

### Express view

The Express View shows a very compact user interface with the main functions of the programs. You can use the Express view for creating and mounting images as well as for restoring drives. Individual functions of the Express view can also be manually disabled so that another user won't be able to use a particular feature.

### Run scheduled activities

O&O DiskImage enables a time schedule execution of activities. With the help of a useful Wizard you can set that the data will be imaged regularly at predefined times. Further settings for the scheduling:

- Manage, change, manually start stored jobs following a schedule
- Automatically create images of the hard disks, drives (Partitions/Volumes)
- Automatic creation of incremental images
- Automatic checking of images
- Automatic creation of differential images

### Report management and notification

- Detailed reports with complete description of the process.
- List of the selected parameter/settings
- Email notification via SMTP (Simple Mail Transfer Protocol, without SSL encryption) after the job processing

### Work in the network

O&O DiskImage gives you the option of saving images on network drives. The only thing this requires is Network authentication. A detailed explanation of authentication can be found in the chapter [Network authentication](#).

The special feature of O&O DiskImage Workstation and Server Edition is the interface with the O&O Enterprise Management Console. You can install and plan your jobs for O&O DiskImage from one central location within the network.

### Scripting ability

The O&O DiskImage Command Interpreter makes it possible to manage storage volumes, partitions, or volumes and images with the assistance of command files (XML documents). All directly or indirectly displayed scenarios by O&O DiskImage can in that way be re-enacted. An overview of all commands and their possible uses can be found as a PDF document on the O&O website or requested from our [Support](#).

**Note:** This function is only available for the **Workstation and Server Edition**.

### Manage computer identity

With O&O DiskImage you can change the identity of a computer to avoid authentication problems, e.g. avoid the same computer identity on two computers. This might be helpful when creating several system images in a network.

- Change the computer name of an shut down operating system
- Change the SID, Security ID, of a shut down operating system
- [M.I.R.](#) (Machine Independent Restoration) Adapting to different hardware (from a shut down operating system)

### **Supports the most current technologies**

O&O Software is always en par with the newest on technology. All current Windows systems and 64-bit versions are supported, so that the creation of images and their restoration can be run as fast as possible.

### **User Interface (GUI)**

- Function oriented user guidance to allow less interactions to reach your target
- Pre-defined and your own created option profiles to complete various returning jobs faster
- Windows Explorer - Extension to directly load imaging files or to remove loaded drives
- Windows Explorer - Extension to directly read the properties of a image file
- Minimizing the user interface of a TrayIcon in the info area of the start page
- Graphical interactive drive overview: Overview of the division of the hard disk, free and used space as well as the size of individual partitions.
- Autark Tray application generate information on the service activities and job status.
- Status display of time elapsed and expected time for an activity

## Installation and registration

Installing O&O DiskImage is very straight forward. Please follow the steps below:

1. Start the computer on which you would like to install O&O DiskImage.
2. Login as local administrator or as a user possessing comparable permissions.
3. Start the installation file for O&O DiskImage, which you have either downloaded from our Server or have on your personal CD ROM.
4. After the setup program has been successfully initialized, please follow the installation dialog.
5. When prompted, restart your computer.

**Note:** Please make sure that no other backup or imaging software is installed on your computer when installing or working with O&O DiskImage. This can lead to complications with the filter driver, especially when different software is working simultaneously on multiple drives.

## Information about licensing

You can test O&O DiskImage for 30 days free of charge and with no obligation. The remaining trial period will be displayed each time you start the program.

If you would like to implement O&O DiskImage in your company or as a technician for your customers, then please contact our resellers or distributors.

## Enter license

**Note:** In order to [Enter license](#) activate the product after installation or to gain access to the Full Version at a later time, you must possess a valid license key. This license key is also called a registration code, serial number, or product ID.

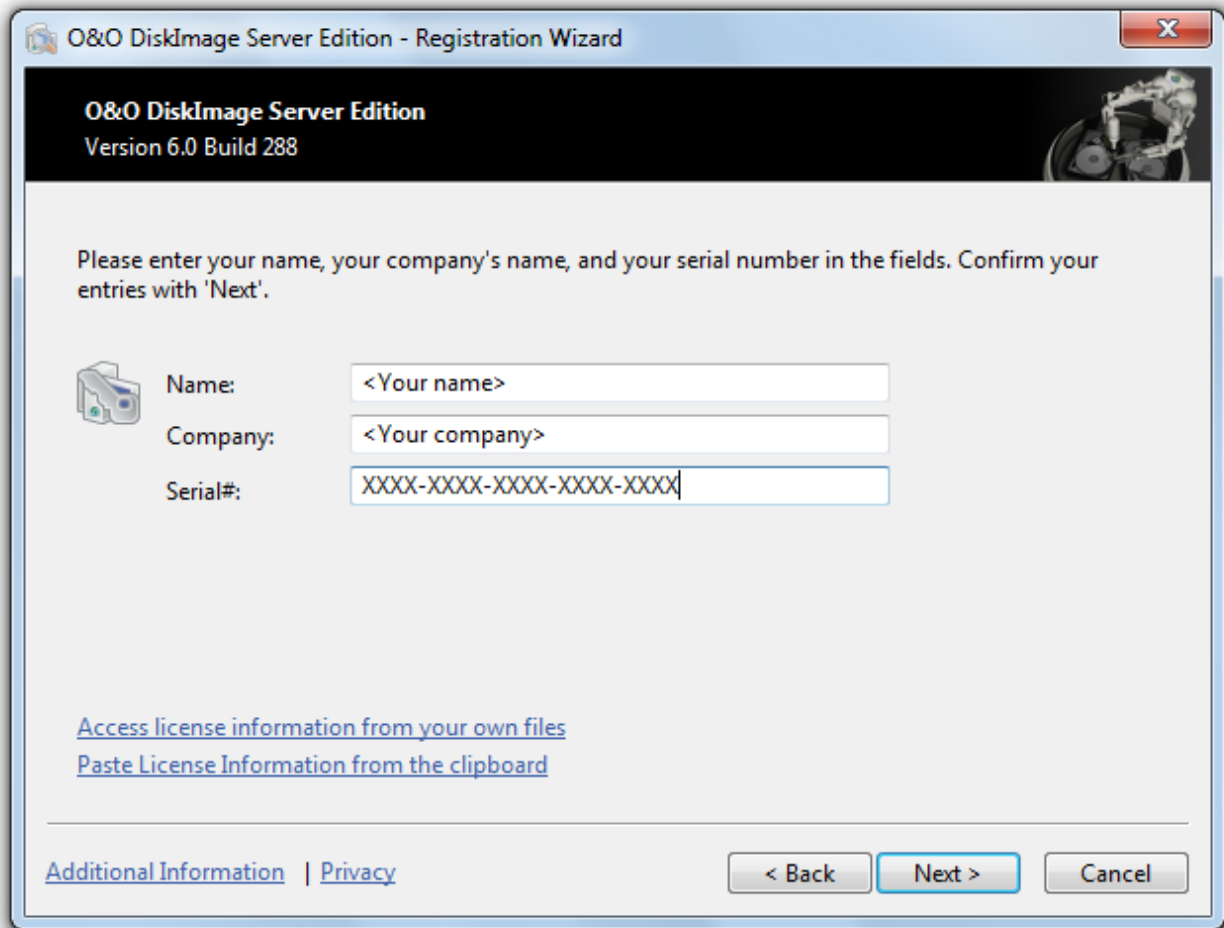
The dialog for registration always appears automatically at the start to guide you if you are using an unregistered version or have entered the registration code incorrectly.

The registration wizard allows for a simple registration process.

When you select the option **I want to enter my license**, a dialog box will appear where you can enter the registration code you received when purchasing the software.

- If you have purchased the **download version** of the software, please enter the license information ("Name", "Company" and License key), just as they are written in the confirmation E-Mail you received.
  - If you have purchased the **box version** of the software, please enter the license key as it is written on the license card included. In addition, please enter your name and if needed your company.
1. Please make sure that you do not confuse the digit "1" with "l" or enter any empty spaces where they don't belong.
  2. Press **Next** to save the registration data or **Cancel** to leave the dialog window without saving the data.
  3. When you have correctly entered the license code you will receive a confirmation in the dialog window.

Should you run into any problems when entering your registration code, please contact our Support Team.



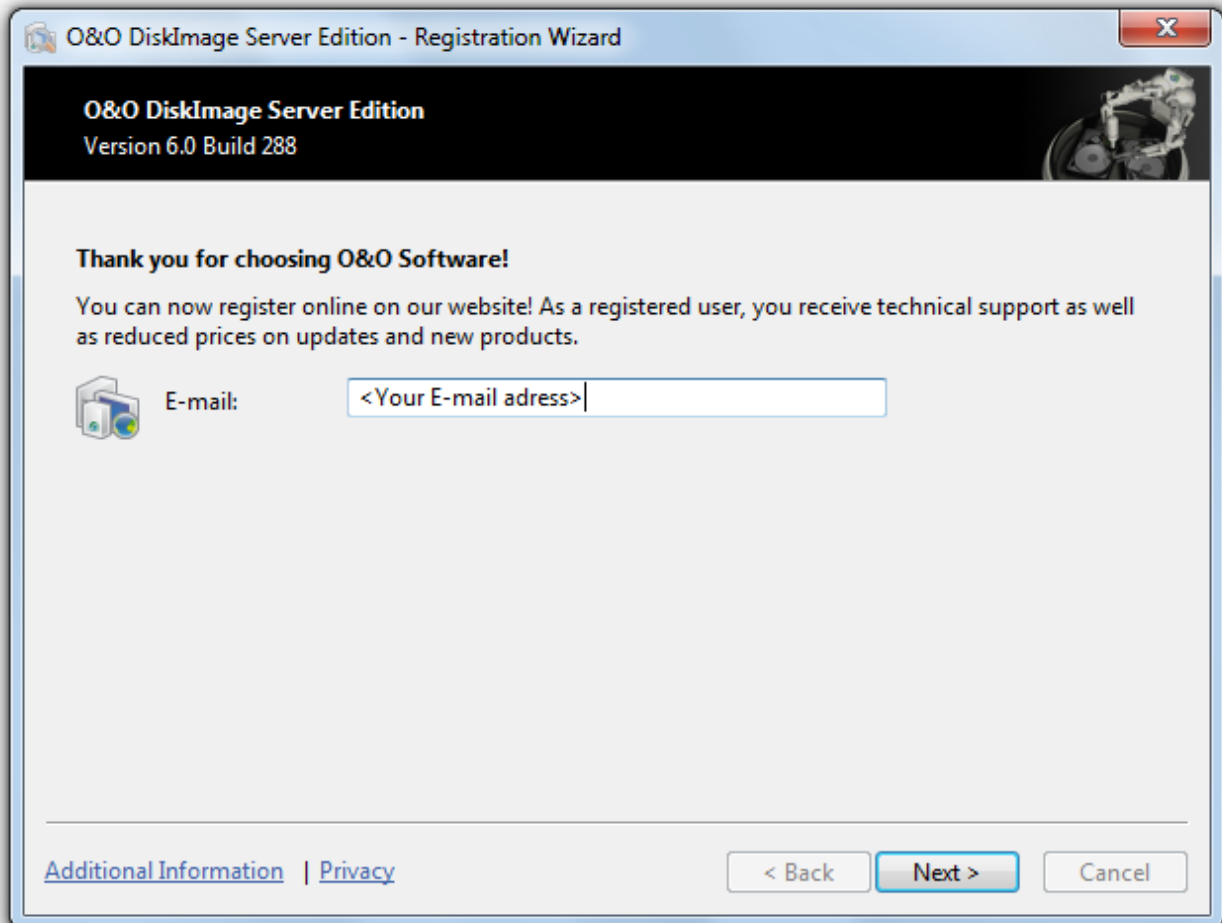
Registration wizard: Enter the license key



## Online registration

To register O&O DiskImage online, you'll need the license key you received when you purchased the program.

To register online, start O&O DiskImage. The questions related to online registration always appear at the start, provided you haven't registered online.



Online registration

### What are the advantages of online registration?

Online registration gives you the benefit of having your customer data kept safely in our files, which means we can provide you with even better service. If, for example, you accidentally lose your license key, we can quickly resend it to you without any problem. The license key is needed for using the full version of a program, getting updates, and for reinstalling the program when you make a new setup of your computer.

Further advantages will let you:

- Be supplied with the latest information about our products
- Make free updates on new versions of purchased items (minor updates)
- Upgrade to a new version at a special discount price (major update)
- Obtain support from our customer service

## How do I register online?

If O&O DiskImage was purchased on our Online Store, you've automatically registered with us. If O&O DiskImage purchased at a retailer, you will be asked if you want to register while entering the license information. You then have the option of either registering immediately or at another time. All you'll need is a functioning Internet connection and a valid license key.

You may also complete the registration form right here:

<http://www.oo-software.com/register>

Just return the completed online form by clicking "Send" and you'll be eligible to take full advantage of our O&O Customer Service.

## Uninstall

To remove O&O DiskImage from your computer, please follow the instructions below:

1. Open the **Control Panel** from the **Start menu** and select **Software**.
2. Select **O&O DiskImage** from the list of installed software programs and then click **Change**.
3. In the InstallShield Wizard click **Next**.
4. In the next dialog select the option **Remove program**.
5. Select **Remove the O&O DiskImage user data**, if you want to remove this together with the uninstallation.
6. Confirm the uninstallation of O&O DiskImage with **Remove**. You'll receive a confirmation notice when uninstallation is completed.
7. After a successful uninstallation, you'll need to restart the computer when prompted in order to apply all settings.

## Updates

In the menu bar under **Help/Check for Updates** you can check, if your program version is updated or a newer version is available.

If there is a new program version, you will be able to update your version. If you decide to upgrade, download the current program version from our website under ([Downloads](#)) and save the installation file on your computer.

**Tip:** Under **Help/About O&O DiskImage** you can see your license data and the number of your program version.

So-called "Minor Updates" (Version 5.0 to 5.1, 5.2, etc.), where smaller changes in the program have been made, are free. "Major-Updates", such as from version 5 to 6, must generally be purchased.

- Start the new installation by double-clicking on the new installation file and follow the dialogs.
- Your license data will normally be saved during Minor Updates so you won't have to enter them again after a successful installation. To be on the safe side, we do recommend keeping your license key for the current version within easy reach - just in case you run into trouble.
- "Major Updates" will require the new license that you receive upon purchasing the software.

To install an update, please do the following:

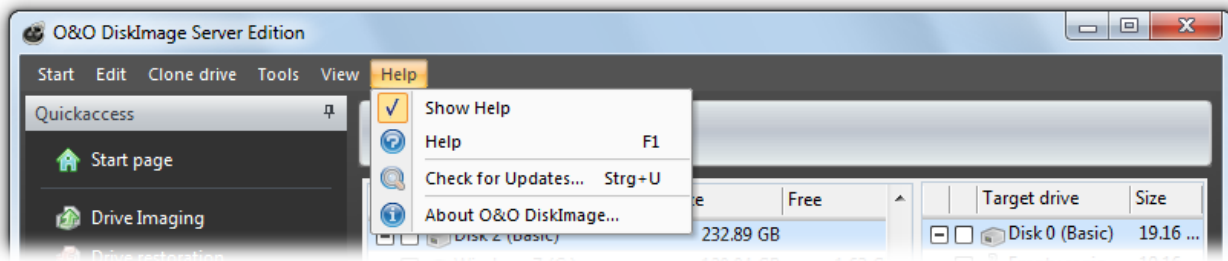
1. Double-click the O&O DiskImage installation file to start the new installation.
2. Follow the installation dialogs.
3. Once finished, the new version is fully installed.
4. Please restart your computer when prompted.
5. Please enter your license key in the Registration Wizard at the first start of O&O DiskImage. If you don't own a valid O&O DiskImage license key, you can use O&O DiskImage as a trial version for a limited time.

**Important!** If you are using Laplink DiskImage from a network and performing a major update, you will need to copy the password file if you want to use the automatic authentication. After a full installation and the restart, you will need to place the password file in the DiskImage default folder. After a restart, the password management has to be started and the password has to be entered for the password file. The required initializations will be run and automatic authentication continues to be possible.

## Program Help

You can either access the program help via the **Menu bar/Help** or by pushing F1.

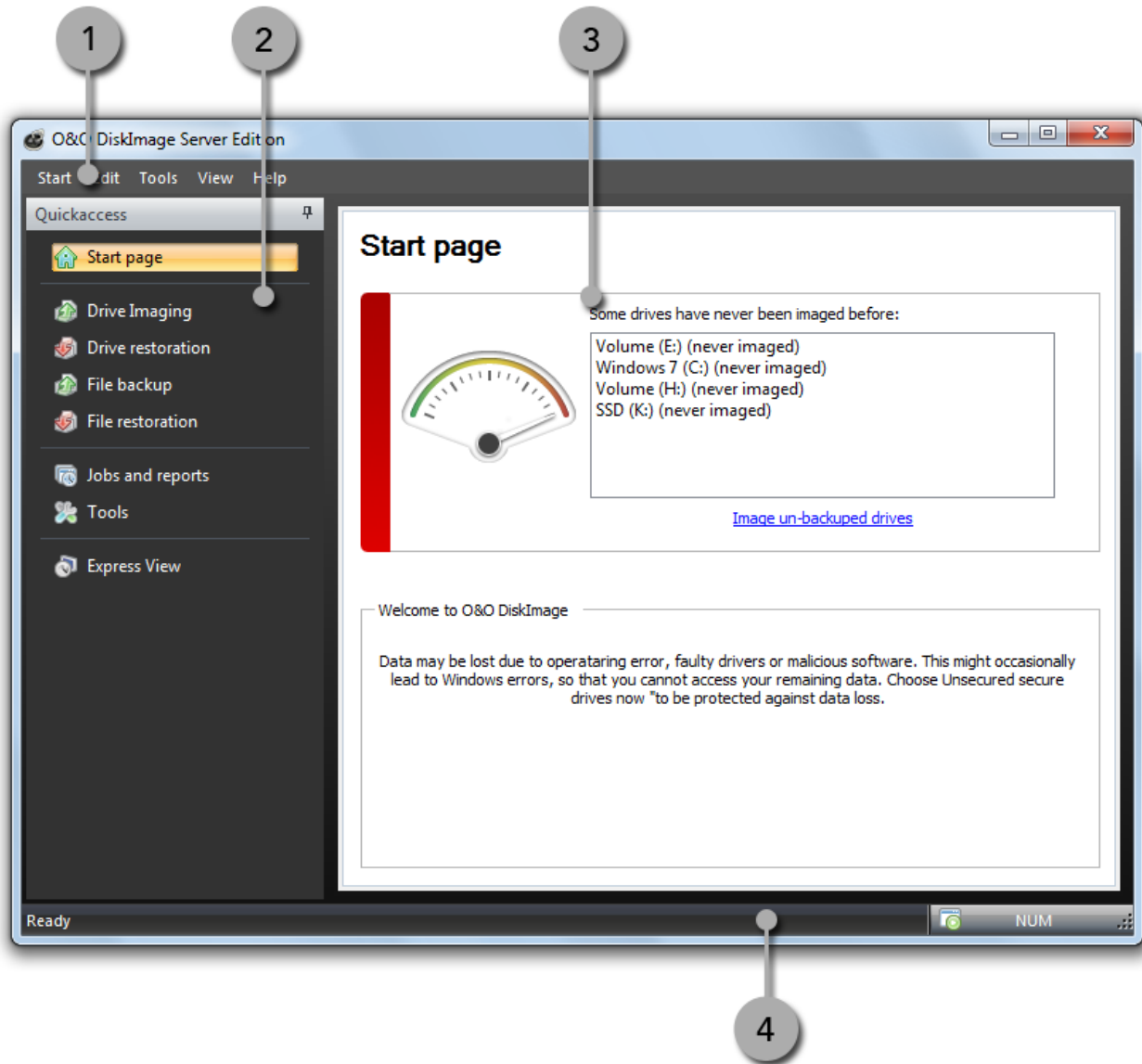
In the menu bar under **Help/Show Help** you can Hide or unhide the Quick Help in the Quick access bar.



# Quick Start

In this section we will explain how, after successfully installing O&O DiskImage, you can take images of drives or your entire computer and restore them back to your computer.

Start page of O&O DiskImage



- 1 Menu bar
- 2 Quick access bar
- 3 Activity window
- 4 Status bar

Start O&O DiskImage

- Start O&O DiskImage via the Desktop shortcut or via the Windows menu **Start/All Programs/O&O Software/O&O DiskImage/O&O DiskImage**.
- For the simplified view select **O&O DiskImage Express**(Express View).
- **O&O DiskImage Tray** starts the TrayIcon, which is shown in the info area in the task bar and informs you on the activity status of O&O DiskImage.

You can access the program help by clicking on **Help** in the menu bar in the tab Help or by pushing **F1**.

## Create images of all volumes un-imaged

Only regular images protect you against data loss. If you work a lot on your computer, data adds up every day. If an image has been created some time ago, your most recent files are not included in this last image.

In the control center (start page) of O&O DiskImage you will get an overview of un-imaged volumes or volumes, which haven't been imaged for some time. The color in the display interprets the time left, since the last image was created.

0 - 10 Days = Green

10 - 20 Days = GreenYellow

20 - 30 Days = Yellow

Over 30 Days = Orange

Never been imaged = Red

You can now easily protect yourself from data loss and prevent any loss with just a few clicks:

1. Click on **Image un-imaged volumes now**.
2. Then, check the entered target path for the image. We recommend to save the image on an external drive, e.g. USB hard drive.
3. Click on **Start** to continue with the imaging process. The process might take some time depending on the size of the drive.

**Note:** An image will be created of all listed drives with the default settings (Image of used sectors).

**Tip:** You can create the job so that your drive will be imaged regularly automatically. See chapter [Scheduling functions](#).

**Tip:** If you want to image your entire computer, you can also use the [One-click imaging](#).

## One-click imaging - Create an image of the entire computer

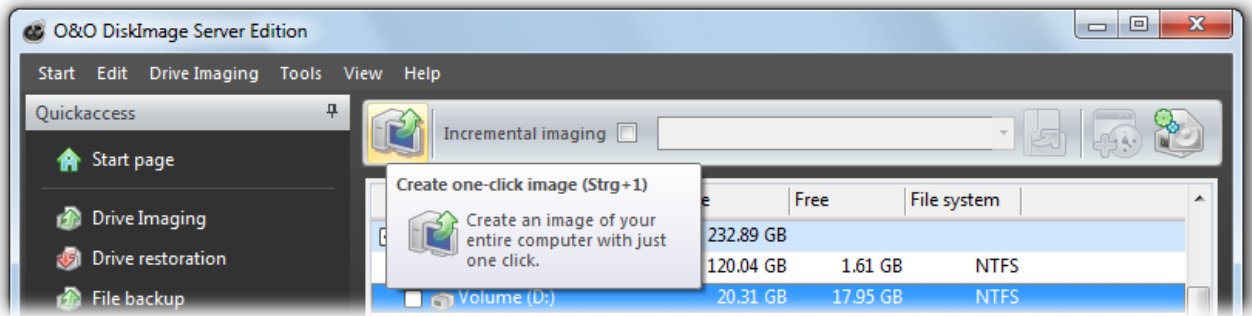
One-click imaging is the fastest and easiest way to create a complete image of all your data and settings. One-click imaging is especially useful if you are using O&O DiskImage for the first time, or have not yet created an image of your computer. Your entire computer including the system partitions are imaged with one click. The compression method (LZNT1) and the imaging method (imaging used sectors) are set as default.

**Note:** We recommend the use of an external storage, e.g. a USB hard disk or a network drive, volume as target folder for the 1 Click imaging.

1. Start O&O DiskImage and select **Drive imaging** on the Start page.
2. Now, click on the symbol **Create one-click image** in the activity bar.

## Quick Start

3. Then check to make sure the target path is set to your desired storage location. The [...] button allows you to navigate to any folder.
4. The image is automatically named after the creation date. You can however enter a name manually.
5. Click on **Start**, to initiate the imaging process. The imaging process can take some time depending on the size of the hard disk(s).



Select One-imaging

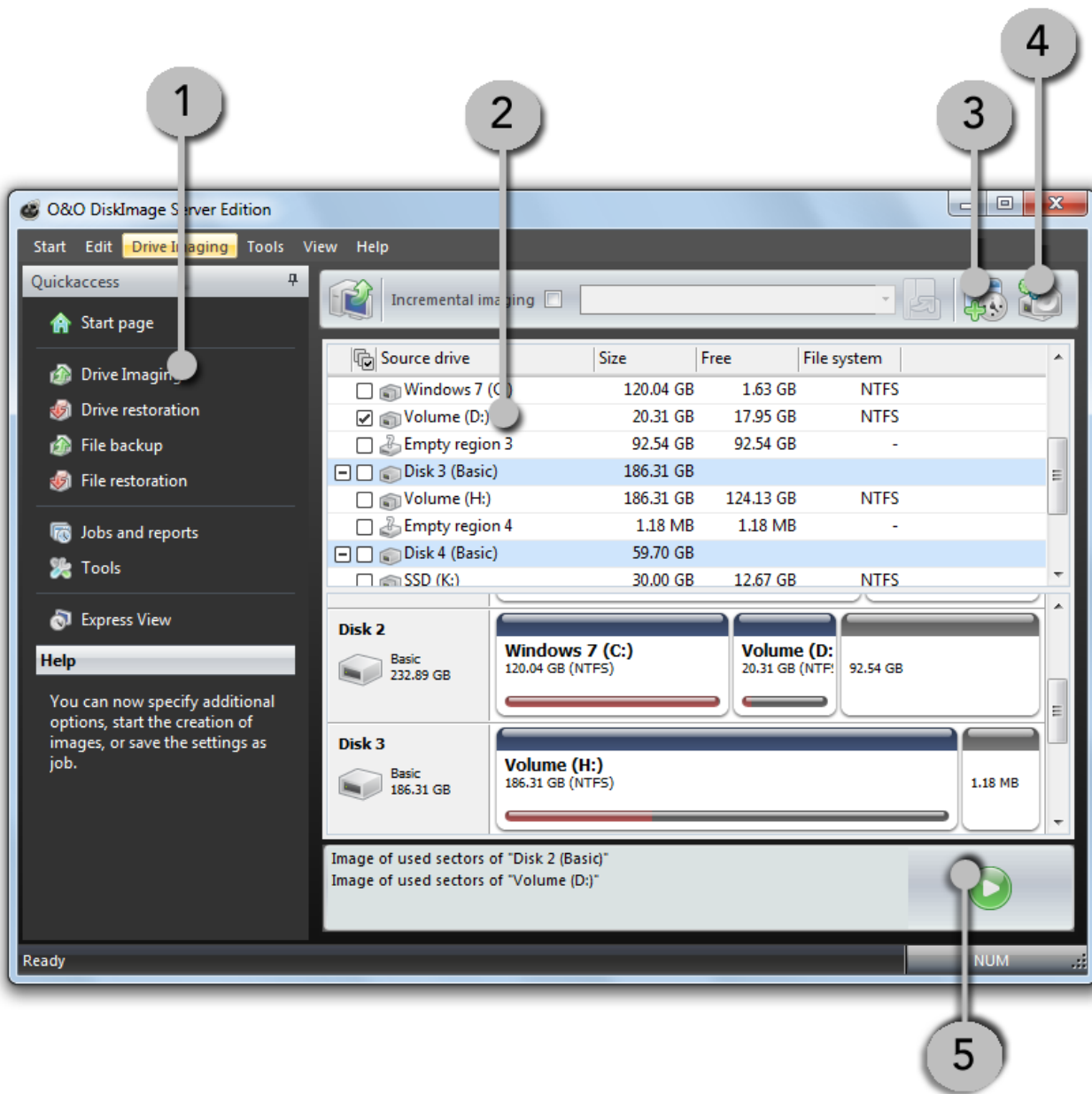
## Image individual drives

You can image single drives (partitions/volumes) with O&O DiskImage. This enables you to image system and data drives separately from each other. In case of data loss, it then only becomes necessary to restore to data drive. You don't need to restore your entire computer.

To create an image of one or more drives, please follow the instructions below:

1. In the start page select **Drive imaging**.
2. Select one or more drives from the drive list. Enable the check next to the drive you want to select.
3. Optionally, you can specify further settings under [Imaging options](#) or add the selected activity as **Job**.
4. To start the imaging process click on **Start drive imaging**.
5. Enter the target path of the drive on which you want to save the image. You can either accept the suggested default path or select another location. Under [Program settings](#), you can also select individual default paths.
6. The image is automatically named after the date of creation. You can, however, enter a name manually. All information from the image will be saved and can later be accessed through Image Information.
7. Select **Start**. The image file will now be created.

**Note:** If there is not enough space to store the entire image, you will be prompted to enter a new target path during the imaging process.



- 1 Quick access Bar: Drive imaging
- 2 Drive list: Source drive
- 3 Add as job
- 4 Settings for imaging
- 5 Start imaging

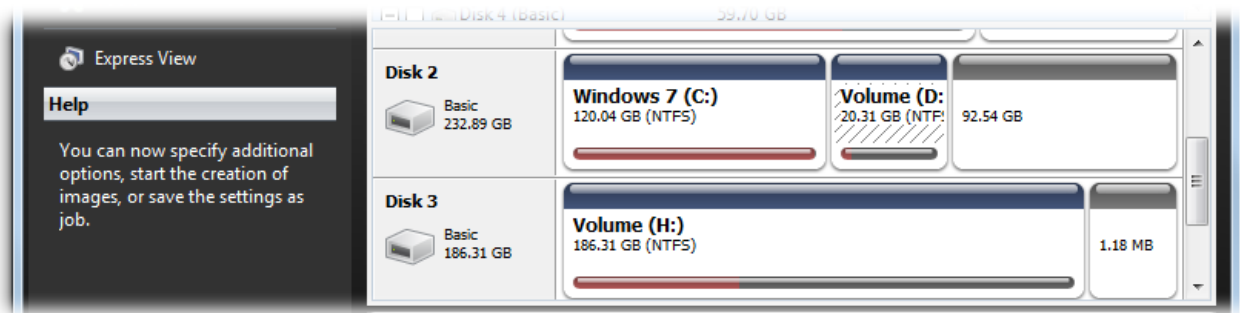
## DiskView

The interactive graphical display gives you an overview of all the hard disks. Free and used space, as well as the size of the partitions, are displayed.

You can select a drive for imaging by double-clicking it.

Among other things, the DiskView of O&O DiskImage will show all empty sectors. These empty areas occur due to the alignment of the partitions or volumes. Programs such as O&O PartitionManager or the Windows Disk Manager don't show these sectors if they're smaller than the smallest sector that can be partitioned, meaning smaller than 8 MB on the average.

Since O&O DiskImage creates images of hard disks, it is important to also consider these small areas, if the entire hard disk is selected as source. These areas can also be made visible indirectly with the Microsoft program "DiskPart". If the hard disks were chosen based on the command "SELECT", then it is possible to list these areas with "LIST PARTITION". Not only the size, but also the Offset, where the partition is located on the hard disk is displayed. It may be necessary to consider possible rounding differences, since the display is rounded to the thousands.



DiskView

## Image single files and folders

Do you want to backup individual folders or files instead of an entire volume? You can now do so with a file backup. Files are backed up directly in the form of data. This type of image includes only file information, no drive information is imaged.

1. Click on the start page of O&O DiskImage on **File backup**. Displaying your files and folders might take up some time. Please consider the loading progress in the status bar.
2. Navigate to the folder, which you want to backup.
3. Check the box next to the folders you want to backup. Multiple selections are also possible. You can also select an entire drive. All files located on the drive will be imaged.
4. Then, click on **Start file backup**.
5. You need to check in the following dialogue if the default specified target corresponds to your selected target and if you want to change the file name.
6. Click on **Start** to continue with the file backup.
7. A compressed file will then be created with the file extension [OBK](#) (\*.obk).

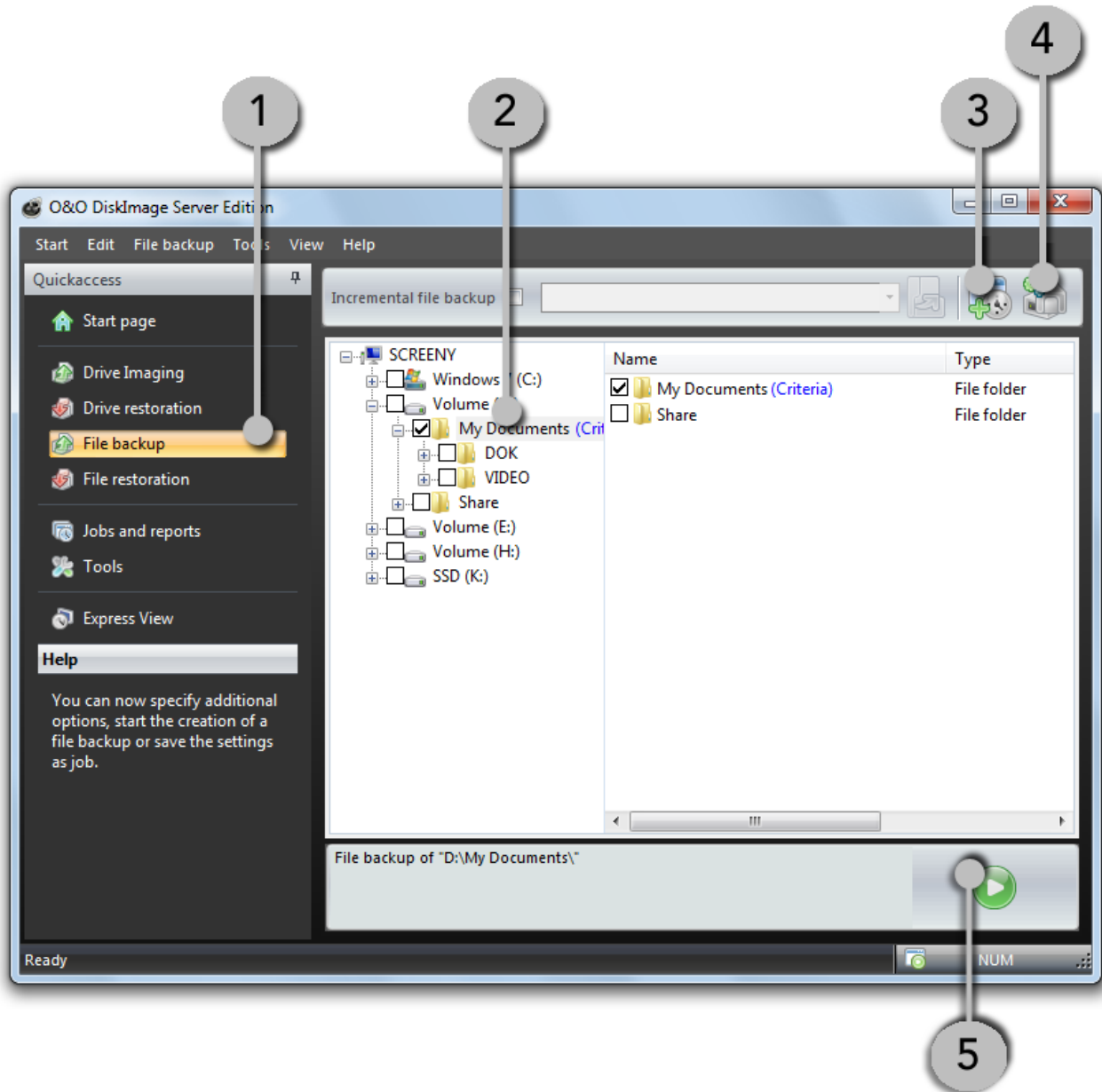
### Selection criteria

Before starting the file backup, you have the possibility to select certain files or file types in the folder to be imaged or exclude them from the image.

- Click on **Criteria** and specify the settings you want in the dialog.



**Tip:** You can specify further settings, by clicking on the icon [File backup options](#). If you want to repeat the file backup at a later time, you can create a job for it. For this, click on the symbol [Add as job](#).



- 1 Quick Access bar: File backup
- 2 Folder view: Source drive
- 3 Add job
- 4 File backup options
- 5 Start file backup

## Restore entire computer or system partition

To restore your entire computer or system partition, you need to run O&O DiskImage from the Start CD under Windows PE. Please proceed as described in chapter [Start directly from bootable disk](#).

**Tip:** For the restoration of an image onto a computer with different hardware than the source computer, please consider the notes in chapter [Machine independent restoration \(M.I.R.\)](#).

1. Run O&O DiskImage directly from the Start CD under Windows PE.
2. Select **Drive restoration** in the start page of O&O DiskImage.
3. Click on **Select image** in the form field or navigate to the storage location of the image in the browser button.
4. Select the image, which included the system partition i.e. all drives of your computer and click on **Open**.
5. All drives included in the image will be shown in the drive list.
6. Enable the check by the drive you want to restore. If you want to restore your entire computer, enable all drives.
7. Afterwards, select your target drive or your target disk, which will then be overwritten with the data of the image.
8. Click on the symbol Start drive restoration, to start the restoration process.
9. After the successful restoration, you can restart your computer.



## Quick Start

- 1 Quick Access Bar : Drive restoration
- 2 Select image
- 3 Select drive from image
- 4 Select target drive
- 5 Start restoration

## Restore drives

To restore one or more drives from an image, proceed as follows:

1. If you want to restore one or more drives from an existing image, click **Drive restoration** on the O&O DiskImage start page.
2. Select the image you want to restore in the DropDown list of **Select image**. If the proposed images (\*.obk) are not the ones you want to restore, check your drives and enter the path to the image file.
3. Select the image file (\*.omg or \*.vhd) from the browser and click on **Open**.
4. All drives contained in the image will then be displayed.
5. Click the drive that you want to restore ("play back").
6. Then, select the target drive for restoration by checking the box next to it. You can either replace an existing drive or create a new one: for example, in an empty sector.
7. Optionally, you can specify further settings for the restoration under **Restoration options**.
8. Whenever you have specified all settings, click on **Start drive restoration** to start the restoration.

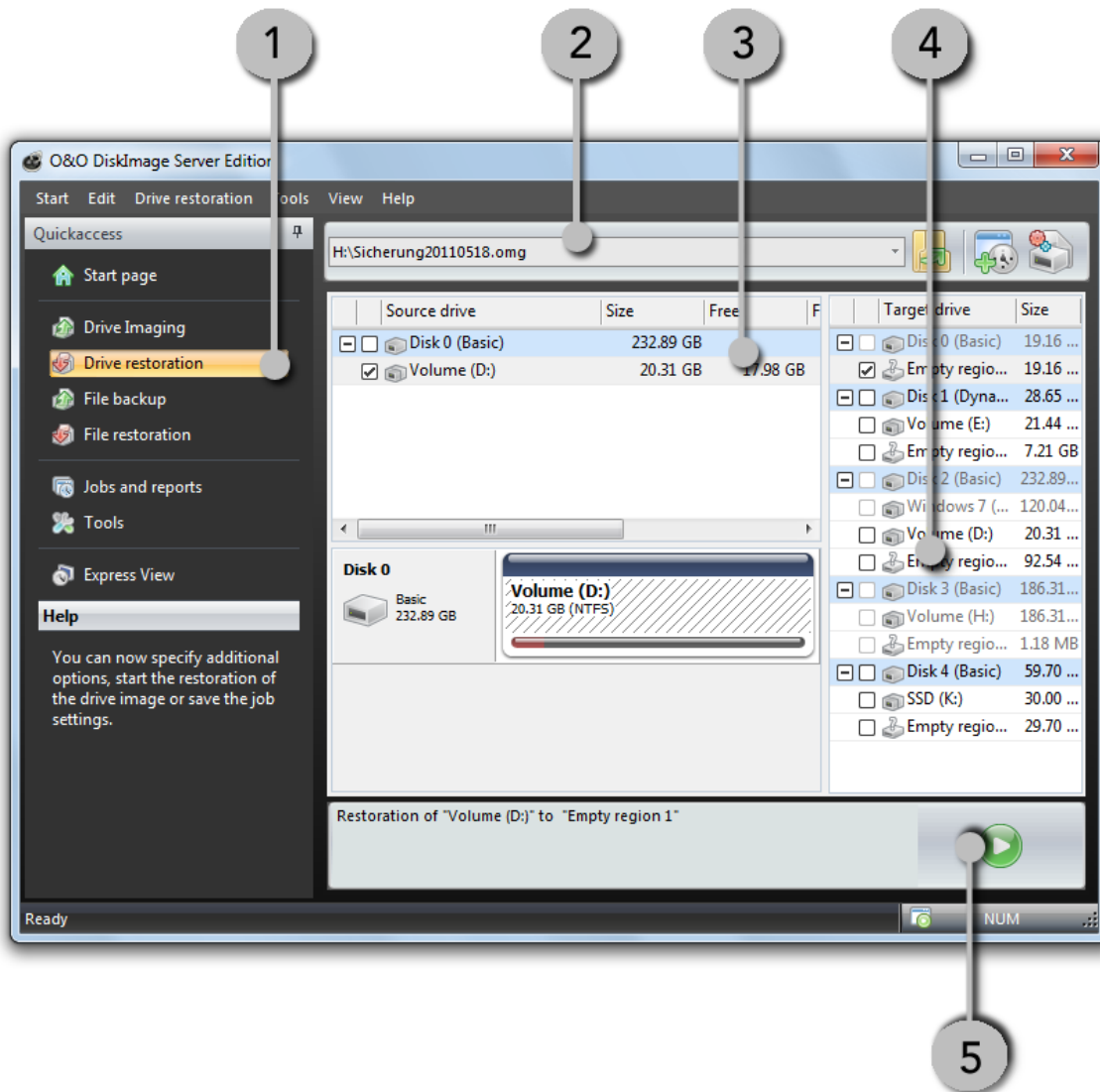
**Important:** During restoration, the image overwrites your selected drive with the data of the drive contained within the image. All data saved on the target drive is thereby lost and replaced by that of the image.

**Note:** If your image is split among various disks, all these disks will be required for a restoration. If you have created an incremental image, all images - from the last complete image to the last incremental image - will be needed.

**Note:** If you have imaged an entire hard disk and the restoration is run on a different hard disks, then the new hard disk must possess at least as much space capacity as the source hard disk.

**Note:** If you want to restore the entire system or the system partition, you need to boot your computer using the O&O DiskImage Start CD and run the restoration from there, see [Start directly from bootable disk](#). If you should run a restoration of the system partition to different hardware, read chapter: [Restoration on different hardware](#).

# Quick Start

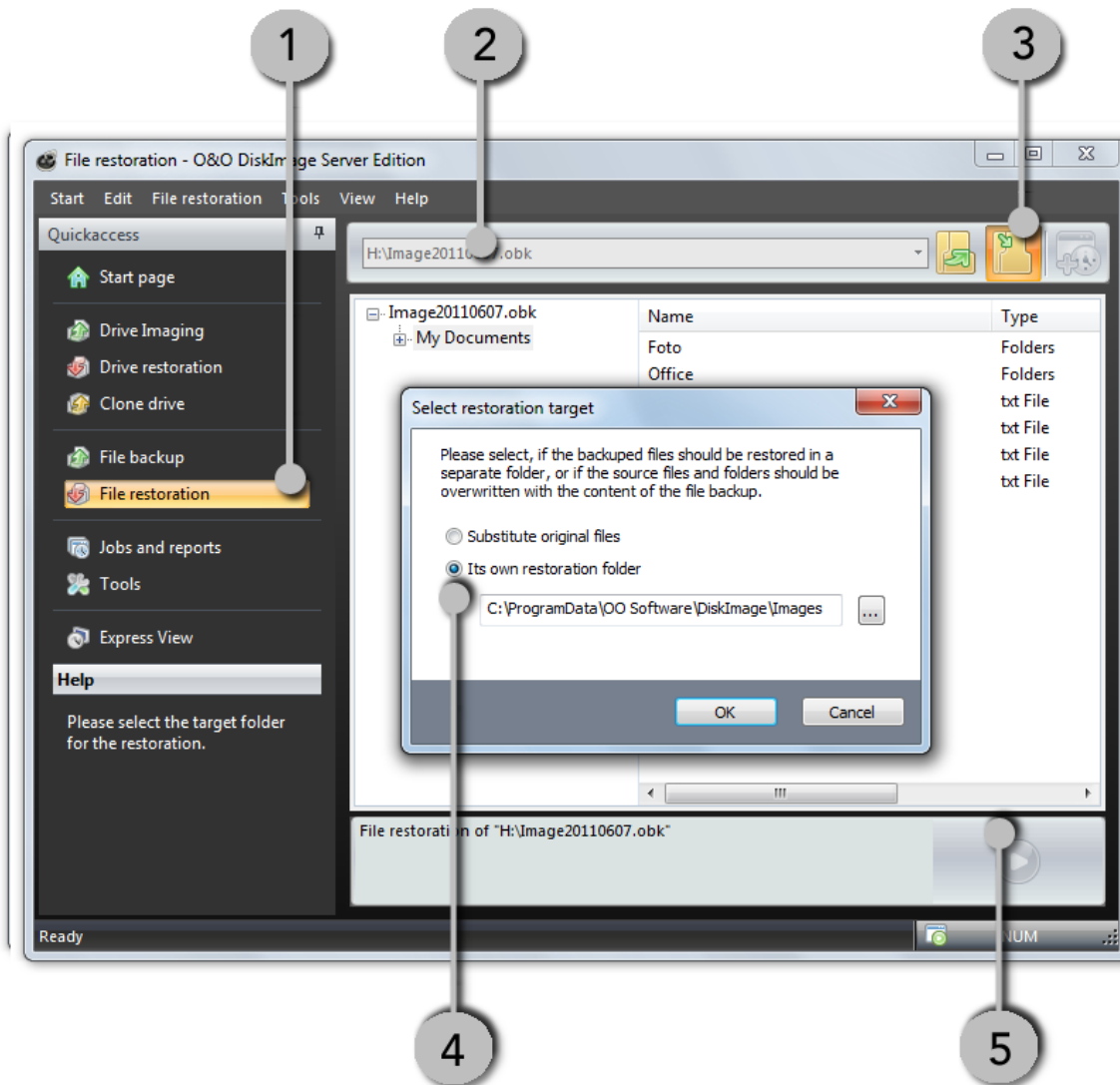


- 1 Drive restoration
- 2 Select image
- 3 Select drive for restoration
- 4 Enable target drive
- 5 Start restoration

## Restore single files and folders

If you want to restore files or folders previously imaged proceed as follows. First, make sure that you are able to access the image (\*.obk).

1. In the Quick Access bar click on **File restoration**.
2. Select the image you want to restore in the DropDown list of **Select image**. If the proposed images (\*.obk) are not the ones you want to restore, check your drives and enter the path to the image file.
3. Now, click on the symbol **Select target folder**.
4. You are now able to restore the data from the image in a new folder, or replace the source data with the data in the image.
5. Following that, start the restoration.



- |   |                           |   |                   |   |                         |
|---|---------------------------|---|-------------------|---|-------------------------|
| 1 | File restoration          | 2 | Select image      | 3 | Show restoration target |
| 4 | Select restoration target | 5 | Start restoration |   |                         |

## Create image of the changes only

If you only want to store the changed since the last image, you can create an **Image of the change**.

To create an image of the changes, you need to have created at least one complete image of the drives or folders of interest.

### Differential/incremental imaging

As a base image you can use either a “complete” image, using the methods “Used sector imaging”, “Forensic imaging” or “Direct forensic imaging”, or by using a previously created [incremental image/differential image](#).

Follow the instructions below:

1. Please make sure that the drive containing the base image is connected to your computer.
2. Start O&O DiskImage and select **Drive imaging** on the start page.
3. Enable the check for **Incremental imaging**.
4. Select your base image in the browser window and click **Open**.
5. Now click **Apply** (if you want to specify further settings) or on **OK** to proceed with the imaging.
6. Click on **Start drive imaging**.
7. Now you can either select the recommended target folder for saving the image, or enter a new target path. For the sake of clarity, we recommend to store the base image and its subsequent images in one folder. The image is automatically named after the creation date. You can however enter a name manually.
8. Click on **Start**, to initiate the imaging process.

**Note:** O&O DiskImage compares each sector of the existing image with the corresponding sector of the imaged (source) disk while creating an image of the changes. This might take up some more time than a complete image. However, the image of the changes takes up much less space than a complete image.

**Note:** the option [Compare data with checksums](#) is set as default. While creating incremental images, it is sufficient to use the last incremental image as base image. Should **Use checksums to administer unchanged data** not be set, you will need the last base image and all the incremental images previously created, since all of them will be accessed for creating the new image.

### Image file changes

A complete image or a previously created image of the changes can be used as base image.

Follow the instructions below:

1. Please make sure that the drive containing the base image is connected to your computer.
2. Start O&O DiskImage and select **File backup** in the start page.
3. Enable the check for **Incremental File backup**.
4. Select your base image in the browser window and click **Open**.
5. Now click **Apply** (if you want to specify further settings) or on **OK** to proceed with the imaging.
6. Click on **Start file backup**.
7. Now you can either select the recommended target folder for saving the image, or enter a new target path. For the sake of clarity, we recommend to store the base image and its subsequent images in one folder. The image is automatically named after the creation date. You can however enter a name manually.
8. Click on **Start**, to initiate the imaging process.

## Clone drives

Entire storage volumes or individual drives can be cloned, which in turn can be used instead of the originals. This function allows you to clone a drive and all its saved data without creating image files. The source disks/drives will be reproduced without any changes.

Please keep in mind that a clone requires much more free space than an image.

Unlike images, there are **no** incremental or differential clones possible for reducing the data volume of successive clones. In addition, a clone **cannot** be compressed or encrypted compared to an image.

1. Select **Clone drive** on the O&O DiskImage start page.
2. Select the drive which you want to clone by enabling the check next to each drive or the entire disk.
3. You can set additional settings for cloning under [Cloning options](#).
4. You can then specify the target drive. Simply enable the check next to the drive or the disk.
5. In the following dialog under **Advanced**, you can specify whether certain functions should be executed when cloning is completed. These functions are disabled by default.
6. Once you've enabled all your settings, click **Start cloning**, to begin the cloning process.
7. You can also "recopy" your clone in exactly the same fashion - to put it back on your computer/disk.

**Important!** When cloning your drive (source drive), the selected target drive, will be overwritten. All data stored on it will be deleted and replaced by the clone! You should therefore save the clone on something like an external hard disk chosen for this purpose.

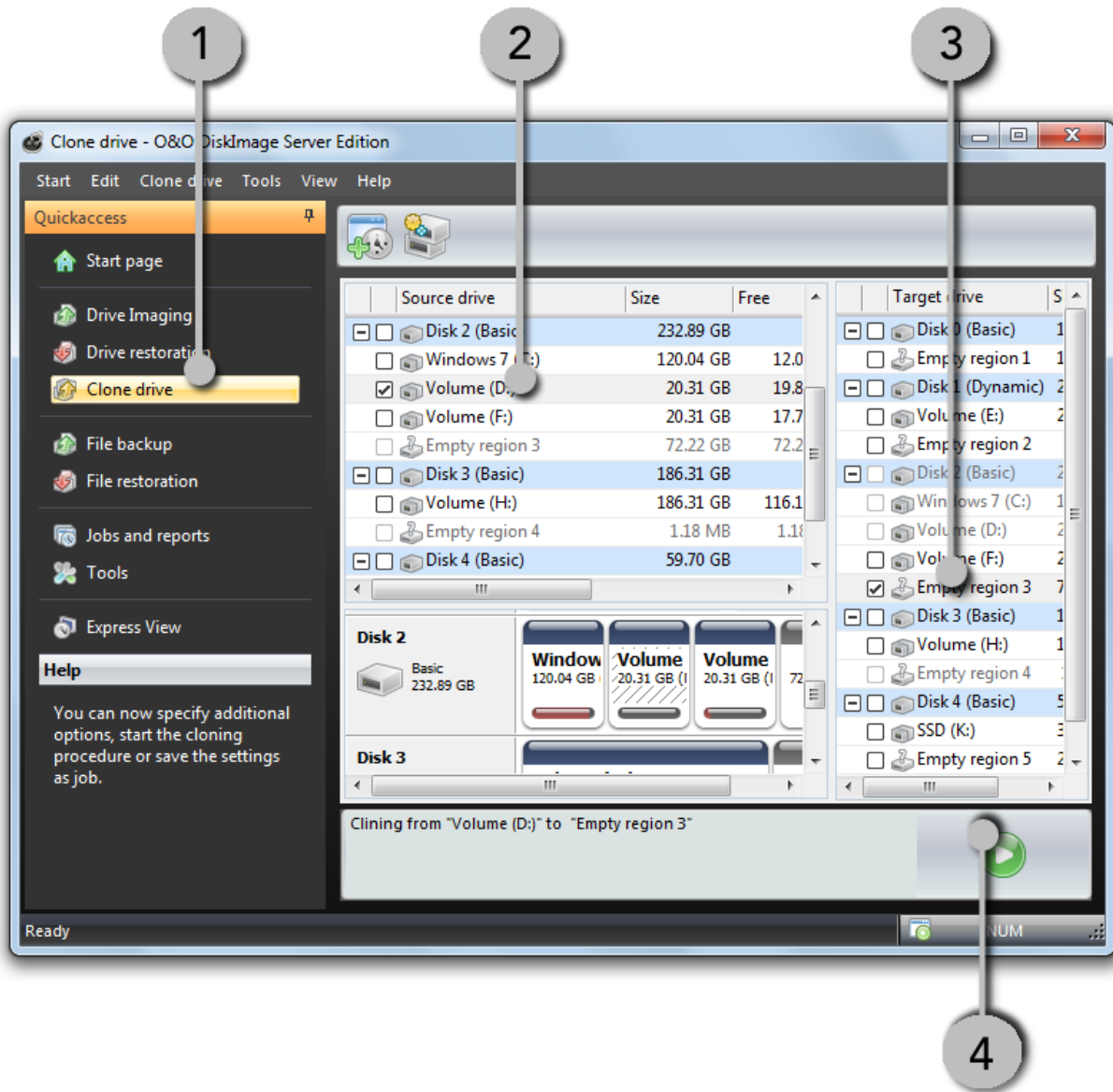
**Note:** When cloning a drive, you should adjust the properties of the target drive for future application. Make sure, for example, that the system partitions of the clone will also be able to boot.

**Note:** If you're using a second hard disk as a target, O&O DiskImage will change its signature. This will guarantee that there are no two hard disks with the same signature connected to your computer. There might otherwise be complications during cloning or even a possible system crash. With simple hard disk structures (basic disk), all partitions in the operating system will be recognized by a link from hard disk signature and partition offset. During cloning, the registry entries of the drive letters, including the letters, will be adapted to the target system.

**Note:** If you want to restore the clone of a system partition onto a PC with different hardware, please bear in mind the notes in chapter [Machine independent restoration \(M.I.R.\)](#).



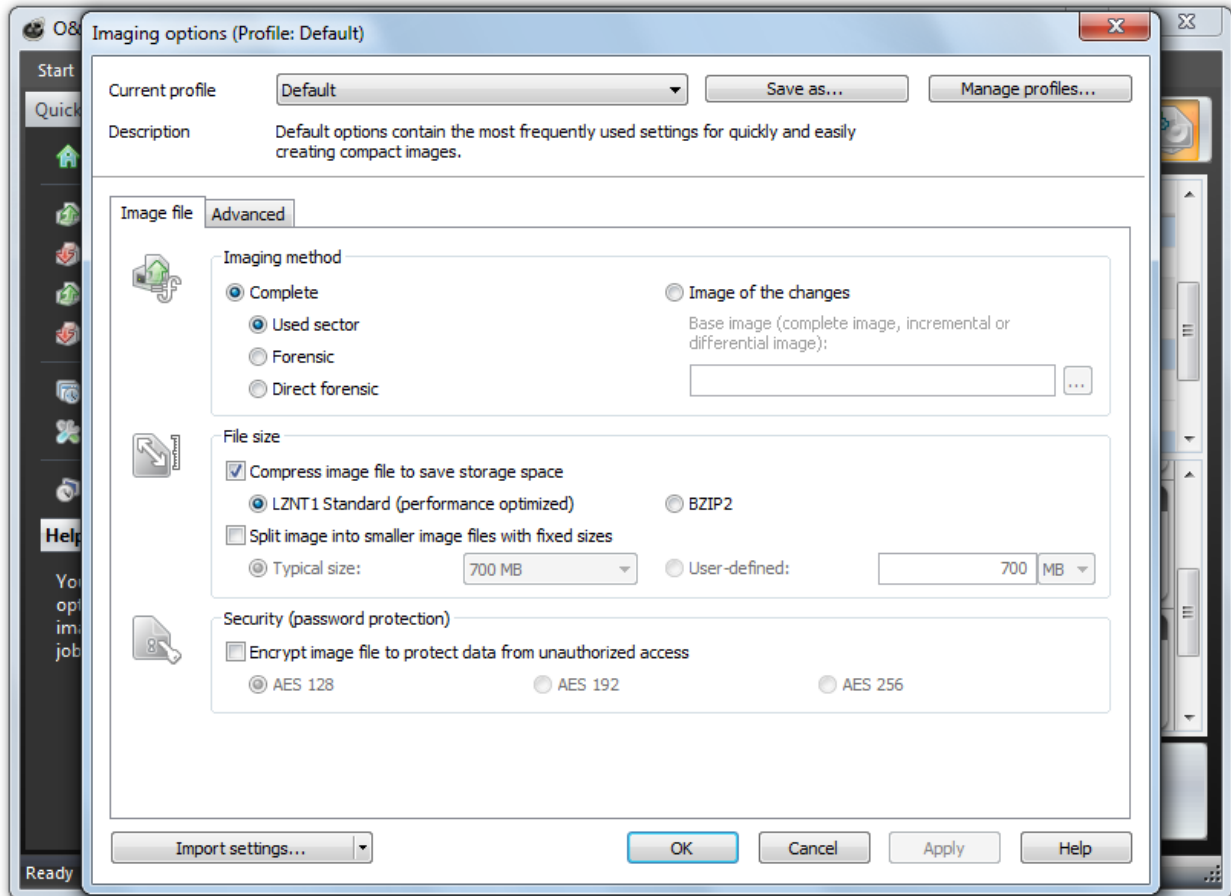
# Quick Start



- 1 Open Start menu
- 2 Select Clone driving
- 3 Select drive
- 4 Select target drive
- 5 Start cloning

## Settings for drive imaging

Under the menu heading Imaging, you can modify the image settings and set them as default for every new image by clicking on **Drive imaging/Imaging options**.



Drive imaging options

### Select imaging method

Under **Drive imaging/Imaging options/Image file** you can specify which imaging method should be applied as standard to every new image. In most cases, the default option **Used sector** is recommended.

#### Used sector imaging

Using this imaging method will limit the imaging process to only used sectors on a drive. This method will let you save time, computer performance, and disk space, and is set in the program by default.

#### Image of the changes

If you only want to save changes made since the last imaging, select **Image of the changes** as method in the imaging options as. This will allow you to create an image that saves only those changes that have occurred since the last [base image](#).

O&O DiskImage compares each sector of the existing image with the corresponding sector of the imaged (source) disk while creating an image of the changes. This might take up some more time than a complete image. The image of the changes takes up much less space than a complete image.

**Note:** If you want to create an image of the changes, you must have created at least one complete image of each drive of interest, which will serve as base image. Afterwards, the image of the changes that you created can also serve as a new base image.

**Note:** The option **Use checksums to administer unchanged data** is always set by default. The last incremental/differential image created is enough to serve as the base image when creating an **Image of the changes**. If **Use checksums to administer unchanged data** is not set, you will need the last base image and all existing incremental images because these must be accessed as part of the imaging process.

## Forensic imaging

This imaging method is especially useful when creating images of non-supported files system or when, for example, you would like to recover deleted data from a source drive with special data recovery software. With this method, an exact sector-level copy of the source drive is made. By saving all sectors of a partition or drive, the unoccupied and deleted portions of file systems can be imaged in their entirety.

### Direct forensic

Direct forensic imaging is a special case. The difference, however, lies in data being read over deep system interfaces. As with regular forensic imaging, a complete copy of a source drive will be created. This makes it possible to, among other things, image an encrypted hard disk using encryption software.

Please note that direct forensic image is meant to image encrypted disks with the encrypted data. Data is encrypted after the image is restored. If the source drive is an encrypted drive, then it is only possible to run a sector based restoration. A file-based recovery or browse of such an image is of course not possible. Furthermore, spanned volumes (stripped/spanned) are also excluded from this, since the logical link here between the regions is taken over by the operating system. If the drives are not encrypted, making a direct forensic image does not make sense. Here we recommend a forensic image, as all sectors of the drive, including the sectors marked as free, are included in the image.

## Specify the size of an image file

An image can be split into multiple image files. If a disk doesn't have enough space to contain a full image of your selected drives, you will automatically be requested to enter another target location. It is also possible to manually set the maximum size of an image file before creating the image. If the image being created is larger than the entered file size, additional image files will be created.

This function is especially useful when you plan to burn your image onto a CD/DVD at a later time. Sometimes a CD/DVD is not large enough to contain the entire image file. We recommend your limiting image files to the size of the blank CD/DVD onto which you will be writing your images.

The image file can also be split at a later time using the [Convert image file](#) function. It is, however, recommended to split images at the time they are created to avoid any confusion that may arise.

- Under **Drive imaging/Imaging options/File size/Split image into smaller files with fixed sizes** you can specify the size of individual image files.

## Encryption

Your data can be securely encrypted using the recognized AES method. This permits O&O DiskImage to provide your image with an extremely high level of security with a key length of up to 256 bits.

- You can select the encryption level for your files under **Drive imaging/Imaging options/Image file/Security**.
- If you then start the imaging process (**Drive imagings**), enter a password when being prompted.

A belated encryption of the image is possible under [Convert image file](#).

## Compress image

Under **Drive imaging/Imaging options/Image file** you find the settings **Compress image file to save storage space**. You can choose from the LZNT1 Standard or theBZIP2 process.

**LZNT1:**This is a compression type based on the Lempel-Ziv algorithm, which is laid out on a real time application. Speed is preferred over the rate of data compression.

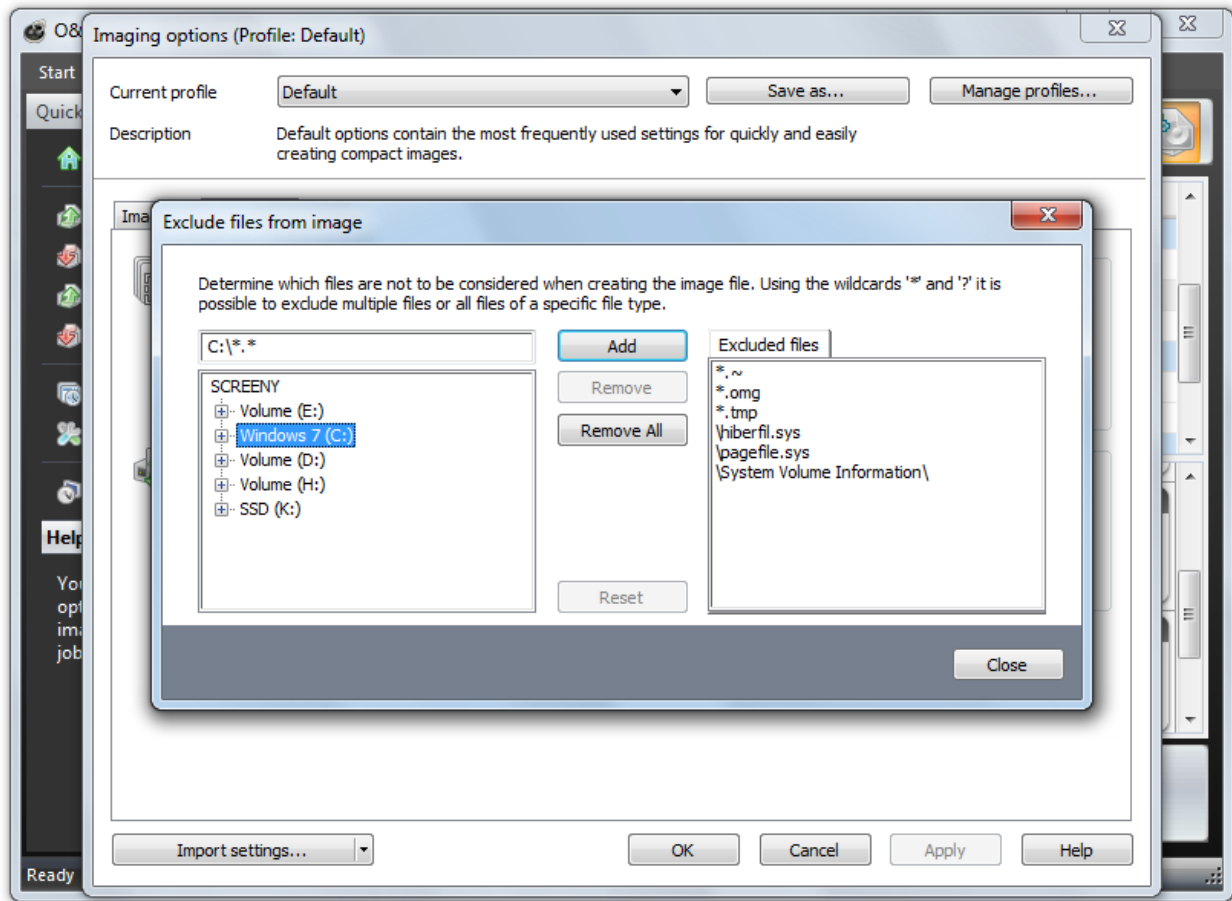
**BZIP2:** is a block type compression process. Compression rate is preferred over velocity.

You can also compress the image after creation under **Convert image file** in the Tools menu.

**Note:** Compression increases the time required to create an image file. However, the file then requires less space on the disk.

## Exclude files from an image

**Note:** Several minutes may be needed for excluding files, depending on the amount of data on the hard disk.



### Exclude files from an image

When using the imaging method Used Sector Imaging you have the option of excluding data from the image or compression. Please follow these instructions for excluding data:

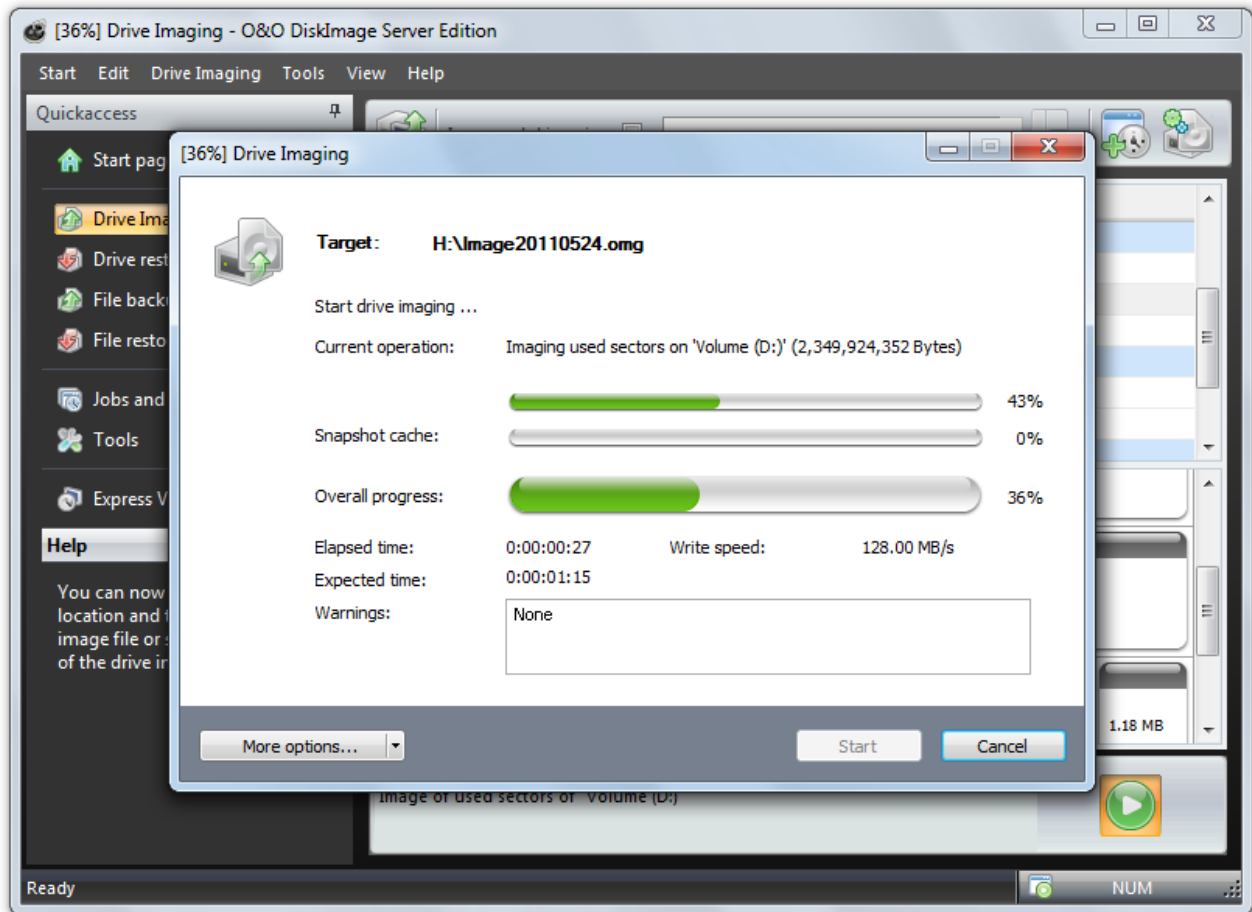
1. Enable the check next to the drive to be imaged under **Drive imaging**.
2. Make sure you have selected the method **Complete/only used sectors** under **Imaging options**.
3. In the **Imaging options** click on **Advanced** and open the dialogue to exclude files in **Exclude from imaging**.
4. In the right hand window select the files and folders you wish to exclude from the imaging and confirm this with **Add**. Only the data on your selected drives will be excluded.
5. You can close the window after your settings are made. The changes you made will then be applied.

### Exclude data from compression

Data that are already compressed, e.g. \*.rar or \*.zip files, will not be further compressed during the imaging process and, for this reason, may be excluded from the compression process. To exclude data from compression, please follow the procedure laid down in [Exclude files from an image](#).

## Lock a drive

You can lock the drive you wish to image during the imaging process. This prevents any changes being made to the drive during creation of an image. The drive will no longer be displayed in Explorer and all applications will be closed. The drive is not locked by default.



Snapshot cache view(here an empty cache)

- To lock a drive, under **Drive imaging/Imaging options/Advanced** select **Imaging procedure/Lock drive during imaging**.

If you leave a drive unlocked during an imaging, for instance, because you want to continue working on the drive, the original status will be “cached”, i.e. stored in the working memory buffer. The working memory buffer space is, however, limited. You can see how much space is available by looking at the memory buffer display.

**Note:** It is not possible to lock a system partition. If you want to prevent temporary files from being written onto a particular drive, enter the entry NoSnapshotTmpFiles in the Registry. More information can be found in the chapter [Explanation of registry entries](#).

**Please note:** If you exceed the available working memory, original data sectors will no longer be saved and included in the image. This makes the image inconsistent and may render it unusable. In this case, after imaging, you should mount the image (Mount the image as a drive) and check its accuracy.

**Note:** To avoid overloading the memory buffer, close or stop all write procedures on the source drive: for example, running a defragmentation.

## Ignore bad sectors

If an error occurs, you can specify under **Drive imaging/Imaging options/Advanced** whether the read process should be aborted or continued. If continued, the bad sector will be saved in the image as an unused sector. The remaining data that is still readable will then be available in the image.

- Enable the check for **Ignore and automatically skip bad sectors while reading**.

## Data comparison with checksums

Unaltered data resulting from incremental images is saved using checksums by default. These files are fractionally larger. It is sufficient when, at the next incremental imaging, you use a previous incremental image (with checksums) as the base image. This function is activated by default. If you save all images in a single folder, you can deactivate this function. Your images will then take up less space on disk.

- Please make sure that the function **Use checksums to administer unchanged data** under **Drive imaging/Imaging options/Advanced** is enabled.

## Use profiles for drive imaging

Under **Drive imaging/Imaging options/Current profile** you can reset current settings to **Default**, or select an already existing profile.

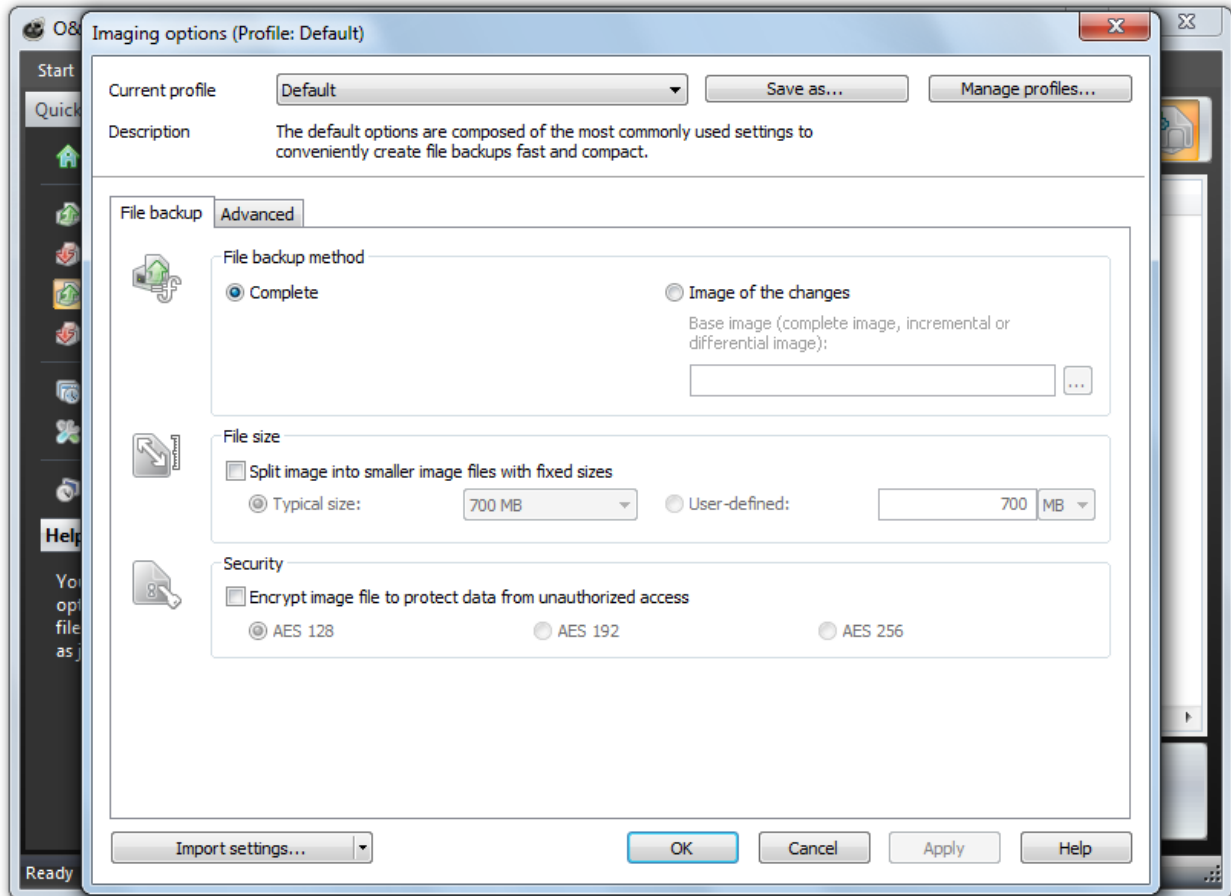
Under **Current profile** you can select a preset Multimedia or Archive profile. The Multimedia profile automatically excludes already compressed music and video data (i.e. \*.avi, \*.mp3, \*.mpeg) from the compression. The Archive Profile excludes other compressed data such as \*.zip or \*.rar.

If you would like to save your user-defined settings, please follow these instructions:

1. Enable your settings under **Drive imaging/Imaging options**.
2. Select under **Save as....**
3. Give your newly created profile a name in the dialog window and confirm.
4. Under **Manage profiles** you can change or delete an existing profile.

## File backup options

Under **File backup /File backup options** you can specify further settings valid for all current or each newly created image as default.



File backup options

### Specify imaging method for file backup

Under **File backup/File backup options/Image file /Image method** you can specify, what method will be preset for every file backup.

The options are:

- Complete imaging and
- Image of the changes

For the regular use, it is recommended to apply the imaging method **Complete imaging**, which is already set as default.

If you have already backed up certain files or folders, you can select the method **Image of changes**. Only changes made since the last source image will be stored.

When running an image of the changes O&O DiskImage, compares the data of the existing image with data from the most current folders. This might take up some more time than a complete image. However, the image of the changes takes up much less space than a complete image.



## Specifying size of file backup

A file backup can be split into multiple backup files. If one storage volume is not enough to store a complete backup, you will be asked automatically to specify a different storage location. It is also possible to manually set the maximum size of an file before. If the image being created is larger than the entered file size, additional image files will be created.

This function is especially useful when you plan to burn your image onto a CD/DVD at a later time. Sometimes a CD/DVD is not large enough to contain the entire image file. We recommend limiting image files to the size of the blank CD/DVD onto which you will be writing your images.

The image file can also be split at a later time using the [Convert image file](#) function. It is, however, recommended to split images at the time they are created to avoid any confusion that may arise.

- Under **File backup/File backup options/File size/Split image into smaller image files with fixed sizes** you can specify the size of individual image files.

## Encrypt file backup

Your data can be encrypted securely with the recognized method AES. This permits O&O DiskImage to provide your image with an extremely high level of security with a key length of up to 256 bits.

- You can select the level of encryption for your files under **File backup/File backup options/Security**.
- If you then start the imaging process (**Start file backup**), enter a password when being prompted.

You also have the option of encrypting the image after it's been created under [Convert image file](#).

## Advanced settings file backup

Under **Advanced** in the file backup options you can specify further settings.

### Lock drive while imaging

While processing a file backup you can lock your drive where the folders/files to be imaged are located. This prevents any changes from being made to the drive during creation of an image. The drive will no longer be displayed in Explorer and all applications will be closed. The drive is not locked by default. If the drive is not locked, changes will be buffered either in the snapshot cache (if installed) or over the volume shadow copy service of Windows so that these changed won't influence the image.

### Use check sums to administer unchanged data (for incremental file backup)

Unchanged data are stored as default via checksums by the method **Image of the changes**. These files are fractionally larger. For this it is sufficient if you enter a previous image of the changes as source image for the next **Image of the changes**(with checksums). This function is activated by default. If you save all images in a single folder, you can deactivate this function. Your images will then take up less space on the disk.

- Make sure that **Use checksums to administer unchanged data** under **File backup/File backup options/Advanced** the function.

## Apply profiles for file backups

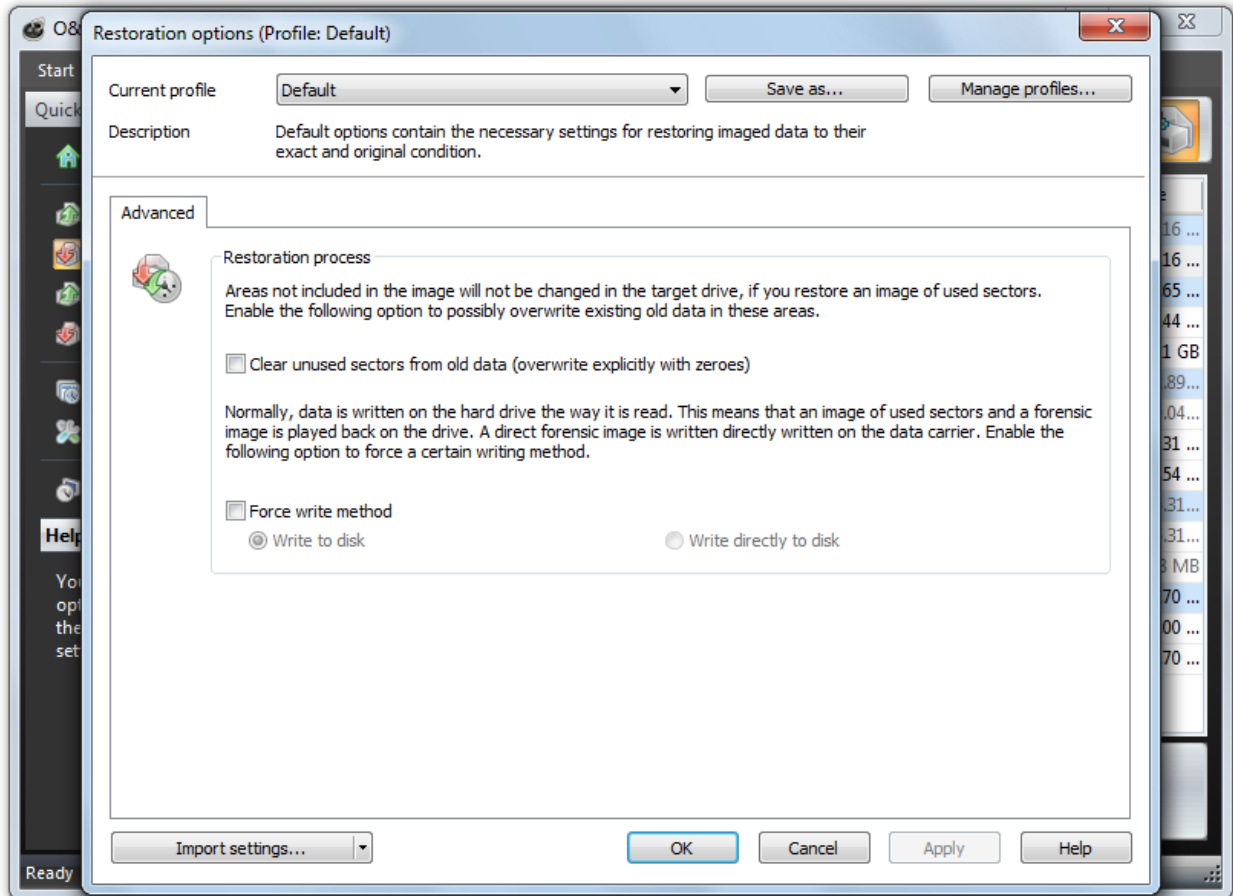
Under **File backup/File backup options/Current profile** you can reset the current settings to **default** for the image or select a wide ranging user-defined profile.

If you would like to save your user-defined settings, please follow these instructions:

1. Enable your settings under **Drive imaging/Imaging options**.
2. Select under Imaging options **Save as....**
3. Give your newly created profile a name in the dialogue window and confirm.
4. Under **Manage profiles** you can change or delete an existing profile.

## Settings for the restoration of drives

Under **Drive restoration/Restoration options** you can specify additional settings for the restoration of drives from an image.



Restoration options

### Overwrite unused sectors

Under **Drive restoration/Restoration options** you can overwrite unused sectors explicitly with zeros: Data, which had been stored in these areas cannot be restored even if using special data rescue software.

### Create a restoration profile

Under **Drive restoration/Restoration options** you can return the current settings for an imaging back to their default settings or select an already created profile.

Under **Current profile** you can choose between **Default** and **User-defined**.

If you want to save your user-defined settings, do the following:

1. Enable your settings under Restoration Options
2. Select **Save as**
3. Give your newly created profile a name in the dialog window and confirm.

Under **Manage profiles** you can change or delete an existing profile.

## Force writing method

Under **Drive restoration/Restoration options/Advanced** you can force a writing method. "Write to drive" is the default writing method used during restoration of images created with the "Used sector" or "Forensic" methods. "Write directly to disk" is the only writing method used during "Direct Forensic" cloning. You can, however, force a user-defined writing method.

- Enable **Force writing method** and select the respective method.

Using the option **Write to drive**, data will be written to the drive with help from the operating system, and not from the offset to the disk.

With the option **Write directly to disk**, you can decide whether a restoration should be written directly to a disk, bypassing the file system driver. This function applies especially to encrypted disks and is required for restoring any disks that have been imaged using the direct forensic method.

## Machine independent restoration (M.I.R.)

Until now, you were only able to restore a system partition on a computer with identical hardware like the source computer. This is also valid for the restoration of clones. The most frequent application scenarios have therefore been limited to the creation of images and restoration of these on the same computers

O&O DiskImage now offers you the possibility to restore an image, even the system partition, on a computer with different hardware thanks to the M.I.R. function (Machine Independent Restoration). Cloning on a computer with different hardware is also possible.

Enable M.I.R. if you changed the hardware composition after an image and these changes have consequences for the functionality on the booting Windows operating system. M.I.R. is also necessary if you want to transfer an already existing computer configuration to a new computer.

Enable M.I.R. therefore can be used or enabled in the following cases:

- Restoration of an image on a computer with different hardware or cloning/duplication of a computer.
- Enabling M.I.R. with the help of the bootable disk to exchange damaged or malfunctioning drivers of an existing system.
- Migration of physical computers onto virtual machines or virtual machines on physical computers.

**Note:** When cloning a source system, which entails cloning installed versions of the Microsoft Windows operating system and programs, we recommend to change the computer name and the computer SID to avoid future problems when using the configured computer within the network.

## Limitations when restoring on different hardware

Under certain circumstances it is possible that the restored or duplicated system does not start or is malfunctioning. The following constellations may lead to malfunctions:

- No hard disk was selected as target, only a part of a hard disk (partition/volume/empty area).
- While creating the layout on the target "delete layout" was not selected. This makes it possible to create partitions/volumes on a different offset.
- You have not selected a hard disk as source, but a single partition/volume and skipped over the partitions/volumes, which contain the needed boot information.
- You are trying to boot from a hard disk, which is connected to controllers, which haven't been initialized by Windows at the time of booting, e.g. booting from a hard disk, which was connected to the computer via a USB controller (not a USB stick).

**Note:** If error messages appear during booting, you will get instructions on how to proceed in chapter [Assistance when error messages occur during booting](#).

**Note:** To ensure a restored system or a clone is bootable, it is important to create an image of the entire system hard disk and then in turn completely restore/clone it.

## Restoring M.I.R. automatically

M.I.R. of O&O DiskImage is available to you when restoring system partitions from an image or when cloning. Meant is the direct selection of the system partition or the indirect selection, e.g. the entire disk including the system partition.

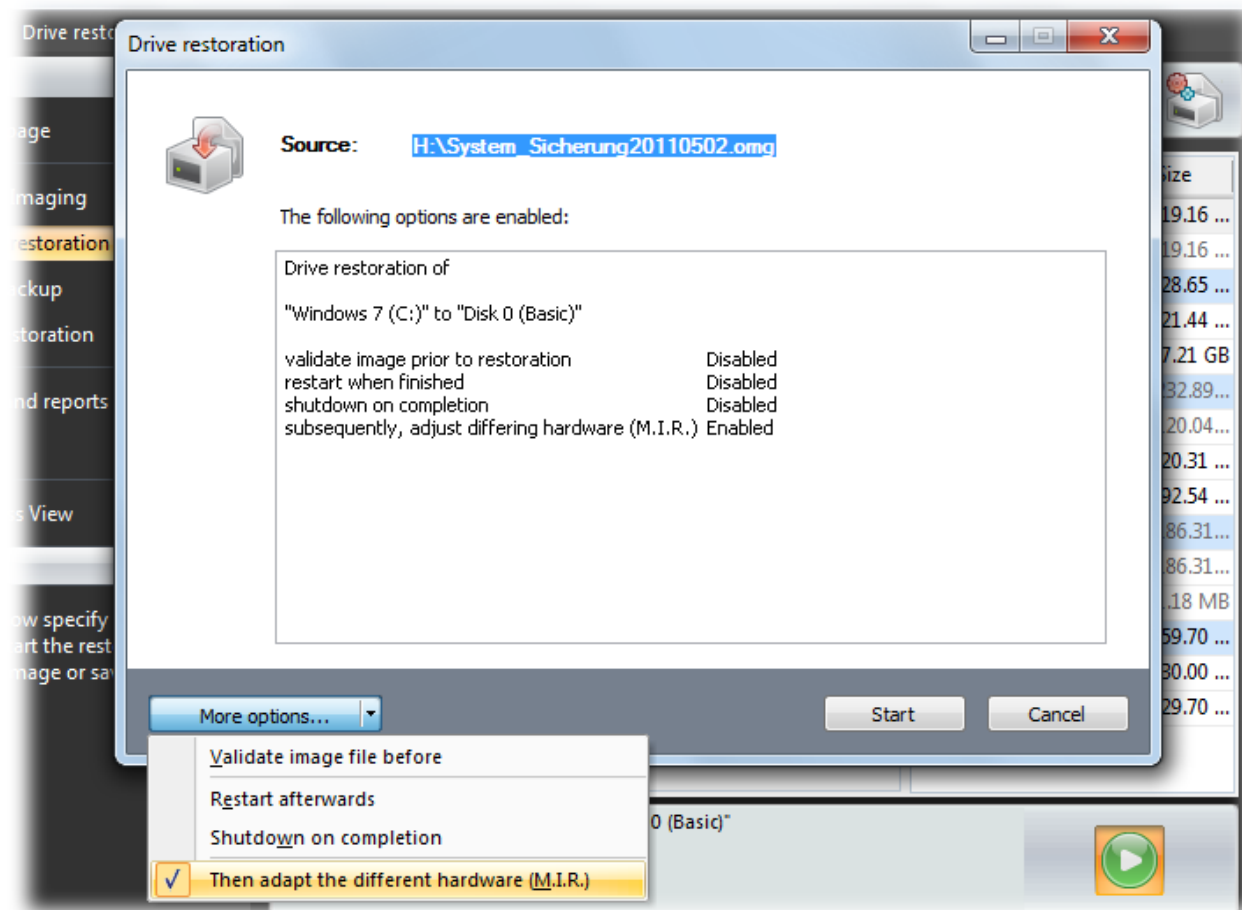
## Machine independent restoration (M.I.R.)

You only need to enable the function M.I.R. whenever you want to restore or clone before the restoration or cloning process is completed. The automatic adaptation will do the rest.

For the restoration on different hardware proceed as follows: The example here describes a restoration from an image:

1. To restore the entire system, which entails the system partition, you need to start your computer with the Start CD of O&O DiskImage and proceed with the restoration from there. To boot from CD proceed as described in chapter [Start directly from bootable disk](#).
2. Click on the start page of O&O DiskImage on **Drive restoration**.
3. O&O DiskImage, by default, will always go the place where the last image was saved. If the image file presented is not the one you want, browse through your drives and enter the path to the image file.
4. Select the image file in the browser and click on **Open**.
5. All drives contained in the image will then be displayed.
6. Click the drive that you want to restore ("play back").
7. Then, select the target drive for restoration by checking the box next to it. You can either replace an existing drive or create a new one: for example, in an empty sector.
8. Whenever you have specified all settings, click on **Start drive restoration** to start the restoration.
9. To restore or clone you need to enable the setting **Adapt to different hardware afterwards** in the restoration or cloning dialog.
10. Then follow the other dialog prompts and restart your computer after the successful restoration.

**Important:** During restoration, the image overwrites your selected drive with the data of the drive contained within the image. All data saved on the target drive is thereby lost and replaced by that of the image.

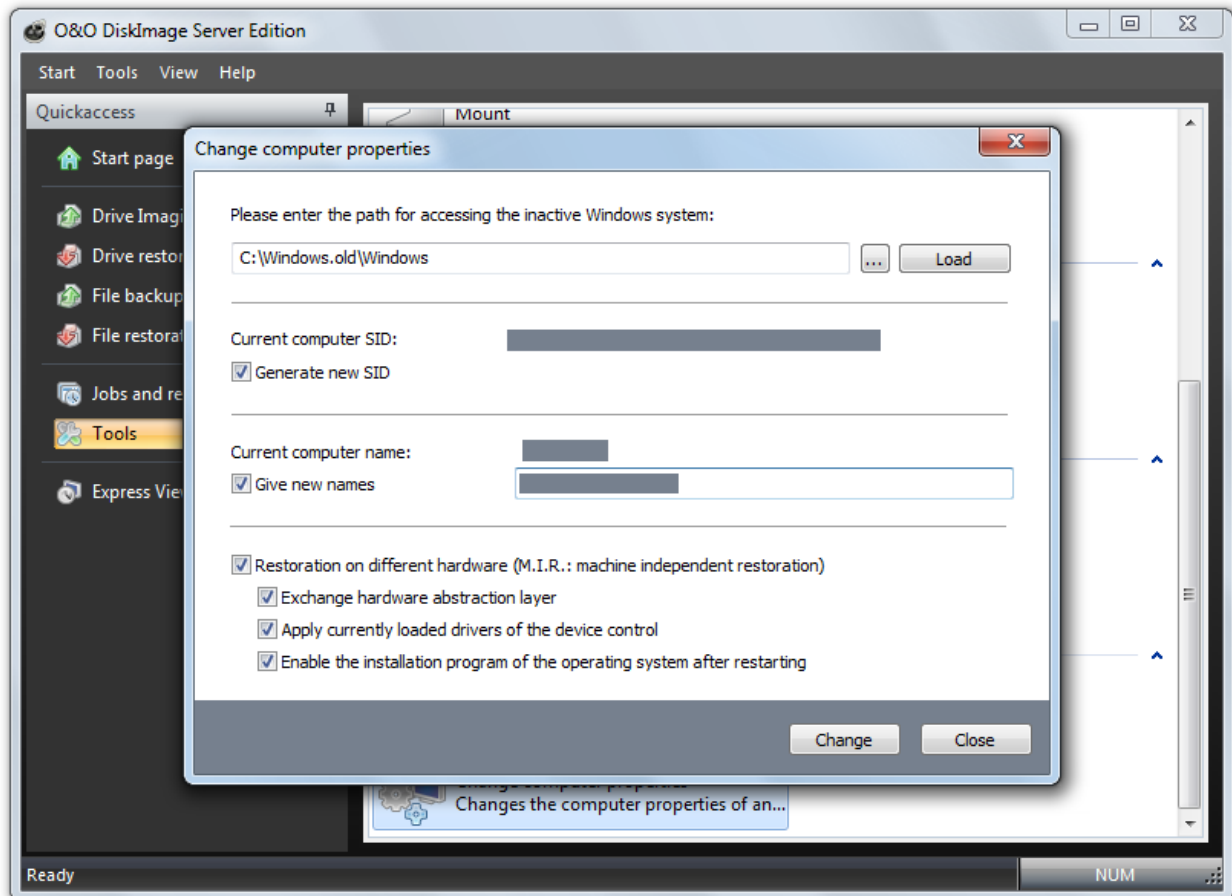


Enable automatic adaptation on changed hardware (M.I.R.)

## Manual adaptation

You can make manual adaptation to the changed hardware after the restoration or the cloning.

- For this, run the restoration or the cloning of the system partition or the entire computer.
- After the successful restoration, please open the O&O DiskImage dialog to change the computer properties **Tools/Change computer identity**.



Change computer identity manually

The adaptations made by M.I.R can be divided in three activities, which can be enabled/disabled when selecting **Restoration on different hardware** (machine independent restoration).

### Exchange hardware abstraction layer (HAL)

Windows operating systems must be compatible with a variety of hardware platforms. This portability is achieved through a special layer within the operating system, which is responsible for the management and control of hardware, architecture and machine-dependent devices, such as the I/O interfaces, Interrupt Controller and multi processor communication mechanisms. This layer is commonly installed on and aligned to the current hardware on an installed and running Windows. If the hardware is exchanged, it becomes necessary to align the layer accordingly, to ensure smooth and continued functionality of the operating system and the programs installed.

### Apply currently loaded drivers of the device control

## Machine independent restoration (M.I.R.)

Drivers are an interface between the I/O-Manager and the corresponding hardware. They are not accessed directly, but over the hardware abstraction layer. After replacement, the corresponding driver of new hardware has got to be installed in order to make sure it can work properly with this layer.

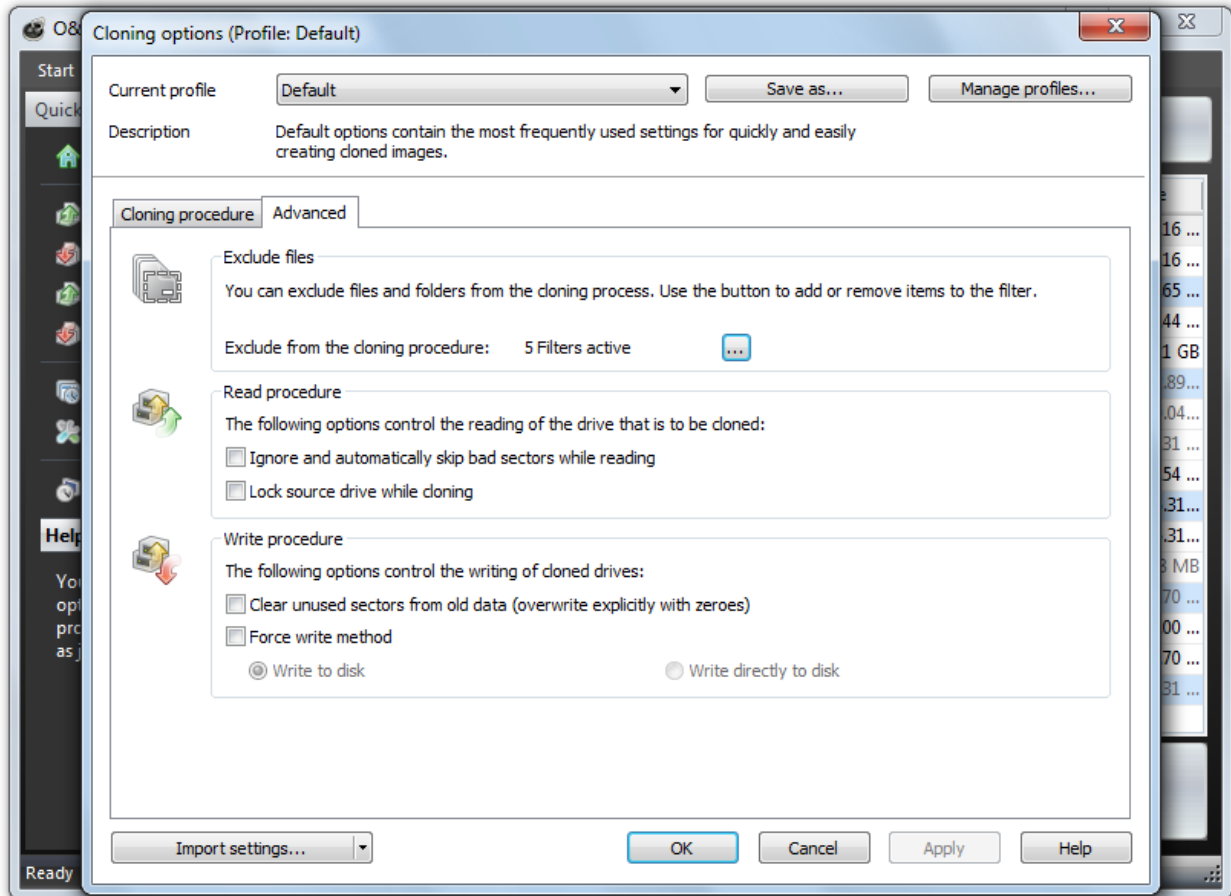
### **Enable the installation program of the operating system after restarting**

This activity tells the Windows operating system that the internal setup should be run to complete the information at the next start. The Windows operating system will then be able to automatically adapt itself after incomplete changes, and complete the registration of the new hardware.



## Settings for Cloning drives

Under **Clone drive/Cloning options** you can specify further settings to clone drives. To specify the settings, you need to open the Cloning options window.



Settings for cloning drives

### Set read method

Under **Clone drive/Cloning options**, you can set your individual read method just as you can when creating an image. (Cloning method). The cloning methods are constructed in a way similar to the imaging methods.

It's possible to choose from "Used sector", "Forensic" or "Direct forensic" methods. You can read more about this under [Select imaging method](#).

### Lock a drive

During the cloning process you can lock the drive from where you wish to clone an image. This prevents interim changes to the drive being made during creation. The drive will no longer be displayed in Explorer and all applications will be closed. The drive is not locked by default.

1. To lock a drive, enable it under **Clone drive/Cloning options /Advanced/Read procedure**

2. If you leave a drive unlocked during an imaging, because, for instance, you want to continue working on the drive, the original status will be "cached", i.e. stored in the working memory buffer. The working memory buffer is however restricted. You can see how much is available in the Memory buffer display.

**Note:** Locking a system partition is not possible. If you want to prevent temporary files from being written on a particular drive, make the entry NoSnapshotTmpFiles in the registry. More information can be found in the chapter [Explanation of registry entries](#).

**Please note:** Should you exceed the available working memory, the current changes will be written directly to the target drive. This makes the image inconsistent and may render it unusable.

**Note:** To avoid overloading the memory buffer, close or stop all write procedures on the source drive, for example, running a defragmentation.

## Ignoring bad sectors

You can specify under **Clone drive/Cloning options/Advanced** whether the read process should be aborted or continued. If continued, the bad sector will be saved in the copy as an unused sector. The remaining data that are still readable will be present in the image.

## Write over unused sectors

You can specify that unused sectors of the source drive should be overwritten with zeros under **Clone drive/Cloning options/Advanced/Clear unused sectors from old data**. If you enable this function, you will not be able to restore data of the empty areas from the drive clone.

This function is run during the next clone activity of the selected drive.

**Tip:** If you delete data normally under Windows, it still remains intact in the hard disk, they are just not accessed by the operating system anymore and are invisible for the user. **Zero unused sectors** should you wish to overwrite unused sectors with zeros. The space is declared as free area by Windows. This data can still be restored using special software. To make sure that nobody can restore data from the drive clone, enable the function **Clear unused sectors from old data**. After overwriting, not even special data recovery software will be able to restore these deleted data.

## Force writing method

Under **Clone drive/Cloning options/Advanced** you can force the writing method. "Write to drive" is the default writing method used for the "Used sector" and "Forensic" cloning methods. "Write directly to disk" is the only writing method used during "Direct Forensic" cloning. You can, however, force a user-defined writing method.

- Enable **Force writing method** and select the respective method.

Using the option **Write to drive**, data will be written to the drive with help from the operating system, and not from the offset to the disk.

With the option **Write directly to disk**, you can decide whether a restoration should be written directly to a disk, bypassing the file system driver. This function applies especially to encrypted disks and is required for restoring any disks that have been imaged using the direct forensic method.

## Create a profile for cloning

Under **Clone drive/Cloning options**, you can reset the default settings for cloning or select an existing profile.

Under **Current profile** you can choose between **Default** or **User-defined**. If you wish to save your user-defined settings for cloning, please follow the instructions below:

- Select **Save as** and enter a name for the new profile.
- Under **Manage profiles** you can change or delete an existing profile.

Start directly from bootable disk

## Start directly from bootable disk

If you start O&O DiskImage directly from a bootable disks, such as CD, DVD or USB stick you will have access to all functions available.

The bootable disk contains Windows PE and is suitable, for example, for the restoration of your entire computer or your system partition, if you have created an image before. You can use the bootable disk with O&O DiskImage even if your Windows is not capable of booting due to a software error. The CD holds various other system rescue tools besides O&O DiskImage. These tools will try to start Windows successfully without having to restore from an image. More information is available in the program help of each integrated tool.

### Starting from CD/DVD

1. Make sure that your system is able to be started from a CD. You can place the appropriate settings in BIOS. Further information can be obtained from your motherboard manufacturer.
2. Put the O&O DiskImage Start CD in your computer's CD/DVD drive.
3. Restart the computer. Follow the instructions at the start of the CD.

A black rectangular box containing the text "Press any key to boot from CD or DVD..\_" in a white, monospaced font.

4. The system settings will subsequently appear in the window. Select a language and region.
5. At the next stage you can load drivers for those devices where no drivers under Windows PE were initially found, see also chapter "[Load Drivers](#)".
6. O&O DiskImage will start after confirmation of the license regulation.

### Start from USB stick

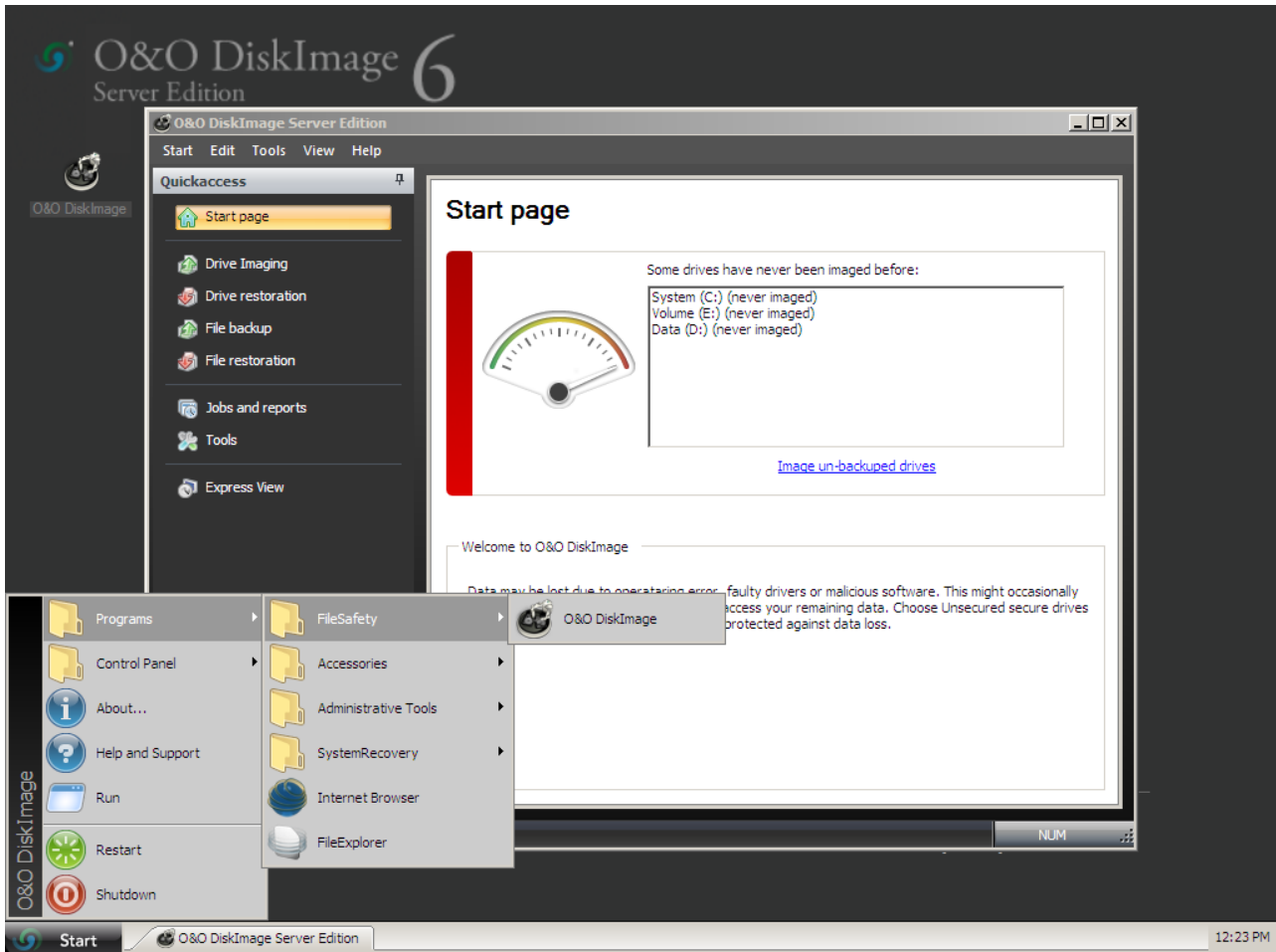
To boot from an USB stick, you normally have to change the boot sequence in the boot menu of your computer. Alternatively, you can also configure appropriate settings in the BIOS. Further information can be obtained from your motherboard manufacturer.

1. Open the boot menu while the computer is booting.
2. You can change the sequence in the menu, if you place the USB entry (removable devices) in the beginning.
3. After that your computer will recognize your USB stick as boot medium, and will start the program from there.



**Note:** The sequence in the boot menu is normally only valid for the current computer status. This step might have to be repeated at the next boot action.

Start directly from bootable disk



Using the Start CD from O&O DiskImage

**Tip:** If you have purchased O&O DiskImage electronically, you will find more information on the creation of bootable disk here: [Create boot medium](#).

**Note:** If you want to run a restoration on different hardware, you should also consider the notes in chapter [Machine independent restoration \(M.I.R.\)](#).

**Note:** In the O&O DiskImage Special Edition the Start CD needed for running O&O DiskImage without an operating system and restoring the system partition is not included.

## Loading drivers

If a device like a hard disk or network card isn't automatically recognized when using the Start CD under Windows PE, it could be that a required driver for the controller (e.g., for RAID) is missing.

You can start loading a new driver immediately after inserting the Start CD using the dialog **O&O System settings** and the tab **Drivers**. You can also find this dialog at a later moment under **Start/O&O System settings/Drivers**.

Please follow these instructions for loading a new driver:

1. Open the tab **Drivers** in the dialog **O&O System settings** as described above. All recognized Windows devices as well as all devices missing installed drivers will be displayed.

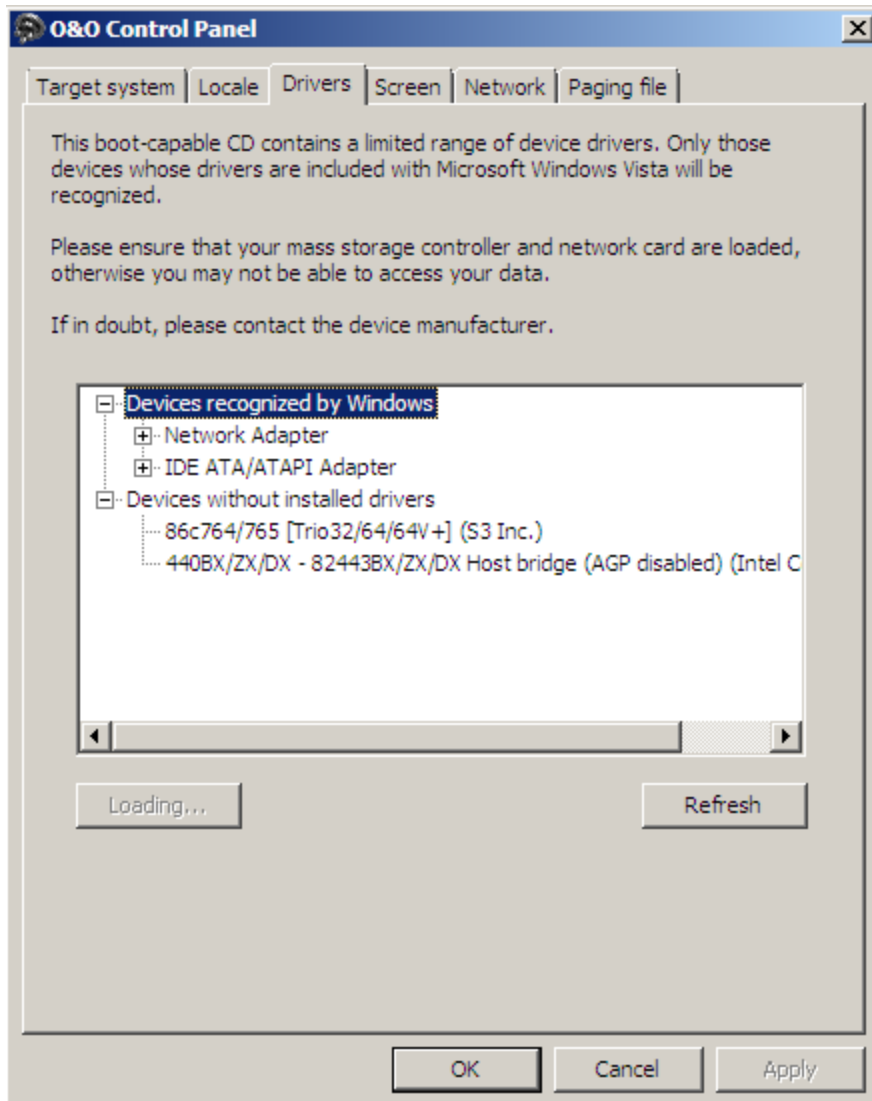
## Start directly from bootable disk

2. Select the device for which you want to load a driver.
3. Click **Load**.
4. Select the desired driver such as one on a connected hard disk, USB Stick or CD\*.
5. In the dialog, select **Open** to install the driver.
6. You'll then see a program message informing you about the status of the installation.

**\* Note:** You can remove the Start CD from the drive in order to insert a driver CD from a manufacturer.

**Note:** Under certain circumstances, you may receive a notice requiring you to restart if you have loaded an additional driver under Windows PE. This message is automatically generated by Windows PE but is irrelevant when starting from a CD. Simply reject the request and follow the further instructions in the pop-up window.

**Note:** Encrypted drives are not supported under Windows PE



Loading drivers

Start directly from bootable disk

## Create boot medium

You can also run O&O DiskImage without needing to install it directly from the boot medium. The boot medium is based on Windows PE and is perfectly suitable to either restore your entire computer or the system partition for instance, if you have created a corresponding image.

The Start CD, which you can use as boot medium is already included, if you have purchased the box version of O&O DiskImage Software-Box.

If you however have purchased the online version of O&O DiskImage, we will send you an email with all the necessary information. It will contain the license data, the download link for the normal installation and the link for the ISO file from which you can create your boot medium.

You will need an empty data carrier (CD-R, DVD, Blu-ray Disc or USB-Stick), corresponding hardware (CD-R/DVD or Blu-ray burner) and burn software.

1. Click on the link of the ISO file and save it on your computer, e.g. on your desktop.
2. Insert a CD-R/DVD/Blu-ray in your optical drive (burner) and start the burn program. Alternatively, you can also connect a USB-Stick to your computer.
3. Follow the instructions of your burn program to create a boot medium from a ISO file. More information is available in the program help of your burn program.

If you are not sure how, you can also create the boot medium with our free burn program (O&O ISOBoot). All presets are already in place. Contact our support and have your license data ready, we will simply send you the link for a download: [support@oo-software.com](mailto:support@oo-software.com).

## Scheduling functions

The Job Wizard allows for the automatic scheduling of the program functions. You can, for example, plan to have your data drives imaged once a week.

- You will be forwarded to the corresponding activity window for your selected job via **Jobs and reports**, which lists all jobs and reports created in O&O DiskImage. With a double click you can see the corresponding report or edit the job.
- You can create a new scheduled job, by clicking on the symbol **Add as job** after selecting the drive or a folder in the activity window.

**Note:** In order to execute jobs on a regular basis, the starting conditions (e.g., source drive, images, or target drives) have to be the same. If you make changes to a drive's name, the storage location of the image, or on the layout of a target drive, the job may no longer be executed successfully.

**Example:** If you've created a job for incremental imaging, you need to enter where you saved all the previous images serving as a basis for the new incremental image. If you've moved the "base image" to another storage location, you'll need to enter the new storage location in the Job Assistant: otherwise the new path will not be found and the job cannot be run successfully.

**Note:** If you're starting O&O DiskImage directly from the CD, the tabs for Scheduling and Notification are not available in the Job Wizard.

## Create a Job - General information

Before setting up a job, you'll have to select the corresponding activity.

1. Click on the activity you want to perform on the start page, e.g. **Drive imaging**, or **File backup**.
2. Select a drive or, in case of a file backup a folder.
3. If you want to specify certain settings for a job, such as the imaging method, encryption or compression, click on Options. Your settings will then be saved and applied to the subsequent job.
4. Now click on the symbol **Add as job**.
5. Enter the name of your job in the dialog. It will be used for the creation of the report later and will serve you for further reference. The name of the job has only symbolic meaning and can also be already applied to other jobs.
6. Specify further settings, such as scheduling, notification, imagings etc.

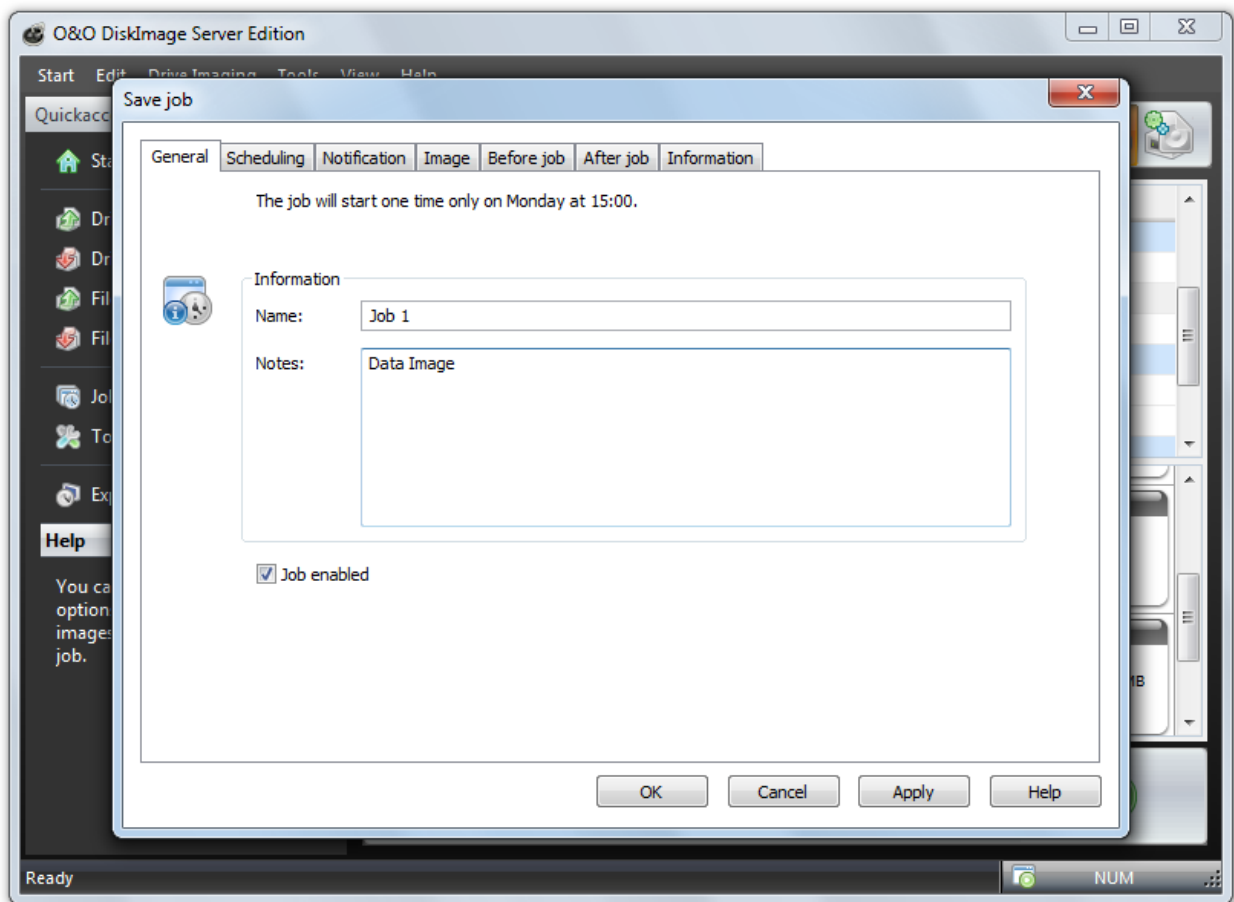
In the field **Notes** you may enter text that can provide a few details about the job.

### Job enabled

If you want to leave out a job for a short period of time, but don't wish to delete it altogether, you can disable it. In this way, the job will not be run until you once again enable it.



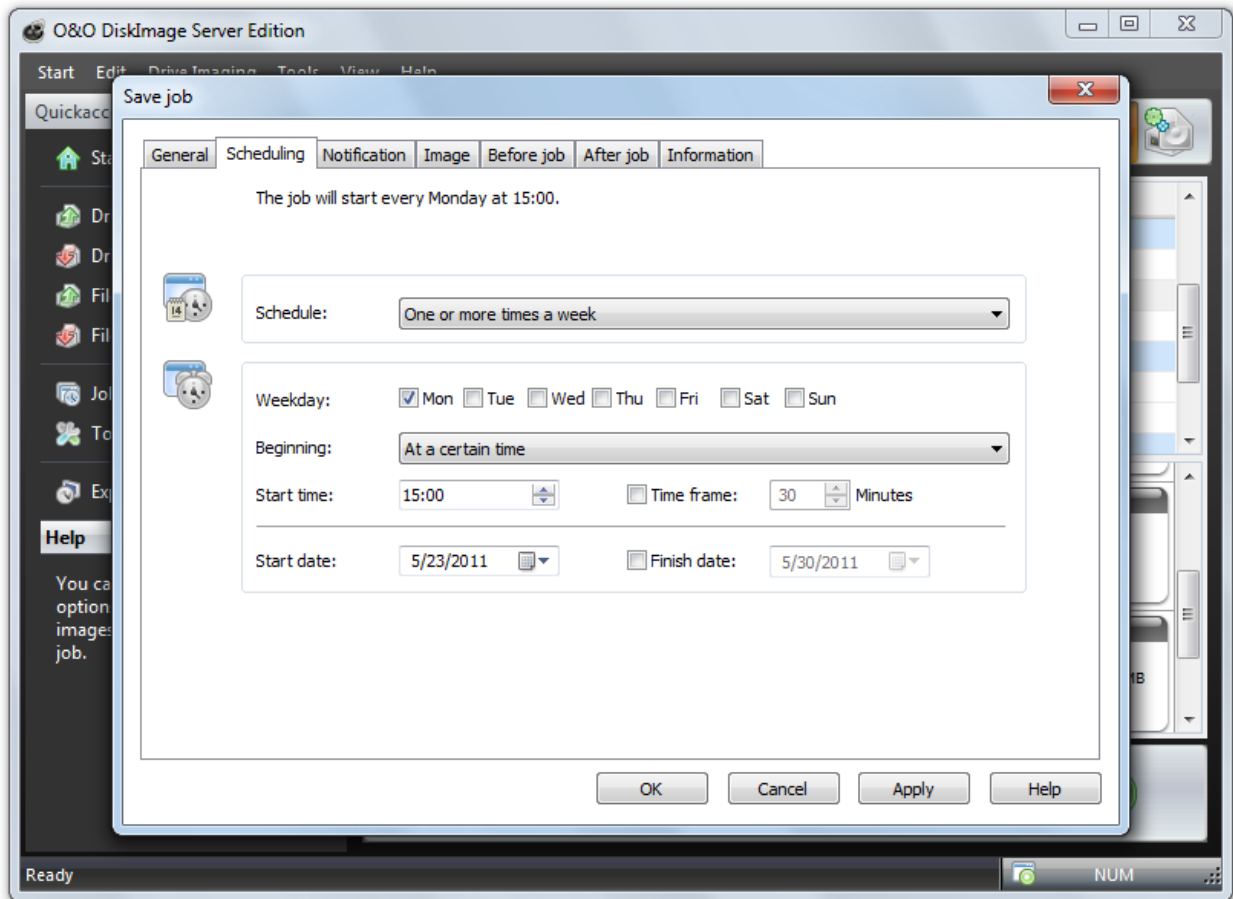
## Scheduling functions



Job Wizard general information

## Scheduling

Under Scheduling in the Job assistant, you can specify the exact moment when a job should be run. A job can be performed one time only or repeatedly. The options for execution (date, day of the week) will change along with the corresponding selection.



### Scheduling jobs

#### For one-time execution:

- Time

#### For weekly execution:

- Selection of weekday, date, and time
- Selection of the start and finish dates for the interval. The job will be performed, for example, five weeks in a row, once a week.

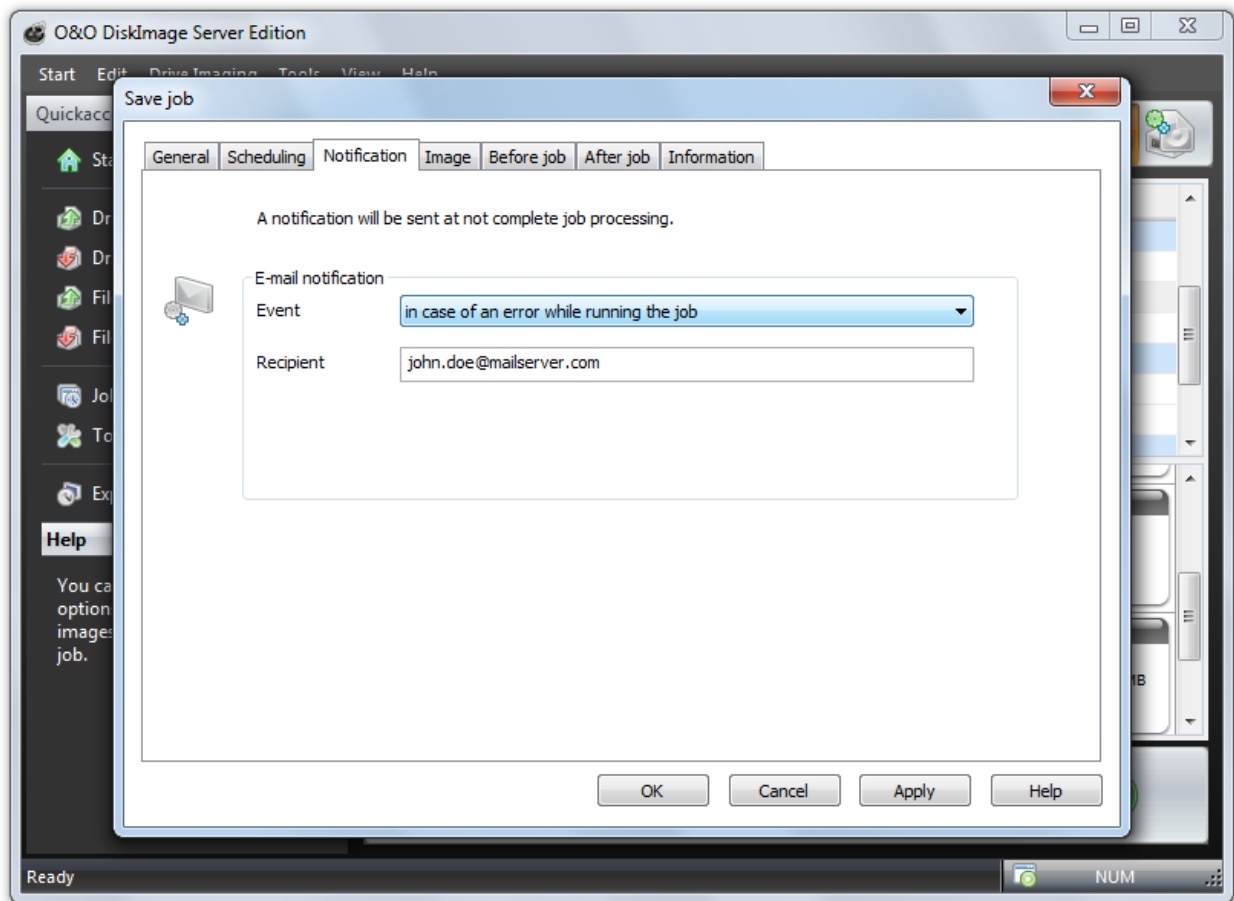
## Notification

In the **Job assistant** under **Notification**, you can arrange to be notified by email about the running of tasks during events.

- If you want to be notified about the running of a job, select an event and enter your email address in the field for recipient.

## Scheduling functions

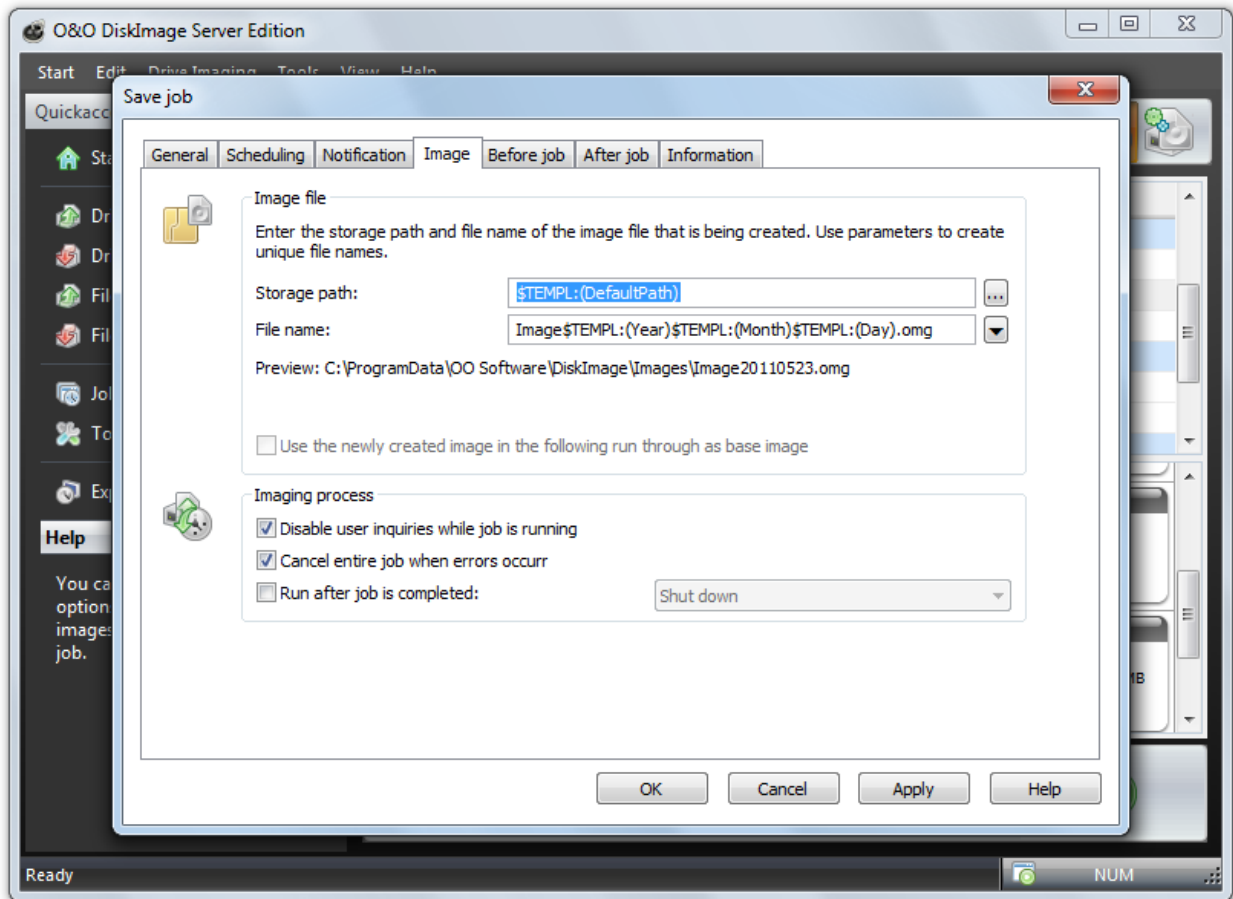
**Note:** In order for your entry to be successfully processed, you'll have to set the sender data of your email server in **Program settings** under [Notification](#).



Job: Notification

## Settings for a job

You can set additional options for your job in the third tab (**Image**) of the Job Wizard. The choice of settings is based on your selected activity. For an imaging activity, you could, for example, enter a storage location and a name for the image.



Job Wizard: Imaging

### Disable user inquiries while job is running

User inquiries are questions that can arise during the normal course of running a job or while the scripts are being processed.

If in doubt, you will need to confirm questions, e.g. with a security check if the name of the image already exists. The job will thereby be interrupted because the user either has to make a decision or additional information is required for continuing. Some user queries can be specified using special parameters, for this see the script documentation.

User queries are currently made only, if the user interface of O&O DiskImage is open.

User queries will not be filed until the user interface is closed during job execution, or if you have enabled the option **Disable user inquiries while job is being run**. Should this interactive option be turned off, in a worst case scenario there will be no confirmation dialog while the job is being run and it will be aborted by default and logged as an error.

### Abort entire job when an error occurs

The job will be aborted whenever an error occurs.

### Run after job is completed

Here you can choose between **Restart** and **Shut Down**. If you don't select anything, the computer will return to its condition prior to imaging. It will usually just remain on.

## Characteristics of an imaging job

### Storage path

The target path to the storage location of the image will be applied by default. You may, however, select or enter a new path manually.

### Apply dynamically generated file names

For a file name, the terms "Image" and the dynamically mounted parameters "year", "month", and "day", will be used by default. In addition, you can select from a list of alternative parameters. If you're making, for example, a number of images on a single day, it's advisable to include the "time" in the file name. Otherwise, files with the same name would emerge and that could lead to the imaging process being aborted.

Note: If you're using O&O DiskImage on a computer in a network, the data from the computer will be automatically read and file names will be dynamically generated. You could, for example, add the "Computer Name" to the image name for use in a network.

## Create a job for incremental or differential imaging

In order to create a differential or incremental imaging job, you'll need a [complete](#) or [base image](#) that was previously created. This complete image will serve as a base for creating differential/ incremental imaging jobs. The first image after the complete image is always a [differential image](#). Incremental images can be based on a differential or another [incremental images](#).

1. Select **Drive imaging** from the O&O DiskImage Start Page.
2. Enable the check for **Incremental imaging**.
3. Select the base image via **Select image** for your incremental follow up images.
4. Then click on the symbol **Add as job** in the ribbon bar.
5. Enter the name and the schedule for the imaging session in the job dialogue.
6. Under **Imaging** you can either use the standard path or manually enter another storage location for the image.

The option **Use created image as base image for the following execution** is enabled by default. [Incremental images](#) will always be created based on the last image of changes. As a result of this, the data volume of the incremental image will end up being very small. All previous cumulative images and the last complete image will be needed for restoration. We recommend saving the complete image as well as any successive image of the changes in one folder.

If this is not possible, the default check has to be removed from **Disable user inquires while task is running**. The process runs only partially automatic because every time an imaging takes place, any previous images will be requested. If these are not entered, the job will be aborted as a result of error.

The selection check for **Use created image as base for the following execution** is enabled by default. If you disable it, all further images will be created as differential ones that use the last complete image for their base. Restoration will then require the last differential image along with the complete. Incremental images that were created in the meantime will no longer be needed. The data volume of these differential images is correspondingly larger than a series of incremental images.

## Run commands before and after a job

Carrying out commands before and/or after a job can allow you to stop certain Windows services and then restart them again afterwards. If you're using O&O DiskImage on a Microsoft Exchange or SQL-Server, you could stop these services beforehand, create the image and then have them automatically start again once the imaging is done. You no longer need to create a script to do this.

### Before Job

If you select this option, the commands entered in the text field will be carried out before the job begins. You can also import existing command files so that their contents will be shown in the text field. Just click on **Import** select the file in the dialog (.BAT, .CMD or .TXT). Confirm with **OK**.

Note: Please make sure that all commands exist and are able to be carried out on the target computer. All commands will be carried out under the SYSTEM User and his permissions.

### After Job

If you select this option, the commands entered in the text field will be carried out when the job is completed. Entry and application is similar to the command instructions in "Before Job".

Note: Please make sure that all commands exist and are able to be carried out on the target computer. All commands will be carried out under the SYSTEM User and his permissions.

## Job information

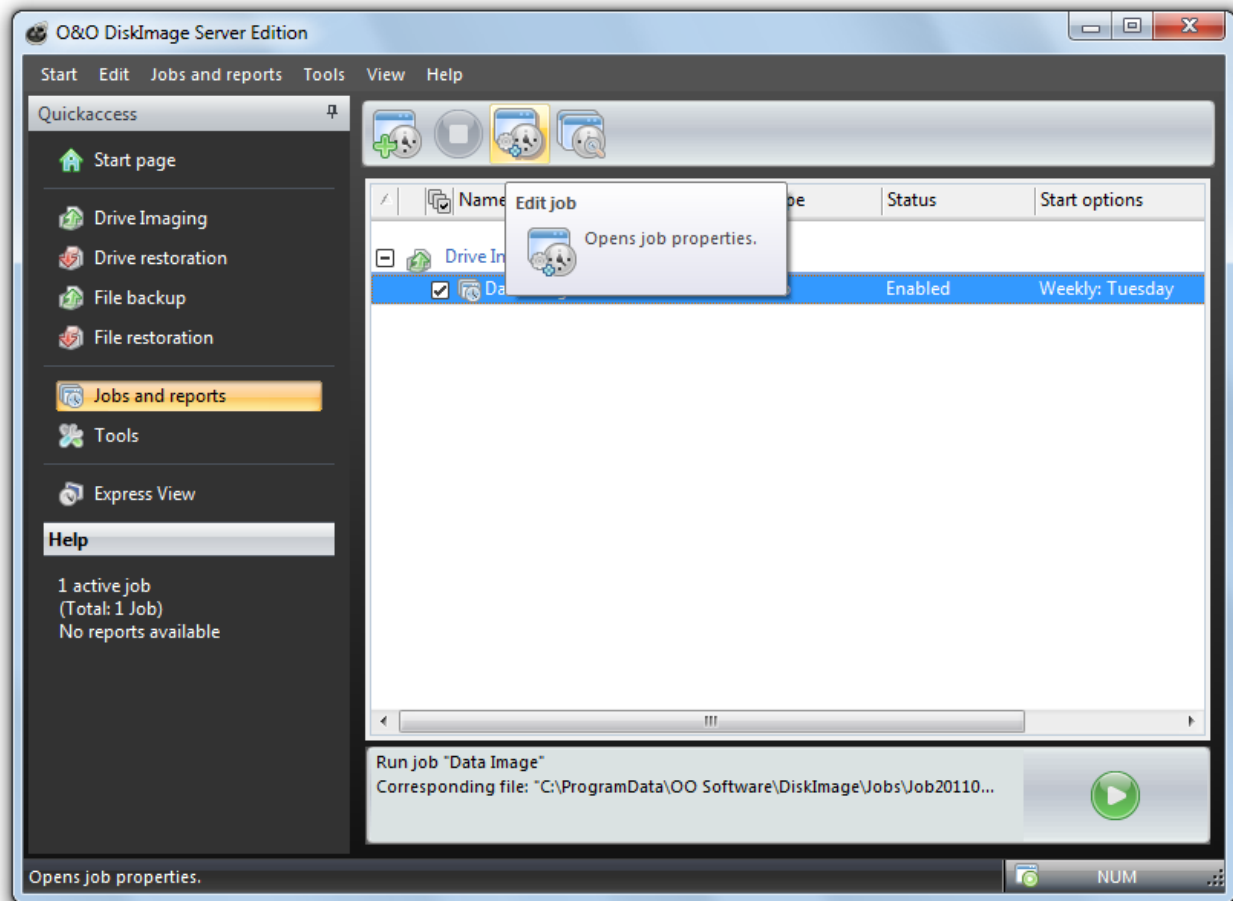
The exact settings of a job are listed under **Information** in the Job Assistant. The view provides information only; you will not be able to make any changes there.

## Edit jobs

1. To edit a job select **Jobs and reports** in the start page of O&O DiskImage.
2. You can change a job, if you select it with a check in the job list and then click on the symbol **Edit**.
3. The Job assistant will then appear with the settings of the job.
4. Make the desired changes in the properties and confirm the changes with **OK**.
5. If you decide not to apply the changes, then click on **Cancel**.

For selected tasks, e.g. deleting or importing/exporting of one or several jobs, you have to check the desired jobs in the list. Afterwards, you can run desired tasks on all selected jobs.

## Scheduling functions



### Edit jobs

#### Check job

To check if the settings for a job are valid, i.e., to check if its contents and syntax can be executed on a local system, select **Jobs and reports** in the file menu on the Start page of O&O DiskImage.

Then select the job you want to check and click on **Check job**.

#### Delete job

To delete a job select **Jobs** in the start page of O&O DiskImage.

Mark the job you wish to delete with a check and then click on **Delete**.

#### Run jobs

To run a job select **Jobs and reports** in the start page of O&O DiskImage.

**Start** will begin the selected activity after a security question is answered.

#### Export jobs

To export a job select **Jobs and reports** in the start page of O&O DiskImage.

Mark the job selected in the job list and then select **Export**. Save the job file (\*.xml) on an external storage volume so that it can be applied again to another computer (see "Import jobs").

## Import jobs

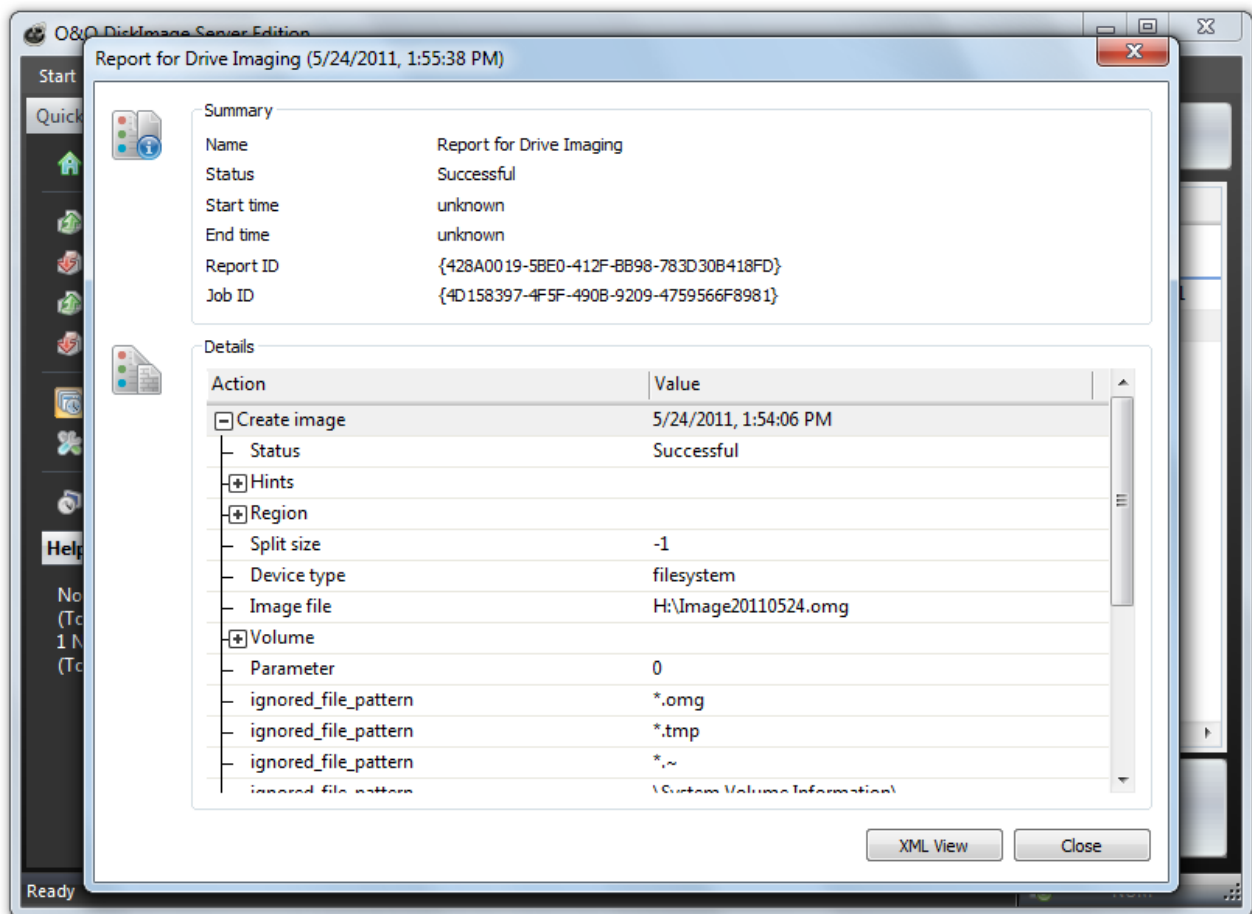
To import a job, select **Jobs and reports** in the start page of O&O DiskImage and select the function **Import jobs**. Select the desired job in the dialog window. This will then be added to the Job List.

You can then transfer the created job from one computer to another, without having to make new settings for the job.

## Reports

A status report will be created for every action performed by O&O DiskImage. It can be accessed as a XML document from the start page of O&O DiskImage under **Jobs and reports**.

In the report you will find all information about the progress of an installation or a job.

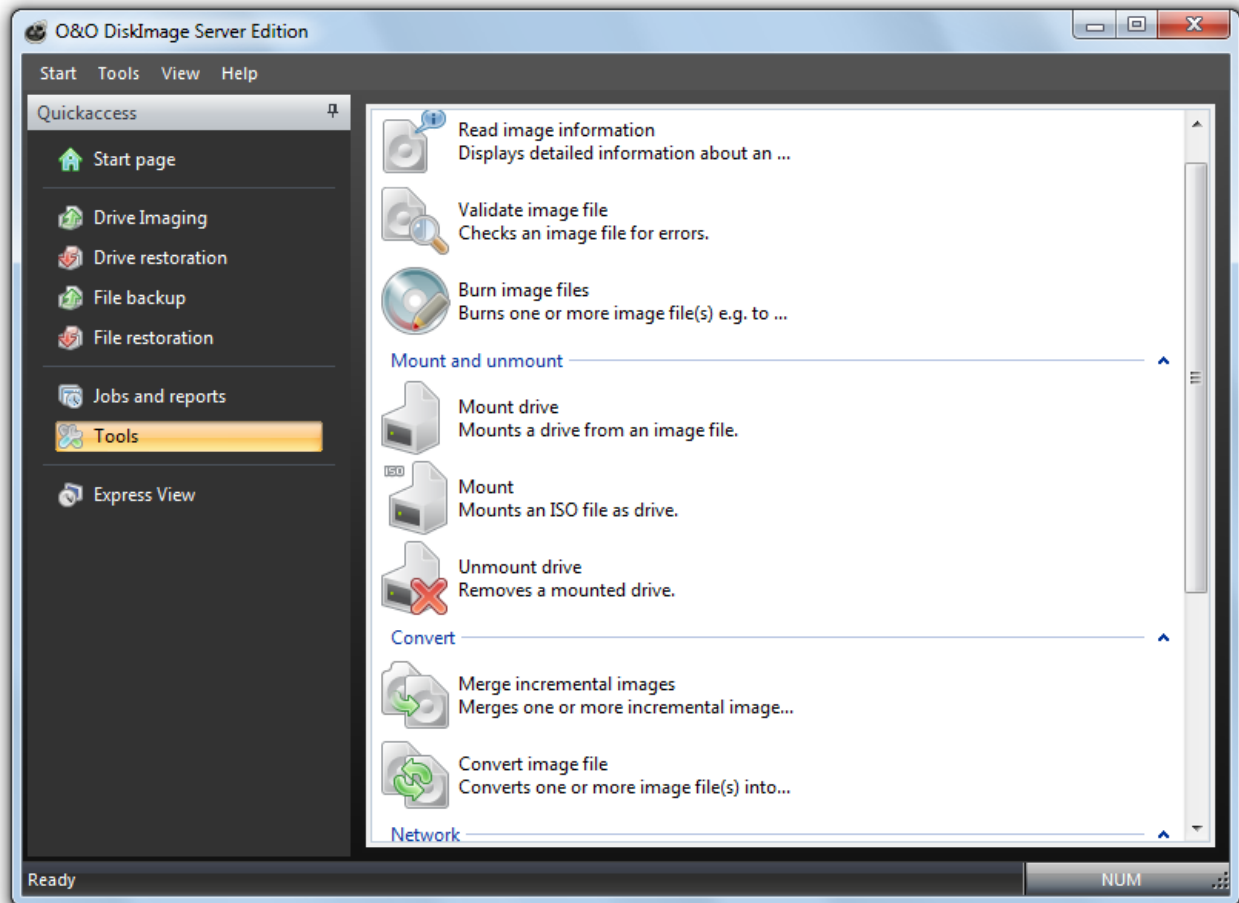


Reports



# Tools

The tool menu includes options to process images and further activities.



Selection of tools for an activity

## Read image information

Select **Read image information** to access information on already created image files (\*.omg/\*.obk). After you've selected an image file in the browser window, you'll see information such as the imaging method, date of creation and image contents displayed.

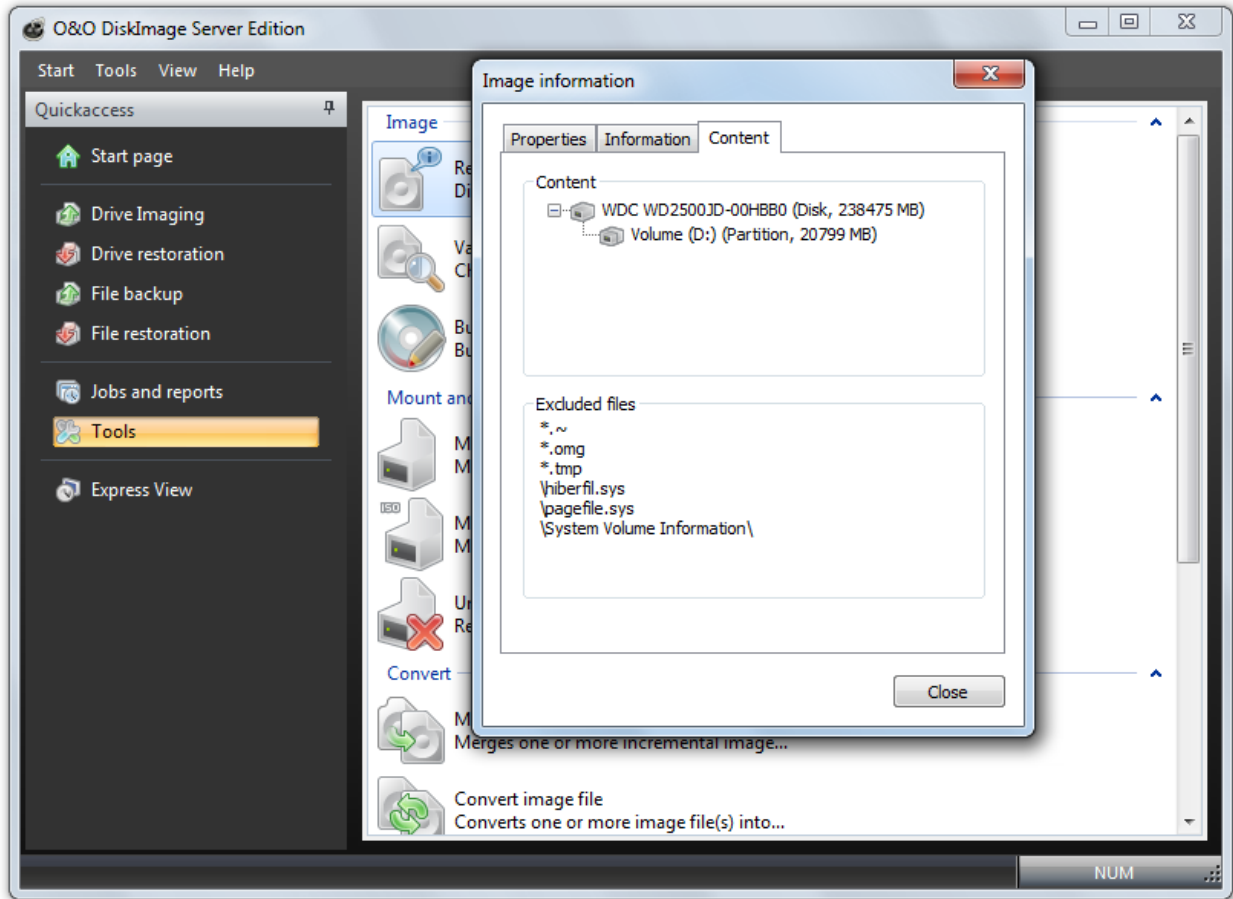
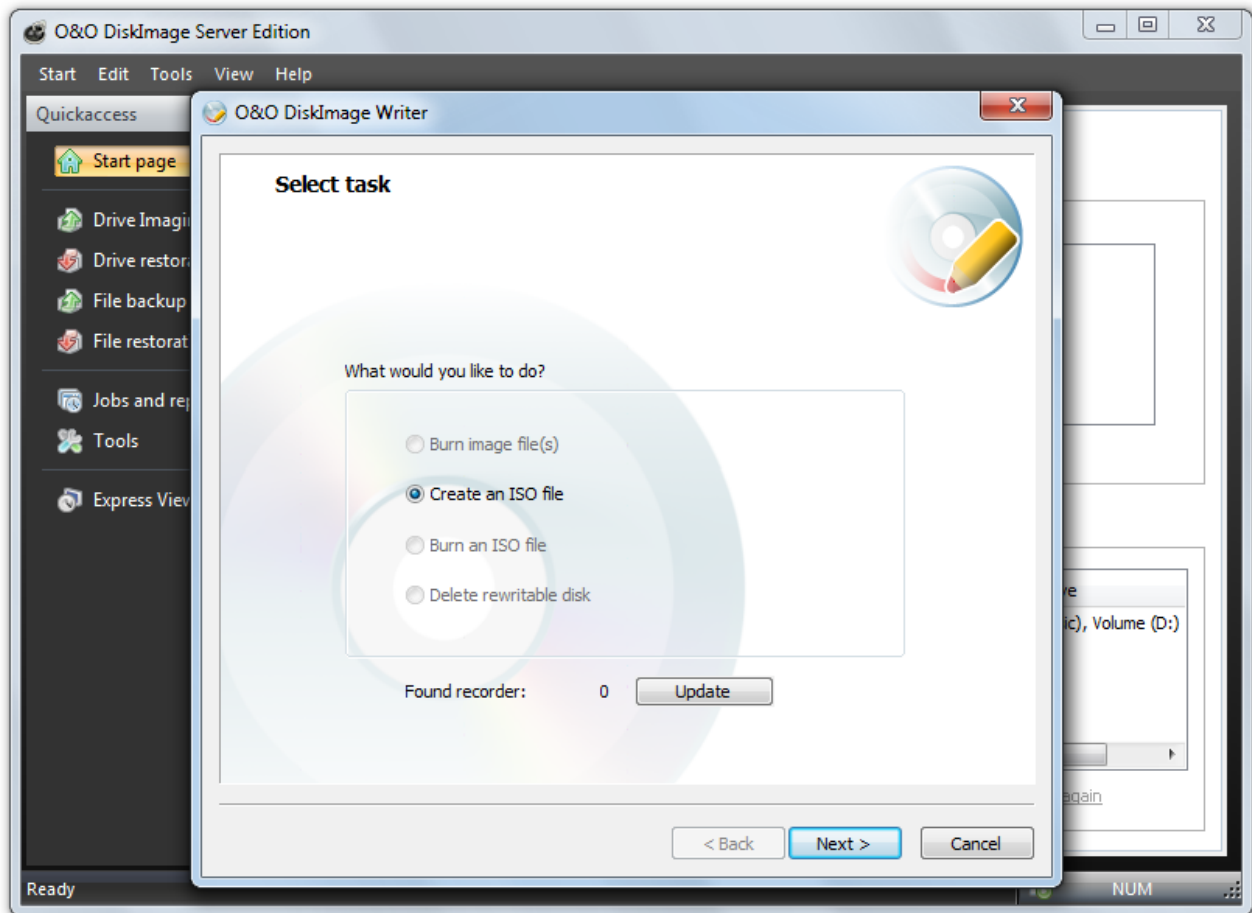


Image information

## Burn Wizard

With the O&O DiskImage Writer (Burn Wizard) you can burn your image on CD/DVD/Blu-ray Disk (BD), create ISO files, burn ISO files and delete rewritable storage volumes.



Burn Wizard

## Burn image file(s) on CD/DVD

To save your image to CD/DVD, you need to first create an image and save it on an internal or external drive\*. Only then will it be possible to burn your image files (\*.omg) or your virtual hard disk (\*.vhd) to CD/DVD. It is **not** possible to store an image or a virtual drive directly, i.e. without buffering it, on CD/DVD.

Before starting the burn process, make sure that you have inserted an empty disk in the optical drive.

1. Under **Tools** click **Burn imaging file(s)**.
2. Select the job **Burn image file(s)** in the O&O DiskImage Writer.
3. Select your image file with **Add**. Depending on the size of the image file you can select one or more files.
4. Then, click on **Next** and follow the instructions in the dialog. Please also take note of the displays.
5. If one disk is not enough to hold your entire image, you can burn your image files one after another.

**\* Note for the creation of images:** After selecting your drives for imaging, limit the image files to the size of your blank CD/DVD under **Drive imaging/Imaging options/Image file/File size**. The image file will then be divided into

several parts during the imaging process. The splitting of the image file at a later time is also possible, (See [Convert image file](#)”).

**Note:** When renaming individual parts of the image, it is recommended to keep the "number portion" of the file name (the number in parentheses) so that you can trace the order of the files and avoid problems when restoring the images at a later time.

**Tip:** In addition to CD/DVDs, the program also supports Blu-Ray Disks and HD/DVDs.

## Create ISO file

1. Under **Tools** click **Burn image file(s)**.
2. To create an ISO file, select **Next** in the O&O DiskImage Writer and the **Create an ISO file**.
3. Then select the files via **Add** in the Windows-Explorer.
4. Before following the dialogue further, check the path for storing the source file and bear the occasional appearing notes in mind.

## Burn ISO file

1. Under **Tools** click **Burn image file(s)**.
2. To burn an ISO file on CD/DVD, select **Next** in the O&O DiskImage Writer and then **Burn an ISO file**.
3. Then select the files via **Add** in the Windows-Explorer.
4. Before following the dialogue further, check the path for storing the source file and bear the occasional appearing notes in mind.

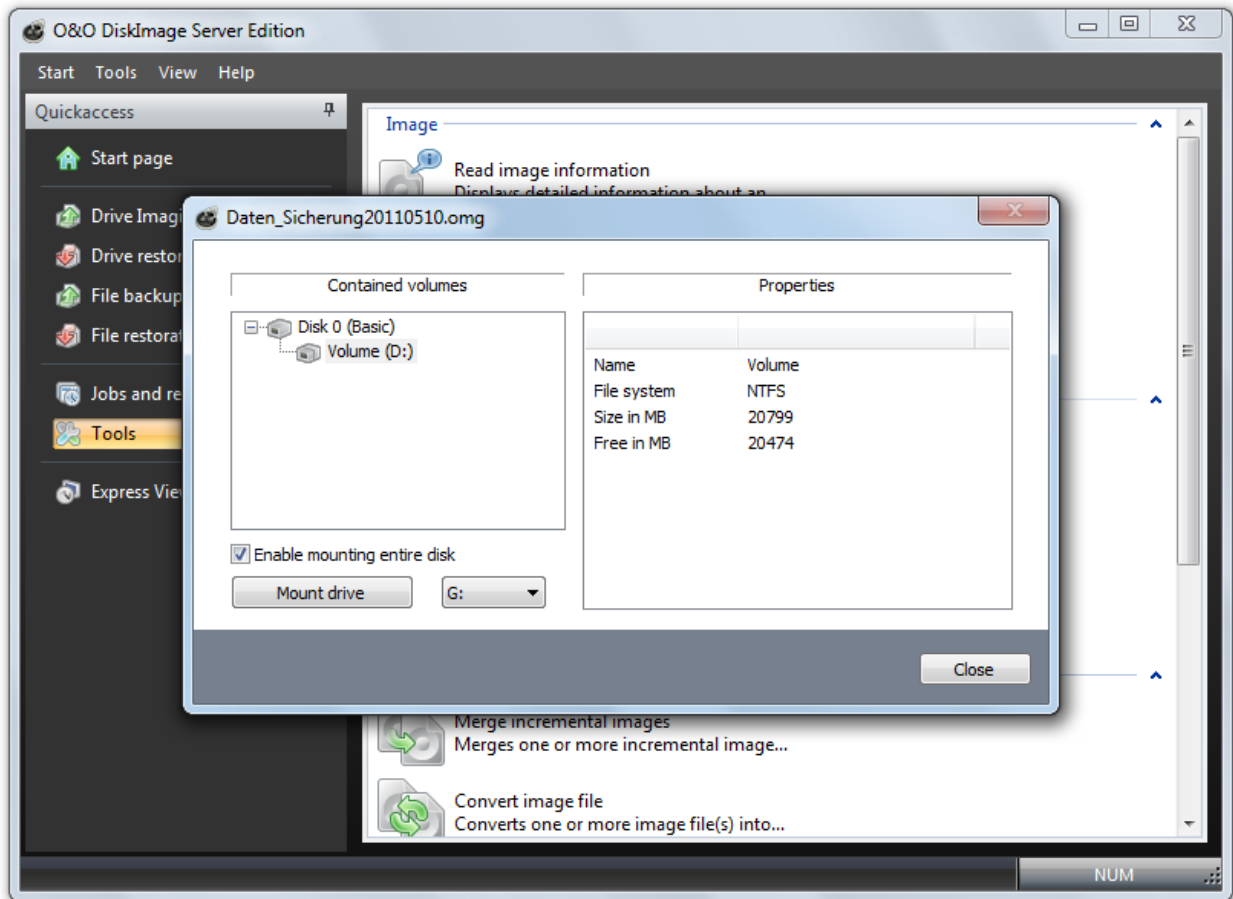
## Delete rewritable disk [Delete rewritable disk](#)

If you are using a rewritable disk, you can delete it with the help of O&O DiskImage.

- If you are using a rewritable disk, you can delete it with the help of O&O DiskImage.

## Mount drives from image files

You can have your created image file displayed in Windows Explorer as a virtual drive. This allows you to copy files or directories from the image file onto existing hard disks. Making changes to the mounted virtual hard disk of the image file, such as deleting or adding files, however, is not possible.



Mount image file as a drive

1. Open **Tools** in the menu bar and select the option **Mount drive from image file**.
2. Select the image file (\*.omg) from the dialog window, from which you want to mount the drive. If you are not sure, you can look up the details of the image under **Image information**.
3. After selecting the image file, all drives included in the image will be listed in the program window.
4. Select the displayed drive as image.
5. Afterwards, you can select any name from the drive list (e.g. G:) for the drive from the image.
6. Then, click on **Mount drive**. The virtual drive from the image will then be visible as a regular drive in the Windows Explorer.

Please note that you may only access sectors which contain image files. Refreshing can take a few moments.

**Note:** Please bear in mind that drives can only be mounted from an image, if the image is available locally. You cannot mount a drive from an image located in the network.

**Enable mounting disk:**

If you create an image of one or more, partitions/volumes, the image contains additional information about the disk (or hard disk) along with the imaged data. This information will concern the hard disk's structure as well as its corresponding system areas such as the master boot record, possibly existing extended boot records, the LDM (logical disk management) database or the GUID partition table. With the function **Enable mounting disk**, you can load this information or use it for acquainting the hard disk to the operating system based on the disk's original information. We recommend using this function when you want to restore deleted or destroyed data from a forensic image.

**Note:** Creating a virtual disk out of an entire hard disk can result in recognition problems for the virtual disk when the following applies to the hard disk being imaged:

- defective or invalid partition tables
- partitioning process not supported by your operating system (e.g. GPT)
- dynamic hard disks containing volumes that are spanned, striped, mirrored or RAID5 when not all the hard disks being used were imaged
- encrypted hard disk

### Technical limitations

- Windows refresh problem: if you're working with a remote desktop connection, a new login will be needed for displaying the mounted drives.
- Mounting images larger than 2TB is not supported by Windows XP (32-bit).

**Note:** After restarting from Windows, the virtual drive is removed automatically from the drive list.

## Mount ISO file as drive

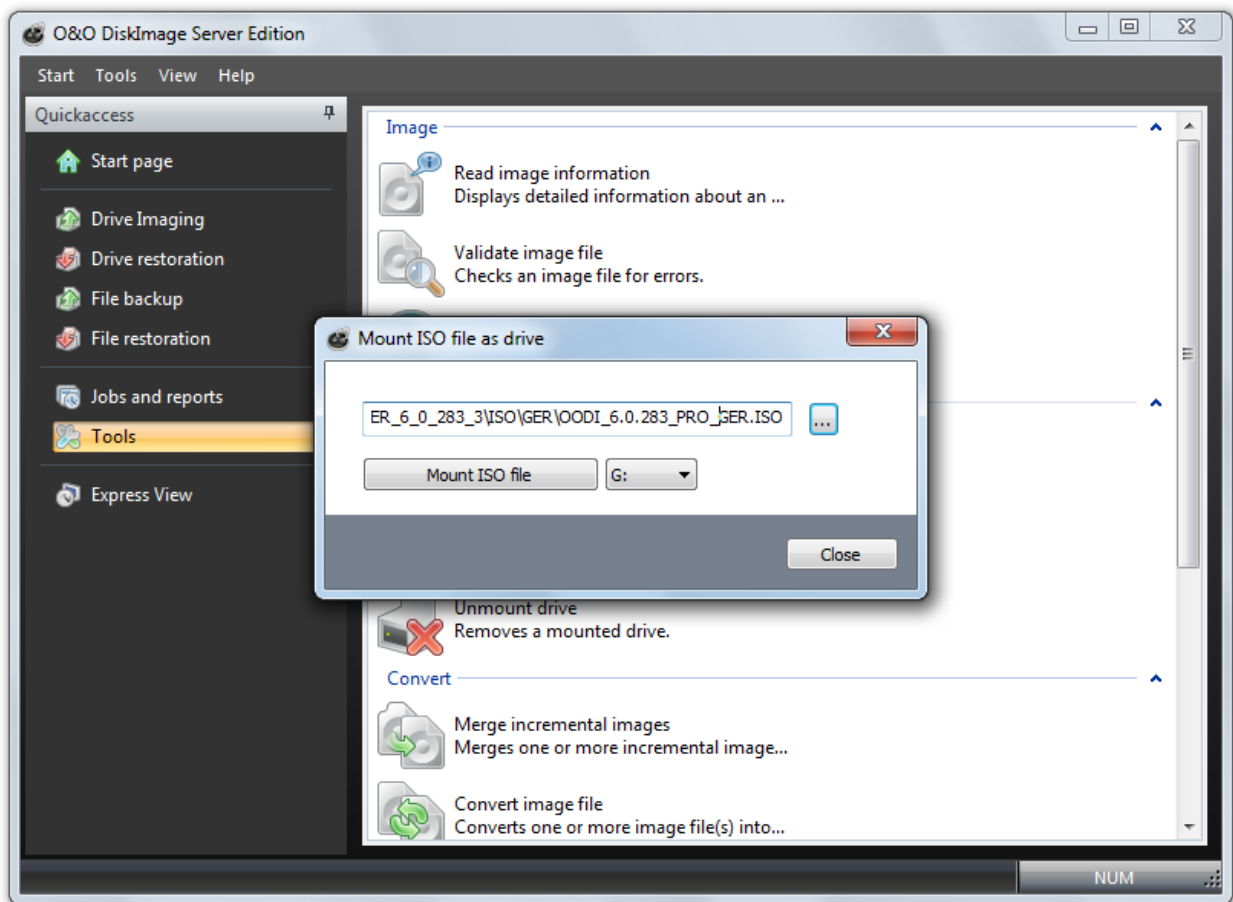
If you have stored data as ISO file, you can mount this ISO file as drive and view the files included. This allows you to copy files folders from the ISO file onto existing drives. Making changes to the mounted virtual hard disk of the ISO file, such as deleting or adding files, however, is not possible.

1. Open **Tools** in the menu bar and select the option **Mount ISO file as drive**.
2. Select the ISO file (\*.iso), of which you want to mount the content as drive.
3. After selecting the ISO file, click on **Mount ISO file**. If you want to label it with a certain letter, you can select another letter from the list.
4. Refreshing can take a few moments.
5. The virtual drive from the ISO file will then be visible as a regular drive in the Windows Explorer.

**Tip:** If you want the virtual drive to be also visible in the drive list of O&O DiskImage, make sure to enable a check next to **Include CD and DVD drives** under **Program settings/General** and click on **Show drives not able to be imaged** under **View**.

**Note:** After restarting from Windows, the virtual drive is removed automatically from the drive list.

## Tools



Select ISO file

### Unmount drive

If you no longer want to display a virtual drive you've mounted from an image file, click under **Tools** on **Unmount drive** and remove the drive in the program window

**Tip:** After restarting from Windows, the virtual drive is removed automatically from the drive list.

## Convert image file

The tool **Convert image file** allows you to change the properties and content of existing images (OMG) or a virtual hard disk (VHD). It creates a copy of the image file (OMG) or virtual hard disk (VHD), so that the original image remains intact.

Further settings like compression, encryption or splitting images into several image files with a certain size are possible. Please note the restrictions that apply to [Handling virtual hard disks \(VHD\)](#).

### Merge images

In Tools under **Convert image file/Add** you can select the drives for merging.

This enables separate image files to be merged together. Only image files of similar types can be merged: that means only forensic, direct forensic or used sector images can be combined.

- Simply add the drive from the list.

### Handling virtual hard disks (VHD)

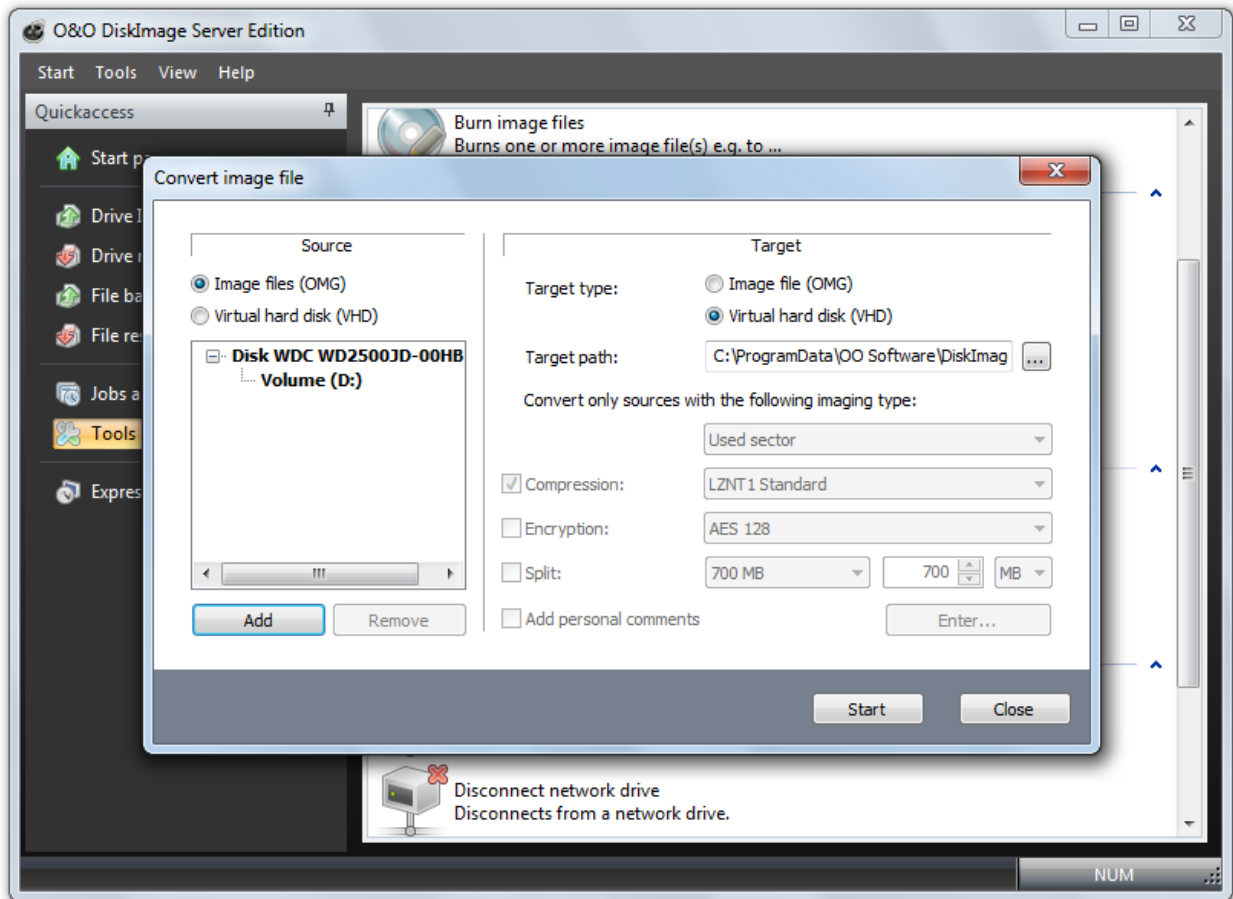
To simplify working with Microsoft Virtual PCs (VPC), you can now convert image files into virtual drives (VHD). The converted image can be integrated as a virtual drive in the VPC, without having to install O&O DiskImage there. In a similar way, images (OMG) can be created of virtual hard disks (VHD).

1. To convert an image to a virtual drive file (VHD), click **Convert image file** in the Tools menu.
2. Select **Image file (OMG)** as source in the Convert image file dialog and attach the desired image file.
3. Enter **Virtual hard disk (VHD)** as target and click **Start**.

You can also convert virtual hard disks (VHD) into an image file (OMG).

**Note:** The following options **cannot** be selected for a VHD: Compression, Encryption, and Split. In addition, only the following imaging methods are available "Only used sectors" or "Forensic".





Convert image file into a virtual hard disk

## Merge incremental images

If you have already created several incremental images, you can merge these to form a new base image. The newly created base image is now a "complete" image. Older images that contained only changes can be deleted once the merging has been completed.

1. Make sure that your computer will be able to access all drives where the base and incremental images are located.
2. In the menu bar under **Tools** click **Merge incremental images**.
3. A program window will appear where you can select and merge the existing image files.

**Note:** Only consecutive image files (Image of the changes) with the same base image may be merged. By clicking **Image information** and the corresponding **Drive information** you will find all details on the image(s).

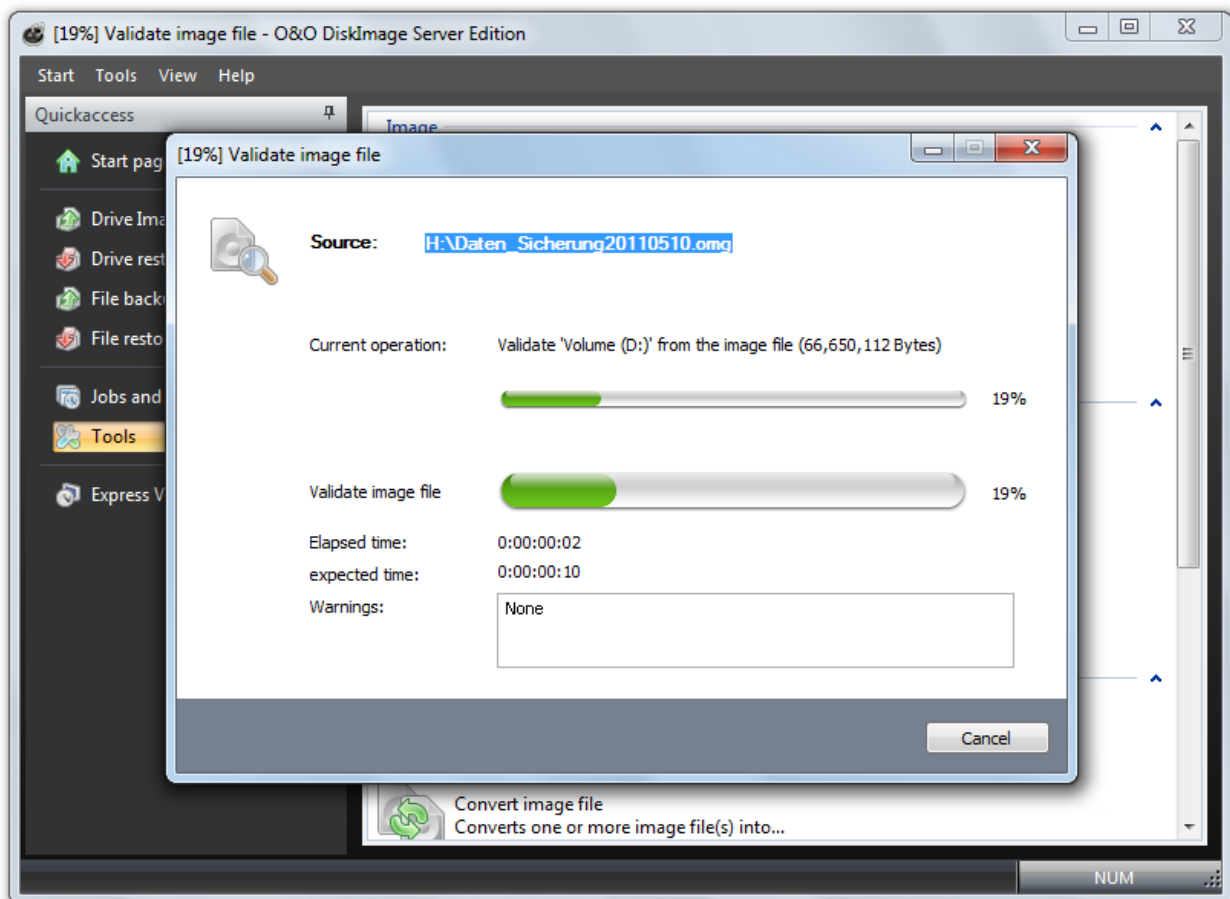
## Check image file for errors

Under **Tools** is a function called **Check image file for errors**. This function checks the structural integrity of an image file. It determines whether the logical structure is intact. Such damage can be caused by virus attacks or defective hardware. In addition, encrypted and/or compressed images will be checked to determine if decryption or decompression is possible without error.

Reasons for an abortive validation:

- Encryption and decryption are not functioning
- Compression and decompression are not functioning (Windows API/System interfaces)
- The user has changed the image file
- Image has been changed by a program driver (e.g. anti-virus software)
- Image is stored on a defective volume

**Note:** To make sure your image is created or restored without error, keep the validation process running until the imaging or restoration is completed. If you choose to “Skip” or “Abort”, there’s no guarantee that your image will be created or restored intact.



Check image for errors

## Check for drive errors

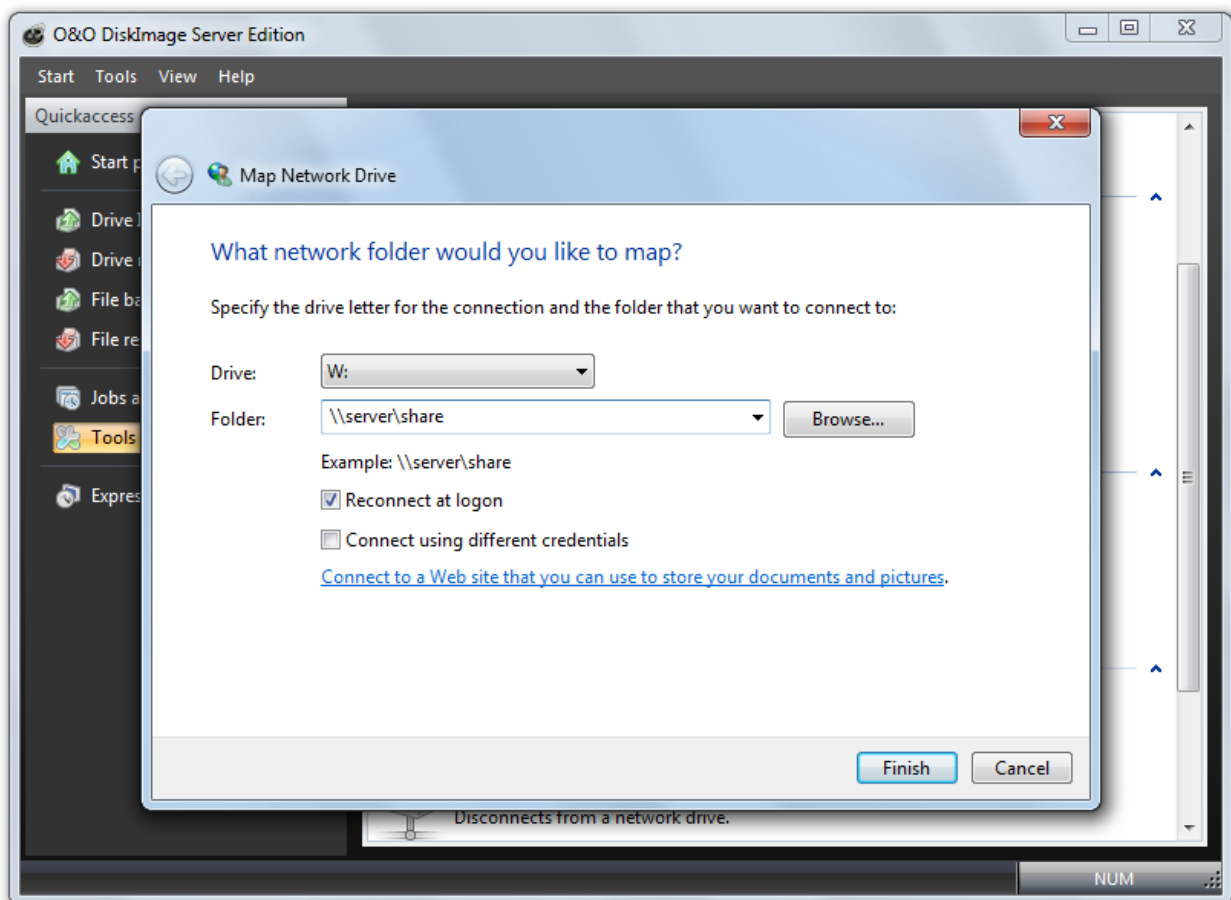
Under Tools is the function **Check drive for errors**, which runs an intensive analysis of the file system and data storage interface to protect you against any possible loss of data.

The Wizard (CheckDisk) will guide you step by step through the process of checking of your drives. Simply follow the instructions in the dialog window and select your drive.

In the next stage the analysis is carried out. You can monitor progress by means of a progress bar where all the program status messages are listed.

## Map/Disconnect network drive

Under Tools in the ribbon bar, you can select the setting **Map network drive**. **Disconnect network drive** allows you to disable the connection.



Map network drive

**Note:** Network authentication is needed for accessing network drives when images are saved on, or restored from them. Read more about it in the chapter [Authentication within the network](#).

## Change computer identity

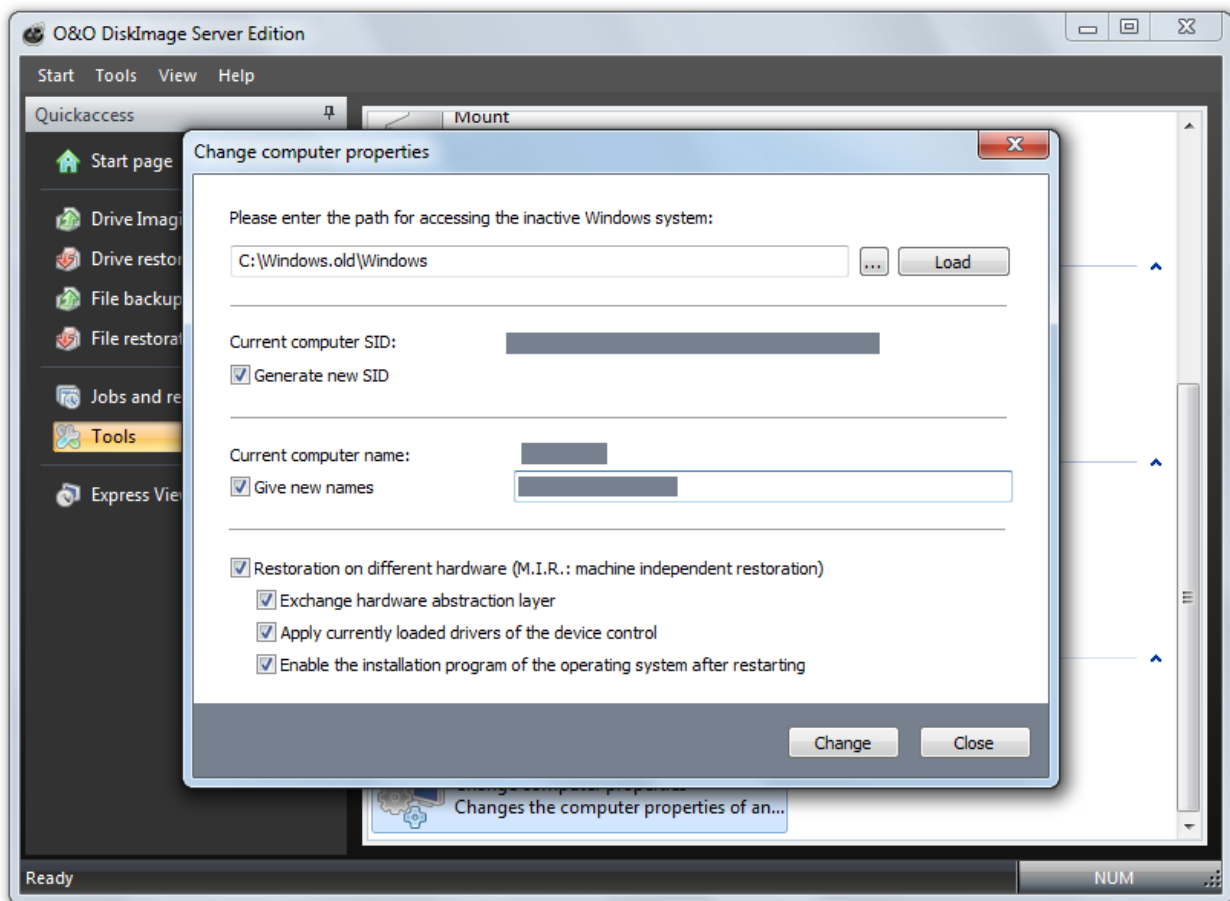
You can change the identity of your computer to avoid authentication problems whenever there exists the same computer identity within a network. This can be helpful, whenever a system image is created on several computers within the network. The disk of a fully installed and configured Windows computer is transferred onto another computer.

Although this cloning method does save time and effort the problem that each cloned system has an identical computer SID might arise. This influences the security in working group environments. In addition, the security of transfer media might be inhibited in networks with many computer SIDs.

To avoid this problem, O&O DiskImage offers the option to change the identity of the computer.

**Note:** If an error occurs while changing the current computer SID, then we recommend resetting the registration structures SECURITY and SAM.

1. Under **Tools** click **Change computer identity**.
2. Load the computer's non-active Windows system.
3. Then, enter a computer name for your computer (Give new name). **Change** saves your settings and the computer identity after you have changed them. **Close** cancels the dialog without applying any changes.

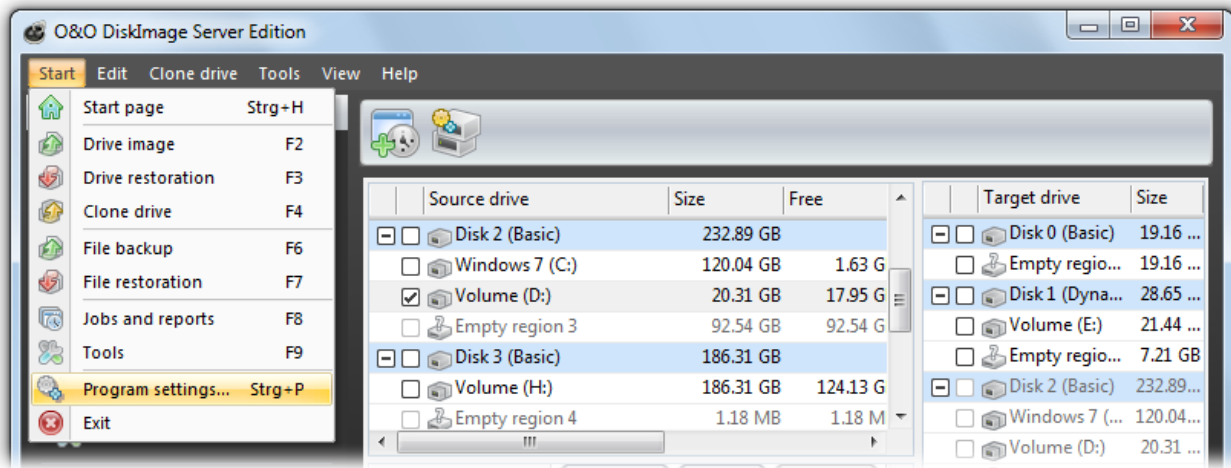


Change computer identity

## Program settings

You can adapt O&O DiskImage to your needs in the start menu via **Start/Program settings**. Here it's possible to determine, for example, whether created settings should be saved and applied as preferred settings when you start the program the next time.

**Note:** Program settings for the Registry, Security, and Email Notification are not available when starting O&O DiskImage from the CD.



Button for program settings in the application menu

## General - Change default settings

Under **General** in the **Program settings** you have the possibility to determine the program page that will be displayed at the start of O&O DiskImage. You can, for example, specify that the "Imaging" page appears whenever you start the program.

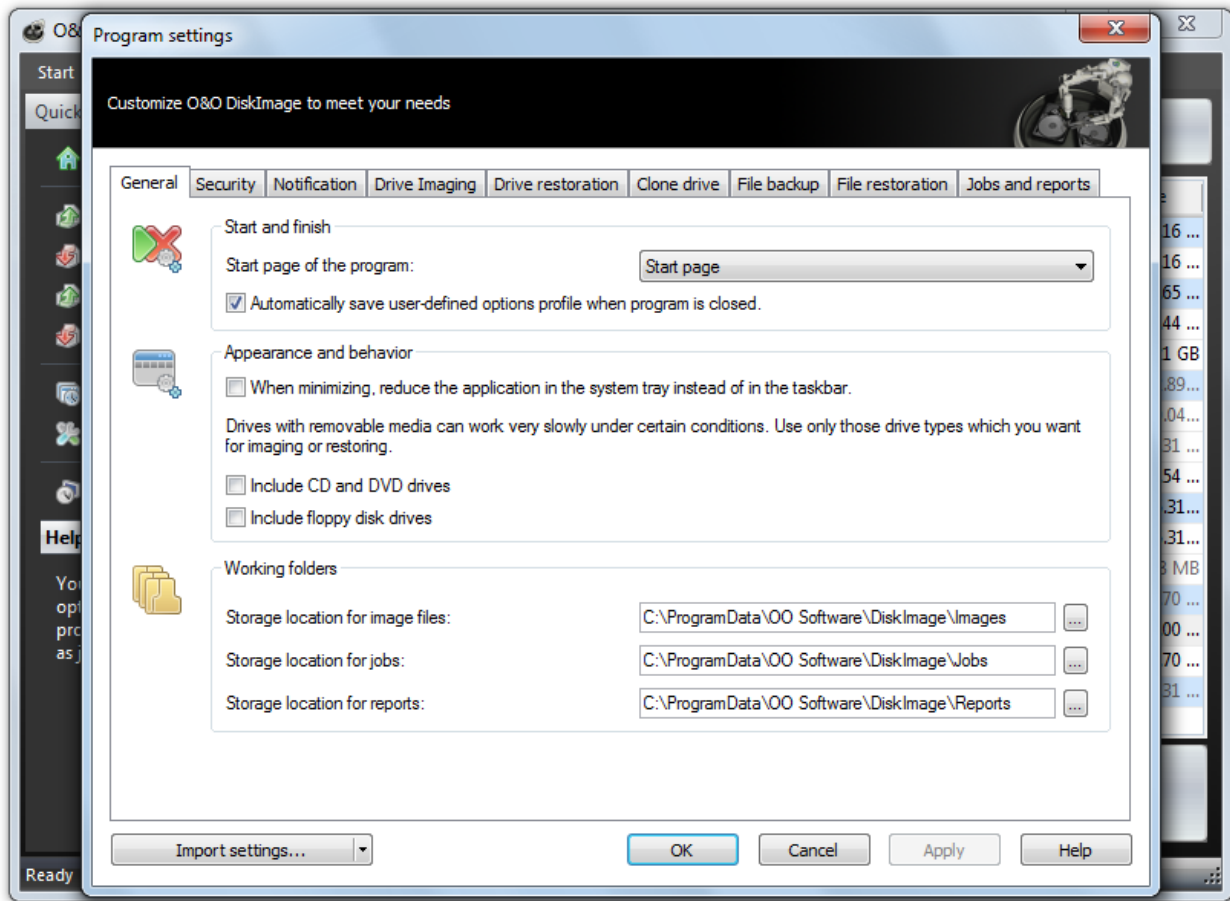
### Access removable drives

Under **Appearance and behavior** you can decide whether removable drives should be accessed when creating images or during restoration. As these removable volumes tend to work very slowly under certain conditions, it is advisable to use only those types which you would want for imaging or restoring.

### Default settings for storage locations

Under **Program settings/General/Working folders** you can determine and edit the folder in which the image should be saved by default. The path entered (target path) will be saved and applied to every imaging by default.

The storage location for jobs and reports can be similarly specified.

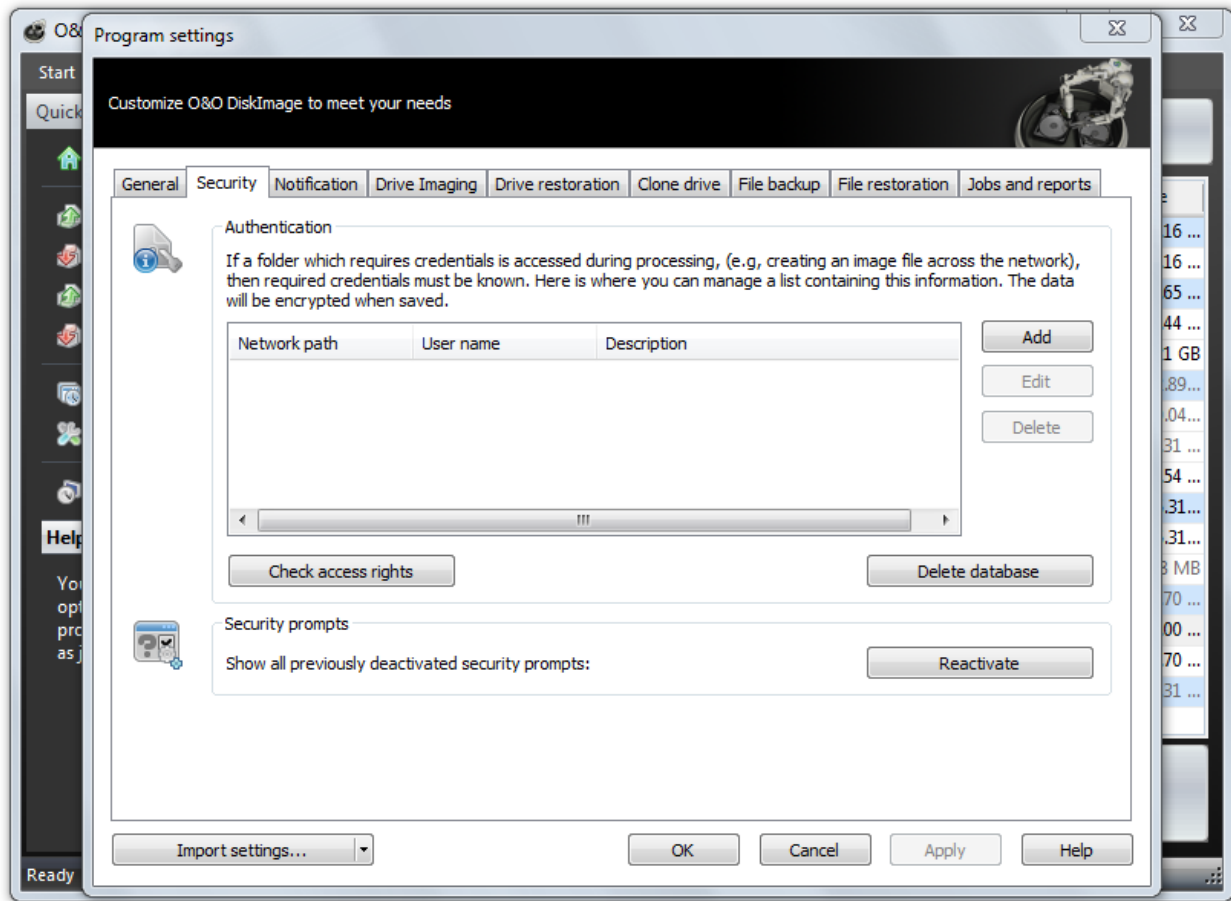


General program settings

## Security - Network authentication

To login locally or to the network, e.g. to enable access to protected folders, you have to authenticate yourself. The authentication occurs through your user account. The user account is composed of the user name and the corresponding password, and can be coupled with additional permissions and sharing rights. It is possible to place the images on network drives while working with O&O DiskImage.

Please use the password manager of O&O DiskImage for automatic authentication.



Authentication in the network

## Reset security confirmations

Most of the security confirmations of O&O DiskImage can be deselected. Once deactivated, they will be suppressed and not be displayed anymore. If you want all the security confirmations to be displayed just like when the program first started, click under **Program settings/Security** on **Reactivate**.

## Explanation: Password management

Managing the password is a program feature which allows you to store authentication data and to manage it. These data is compresses in the password file, using the Advanced Encryption Standard-Algorithm (AES) and then stored. In addition, the order of the data sets is chosen at random.

A public and a private key are used to encrypt the password. The public key is set by default and can be changed in the registry under HKEY\_LOCAL\_MACHINE\Software\O&O\O&O DiskImage\6.0. Please bear in mind that the key has to hold a value. An empty key will not be accepted. The private key is preset to a size of 64 Byte.

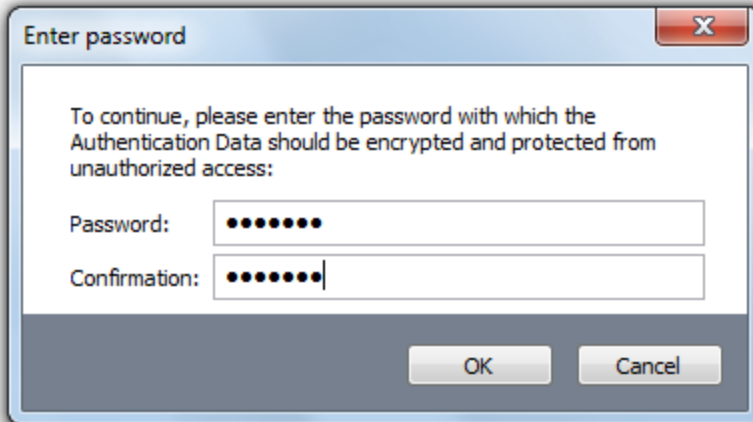
**Important!** Changes in the Registry may cause severe problems affecting the entire system and may cause the need to reinstall the complete operating system. Before making changes in the Windows Registry database, you should create an image of all the important data on your computer using O&O DiskImage.

**Note:** If you make changes in the Registry, it will require loading the database again. In the following chapter you'll find brief explanations of the registry entries.

## Network authentication

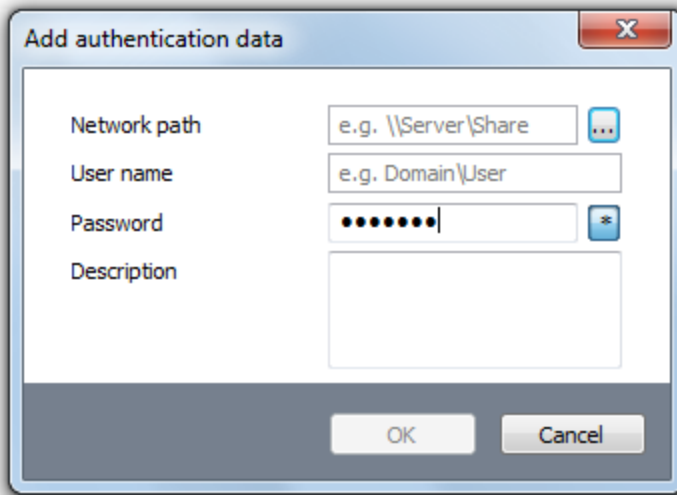
Enter the following settings under **Start/Program settings/Security**:

1. If you have not yet created a database, click on **Create database**.
2. Enter any password you'd like and confirm your entry. This password will then be encrypted and filed. In order to encrypt the password, a new one will be generated that is composed of two parts: public (Public Key) and private (Private Key). This ensures that you are the only one who can open and read the password file. The O&O DiskImage Service will have automatic access to this password as well.



3. Then, click on **Add** in the security dialog.
4. Under **Computer/Folder** enter the path under which the image is to be saved, or from where it is supposed to be loaded from: `\\Computer name\Folder name` or `Domain name\Folder name\User name`. Alternatively, you can also enter the computer name only, if all the sharing options can be opened by the selected user.
5. You have to enter a qualified name of a user account while entering the user name. For example, the corresponding domain for the specific domain account has to be entered and covered, e.g. `domain\user1` or `User1@domain`.
6. Enter the network password of the user, or of his user account. Please keep in mind that the user under which you login has to hold access rights for the target or original folder. You can check for them under Properties in the corresponding target directory under Security.





7. Optionally, you can also add descriptions to the credentials.
8. After the authentication, you can, for instance, enter a new "network path" as saving location and also restore an image from there.

Additional information is available in chapter [Frequent questions on authentication](#). You can find a detailed explanation of the most important registry entries under [Explanation of registry entries](#).

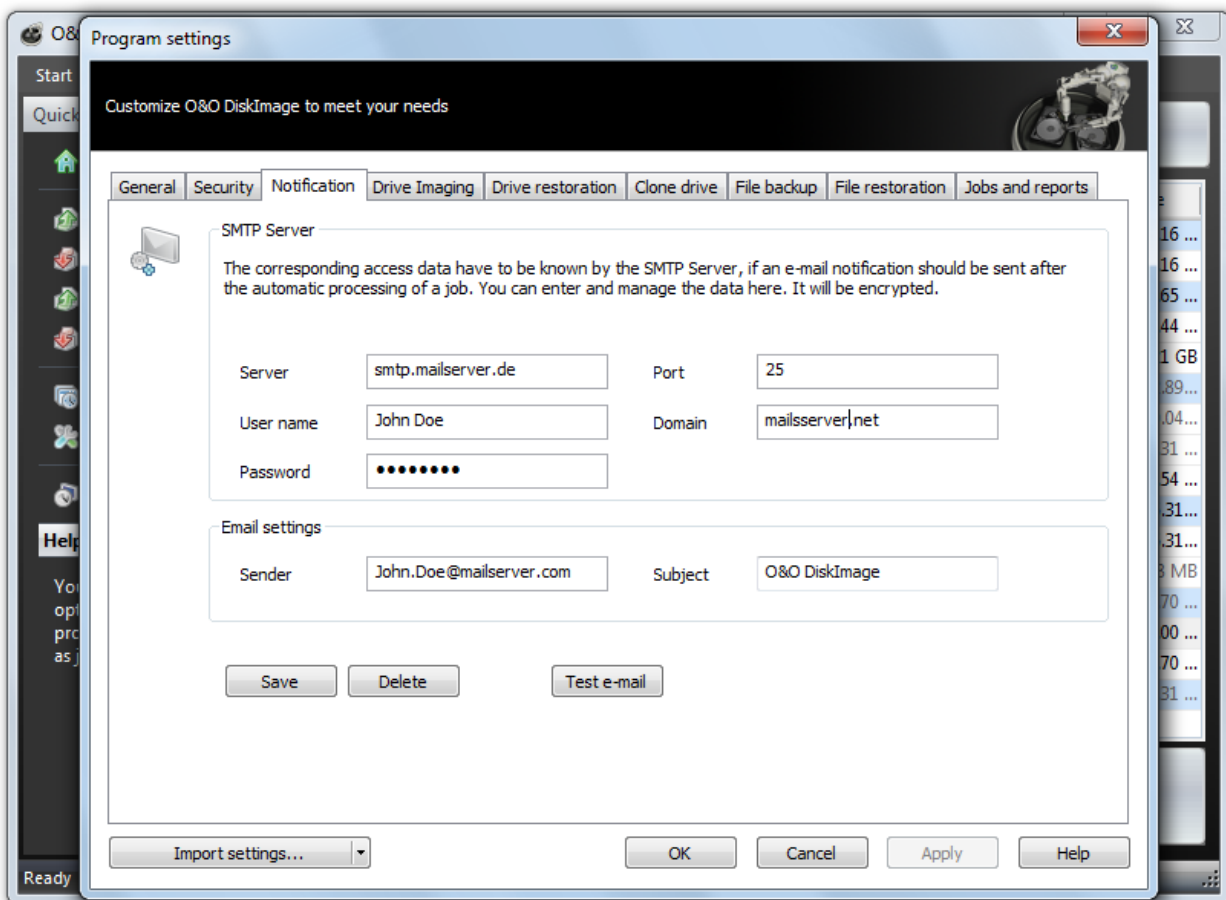
## Settings for notification

To receive email notification about the running of a job, you'll have to enter the corresponding login data in the SMTP server. You will also need to enter the sender data.

- Execute the relevant actions in **Program settings** under **Notification**.

Only if you have entered the data completely, it will be possible to enter your Email in the Job Wizard as addressee [Notification](#).

**Tip:** Your domain does not necessarily needs to be entered in the field "Domain". You can also enter the name of your Email Server so that the EHLO or HELO including the mail server name can be run. The Email notification will then also work under a stricter setup Server.



SMTP settings for notification

**Suggestion:** Try sending yourself a test email to make sure your entries are correct.

## Change presets for drive imaging

Under **Drive imaging** in the **Program settings** you can set specific settings for imaging.

### Prefer external USB drive to store image files

If you enable this function, external USB drives will be preferred as target drive to store images.

Under the option **Automatically check image file for errors after creation** you can specify whether image files should be checked for errors immediately after they are created.

When you enable **Overwrite existing image files**, the prompting for overwriting image files with the same name will be suppressed during the creation of new images. This function is very useful when, for example, you're imaging data a number of times daily, and the image is automatically being named after the Day/Month/Year.

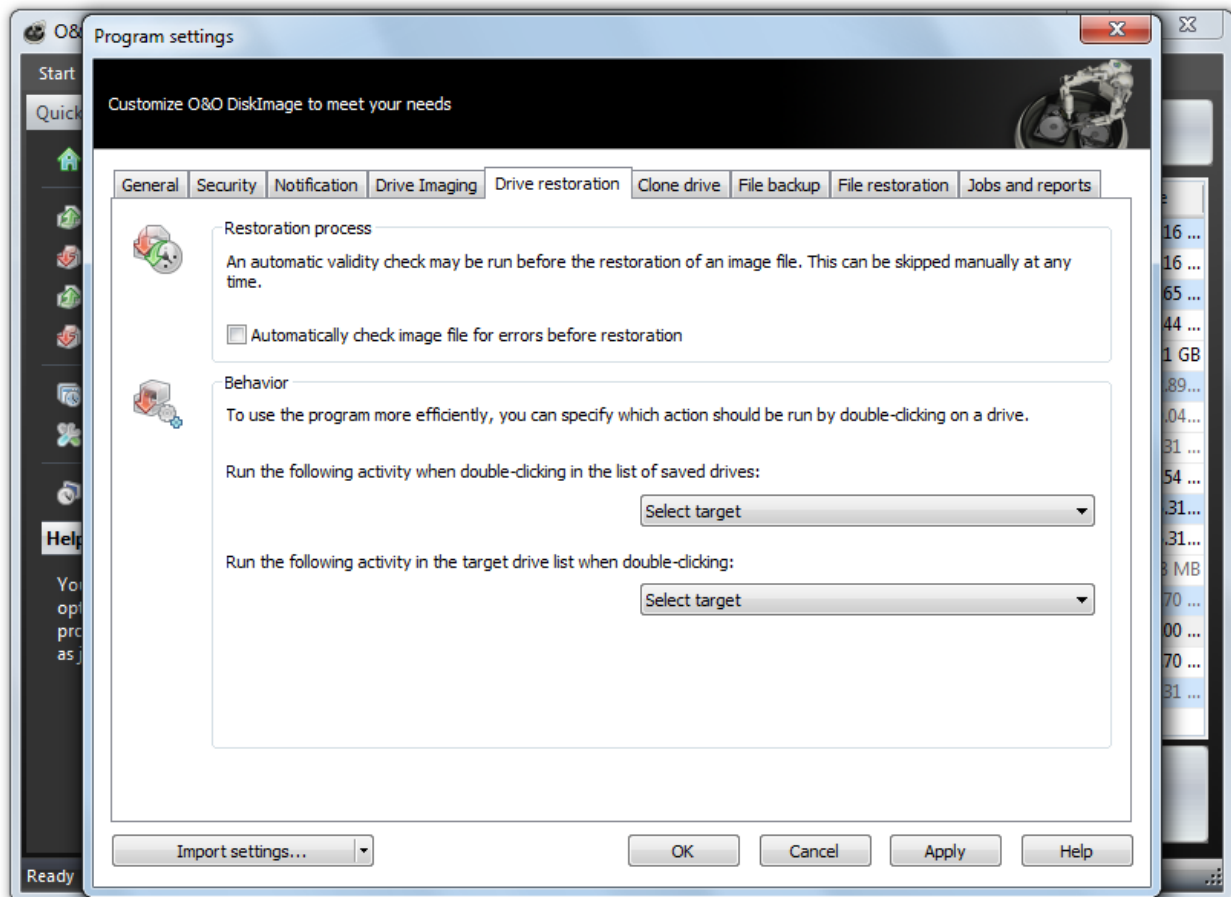
Under **Behavior** you can hide or un-hide drives that cannot be imaged by default in the user interface. Drives that cannot be imaged are for example: empty card reader or disk drives, the "Microsoft reserved partition" in GPT drives, OEM-BIOS-partitions in DELL and IBM or the system area in basic disks.

## Change presets for the drive restoration

You can establish the default settings for restoration behavior under **Drive restoration** in the **Program settings**.

Under **Drive restoration** you can enable a validity check before the restoration of an image.

In addition, you can specify under **Behavior**, which activity should be run when double-clicking on a drive in the list.



Program settings: Drive restoration

## Change presets for drive cloning

If you're looking to change or enable the default settings for cloning, click **Clone drive** in **Program settings**

You can specify, if drives not able to be cloned by default e.g. a CD/DVD drive or empty disk drive should be shown in the activity window "Cloning".

Also, you can specify what should happen when you double-click on a drive in the activity window "Clone drive".

## Change presets for file backup

Under **File backup** in the **Program settings** you can set specific settings for imaging.

### Prefer external USB drive to store image files

If you enable this function, external USB drives will be preferred as target drive to store images.

Under the option **Check file backup automatically after its creation** you can determine if image files should be checked for errors immediately after they are created.

If you enable a check next to **Automatically overwrite existing image files** the prompt asking if you want to overwrite an existing older image file with the same name will be suppressed. This function is very useful when, for example, you're imaging data a number of times daily, and the image is automatically being named after the Day/Month/Year.

Under **Behavior** you can adapt the program user guidance individually. You can select in the DropDown menu what will happen when you double-click a file or a folder.

## Change presets for the file restoration

Under **File restoration** in the **Program settings** you can change the presets for the restoration behavior.

You can specify the **Behavior** while double clicking on a drive in the activity window "File restoration".

## Change presets for jobs and reports

If you want to change or use the presets for jobs and reports, click on **Start/ Program settings** and then **Jobs and reports**.

### Reporting

Detailed reports can be created for all program activities. To save space, you can select the activities necessary for the reports. Running a job always creates a report.

### Behavior

Under **Behavior** you can specify which activities to run, if you double-click on a job in the job list.

In addition, you can set the behavior with a double-click in a report in the report list.

## TrayIcon

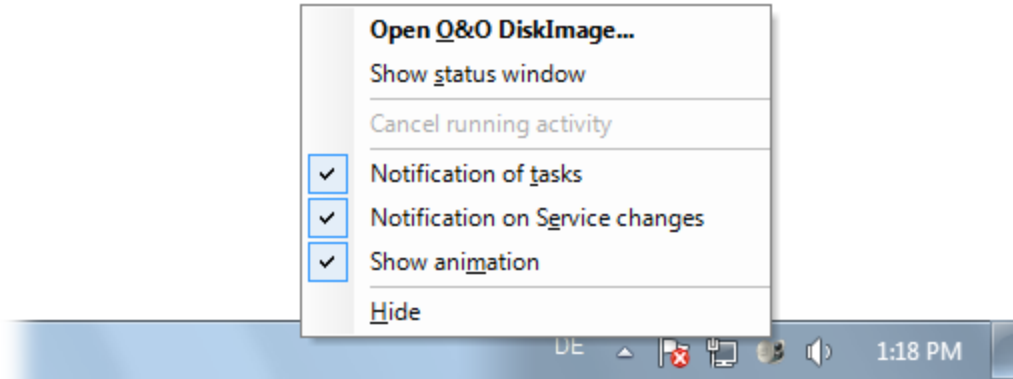
The O&O DiskImage Tray icon will be displayed as default in the info area of the task tray after the successful installation of O&O DiskImage. The tray icon will indicate whether O&O DiskImage is currently enabled. The icon will be animated while an action is being processed, otherwise, the tray icon will remain still.

Right-clicking the tray icon will show you various control options for O&O DiskImage. You'll be able to open the O&O DiskImage program interface, cancel a running action, hide the tray icon, or suspend the animation.

If you don't have administrator rights for this computer, you will not be able to start DiskImage. It will not be possible to click.

In addition, you'll be able to hide or show the progress of a job or changes in the service.

**Our suggestion:** If you'd like to have the tray icon permanently disabled (hidden), do so using the menu **Start/All programs/O&O Software/O&O DiskImage/O&O DiskImage Tray**. The same path can be used for reversing the process whenever you want the icon to be shown.



Context menu of the TrayIcons

## View

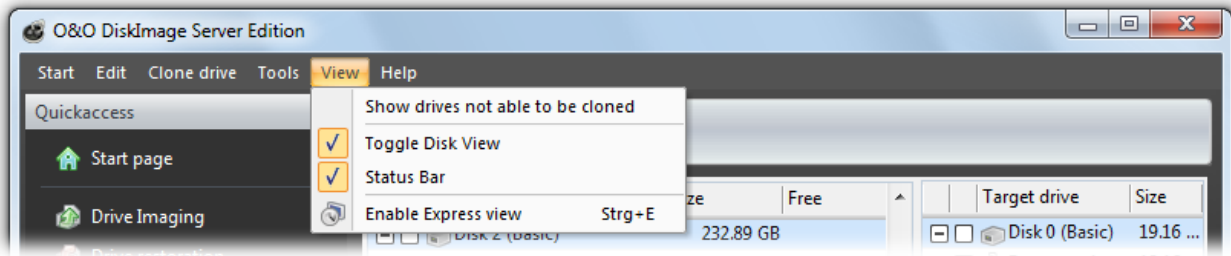
You can change the O&O DiskImage interface according to your own preference. You have a choice of different views for each task.

**Show drives that cannot be imaged:** all sectors of hard disk will be shown - even those that cannot be imaged.

**Show disk view:** a graphical view of the hard disk and the individual partitions will be displayed.

**Status bar:** displays the current status of a job.

**Express view:** Displays only the main features of O&O DiskImage.



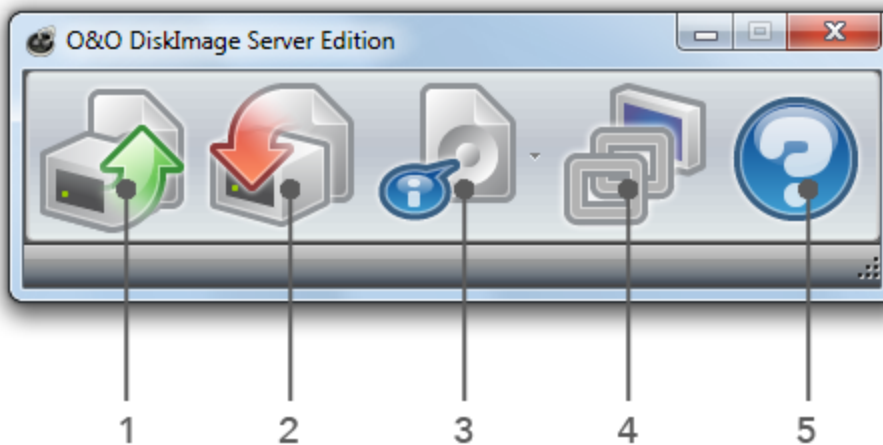
View menu

## Use Express view

The Express view provides a simple and intuitive way of using the main features of the program. You can use the Express view for creating, mounting, and restoring images. You can also switch easily from one view to another.

**Tip:** If you want to hide certain function from the user, you can disable them over the Registry entry ExpressFlags. For further information consult chapter [Explanation of the Registry entries](#).

**Note:** Restoring the system partition is not possible while the computer's running. Use the [Start CD](#) for this and run O&O DiskImage directly from it.



Express view

## Key

## View

1. Create image - starts the imaging of one or more drives.
2. Restore image - starts the restoration of the image.
3. Read image information - displays detailed information about an image file. You can also use the drop-down menu (small arrow on the right) to mount and unmount an image from a drive.
4. Restores the full view of O&O DiskImage's user interface.
5. Displays the program's Help.

## Status bar

The status bar informs you on the loading processes and the activities of O&O DiskImage.

Under **View/Status bar** you can hide or un-hide it.

## Frequently asked questions

### When and how often should I make images?

We recommend imaging on a regular basis (at least once a month). The more regularly it's performed, the more up-to-date the data contained within those images will be. As a guiding rule, you should always image an intact system.

### Which drives should I image?

You should generally image all drives, meaning the system drive (Windows), primarily Drive C, and all remaining data drives where private and business data, e.g. customer data, photo collections or music are stored.

### Where should I store my image?

Don't save the image on the same hard disk where the imaged drive is located. It should be ideally stored on an external hard disk or a CD/DVD.

### I just bought myself a new computer. If I take a complete image of my old computer, can I restore it to my new one?

Restoring data drives is not a problem even with differing hardware. However, system partitions can only be restored on differing hardware using the Start CD and the integrated M.I.R. You can read more about this in the chapter [Settings for restoration on different hardware](#).

### Do I have unlimited use of all functions with the trial version?

The trial version is not restricted - all program functions are fully operational. You should note, however, that restoring a system partition is only possible with the bootable O&O DiskImage CD, included when you purchase the product.

### When do I need the bootable CD from O&O DiskImage?

You will need the Start CD, if you want to restore your entire computer or a system partition. The Start CD can also be used, if the operating system doesn't start up anymore.

### How do I save an image to CD/DVD?

1. You must create an image file(s) and save it to your hard disk before you can write it to CD/DVD.
2. When creating the image, under **Drive imaging/Imaging options/File size**, you should restrict the maximum image file size to the size of the intended removable medium where it will be saved.
3. Should the image exceed the selected maximum file size, it will be split into several image files.
4. You can then burn the image files to CD/DVD.
5. Select **Tools** on the start page, then on **Burn image file(s)** and follow the instructions.

### What do I do when my image is too big for a CD/DVD?

1. If the Image you already saved to your hard disk is too big for the blank CD/DVD, you can, of course, still split the image file.
2. Under **Tools**, open up **Convert image file**.
3. Select the Image you wish to change by using **Add**.
4. Merge incremental Images
5. During conversion, one copy of the Image will be made while the original remains unchanged.

### I have split the image and saved it on various storage volumes (CD/DVD).

I want to:

- restore this image
- display drives from the image
- use the image as a base image for incremental imaging purposes



## Frequently asked questions

- merge incremental images
- convert the image file

Before you go ahead with any of the above named steps, we strongly advise you to save all parts of the Image in a folder on your hard disk. Please ensure the folder is not on the drive to where you wish to restore the Image. Once you have done this you can complete the steps outlined above by simply following the instructions in the corresponding chapters of the User's Guide.

### Can I continue working during the imaging process?

You can continue working and making changes without any problem.

The working memory buffer is however restricted. You can see how much is available in the Memory buffer display. See Chapter "Lock a Drive".

### Can I change an existing image?

Under Tools you can find the function Convert Image File. This enables you to change certain properties and contents of an existing image.

### I have created an image of several drives. Can I extract the image from just one of those drives and store it separately?

Follow the instructions below:

1. Under **Tools** select Convert image file.
2. Select the image using **Add** and then select the drive you wish to separately image.
3. Click **Open** and select a drive. After confirming with OK, click Start.
4. After confirming with **(OK)** click on **Start**.
5. The old image remains unaltered.

### What is the difference between a clone and an image?

Using the **Clone drive** function, you can make a 1:1 copy of a drive including all its stored data, without producing any image files. The storage volume /drive is saved directly without compression. The advantage of a clone as opposed to an image is that the detour through an image file is avoided. You can access the clone of a drive without having to restore the drive. You do, however, require a lot more storage space for a clone than for an image.

**Important!** When cloning your drive (source drive) the selected target drive will be overwritten. You should therefore save your copy on an external hard disk, either in an unused region or overwrite a previously selected drive purely for this purpose.

### Why are temporary files created?

If you leave a drive unlocked during an imaging because, for instance, you want to continue working on that drive, the original status will be "cached", i.e. stored in the working memory buffer. "Temporary files" are created in the process. The working memory buffer space is, however, limited. You can see how much space is available by looking at the memory buffer display.

### What is the advantage of an incremental image?

An incremental image normally has a smaller data volume as a base image. In addition, you can ascertain the differences, more precisely, the changes made since the base image was created.

### My incremental image is not smaller than my base image. Where does this file come from?

## Frequently asked questions

This can occur if you have, for example, defragmented your computer in the meantime. The newly structured file segments will then be recognized as “changes” and imaged as new files.

### **What does "Drive cannot be locked" mean? Does this affect the data imaging?**

Because of the constantly running system processes, your system partitions cannot normally be locked. You get this notification even when you want to image a data drive and this is directly integrated into the system processes. The notification doesn't generally have an effect on the imaging process; this is still able to be run without a problem. To be totally sure, shut down all running system applications, e.g. defragmentation or cloning processes, before imaging.

### **While imaging, O&O DiskImage reports that the target volume is too small although the source drive is smaller than the target disk. What is the reason for this?**

Make sure you haven't selected the entire hard disk as your source. Example:

You have a hard disk with 100GB that is divided into two partitions:

- System partition (20GB)
- Data partition (80GB)
- While trying to save the system partitions on an external 40GB hard disk, O&O DiskImage reports that the target volume is too small.

By just making a check, you can select the system partitions as your only source, and not the entire hard disk.

### **What do I do if O&O DiskImage takes very long to start, or doesn't even start at all?**

Please read the note about [System requirements](#) and make sure you're using the latest versions of your drivers.

### **During restoration, O&O DiskImage created a new temporary file on my hard disk. Where does this file come from?**

Before creating an image, O&O DiskImage normally deposits a number of metadata in a local file. This data is needed by O&O DiskImage in order to create the image. The file will be included in the imaging to assure consistency in the image. This file will normally be automatically removed during restoration.

Under certain circumstances, it's possible that another action of the operating system or the user will prevent this temporary file from being deleted. This will then result in the file remaining undeleted in the system. You can, however, delete this temporary file without any risk.

### **Why are partitions that weren't imaged displayed when mounting an image in Explorer?**

In addition to saving data from the partition being imaged, O&O DiskImage also needs to save information about the disk on which that partition was originally located. All of this is required for mounting an image, converting it into a virtual disk, or performing any future restoration. Of course, there will also be information included about partitions that were not imaged. When mounting an image, just as when using a virtual hard disk after conversion from an image, Microsoft Windows uses this information to recognize that there were originally multiple partitions on the disk, and attempts to integrate them into the system. Because information/data about these partitions is missing, it's not possible to assign them to any file system. As a result, partitions that weren't imaged will be displayed as RAW, i.e., non-formatted.

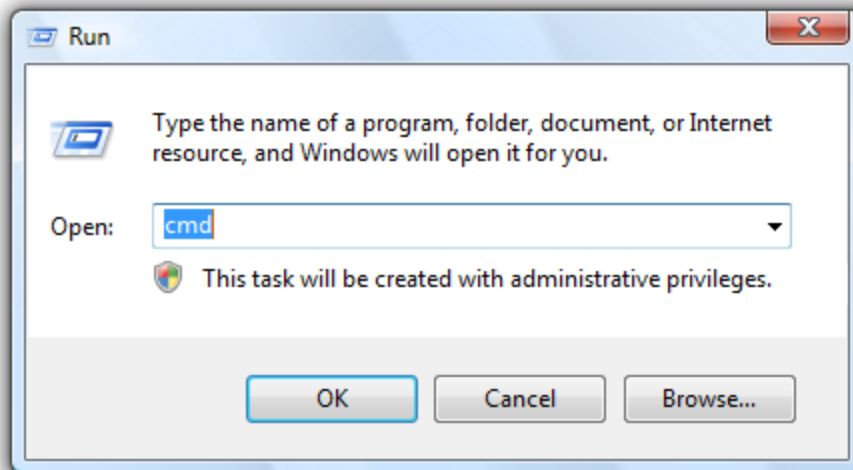
## **Frequent questions on authentication**

### **Where do I find the domain and user name to use for authentication?**

If you are not sure, please proceed as follows:

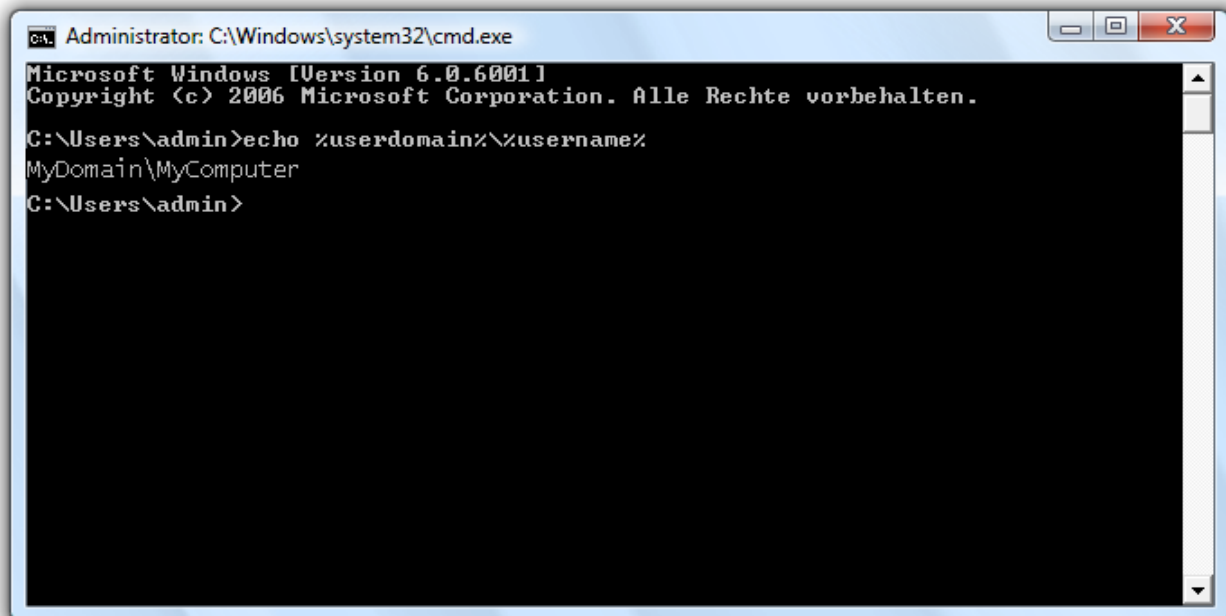
- Call the command line under **Run...** in the Start menu. Enter the command `cmd` in the dialogue.

## Frequently asked questions



Call the command line

- Enter the command: `echo %userdomain%\%username%` into the command line and confirm your entry with Enter. If your computer is not signed on to a domain, your computer name will appear instead of the domain name.

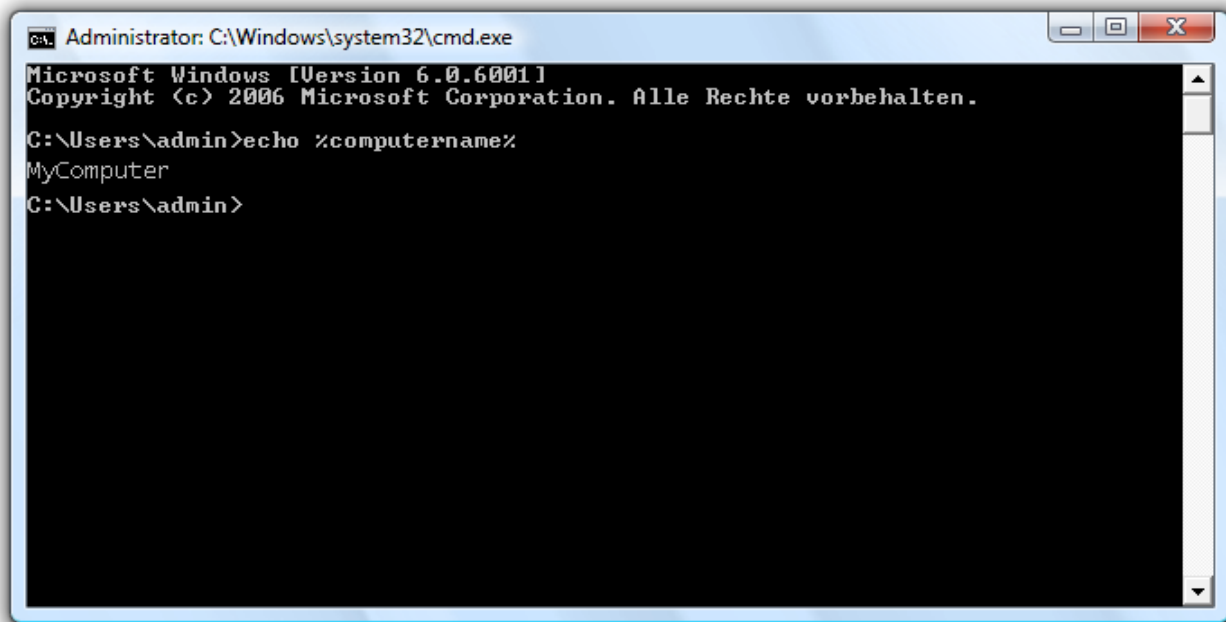


Get the user name in the command line.

### Where do I find the computer name for, running activities?

If you are not sure, please proceed as follows:

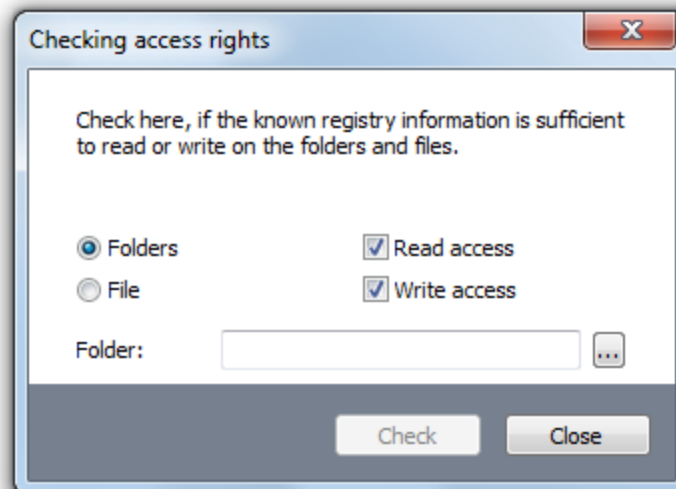
- Call the command line under **Run...** in the Start menu. Enter the command `cmd` in the dialogue.
- Enter the command: `echo %computername%` and confirm your entry with Enter.



Get the computer name in the command line.

### How can I check my access rights on the target computer or the target folder?

If you are not sure if your entries are correct, you can view them under **Program settings/Security** and recheck them.



Checking access rights in O&O DiskImage

Alternatively, you can check your access rights on the target computer in the properties of the corresponding target folder under "Security" in Windows Explorer.

- Click in the context menu of the folder on **Properties** and then on **Security**. All user with access to the folders will be listed.

**Although I have already entered my authentication data for a network drive, I am asked again once for every activity.**

It is possible that you are requested to re-enter your authentication data for an activity like the restoration of an network drive image. The reason for this can be traced back the Windows. Certain dialogs, e.g. the browser dialog are not originally from O&O DiskImage but from Windows. Windows doesn't have access to your O&O DiskImage authentication data, it is necessary to re-enter the access data for the selected drive.

## Explanation of the Registry entries

In the Windows registry, under HKEY\_LOCAL\_MACHINE\Software\O&O\O&O DiskImage\6.0, you can carry out certain settings for O&O DiskImage. Please note that changes in the registry can influence the functionality of O&O DiskImage and such changes will continue to be applied after restarting the computer.

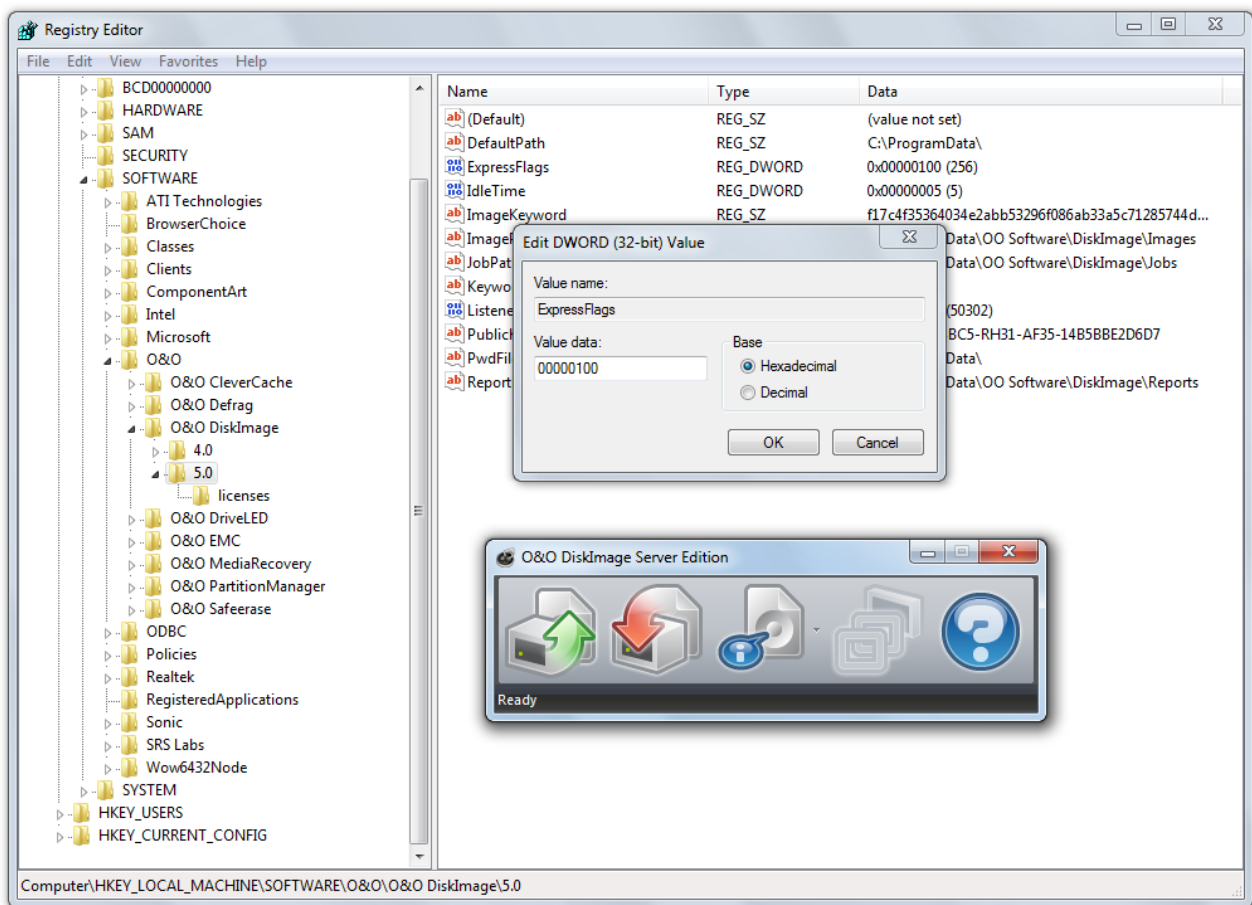
Name of the entry	Type of entry	Short description
Image path	String	Path to the storage location from the image files.*
JobPath	String	Path to the storage location from jobs.*
ReportPath	String	Path to the storage location from reports.*
PwdFile	String	Path and name of the password file
PublicKey	String	Public key for password encryption. Can be changed whenever needed.
NoSnapshotTmpFiles	String	This key is optional: it does not need to be set. If it's set, this key will influence the behavior of the snapshot driver during the creation of temporary files. In this way you can specify those drives where no temporary files should be created. The syntax for the value is: <Drive letter>;<Drive letter>; (for example: c;d;e;)
Version	DWORD	Version of the type of image file. Current possible versions: 1 (up to and including version 4), 2 (current version)**
ExpressFlags	DWORD	Optional key for disabling buttons in the Express view. This key can help administrators limit the functionality that is available over the interface so that users can only have restricted access to the program's features. If the key isn't set, all buttons are enabled. The DWORD values can be changed so that certain buttons in the Express are disabled: <ul style="list-style-type: none"> <li>• Create image button: 00 00 00 01</li> <li>• Restoration button: 00 00 00 10</li> <li>• Switch to full view button: 00 00 01 00</li> <li>• Read image information button: 00 00 10 00</li> <li>• Mount image button: 00 01 00 00</li> <li>• Unmount drive-Button: 00 10 00 00</li> </ul>

Frequently asked questions

Name of the entry	Type of entry	Short description
		<ul style="list-style-type: none"> <li>Help button: 01 00 00 00</li> </ul>

\* Can also be controlled over the user interface. If you're not sure, make changes over the user interface. There you can find additional explanations and selection options.

\*\* The format of image files was extended in O&O DiskImage 4. In addition to the imaged data, checksums are placed in the image so that an identity check can be carried out for data inside the image. Older versions of O&O DiskImage do not recognize this extended image format and would label the image as invalid. To help older versions of O&O DiskImage work with images created by a newer version, the new version can create an image using the "old" format.



Registry entries from O&O DiskImage - Example: Disable button for "Switch to full view"(ExpressFlags)

## Behavior when receiving error notices

Various error notices may appear while working with O&O DiskImage. These can either be displayed in dialogs or seen in reports.

Error notice	Description
<p>IDS_ERROR_LOGON_FAILURE</p> <p>Registration has failed on account of invalid user name or authentication information.</p>	<p>User name and/or password is false. Where required, consult your system administrator.</p>

## Frequently asked questions

<p><b>IDS_ERROR_ACCOUNT_RESTRICTION</b></p> <p>The authentication information entered is valid but restrictions on the user account have prevented a successful authentication.</p>	<p>Change the settings of the respective user account. It's possible that there is a restriction such as "read only" enabled there.</p>
<p><b>IDS_ERROR_INVALID_LOGON_HOURS</b></p> <p>The user account is subject to time limitations and is therefore not available for registration at this time.</p>	<p>Maximum login time has expired. Please login again.</p>
<p><b>IDS_ERROR_PASSWORD_EXPIRED</b></p> <p>The password for the user account has expired.</p>	<p>Your password has expired. Please enter a new password.</p>
<p><b>IDS_ERROR_ACCOUNT_DISABLED</b></p> <p>The account referred to is currently disabled and cannot be accessed for registration.</p>	<p>User account was disabled. When applicable, consult your system administrator.</p>
<p><b>IDS_ERROR_ACCOUNT_LOCKED_OUT</b></p> <p>The user account has been automatically blocked because too many invalid registration attempts have been made.</p>	<p>User account was blocked. Where required, consult your system administrator.</p>

## Internal error codes

The internal error code (individually designed error code) is the last digit in the error code after the last period.

Error notice	Description
0x385	Invalid job or script.
0x387	Unsupported task or incorrectly written job / script
0x388	Parameter is false or is not supported by the task.
0x38A	An obligatory parameter is missing.
0x70	Invalid or damaged installation.
0x7D1	Unknown Host
0x7D2	Invalid Host Port
0x6A6	Invalid password file
x6A9	Invalid keyword in parameter (registry)

## Frequently asked questions

0x6AA	No password file registered
0x6AA	A target folder is missing in the password file.

### Windows errors / Microsoft error definitions (primary value)

Error notice	Description
C0000240	Prompting was cancelled
C0000022	Access denied: process requires access to an object to which access is being denied.
C0000033	Object (path/file) is invalid, e.g. is especially marked.
C0000034	Object (path/file) not found
C0000035	Same object (path/file) already exists.

## Allocating objects

For cloning or a restoration the source and target can be linked differently. Sources are drives or disks, which are restored from an image or have been used as source while cloning.

### Terminology

- **Disk:** A hard disks or in general a disk, which contains one or more drives.
- **Area:** An area on a disk. It may be empty, contain disk information (MBR, GPT, LDM) or belong to a drive.
- **Drive:** A partition or a volume, which is located on one or more hard disks.

Source and target may be linked in the following combinations:

	link from	to
1.	Source disk	Target disk
2.	Source disk	Target drive
3.	Source disk	Target area
4.	Source drive(s)	Target disk(s)
5.	Source drive	Target drive
6.	Source drive	Target area(s)
7.	Source area(s)	Target disk
8.	Source area	Target drive
9.	Source area	Target area



## Support and Contact

For more information O&O DiskImage, please visit our website <http://www.oo-software.com> and get the latest information about product developments and support. Also included on our website are regularly updated FAQs and Knowledge Bases that address the most common issues regarding our products.

All registered customers receive installation support, free of charge, for the first 30 days after registration. When contacting our support team, please remember to have your registration code available.

In addition, it may be helpful to read the frequently asked questions ([FAQ](#)) section of the web site before contacting our Support Team. It's always possible that your specific question or problem has already been addressed.

**Made in Germany.** Made in Berlin.

All O&O products are developed in Berlin, Germany. O&O is one of the few companies that offers its users phone support without a special rate number. At O&O Software GmbH, we pay very special attention to the concerns of our customers because we know just how important their data is for them. And what's more, we've been doing this for over ten years now!

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[sales@oo-software.com](mailto:sales@oo-software.com)

## Authorized Resellers

Our authorized reseller partners in over 30 countries stand ready to assist you with answers to all questions regarding the licensing and purchase of our software products. Their names and addresses can be found on our website, under the heading "Partner - Find Resellers". Just ask us, we'll be happy to help you find an authorized partner in your vicinity.

# End user license agreement 3.4 (EULA)

O&O Software GmbH

GENERAL and SPECIALIZED SECTION

## GENERAL SECTION

IMPORTANT - PLEASE READ CAREFULLY

This End User License Agreement (EULA) is organized into 2 sections: a general part, which is valid for all O&O products, and a specialized part, which includes the particular terms of each corresponding product. By accepting both parts of the license terms they automatically form part of your contract with O&O Software, Am Borsigturm 48, 13507 Berlin. If you have any questions regarding this contract and the license terms, our Service Team is available to help you under [info@oo-software.com](mailto:info@oo-software.com).

The software product is protected by copyright laws and international copyright contracts as well as other laws and agreements concerning intellectual property.

### 1. Object and form of delivery

(1) You receive the software covered by the contract in executable form (Binary code) together with the relevant documentation released by O&O according to Section (6).

(2) The software provides the range of functions described in the given documentation. The documentation regarding functionality may be consulted prior to concluding the contract in the Internet presentation on the following site <http://www.oo-software.com/>.

(3) Delivery will be made according to the way in which you have purchased the software, either by having a disk directly handed over or sent by mail to an address you have supplied or through the forwarding of license as well as any required download information to a given E-mail address.

(4) If you are currently receiving updates as part of a maintenance agreement, these will continue to be supplied in the same way as the initial software delivery, i.e. for a disk sent by mail, a disk containing the update will be sent to the given address: for electronically delivered keys, a key for downloading updates will be sent to the given E-mail address.

(5) Changes to the delivery or E-mail address can only be taken into consideration when they are supplied in writing or by E-mail to the address or E-mail address indicated on <http://www.oo-software.com> at least two weeks before delivery of the update.

(6) A printed copy of the documentation will not be included in delivery. The documentation consists primarily of electronic aids.

### 2. Requirements for application (system requirements)

(1) Installation of the software is not part of the agreement.

(2) Depending on the software, there are certain system requirements that must be met in order to use the software according to the terms of this contract. These will be defined according to each product in the specialized section of this contract.

### 3. Rights of use, including test versions, unauthorized transfer, and application

(1) O&O grants you, upon payment of the agreed one-time fee, a permanent, spatially unlimited and non-exclusive right to use the software.

## End user license agreement 3.4 (EULA)

- (2) Test versions - if you have installed a test version of one of our products taken from the O&O Website <http://www.oo-software.com/>, the right of use will be, according to the program, for a limited time only and/or technically restricted.
- (3) One copy of the software is entitled to be used on a maximum of one (1) output device/workstation simultaneously.
- (4) If you want to use the software on more than one output device/workstation, the rights of use must be extended accordingly. To find out which O&O products are also available as volume licenses, please consult (<http://www.oo-software.com/>). The separate price list concerning O&O Volume Licenses will apply to extending the rights of use without redelivery.
- (5) Any use beyond that agreed upon in the contract is one in violation of the contract. In such a case, you are required to report this use that exceeds the rights of use to the supplier without any delay. The parties will then try to bring about an agreement for extending the rights of use. For the duration of the excessive usage, i.e., until the conclusion of such an agreement or the cessation of the excessive usage, you are required to pay compensation for this excessive usage according to the amount indicated in our price lists. The amount of compensation will be calculated on the basis of a four year, straight-line depreciation. If we are not informed of the excessive usage, a contract penalty in the amount three times the price of the usage indicated in the price list will be due O&O.
- (6) You are entitled to create a backup copy of the software and to conduct ordinary data backups. The creation of more copies than the amount needed for the backing up of any future usage (including the backup copies and data backups) is not allowed.
- (7) Copyrights and other trademarks within the software may not be altered or removed. They must be transferred onto every copy of the software.
- (8) Unauthorized transfer - only when you have purchased the software with an accompanying disk are you permitted to transfer it and then, only under the following conditions: a resale of the software is only permitted when it involves an entire software copy, i.e., by surrendering your own usage of the purchased copy, you are entitled to transfer these rights of use of the disk onto a third party according to the terms of the agreement existing between you and O&O. When making such a transfer, you are required to hand over to the third party all materials related to the software that are covered in the contract and to delete the software from any storage volumes (e.g., hard disks) remaining in your possession.
- (9) Unauthorized rental and service - The purchase of this contract does not entitle you to any public transfer or rental of the software. You are also not entitled to include the software as part of your providing services for and in the presence of any third parties. You may purchase an appropriate license from O&O for doing this.

### **4. Payment**

- (1) The prices are given with the corresponding sales taxes included, unless otherwise indicated.
- (2) Test versions - Downloads of test versions offered by O&O are provided free of charge, unless otherwise indicated.
- (3) If you receive updates of your programs as part of a Maintenance Agreement, the terms of payment in these contracts will apply to these Maintenance Agreements.
- (4) O&O is entitled to forward any data it has received onto third parties requiring it for purposes of collection.
- (5) Until payment is made in full, O&O retains possession of all rights, particularly those concerning copyrighted rights of use, on the materials included in this contract. O&O is specifically entitled to cancel a contract, for example, when your payment is delayed, it prohibits the further using of the software and demands the surrendering of all copies or this being impossible, to demand their deletion. Should a third party have access to the object of purchase before payment is completed for the contractual software, you are required to inform this third party about the object being the property of O&O and to inform O&O, in writing, about the third party's access.

### **5. Material defect and defect of title**

## End user license agreement 3.4 (EULA)

(1) The software package or download you receive is free of any material defect or defect of title.

(2) A material defect exists when the software is unable to be used as described in the documentation appearing on the website <http://www.oo-software.com/> and included in delivery or available for downloading.

O&O is constantly checking to make sure that other sources are not misrepresenting the functions and properties of the software as described in the documentation. You can therefore assume that any descriptions beyond those found in the software documentation have not originated with O&O and are also unknown to it. Please inform O&O if you learn of any software descriptions that include functions and properties not mentioned in the documentation.

(3) Please inform O&O if you learn of any software descriptions that include functions and properties not mentioned in the documentation.

(4) Any claims concerning defects of material and/or title related to the software have a limitation period of two years subsequent to delivery of the program or transmission of the serial number needed for downloading. If you are not a private individual, the warranty period is shortened to one year.

If O&O has fraudulently concealed a material defect, a three year limitation period will cover claims related to this defect.

Payment for compensation that you might have been entitled to as a result of cancelation or an abatement can be refused upon expiration of the limitation period.

(5) You are required to inform O&O, in writing if possible, of any defects that arise immediately upon their discovery. While doing so you should also describe, as well as possible, how the defect is communicated, the effect it has on the program, and under which circumstances it occurs.

(6) Should defects be reported to O&O within the limitation period, it will undertake a cure free of charge.

(7) As part of the cure, the corrected software will be redelivered as agreed. An on-site analysis and correction of the error on your system will not take place.

O&O assumes the ensuing expenses for the cure, in particular the costs for transport, labor, and material. You are personally responsible for installation. O&O specifically does not assume on-site installation as part of its obligation with regard to defects of material or title.

Should a change of the program be required as part of the cure, O&O will make the necessary changes in the documentation without any charges.

(8) After the unsuccessful expiration of a deadline you set for cure, you can cancel the contract or reduce the purchase price and demand compensation instead of service or the replacement of any futile expenditures.

(9) A deadline is not required when

- a) O&O refuses both kinds of cure, even if it is entitled to do so as a result of the arising expenses or
- b) the cure is impossible or
- c) the cure is unacceptable to you or
- d) the cure is unsuccessful.

A subsequent improvement is considered a failure after the second unsuccessful attempt unless there is something particular about the type of software or the defect itself or the surrounding circumstances that would indicate otherwise.

(10) You are not entitled to cancel the contract if the defect is negligible, nor may you, in this event, demand compensation instead of full service.

(11) In the event of cancellation, compensation is due for any uses made. The compensation for use will be based on a four year, straight-line depreciation of the purchase price.

(12) As a result of the abatement, the purchase price will be reduced by the amount which is calculated for deducting the defect from the value of the software. The standard used will be its value at the time the contract was concluded. The amount, when necessary, is to be calculated by estimation. As a result of this reduction, any amount larger than that paid for the reduced purchase price will be refunded.

(13) If it turns out that a reported problem did not arise as a result of a defect in the software, O&O is entitled to invoice you, according to the amount charged in its price lists for such services, the expenses for analysis and correction of the problem if you can be accused of malice or gross negligence.

(14) The seller's warranty is canceled when changes are made on the software without expressed written consent or when the software is not used as intended or used in an improper software environment, unless you can prove that these facts had nothing to do with the problems that occurred.

## **6. Limitation of compensation**

(1) O&O is liable for compensation for every legal ground to the extent described in the following provisions.

(2) The extent of liability of O&O for damages caused by malice or gross negligence arising from O&O itself or one of its vicarious or legal agents is unlimited.

(3) There is no limit to the extent of liability of O&O or any of its legal or vicarious agents for damages involving injury to life, physical well-being or health, or for simple breach of duty.

(4) There is unlimited liability for damages caused by serious organizational fault on the part of O&O as well as for damages arising from a missing guaranteed characteristic.

(5) For the breach of an essential contractual duty, O&O is liable for damages normally foreseen in a contract when none of the instances in provisions (2) - (4) applies.

(6) Any further liability for compensation is excluded, specifically excluded is liability without fault.

(7) Liability as defined by the product liability law remains untouched.

(8) If damage can be traced to have arisen through a fault on the part of O&O as well as on the part of yourself, you must have your share of the fault evaluated.

You are responsible for making a standard backup of your data at least once a day. For data loss caused by O&O, O&O is only liable for the expense of duplicating the data on your backup copies that need to be created and for the restoration of data which would have also been lost during a standard backup procedure.

## **7. Final provisions**

(1) You may only balance claims from O&O with indisputable or legally valid claims.

(2) Changes and amendments to this contract must be made in writing. This also applies to changes to this provision.

(3) The contract is subject to German law. The uniform UN purchasing law (CISG) as well as the UNIDROIT Factoring Agreement of Ottawa do not apply.

(4) Any general terms and conditions on your part will not be applied.

(5) In the event you are not a private individual or a resident of the Federal Republic of Germany, we agree that the district court in Berlin will be the competent court for litigation arising from this contract.

## **8. Contact**

If you have any questions concerning the O&O Software License Agreement or wish to speak with O&O, please get in touch with us.

O&O Software GmbH, Am Borsigturm 48, 13507 Berlin, Germany.

Telephone: +49 (0)30 4303 4303, Fax: +49 (0)30 4303 4399

E-Mail [info@oo-software.com](mailto:info@oo-software.com) / [sales@oo-software.com](mailto:sales@oo-software.com), Web [www.oo-software.com](http://www.oo-software.com)

## **SPECIALIZED SECTION**

### **O&O BlueCon**

Important note on the Windows PE Start CD

The Microsoft® Windows® Preinstallation Environment software included with this device or software may be used for boot, diagnostic, setup, restoration, installation, configuration, test or disaster recovery purposes only.

**NOTE: THIS SOFTWARE CONTAINS A SECURITY FEATURE THAT WILL CAUSE END USER'S SYSTEM TO REBOOT WITHOUT PRIOR NOTIFICATION TO THE END USER AFTER 72 HOURS OF CONTINUOUS USE.**

Amendment to: 2. Requirements for application (system requirements)

The software requires Windows 2000 (all Editions), Windows Server 2003 (all Editions), Windows XP (all Editions), Windows Vista (all Editions), Windows Server 2008 (all Editions), Windows 7 (all Editions) or Windows Server 2008 R2 (all Editions) operating systems. Usage within the terms of this contract is not achieved without the application of these operating systems.

The product at hand can only be employed according to the acquired license. The following license types exist for O&O BlueCon:

#### O&O BlueCon Admin Edition

You are authorized to install and use the software product on all computers a) in the possession of the company (legal person or natural person(s) in the case of corporations) owning the license and b) all located at a single site. This license is bound to a single natural person and is non-transferable.

#### O&O BlueCon Tech Edition

You are authorized to install and use the software product on all computers. This includes computers that do not belong to the company owning the license (also known as Service Technician's License). This license is bound to a single natural person and is non-transferable.

### **O&O BuildPE**

Amendment to: 2. Requirements for application (system requirements)

The software requires Windows Vista (all Editions) or Windows Server 2008 (all Editions), Windows 7 (all Editions) or Windows Server 2008 R2 (all Editions) operating systems. Usage within the terms of this contract is not achieved without the application of these operating systems.

### **O&O CleverCache**

Amendment to: 2. Requirements for application (system requirements)

#### O&O CleverCache Professional Edition

## End user license agreement 3.4 (EULA)

The software requires the Windows XP (all Editions), Windows Vista (all Editions) or Windows 7 (all editions) operating systems. Usage within the terms of this contract is not achieved without the application of these operating systems.

### O&O CleverCache Server Edition

The software requires Windows 2000 (all Editions), Windows Server 2003 (all Editions), Windows XP (all Editions), Windows Vista (all Editions), Windows Server 2008 (all Editions), Windows 7 (all Editions) or Windows Server 2008 R2 (all Editions) operating systems. Application within the terms of this contract is not achieved without the use of one of these operating systems.

### **O&O Defrag**

Amendment to: 2. Requirements for application (system requirements)

### O&O Defrag Professional Edition

The software requires Windows XP (all Editions), Windows Vista (all Editions) or Windows 7 (all Editions) operating systems. Usage within the terms of this contract is not achieved without the application of these operating systems. Control of the program through a network management is not possible.

### O&O Defrag Workstation Edition

The software requires the Windows XP (all Editions), Windows Vista (all Editions) or Windows 7 (all editions) operating systems. Usage within the terms of this contract is not achieved without the application of these operating systems. The O&O Defrag Workstation Edition may be used on computers with or without the user interface. You are entitled to control this program over the separately obtainable network manager.

### O&O Defrag Server Edition

The software requires Windows Server 2003 (all Editions), Windows XP (all Editions), Windows Vista (all Editions), Windows Server 2008 (all Editions), Windows 7 (all Editions) or Windows Server 2008 R2 (all Editions) operating systems. Usage within the terms of this contract is not achieved without the application of these operating systems. The O&O Defrag Server Edition may be used on computers with or without the user interface. You are entitled to control this program over the separately obtainable network manager.

### O&O Defrag Virtual Machine Edition

The O&O Defrag Workstation Edition may be used on computers with or without the user interface. You must own a minimum of one Server Edition to use a Virtual Machine Edition.

### **O&O DiskImage**

Important note on the Windows PE Start CD

This note is only valid for the O&O DiskImage Professional and the Server Edition Start CD. The Microsoft® Windows™ Preinstallation Environment (Windows PE) is not a part of O&O DiskImage Express, Special and the Workstation Edition!

The Microsoft® Windows® Preinstallation Environment software included with this device or software may be used for boot, diagnostic, setup, restoration, installation, configuration, test or disaster recovery purposes only.

NOTE: THIS SOFTWARE CONTAINS A SECURITY FEATURE THAT WILL CAUSE END USER'S SYSTEM TO REBOOT WITHOUT PRIOR NOTIFICATION TO THE END USER AFTER 72 HOURS OF CONTINUOUS USE.

Amendment to: 2. Requirements for application (system requirements)

### The O&O DiskImage Express Edition

## End user license agreement 3.4 (EULA)

The software requires Windows XP (all Editions), Windows Vista (all Editions) or Windows 7 (all Editions) operating systems. Usage within the terms of this contract is not achieved without the application of these operating systems. Control of the program through a network management is not possible.

### O&O DiskImage Professional Edition and Special Edition

The software requires Windows XP (all Editions), Windows Vista (all Editions) or Windows 7 (all Editions) operating systems. Usage within the terms of this contract is not achieved without the application of these operating systems. Control of the program through a network management is not possible.

### O&O DiskImage Workstation Edition

The software requires the Windows XP (all Editions), Windows Vista (all Editions) or Windows 7 (all editions) operating systems. Usage within the terms of this contract is not achieved without the application of these operating systems. The O&O DiskImage Workstation Edition may be used on computers with or without the user interface. You are entitled to control this program over the separately obtainable network manager.

### O&O DiskImage Server Edition

The software requires Windows Server 2003 (all Editions), Windows XP (all Editions), Windows Vista (all Editions), Windows Server 2008 (all Editions), Windows 7 (all Editions) or Windows Server 2008 R2 (all Editions), operating systems. Usage within the terms of this contract is not achieved without the application of these operating systems. The O&O DiskImage Server Edition may be used on computers with or without the user interface. You are entitled to control this program over the separately obtainable network manager.

### O&O DiskImage Virtual Machine Edition

The O&O Defrag Workstation Edition may be used on computers with or without the user interface. You must own a minimum of one Server Edition to use a Virtual Machine Edition.

## Amendment to: 3. Rights of use, including test versions, unauthorized transfer, and application

### Creation and restoration of images

The source computer and each target computer are required to hold licenses, to create and restore images using O&O DiskImage. One license is sufficient under the previously mentioned terms, if the source and the target computer is one non-virtual workstation. Each virtual machine is seen as an independent computer; in other words, each virtual machine needs its own license.

## **O&O DiskRecovery**

### Amendment to: 2. Requirements for application (system requirements)

The software requires Windows 2000 (all Editions), Windows Server 2003 (all Editions), Windows XP (all Editions), Windows Vista (all Editions), Windows Server 2008 (all Editions), Windows 7 (all Editions) or Windows Server 2008 R2 (all Editions), operating systems. Application within the terms of this contract is not achieved without the use of one of these operating systems.

The product at hand can only be employed according to the acquired license. The following license types exist for O&O DiskRecovery:

### O&O DiskRecovery Professional Edition

You are authorized to install and use the software product on only one computer. This should be used wholly in conjunction with all hardware in your possession, i.e. this license may not be used to provide a service to a third party. Other limitations may apply in the software itself. Please consult the software documentation for more information on these limitations.

### O&O DiskRecovery Admin Edition



## End user license agreement 3.4 (EULA)

You are authorized to install and use the software product on all computers

a) in the possession of the company (legal person or natural person(s) in the case of corporations) owning the license and b) all located at a single site. This should be used wholly in conjunction with all hardware in your possession, i.e. this license may not be used to provide a service to a third party. This license is bound to a single natural person and is non-transferable.

### O&O DiskRecovery Tech Edition

You are authorized to install and use the software product on all computers. This includes computers that do not belong to the company owning the license (also known as Service Technician's License). This license is bound to a single natural person and is non-transferable.

### **O&O DiskStat**

Amendment to: 2. Requirements for application (system requirements)

### O&O DiskStat Professional Edition

The software requires Windows 2000 Professional or Windows XP (all Editions) Windows Vista (all Editions) or Windows 7 (all Editions) operating systems. Usage within the terms of this contract is not achieved without the application of these operating systems.

### O&O DiskStat Workstation Edition

The software requires Windows 2000 Professional or Windows XP (all Editions) Windows Vista (all Editions) or Windows 7 (all Editions) operating systems. Usage within the terms of this contract is not achieved without the application of these operating systems. The O&O DiskStat Workstation Edition may be used on computers with or without the user interface. You are entitled to control this program over the separately obtainable network manager.

### O&O DiskStat Server Edition

The software requires Windows 2000 (all Editions), Windows Server 2003 (all Editions), Windows XP (all Editions), Windows Vista (all Editions), Windows Server 2008 (all Editions), Windows 7 (all Editions) or Windows Server 2008 R2 (all Editions), operating systems. Application within the terms of this contract is not achieved without the use of one of these operating systems.

### O&O DiskStat Virtual Machine Edition

The O&O Defrag Workstation Edition may be used on computers with or without the user interface. You must own a minimum of one Server Edition to use a Virtual Machine Edition.

### **O&O DriveLED**

Amendment to: 2. Requirements for application (system requirements)

### O&O DriveLED Professional Edition

The software requires Windows XP (all Editions), Windows Vista (all Editions) or Windows 7 (all Editions) operating systems. Usage within the terms of this contract is not achieved without the application of these operating systems. Control of the program through a network management is not possible.

### O&O DriveLED Workstation Edition

The software requires Windows XP (all Editions), Windows Vista (all Editions) or Windows 7 (all Editions) operating systems. Usage within the terms of this contract is not achieved without the application of these operating systems. The O&O DriveLED Workstation Edition may be used on computers with or without the user interface. You are entitled to control this program over the separately obtainable network manager.

### O&O DriveLED Server Edition

## End user license agreement 3.4 (EULA)

The software requires Windows 2000 (all Editions), Windows Server 2003 (all Editions), Windows XP (all Editions), Windows Vista (all Editions), Windows Server 2008 (all Editions), Windows 7 (all Editions) or Windows Server 2008 R2 (all Editions) operating systems. Usage within the terms of this contract is not achieved without the application of these operating systems. The O&O DriveLED Server Edition may be used on computers with or without the user interface. You are entitled to control this program over the separately obtainable network manager.

### O&O DriveLED Virtual Machine Edition

The O&O Defrag Workstation Edition may be used on computers with or without the user interface. You must own a minimum of one Server Edition to use a Virtual Machine Edition.

## **O&O Enterprise Management Console**

### Important note on the Microsoft SQL Server

This product uses the Microsoft SQL Server or Microsoft SQL Server Express Edition. To the extent that these programs are part of the installation of this product, the terms of their licensing related to the use of this software will also apply to the terms of this agreement.

The use of Microsoft SQL Server Express Edition is free of charge in conjunction with this product. The purchase of licenses for O&O Enterprise Management Console and related products is separate from any possible purchase of SQL Server products.

### Amendment to: 2. Requirements for application (system requirements)

The software requires Windows 2000 (all Editions), Windows Server 2003 (all Editions), Windows XP (all Editions), Windows Vista (all Editions), Windows Server 2008 (all Editions), Windows 7 (all Editions) or Windows Server 2008 R2 (all Editions) operating systems. Usage within the terms of this contract is not achieved without the application of these operating systems.

## **O&O EventViewer**

### Amendment to: 2. Requirements for application (system requirements)

### O&O EventViewer Workstation Edition

The software requires Windows 2000 Professional or Windows XP (all Editions) Windows Vista (all Editions) or Windows 7 (all Editions) operating systems. Usage within the terms of this contract is not achieved without the application of these operating systems. The O&O EventViewer Workstation Edition may be used on computers with or without the user interface. You are entitled to control this program over the separately obtainable network manager.

### O&O EventViewer Server Edition

The software requires Windows 2000 (all Editions), Windows Server 2003 (all Editions), Windows XP (all Editions), Windows Vista (all Editions), Windows Server 2008 (all Editions), Windows 7 (all Editions) or Windows Server 2008 R2 (all Editions), operating systems. Usage within the terms of this contract is not achieved without the application of these operating systems.

### O&O EventViewer Virtual Machine Edition

The O&O Defrag Workstation Edition may be used on computers with or without the user interface. You must own a minimum of one Server Edition to use a Virtual Machine Edition.

## **O&O ISOBoot**

### Important note for working with O&O ISOBoot

The program overwrites the target data volume (these include among other things rewritable CDs or USB sticks). Please make sure that no data you need is left on the target data volume. Overwriting data cannot be reversed!

## End user license agreement 3.4 (EULA)

O&O formally declares that it is not responsible for damages arising from the improper use of O&O ISOBoot.

Amendment to: 2. Requirements for application (system requirements)

The software requires the Windows 2000 (all Editions), Windows Server 2003 (all Editions), Windows XP (all Editions), Windows Vista (all Editions), Windows 7 (all Editions) or Windows Server 2008 (all Editions) operating systems. Application within the terms of this contract is not achieved without the use of one of these operating systems.

Amendment to: 4. Payment

O&O demands no fee for the use of this license. In addition, a fee for this license and this program may not be demanded by any Third Parties, unless this is done with the expressed approval of O&O. When in doubt, please get in touch with us. You can find our contact data at the end of this license agreement.

### **O&O MediaRecovery**

Amendment to: 2. Requirements for application (system requirements)

The software requires Windows 2000 (all Editions), Windows Server 2003 (all Editions), Windows XP (all Editions), Windows Vista (all Editions), Windows Server 2008 (all Editions), Windows 7 (all Editions) or Windows Server 2008 R2 (all Editions), operating systems. Usage within the terms of this contract is not achieved without the application of these operating systems.

### **O&O PartitionManager**

Important note on the Windows PE Start CD

The Microsoft® Windows® Preinstallation Environment software included with this device or software may be used for boot, diagnostic, setup, restoration, installation, configuration, test or disaster recovery purposes only.

NOTE: THIS SOFTWARE CONTAINS A SECURITY FEATURE THAT WILL CAUSE END USER'S SYSTEM TO REBOOT WITHOUT PRIOR NOTIFICATION TO THE END USER AFTER 72 HOURS OF CONTINUOUS USE.

Amendment to: 2. Requirements for application (system requirements)

#### O&O PartitionManager Professional Edition

The software requires Windows 2000 Professional or Windows XP (all Editions), Windows Vista (all Editions) or Windows 7 (all Editions) operating systems. Usage within the terms of this contract is not achieved without the application of these operating systems.

#### O&O PartitionManager Server Edition

The software requires Windows 2000 (all Editions), Windows Server 2003 (all Editions), Windows XP (all Editions), Windows Vista (all Editions), Windows Server 2008 (all Editions), Windows 7 (all Editions) or Windows Server 2008 R2 (all Editions), operating systems. Usage within the terms of this contract is not achieved without the application of these operating systems.

### **O&O RegEditor**

Important note for working with the Microsoft Windows Registry

Before making changes to the Microsoft Windows Registry (in the following Registry), you should prepare a backup copy of the Registry and ensure that you'll be able to restore the Registry if a problem should arise.

O&O formally declares that it is not responsible for damages arising from the improper use of O&O RegEdit. Changes to the Registry should only be made by experienced users who are aware of the consequences of such changes. A defective Registry can influence the entire stability of the system and lead to a crash of the computer or make it unable to start. This can further lead to loss of data.

## End user license agreement 3.4 (EULA)

### Amendment to: 2. Requirements for application (system requirements)

The software requires Windows 2000 (all Editions), Windows Server 2003 (all Editions), Windows XP (all Editions), Windows Vista (all Editions) or Windows Server 2008 (all Editions) operating systems. Application within the terms of this contract is not achieved without the use of one of these operating systems.

### Amendment to: 4. Payment

O&O demands no fee for the use of O&O RegEditor. In addition, a fee for this license and this program may not be demanded by any Third Parties, unless this is done with the expressed approval of O&O. When in doubt, please get in touch with us. You can find our contact data at the end of this license agreement.

## **O&O RescueBox**

### Important note on the Windows PE Start CD

The Microsoft® Windows® Preinstallation Environment software included with this device or software may be used for boot, diagnostic, setup, restoration, installation, configuration, test or disaster recovery purposes only.

**NOTE: THIS SOFTWARE CONTAINS A SECURITY FEATURE THAT WILL CAUSE END USER'S SYSTEM TO REBOOT WITHOUT PRIOR NOTIFICATION TO THE END USER AFTER 72 HOURS OF CONTINUOUS USE.**

### Amendment to: 2. Requirements for application (system requirements)

The software requires Windows 2000 (all Editions), Windows Server 2003 (all Editions), Windows XP (all Editions), Windows Vista (all Editions), Windows Server 2008 (all Editions), Windows 7 (all Editions) or Windows Server 2008 R2 (all Editions) operating systems. Usage within the terms of this contract is not achieved without the application of these operating systems.

The product at hand can only be employed according to the acquired license. The following license types exist for O&O RescueBox:

#### O&O RescueBox Personal Edition

You are authorized to install and use the software product on only one computer. This should be used wholly in conjunction with all hardware in your possession, i.e. this license may not be used to provide a service to a third party. Other limitations may apply in the software itself. Please consult the software documentation for more information on these limitations.

## **O&O SafeErase**

### Amendment to: 2. Requirements for application (system requirements)

#### O&O SafeErase Professional Edition

The software requires Windows XP (all Editions), Windows Vista (all Editions) or Windows 7 (all Editions) operating systems. Usage within the terms of this contract is not achieved without the application of these operating systems.

#### O&O SafeErase Workstation Edition

The software requires Windows XP (all Editions), Windows Vista (all Editions) or Windows 7 (all Editions) operating systems. Usage within the terms of this contract is not achieved without the application of these operating systems.

#### O&O SafeErase Server Edition

The software requires Windows 2000 (all Editions), Windows Server 2003 (all Editions), Windows XP (all Editions), Windows Vista (all Editions), Windows Server 2008 (all Editions), Windows 7 (all Editions) or Windows Server 2008 R2 (all Editions) operating systems. Usage within the terms of this contract is not achieved without the application of these operating systems.

**O&O SSD Migration Kit**

Amendment to: 2. Requirements for application (system requirements)

The software requires Windows XP (all Editions), Windows Vista (all Editions) or Windows 7 (all Editions) operating systems. Usage within the terms of this contract is not achieved without the application of these operating systems. Control of the program through a network management is not possible.

**O&O UnErase**

Amendment to: 2. Requirements for application (system requirements)

The software requires Windows Server 2003 (all Editions), Windows XP (all Editions), Windows Vista (all Editions), Windows Server 2008 (all Editions), Windows 7 (all Editions) or Windows Server 2008 R2 (all Editions), operating systems. Application within the terms of this contract is not achieved without the use of one of these operating systems.