O&O DiskImage 5

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About O&O DiskImage 5

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

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Quick Start

- One-click imaging - Create an image of the entire computer
- Restore drives
- Save Images onto CD/DVD
- Start O&O DiskImage directly from CD
- Express view

> **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.

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.

In addition to the on-going perfecting of existing program components, you'll find several additional new and helpful features in Version 5.

NEW: One-click imaging
is the fastest and easiest way of creating a complete image of all your data and settings, including the system partition. 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.

NEW: M.I.R.- Machine Independent Restoration
The Machine Independent Restoration technology allows you to perform a system restoration on differing types of hardware. 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. You can read more about this in the document "Machine Independent Restoration".

NEW: Email notification about the running of tasks
 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.

Information Bar
The Information Bar guides you through selected tasks and lets you know what to do next. It'll also provide important information about the running of tasks. You also have the option of hiding the Information Bar.

NEW: Express View
The Express View presents an easy and intuitive way of using the main features of the program. 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.

NEW: The size of the target drive can be adjusted for restoration and cloning
If the target for restoration or cloning is a free sector, the size of the target drive can be changed by the user to fit the actual data volume of the original drive. 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.

Exceptions are drives with unknown file systems, direct forensic images from encrypted hard disks and images from virtual hard disks (VHD) containing dynamic drives that are stripped, spanned or RAID5.

NEW: A new start page
It displays the main features of O&O DiskImage along with an explanation of what each one does. The three main features are: **One-click imaging, Differential/incremental imaging** and **Restore drives**. It's also very easy to switch to the Advanced start page from where you can run all of O&O DiskImage's features.

Imaging while system is running

The time once needed for servicing images could have taken half a day and made it impossible to work on Servers and Workstations. O&O DiskImage allows you to create reliable images of individual disks and entire systems without interrupting Server operation* or the user. 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.

Imaging methods for all purposes
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.

After creating a base image, you can create incremental or differential images to save modifications since the last image.

Conveniently work across a 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. Further information is available in chapter "Additional properties of the Server and Workstation Edition".

Cloning
By cloning, it's possible to create 1:1 copies of entire disks or individual drives which can then be used instead of the originals. Cloning will give you exact replicas of disks or individual drives, including the data stored on them, but without creating any image files. You do, however, require a lot more storage space for a clone than for an image.

No incremental or differential follow up image can be done with a clone, which would lessen the data volume. In addition, an image can be compressed (clones cannot) and/or encrypted, which makes the data unusable for out-siders or unauthorized users.

Job management for creating images automatically on a regular basis
O&O DiskImage will let you set up a schedule for executing tasks. With the help of a useful Wizard you can set that the data will be imaged regularly at predefined times.

Restoration of entire computers and individual drives

Restoring your data is as easy as creating an image. If you want to restore data volumes, it is sufficient to start O&O DiskImage under Windows. If you want to restore an entire computer including its operating system and all applications, then run O&O DiskImage directly from the Start-CD. The additional integrated system rescue tools also offer the chance to restore the original system and identify mistakes.

To start O&O DiskImage directly from CD, it is not necessary for the operating system to run properly. The CD includes a bootable Windows operating system including all the needed drivers. If special hardware is not rec-ognized, you can download additional drivers, e.g. for a controller or network cards with the help of an assistant.

Restoration of individual files
You can also restore single files from an image fast and easy. Just mount drives from the image 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.

Transfer system environment onto a new computer
O&O DiskImage can also assist you when installing/configuring new acquired computers. After you've setup your computer, image the entire system and then transfer this image onto all additional machines.

Using the Command Interpreter (script capability)
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. This function is available only for the **Workstation and Server Edi-tion**. 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.

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.

DiskView The interactive graphical display provides an overview of the entire hard disk.
 Free and used space, as well as the size of the partitions are displayed.

Compression types
Along with LZNT1 compression, it's now possible to use BZIP2 on the image.

Handling of virtual hard disks (VHD)
To make working with Microsoft Virtual PCs (VPC) easier, 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.

Integrated burner
In addition to CD/DVDs, the integrated burner of O&O DiskImage also supports Blu-Ray Disks and HD/DVD´s.

Change computer identity
O&O DiskImage will let you change the identity of your computer to avoid authentication problems, i.e., when the same computer identity already exists in the network. This might be helpful when creating several system images in a network.

TrayIcon
The new TrayIcon monitors the service status and keeps you informed about active program functions. This will help prevent you from unintentionally aborting an O&O DiskImage task that is being run in the background.

Validation
A checksum comparison of the data will also be performed while the image is being checked.

Additional features:

- Reporting (Job/Parameter/Timing)
- Supports Windows Vista and Server 2008 R2 (Server Edition only)
- Base operating system with integrated system recovery tools for starting directly from CD, without Windows.
- Secure encryption of your data (AES with up to 256-bit)
- Checks drives and images for errors and inconsistencies
- Exclude files
- Convert image file
- Utilizes the speed advantages of multi-core and multiprocessors
- Supports all common removable data storage media
- Checksum function for checking and distinguishing sums of images and originals
- Native support of dynamic drives
- And much, much more...

Differences between the three Editions

O&O DiskImage 5 is available in three Editions:

- O&O DiskImage 5 Professional Edition
- O&O DiskImage 5 Workstation Edition and
- O&O DiskImage 5 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

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® 2000 till Windows® Server 2008 R2 (all Editions)

	Professional Edition/ Special Edition	Workstation Edition	Server Edition
Windows® 7	yes	yes	yes
Windows® Vista®	yes	yes	yes
Windows® XP	yes	yes	yes
Windows® 2000 Professional	yes	yes	yes
Windows® 2000 Server	no	no	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.

Installation

> **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.

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

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

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 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. If you do not enter a valid license key, you can still use O&O DiskImage as a fully functional trial version for up to a maximum of 30 days. Should you have any questions, please contact our Support Team.

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 "I" 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.
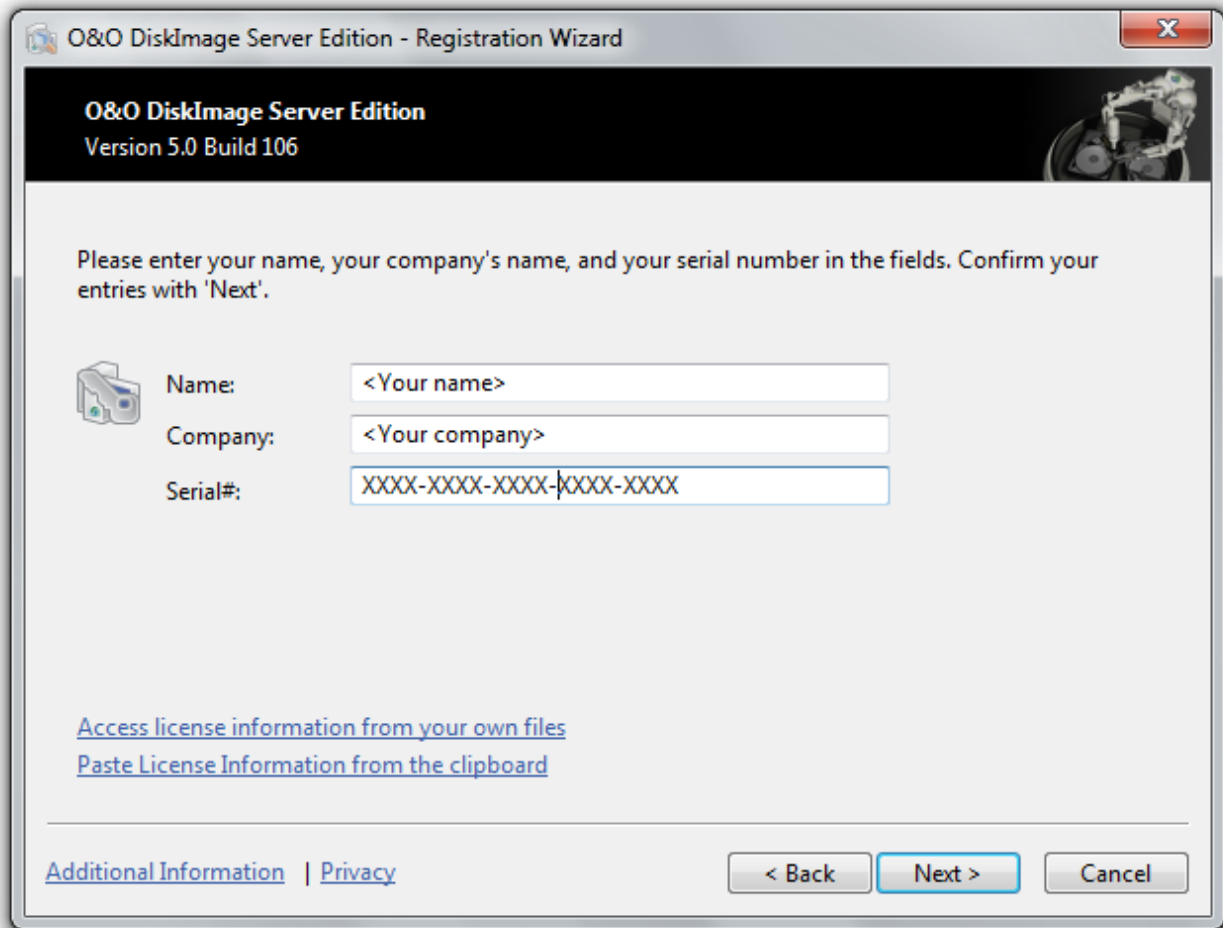
Registration wizard: Enter the license key

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 for O&O DiskImage

If you want to update O&O DiskImage to a newer version, you'll need the license key. Please follow the following directions:

1. First uninstall the previous version of O&O DiskImage.
2. Start the O&O DiskImage installation.
3. Complete the O&O DiskImage installation in the normal way.

4. Once finished, the new version is fully installed.
5. Restart the computer when prompted.

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.

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 program start, unless you've already registered.
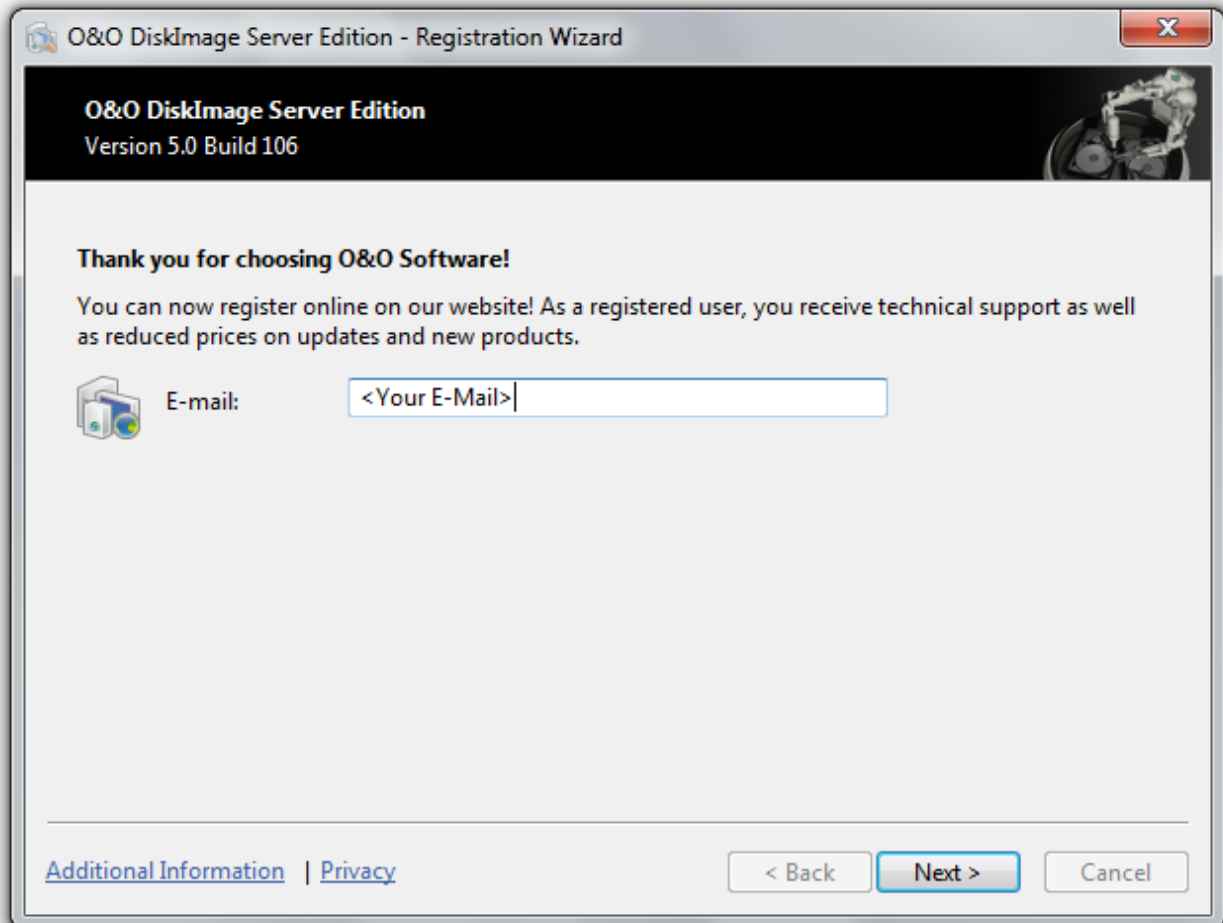
Online registration

More:

What are the advantages of online registration

How do I register online?

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 lose your license key, you can quickly and easily ask us to send you a new one. The license key is needed for, among other things, purchasing updates or reinstalling your O&O programs when you make a new setup for 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
- And much, much more...

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 was purchased through a dealer, you'll be asked during the installation if you'd like to register. 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.

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 makes it easier to image data using data imaging products such as O&O DiskImage.

Image

An image is a "copy" of your drive or partition. 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, when one disk is not large enough and the image is split onto two disks.

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.

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 want to image changes to your hard disk or of your partitions, you must have created at least one complete image. Changes made can be saved as differential and incremental images.
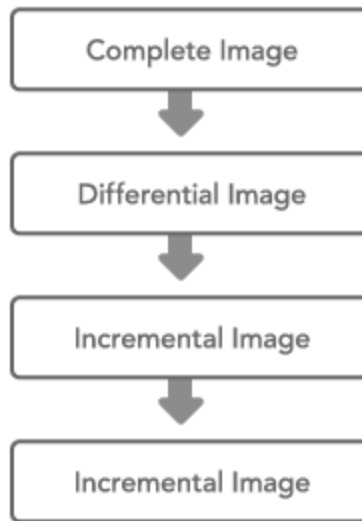
Connection between image types

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.

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.

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.

Getting started

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 O&O DiskImage either from an icon on the Desktop or under **Start/Programs/O&O Software/O&O DiskImage**. You can also have online help displayed by clicking **Help** or pushing **F1**.
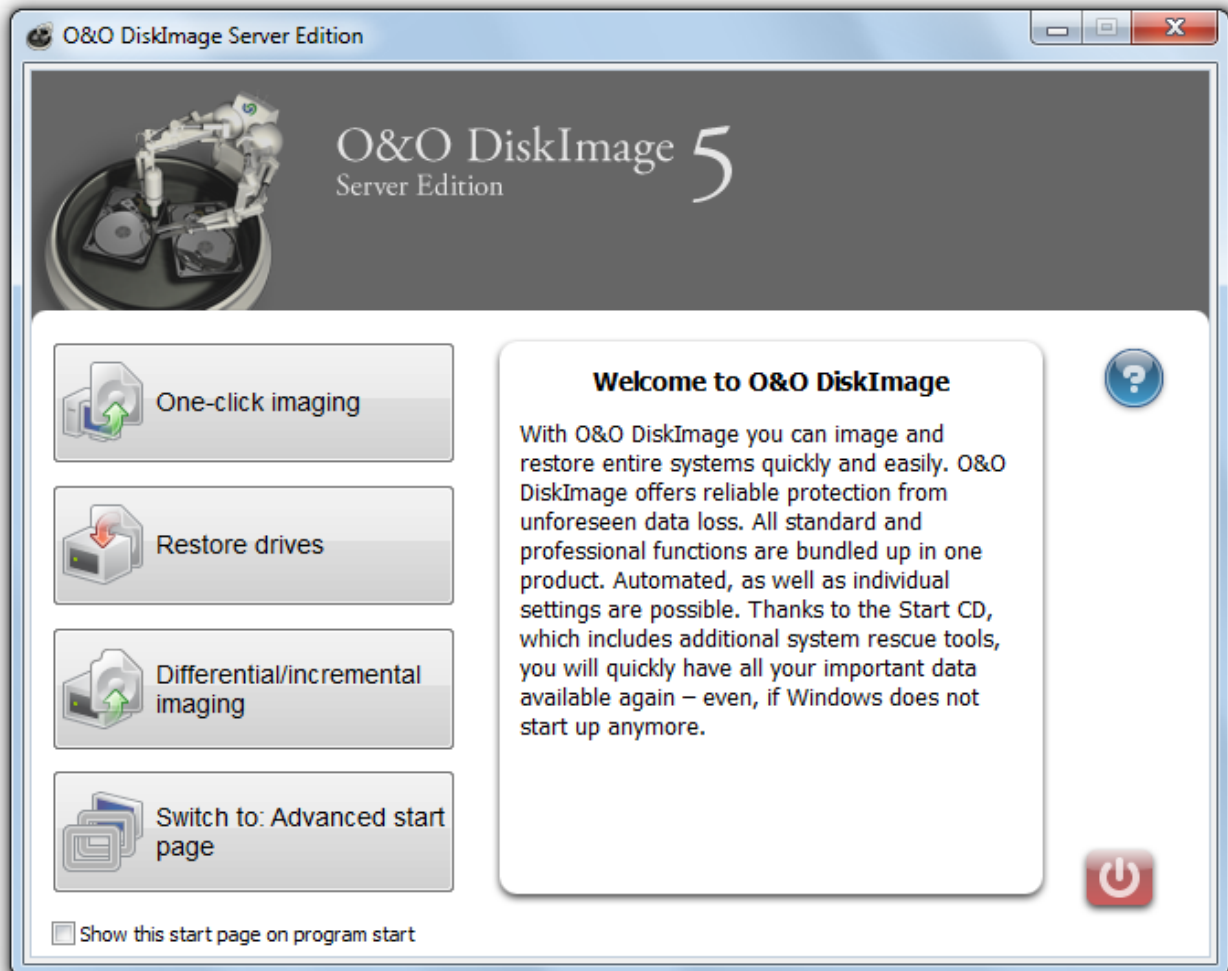
Start page of O&O DiskImage

Tip: If you want to run features such as imaging individual drives or cloning a drive, click **Advanced start page** and work from there.

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 using an external disk, e.g., a USB hard disk or a network drive as a target for One-click imaging.

1. Start O&O DiskImage and select **One-click imaging** on the Start page.
2. Then check to make sure the target path is set to your desired storage location.
3. The image is automatically named after the creation date. You can however enter a name manually.
4. Click on **Start** to initiate the imaging process. The imaging process can take some time depending on the size of the hard disk(s).
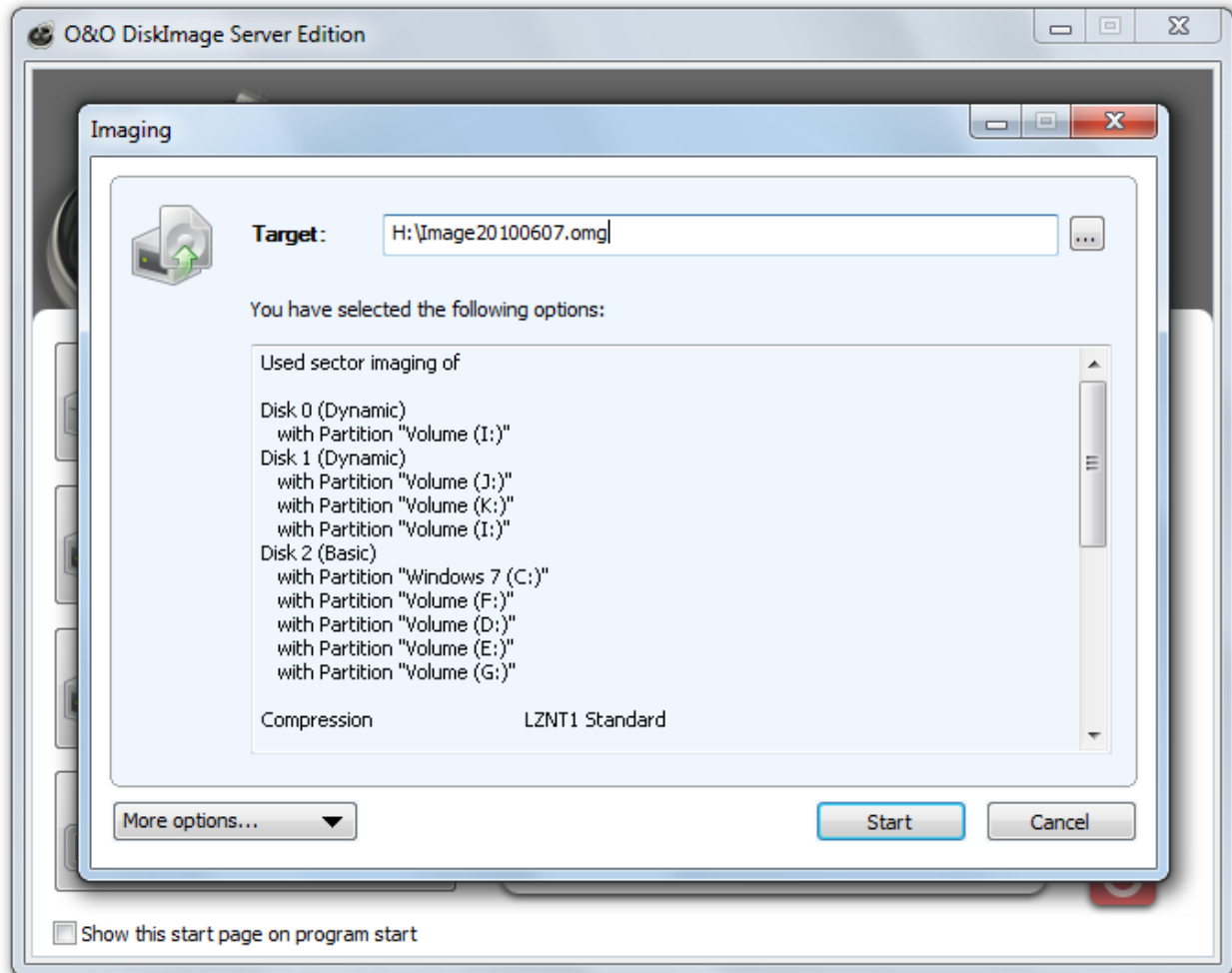
One-click imaging settings

> **Tip:** Further settings can be specified in the dialog **More options**.

Differential/incremental imaging

The **Differential/incremental imaging** function creates an image that saves only the data that's been changed since the last base image. As a rule, an image of the changes requires less disk space than a complete image.

To create an incremental image, you must have first created a complete image of the respective drive. 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. On the O&O DiskImage start page, click **Differential/incremental imaging.**
3. Select your base image in the browser window and click **Open**.
4. Now you can either select the recommended drive for saving the image, or enter a new target path. For greater clarity, it's advisable to store the base image and its respective incremental/differential image file on the same drive. You may, however, use any drive you wish.
5. The image is automatically named after the creation date. You can however enter a name manually.
6. Now click **Start** to create a differential/incremental image from the base image. The Imaging method of the original "complete" image, e.g. Used sector imaging, remains the same and cannot be amended.

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.

Restore drives

If you want to restore one or more drives from an existing image, click **Restore drives** on the O&O DiskImage start page. 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.

1. Select the image file (*.omg) or (*.vhd) in the dialog window and then click **Open**.
2. All drives contained in the image will then be displayed.
3. Click the drive that you want to restore ("play back").
4. In the following dialog, select the target drive for restoration by clicking next to it. You can either replace an existing drive or create a new one: for example, in an empty sector.
5. Click **Map** if you want to continue with restoration or select additional drives from the image.
6. In the following dialog under **Further options**, you can specify whether certain functions should be executed when restoration is completed. These functions are disabled by default.
7. Once you've enabled all the settings, click **Start** to begin the restoration process.

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: You can learn more about restoration in the chapters Advanced restoration and Settings for restoration on different hardware.

Advanced features

On the Advanced start page, you have the option of running additional settings and features from the Ribbon bar. Click **Switch to Advanced start page** on the O&O DiskImage start page to use advanced features.
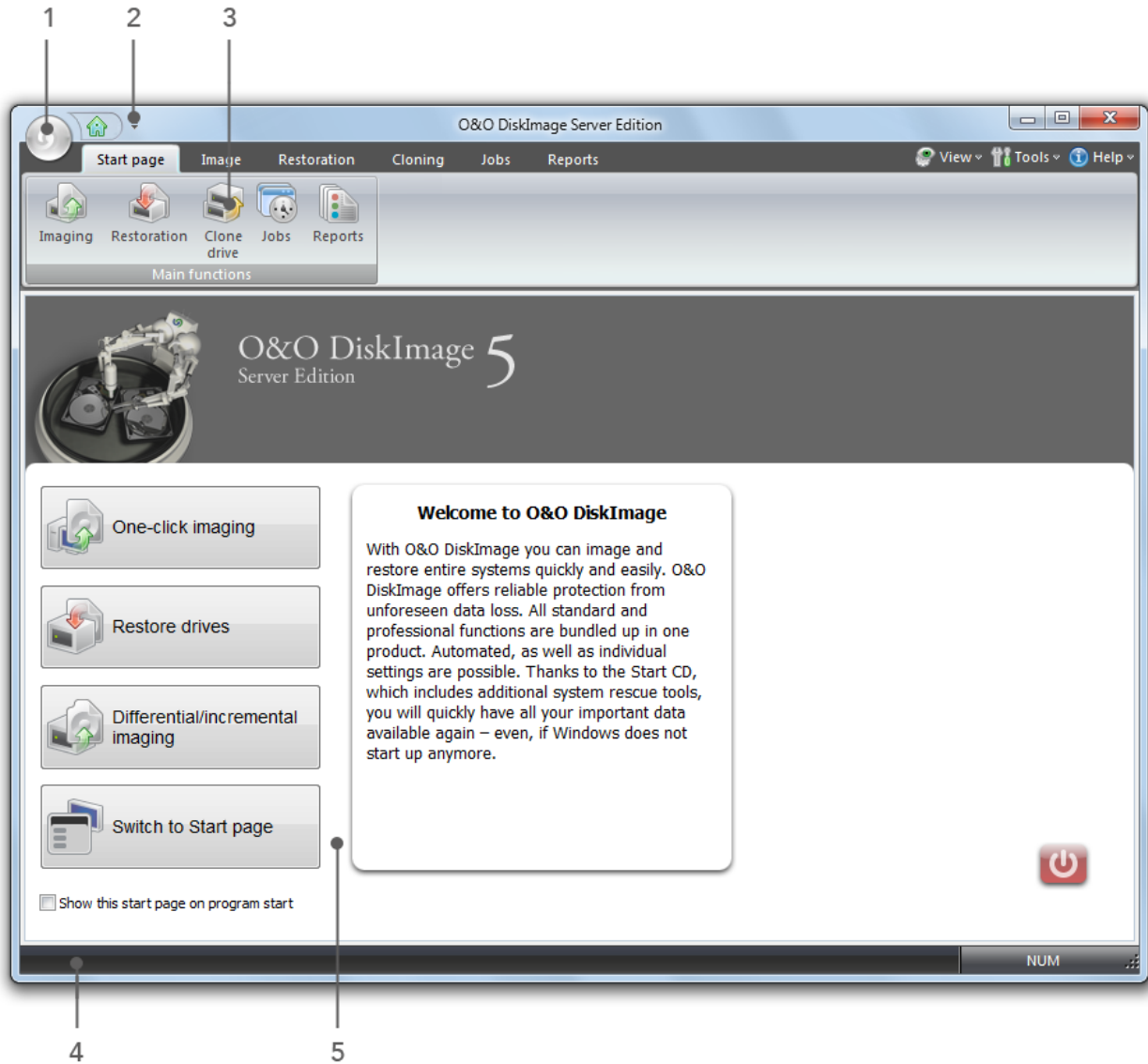
Advanced start page of O&O DiskImage

Caption:

1. Application menu
2. Quick Access Toolbar and options for customization
3. Ribbon Bar: Variable content, depending on process chosen
4. Status bar
5. Activity window: Variable content, depending on action

Image individual drives

In addition to One-click imaging which images your entire computer, you can also image individual drives only, e.g., data drives. To create an image of one or more drives, follow the instructions below:

> **Note:** Make sure the Advanced start page is being displayed if you want to run this feature. This can be done by clicking **Advanced start page** on the O&O DiskImage start page.

- Select **Imaging** in the Ribbon bar.
- Afterwards, the selection possibilities for creating images will appear in the activity window. Please take note of the instructions in the Information bar (to the right).
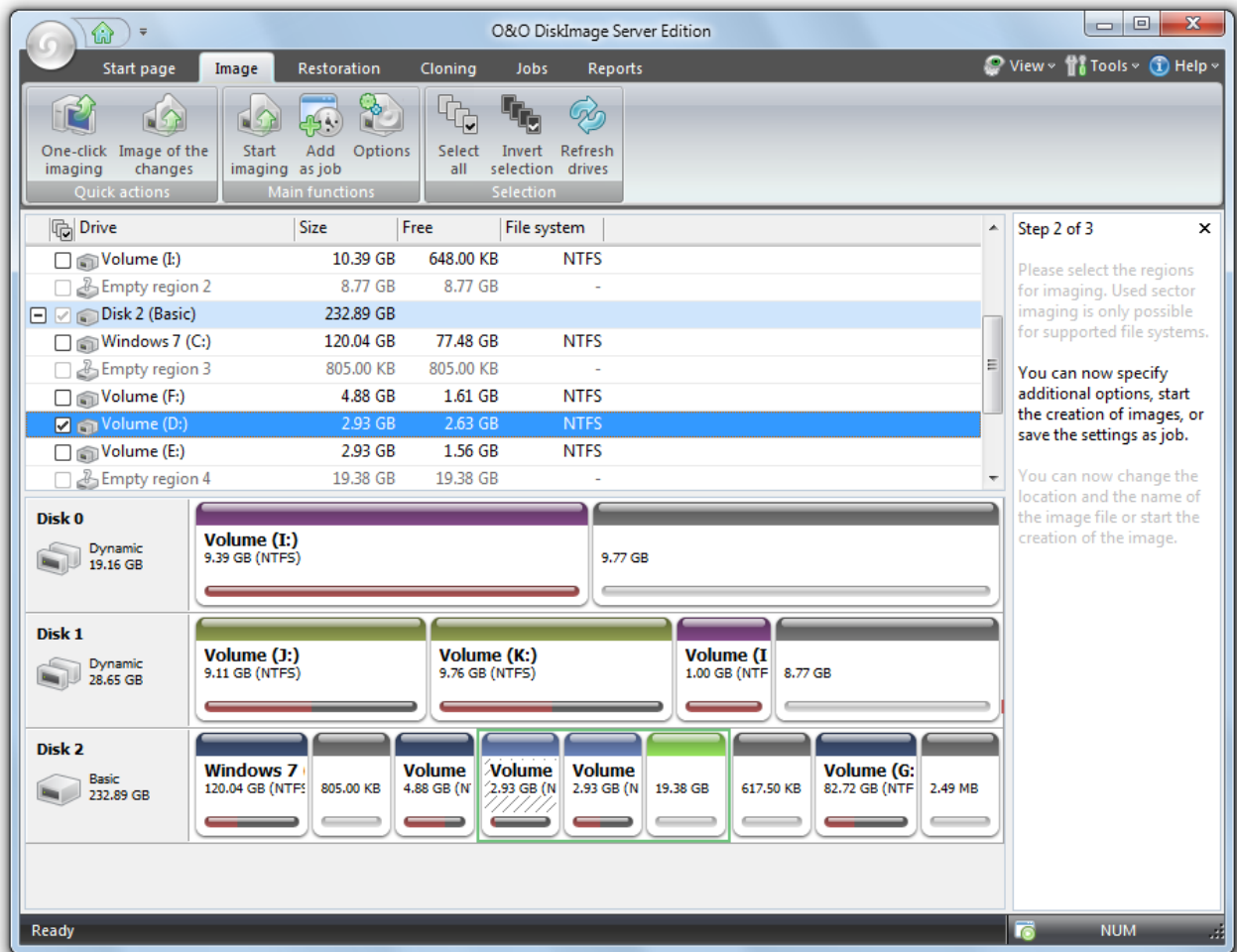
Activity window for creating Images

1. Select the drive you want to image by checking the box next to it.
2. Under Options, you can set further settings such as imaging method or encryption.
3. Then click **Create**.
4. 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.

5. 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.
6. Select **Start**. The image file will now be created.

Note: If one disk is not large enough to save an entire image, you will be prompted to enter a new target path.

Note: If all the connected drives are not displayed, click **Imaging** in the Ribbon bar and then on **Refresh drives**.

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 "Disk-Part". 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.
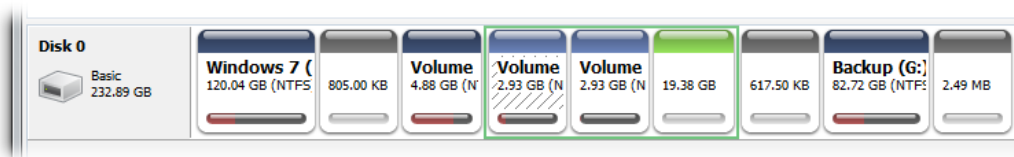
DiskView

Clone drives

Note: Make sure the Advanced start page is being displayed if you want to run this feature. This can be done by clicking **Advanced start page** on the O&O DiskImage start page.

By cloning, it's possible to create 1:1 copies of entire disks or individual drives which can then 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 and/or encrypted: something that renders the data useless for third persons or other unauthorized access.
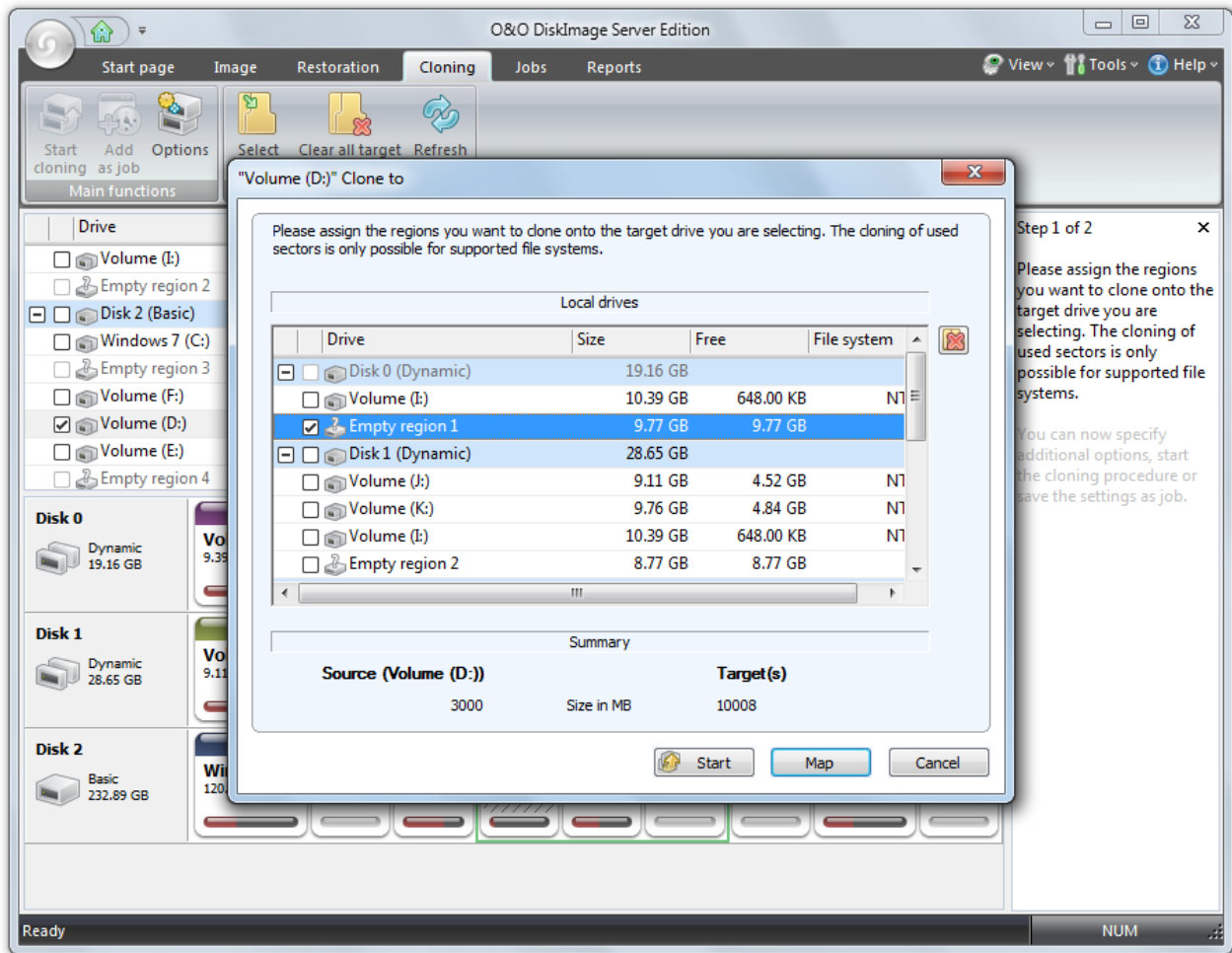
Activity window for cloning drives.

1. Select **Cloning** in the Ribbon bar.
2. You can set additional settings for cloning under **Options**.
3. Select the drive you want to clone by checking the box next to it.
4. A dialog will then appear where you must select a target drive.
5. Click **Map** if you want to clone additional drives or **Start** if you want to continue with the cloning.
6. In the following dialog under **Advanced options**, you can specify whether certain functions should be executed when cloning is completed. These functions are disabled by default.
7. Once you've enabled all your settings, click **Start,** to begin the cloning process.
8. You can also "recopy" your clone in exactly the same fashion - to put it back on your computer/drive.

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 on a PC with different hardware, read more about this in the separate PDF document "Restoration on different hardware" (Machine Independent Restoration). Please make sure and read the notes in the chapter Settings for restoration on different hardware

Advanced restoration

All the information about an existing image file and its corresponding drive can be displayed by clicking **Tools/Read image information**. You can also apply further settings under **Options**.

Note: Make sure the Advanced start page is being displayed if you want to run this feature. This can be done by clicking **Advanced start page** on the O&O DiskImage start page.

Note: If you want to restore your entire system or a system partition, you'll have to start your computer using the Start CD of O&O DiskImage and begin the restoration from there. See Start O&O DiskImage directly from CD.
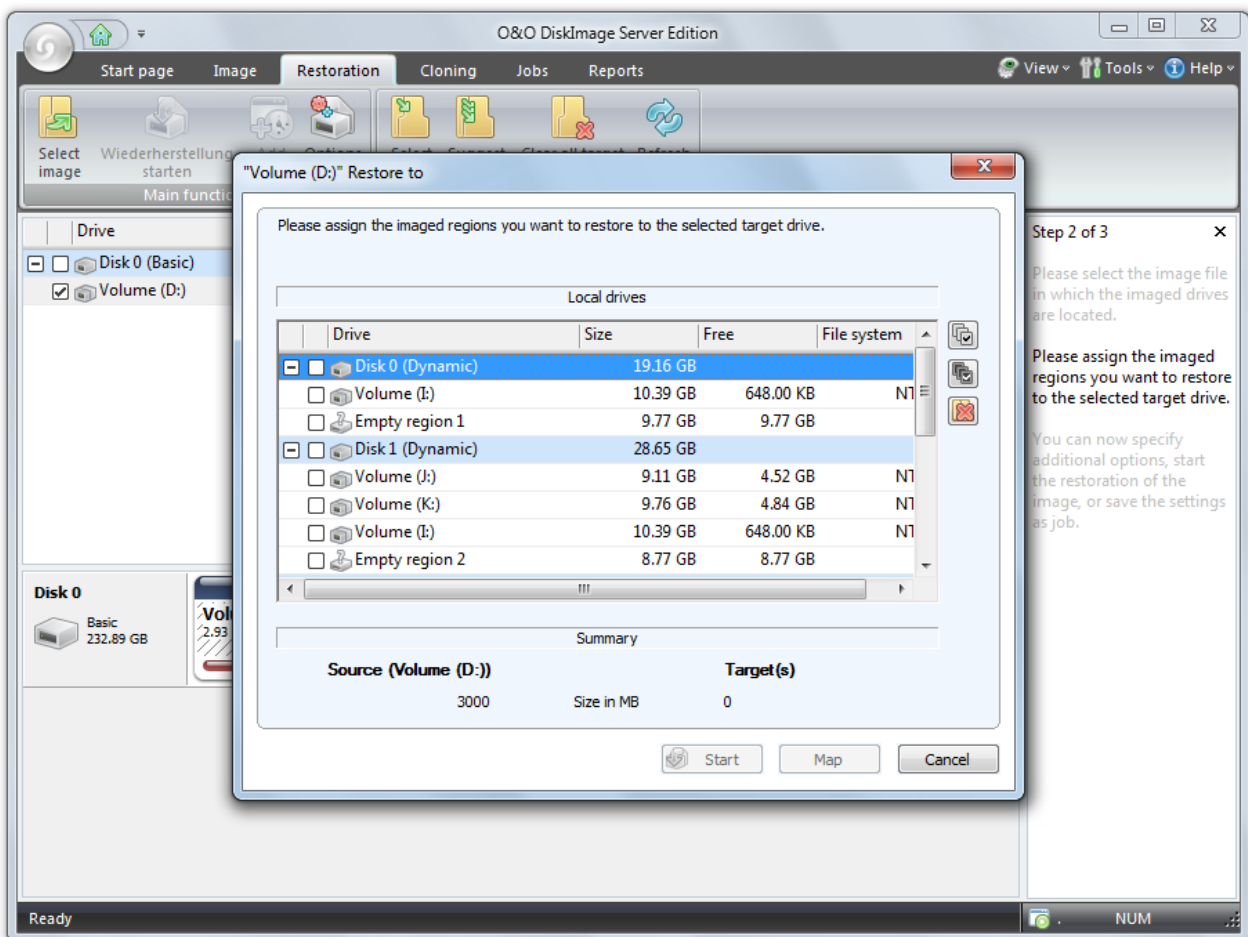
Activity window for the restoration of images.

To restore an image, please follow the instructions below:

1. Please make sure that the drive containing the image is connected to your computer.
2. On the Advanced start page select **Restoration** in the Ribbon bar.
3. Click **Select image** in the ribbon bar.
4. Select the image file (*.omg) or (*.vhd) in the dialog. 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.
5. Select **Open**.
6. All the drives contained in the image will then be listed.
7. Click the drive that you want to restore ("play back").
8. In the following dialog, select the target drive where restoration should be made. You can either replace an existing drive or create a new one: for example, in an empty sector.
9. Click **Map** if you want to restore additional drives from the image or directly on **Start**, to continue with the restoration.
10. In the following dialog under **Further options**, you can specify whether certain functions should be executed when restoration is completed. These functions are disabled by default.
11. Once you've enabled all your settings, click **Start,** to begin the restoration.
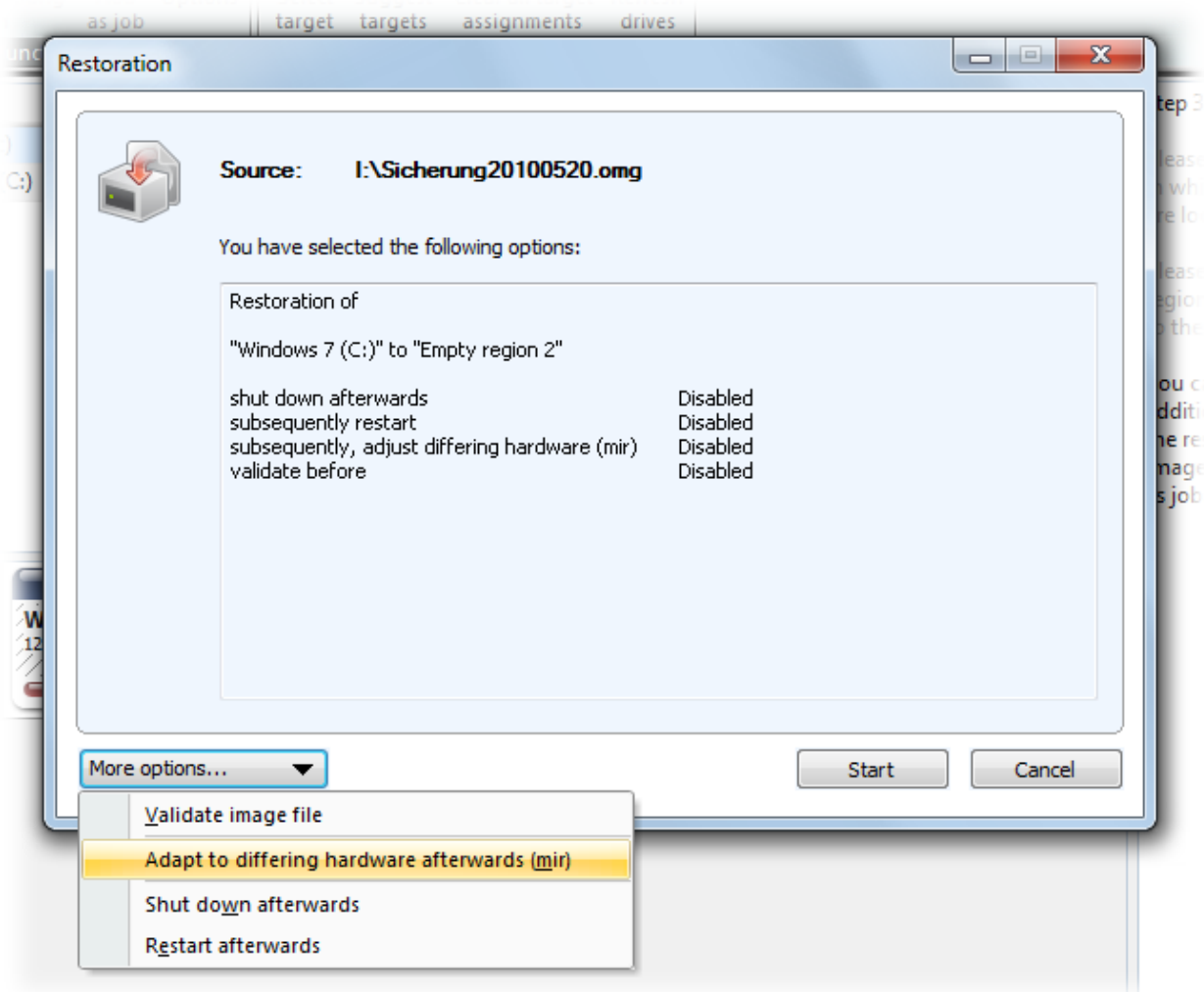
Enable further options such as M.I.R. when restoring or cloning a system partition.

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 you are not restoring the image onto the original hard disk, the memory of the hard disk you're using must have at least as much storage capacity as the original one. This is extremely important, for example, when imaging an entire hard disk.

Note: If your image is split among various disks, all these disks will be required for a restoration. If you've created incremental images, all images made since the first complete image will be needed.

Note: If you want to restore a system partition on a PC with different hardware, read more about this in the separate PDF document "Restoration on different hardware" (Machine Independent Restoration). Please make sure and read the notes in the chapter Settings for restoration on different hardware

Note: The Special Edition does not include the Start CD, which is needed for running O&O DiskImage without an operating system and for restoring a system partition.

Start O&O DiskImage directly from CD

If you run O&O DiskImage directly from CD, you will have all functions at your disposal. The Windows PE based Start CD is especially suitable, for example, if you restore your entire computer or the system partition, but only if you have created a corresponding image before. You can use the CD even if your Windows doesn't start up anymore due to a software failure. 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.

To run O&O DiskImage directly from CD (Windows PE Version) it is not necessary to previously install it. For starting from the CD, proceed as follows:

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.


```
Press any key to boot from CD or DVD.._
```

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.

> **Tip:** To restore your entire computer or your system partition, go to chapter Image restoration and follow the instructions given. Please note the instructions in the dialogs regarding the restoration of a system partition.

Start O&O DiskImage directly from CD
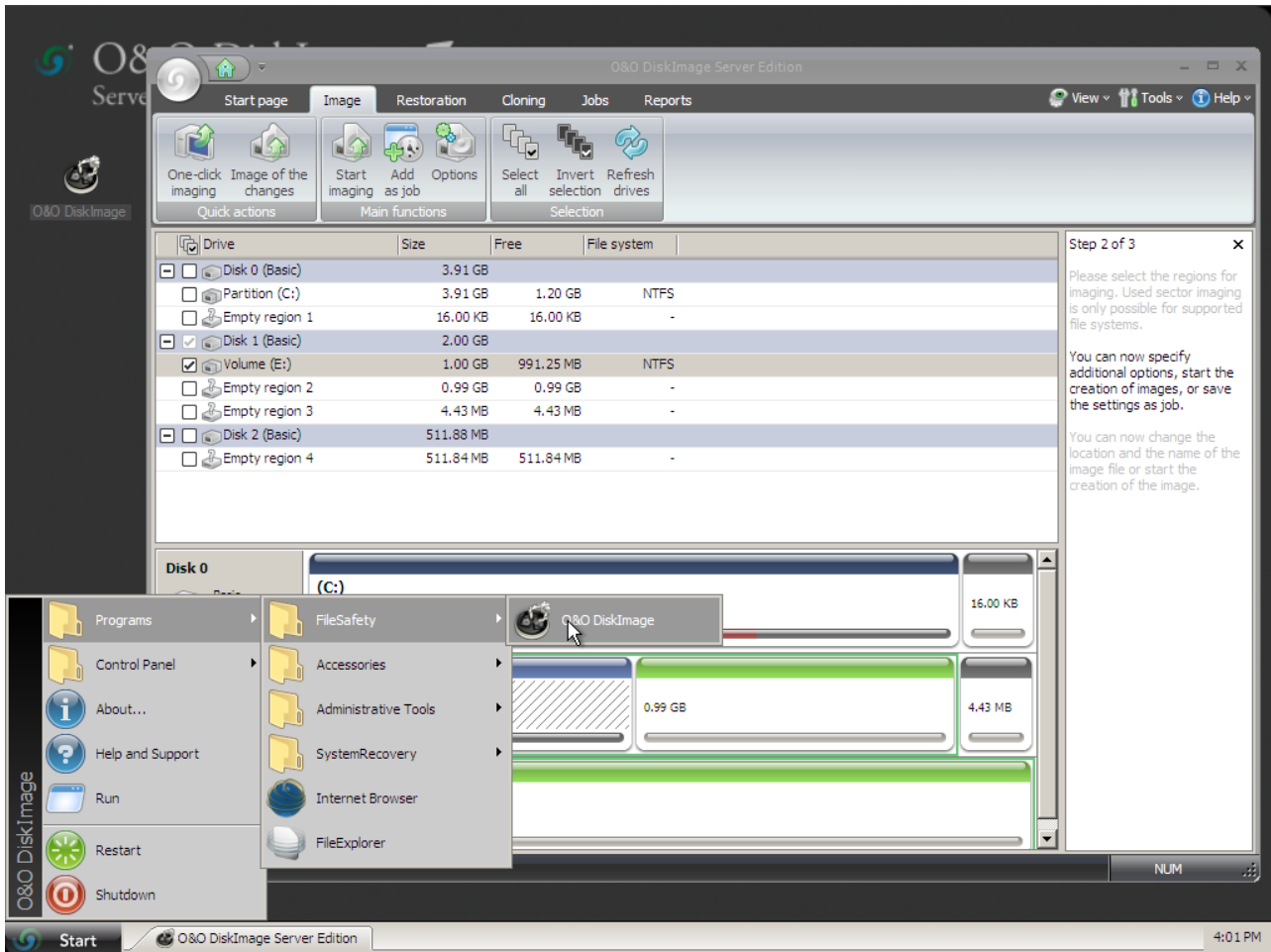
Using the Start CD from O&O DiskImage

> **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.

> **Note:** If you want to run the restoration on a computer with differing hardware, then please read more on the separate PDF document "Restoration on differing Hardware" (Machine independent restoration). Please see the notes in the chapters System restoration and Settings for restoration on different hardware.

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.
2. All recognized Windows devices as well as all devices missing installed drivers will be displayed.
3. Select the device for which you want to load a driver.

4. Click **Load.**
5. Select the desired driver such as one on a connected hard disk, USB Stick or CD*.
6. In the dialog, select **Open** to install the driver.
7. 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: Please keep in mind when doing so that you will need the driver for Windows Server 2008 32 Bit. The driver for Windows Vista 32 Bit might work as well.

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
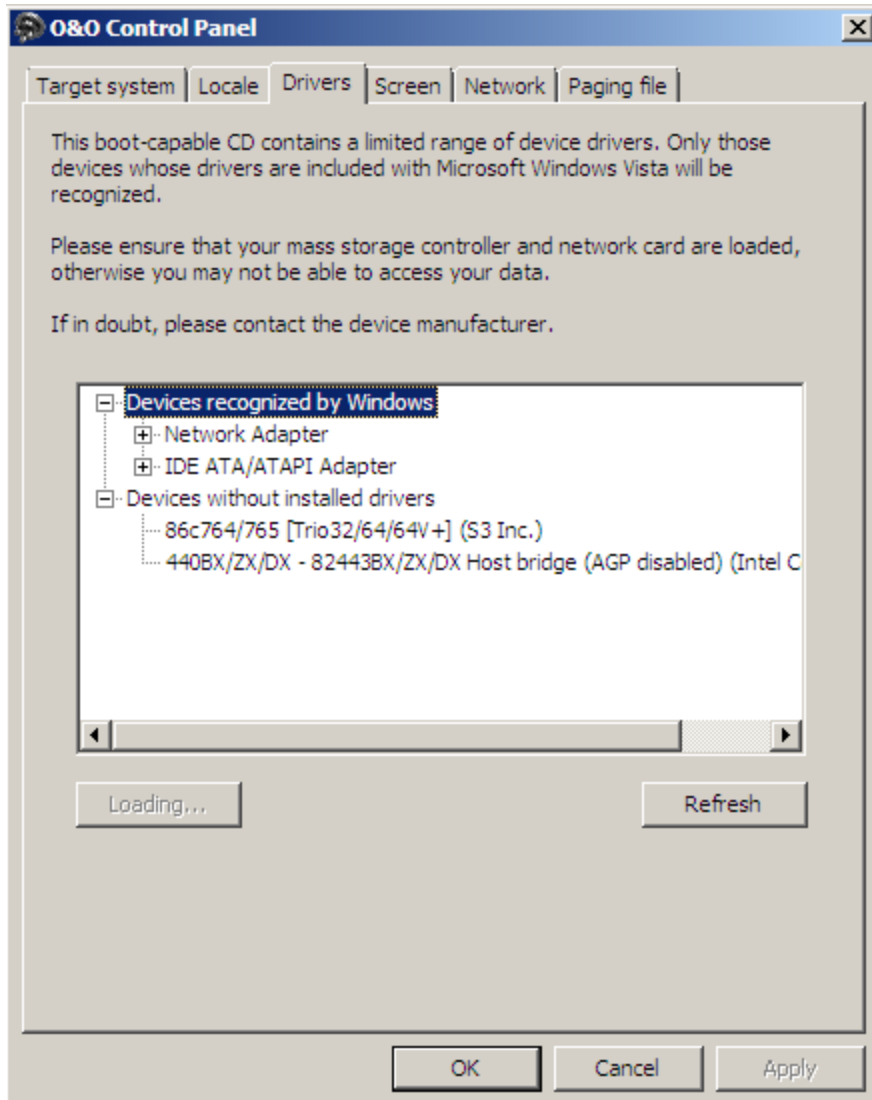
Loading drivers

Program settings

Under **Program settings** in the top right of the ribbon bar, you can customize O&O DiskImage to suit your own requirements. 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:** Make sure the Advanced start page is being displayed if you want to run this feature. This can be done by clicking **Switch to Advanced start page** on the O&O DiskImage start page.

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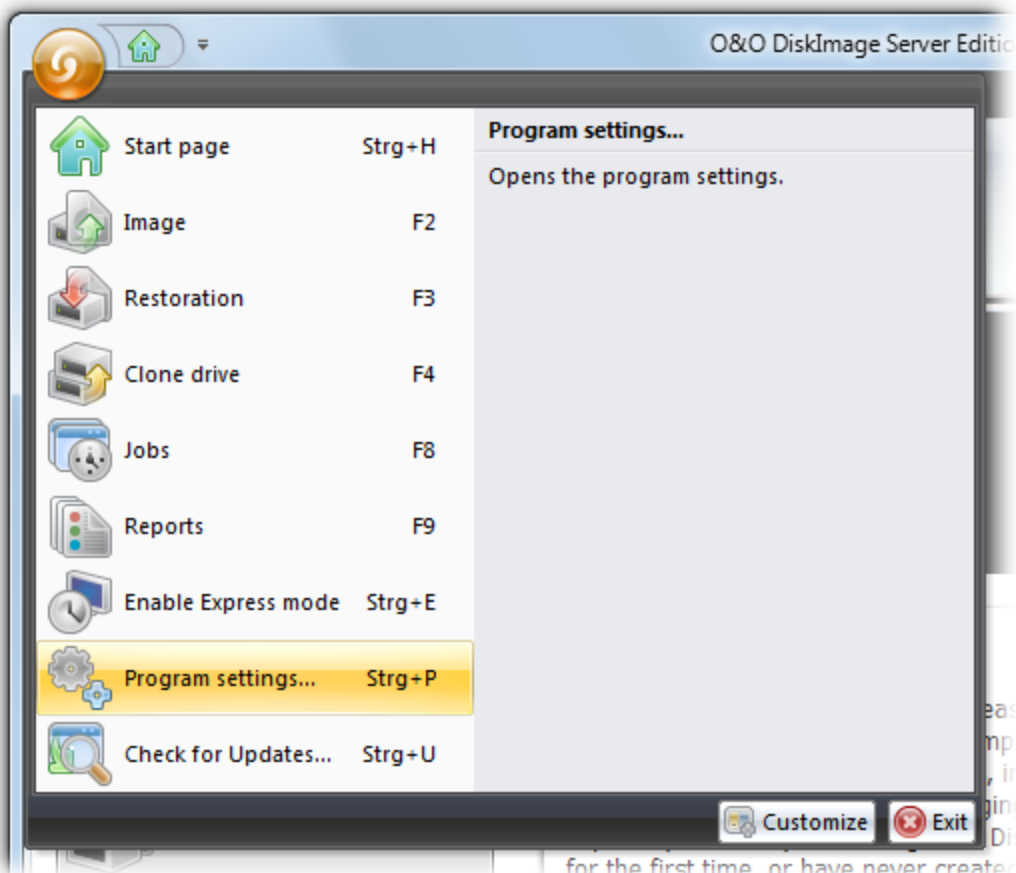
Button for program settings in the application menu

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.

Customize user interface

Under **Appearance and behavior** you can adjust the display of the user interface. You have the choice of "modern" (default) or "classic".

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.
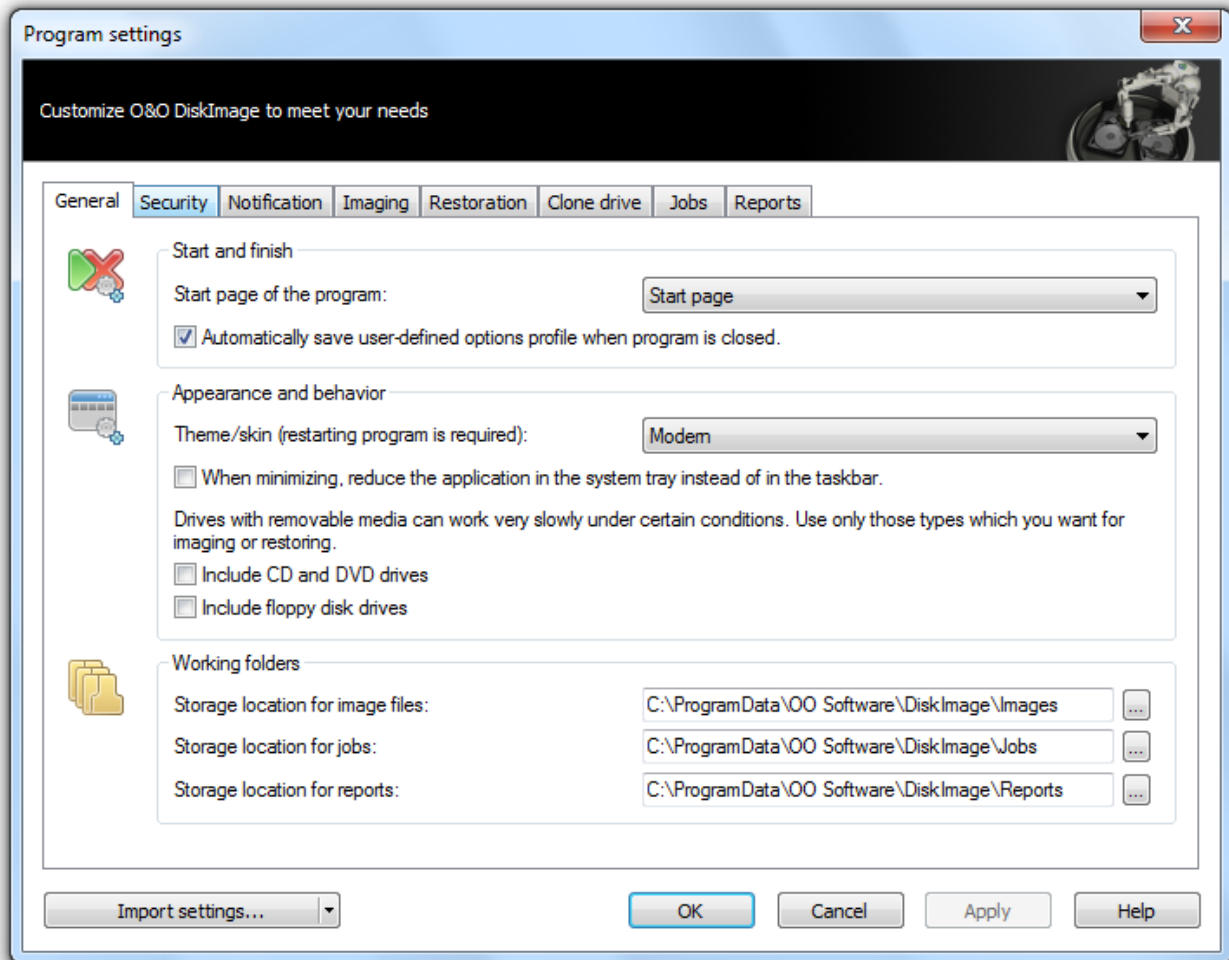
General program settings

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.
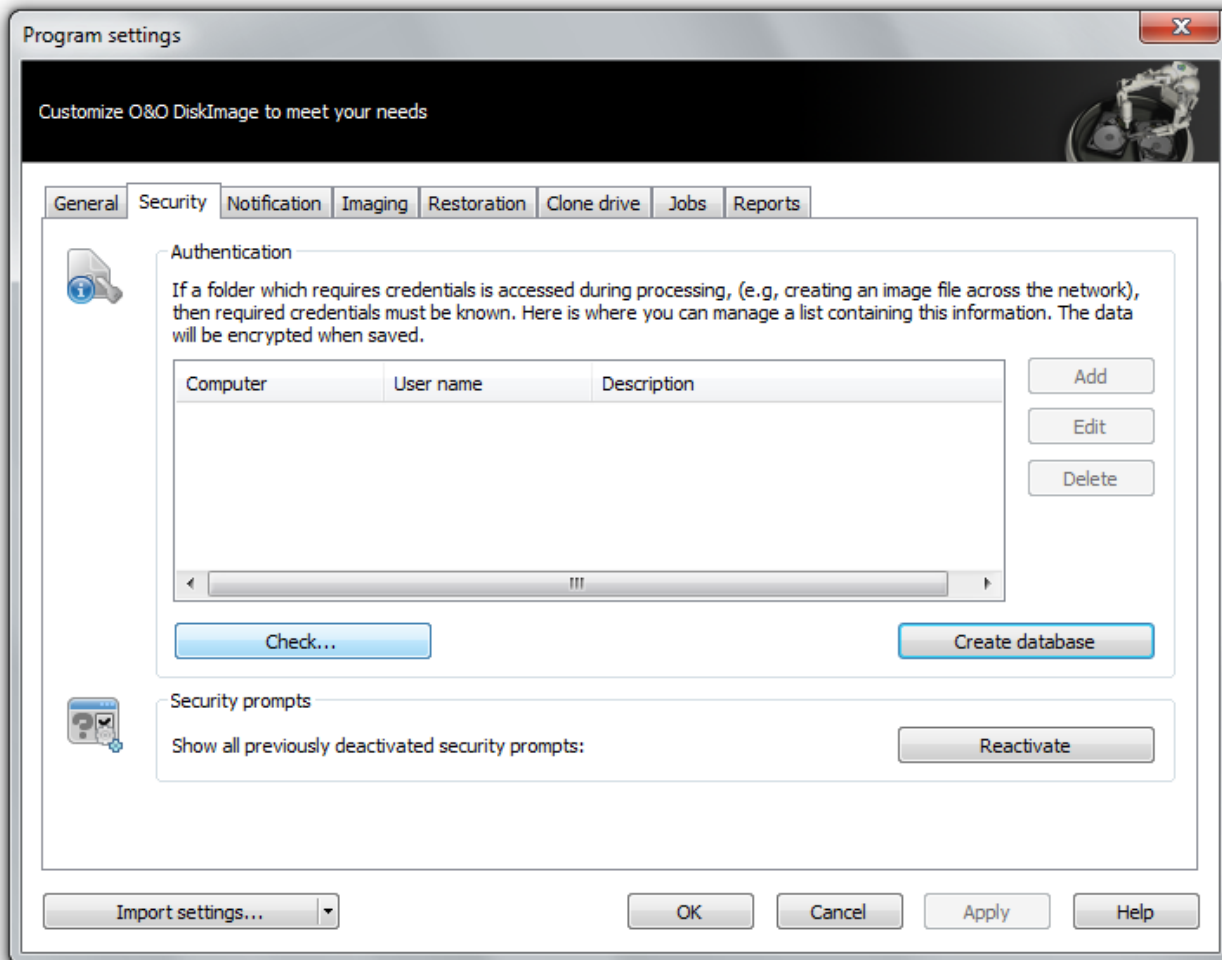
Authentication in the network

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. This data is encrypted in the password file, using the Advanced Encryption Standard-Algorithm 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\5.0. 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 **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.
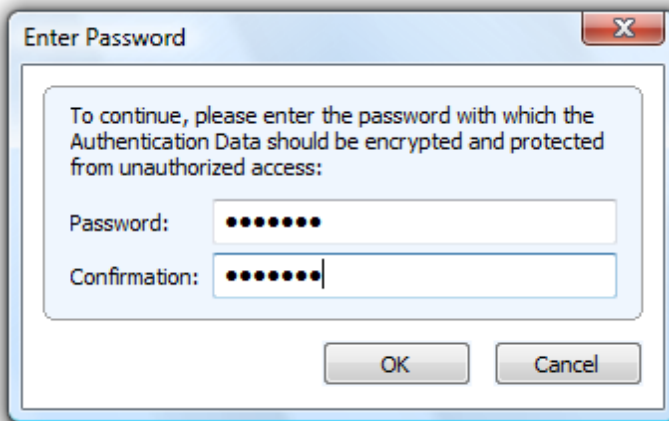
3. Afterwards, click on **Add** in the security dialog in the program settings.
4. Under **Computer/Folder** enter the path under which the image is to be saved, or from where it is supposed to be loaded from: `\\Computer name\Folder name` or `Domain name\Folder name\User name`. Alternatively, you can 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.
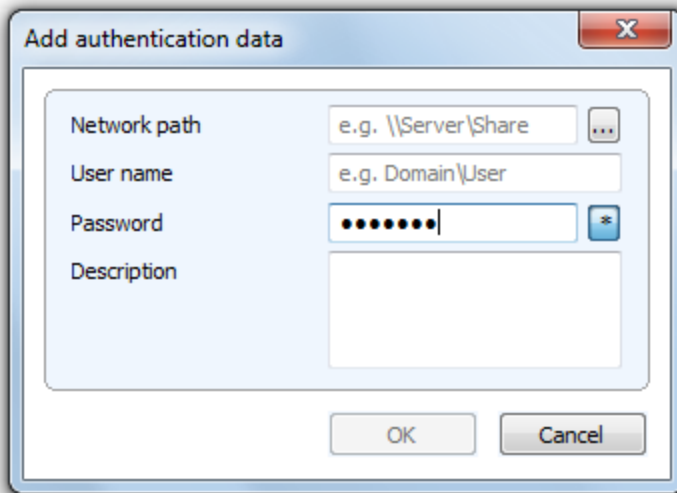
7. Optionally, you can also add descriptions to the credentials.
8. After the authentication, you can, for instance, enter a new "network path" as saving location and also restore an image from there.

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 after completing these actions will you be able to successfully enter your email address in the Job assistant as a recipient for Notification.
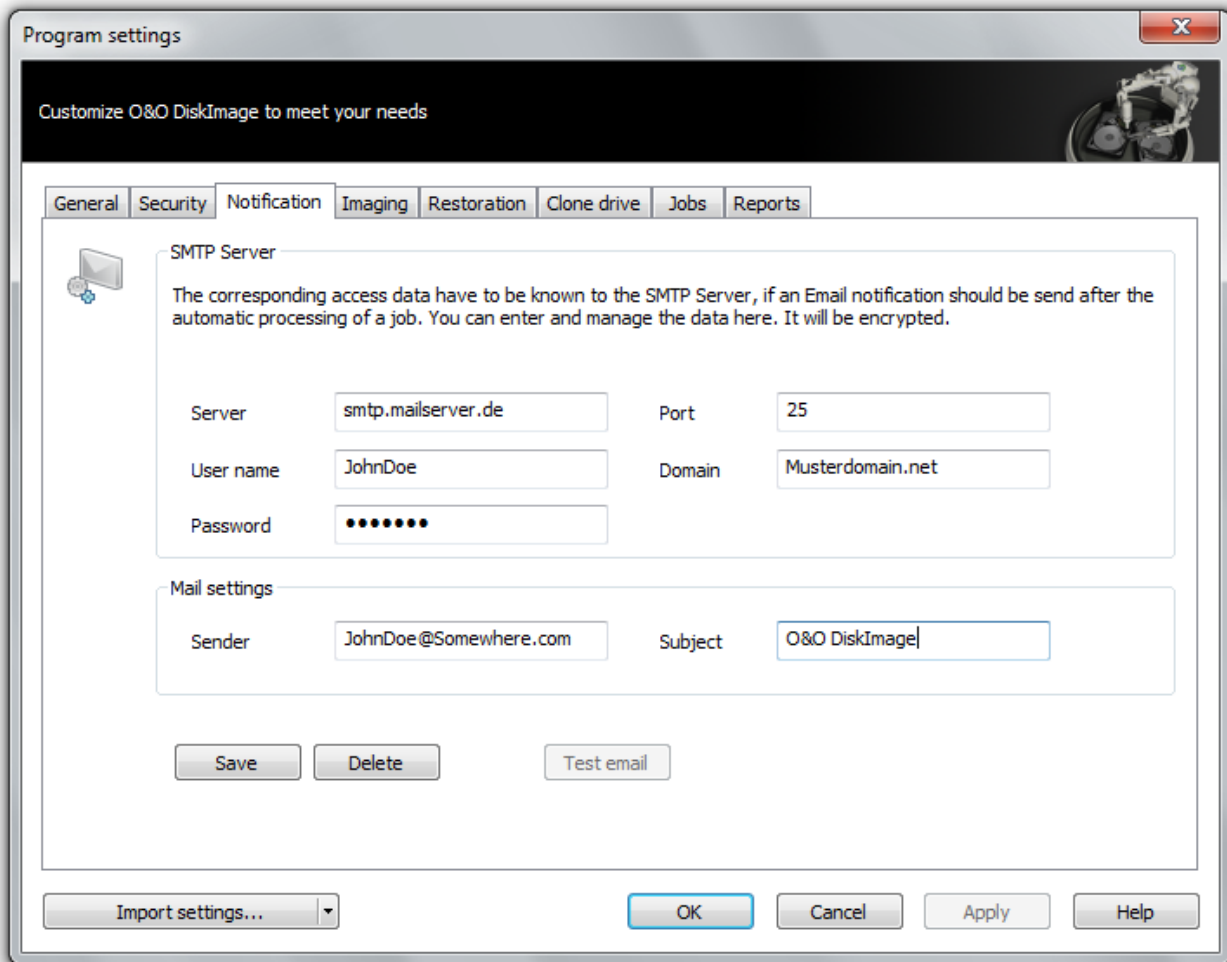
SMTP settings for notification

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

Change default settings for imaging

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

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** there is the option of having the program window also display invisible drives such as empty card readers or disk drives, the "Microsoft reserved partition" on GPT drives, OEM BIOS partitions on DELL and IBM, or the system sectors on base disks.
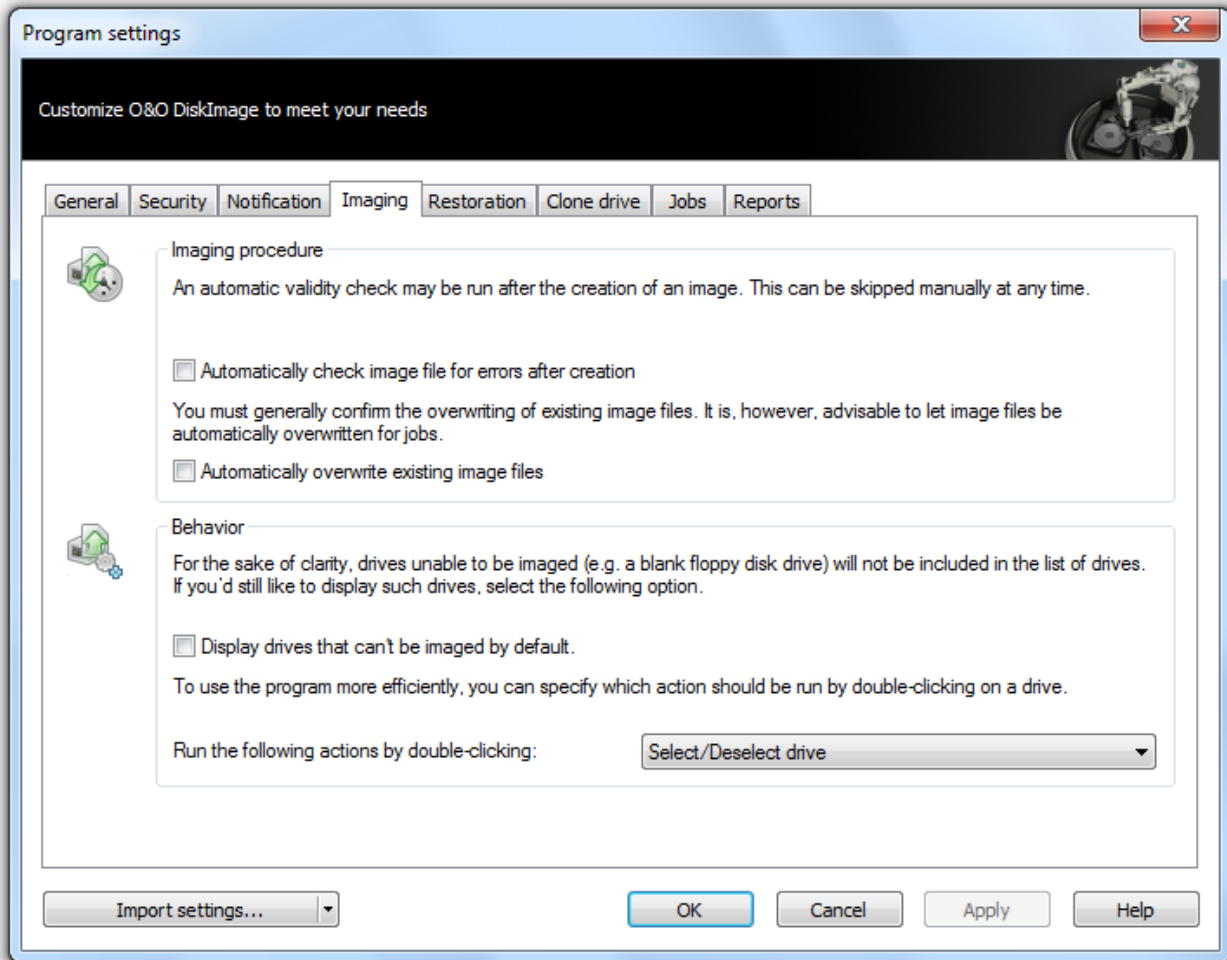
Program settings: Imaging

Change default settings for restoration

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

You have the option of deciding whether a validity check of the image should be conducted by default prior to restoration.

You can also control a drive's **Behavior** by double-clicking it in the "Restoration" activity window.
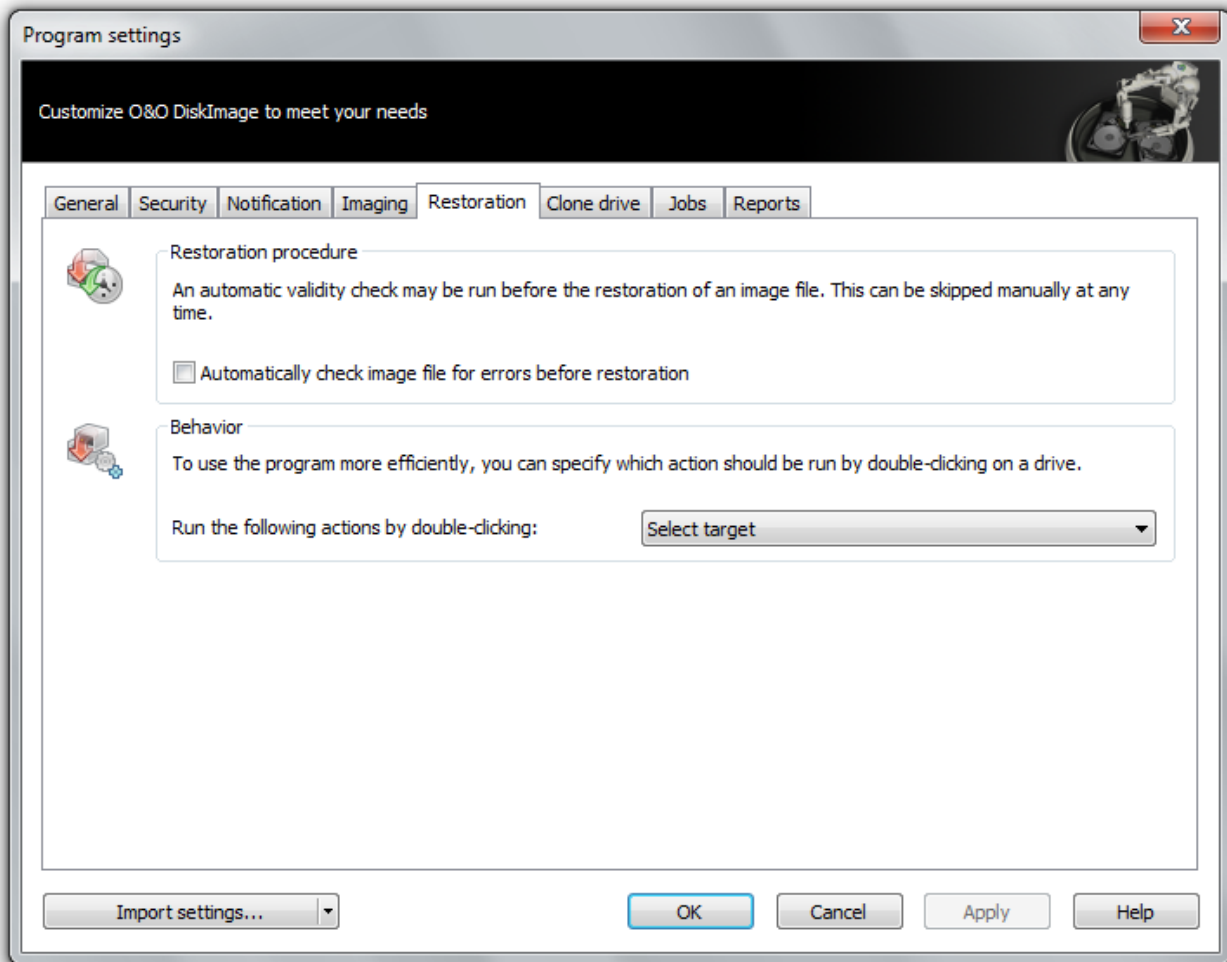
Program settings: Security

Change default settings for cloning

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

You can also decide whether drives unable to be cloned (e.g., a CD/DVD drive or empty disk drive) should be displayed by default in the "Clone drive" activity window.

In addition, you can control a drive's behavior by double-clicking it in the "Clone drive" activity window.
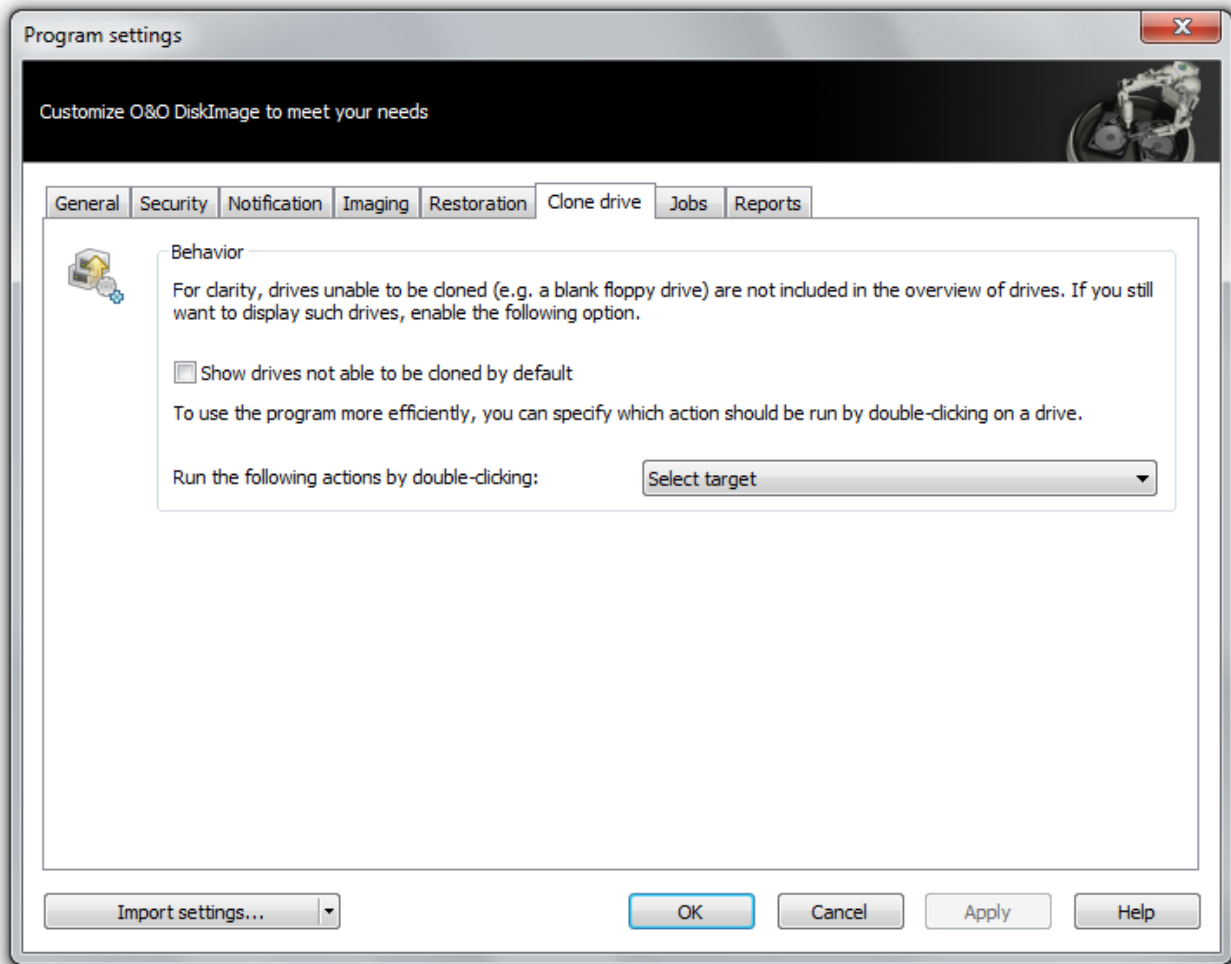
Program settings: Clone drive

Change default settings for jobs

If you want to specify or change the default settings for the jobs, click **Program settings** and then **Jobs**.

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

- To change the settings, click on **Program settings** on **Jobs** and decide on an activity from the list.

Settings for reports

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

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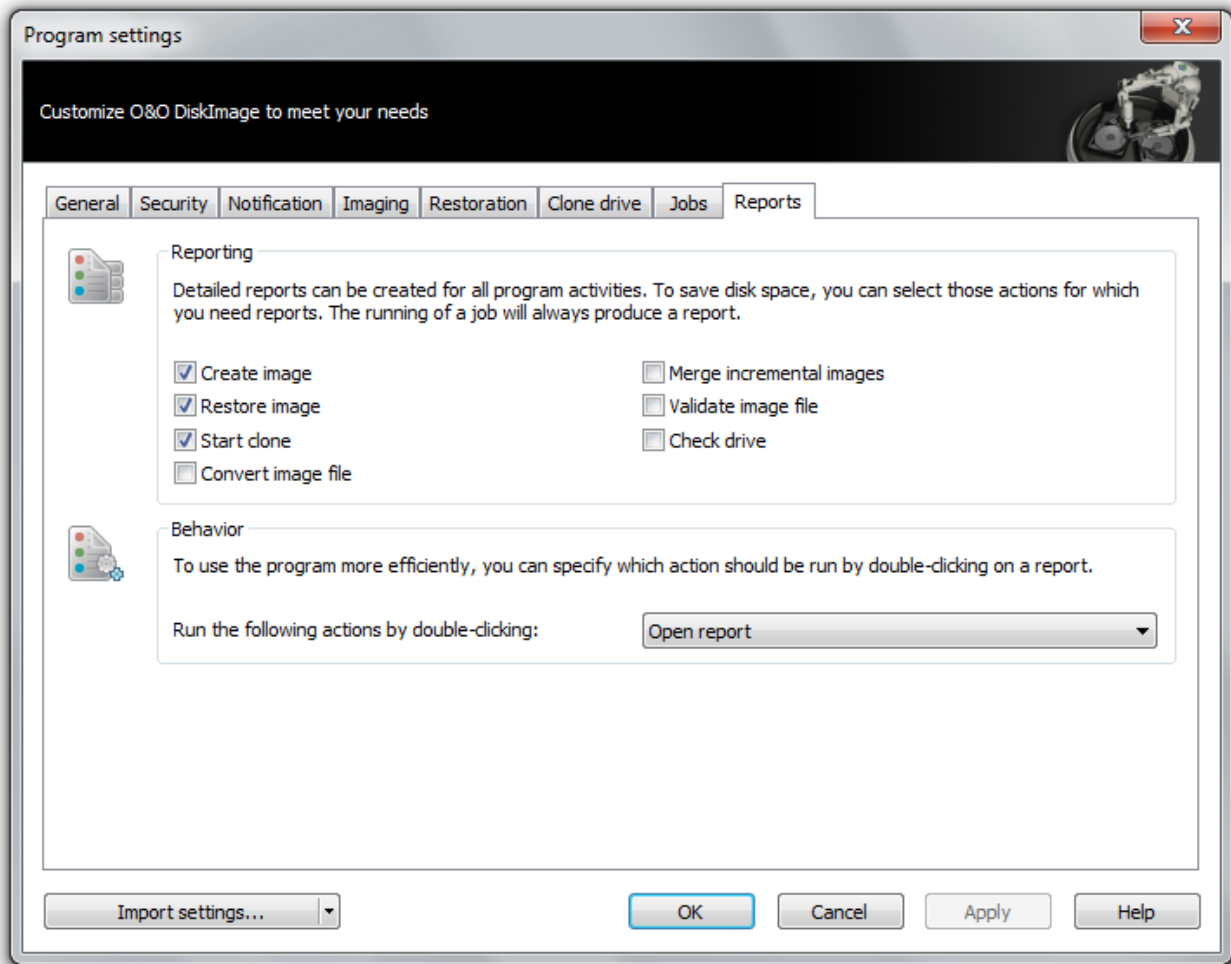
Change settings for reports

TrayIcon

After a successful installation, the O&O DiskImage icon will be displayed in the notification area of the task tray by default. 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.

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.
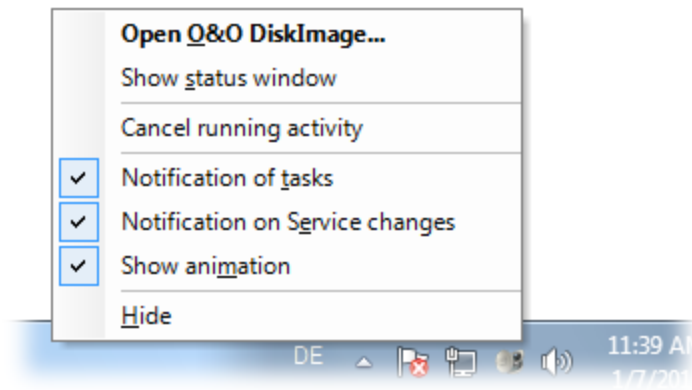
O&O DiskImage's right-click menu during an action

Tools

This chapter will show you the tasks that can be run on an existing image. The various imaging tasks can be found under **Tools** in the ribbon bar.

> **Note:** Make sure the Advanced start page is being displayed if you want to run this feature. This can be done by clicking **Switch to Advanced start page** on the O&O DiskImage start page.
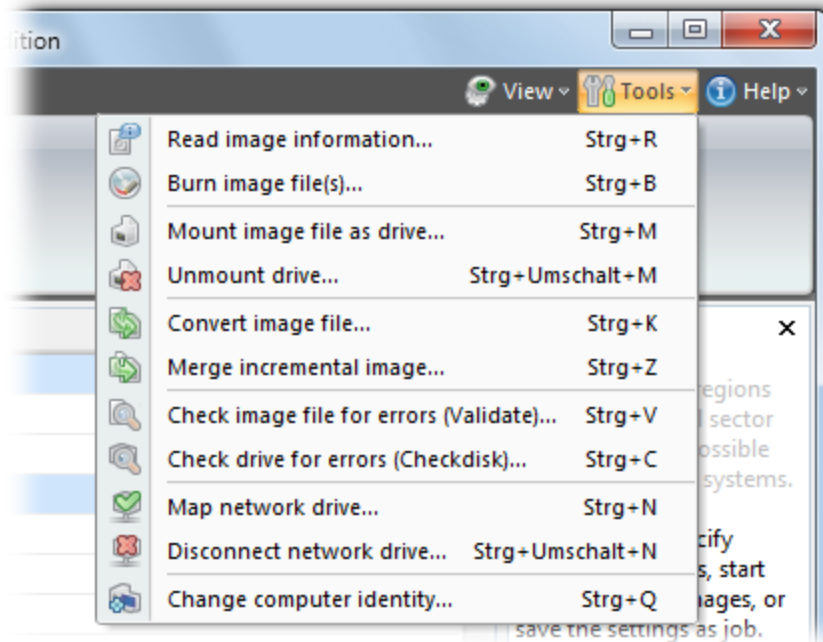
Selection of tools for a task

Read image information

Select **Read image information** to get information about an existing image file. 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.
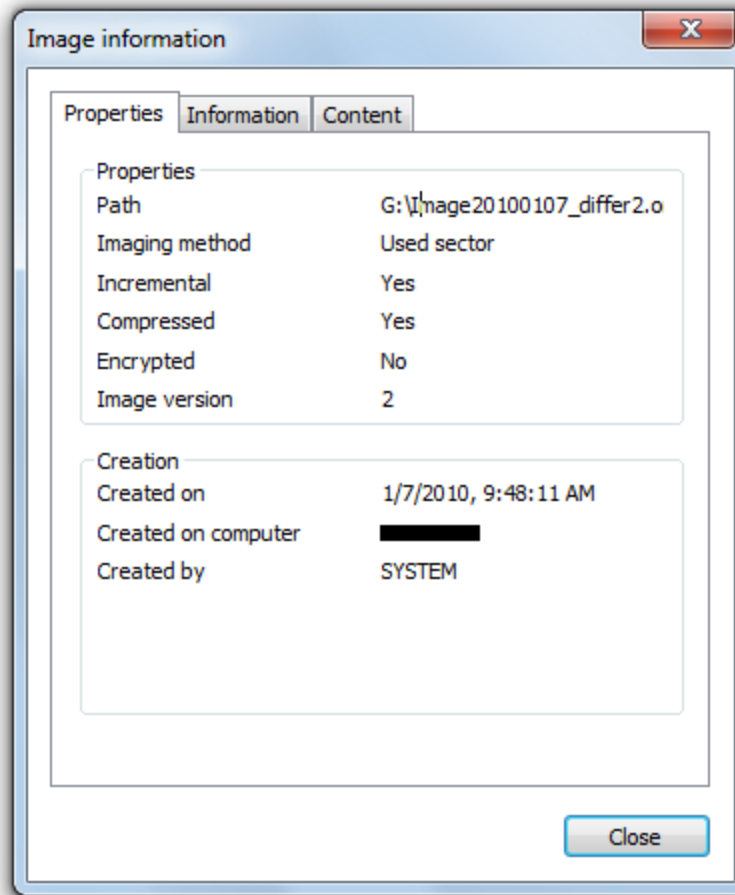
Image information

Burn image file(s) on CD/DVD

To save your image to CD/DVD, it is necessary to have first created an image, as described in the section entitled "Creating an image". The image file(s) must be stored on an internal or external drive. Only then will it be possible to save your image files (*.omg) or your virtual hard disk (*.vhd) to CD/DVD. Images (*.omg) or virtual hard disk (*.vhd) cannot be saved directly on CD/DVD without having first been saved on an external or internal drive.

1. Under **Imaging/Options/Image file/File size** limit the image files to the size of your blank CD/DVD. The image will then be split into multiple image files. The splitting of the image file at a later time is also possible, (See "Converting Image File").
2. Under **Tools** click **Burn image file**.
3. Follow the instructions in the dialogue window.

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

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.
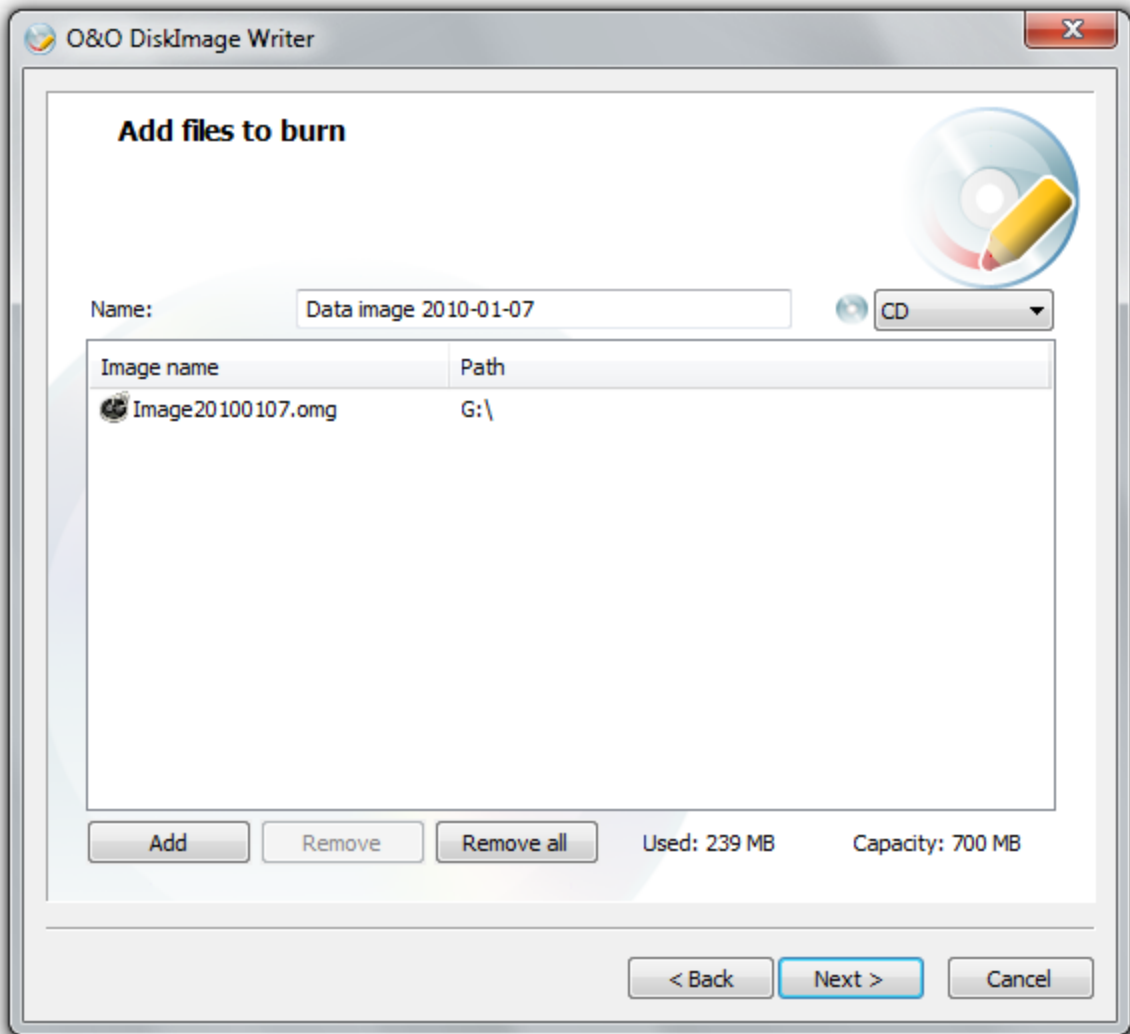
Burn assistant

Mount image file as a drive

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.
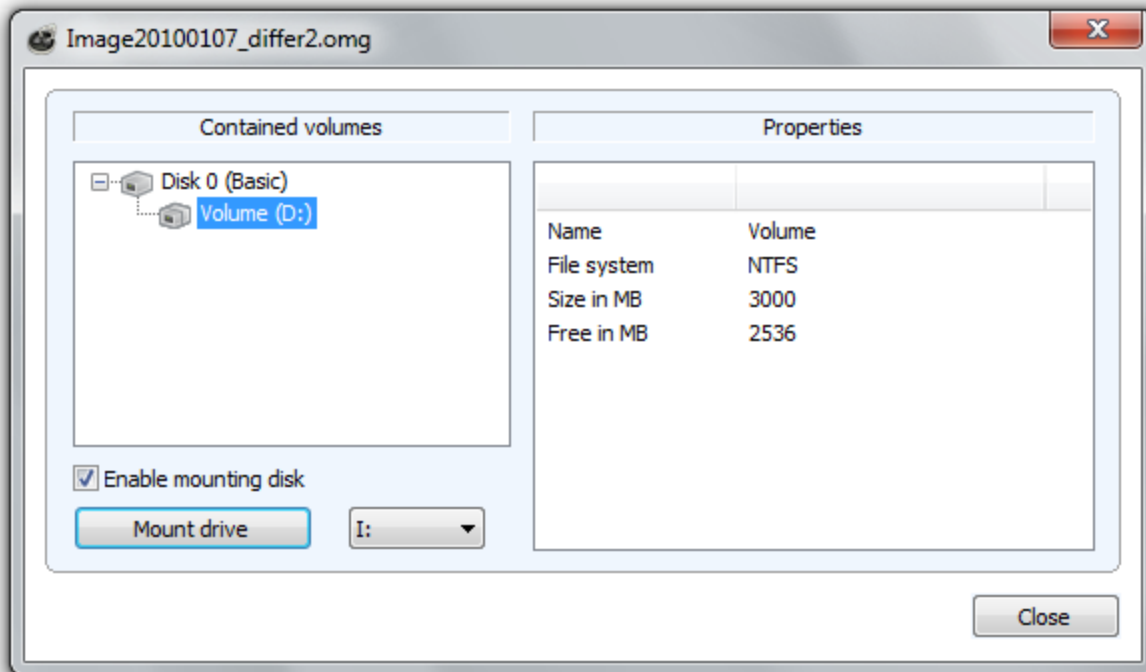
Mount image file as a drive

1. Open **Tools** and select the option **Mount drive**.
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. Here in the example "Volume (E:)".
5. Afterwards, you can select any name from the drive list (e.g. G:) for the drive from the image.
6. Then click **Mount drive**. If the mounting process was successful, you will see the virtual drive from the image displayed as drive (G:) in Windows Explorer.

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

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

> **Note:** A notification to restart your computer may appear by the initial mounting of an image file under Windows 2000. Cancel this in order to mount the image as a drive.

> **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 2000 and Windows XP (32-bit).

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

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 (OMG)

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".
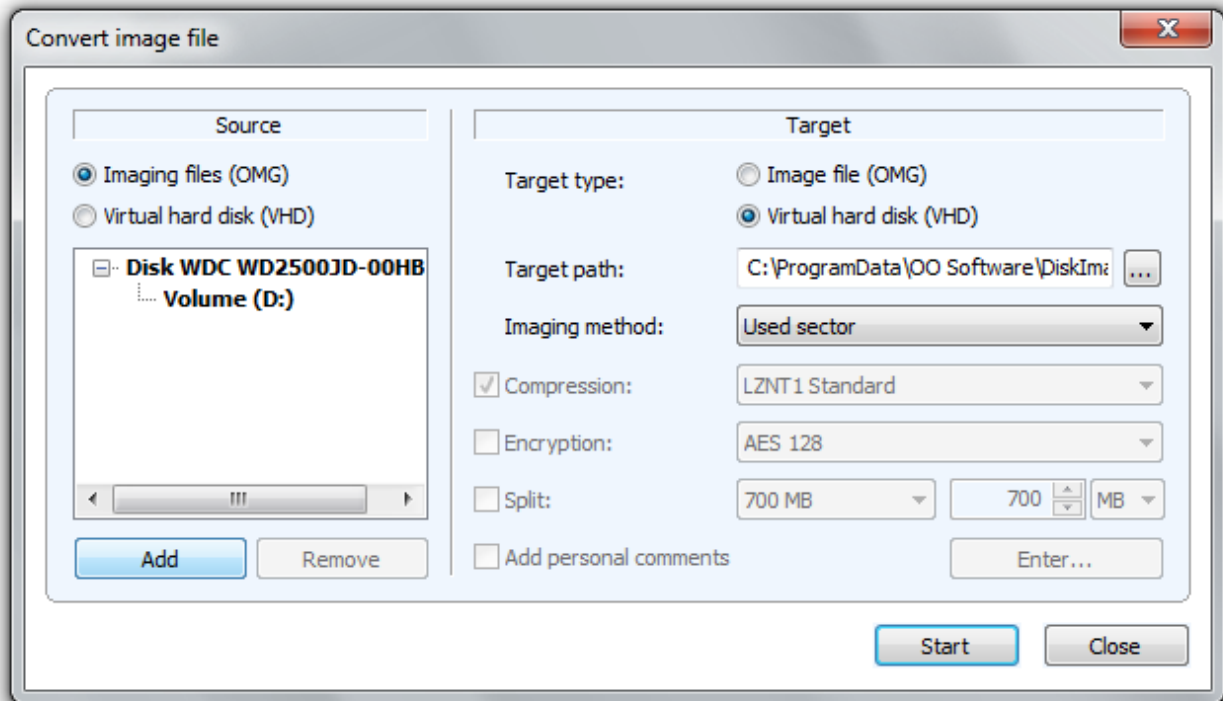
Convert image file into a virtual hard disk

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'll be able to find all details about the image.

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 for drive errors

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

CheckDisk is an assistant that leads you step-by-step through the examination 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.
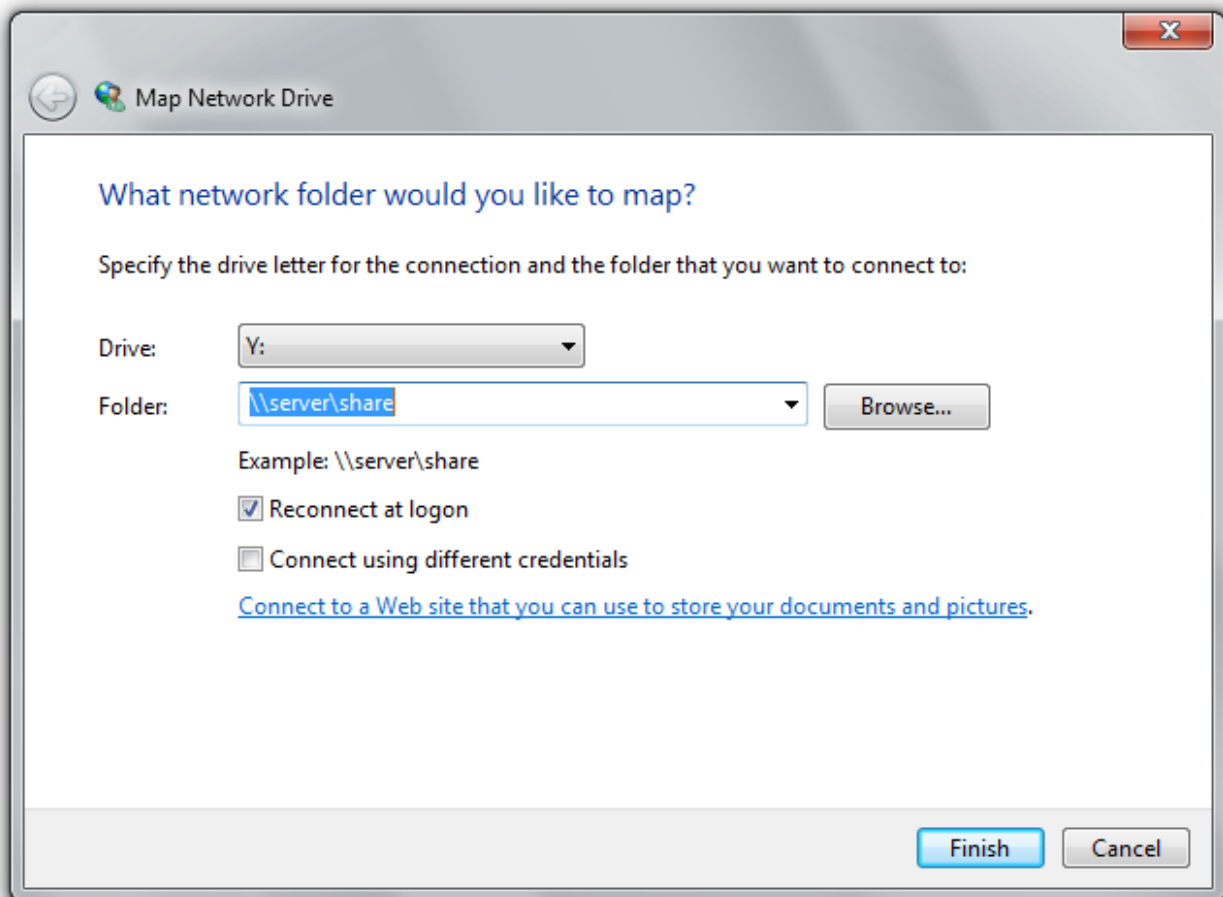
Map network drive

> **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 <u>Authentication within the network</u>.

Change computer properties

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 properties**.
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.
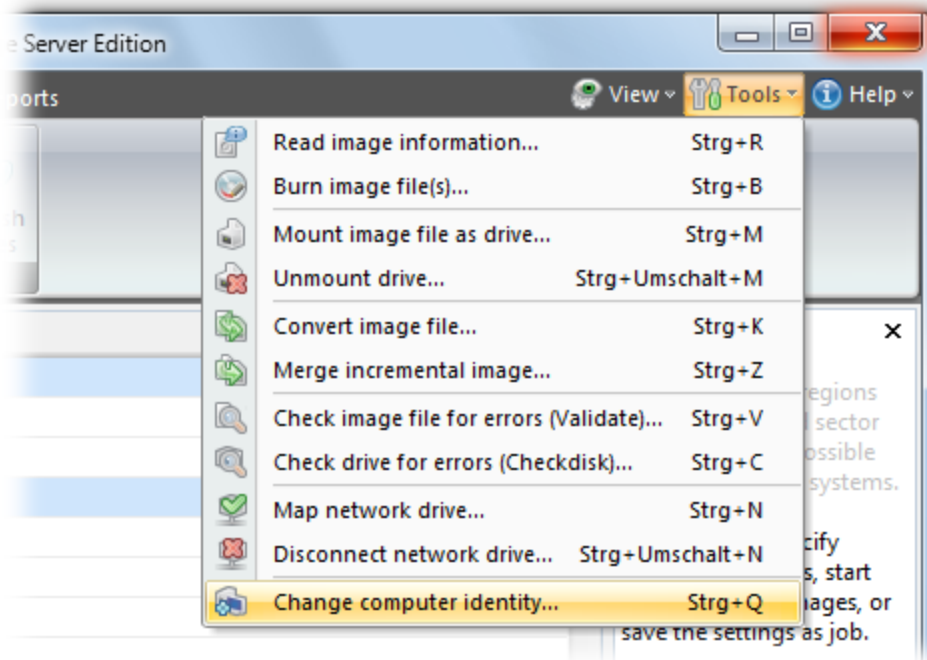
Change computer properties

Settings for restoration on different hardware

O&O DiskImage gives you the option of restoring images and clones of your entire computer or a system partition on different kinds of hardware. The M.I.R. feature (Machine Independent Restoration) can be used whenever you've made changes to your hardware and these changes affect the functionality of the Windows operating system being started. The M.I.R. of O&O DiskImage offers you the choice of direct or indirect restoration of a drive or clone. To do this, enable the option **Restore on different hardware when finished** in the dialogs for restoration or cloning.

Note: You can read more about M.I.R. in the document "Machine Independent Restoration". When restoring on different hardware, please see the notes in the chapters Image restoration and Start O&O DiskImage directly from CD.
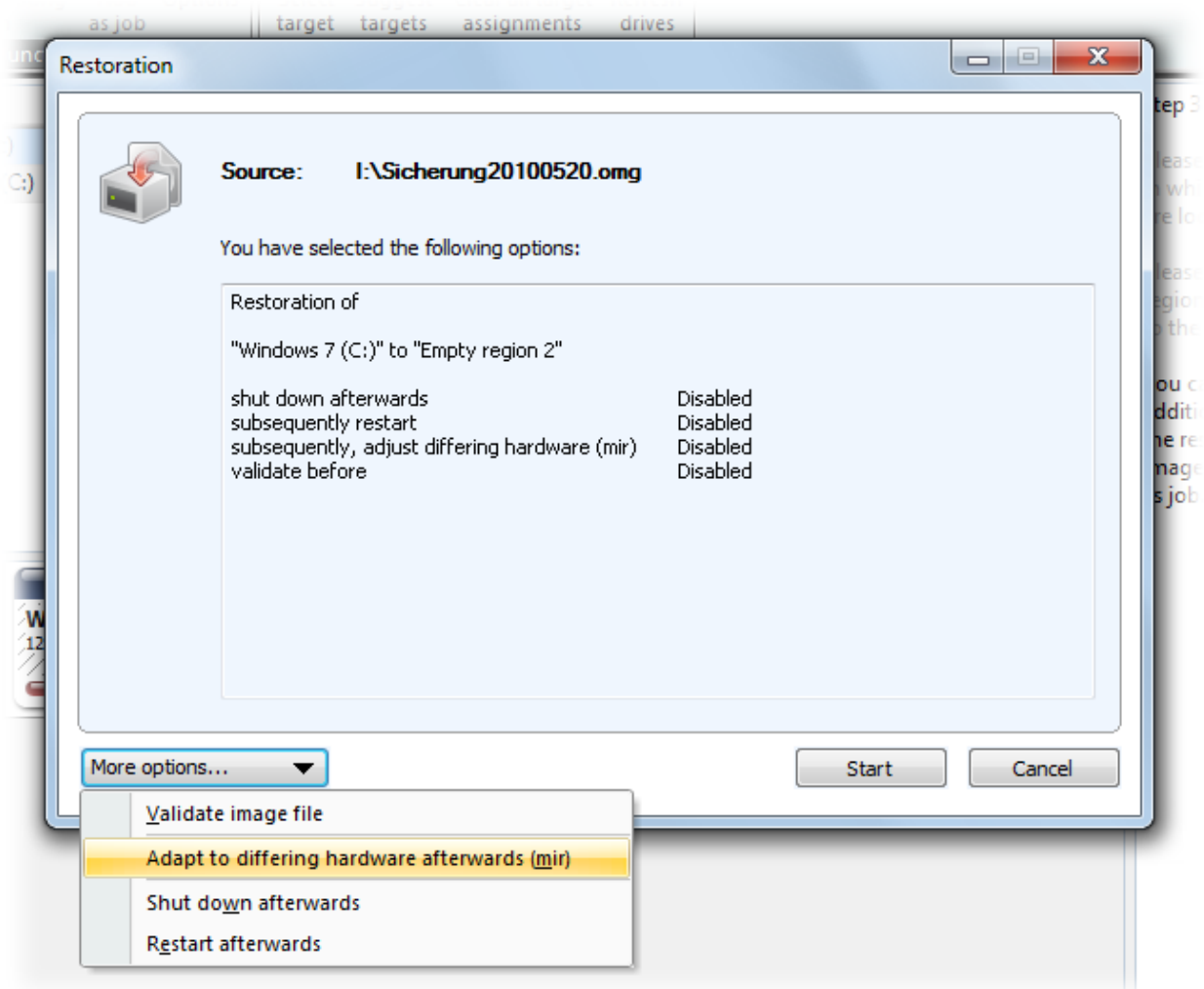
Enable M.I.R. when restoring or cloning a system partition.

Under **Change computer properties** you can also enable or disable the individual M.I.R. processes. The following will explain the running default processes:

Replace hardware abstraction layer (HAL)

Windows operating systems must be compatible with a variety of hardware platforms. This compatibility is achieved through a special layer which "shields" the technical details of hardware, architecture and machinery, such as the I/O interfaces, Interrupt Controller and multi processor communication mechanisms from the operating system. This layer is commonly installed on and aligned to the current hardware on an installed and running Windows. Whenever the hardware is changed, this layer has got to adapted or replaced so that any programs installed on it will be able to again function without any problem.

Transfer currently loaded device control drivers

Drivers also 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 new hardware driver needs to be installed in order to make sure it can work properly with this layer.

Enable the setup of the operating system after restart

This activity messages the Windows operating system to run an internal setup when rebooting to complete the information, so that it automatically adjusts to any changes, or to register the new hardware.
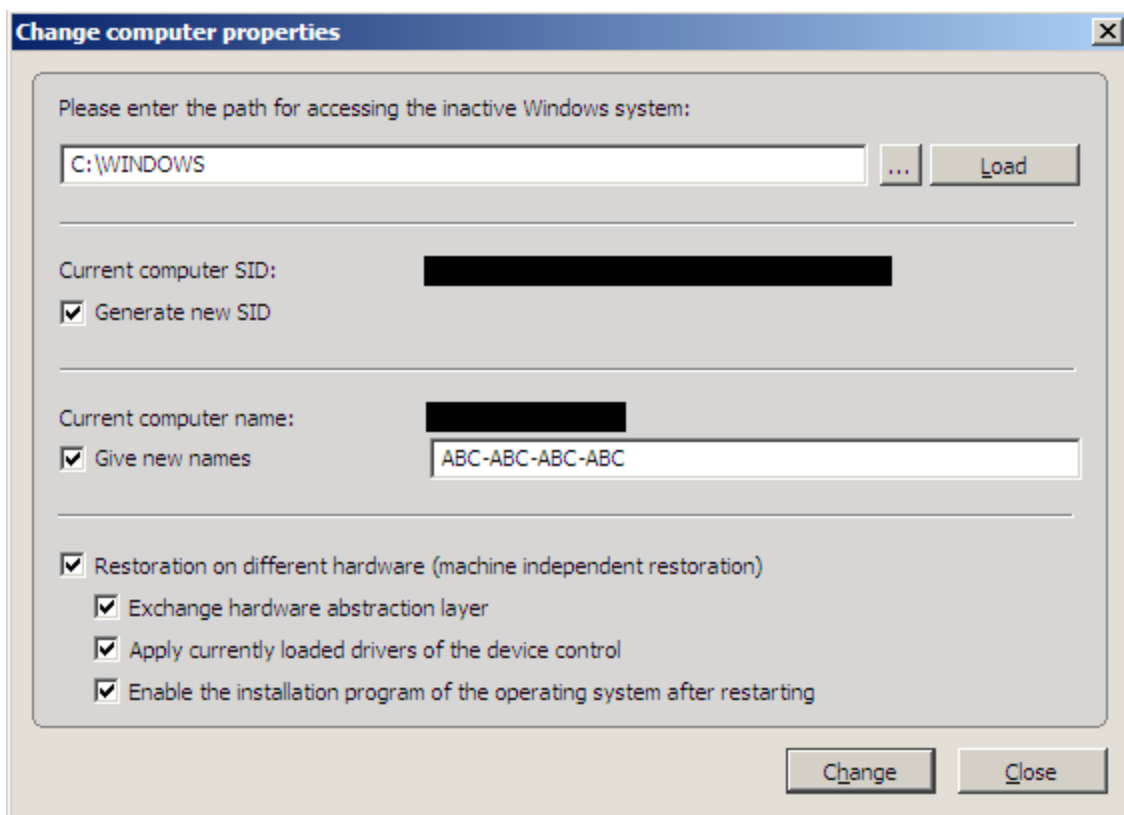
Change computer identity

Scheduling functions

The Job Assistant makes it possible for program functions to be run automatically and on a regular basis. You can, for example, plan to have your data drives imaged once a week.

> **Note:** Make sure the Advanced start page is being displayed if you want to run this feature. This can be done by clicking **Switch to Advanced start page** on the O&O DiskImage start page.

> **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 Assistant.

Create a Job – General information

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

1. On the Advanced start page, click the task you want, such as **Imaging**, **Cloning** or **Restoration**.
2. Select a drive, or for the restoration, an imaging.
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. Afterwards, click **Add as job**.
5. Enter the name of your job in the dialog. This will be later used for preparing the report and will serve as information regarding the activity this job will run. The name of the job has only symbolic meaning and can also be already applied to other jobs.
6. Specify further settings under [Time scheduling](#), Notification or [Image](#) in Add as job.

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.
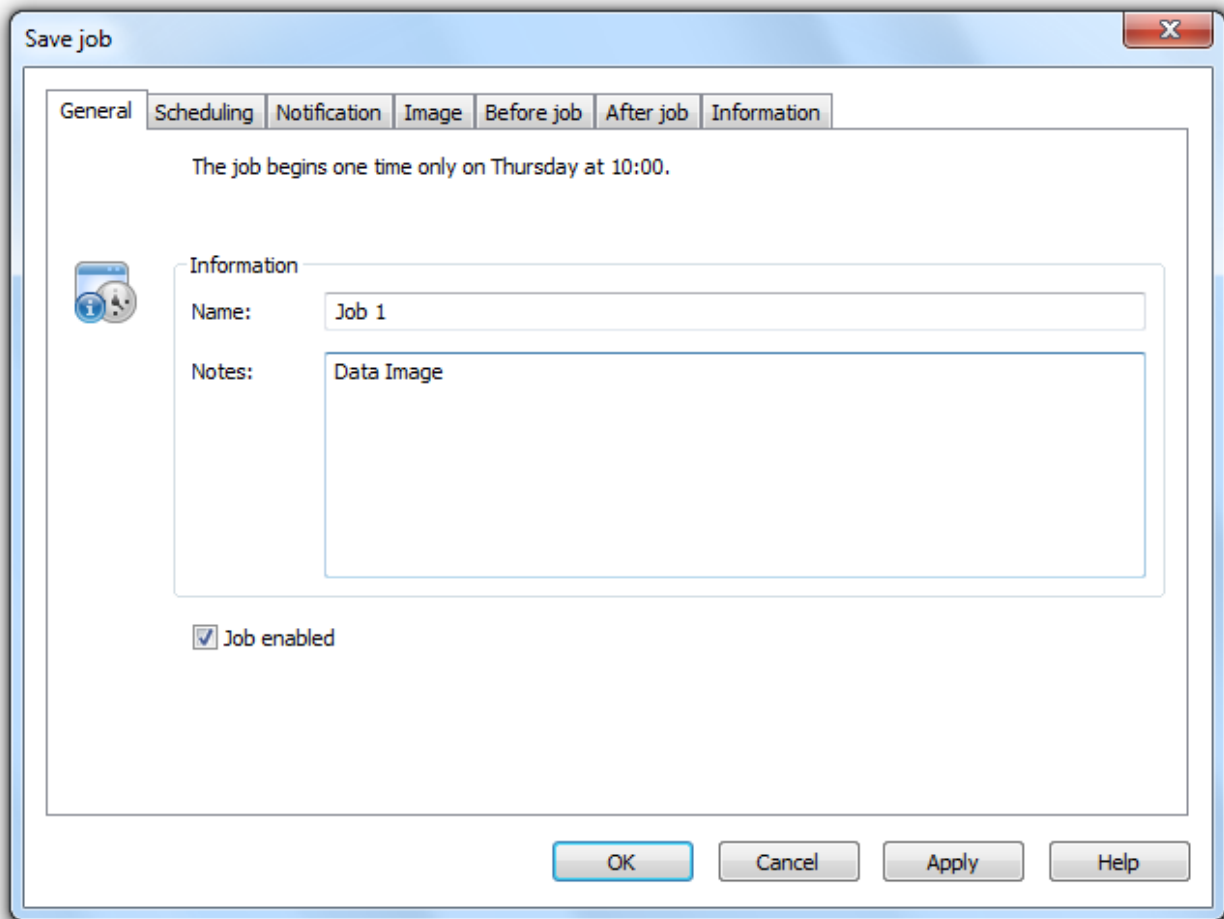
Job assistant general information

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.
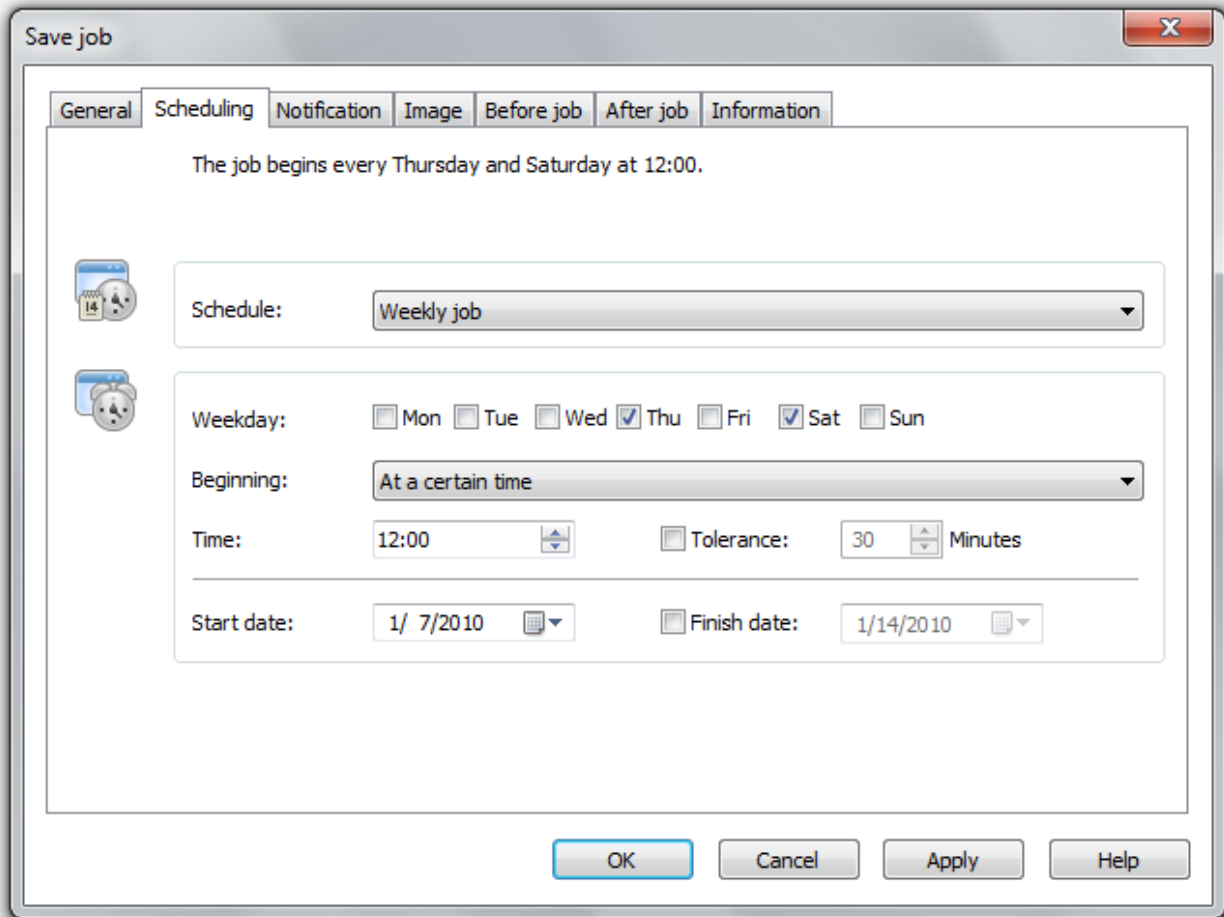
For one-time execution:

- 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.

> **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.
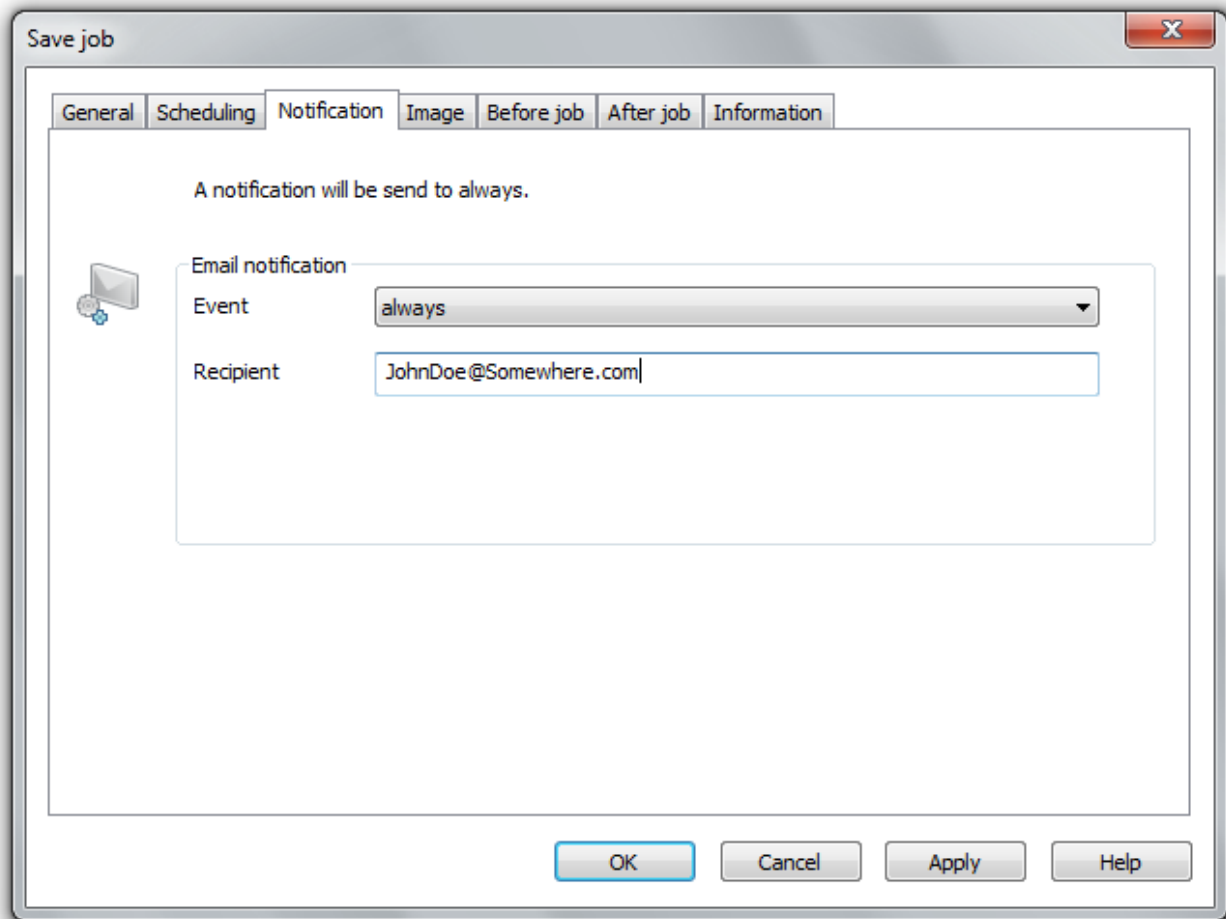
Job: Notification

Settings for a job

You can set additional options for your job in the third tab (**Image**) of the Job Assistant. 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.
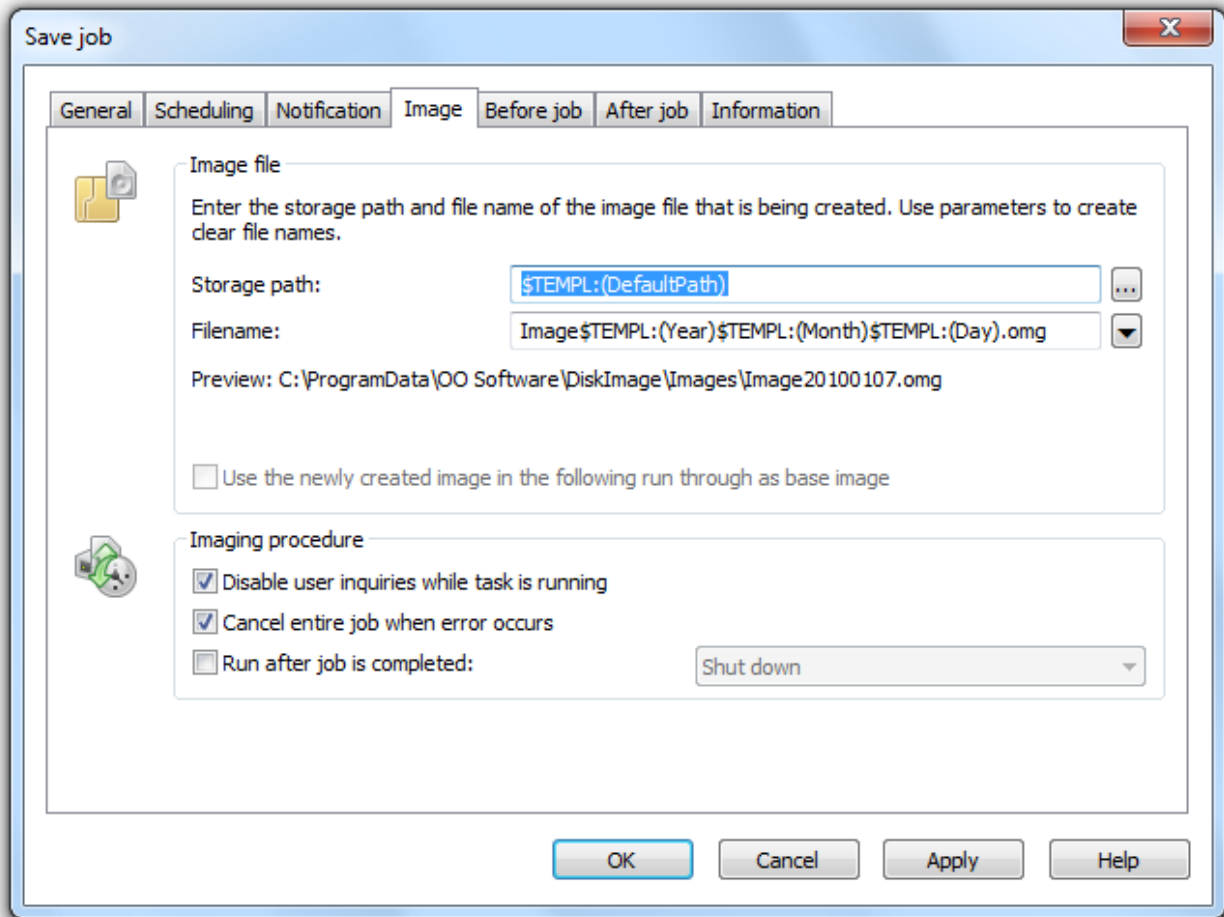
Job assistant: Imaging

Disable user inquiries while job is being run

User inquiries are questions that can arise during the normal course of running a job. The job will thereby be interrupted because the user either has to make a decision or additional information is required for continuing.

There might, for instance, be a confirmation dialog if there's already a file name being used for the image.

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. Successive incremental images can use differential or other incremental images for the base image.

1. Select **Image of the changes** from the O&O DiskImage Start Page.
2. Enter the base image you want to use in the dialog window.
3. Then click **Add as job** in the ribbon bar.
4. Enter the name and the schedule for the imaging in the job dialog.
5. 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 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 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** on the Ribbon Bar in the Start Page of O&O DiskImage.
2. You can edit a job by making a check on your selection in the job list.
3. Then click on **Edit**. 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.

Check a job

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

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

Delete job

To delete a job, select **Jobs** in the file menu on 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 carry out a job, select **Jobs** in the file menu on 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** in the file menu on 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** in the file menu on the Start page of O&O DiskImage und select the function **Import**. 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 an XML document over **Reports** in the Ribbon Bar.

In the report you will find all information about the progress of an installation or a job. You can execute further operations for reports, such as **Delete** or **Refresh**.
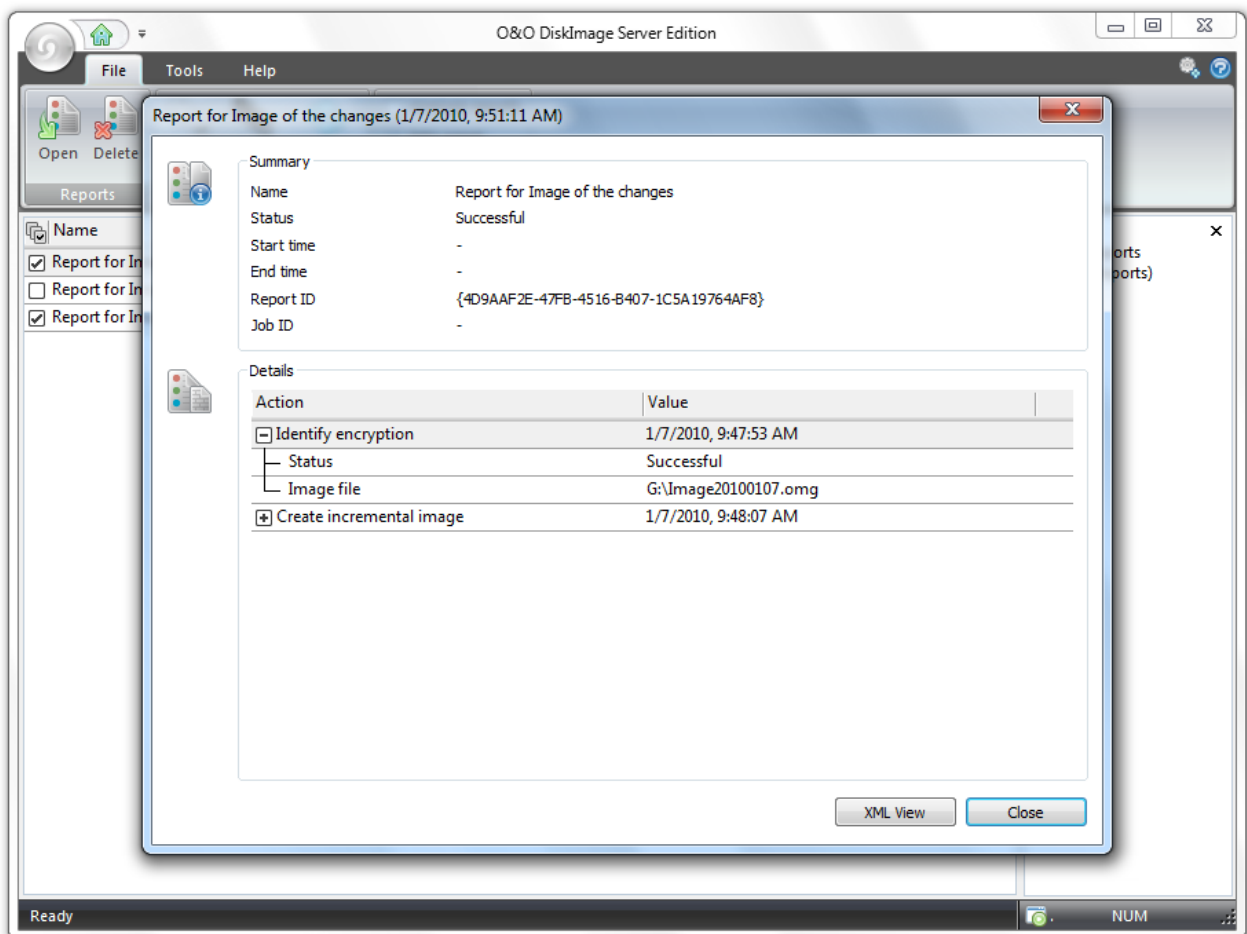
Reports

Settings for imaging

Note: Make sure the Advanced start page is being displayed if you want to run this feature. This can be done by clicking **Switch to Advanced start page** on the O&O DiskImage start page.

Under the menu heading Imaging, you can modify the image settings by clicking on **Options**. All image files will then be created by using these settings by default.
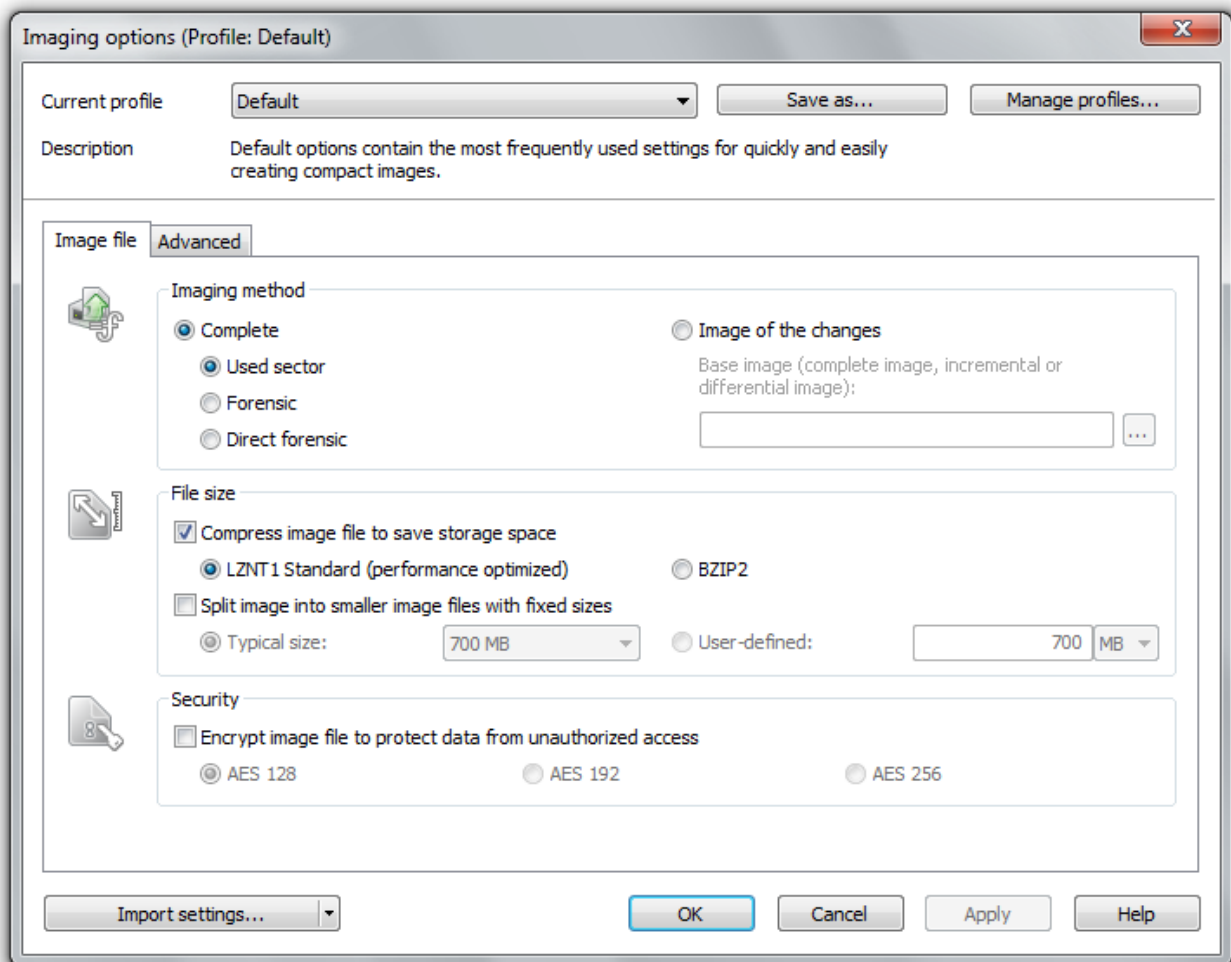
Settings for imaging

Select imaging method

Under **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 task on the Start page of O&O DiskImage. This will allow you to create an image that saves only those changes that have occurred since the last base image. These incremental/differential images generally require less hard disk space than a complete image.

> **Note:** if you want to create an image of the changes, you will need to have an existing complete image of the respective drive available to use as a 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 manage 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 manage 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. Just as with regular forensic imaging, a complete copy of a source drive will be created. The difference, however, lies in data being read over deep system interfaces. This makes it possible to, among other things, image an encrypted hard disk using encryption software.

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 **Imaging/Options/Image file/File size/ Split image into smaller image 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 **Imaging/Options/Image file/Security**.
- After that, under **Create**, enter a password when prompted.

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

Compress image

Under **Imaging/Options/Image file** you can find the setting **Compress image, file to save storage space.** You can choose from the LZNT1 Standard or theBZIP2 process.

LZNT1: 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.
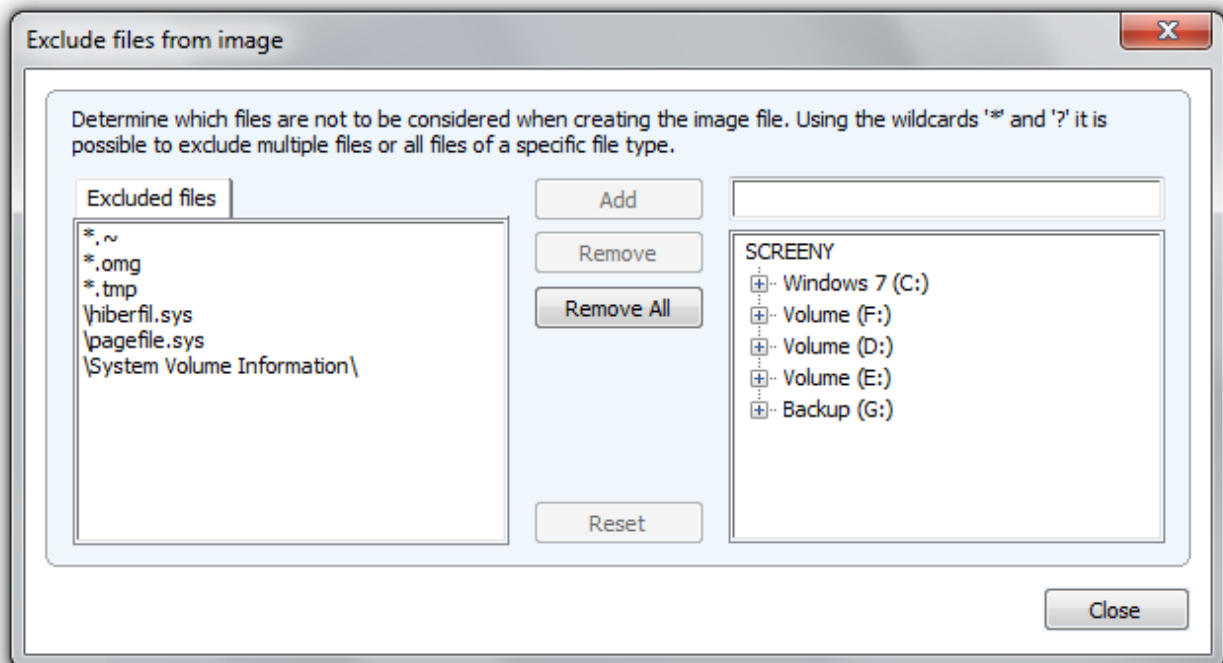
Exclude files from an image

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. Check the drive you wish to image.
2. Make sure you have selected the method **Used sector** under **Imaging/Options**.
3. Click **Advanced** to open the dialog to exclude files.
4. In the right hand window select the files and directories 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.
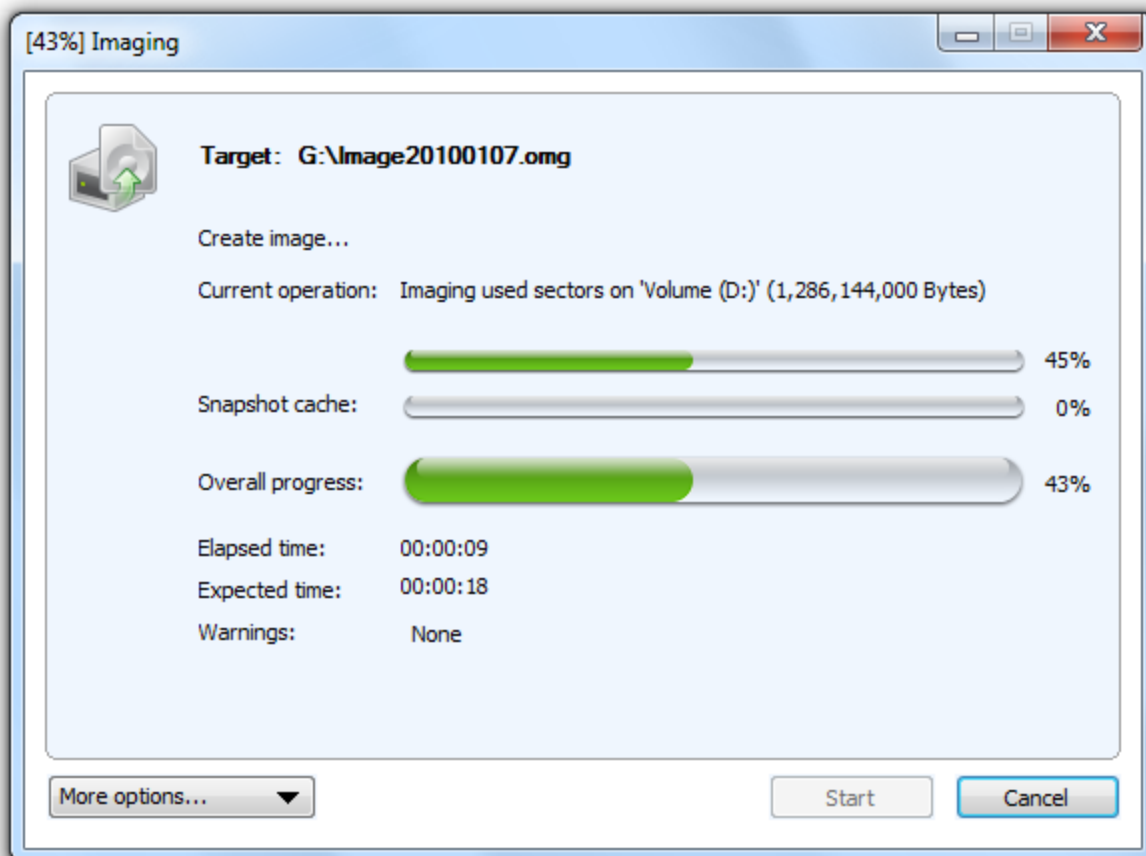
Snapshot cache view(here an empty cache)

- To lock a drive, under **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 **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.

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.

- Make sure the setting, **Use checksums to manage unchanged data**, is enabled under **Imaging/Options/Advanced**.

Create an image profile

Under **Imaging/Options**, **Current profile**, you can reset the 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 **Imaging/Options**.
2. Select under **Imaging/ Options/ 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.

Restoration options

> **Note:** Make sure the Advanced start page is being displayed if you want to run this feature. This can be done by clicking **Switch to Advanced start page** on the O&O DiskImage start page.

Under **Restoration/Options**, you can specify the settings for restoring data images.
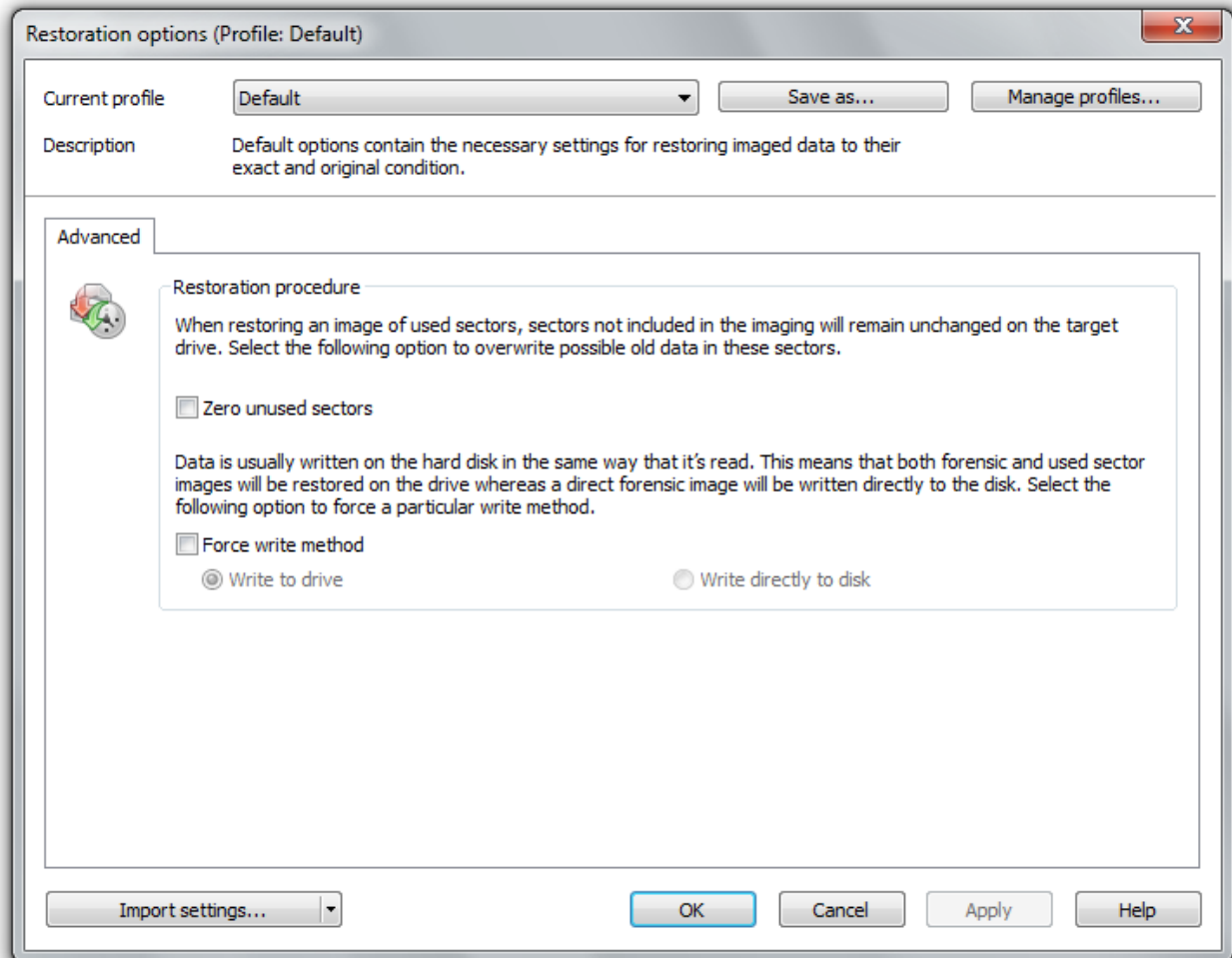
Settings for restoration

Overwrite unused sectors

Under **Restoration/Options** you can overwrite unused sectors with 0. Data saved in these sectors can then never be restored - not even with the help of special data recovery software.

Create a restoration profile

Under **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

You can force a writing method under **Restoration/Options/Advanced**. "Write to drive" is the default writing method used during restoration of images created with the "Used sector" or "Forensic" methods. The writing method "Write directly to disk" is only used with "Direct forensic" imaging. You can, however, also 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 such disks that were imaged using the direct forensic method.

Settings for cloning drives

Note: Make sure the Advanced start page is being displayed if you want to run this feature. This can be done by clicking **Switch to Advanced start page** on the O&O DiskImage start page.

Under **Clone Drive/Options**, you can specify the settings for cloning drives. To specify the settings, you need to open the Cloning options window.
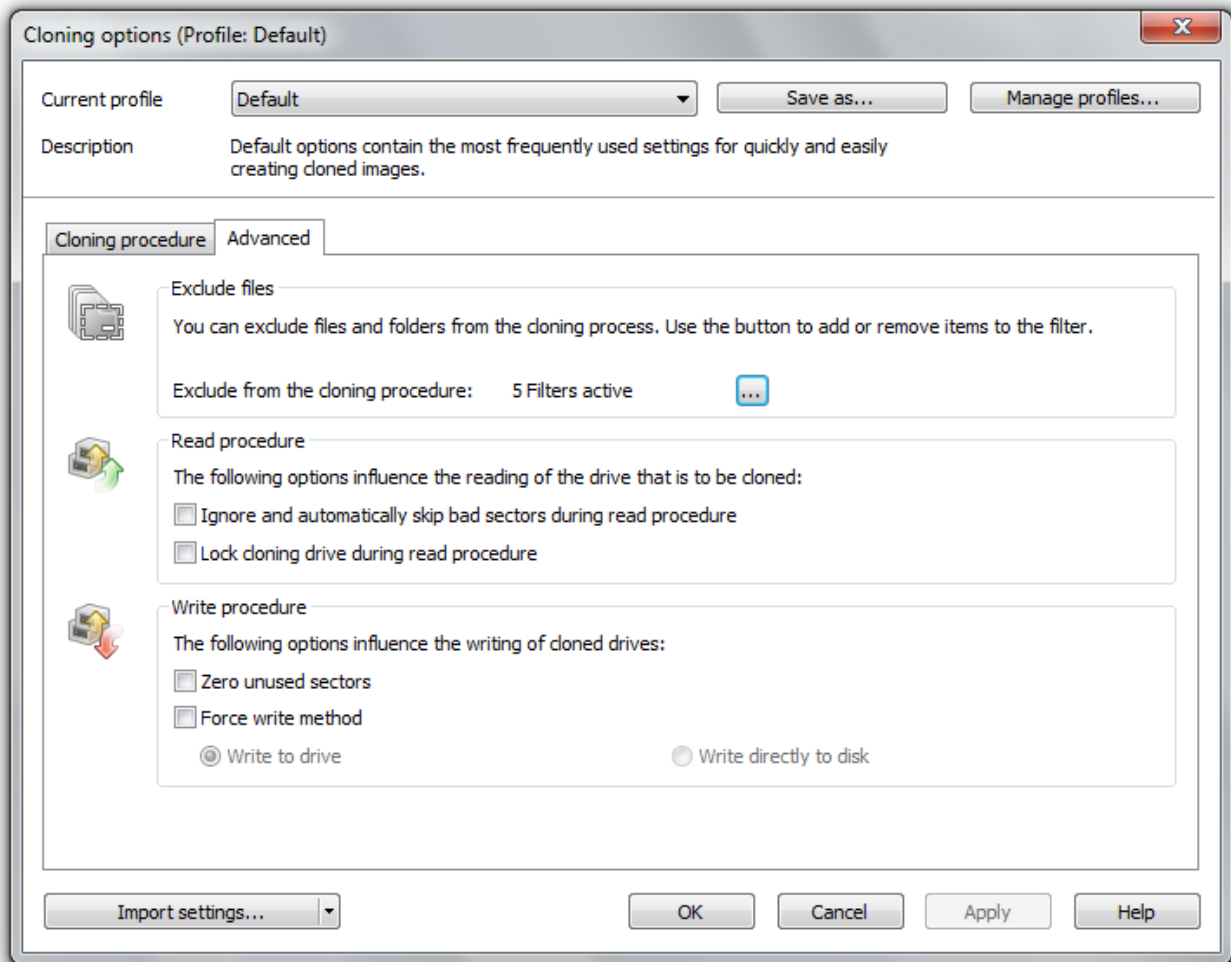
Settings for cloning drives

More:

Set a cloning method

Lock a drive

Ignoring bad sectors

Overwrite unused sectors

Write directly to storage volume

Set a clone profile

Set read method

Under **Clone drive/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 Imaging options.

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, activate it under **Clone drive/Options/Advanced**
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

Should an error occur, you can specify under **Clone drive/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

Under **Clone Drive/Options/Advanced**, you can select **Zero unused sectors** should you wish to overwrite unused sectors with zeros. Data that were once saved there will now be permanently deleted. After overwriting, not even special data recovery software will be able to restore these deleted data.

Force writing method

Under **Clone drive/Options/Advanced** you can force a 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.

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

Create a profile for cloning

Under **Clone Drive/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.

View

> **Note:** Make sure the Advanced start page is being displayed if you want to run this feature. This can be done by clicking **Switch to Advanced start page** on the O&O DiskImage start page.

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.

Info panel: provides instructions about what to do next along with additional information.

Status bar: displays the current status of a job.

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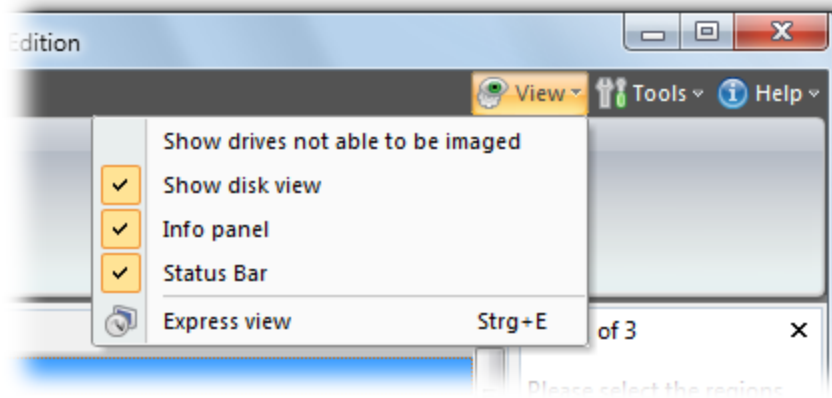
View menu

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.

> **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.
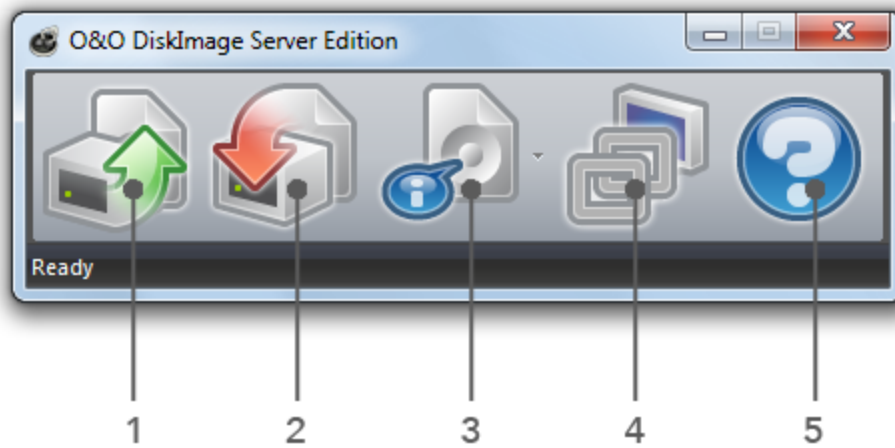
Express view

Legende

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.

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 or in the PDF document "Machine Independent Restoration".

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 **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 files** 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
- 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?

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 which I can 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.
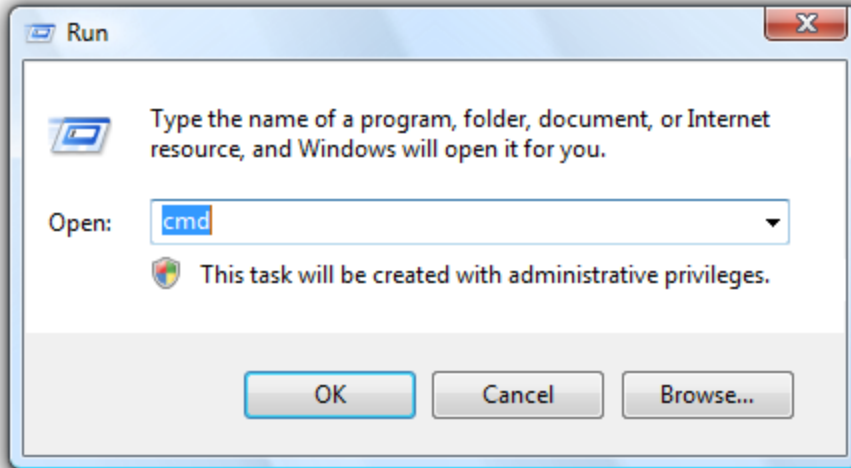
Call the command line

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.
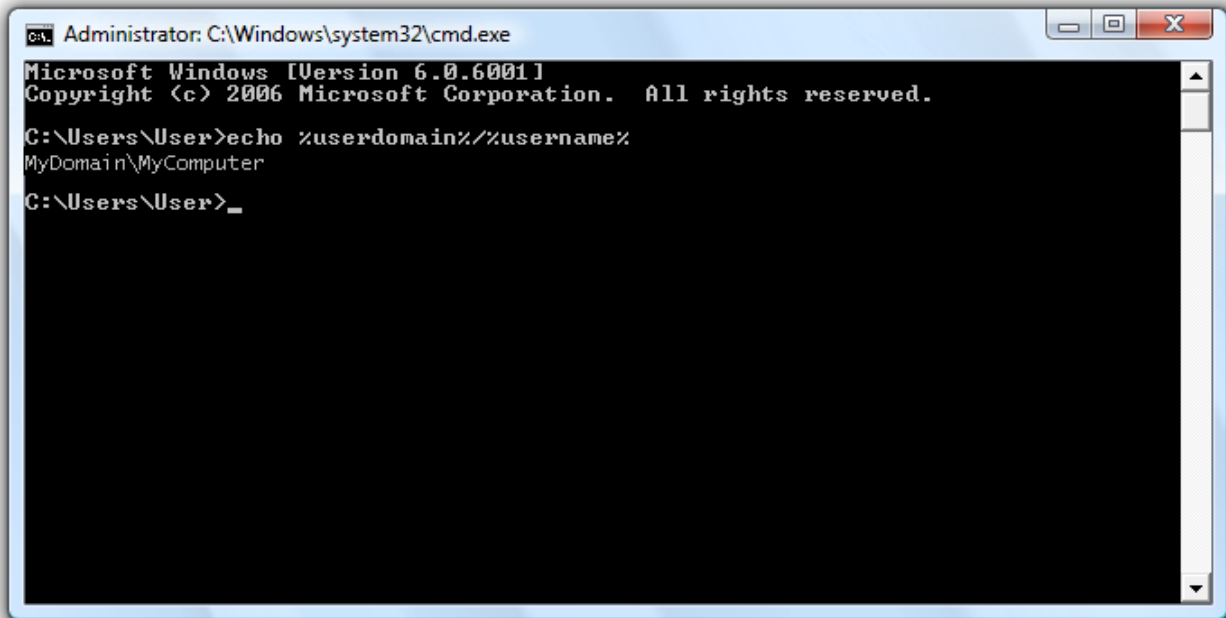
Get the user name in the command line.

Where do I find the computer name, from which I can run activities?

If you are not sure, please proceed as follows:

Frequently asked questions

- Run the command line by typing `cmd` in the start menu under Run.
- Enter the command: `echo %computername%` and confirm your entry with Enter.


```
Administrator: C:\Windows\system32\cmd.exe

Microsoft Windows [Version 6.0.6001]
Copyright (c) 2006 Microsoft Corporation. Alle Rechte vorbehalten.

C:\Users\admin>echo %computername%
MyComputer
C:\Users\admin>
```
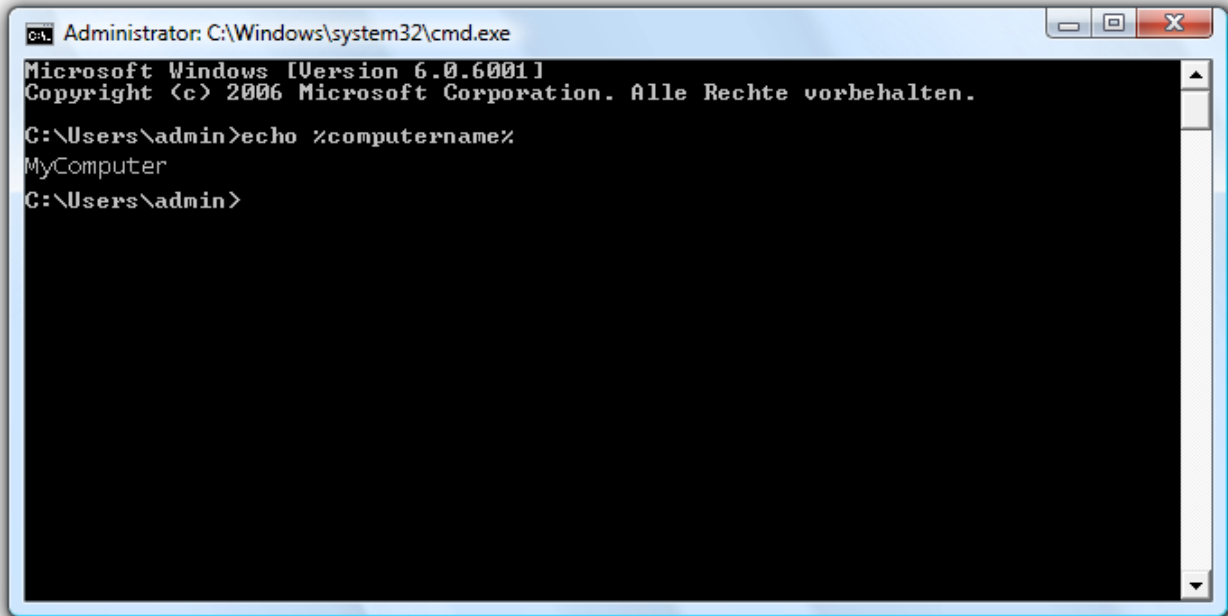
Get the computer name in the command line.

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

Check here, if the known registry information is sufficient to read or write on the folders and files.

- ○ Folders   ☑ Read-rights
- ○ File   ☑ Write-rights

Folder: [   ] [...]

[Check]   [Close]
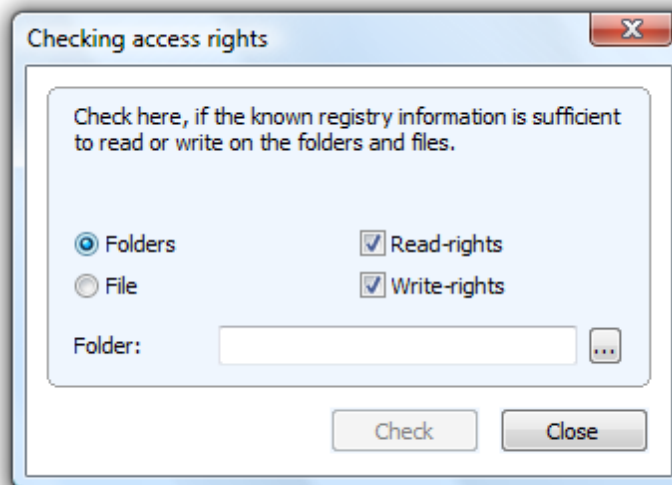
Checking access rights in O&O DiskImage

Or you can your access rights on the target computer under Properties in the corresponding target folder under "Security".

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

Explanation of the Registry entries

In the Windows registry, under HKEY_LOCAL_MACHINE\Software\O&O\O&O DiskImage\5.0, 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
ImagePath	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: • Create image button: 00 00 00 01 • Restoration button: 00 00 00 10 • Switch to full view button: 00 00 01 00 • Read image information button: 00 00 10 00 • Mount image button: 00 01 00 00 • Unmount drive-Button: 00 10 00 00 • Help button: 01 00 00 00

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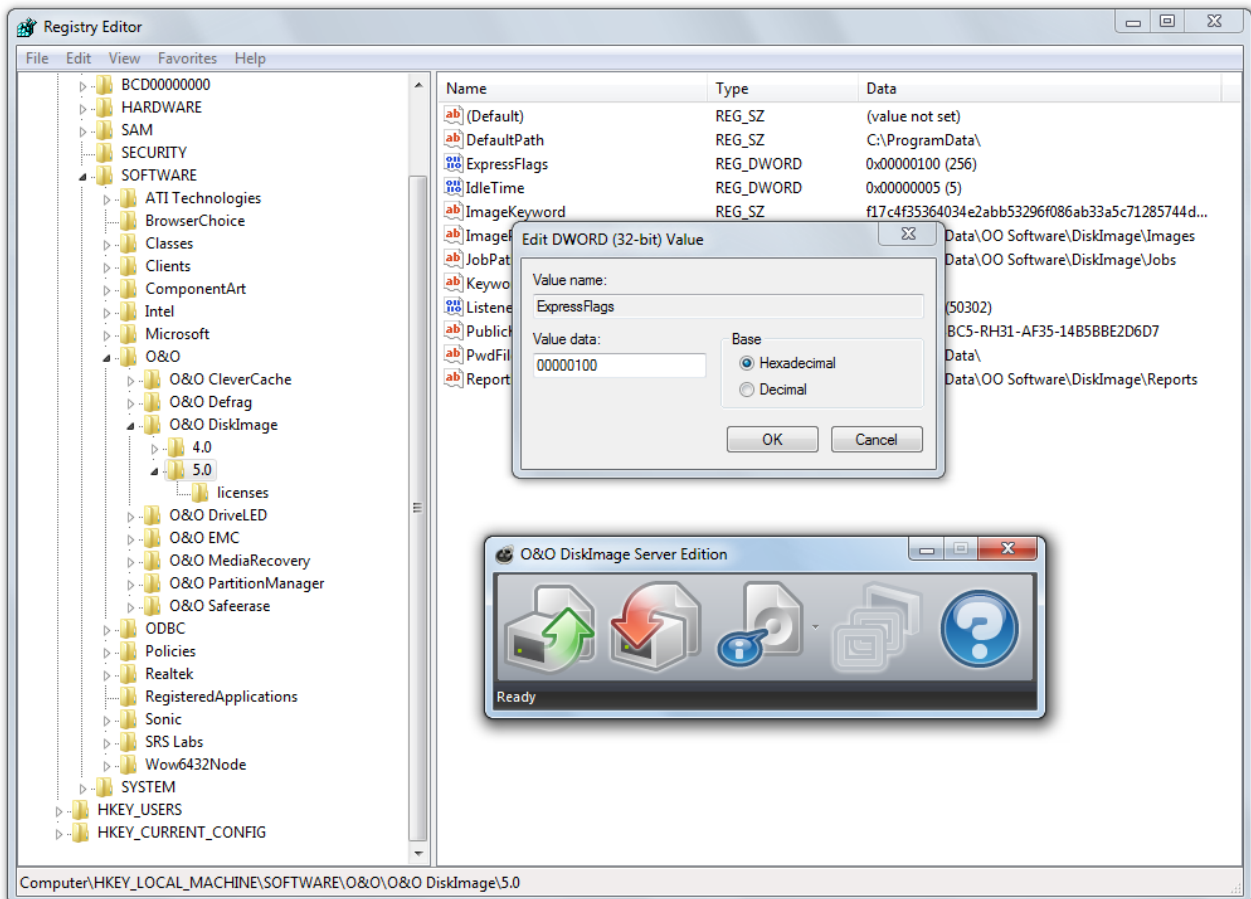
Registry entries from O&O DiskImage - Example: Disable button for "Switch to full view"(ExpressFlags)

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
IDS_ERROR_LOGON_FAILURE Registration has failed on account of invalid user name or authentication information.	User name and/or password is false. Where required, consult your system administrator.
IDS_ERROR_ACCOUNT_RESTRICTION The authentication information entered is valid but restrictions on the user account have prevented a successful authentication.	Change the settings of the respective user account. It's possible that there is a restriction such as "read only" enabled there.

IDS_ERROR_INVALID_LOGON_HOURS The user account is subject to time limitations and is therefore not available for registration at this time.	Maximum login time has expired. Please login again.
IDS_ERROR_PASSWORD_EXPIRED The password for the user account has expired.	Your password has expired. Please enter a new password.
IDS_ERROR_ACCOUNT_DISABLED The account referred to is currently disabled and cannot be accessed for registration.	User account was disabled. When applicable, consult your system administrator.
IDS_ERROR_ACCOUNT_LOCKED_OUT The user account has been automatically blocked because too many invalid registration attempts have been made.	User account was blocked. Where required, consult your system administrator.

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)

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 canceled
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.

Support and Contact

To receive more information about 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 website before contacting our Support Team. It's always possible that your specific question or problem has already been addressed.

O&O Software

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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 2.6 (EULA)

O&O Software

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.

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.

(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

(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.

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SPECIALIZED SECTION

O&O BlueCon

Important note on the Windows PE Start CD.

The Microsoft® Windows™ Preinstallation Environment contained in this hardware or this software may only be used for starting, diagnosing, setup, restoration, installation, configuration, testing or disaster recovery.

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) 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.

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 CleverCache

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

O&O CleverCache Professional Edition

The software requires the Windows XP (all Editions), Windows Vista (all Editions) or Windows 7 (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 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 2000 Professional or Windows XP (all Editions) Windows Vista (all Editions) or Windows 7 (all Editions) operating systems. Application within the terms of this contract is not achieved without the use of one of these operating systems. Control of the program through a network management is not possible.

O&O Defrag Workstation Edition

The software requires Windows 2000 Professional or Windows XP (all Editions) Windows Vista (all Editions) or Windows 7 (all Editions) operating systems. Application within the terms of this contract is not achieved without the use of one 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 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 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 software may only be used on the appropriate operating system in accordance with the previously mentioned conditions for the Workstation and Server Editions. 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

The software requires Windows 2000 Professional or Windows XP (all Editions) Windows Vista (all Editions) or Windows 7 (all Editions) operating systems. Application within the terms of this contract is not achieved without the use of one of these operating systems. Control of the program through a network management is not possible.

O&O DiskImage Professional Edition und Special Edition

The software requires Windows 2000 Professional or Windows XP (all Editions) Windows Vista (all Editions) or Windows 7 (all Editions) operating systems. Application within the terms of this contract is not achieved without the use of one of these operating systems. Control of the program through a network management is not possible.

O&O DiskImage Workstation Edition

The software requires Windows 2000 Professional or Windows XP (all Editions) Windows Vista (all Editions) or Windows 7 (all Editions) operating systems. Application within the terms of this contract is not achieved without the use of one 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 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 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 software may only be used on the appropriate operating system in accordance with the previously mentioned conditions for the Workstation and Server Editions. 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 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 DiskRecovery 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 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. Application within the terms of this contract is not achieved without the use of one 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. Application within the terms of this contract is not achieved without the use of one 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 software may only be used on the appropriate operating system in accordance with the previously mentioned conditions for the Workstation and Server Editions. 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)

<u>O&O DriveLED Professional Edition</u>

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

<u>O&O DriveLED Workstation Edition</u>

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

<u>O&O DriveLED Server Edition</u>

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 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.

<u>O&O DriveLED Virtual Machine Edition</u>

The software may only be used on the appropriate operating system in accordance with the previously mentioned conditions for the Workstation and Server Editions. 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. Application within the terms of this contract is not achieved without the use of one of these operating systems.

O&O EventViewer

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

<u>O&O EventViewer Workstation Edition</u>

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

of one 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. Application within the terms of this contract is not achieved without the use of one of these operating systems.

O&O EventViewer Virtual Machine Edition

The software may only be used on the appropriate operating system in accordance with the previously mentioned conditions for the Workstation and Server Editions. 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!

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. Application within the terms of this contract is not achieved without the use of one 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. Application within the terms of this contract is not achieved without the use of one 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. Application within the terms of this contract is not achieved without the use of one 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.

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) 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.

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 RescueBox 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 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 RescueBox 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 SafeErase

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.

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.

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

O&O UnErase Personal 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 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 UnErase 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 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 UnErase 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.