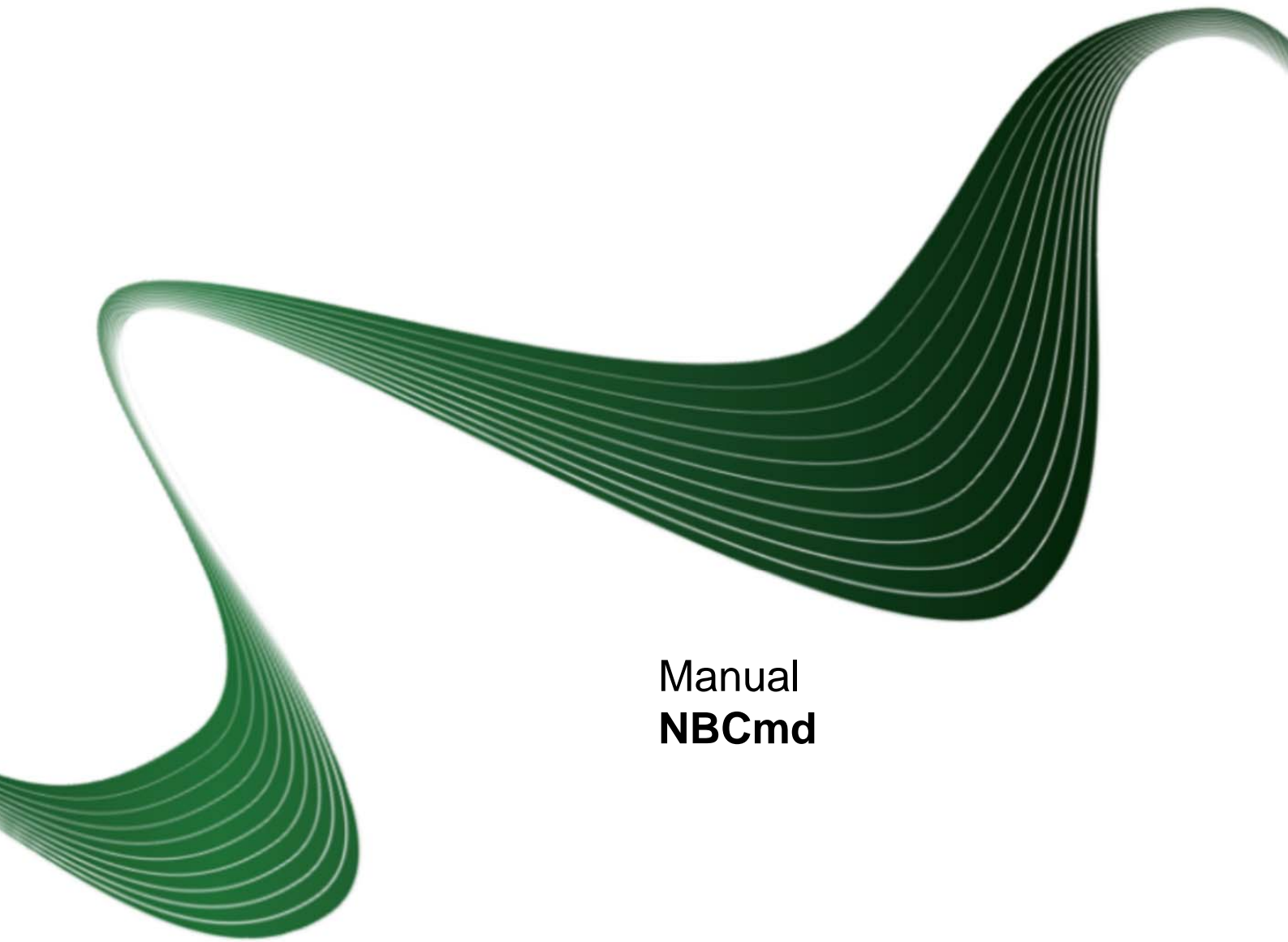


nero

BackItUp 4



Manual
NBCmd

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1 Start Successfully

1.1 About NBCmc

NBCmd is a console application that enables Nero BackItUp to accept, interpret and execute commands via command line interface. NBCmd not only provides the basic functionality for creating and restoring file and drive backups but also facilitates the user by providing additional options settable for support of all operations which BackItUp is capable of.

This document will provide a comprehensive list of available options for NBCmd and examples of use. NBCmd can perform the following tasks:

- File backup
- Drive backup
- Restore of file and drive backups

1.2 Working with NBCmd

This application provides the functionality for creating and restoring file and drive backups. NBCmd provides the support of a variety of different media type like FTP, hard drive and optical disc for backup and restore operations. So some additional media supported features like disc erasing, disc ejecting, FTP configuration are also included in NBCmd.

NBCmd will be installed with Nero BackItUp. For further information refer to the Nero BackItUp manual.

Settings who are made in the Nero BackItUp options are default values in NBCmd and the other way around.

1.3 Requirements and Recommendations

NBCmd will work on any platform which is fit for hosting Nero BackItUP. Nero BackItUp needs to be installed and licensed prior to using NBCmd.

NBCmd will not work with Linux.

Please refer also to the Silent Installation Manual.

1.4 Convention

< > Place holder

[] optional

2 Launching NBCmd

To launch NBCmd, proceed as follows:

1. Open a command shell.
2. Change to the drive and directory where NBCmd.exe is installed on your hard drive:



For example, NBCmd.exe is installed in the default path E:\NBCmd\:

Type **E:** and press **Enter**

Type **cd NBCmd** and press **Enter**

→ You are now ready to use NBCmd.

2.1 Using NBCmd

To use NBCmd is easy. After launching NBCmd, you can execute all the commands which are described in this manual.

NBCmd must be typed before a command. The commands and parameters itself must be typed in the following order: two hyphens and then the command/parameter without a blank between the single lines and the command/parameter.

3 Backup

3.1 File Backup

You can back up files with NBCmd. You can burn the backup to a disc or hard drive. It is also possible to save on an FTP server.

A file backup is useful to protect against data loss that can occur due to hardware damage or force majeure (fire, etc.). Consequently we recommend executing frequent file backups so that, should such an event occur, data that is as current as possible can be restored.

Command line:

```
--filebackup
--sourcepath <sourcepath1, sourcepath2, ... sourcepathn>
--location <location>
[--output_folder <output folder>]
[--backuptype <update/differential/incremental>
  --source_backup <source backup>]
[--shadowcopy <0/1>]
--backupname <backupname>
[--verify <0/1>]
[--password <password> --encrypt_type <standard/aes>]
[--compress <low/middle/high>]
[--comments <comments>]
[--log_file <log_file>]
```

3.2 Drive Backup

You can take backup of single drive partition, multiple drive partitions or complete drives. with NBCmd. In contrast to the file backup, the drive backup restores programs and operating systems when restoring.

You can burn the backup to a disc or save it to a hard drive. It is also possible to save the backup to an FTP server.

When you back up a drive, the backup file is usually quite large. If you burn the backup to disc, you will usually require multiple discs. The first backup disc is always a bootable disc. If you do not burn the backup to disc, it is still quite useful to create a bootable disc so that you can start the computer (and the drive restore) from CD/DVD in the event of an emergency.

Command line:

```

--drivebackup
--sourceharddisknumber <sourceharddisknumber>
[--sourcepartitionnumber <0,1,2 ... n>]
--location <location>
[--output_folder <output folder>]
--backupname <backupname>
[--verify <0/1>]
[--password <password> --encrypt_type <standard/aes>]
[--compress <low/middle/high>]
[--comments <comments>]
[--log_file <log_file>]

```

3.2.1 Backup Parameter Description

--sourcepath <sourcepath1, path2, ... pathn>

Defines the path of the source <path1,path2,...pathn> (only file backup).

Example:

- --sourcepath D:\Data (for single source path)
- --sourcepath D:\Data,C:\MyData (for multiple source path)

--sourceharddisknumber <sourceharddisknumber>

Displays disk number (only drive backup).

Example:

- --sourceharddisknumber 1

[--sourcepartitionnumber <0,1,2 ... n>]

Chooses the partion or partitions to be backed up (only drive backup).

Example:

- --sourcepartitionnumber 0,3

--location <location>

Defines the backup location index for the backup. The location index of the choosen target can be readout with --listlocations.

Example:

- `--location H:\` (for local hard disk location)
- `--location MyFtp` (for FTP location)

[--output_folder <output folder>]

Defines the folder path on target. The path can be nested path of the folder on the target.

Example:

- `--output_folder Backup` (simple path)
- `--output_folder Backup\MyFileBackups`

[--backuptype <update/differential/incremental> --source_backup <source backup>]

Defines the backup type and gives the complete backup source file path (only file backup).

incremental: all files that have changed in comparison to the last backup will be saved.

differential: all files that have changed in comparison to the first backup will be saved.

The procedure for update varies depending on the medium to which you will back up.

If you are backing up to a **hard drive** with the update type, then the data of the previous backup will be overwritten with the changed data. This means that older versions will be erased; access to older backup states will no longer be possible.

If you are backing up to the **disc** on which the last backup was burned with the update type, then the procedure is the same as described for the incremental backup. In this case a folder will be generated in a new session.

If you are backing up to a **new disc** with the update type, then the procedure is the same as described for the full backup. The full backup will be burned on the disc.

Example:

- `--backuptype <update> --source_backup H:\MyBackup.nbi`

[--shadowcopy <0/1>]

Enables shadow copy for backup: shadow copies of the files will be created before backup.

Thus files can also be backed up that are currently being worked on (only for file backup).

--backupname <backupname>

Chooses a name for the backup. Date and time are added automatically.

Example:

- `--backupname MyBackup` (The backup created on the location will be appended by data and time: '20081213_104312_MyBackup.nbi')

[--verify <0/1>]

Verifies, if the backup was successful after backup process. If you want to verify the backup process give '1' as an argument.

Example:

- `--verify 1`

[--password <password> --encrypt_type]

Defines a password for the encryption and the encryption type. Encryption type is dependent on password. Password is optional but once you give a password you may give its encryption type. By default the encryption type is AES . Whenever you want to restore the backup you are required to provide the correct password.

Note: Be careful while setting a password and remember it because you cannot open a backup if you forgot your password.

[--compress <low/middle/high>]

Compresses the backed up data and chooses compress rate. A higher compress rate will result in lower file size, but the backup process will last longer.

[--comments <comments>]

Gives backup comments

[--log_file <log file>]

Complete file path for the logfile. Log file is saved in text format and you can set the custom path to save the file.

Example:

- `--log_file D:\MyLogFile.txt`

3.2.2 Examples

The following command creates a **full file backup** named "MyBackup" consisting files and folders located in directory "D:\Data" at the target directory:

```
NBCmd --filebackup --sourcepath D:\Data --location H:\
--output_folder Backup --backupname MyBackup
```

For creating an **update backup** of an existing backup `--backup-source` and `--backuptype` parameter values should be defined, like following command will create an incremental backup of an existing backup:

```
NBCmd --filebackup --source_backup H:\MyBackup.nba
--backuptype incremental --location H:\ --output_folder Backup
--backupname MyIncBackup
```

Following command will create a **complete drive backup** named MyFullDriveBackup of selected hard drive:

```
NBCmd --drivebackup --sourceharddisknumber 1 -- location D:\  
-- output_folder Backup --backupname MyFullDriveBackup
```

To create a **drive backup of a selected partition** parameters can be specified as follows:

```
NBCmd --drivebackup --sourceharddisknumber 1  
--sourcepartitionnumber 0 -- location D:\ --output_folder Backup  
--backupname MyPartitionBackup
```

4 Restore

NBCmd can be used to restore a backup. The backup can be restored to the source folder or selected folders.

Command line:

```

--restore
--location <location>
--source_backup <source backup>
[--sourcepartitionnumber <sourcepartitionnumber>]
[--targetharddisknumber <targetharddisknumber>]
--targetpartitionnumber <targetpartitionnumber>
--targetstartsector <targetstartsector>]
[--fit <source/target>]
[--verify <0/1>]
[--password <password>]
[--originalpath / --custompath <custompath>]
[--log_file <log_file>]

```

4.1 Restore Parameter Description

--location <location>

Is the backup location.

Example:

- --location H

--source_backup

Is the complete backup source file path. Note: file backups have the extension NBA and drive backups have the extension NDA.

Example:

- --source_backup Backup\MyBackup.nba

[--sourcepartitionnumber]

Is the partition number at source.

**[--targetharddisknumber <targetdisknumber>
 --targetpartitionnumber <targetpartitionnumber>
 --targetstartsector <targetstartsector>**

Defines, where the backup is to restore with target disk number, partition number, and target sector.

[--fit <source/target>]

Specifies whether the restore will be fitted to the target or source size. If the target partition and backed up partition are the same size, the options provide the same result. There are differences if the target partition is larger than the backed up partition. Only for restoring drive backup!

`--fit source`: The size of the target partition is reduced to the size of the backed up partition. Partition storage space no longer needed is no longer part of the partition. You can re-partition this unused storage space as needed.

`--fit target`: The size of the target partition remains intact. The storage space not needed for the restore becomes empty space but remains part of the partition.

[--verify <0/1>]

Verifies, if the restore was successful.

[--password <password>]

Decrypt an encrypted backup. If a password was entered while taking file or drive backup then during restoring the same, you must provide the password.

[--originalpath / --custompath <custompath>]

Restore backup on original path or on selected path as specified.

4.2 Examples

The following command with the specified parameter set will restore a file backup.

```
NBCmd --restore --location H --source_backup Backup\MyBackup.nba
--originalpath
```

To restore a drive backup of a partition, parameters can be specified as follows:

```
NBCmd --restore --location D:\
--source_backup Backup\MyPartitionBackup.nda
--sourcepartitionnumber 1 --targetharddisknumber 0
--targetpartitionnumber 4 --fit target
```

5 Add FTP

With this command FTP connections can be established which can be used as source and target for various backup and restore operations.

Command line:

```
--ftp  
--name <name>  
--address <address>  
--user <user>  
--password <password/anonymous>
```

--name <name>

Is the host name which serves as an internal name for the remote site

--address <address>

Is the host address which is the url of the remote site

--user <user>

Is your login name

--password <password/anonymous>

Is the password for the connection

6 Create bootable disc

With this command you can create a bootable disc with Nero BackItUp Image Tool. With the ImageTool, you can back up and restore drives. This particularly lends itself to backing up on otherwise active drives, since such drives are inactive when booting the Nero BackItUp ImageTool.



You can find more information about this and about working with the Nero BackItUp ImageTool in the Nero BackItUp manual under www.nero.com/.

Command line:

```
--createbootabledisc  
--location <location>
```

7 Disc commands

With NBCmd you can load and eject your disc. Rewritable discs can be erased.

The following disc commands are available

<code>--load --drivename <drivename></code>	This command loads a media into an optical disc drive.
<code>--eject --drivename <drivename></code>	This command ejects the inserted disk.
<code>--erase --drivename <drivename --mode <full/quick></code>	This command erases the rewritable media.

--drivename <drivename>

Is either the "full name" of the drive or the drive letters

--mode <full/quick>

Chooses a erase method.

Full erasing removes the data from the disc by overwriting it with zeroes. The contents cannot be restored with conventional methods. Repeated full erasing increases the probability that third parties will not be able to reconstruct the contents.

Quick erasing does not remove the data physically from the disc, but instead only makes it inaccessible by erasing the references to existing content. The data can be restored!

8 Display commands

The following display commands are available:

<code>--help OR /?</code>	Displays list of all available features in NBCmd.
<code>--listlocations</code>	Displays list of different target media with names and their full paths. You need the index of the location, when you choose a backup target.
<code>--listharddrives</code>	Display the list of drives with their file system, disk number, and Partition number and start sector of the disk.
<code>--discinfo</code> <code>--drivename</code> <code><drivename></code>	Displays the disc info with type, start, stop, length, session number. Displays the information (like Erase Modes, Medium Flags, Total Capacity etc) of the inserted media.
<code>--backupproperties</code> <code>--location</code> <code><location></code> <code>--source_backup</code> <code><source backup></code>	Displays various properties of file backups and drive backups like full backup name, backup set, backup name, backup type, user name, backup size, compress size, backup date, number of files, folders etc.

9 Glossary

AES Encryption

The Advanced Encryption Standard uses symmetrical encryption with key lengths of 128, 192, and 256 bits. With it, sensitive data is protected from unauthorized access.

Archive Bit

Archive bits are used to identify files that have been edited. A file is only resaved during the next backup process if it was edited (and an archive bit is thus reset).

Backup

Copying data from the computer to an alternative storage medium. Backups are created in a special format with the help of a backup program.

Backup Set

A backup set consists of individual backups that belong together - a complete backup and a differential backup extension, or a complete backup and one or more incremental backup extensions.

Bootable CD

Booting refers to loading the operating system when a computer is started. This is normally done from the hard drive. However, if you do not want to boot or cannot boot your computer from your hard drive for whatever reason, you can load an operating environment from the drive with a boot CD.

Classic Encryption

Classic encryption is the predecessor of AES encryption. It uses a symmetrical encryption algorithm as well. The key length is 56 bits.

CRC

Cyclic Redundance Check refers to an error-detection procedure used during the transmission or copying of data. A checksum is calculated with a defined amount of data at the beginning, and provided with the data block. After the operation has ended, the checksum is calculated again and compared to the first value. Deviations indicate the presence of errors.

Differential Backup

Differential backup refers to a type of backup update / backup extension. Only data that has been modified or added since the first full backup is backed up.

Drive

General term for a storage device with read, and possibly write, capabilities that is located outside RAM. Drives are e.g. physical drives (hard drives), logical drives (partitions), or optical drives (CD/DVD drives).

FTP Server

An FTP server is a data storage unit that can be accessed through the Internet. Access is usually anonymous. FTP servers are frequently used as storage locations for backups.

Hard Drive

A hard drive is a physical drive that writes binary data on a rotating magnetic disk. The hard drive can be installed in the computer or be connected to the computer as a so-called external hard drive.

Incremental Backup

Incremental backup refers to a type of backup update / backup extension. Only data that has been modified or added since the last backup - the first full backup or an earlier incremental backup - is backed up. The reason why this type of backup extension is called incremental backup is that several incremental backups are usually added to a full backup.

Master Boot Record MBR

The Master Boot Record (MBR) is located in the hard drive's first sector. It contains a boot file that starts the operating system. It also defines the drive's partitioning.

Multisession Disc

A multisession disc can contain several sessions that are not fixed. This way, more data can be added in new sessions at a later point in time, and the disc is not closed until it is full.

NTFS

New Technology File System is a Windows file system. Its advantages include differentiated access and rights management, as well as defragmented data storage, which allows the processing speed to remain high.

Partition

A partition is a section of the hard drive. A hard drive can be divided into several partitions that can work independently of each other, as if they were separate drives. Because of this, partitions are also called "logical" drives.

Restore

Restore stands for restoring data to a previous condition or to copying data by using a backup copy that was created previously and a backup program, e.g. Nero BackItUp.

Shadow Copy

A shadow copy is a snapshot of a file at a certain point in time. The advantage is that you can keep working with this file while the backup program, e.g. Nero BackItUp, backs up the file in the background. This feature is particularly relevant when you want to save system files, which are modified continuously by the system.

10 Contact

NBCmd and Nero BackItUp are Nero AG products.

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