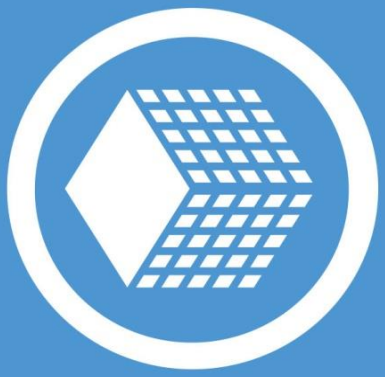

Handy Backup User Manual V7

Version 7

Published on October 2018

handybackup.net

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This manual describes all features of Handy Backup™, and explains its architecture and main principles of its work.

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1 General Information

This manual describes in detail the use of Handy Backup™. It contains complete information on all features and explains all principles of the software's operation.

The manual consists of nine sections:

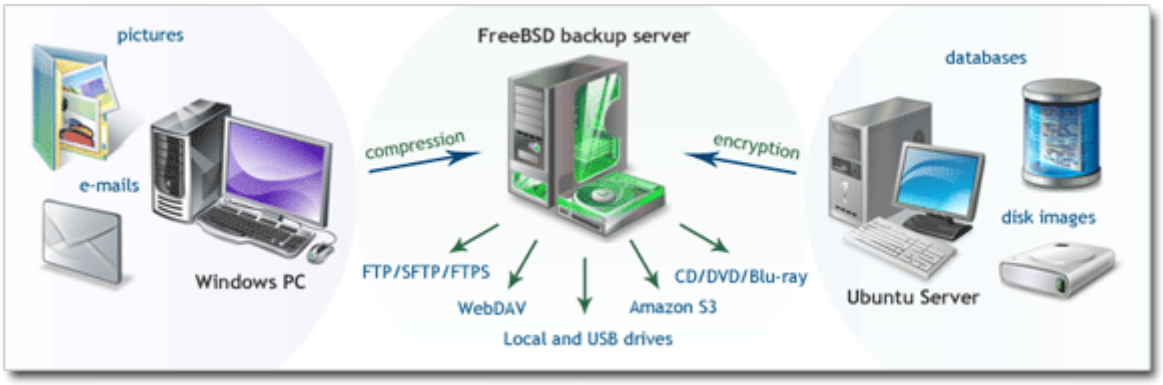
1. **General Information.** In this section you can find general overview of the product's strengths and target uses, legal and copyright information, and technical support contacts.
2. **Installation.** The second section provides detailed instructions on installing, updating and uninstalling the software.
3. **Registration.** This section describes all aspects of registration, upgrading and license management.
4. **Quick Start.** In the fourth section you can find startup instructions on creating your first backup, restore and synchronize tasks.
5. **Managing Data.** This is the core part of the manual that describes how to create tasks of different types, and gives general recommendations on setting up automated backups in different environments.
6. ***Technologies Behind the Software.** The sixth section contains technical materials on Handy Backup's architecture and principles of its work.
7. **User Interface.** In this section you can learn what makes up the program's user interface.
8. **Settings.** In the eighth section you can find information about various settings.
9. **Extras.** The final section describes Novosoft Remote Backup and other related services.

* Recommended reading for advanced IT users, technological partners and hardware manufacturers.

We hope that you find this manual useful and informative. To leave feedback and suggestions, or to report errors, please refer to Technical Support Contacts.

1.1 Product Overview

Handy Backup™ is a family of award-winning solutions for home and business environments. It is a cross-platform utility built on client-server architecture that provides a reliable way to back up and restore any critical data, from common PC files to commercial database servers.



Example use: copying files, disk images and databases in a heterogeneous network

Ease of Use

An intuitive interface makes protection and recovery procedures easy for users of all levels. To back up your data, you need to create a backup task, which is done with the help of a simple Wizard, as follows:

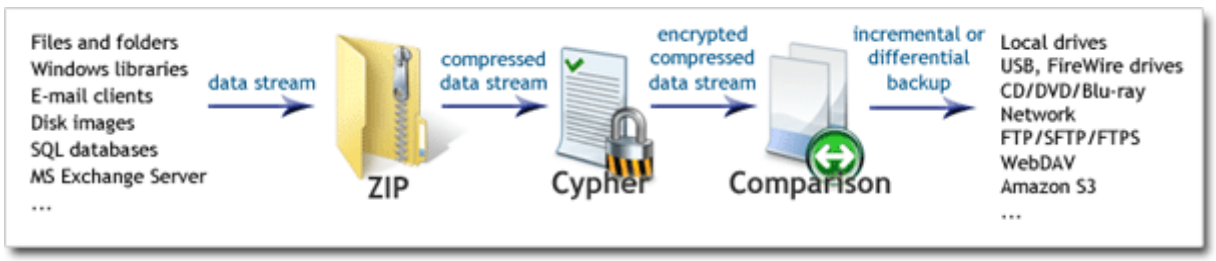
1. Select what you want to back up.
2. Select where you want to store the data.
3. Schedule the task.

In this manual you can find step-by-step instructions on every aspect of managing your data with our software. If you want to skip the product overview, you can start with the Installation and Quick Start sections.

Universality

The software works with very different types of data: from common files and folders to SQL databases and e-mail servers. To select data for backup, you don't need to be an IT expert: simply check the box near an item that you want to back up, and the program will do the rest.

Supported storage devices and data transferring protocols enable you to save data to virtually any place. Depending on your situation, you may want to store copies to an external USB disk, transfer them to an FTP or WebDAV server, upload them to Amazon S3 storage, or make use of any other location.



Data stream path: "on-the-fly" compression, encryption and comparison with previous backups

The program features built-in ZIP compression and 128-bit Blowfish encryption. Data processing is performed "on-the-fly", without temporary files, which allows backing up significant amounts of data in an efficient and resource-friendly way. Before files are written to the designated storage, they are compared to existing backups, which enables you make incremental or differential backups (save only changes).

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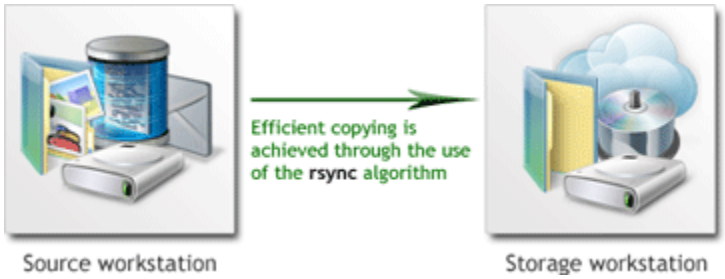
On its way from "source" to "destination", data stream can also be transferred to a different computer running another instance of Handy Backup. This lets you back up all network data from a single control point, which is the idea of Server edition (see below). To learn technical details of the program's client-server architecture, please see Architecture.

Standalone and Server Editions

The program is available in Standalone and Server editions:

- In **Standalone editions**, data stream remains within one computer. All processing and storage operations are handled by a single machine.
- In **Server edition**, data stream can be transmitted from one computer to the other, over the network. Logical components responsible for data transfer are called **Workstations**: one workstation manages all reading and processing operations, while the other manages data storage.



For example, you may want to back up a server that for security reasons cannot be connected to the Internet. The client-server architecture employed in the software allows you to transfer the data in encrypted form to the "Storage" workstation which will then save it to a local or a remote place. To learn more about cooperation of workstations, please see Workstation.

Extensibility

You can copy files, disk images, databases (MySQL, MS SQL, Oracle and other), and many other types of data. Supported storage destinations include local HDDs, USB drives, LAN, FTP, WebDAV, Amazon S3 and other locations. This versatility is achieved through the use of plug-ins: each program's feature is a separate module that can be added to the program's core independently of other features.

The software comes in several editions, each one with different sets of plug-ins. At any time you can upgrade your version by supplementing it with plug-ins of your choice. This lets you build a solution tailored for your needs, saving on the options you never use. For more details, please see Registration.

All the upgrades are available on the product website: www.handybackup.net

Multilanguage Support

The program is completely Unicode-enabled, and is available in several languages, such as:

- English;
- French;
- Russian;
- Spanish;
- Czech.

New language packs can be added relatively easily. We encourage our users to translate non-translated components (user interface, help files, main website pages, etc.) into their native languages, and send them to us. These efforts will be rewarded with free licenses, upgrades, Online Backup storage, and other valuable prizes. To learn more, please refer to the product website:
www.handybackup.net/morelanguages

Always Up-to-Date

Our developers constantly work on Handy Backup to add new features, improve its security and performance. We take into consideration any feedback and recommendations, striving to make an ideal solution for all types of users. Updates are released each month or two. To stay informed of all news, watch the product website: www.handybackup.net

1.2 Copyright Notice

Copyright© Novosoft LLC 2002-2016. All rights reserved.

Handy Backup is protected by copyright law and international treaties. The software is licensed (not sold), and its use is subject to a License Agreement. Unauthorized use, copying or distribution of the program or any of its components may result in severe criminal or civil penalties, and will be prosecuted to the maximum extent under the law.

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- Microsoft, Outlook, Outlook Express, Windows Mail, Internet Explorer, Exchange Server, SQL Server, Windows and Windows Server are trademarks or registered trademarks of Microsoft Corporation.
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- IBM, DB2, Tivoli, Lotus and Lotus Notes are trademarks or registered trademarks of IBM Corporation.
- Amazon and Amazon S3 are trademarks or registered trademarks of Amazon.com Corporation.
- CORBA is a trademark or a registered trademark of the Object Management Group Corporation.

1.3 Third-Party Binaries

The software contains a number of third-party executable files and libraries critical for the core functionality. These files are included into the program's installation and come with their own licenses that you can find in the program's installation folder.

File	Description	Author
7z.dll	File compression library used in ZIP filter	Igor Pavlov
ACE.DLL	Part of the Adaptive Communication Environment (ACE)	Douglas C. Schmidt
ACE_ETCL.dll	Part of the Adaptive Communication Environment (ACE)	Douglas C. Schmidt
ACE_ETCL_Parser.dll	Part of the Adaptive Communication Environment (ACE)	Douglas C. Schmidt
htmlayout.dll	Lightweight HTML rendering library used for drawing GUI client	Terra Informatica Software Corporation
libeay32.dll	Part of the OpenSSL library used for secure data transferring	The OpenSSL Project
libmysql.dll	Part of the MySQL Connector library used to connect to MySQL	Oracle Corporation
librsync.dll	Data transport library that implements the rsync remote-delta algorithm	Martin Pool, Andrew Tridgell
mysql.exe	Client application for the MySQL database management system	Oracle Corporation
mysqldump.exe	Application for dumping MySQL data into files	Igor Romanenko, Oracle Corporation
ssleay32.dll	Part of the OpenSSL library used for secure data transferring	The OpenSSL Project
StarBurn.dll	Library responsible for working with optical drive devices	StarBurn Software Ltd.
syslinux.exe	Boot loader for the Linux operating system	The Syslinux Project
TAO.DLL	Part of CORBA, used for communication of different components	Douglas C. Schmidt
TAO_AnyTypeCode.dll	Part of CORBA, used for communication of different components	Douglas C. Schmidt
TAO_CodecFactory.dll	Part of CORBA, used for communication of different components	Douglas C. Schmidt
TAO_Codeset.dll	Part of CORBA, used for communication of different components	Douglas C. Schmidt
TAO_CosEvent.dll	Part of CORBA, used for communication of different components	Douglas C. Schmidt
TAO_CosEvent_Skel.dll	Part of CORBA, used for communication of different components	Douglas C. Schmidt

File	Description	Author
TAO_CosNaming.dll	Part of CORBA, used for communication of different components	Douglas C. Schmidt
TAO_CosNaming_Serv.dll	Part of CORBA, used for communication of different components	Douglas C. Schmidt
TAO_CosNaming_skel.dll	Part of CORBA, used for communication of different components	Douglas C. Schmidt
TAO_CosNotification.dll	Part of CORBA, used for communication of different components	Douglas C. Schmidt
TAO_CosNotification_Serv.dll	Part of CORBA, used for communication of different components	Douglas C. Schmidt
TAO_CosNotification_Skel.dll	Part of CORBA, used for communication of different components	Douglas C. Schmidt
TAO_DynamicAny.dll	Part of CORBA, used for communication of different components	Douglas C. Schmidt
TAO_ETCL.dll	Part of CORBA, used for communication of different components	Douglas C. Schmidt
TAO_IORTable.dll	Part of CORBA, used for communication of different components	Douglas C. Schmidt
TAO_Messaging.dll	Part of CORBA, used for communication of different components	Douglas C. Schmidt
TAO_Notify_Service.dll	Part of CORBA, used for communication of different components	Douglas C. Schmidt
TAO_PI.dll	Part of CORBA, used for communication of different components	Douglas C. Schmidt
TAO_PortableServer.dll	Part of CORBA, used for communication of different components	Douglas C. Schmidt
TAO_Svc_Utils.dll	Part of CORBA, used for communication of different components	Douglas C. Schmidt
TAO_Valuetype.dll	Part of CORBA, used for communication of different components	Douglas C. Schmidt
WnASPI32.dll	Library responsible for working with optical drive devices	FrontBack LLC
xdelta.exe*	Application that computes difference between two files	Josh McDonald

* Not used, left for backward compatibility with old versions.

Publication of this list is a requirement for the Microsoft **“Works with Windows Server 2008”**certification program.

1.4 End User License Agreement

Handy Backup™ is copyrighted and licensed software, so please read the license agreement carefully.

Novosoft Handy Backup End User License Agreement

This software end user license agreement (hereinafter referred to as the “EUL”) is a legal agreement between the EUL end-user (hereinafter referred to as “YOU”) and **NOVOSOFT Development LLC** as the EUL licensor (hereinafter referred to as “NOVOSOFT”). Use of the software provided with this agreement (hereinafter referred to as “SOFTWARE”) constitutes your acceptance of these terms. Read it carefully before completing the installation process and using the software. If you do not agree to the terms of this agreement, do not install and/or use this software. By installing, copying, or otherwise using the software product, you agree to be bound by the terms of this EUL.

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2. **Trial and Registration.** YOU are granted the right to use the software without registration solely for the purposes of evaluating the performance of the software for a period of no more than 30 days. If after that time continued use of the software is desired then the software must be registered with NOVOSOFT subject to the terms as laid out in the registration information which can be found in the documentation accompanying the software. YOU are expected to use the software on your system and to thoroughly evaluate its usefulness and functionality before registration. This “try before register” approach is the ultimate guarantee that the software will perform to your satisfaction.

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5. **Reverse Engineering.** YOU agree that YOU will not attempt to reverse compile, modify, or disassemble the software in whole or in part.

6. **No Other Warranties.** The software product is provided “as is” without warranty of any kind. NOVOSOFT disclaims all other warranties with respect to the software, either express or implied, including but not limited to implied warranties of merchantability, fitness for a particular purpose and non infringement of third party rights. Some jurisdictions do not allow the exclusion of implied warranties or limitations on how long an implied warranty may last, or the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to YOU. This warranty gives YOU specific legal rights and YOU may also have other rights which vary from jurisdiction to jurisdiction.

7. **Severability.** In the event of invalidity of any provision of this license, the parties agree that such invalidity shall not affect the validity of the remaining portions of this license.

8. **No liability** for consequential damages in no event shall the OWNERS or their suppliers be liable to YOU for any consequential, special, incidental or indirect damages of any kind arising out of the delivery, performance or use of the software, even if NOVOSOFT has been advised of the possibility of such damages. In no event will NOVOSOFT’s liability for any claim, whether in contract, tort or any other theory of liability, exceed the license fee paid by YOU, if any.

9. **Governing Law.** This agreement is governed by the laws of the Russian Federation. If for any provision or portion thereof of the license agreement is found to be unenforceable by a court of competent jurisdiction, that provision shall be enforced in such manner as to effect the intention of the parties hereof, and the remainder of the license agreement shall continue in full force and effect.

10. **General provision.** This is the entire agreement between YOU and NOVOSOFT, which supersedes any prior agreement or understanding, whether written, or oral, relating to the subject matter of this license. If any part of this agreement is found void and unenforceable, it will not affect the validity of the balance of the agreement, which shall remain valid and enforceable according to its terms. This agreement shall automatically terminate upon failure by YOU to comply with its terms. NOVOSOFT, on its sole discretion, may modify this agreement in writing at any time.

1.5 Technical Support Contacts

All users of are entitled to free technical support from Novosoft. If you experience any problems installing or using our software that you can’t solve by using this manual, or have any questions or suggestions, please contact us.

Note: Contact information may change from the time of publication. To find most current contacts, please refer to the product website: www.handybackup.net/support

- Free technical support by phone or e-mail.
- Guaranteed response time – 1-3 business days.
- Patches, fixes, extended help and other critical assistance.

support@handybackup.net.

To make sure that our support response letter is not deleted by spam filters, don't forget to add support@handybackup.net to your e-mail address book.

You can also contact us via instant messengers or phone:

Facebook: NovosoftHandyBackup

Twitter: Handy_Backup

Google+: +HandyBackupNet

Skype: NovosoftHelp

Email: support@novosoft.net

+7 (383) 330-3469
+1 (707) 703-1311

Note: We are at GMT+7, EST +11, which may be inconvenient for your time zone. If you don't receive an instant response, please accept our apologies and try contacting us via e-mail.

You can also use an Online support form at product website: www.handybackup.net/support

Before Contacting Support

Before sending a message to our support team, please download and install the latest build of the program. It is highly possible that your problem has been fixed already.

- The program can be downloaded at the product website free of charge: www.handybackup.net/download.
- To learn about installing and uninstalling the program, please refer to Installation.

When sending a support request, please describe the problem with as many details as you can.

If the program is running, include the following information:

- Version and build date of the program.
- Your operating system (with version and Service Pack number, if applicable).
- What you were doing before the error occurred.
- Settings and log of the task on which the error occurred.
- General system log.

- If possible, include a screenshot of an error.

If the program does not run, include the following information:

- Version and build date of the program.
- Your operating system (with version and Service Pack number, if applicable).
- What you were doing before the error occurred.
- If possible, include a screenshot of an error.

2 Installation

The program can be installed using the common setup file, regardless of OS version used:

- handybackup.exe - for 32-bit or 64-bit versions of Windows

www.handybackup.net/download

Editions

The program is available in several editions:

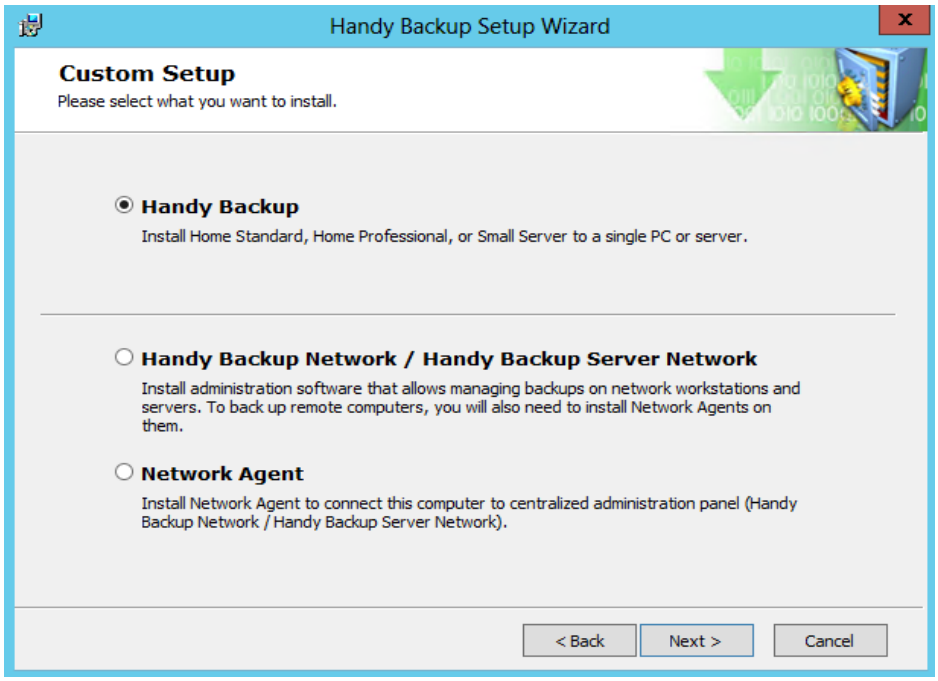
- Standard;
- Professional;
- Small Server;
- Network;
- Server Network.

Each edition is installed with the **same setup file**: exact functionality is defined by registration key number. To learn more, please see Registration.

Installing

To install the software, follow these steps:

1. Launch the setup file.
2. On the welcome screen, click **Next**.
3. Read end user license agreement, and then click **Next**.
4. Select what you want to install. There are three variants:



- **Handy Backup.** Select this option if you are planning to back up only one computer or small server.
- **Handy Backup Network /Handy Backup Server Network.** Select this option to install Server edition and back up multiple networked computers. To control data of remote computers, you will need to install **Workstations** on them.
- **Network Agent.** Select this option to install workstation or server software agent for **Network** or **Server Network** edition.

2.1 System Requirements

The program is one of the fastest and most resource-friendly utilities on the market. Designed for Windows, it can run on virtually any system with Windows NT core:

- Windows 10
- Windows 8, Windows 8.1
- Windows 7
- Windows Vista
- Windows Home Server
- Windows Server 2008
- Windows Server 2008 R2
- Windows Server 2012
- Windows Server 2012 R2
- Windows Server 2016

The program supports both 32-bit and 64-bit versions of Windows, and can run under any edition, e.g. Windows 8 Pro, Windows 8 Enterprise, Windows Server 2012 Foundation, Windows Server 2012 Essentials, and other.

Hardware Requirements

The list of requirements is very moderate:

- 256MB RAM or more;
- Pentium 300Mhz or higher;
- Mouse (recommended);
- Network adapter (recommended).

Due to its powerful design, the program doesn't slow down the PC at all.

Hard Disk Space

- 42MB for **Standalone editions** (Standard, Professional, Small Server) or **Network Management Panel** (Network and Server Network editions);

- 25MB for **Network Agent.**

File System Support

All components of our software are fully Unicode-enabled, which means that you can safely use it under any locale setting. The program supports all file systems used in Windows:

- NTFS
- ReFS
- FAT32/FAT32X
- FAT16/FAT16X

When running image-based backup or HDD cloning, you can work with partitions of any other file system:

- ext2
- ext3
- ext4
- HFS
- HFS+
- ReiserFS
- (and other)

Storage Media Support

- **Local Drives.** You can store backups to any local or external drives accessible in your system, including any types of SSD, eSATA, USB, FireWire, Flash, NAS and other media.
- **Network.** Backups can be transferred to network shares and FTP, SFTP, FTPS and WebDAV servers of any kind.
- **Cloud storage.** The software features built-in support for a variety of cloud storage services including Amazon S3, Box.com, Yandex.Disk and other.
- **Online Backup Service - HBDrive.** This is our proprietary service that lets you copy backups to a distributed storage system located in a secured underground shelter. To learn more about the service, please see the following URL: www.hbdrive.com

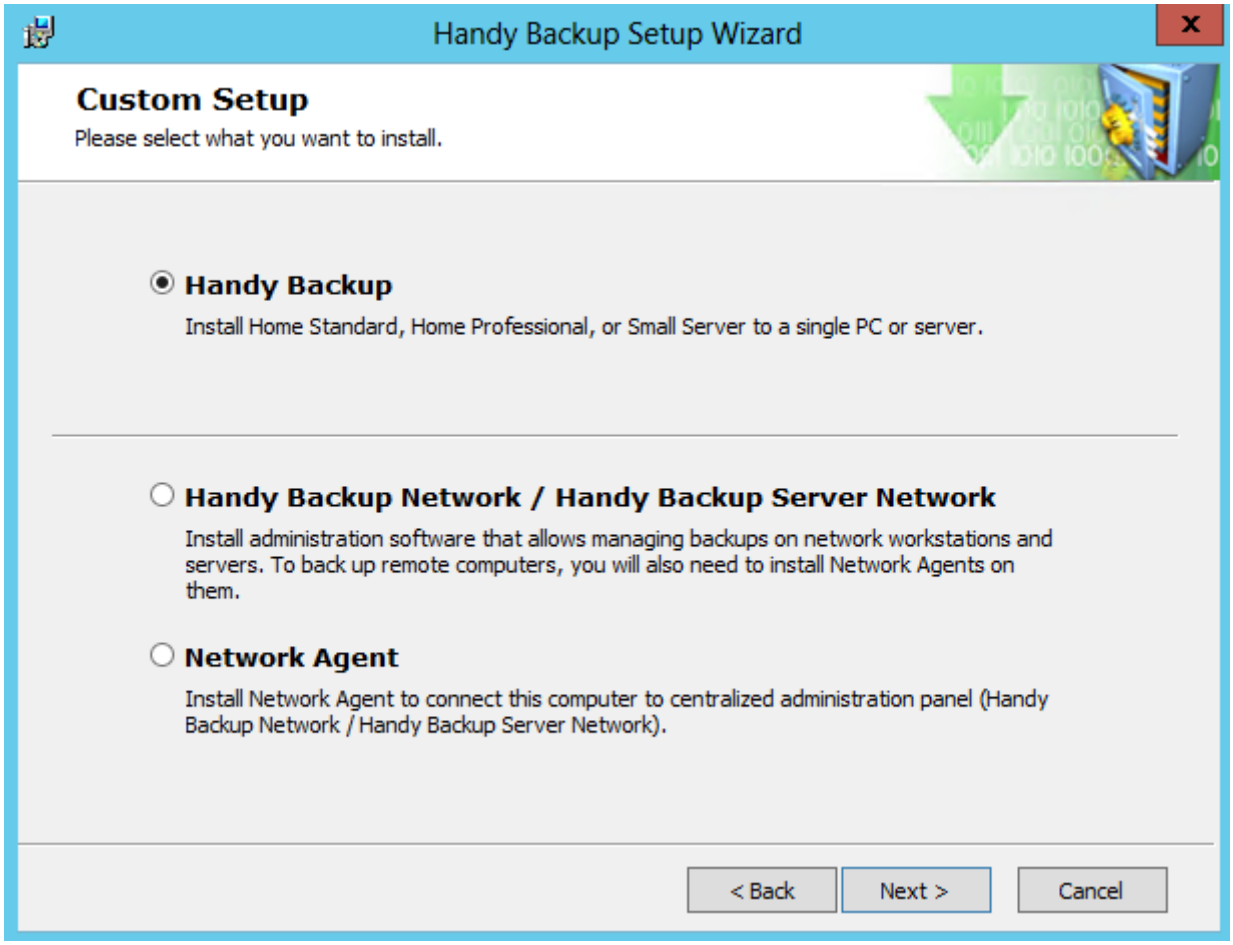
2.2 Installing Standalone Edition (Standard, Professional, Small Server)

The software is available in three **Standalone** editions: **Standard**, **Professional** and **Small Server**. The term "standalone" means that all components of the software are installed on one computer, and all data retrieval, processing and storage operations are handled by a single machine.

Installing

To install a standalone edition, follow these steps:

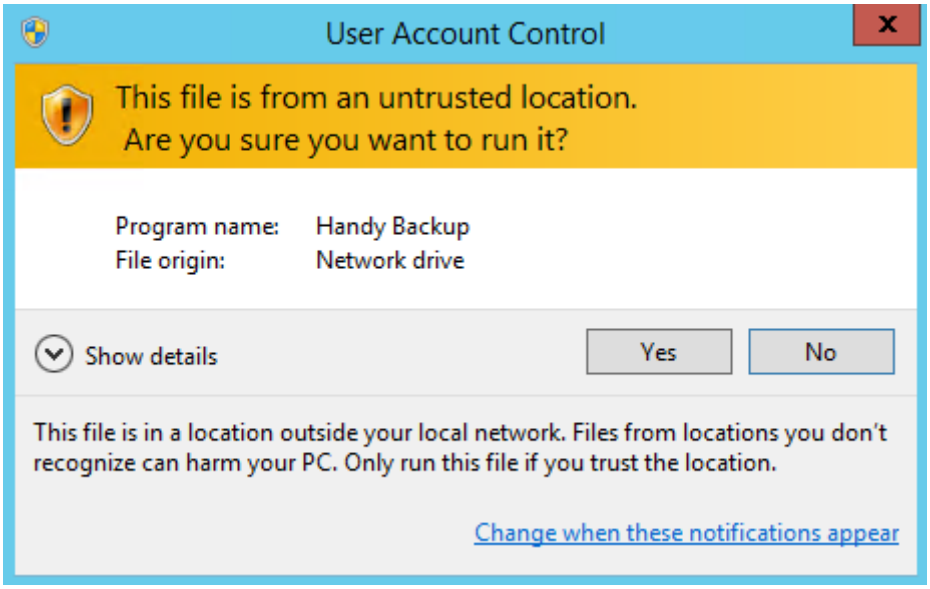
1. On the **Custom Setup** step of the Setup Wizard, select Handy Backup (default option), and then click **Next**.



2. Select installation folder, and then click **Next**.

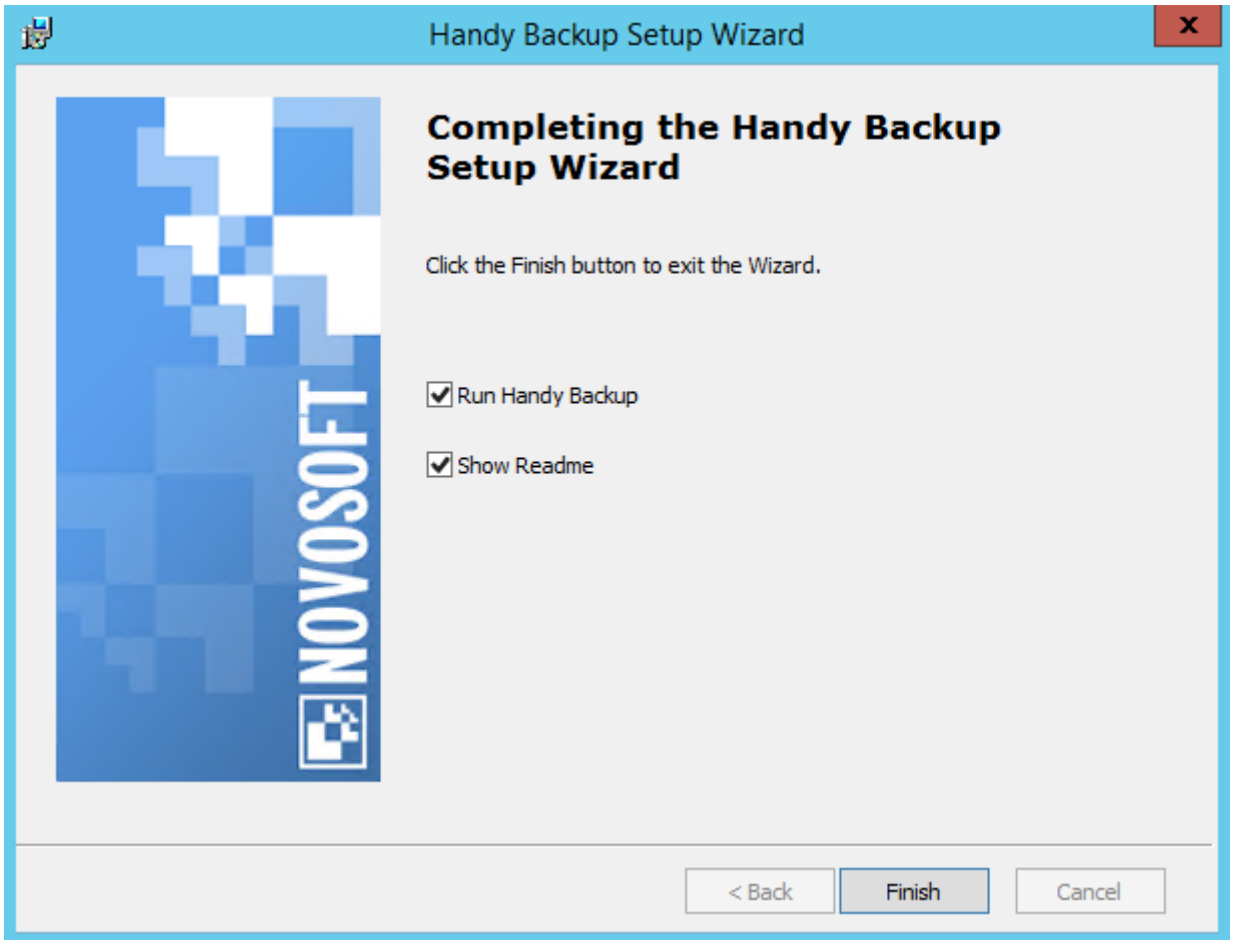
3. Click **Install** to start the installation.

4. If you have User Account Control enabled, then you will be prompted to confirm the installation. Click **Yes**.



The installer copies program files on the installation folder.

5. On the final screen of the Setup Wizard, select if you want to start the program after installation, and if you want to see the Readme file with brief description of the program's features.



6. Click **Finish**.

The program will start from the user account under which you launched the installation. This means that you will be able to back up data of this user only. To learn more about user privileges and accessing computer data, please see the Workstation section of this manual.

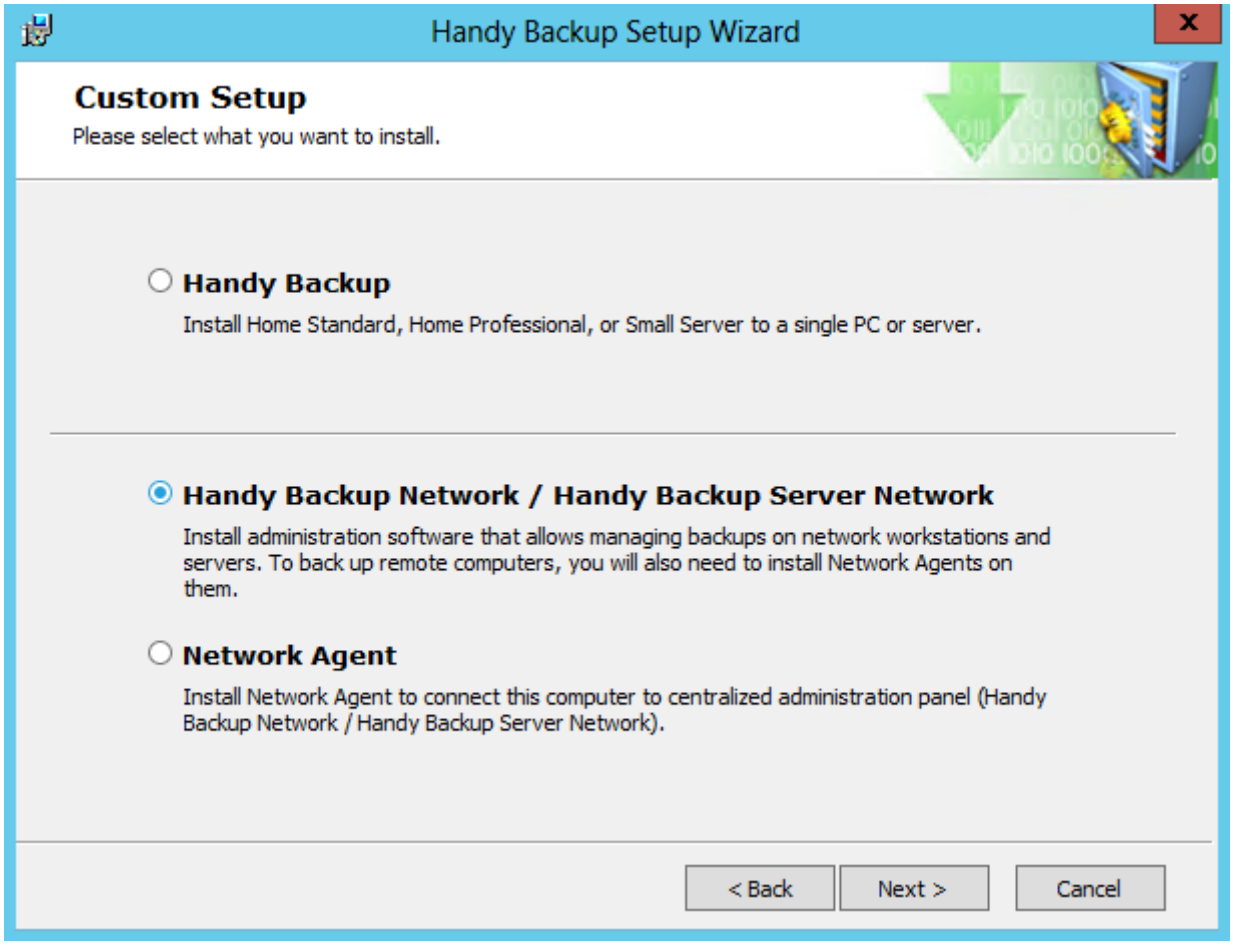
2.3 Installing Network Editions (Network or Server Network)

Network editions of the program (both **Network** and **Server Network**) allows controlling backups of multiple computers from one control point. The scheme is as follows:

- **Management Panel** is installed on one computer (usually, administrator's machine) that will be used to control backups on networked workstations and servers.
- **Network Agents** are installed on all computers that you want to back up.

Installation of network editions is similar to installation of standalone editions:

1. On the **Custom Setup** step of the Setup Wizard, select **Handy Backup Network / Handy Backup Server Network**, and then click **Next**.



2. Select an installation folder, and then click **Next**.
3. Click **Install** to start the installation.
4. If you have User Account Control enabled, then you will be prompted to confirm the installation. Click **Yes**.

The Management Panel will be installed on your computer.

5. On the final screen of the Setup Wizard, select if you want to start the program after installation, and if you want to see the Readme file with brief description of the program's features.
6. Click **Finish**.

Besides network data, the Management Panel from the Server Network edition can be used to back up and restore data of a local PC. Technically, it is the same client-server scheme, in which a Network Agent installed locally, rather than on a remote computer. Local Network Agent always started from the user account under which you launched the installation. To learn more about user privileges and accessing computer data, please see Workstation.

After you install the Server editions, you need to install Network Agents (next chapter).

2.4 Installing Network Agents

The **Network Agent** is a client software for both **Network** and **Server Network** editions. The installation of network editions follow the scheme described below:

- Install the **Management Panel** of a network edition on administrator's computer. It will be used to control backups on **Workstations** and remote servers.
- Install **Network Agents** on all computers in your network you want to back up. They will provide **Management Panel** with the access to remote data.

2.4.1 Pre-configuring Network Agents Automatically

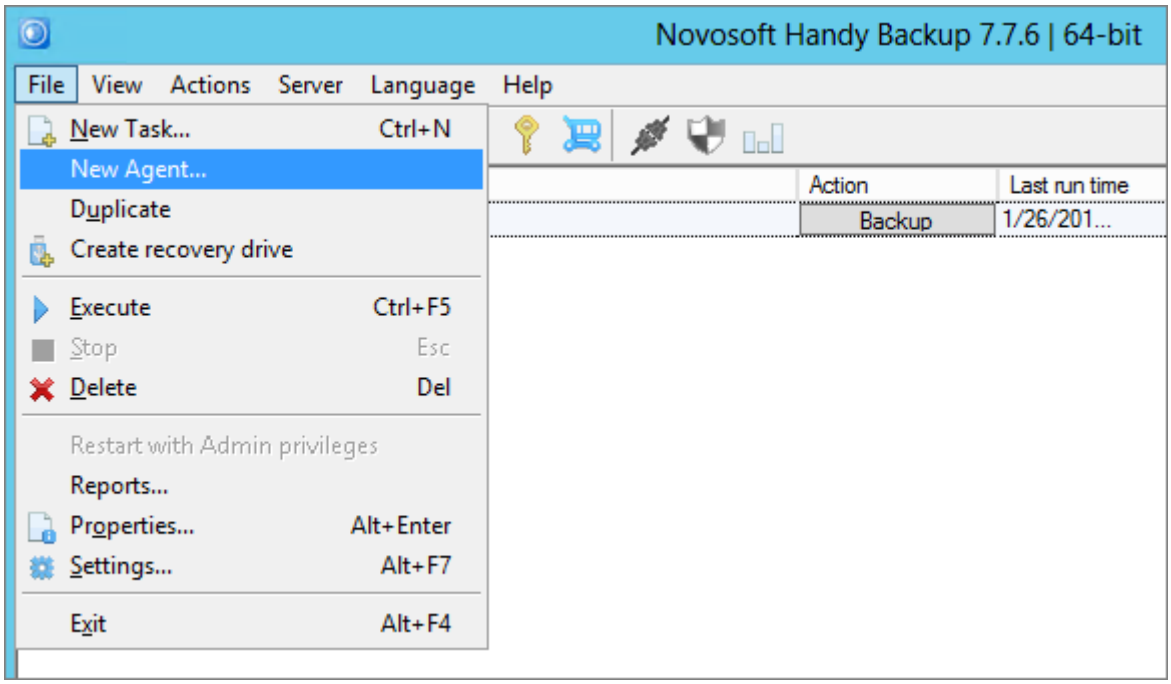
Centralized installing of Handy Backup on domain-linked machines is realized via running a "quiet" installation of software package file (.msi) on a remote computer, specifying all the parameters needed, or through an automatic setup from the Management Panel.

Note: We are recommending to do all actions described below on an administrator machine and under the account of domain administrator!

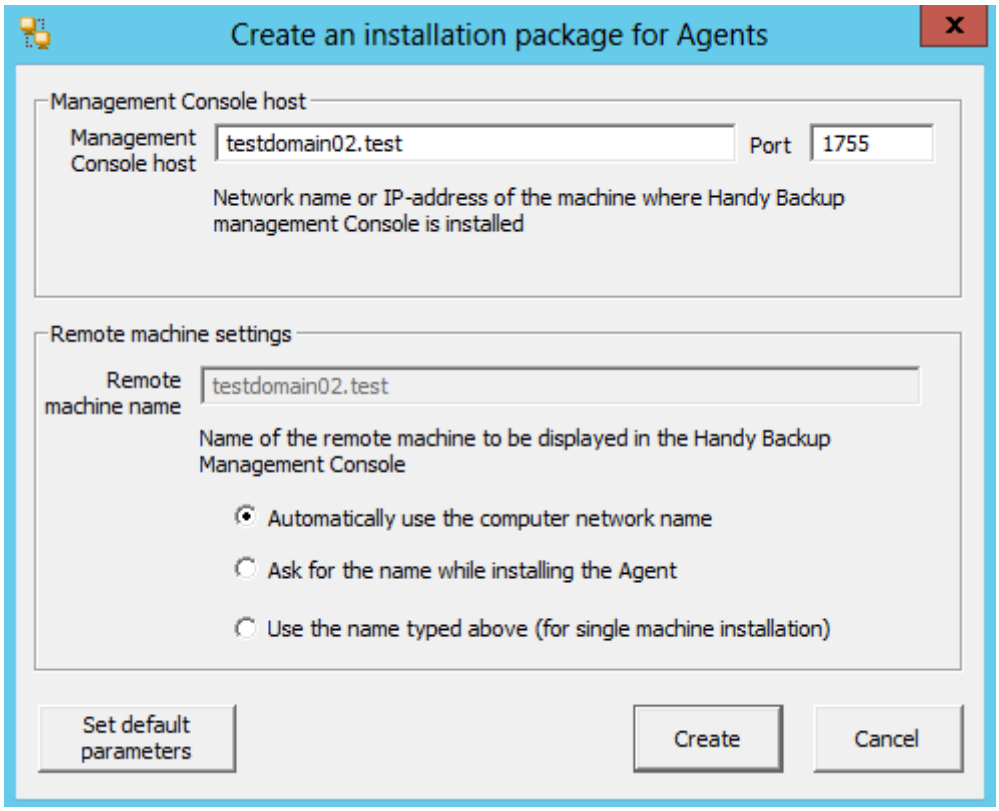
Obtaining and Pre-Configuring a Network Agent

To pre-configure a copy of a Network Agent for some remote machine, please follow the next instruction:

1. Download and install the Management Panel.
2. Open a "File…" menu and find the "New agent…" option.



3. You will see a window prompting you to create and download a new copy of a Network Agent.



Note: You can click on the "Set default parameters" button to provide the typical settings for most Network Agents.

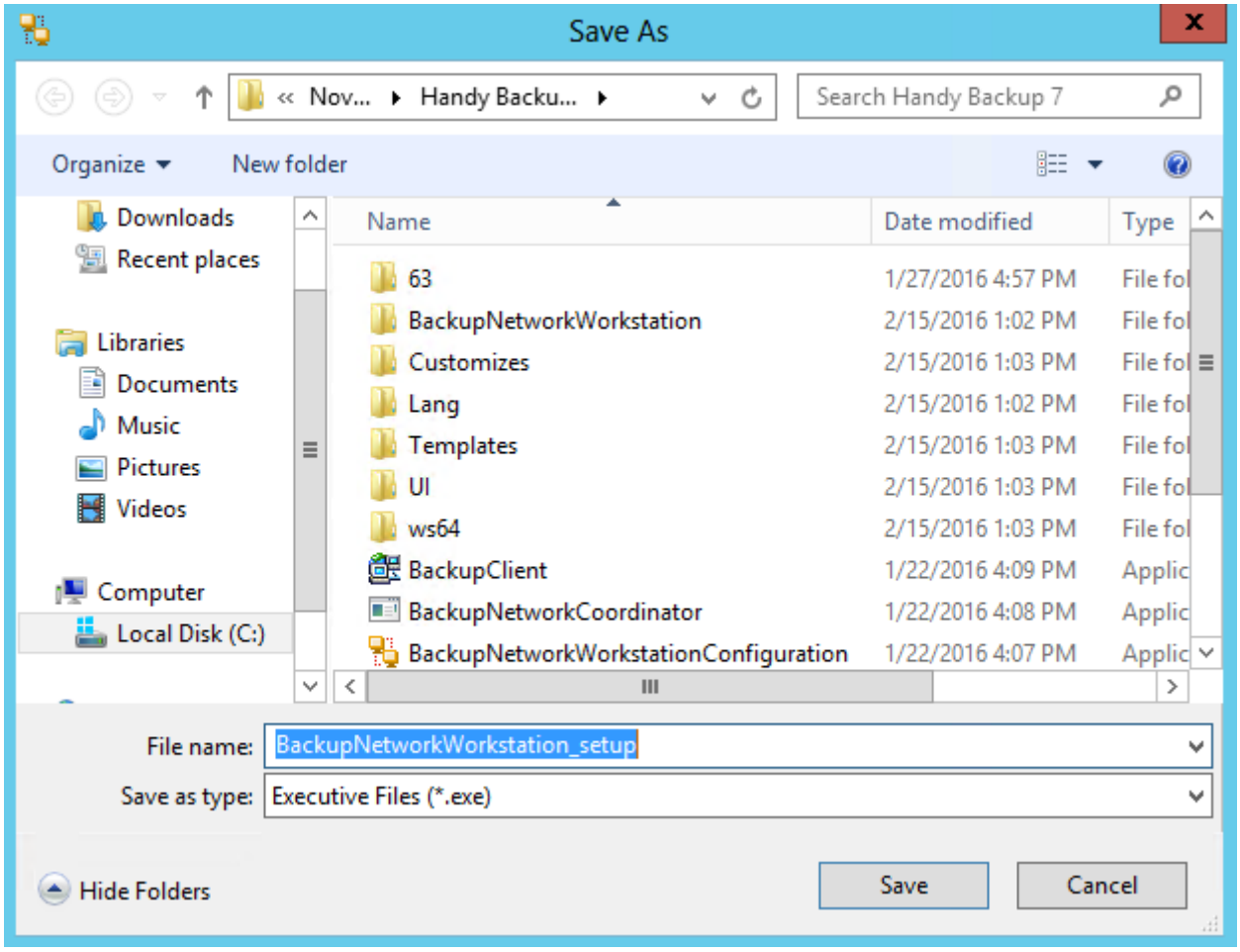
4. Please enter the server name for a host of your Management Panel.

5. On the next field, please enter the name of a remote computer for a Network Agent.

6. You can select a name of your remote computer for a backup console from the three options:

   - Use a network name of the remote computer;
   - Call for a name later (when the program will run);
   - Use a name you will provide by the step 5 of this sequence.

7. The program will generate the installation file for your Network Agent. Choose where to save it.



8. Now you can distribute and install the Network Agent on your remote machine by any way you see appropriate.

9. After the installation, the name of a newly connected remote machine will appear on the Management Panel list of computers. If you does not see a machine in the list, please try to troubleshoot the problem.

2.4.2 Manual Installing and Configuring Agents

The **manual installation of Network Agents** provides an option of manual control over all aspects of installation and configuration of any Network Agent on a particular machine.

Causes for Manual Installation

You can have a need for configuring and installing Network Agents manually in some cases including:

- If some troubles emerge when configuring an Agent for a particular machine automatically;
- When you set up a remote Network Agent in a quite non-typical network architecture;
- To achieve an access to Linux-based remote machines;
- For fine-tuning some extra options such as using proxies and bridges, firewalls or other similar software.

For all these cases, you can install and configure your Network Agents manually. Read the next sub-chapters for taking detailed instructions about the manual installation and setup.

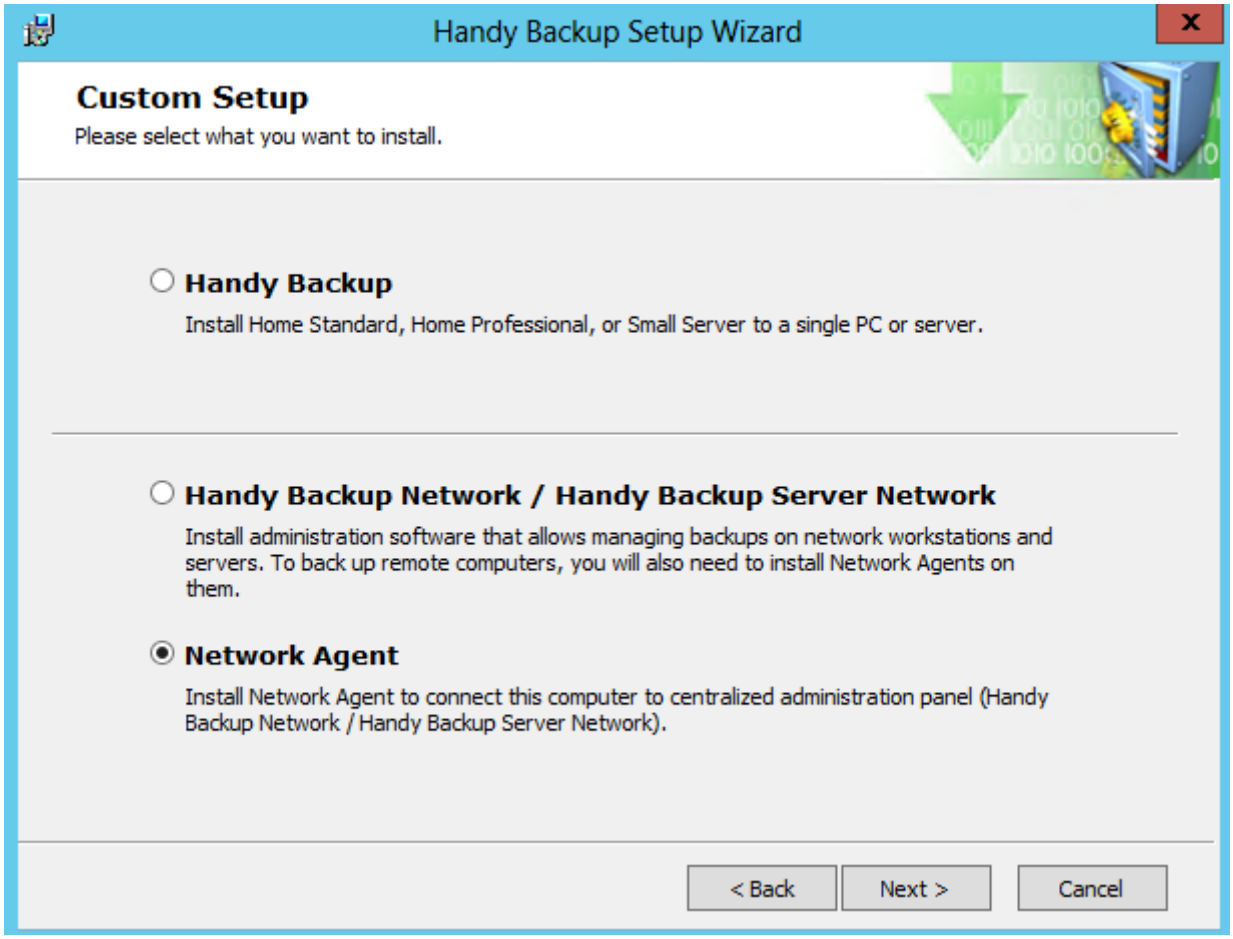
Selecting Installation Type

You can install Network Agents on remote machines by the two ways: locally or in a centralized mode. This chapter is about a local installation procedure. Please refer to the corresponding chapter for instructions describing a process of centralized installation.

Installing a Network Agent

To install a Network Agent, follow these steps:

1. On the **Custom Setup** step of the Setup Wizard, select the **Network Agent** option, and then click **Next**.

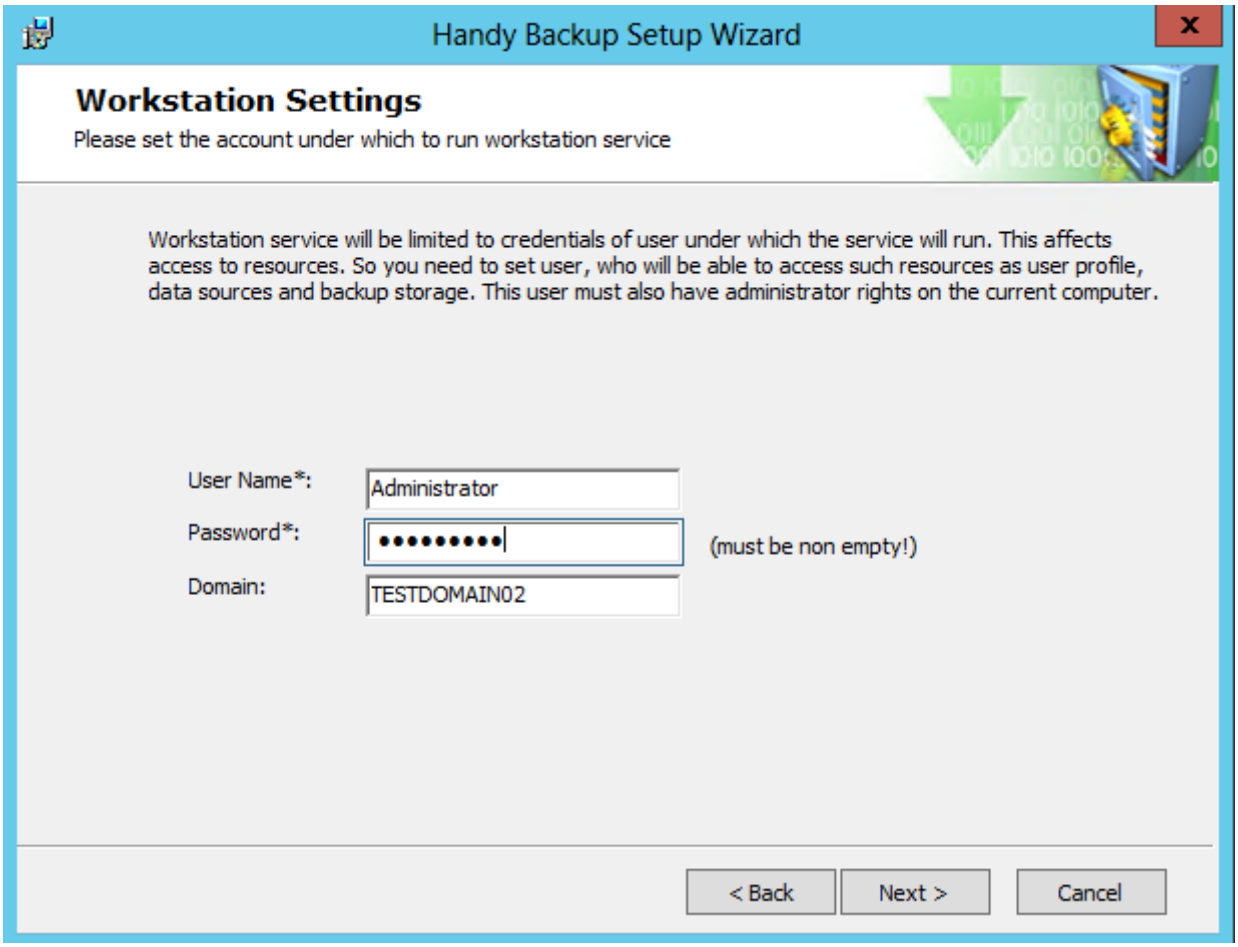


The **Network Agent Settings** window will appear.

2. On the **Network Agent Settings** step, select user account under which Workstation will be installed.

Network Agent is always launched from a certain user account, and allows backing up data that can be accessed by this user only.

- **Local System** – use this option to run the Network Agent from the SYSTEM account, i.e. you won't be able to back up Windows Libraries, Outlook and other user-specific data.
- **Custom Account** – use this option to run the Network Agent from a specific user account with its own access rights and privileges.



3. Click **Next**.
4. Select installation folder, and then click **Next**.
5. Click **Install** to start the installation.
6. If you have User Account Control enabled, then you will be prompted to confirm the installation. Click **Yes**.

The program is installed on your computer.

7. On the final screen of the Setup Wizard, select if you want to see the Readme file with brief description of the program's features.
8. Click **Finish**.

After the installation, you will need to configure the Network Agent, so it can register on a networked **Management Panel** of some network edition, and allow it to access its data. Please see the next chapter for details.

Configuring Network Agents Manually

Technically, the file **workstation.hbl** is a common XML file in which all parameters are available in a simple and readable form.

Specifying Server Settings

To specify **Server** to connect to, follow these steps:

1. Open the Network Agent settings file (**Users\[Username]\AppData\Roaming\Novosoft\Handy Backup 7\Settings\Services\workstation.hbl**) with any text editor.
2. Find and modify the **CoordinatorHost** parameter:

   <param name="CoordinatorHost">localhost</param>

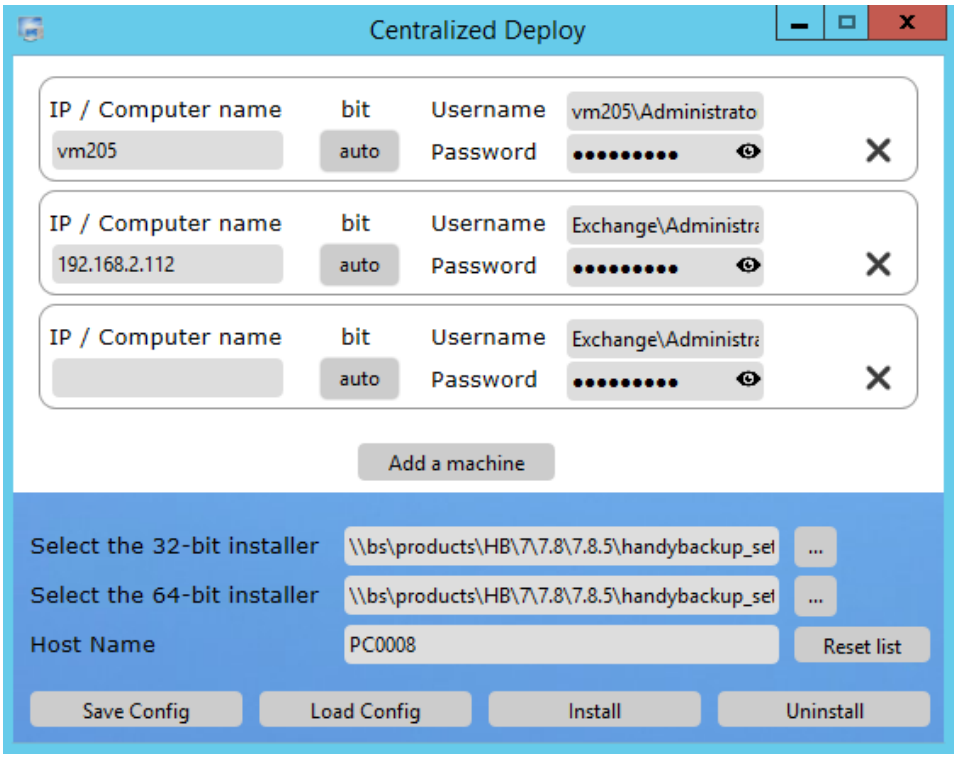
   For example, if your Server is located at 192.168.1.100, you need to change it as follows:

   <param name="CoordinatorHost">192.168.1.100</param>
3. Restart the Network Agent.

To restart the Network Agent, go to Windows services, find a service named **Novosoft Backup Network Workstation 7**, and restart it.

2.4.3 Centralized Installation of Network Agents with Centralized Deploy

Handy Backup allows centralized deployment of Network Agents via the dedicated Centralized Deploy utility. To the reference, see the main utility window on the next screenshot.



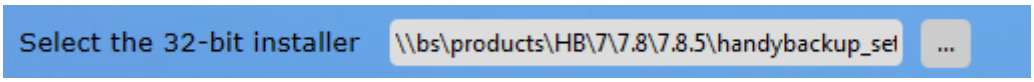
To perform the centralized deployment, please follow the instruction listed below.

1. Before you begin, please download the files you need, and then unpack the *Centralized Deploy* utility on the machine you will use as the backup management console. You can find all the files you need here:

   - CentralDeploy.zip
   - 32-bit Agent package
   - 64-bit Agent package

Caveat: You must unpack the Centralized Deploy utility to a consistent folder, making no attempt to distribute the content of this archive by different folders.

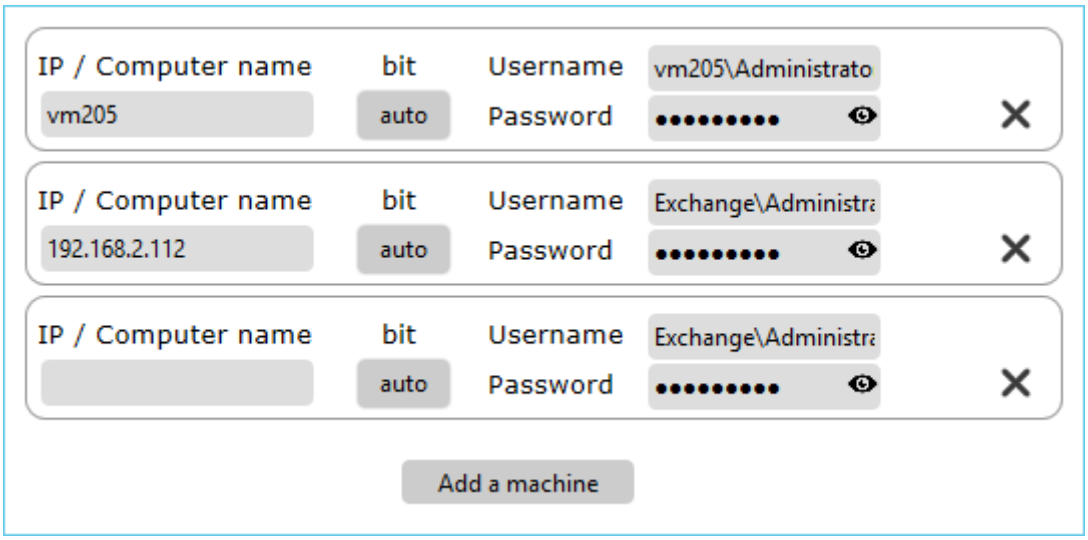
2. Select a path to the installation files. By default, this is the path
   "C:\Program Files (x86)\Novosoft\Handy Backup 7\BackupNetworkWorkstation\Packet\Distrib" or
   "C:\Program Files\Novosoft\Handy Backup 7\BackupNetworkWorkstation\Packet\Distrib"
   (depending of the current OS 32- or 64-bit architecture) in the Windows Explorer.



3. Type the name (or the IP address) of a host (management console) machine

4. In the next fields, type domains or names of machines and then usernames for installing the Network Agents. Select a type of installation (32- or 64-bit) for each machine if you need it (by default, the utility will select between 32-and 64-bit for each target OS).

Note: This installation requires typing domain names or machine names before the username in the account! In addition, adding a new machine will copy a username and a password from the previous account, which is very useful when the administrator's account is the same for all computers.



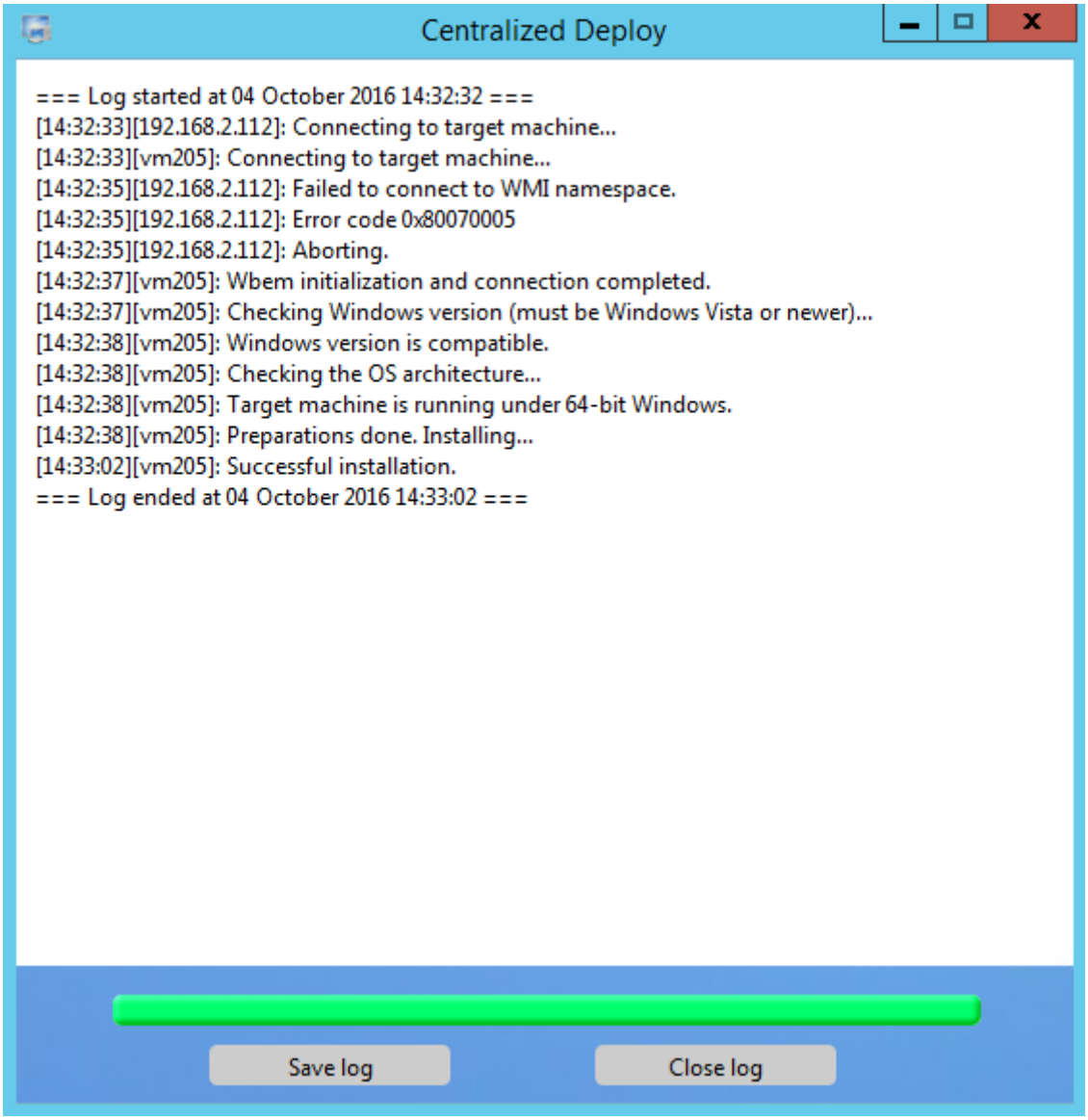
Please consider that the Centralized Deploy utility keep all the passwords in the encrypted format!

5. To clear a list of machines, click the “Reset list” button; it will erase all data you entered.

6. You can save the setup configuration and restore it later using the appropriate buttons.

7. Now your utility is ready to install. If you entered correct data, start the installation.

8. The program will write a log file during installation. (You can save this log for analysis.)



This is all. Please configure your network edition of Handy Backup with the Network Agents you just install to remote machines!

2.4.4 For Configuring and Installing Network Agents Manually

Step 1. Before the Manual Installation

To **start setting up** Handy Backup on remote computers, you need the next things:

1. Pack of setup files (see below);

2. Actual version of Handy Backup installation package;

3. PSExec utility.

Setup Pack

The **pack of files you need** for installing contain of:

- This manual;
- The file **remote_workstation_deploy.bat;**
- The file **ComputersList_64bit.txt;**
- The file **ComputersList_32bit.txt.**

You can download setup files there: download network agent setup files

If you lack any of these files, please call for our Handy Backup manager or send us E-mail using this contact: sales@handybackup.net.

Handy Backup Installation Package

The most current version of Handy Backup distributive is available on official site: handybackup.net/download

You can download installation packages directly using these links:

- handybackup_setup.msi - 32-bit installation package.
- handybackup_setup_x64.msi - 64-bit installation package.

Note: Download the installation package that is appropriate for your OS (i.e. 32-bit for 32-bit Windows editions and 64-bit for 64-bit Windows)!

The Management Panel and Network Agents are installing from the common package.

PSExec Utility

PSExec utility can be downloaded using the next link:
http://technet.microsoft.com/en-us/sysinternals/bb897553.aspx.

Step 2. Installation of Management Panel

To install the Management Panel on your main computer, use the next sequence of actions:

1. Run the Handy Backup installation.
2. Select "Handy Backup Network / Handy Backup Server Network" (the second option in a list) as a type of installation.
3. On the next step named "Workstation Settings" choose installing under the account of network administrator, giving appropriate name and password.

This sequence allows you to install Management Panel successfully.

Step 3. Installation of Network Agents

To install Network Agents on remote computers linked in domain, follow these guides:

1. Create the directory **c:\psexec** and extract in this directory the utility PSExec from archive.
2. Create the directory **c:\remoteinstall** and another directory called **c:\remoteinstall\hb_distributives** inside it.
3. Place files **ComputersList_32bit.txt, ComputersList_64bit.txt** and **remote_workstation_deploy.bat** into the directory **c:\remoteinstall**.
4. Place the 32-bit and 64-bit Handy Backup installation packages into the directory **c:\remoteinstall\hb_distributives** and rename it to **handybackup_32bit.msi** and**handybackup_64bit.msi**, respectively.
5. Edit files **ComputersList_32bit.txt** and **ComputersList_64bit** with any text editor, appending in these files network names or IP addresses of remote computers where you plan to install Network Agents.

In **ComputersList_32bit.txt** file listed all machines where 32-bit version of Network Agent will be installed, and the file **ComputersList_64bit.txt** contains the names of machines designated for 64-bit version.

Every name or IP address in these files must be placed in a separate string!

6. Edit the batch file called **remote_workstation_deploy.bat**, inserting appropriate values for these next variables in it:

DOMAIN_AND_USER_FOR_REMOTE_CONNECTION="[domain_name]\[user_name]"

PASSWORD_FOR_REMOTE_CONNECTION=[user_password]

These two variables contain user data of account under that the connection and remote installation will be executed.

…

HB_COORDINATOR_HOST=[host_IP_address]

This variable contains a host IP address of the computer containing Management Panel.

…

WORKSTATION_SERVICE_USER=[user_name] WORKSTATION_SERVICE_DOMAIN=[domain_name] WORKSTATION_SERVICE_PASSWORD=[user_password]

These three variables contain user account data under which the Network Agent will be opened on remote computer.

7. Share the directory **c:\remoteinstall\hb_distributives** with user specified in **DOMAIN_AND_USER_FOR_REMOTE_CONNECTION** making it accessible to read by this user.
8. Run the Console application **(CMD)** and go to the directory **c:\remoteinstall:**
   cd c:\remoteinstall

Now run the installation batch file called **remote_workstation_deploy.bat**

As all Network Agents are installed, Handy Backup is prepared for work.

Frequently Asked Questions

***Question (Q):* What if Network Agents were installed before on remote computers?**

Answer (A): We are recommending uninstalling old versions of Network Agents before new installation.

***Q:* Will I need to configure some extra parameters after the installation of Network Agents?**

A: As a general rule, no extra actions will required, as all the parameters needed are provided during the installation process.

***Q:* How to install Handy Backup Network Agents on Linux-based machines?**

A: The separate instruction for Linux Network Agents is existed. Tell us please if you need a copy of one.

***Q:* What if some machines where I plan to install Network Agents are not a part of domain?**

A: These computers can be set up separately. Call us please for special instructions of installing Handy Backup Network Agents on non-domain machines when you need it.

Alternate Methods of Remote Installation

These are some other methods of installing Network Agents on remote computers existed:

1. Use no shared network resources for distribution. Instead the installation package copied as whole on a target computer using PSExec with a key -c:

psexec -c

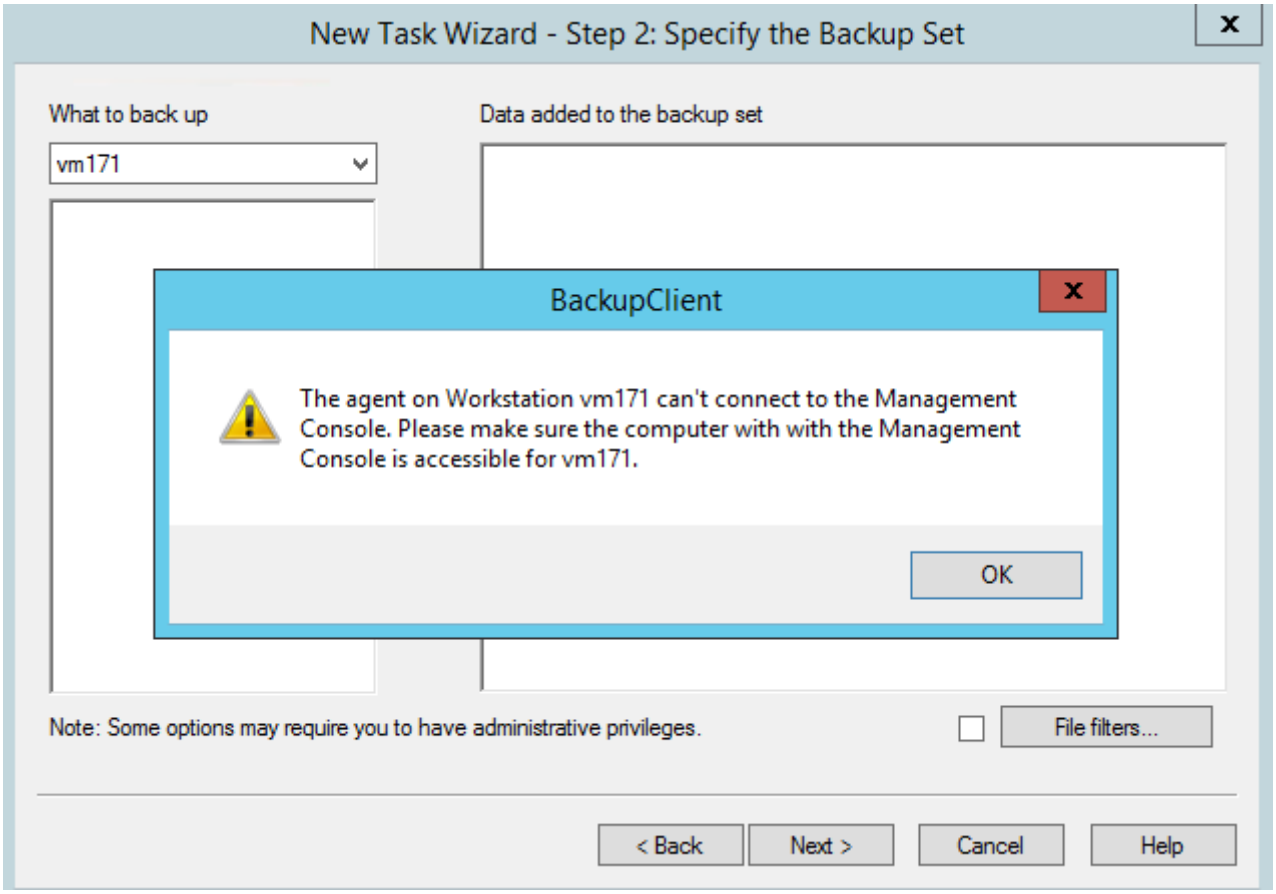
2. No PSExec or scripts are used. Handy Backup is installed manually on all the machines in the network.

2.4.5 Troubleshooting Problems with Network Agents

If some remote machine connected to a network edition of Handy Backup cannot provide an access to some remote computer data through the Management Panel, then you often can solve these problems without much effort or time loss.

One of the two situations typically indicates these problems:

- the remote computer is visible via the Management Panel but cannot provide an access to its data via the network;



- the Management Panel does not "see" the computer (the particular remote machine does not appear in the drop-down list of objects).

Solving Problems after the Automatic Installation

If you obtain your Network Agents through a Management Panel menu option, it generally requires no troubleshooting. Any computer with the Agent installed must appear on the Step 2 of a new task wizard, under a name given to it during the Network Agent pre-configuring.

To ensure this result, you may change the user account under that a Network Agent will run. To do it, please:

- Go to the "Management" section of the "Computer" menu, then switch to "Services";
- Find the Network Agent service (named "Novosoft Backup Network Workstation" in the list of services);
- Change a user of this service from "Local System" to some other user name available in the system (preferably, with administrative privileges).

Note: If a user account selected to run the Network Agent has administrative privileges, it can solve many possible problems with data access without an additional interference from a user.

If this operation is unsuccessful, please check if the name given for your Network Agent workstation corresponds to a name that you set for an Agent during the configuration. (If it does not work, you can switch to an IP address instead of a name.)

For most cases of inconsistence, these steps will resolve a problem completely. If the remote computer with a running Network Agent still has not appearing in your Management Panel, please refer to the steps of manual troubleshooting described in this instruction.

Test Your Network

First, ping the remote machine in question entering the following command line on a computer containing Management Panel:

```
ping <IP addr>
where <IP addr> is an IP address of the remote machine.
```

Repeat this step by attempting a ping to the computer with Management Panel from the remote machine.

If the ping failed, then the problem is possibly lies on a configuration of your local network. Please contact with your network administrator to solve the problem. Otherwise, you can move to Step 2.

Ensure Connecting Management Panel to the Remote Computer

If the ping in Step 1 is successful but you're still receiving a message like "Can't connect to the remote workstation" or "The session is broken", then it is possible that your remote computer has been accessed by IP address only. In this cause, open the Registry on the problem side using **Regedit** or whatever software you prefer, and add the parameter --HostNameInIOR <IP or name> into the Registry:

- For the message "**The session is broken**", reconfigure Management Panel, and the entries changing are:
  HKLM/System/CurrentControlSet/Services/NSbackupServer/ImagePath
  HKLM/System/CurrentControlSet/Services/NSbackupWorkstation/ImagePath
- For the "**Can't connect to the workstation**", set up properly the Network Agent adding the parameter listed above to this entry only:
  HKLM/System/CurrentControlSet/Services/NSbackupWorkstation/ImagePath

After changing the Registry, restart following services:

- For the Management Panel - "Novosoft Backup Workstation 7" and "Novosoft Backup Server 7".
- For the Network Agent – "Novosoft Backup Workstation 7" only.

You can find and restart these services using Windows controls at the following sequence: Control panel --> Administrative tools --> Services --> Novosoft Backup Workstation 7 (Novosoft Backup Server 7).

If all these means were unsuccessful, go to Step 3 and attempt to configure your Network Agent properly.

Configure Your File workstation.hbl

If the remote machine pings both by name and by IP address but remains inaccessible through Management Panel and does not appear in the drop-down list of backup objects, then it is completely possible that the Network Agent has not been configured correctly.

To set up the file **workstation.hbl** properly, follow these simple instructions:

1. If you install the Network Agent as the particular user (such as a network administrator), you can find the file **workstation.hbl** by the following path:
   - Using Windows 8, Windows 7 or Windows Vista or Windows Server started at version 2008 –
     C:\Users\[username]\AppData\Roaming\Novosoft\Handy Backup 7\Settings\Services\
2. If you install the Network Agent as Local System, then this file will be located at:
   - For all modern versions of Windows started at Windows Vista, or Windows Server editions started at Windows Server 2008 –

C:\Windows\System32\config\systemprofile\AppData\Roaming\Novosoft\ Handy Backup 7\Settings\Services\

To set up Network Agent properly, just set proper values of fields **Name** and **CoordinatorHost** located at the beginning of this file.

- The **Name** field is the name of network computer managed by Network Agent; this name can be selected later in the Management Panel.
- The **CoordinatorHost** field is the name or IP address of computer serving as host to the Management Panel.

After changing the file workstation.hbl, restart the workstation service using the sequence of controls:
Control panel --> Administrative tools --> Services --> Novosoft Backup Workstation 7.

Restarting Software Components

After completing operations described above, you will ensure the stable job of your remote backup. To be sure that all changes will be applied, restart manually all related services on both sides (Management Panel and Network Agent, respectively) as described in the Step 2.

If you still have any problems, please contact our support team: support@novosoft.net

2.5 Installing Handy Backup under OS Linux

For now, the only type of tested Linux distributives are those based on Debian/Ubuntu package types (i.e. on *.deb* files). Please read the instruction carefully before installing Handy Backup components!

Adding a Repository

For Debian/Ubuntu, you must firstly add a repository to the list, to avoid the warnings about missing key during installation. Download a key using the terminal command:

wget packages.handybackup.net/hb.pub

Add this key to the *apt* utility with a command:

sudo apt-key add hb.pub

For Ubuntu 14.04, add the next string to the end of the file */etc/apt/sources.list*:

deb http://packages.handybackup.net/trusty trusty main

For Ubuntu 16.04:

deb http://packages.handybackup.net/xenial xenial main

Then execute the next command:

sudo apt-get update

Now you are ready for installation. To install both Server and Workstation components of Handy Backup, please execute the following command:

sudo apt-get install hb7

For installing the Workstation component only, the command must be:

sudo apt-get install hb-ws

Executing and Controlling the Program under OS Linux

For controlling Handy Backup, you will need Handy Backup Client. You can either use a remote Windows machine with a Handy Backup Client installed to control a Linux host, or install a Client directly upon Linux using Wine.

Using Remote Control

As a prerequisite, add an IP address and a host name of a machine containing Handy Backup Server to the *file /etc/hosts*. (To check an IP address, run ifconfig, and then execute the command hostname.)

An example of a string added for a sample PC003 server:

192.168.2.223 PC003

Restart Handy Backup:

sudo service hbserver restart && sudo service hbworkstation restart

Then run Handy Backup Client. In the appearing window, enter an IP of a computer and click "Apply". After all, click “Connect”.

Installing and Running under Wine

To obtain Wine, just install an appropriate version:

sudo apt-get install wine

After installing Wine, you can install Handy Backup.

1. Run a Handy Backup installation package for Windows (HandyBackupClient.msi)
2. Follow the sequence attempted by the Installation Wizard, until finishing setup.

To start a Client via Terminal, execute the next command:

wine "C:/Program Files/Novosoft/Handy Backup 7/BackupClient.exe"

As an alternative, use the icon appearing in the “Applications” menu.

If you are Installing the Workstation Only

This action requires some extra configuration measures. The default location for all configuration and options files is the /var/lib/.hb7 directory.

Open the configuration file **/var/lib/.hb7/Settings/Services/workstation.hbl**. Then, in the field CoordinatorHost you must write a name of a computer with the operating Management Panel, a main server for Handy Backup network editions.

Note: The configuration file is a common XML file. You can modify it by any text editor such as vi or emacs. Check also that you have rights to modify this file.

After modifying the file, restart the workstation using the following command:

sudo service hbworkstation restart

Appendix: The List of Supported Commands

Server:	Workstation:
sudo service hbserver start **sudo service hbserver stop** **sudo service hbserver restart**	**sudo service hbworkstation start** **sudo service hbworkstation stop** **sudo service hbworkstation restart**

2.5.1 Installing and Configuring Agents for Linux

Installing the Network Agent on a Linux Workstation

At first, add the repository containing Network Agent to a list of eligible repositories on your Linux:

wget packages.handybackup.net/hb.pub

Add this key to the apt utility with a command:

sudo apt-key add hb.pub

For Ubuntu 14.04, add the next string to the end of the file */etc/apt/sources.list*:

deb http://packages.handybackup.net/trusty trusty main

For Ubuntu 16.04:

deb http://packages.handybackup.net/xenial xenial main

Then execute the next command:

sudo apt-get update

Finally, install a copy of the Network Agent using the next command:

sudo apt-get install hb-ws

Configuring the Network Agent

Next, configure your Linux Network Agent. The default location for all configuration and options files is the */var/lib/.hb7* directory.

Open the configuration file **/var/lib/.hb7/Settings/Services/workstation.hbl**. Then, in the field CoordinatorHost you must write a name of a computer with the operating Management Panel, a main server for Handy Backup network editions.

Note: The configuration file is a common XML file. You can modify it by any text editor such as vi or emacs. Check also that you have rights to modify this file. After modifying the file, restart the workstation using the following command:

sudo service hbworkstation restart

2.5.2 Installing and Using Generic Java Workstation

The next instruction tells how to install and use Handy Backup JAVA Workstation in Unix-like systems.

Downloading and Installing Java Workstation

Firstly, download and install Java machine, according to the instruction provided by Java itself:

https://www.java.com/en/download/help/download_options.xml

Open the terminal and enter a command to go to the /opt folder:

cd /opt

Using wget, download an archive file containing Handy Backup Java Workstation:

wget https://www.handybackup.net/downloads/hbjavaws.tar.gz

Unpack this archive into the current folder:

tar -xzf hbjavaws.tar.gz

Setup

To provide server parameters (i.e. parameters of a computer containing the Management Console) for linking with a Network Agent, use the next sequence of operations:

Open the file hbjavaws for edit:

sudo nano /opt/hbjavaws/hbjavaws

Find and change the parameter called **HOST**:

HOST=localhost

For example, if an IP address of a Management Console is 192.168.1.100, then you must change the HOST parameter in a next way:

HOST=192.168.1.100

By default, the script presumes the Network Agent running from the folder /opt/hbjavaws. If you are changed the default folder, provide the new path by changing the HOME parameter:

HOME=/opt/hbjavaws

Auto Running

To add the Network Agent to the list of automatically starting software, you must create a symlink for the script hbjavaws in the /etc/init.d folder, and add this symlink into the list of auto start.

In this example, the location of the subfolder containing a Network Agent is the /opt/hbjavaws/ folder. To create a symlink, please use the command:

sudo ln -s /opt/hbjavaws/hbjavaws /etc/init.d/

The next command will add this symlink to the list of auto starting programs:

sudo update-rc.d hbjavaws defaults

To remove the symlink from auto start please use the next command:

sudo update-rc.d -f hbjavaws remove

Controlling the JAVA Workstation Network Agent

To start a Network Agent, please use the command:

sudo service hbjavaws start

To stop the Network Agent, please enter this command:

sudo service hbjavaws stop

Finally, to restart the Network Agent , please apply the next command:

sudo service hbjavaws reload

2.6 Updating from Earlier Versions

Handy Backup is a live product that is regularly updated. We add new features, fix bugs, improve performance, introduce GUI optimizations and make other changes, releasing updates every 1-2 months. You can always get the latest version from the product website: handybackup.net/download

At present, all updates need to be made manually. To do it, follow these steps:

1. Check that there is a new version available on the website.
2. Uninstall an old version.
3. Download and install the new version.

All settings and tasks will remain unchanged.

4. If you are using the **Network** or **Server Network** edition, carefully check if there are any special update instructions. We do our best to maintain backward compatibility, but in rare cases you may need to reinstall Workstations, so they can work with the latest Server version.

Updating from Version 6

Since version 6, the software has undergone a major upgrade, and there is no way to transfer or convert tasks between versions.

Recommended way of migrating from version 6 to version 7 is as follows:

1. Download and install the latest version.
2. Run two programs simultaneously.
3. Open task properties in version 6, and create a similar task in version 7.
4. Repeat step 3 for all tasks of the old version.

To learn more about creating tasks, please see Managing Data.

2.7 Uninstalling

To uninstall the software, use common Windows methods:

- Open the program's folder in **All Programs**, and then click **Uninstall Handy Backup**.
- Open Control Panel, and click **Uninstall a program** in the **Programs** section. Find Handy Backup in the list, select it, and then click **Uninstall** on the toolbar.

After you select to uninstall the program, follow the steps of the Wizard.

When you uninstall the program, all settings, tasks and registration information are left on the computer. If you decide to install it again (e.g. if you are updating to a new version), you won't need to create them again.

3 Registration

During the first 30 days after installation, you can use all features of the software without any limitations. When the trial period expires, you will need to register the program. Exact set of features you can use after registration is defined by your registration number.

Obtaining Registration Number

- The exact functionality of the program after registration is defined by the registration number. Each number is unique and depends on the edition that you purchase (Standard, Professional, Small Server or Server Network).

  It is delivered to you via e-mail immediately after the payment is processed. To order, please refer to the Order section.

- When you register Handy Backup, some of its features may stop working (as compared to the trial version). This applies to all features that are not included into the purchased edition.

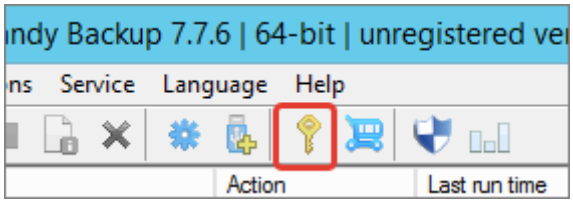
If at a later time you encounter the need to use the functionality that is unavailable, you can always enable it by upgrading your registration number. See Upgrades for details.

Registration can be made in a “common” way, over the Internet, and via e-mail.

Registering over Internet

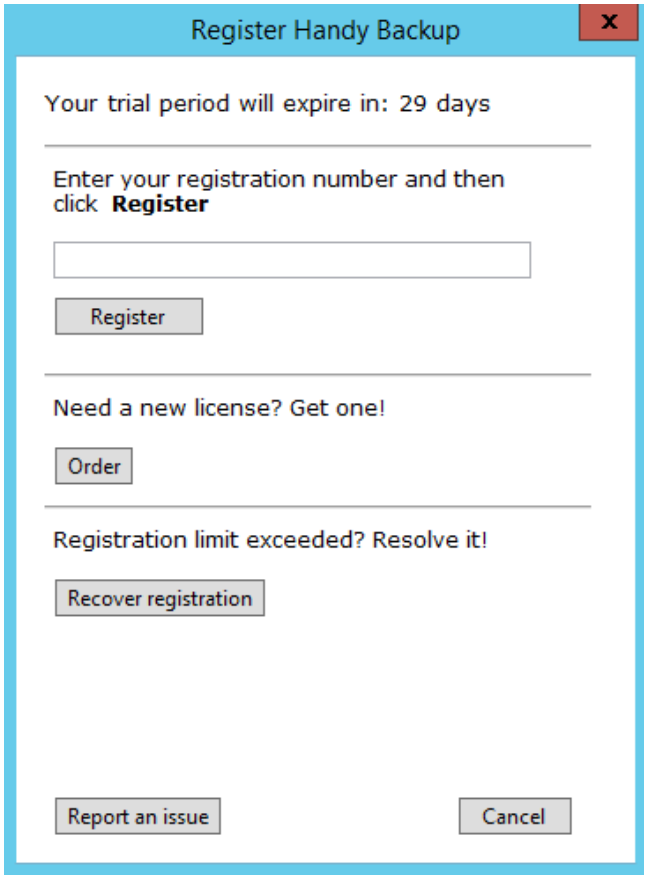
To register the program, follow these steps:

1. Click the **Register** button on the program’s toolbar.



   The **Registration** window opens.

Version 7, Published on October 2017
support@handybackup.net



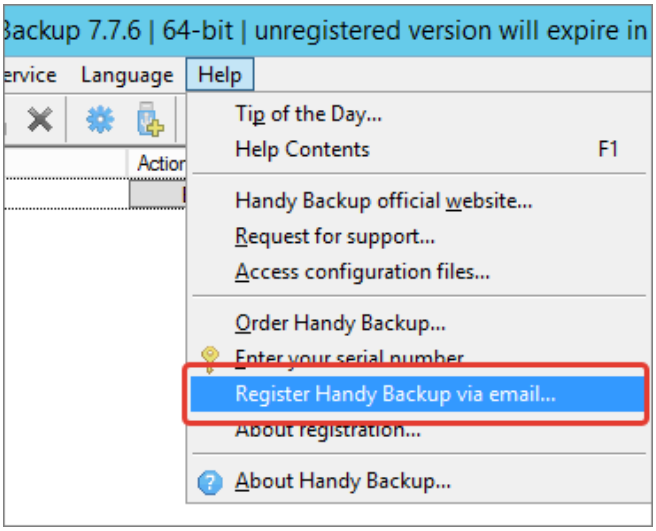
2. Enter your **registration number**, and then click **Register**.

Note: If registration doesn't succeed for the first time, it is recommended to try again. Sometimes it may fail due to connection errors.

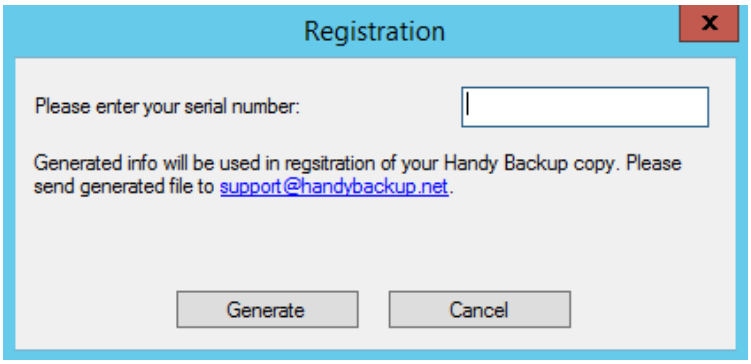
Registering via E-mail

Sometimes the direct registration is undeserved or impossible (e.g. for registering a copy for the different computer not plugged to Internet). Then you can register the program via e-mail. To do it, follow these steps:

1. Open the **Help** menu item and find the **Register Handy Backup via email...** option.

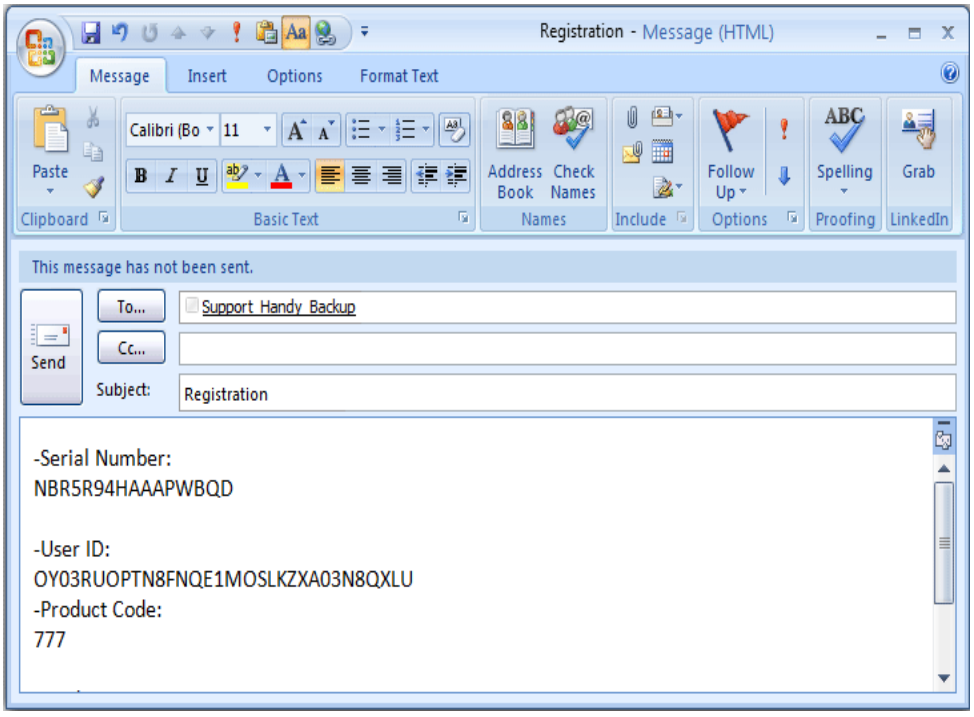


The **Registration** window opens.



2. Click **Generate** to create the email with your registering information.

The program generates a e-mail message and opens it in your default e-mail client. For example, if you have Microsoft Outlook, it will look as follows:



3. You need to **send this information** to support@handybackup.net. Upon receipt, we will send you a registration file that you will need to import into the program. The message from the support team will have all the necessary instructions.

Registering as Console Client

You can register your copy of Handy Backup when running it as a console application. To do it, just write the following console command:

hbcc.exe -r *registration_number*

Here the *registration_number* is a substitution to the registration key number of your Handy Backup license. That is all; enjoy the possibilities of your Handy Backup!

3.1 Features of Different Editions

After registration, functionality of the program is defined by your registration number. Different editions of the program have different sets of features. You can find a detailed comparison of editions at the product website: www.handybackup.net/backup-comparisons

The **Standard** edition has all the basic functionality related to files-based backup. The list of supported plug-ins* is as follows:

- Computer;
- Windows Libraries;
- User Folders;
- Outlook;
- Registry;
- Network;
- WebDAV;
- FTP;
- Online Backup;
- Google Drive;
- Dropbox
- Yandex.Disk.

***Note:** Each plug-in is basically a function of the software. The term “plug-in” on this page is used for correct technical reference only. To learn more, please see Plug-ins.

The **Professional** edition has all features of the **Standard** edition, and some advanced options. The list of additional plug-ins and features is as follows:

- Disk Image;
- System Recovery;
- Database;
- FTPS;
- SFTP;
- Amazon S3;
- Disaster Recovery module.

The **Small Server** edition has all the features of the **Standard** and **Professional** editions, and a range of server-specific functions. The list of additional plug-ins is as follows:

- MSSQL;
- MySQL;
- MariaDB;
- PostgreSQL;
- Oracle;
- DB2;
- Lotus Notes;
- MS Exchange;
- Hyper-V.

The **Network** and the **Server Network** edition allows backing up and synchronizing a number of other computers, when each of it is managed by special software utility called Network Agent. On each Network Agent, all workstation or server backing up features are available (Handy Backup installs automatically the Network Agent of a type needed - server or workstation.).

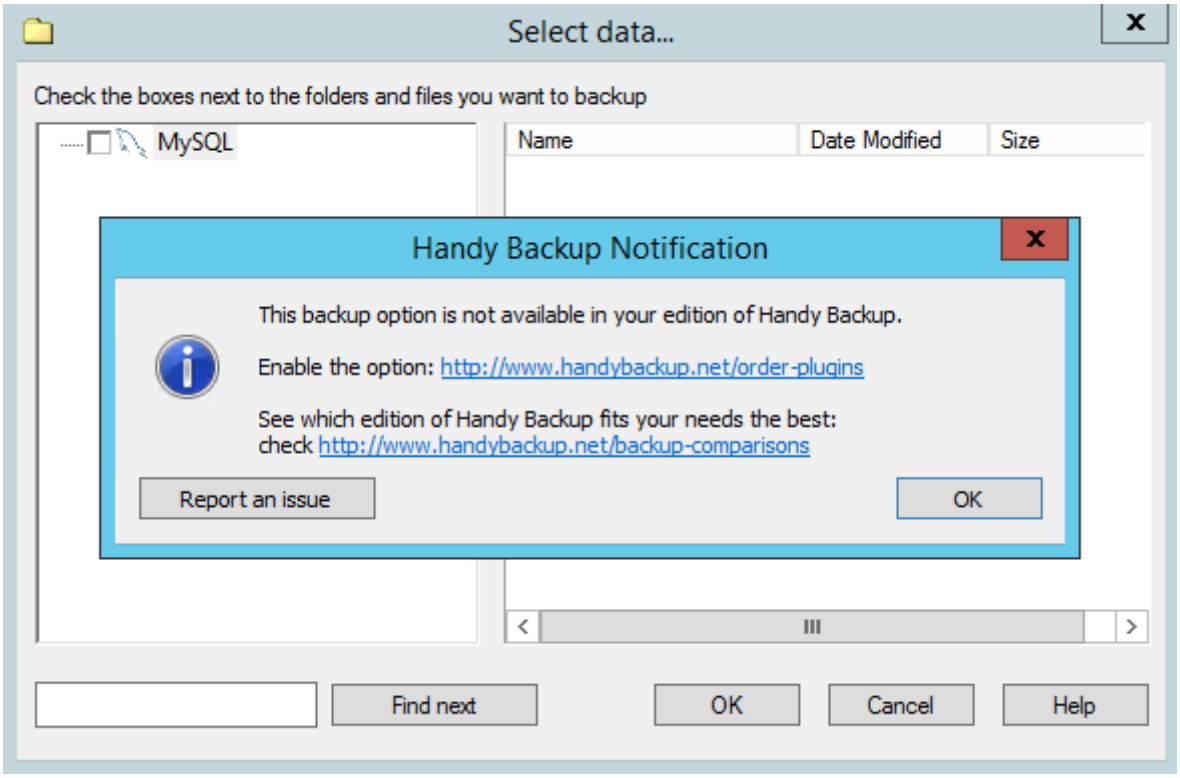
In addition, the **Server Network** edition allows the Management Panel to serve same ways as the **Small Server** edition (see above).

Note: The information above is valid for the version 7.8 (May 2016).

3.2 Activating Upgrades and Plug-ins

The program is distributed as one installation package which is common for all editions. During the trial period, you can use all of the features without any limitations. After registration, the features you can use are defined by your registration number. See Features of Different Editions for more details.

After registration, features that are not available in your edition will stop working. For example, if you registered the program with a number for **Home Standard** edition, all tasks that use plug-ins of the **Professional** and **Small Server** editions will end with an **Error** status. Attempts to use the respective options in New Task Wizard will fail.



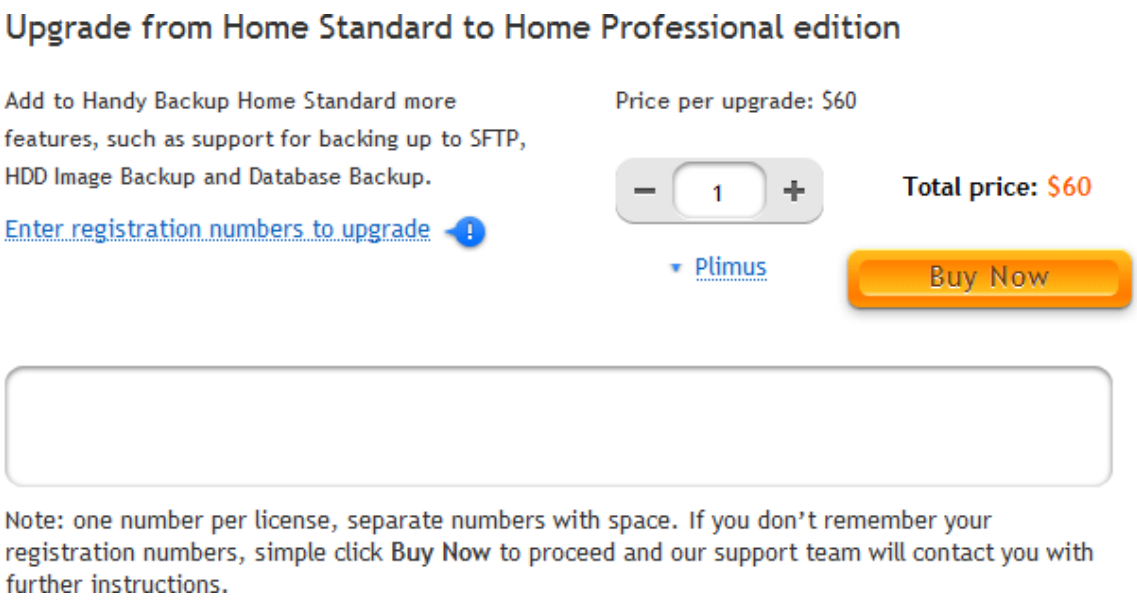
To add new features to a registered copy of Handy Backup, there is no need to install any additional software or patches. You need to upgrade your current registration number and re-register the software. General scheme is as follows:

1. Order the respective upgrade via the product website, or by contacting our support or sales team.
2. When your registration number is updated in the registration database (this generally takes no longer than 10 minutes), re-register the program to activate the new features.

Upgrading to a Higher Edition

The easiest way to upgrade the program to a higher edition is to order the respective upgrade on the product website. Follow these steps:

1. Open the **Upgrades** page on the product website: www.handybackup.net/order-upgrades.
2. In the bottom of the page, find the upgrade you need.



Note: The above screenshot may change from the time of publication (April, 2013).

3. Enter registration numbers that you want to upgrade. Make sure that the numbers correspond to the upgrades, e.g. if you are ordering an upgrade from **Home Standard** to **Professional** edition, enter a registration number of **Home Standard** edition.
4. Click **Buy Now**. You are redirected to a payment system where you can complete the order.

If you don't remember your registration numbers, or need assistance, please don't hesitate to contact our support team: registered@handybackup.net.

Generally, it takes no longer than 10 minutes before the key is updated in our database.

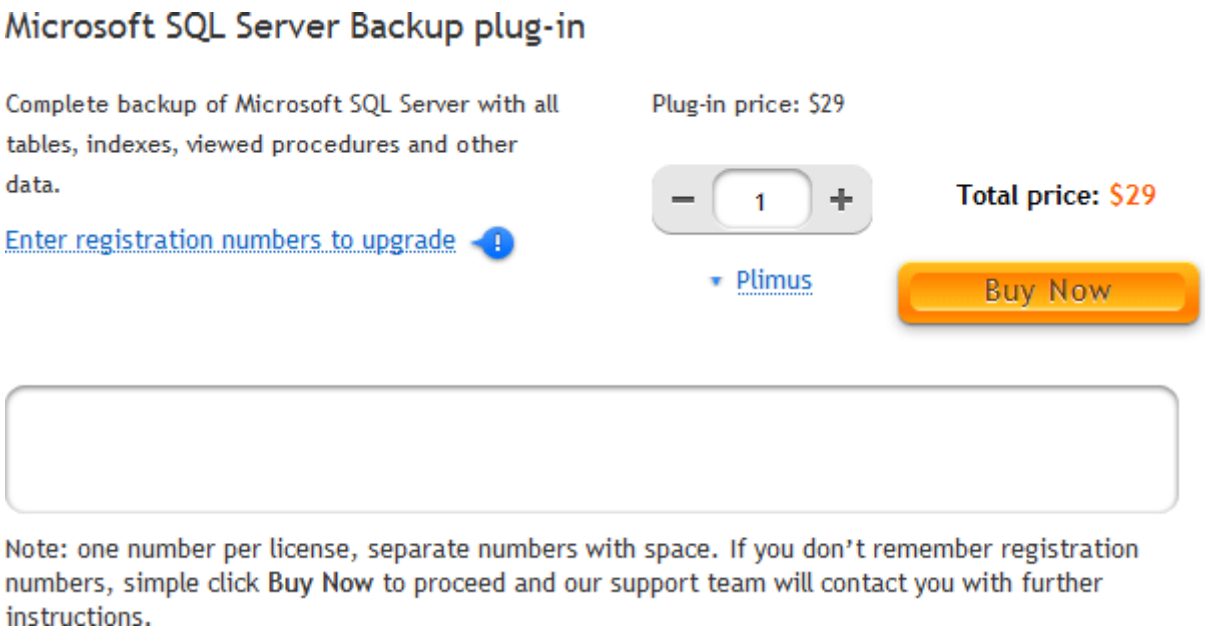
5. When you receive an e-mail with confirmation of the upgrade, re-register the software. To do it, click the **Register** button on the program's toolbar, enter your registration number in the **Registration** window, and then click **Register**.

For detailed instruction on re-registering, please see Registration.

Upgrading with Plug-ins

You can also upgrade the program with any individual plug-ins that you need. Follow these steps:

1. Open the **Plug-ins** page on the product website: www.handybackup.net/order-plugins.
2. Find the plug-in you need.



Note: The above screenshot may change from the time of publication (April, 2013).

3. Enter registration numbers that you want to upgrade.
4. Click **Buy Now**. You are redirected to a payment system where you can complete the order.

If you don't remember your registration numbers, or need assistance, please don't hesitate to contact our support team: registered@handybackup.net.

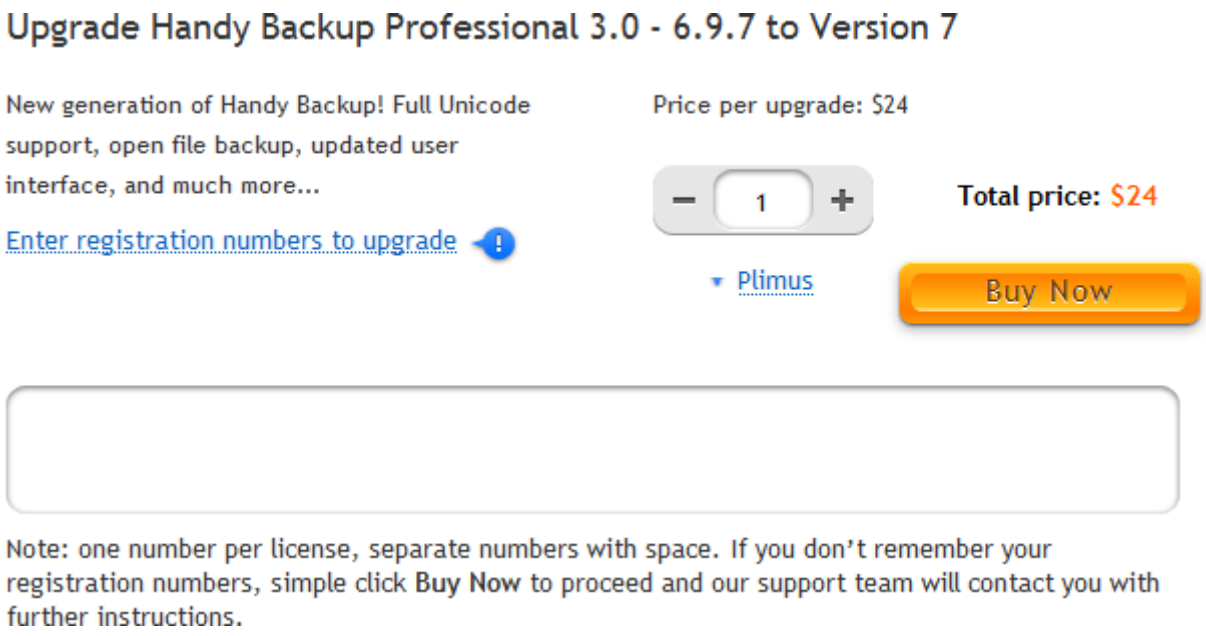
Generally, it takes no longer than 10 minutes before the key is updated in our database.

5. When you receive an e-mail with confirmation of the upgrade, re-register the software. To do it, click the **Register** button on the program's toolbar, enter your registration number in the **Registration** window, and then click **Register**.

3.3 Upgrading from Version 3.0-6.9.7 to Version 7

To migrate from version 3.0-6.9.7 to version 7, you need to order the respective upgrade. Follow these steps:

1. Open the **Upgrades** page on the product website: www.handybackup.net/order-upgrades
2. Find the upgrade you need.



Note: The above screenshot may change from the time of publication (April, 2013).

3. Enter registration numbers that you want to upgrade. Make sure that the numbers correspond to the upgrades, e.g. if you are ordering an upgrade for **Professional** edition, enter the respective registration number.
4. Click **Buy Now**. You are redirected to a payment system where you can complete the order.

If you don't remember your registration numbers, or need assistance, please don't hesitate to contact our support team: registered@handybackup.net.

Generally, it takes no longer than 10 minutes before the key is updated in our database.

5. When you receive an e-mail with confirmation of the upgrade, re-register the software. To do it, click the **Register** button on the program's toolbar, enter your registration number in the **Registration** window, and then click **Register**.

For detailed instruction on re-registering, please see Registration.

Migrating Tasks

Version 7 of Handy Backup has undergone a major update and is not compatible with earlier versions. The only way to migrate tasks from old versions to version 7 is to create them again. Follow these steps:

1. Run two versions of the programs simultaneously.
2. Open task properties in the old version and create a similar task in version 7.
3. Repeat step 2 for all tasks of the old version.

To learn more about creating tasks, please see Managing Data.

3.4 Migrating License to New Computer

Handy Backup license allows you to use the software on one computer only*. After you have used your registration number on one PC, any attempts to re-use it on other computers will fail.

*__Note:__ In case of Server edition, you register only the **Server** component, independently of the number of Workstations you want to back up.

There are situations (e.g. hardware upgrade) when you may want to migrate your license to another computer. You can made it by one of two ways described below.

Re-register your license manually

You can reset your registration key manually, using the registration management page. It is a quick and simple action. Please follow the instruction to migrate your registration key from one computer to another.

Calling for Technical Support

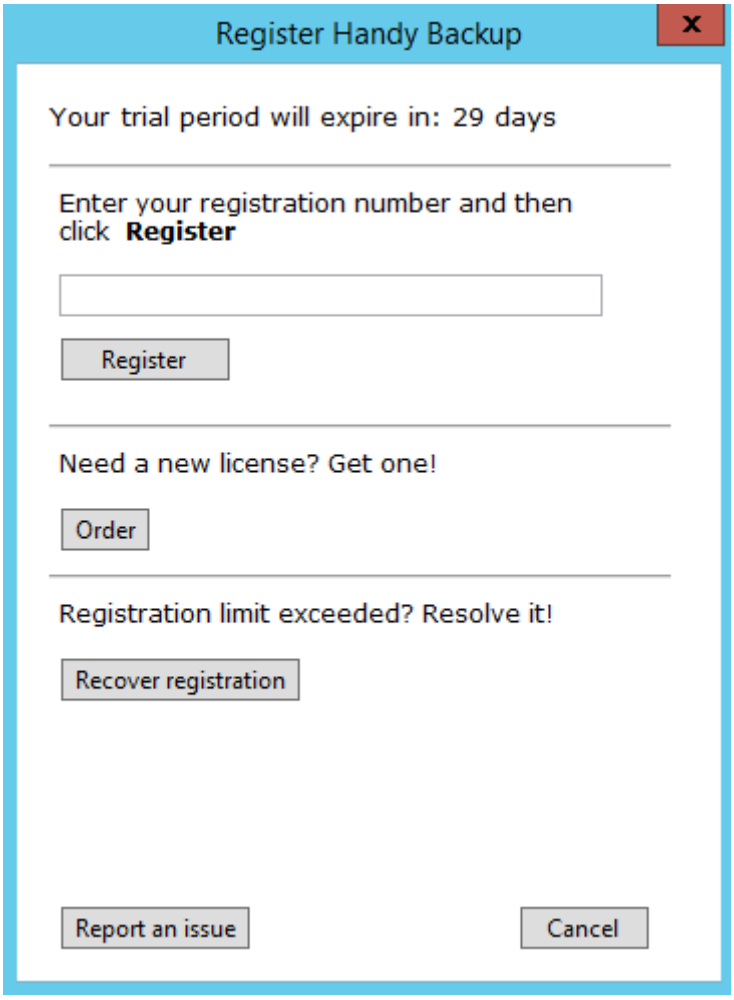
1. Send a request to registered@handybackup.net. Include your registration number, your name, and information about when you purchased the software.

Note: Make sure you give us enough information to find the correct record in the registration database. Generally, we identify customers by name and e-mail address used during the purchase.

2. Our support team resets information about your registration number, so you can use it to register the program on another computer.
3. When you receive an e-mail with confirmation, re-register the program on the new computer under the same key.

Entering the Released Registration Key

To register a migrating copy of Handy Backup, please open the **Help** menu section, and use the **Enter your serial number...** option to enter the registration code. Then click on a **Register** button to move your license.



For detailed instructions on registering, please see Registration.

4 Quick Start

In this chapter you can find quick start instructions on creating your first Handy Backup tasks. Task is a set of instructions that need to be followed to protect your data. There are three type of tasks:

- **Backup** task copies data to a safe place, with optional compression, encryption and versioning.
- **Restore** task is used to recover data from backups to original location, with automatic decompression, decryption, etc.
- **Synchronize** task is used to keep two folders in sync, without any advanced options.

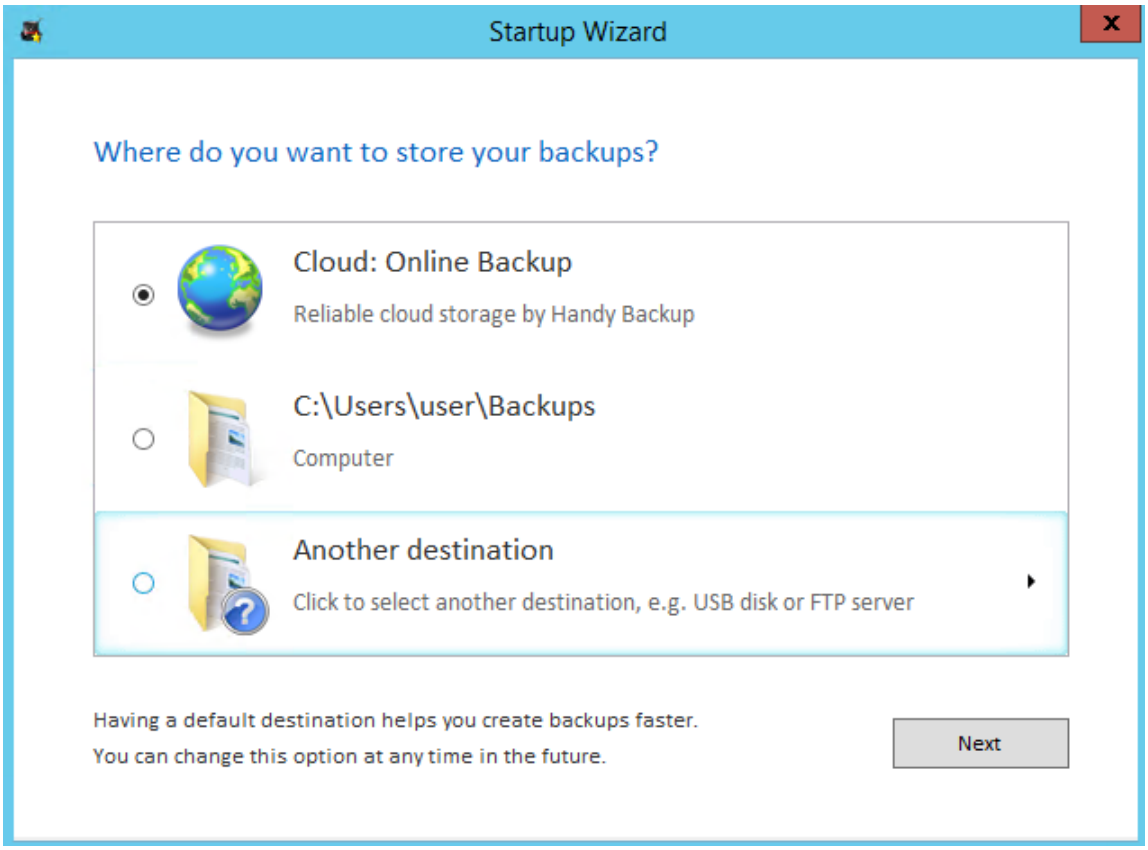
Each task can be run once, or scheduled to take place automatically.

First Start

When you start the program for the first time, it opens a **Startup Wizard** (in a Standalone edition), or a **New Task Wizard** (in Server edition). The Wizards help you create your first tasks. See next chapters for more details.

4.1 Using the Startup Wizard (Standalone Edition)

When you run the program for the first time, and it doesn't find any tasks from previous installations, it automatically opens a **Startup Wizard**.



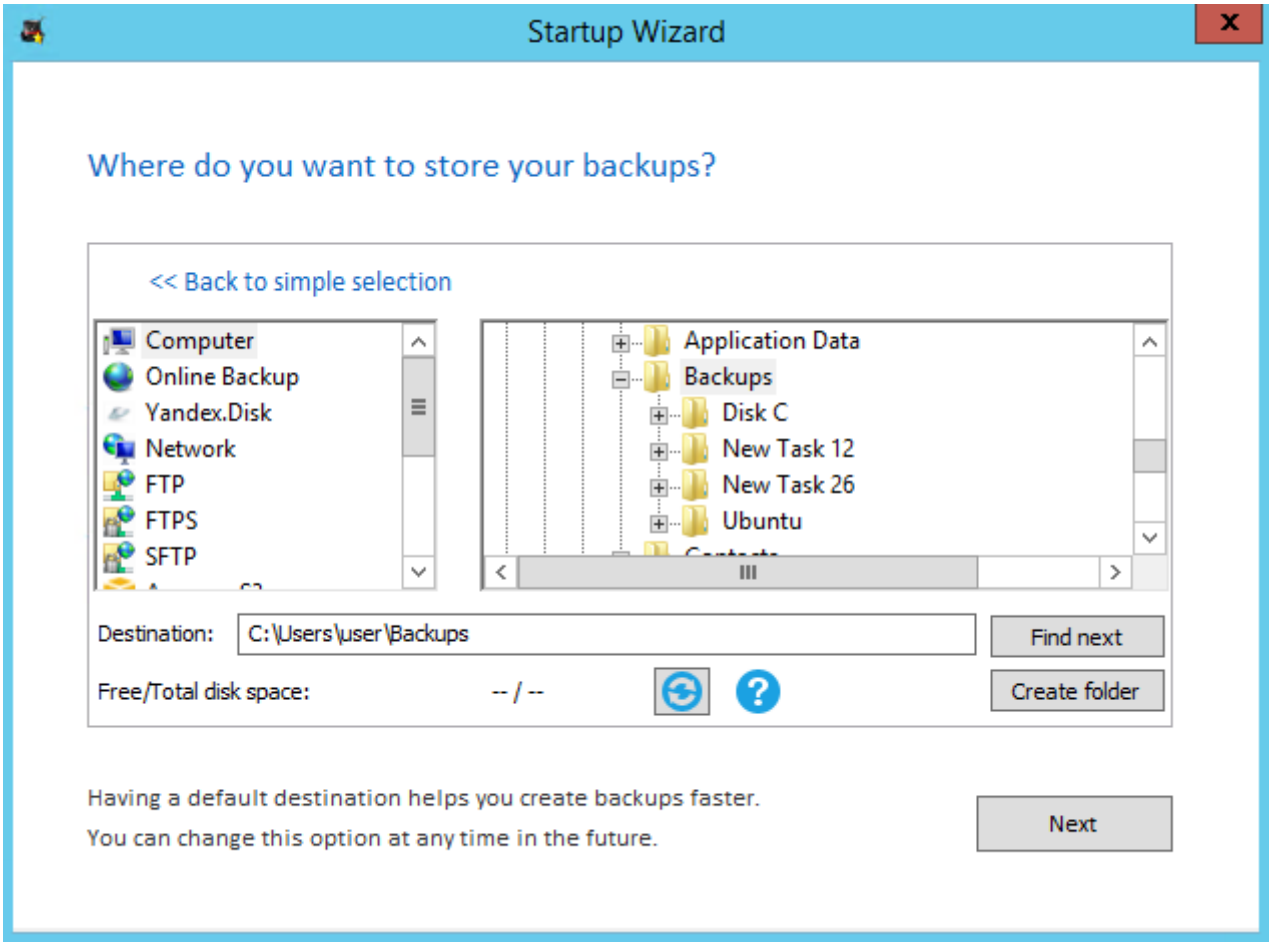
The Startup Wizard demonstrates main principles of the program and helps you to create first backup tasks.

1. On the first step of the Startup Wizard, you need to select the default destination for your backups.

Each backup task must have a non-empty **destination** parameter. Specifying default destination helps you create tasks faster: when creating a new backup, it lets you skip selection of target folder. Default is also used in sample tasks created by the Startup Wizard.

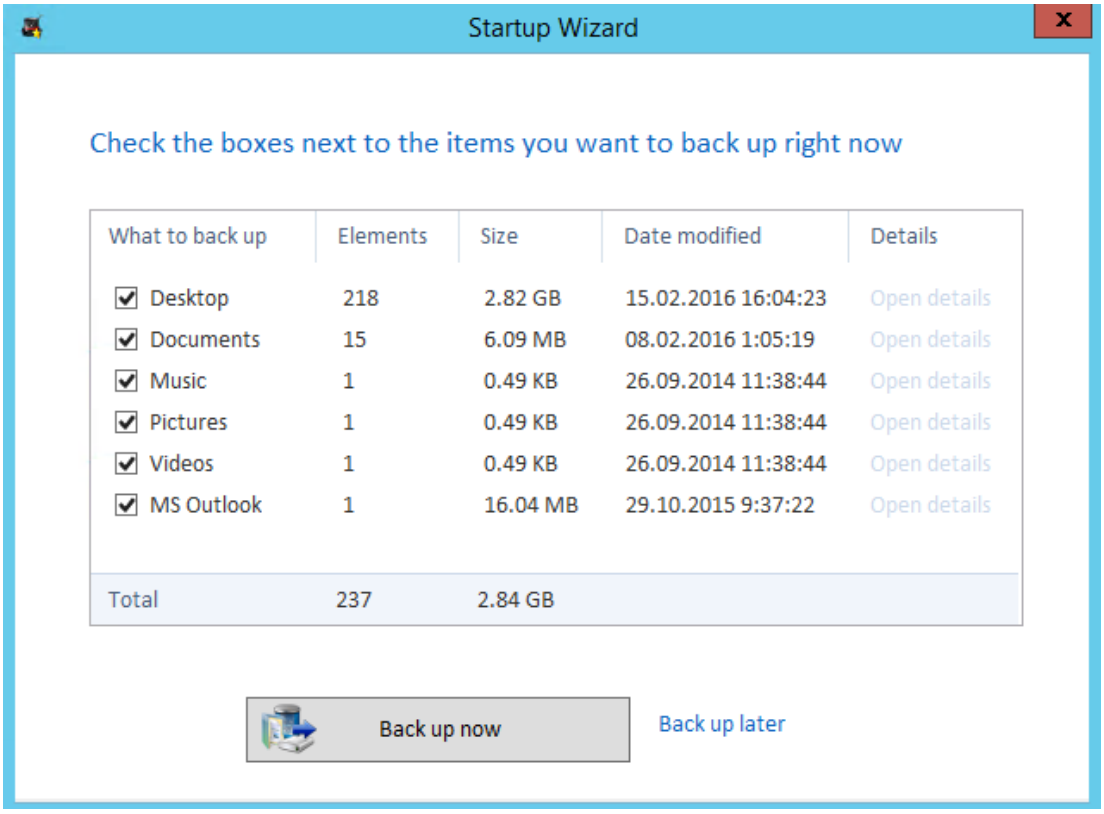
The first window offers three options:

- **Online Backup.** This is option selects **Novosoft Remote Backup Service** – advanced cloud storage closely integrated with the software. When you select it, it doesn't require any additional registration; the account is created automatically. To learn more, please refer to a description of the Online Backup plug-in.
- **Backups.** This option creates a **Backups** folder in the Windows User folder, and selects it as a destination.
- **Another destination.** This option opens a **Select Destination** dialog that lets you select a custom path for your backups.



Select the desired destination, and then click **Next**.

2. On the second step of the Startup Wizard, the program runs a quick search for data that you can back up, and creates sample backup tasks.

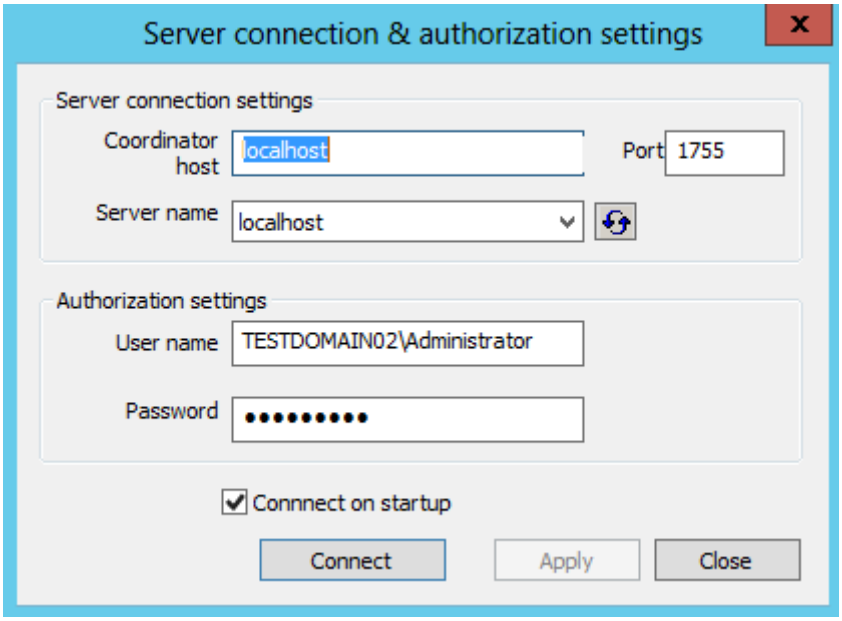


Sample tasks are created without scheduling, compression, encryption, or other options. For any task, you can click **Open details** and review or change data set, destination folder (if you don't want to use the default one) and other parameters. To learn more about possible options, please see Backup Task.

After reviewing the sample tasks, you can click **Back up now** to run all checked tasks, or **Back up later** to go to the main program's window. Further actions are described in Managing Data.

4.2 Connecting to Server (Server Edition)

When you run the program for the first time, it starts with a **Server connection** dialog.



In this dialog, you need to authorize on the **Server**. The idea of authorization is as follows:

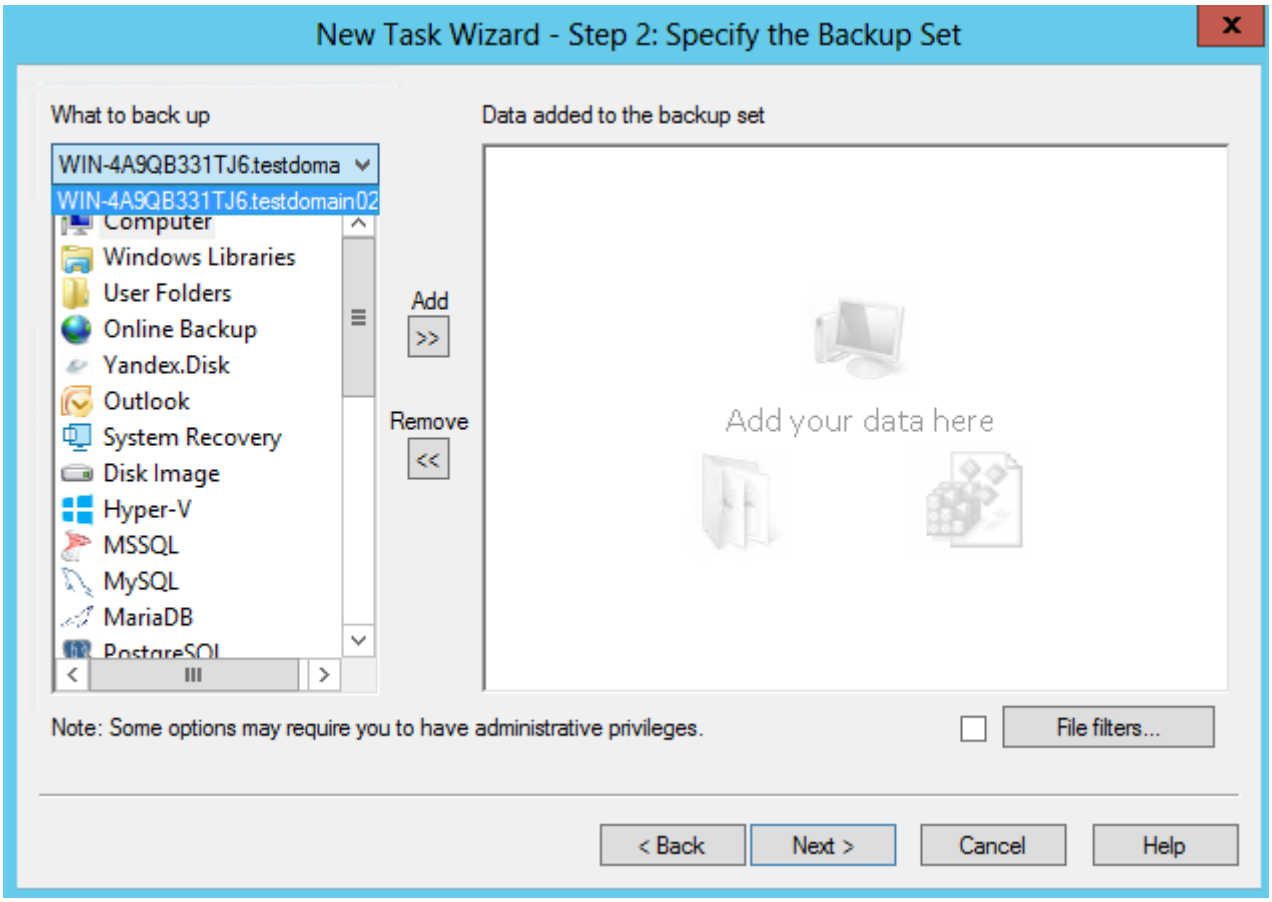
- Technically, **Server** can be located on any computer on the network.
- When you run the program, you actually launch a **GUI Client** – an application designed to connect to **Server** and create, modify, or run its tasks.
- For security considerations, any **Client** connecting to **Server** must authorize on it, so only authorized users can access and control backups.

To authorize on the Server, follow these steps:

1. In **Authorization settings**, specify **User name** and **Password** of the **Server**'s administrator or Domain administrator.
2. Click Connect.

Before you authorize on the **Server**, the program's window name will have the **Disconnected: Session access denied** message in it. After successful authorization, this title will disappear. You can learn more about the program's components and their cooperation in Architecture.

After connecting to the **Server**, if the program doesn't find any tasks from previous installations, it automatically opens a **New Task Wizard**. Since installation of **Server** edition is always accompanied with installation of a local **Workstation**, the latter immediately becomes available for backups.



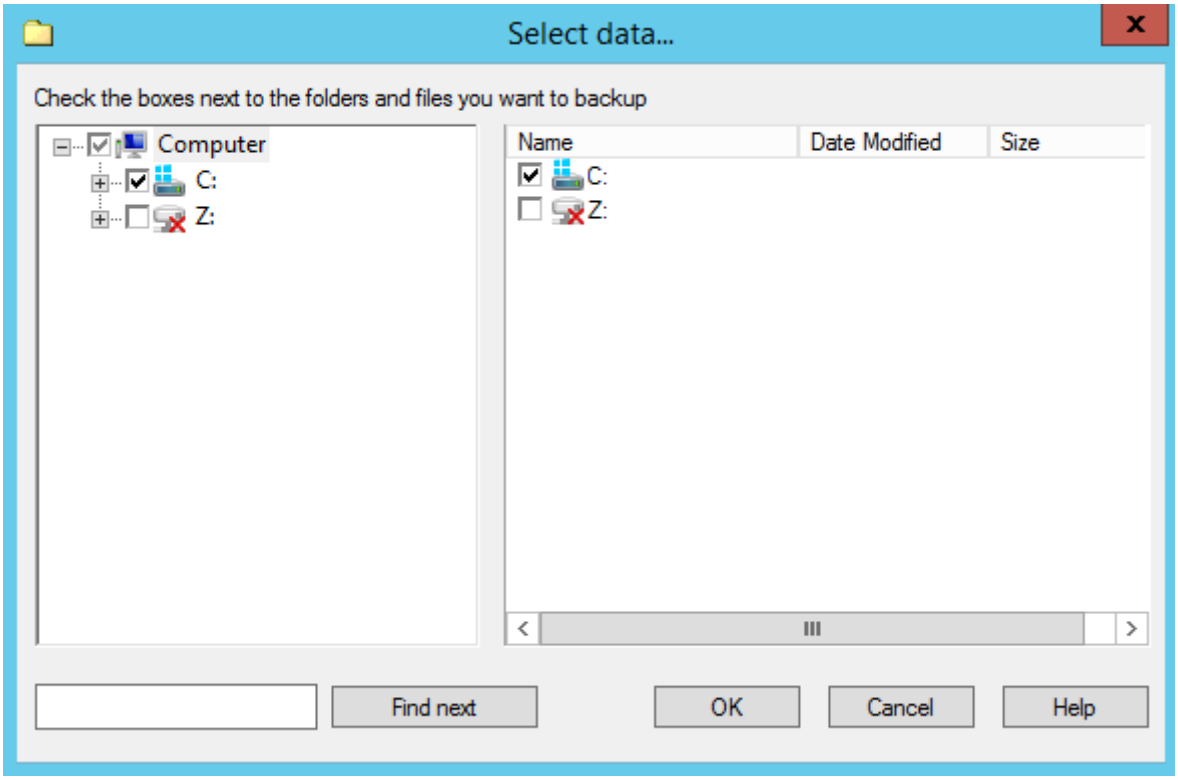
To learn how to add Workstations to the list, please see Workstation Configuration.

To select a Workstation, find it in the dropdown menu at the top left corner of the New Task Wizard. You can learn about creating tasks in the next chapters.

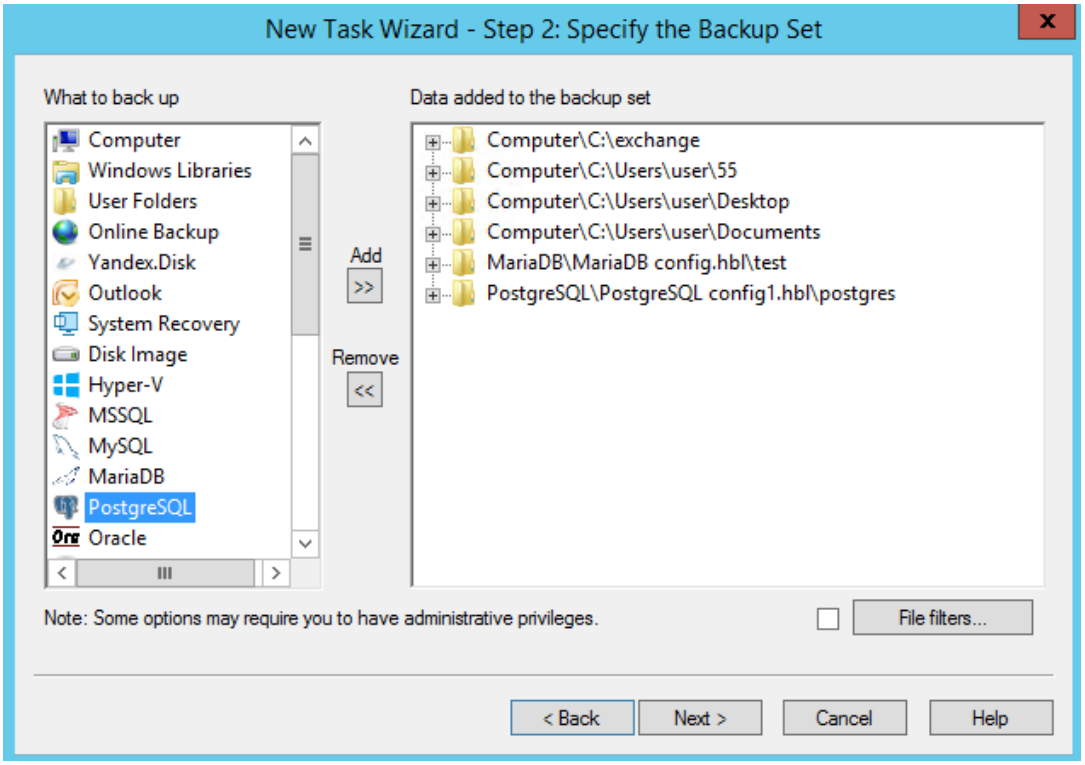
4.3 Creating Backup Task

In this chapter you can find quick instructions on making your first backup. To create a backup task, follow these steps:

1. Launch the New Task Wizard.
2. Select **Backup task**, and then click **Next**.
3. (Server edition only) At the top left corner of the window, select Workstation that you want to back up.
4. In the left pane (**Objects available for backup**), select a source of data. For example, to back up local computer files and folders, select **Computer**.
5. Click **Add**. The **Select data...** dialog opens.
6. In the **Select data...** dialog, check the boxes next to files and folders that you want to back up.



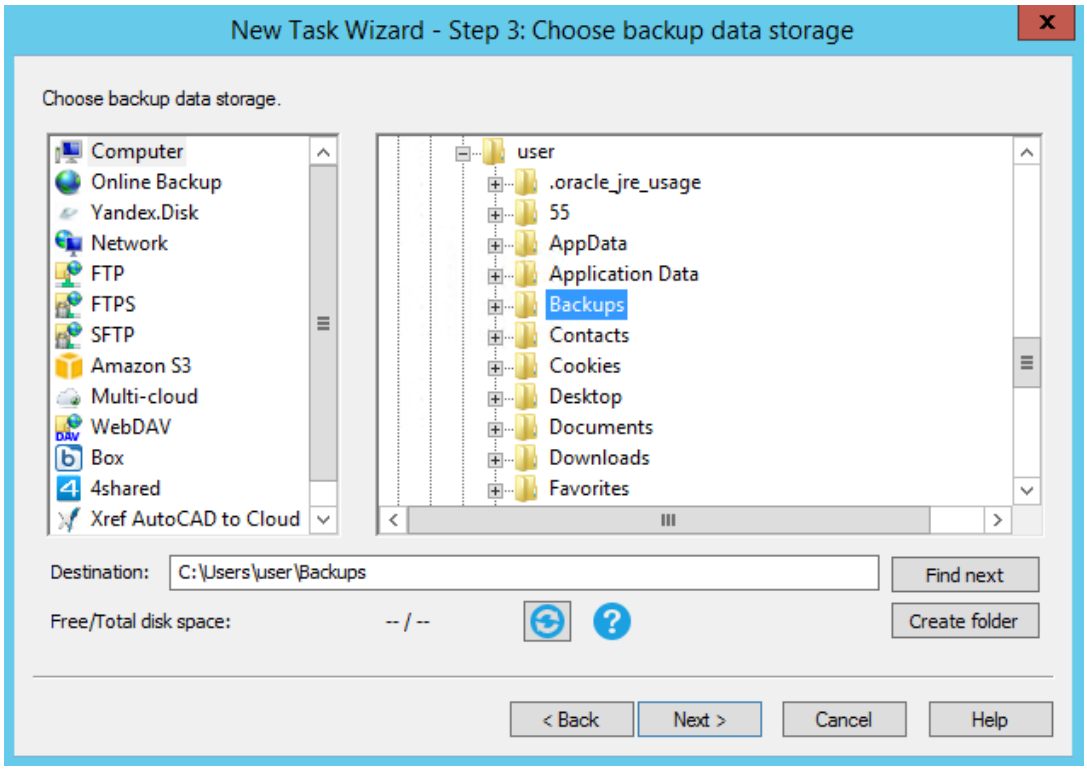
7. When finished the selection, click **OK**. The objects you selected appear in the right pane of the window (**Objects added to the backup set**).
8. Repeat steps 4-7 for all other sources of data that you want to back up within this task.



9. When finished adding data to backup set, click **Next**.

In the next step of the New Task Wizard, you need to select where to store the backup. **Note:** If you have chosen default destination, it will be already selected. If you don't want to change it, skip to step 13.

10. (Server edition only) At the top left corner of the window, select Workstation that will store the data.
11. In the left pane, select storage destination. For example, if you want to store backup to a local HDD, select **Computer**.
12. In the right pane, select a target folder where you want to store the data. Click **Next**.



13. In the next steps, you can enable versioning, ZIP compression and other options. These steps are not obligatory, and you can skip them by clicking **Next** several times.

14. On the final step of the New Task Wizard, you need to name the task and choose if you want to execute the task immediately. Click **Finish**.

The newly created task appears in the **Task View** panel of the main window. If you have chosen to execute it immediately, you can see operation log in the **Log View** panel in the bottom of the window.

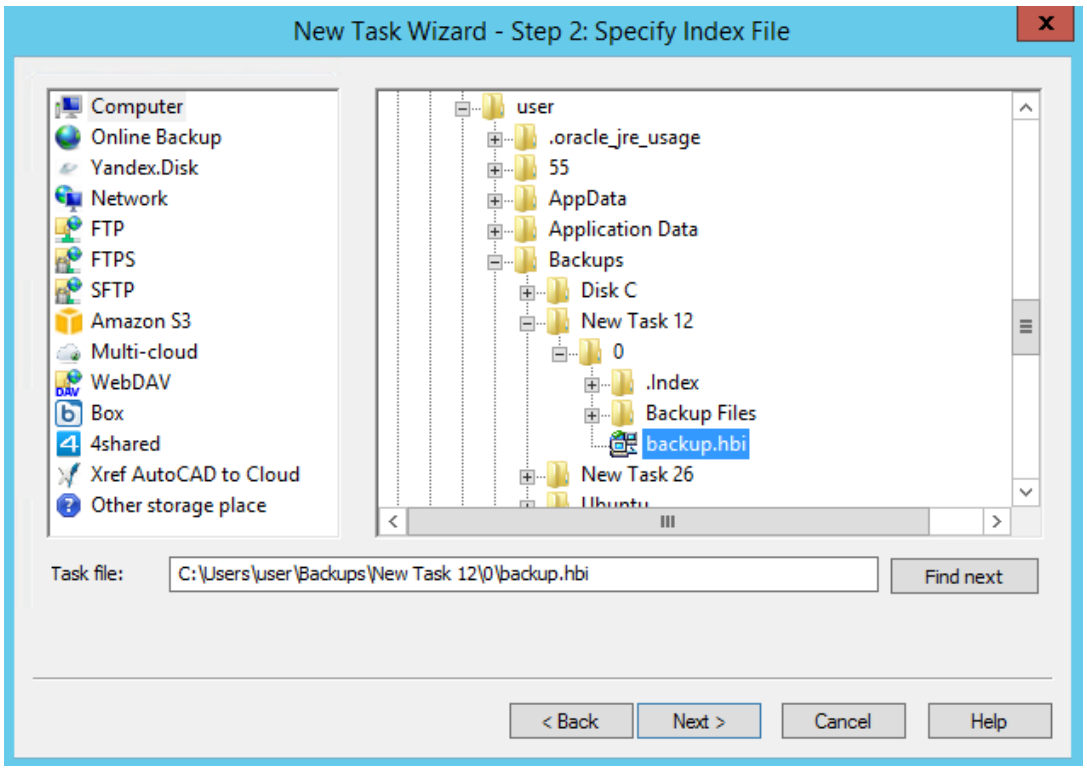
When a backup is completed, the program creates an index file **backup.hbi** in destination folder. This file contains information about the backup and is required for restoration. See the next chapter for more details.

To see detailed description of backup task parameters and instructions on creation, please see Backup Task.

4.4 Creating Restore Task

In this chapter you can find quick instructions on restoring backups. To restore a backup, follow these steps:

1. Launch the New Task Wizard.
2. Select **Restore task**, and then click **Next**.
3. (Server edition only) At the top left corner of the window, select Workstation that stores or has access to your backups.
4. In the left pane, select storage that contains your backup. For example, if the data is stored on a local computer, select **Computer**.
5. In the right pane, browse for the backup that you want to restore.
6. Select index file (**backup.hbi**, always accompanies any backup), and then click **Next**.



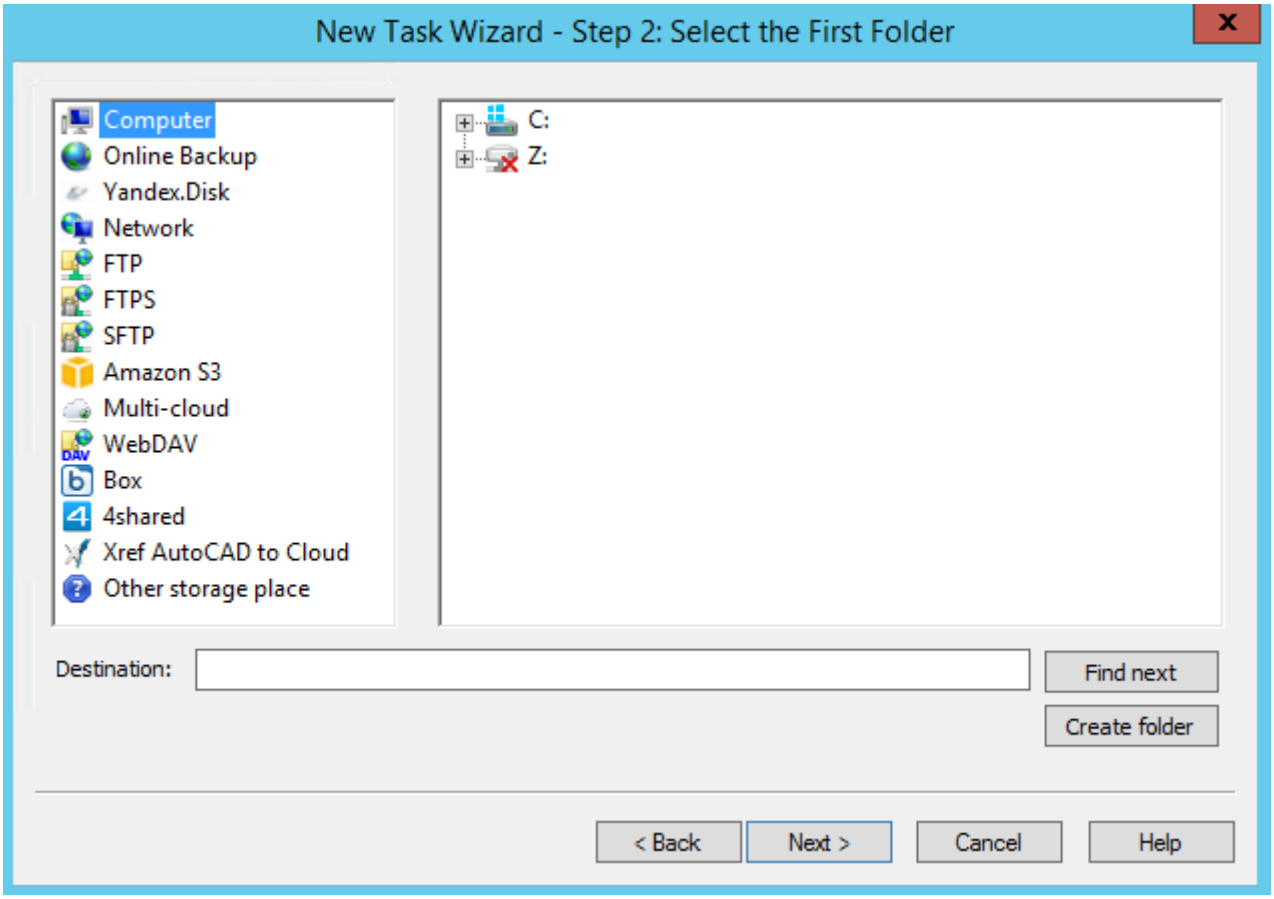
7. In the next steps, you can set location of restoration, scheduling and other options. These steps are not obligatory, and you can skip them by clicking **Next** several times.
8. On the final step of the New Task Wizard, you need to name the task and choose if you want to execute the task immediately. Click **Finish**.

The newly created task appears in the **Task View** panel of the main window. If you have chosen to execute it immediately, you can see operation log in the **Log View** panel in the bottom of the window.

4.5 Creating Synchronize Task

In this chapter you can find quick instructions on synchronizing folders. To synchronize data, follow these steps:

1. Launch the New Task Wizard.
2. Select **Synchronize task**, and then click **Next**.
3. (Server edition only) At the top left corner of the window, select Workstation will access the first folder you want to synchronize.
4. In the left pane, select location that contains the first folder you want to synchronize. For example, to sync local folder, select **Computer**.
5. In the right pane, select a folder that you want to synchronize. Click **Next**.



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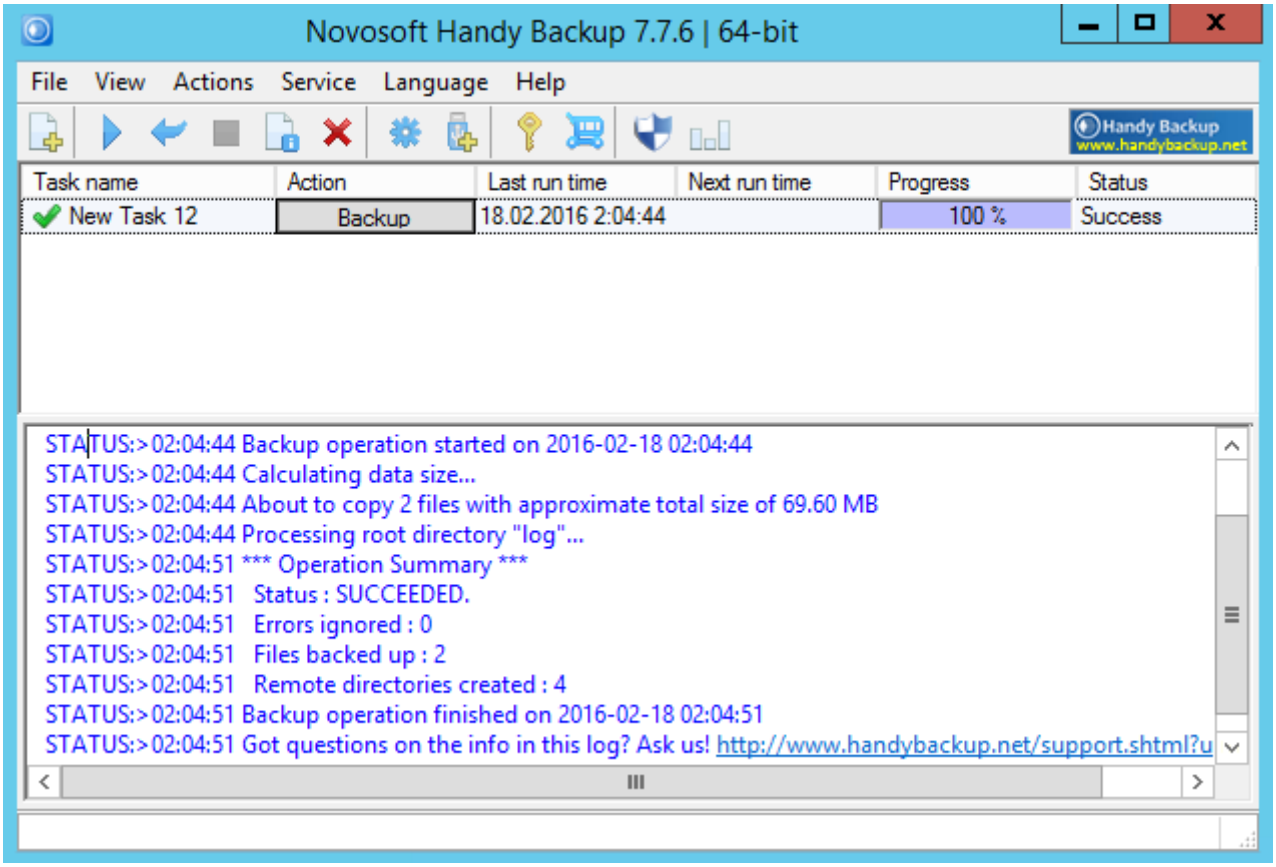
6. In the next step, you need to select the second folder for synchronization. Repeat steps 3-5.
7. Then you need to select direction of synchronization. You can copy first folder to the second, second to the first, or mirror the folders.
8. In the next steps, you can set scheduling and other options. These steps are not obligatory, and you can skip them by clicking **Next** several times.
9. On the final step of the New Task Wizard, you need to name the task and choose if you want to execute the task immediately. Click **Finish**.

To a certain extent, synchronization is similar to backup, but has no compression, encryption, versioning and other options.

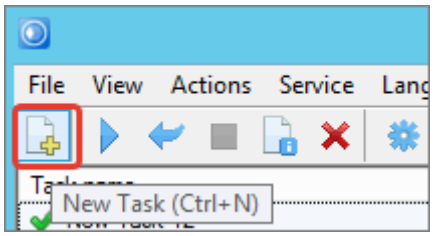
5 Managing Data

To back up, restore and synchronize your data you need to create the respective **task**. All tasks are displayed in the main window of the program, for each task you can see its current status, type, progress, log, and other parameters.



There are three most frequent things you will do in this window:

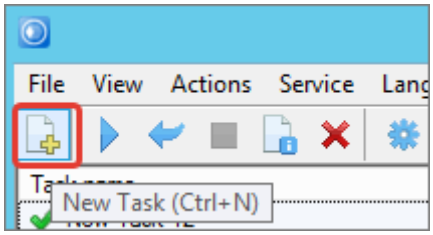
- **Running task.** To run a task, click the respective button in the **Action** column.
- **Reading task log.** Selecting a task automatically displays task log in the lower part of the window.
- **Creating new task.** To create a new task, click the **New Task** button on the toolbar, and follow steps of the New Task Wizard.



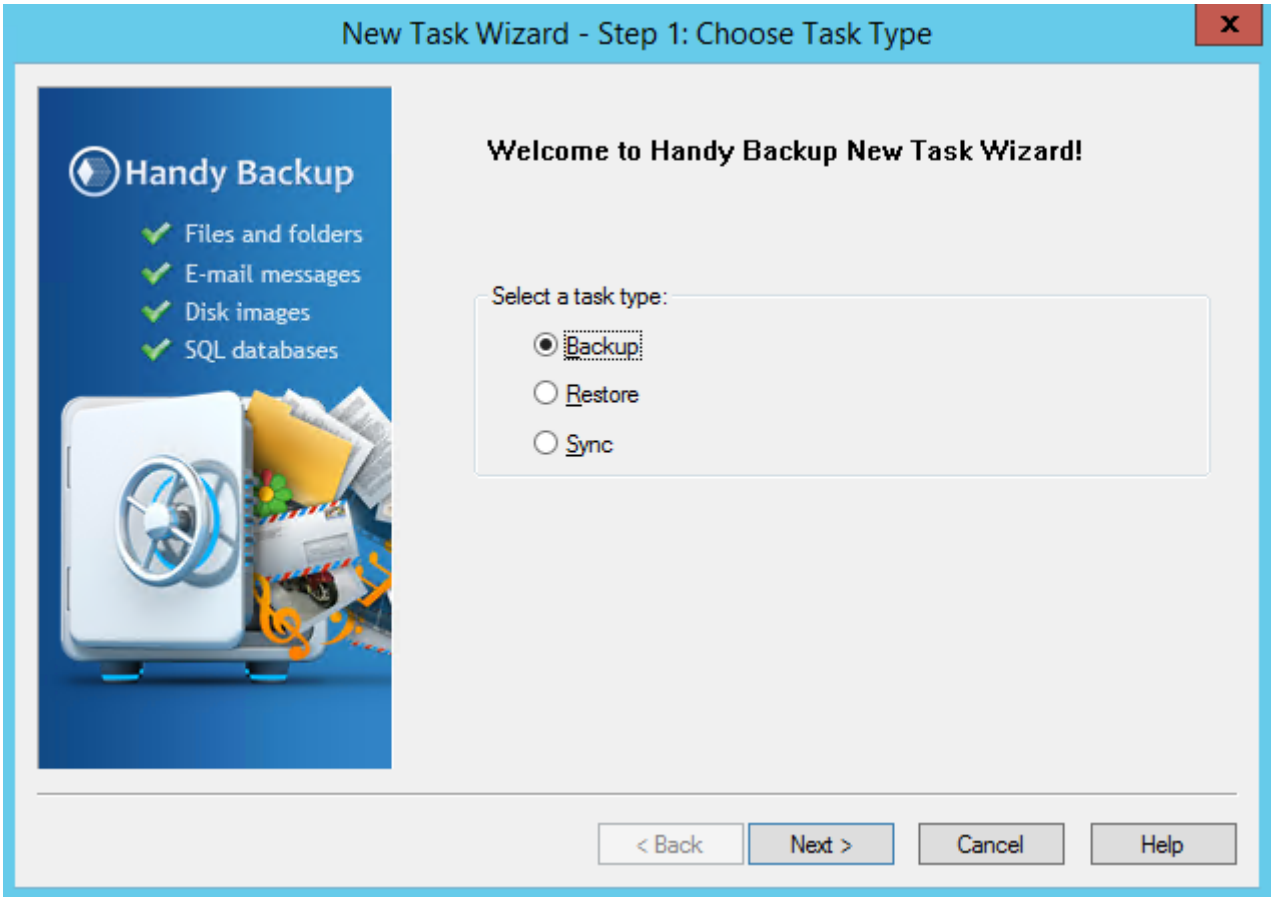
To learn more about the program's interface, please refer to User Interface. To learn about creating tasks, please see next chapters of this section.

5.1 Choose Task Type

All tasks are created with the New Task Wizard. To run the Wizard, click the New Task button on the program's toolbar.



The New Task Wizard opens.



On the first step of the New Task Wizard, you need to select task type.

- **Backup tasks** are used to create copies of data, with versioning, compression, encryption, and other options. For each backup, the program creates a number of control files that are required for restoration.
- **Restore tasks** are used to restore data backed up with the program, with automatic unZIPping, decryption, etc. To roll back to a previous version of your data, you need to select the respective **backup.hbi** file created during a **backup** task.

- **Synchronize tasks** are used for common synchronization of files and folders, without any options. They are useful if you don't to save multiple copies of different versions of files, and need no compression or other options.

Each task can be run once or scheduled. To create a task, you need to complete all steps of the New Task Wizard. See next chapters for detailed description of all steps.

5.2 Backup Task

There is the two ways to add a dataset to a backup task.

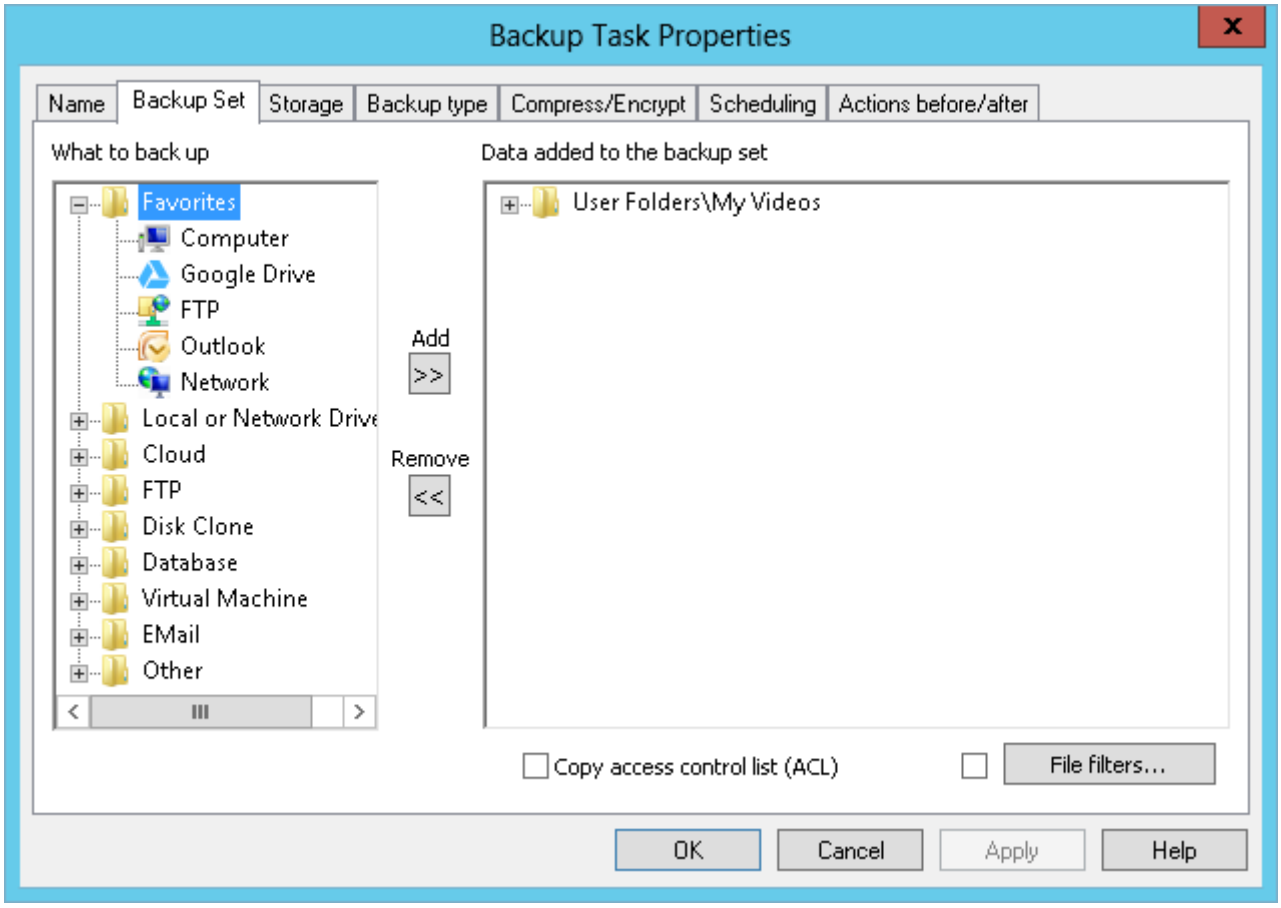
1. You can create a completely **new backup task**, using one of the next instructions:

   - Select the **New task** item from the **File** menu.
   - Click on a "**New task**" button on the management panel.
   - Press **Ctrl and N** simultaneously.
   - Right-click on a task view section of the main window to call for a context menu, and then select "**New task**".

Each time the backup task is executed (manually or by schedule), all data included in the backup set will be saved.

2. If you want just to add some data to an existing backup dataset, edit a backup task to include these data. To do it, follow the instruction below:

   1. In the task view section of the main window, select a backup task that you want to modify.
   2. Go to the **What to Back up** tab and select objects that you want to add to a backup list.



The program will copy all data that you add during the next run of this particular task.

Backup tasks have six main parameters:

- Backup set*
- Storage destination*
- Type of backup*
- Versioning
- Compression
- Encryption

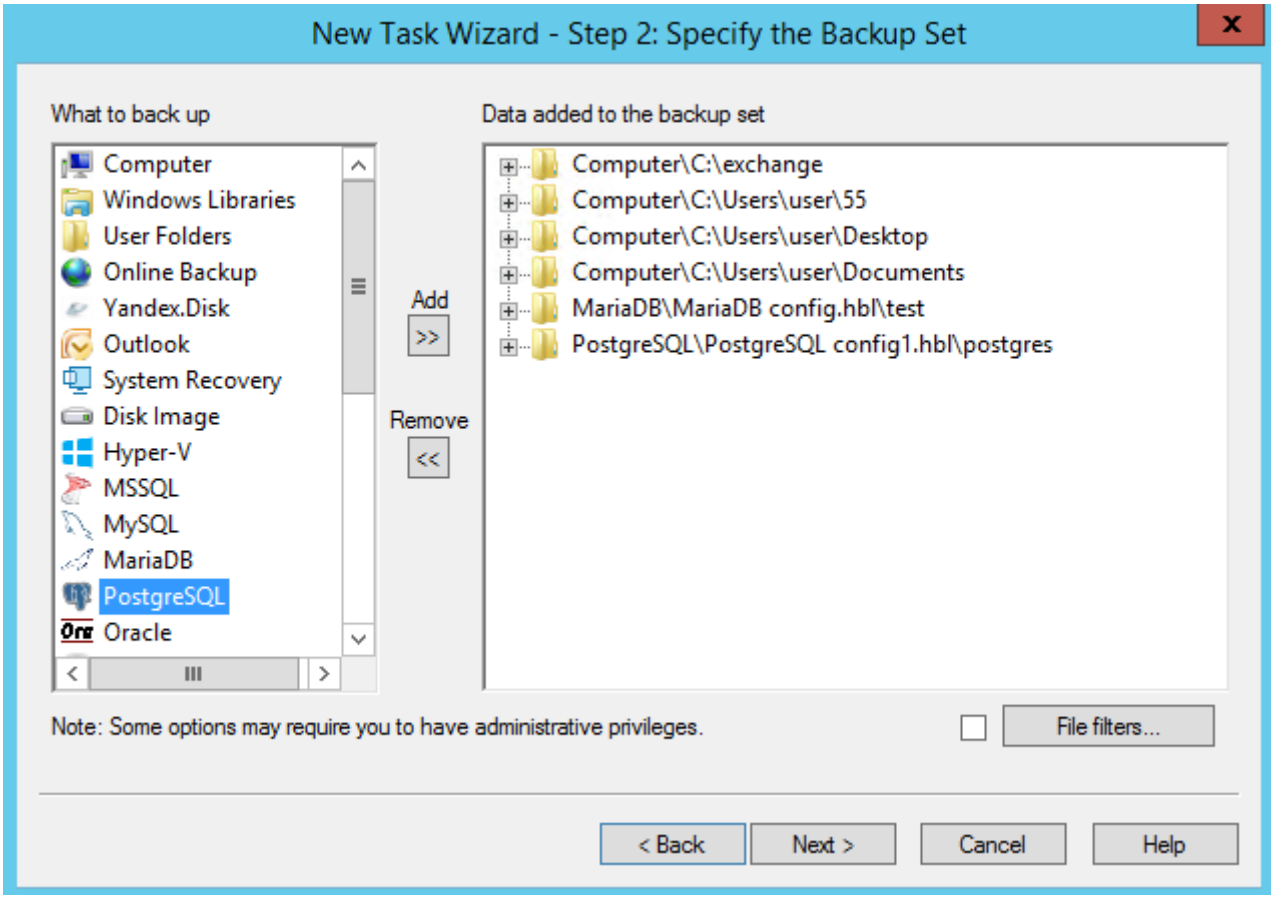
*Required parameter

The New Task Wizard guides you step-by-step through specifying these and other parameters. For quick start, you can only select what to back up and where to store the data, and skip all other steps by clicking **Next**. By default, the program will make a full backup. For detailed description of all options, please refer to next chapters.

- ## Specify the Backup Set

This page describes the second step of creating a backup task with the New Task Wizard.

On the second step of the New Task Wizard, you need to select data that you want to back up. The window consists of two panes: **Data Sources** and **Backup Set**.



- In the **Data Sources** pane, you can see the list of all different types of data that you can back up. For example, if you want to back up computer files and folders, you need to select **Computer**.

Technically, data sources are **plug-ins**. To make use of this or that plug-in, you need to have an appropriate license. During the trial period, you can use all plug-ins without any limitations. After registration, the list of plug-ins will be limited, respectively to the edition you register. To learn more, please refer to Registration...

Some of the plug-ins are configurable. For example, to back up a MySQL database, you will need to create a MySQL configuration (specify server, login and password). To learn more, please refer to Plug-in Configurations...

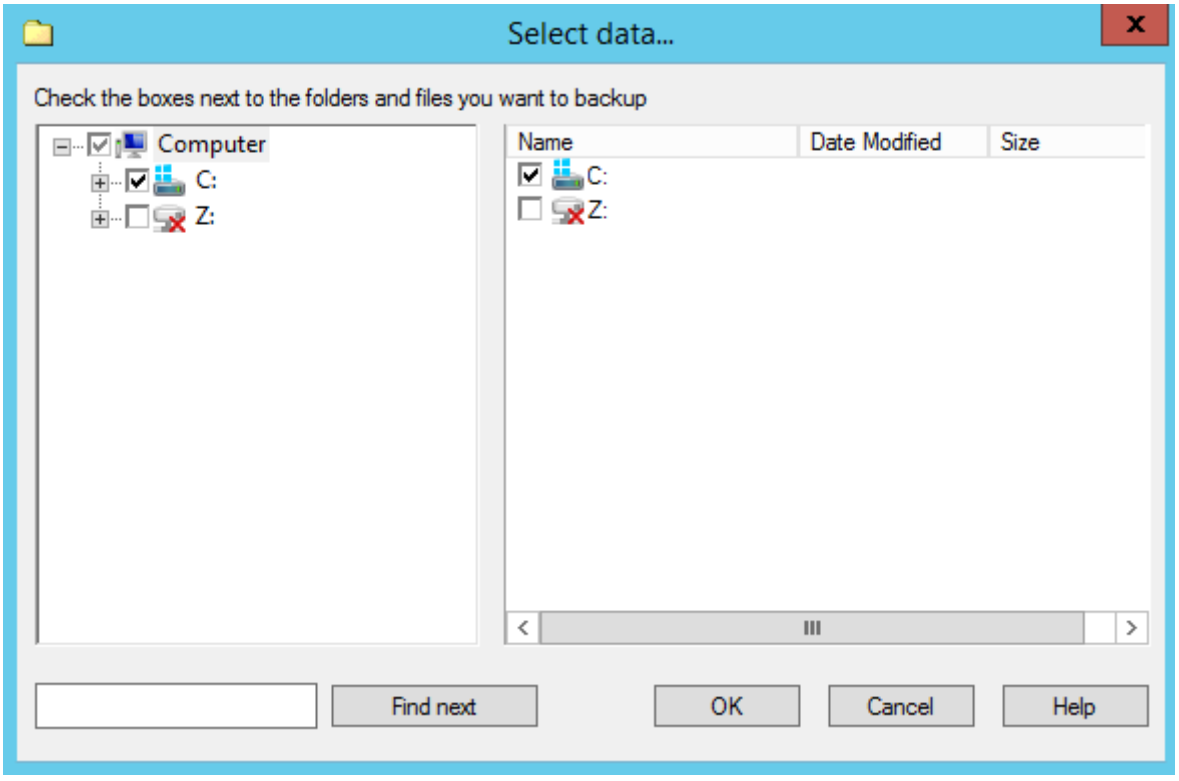
- In the **Backup Set** pane, you can see the list of paths added to backup. It is recommended to create individual tasks for each logical group of data that you want to back up. For example, to back up a website, you may want to select an FTP folder and a MySQL database.

Note: In this dialog, data is accessed through a Workstation (logical component responsible for retrieving, storing and processing data) that is launched from a specific user account and may be unable to access some data. For example, the Disk Image plug-in requires the Workstation to be launched with administrator privileges. To learn more, please see Workstation.

Selecting Data for Backup

To add data to backup set, follow these steps:

1. (Server edition only) In the dropdown menu at the top left corner of the window, select Workstation that you want to back up.
2. In the **Data Sources** pane, select a plug-in, and the click **Add**. The **Select data...** dialog opens.

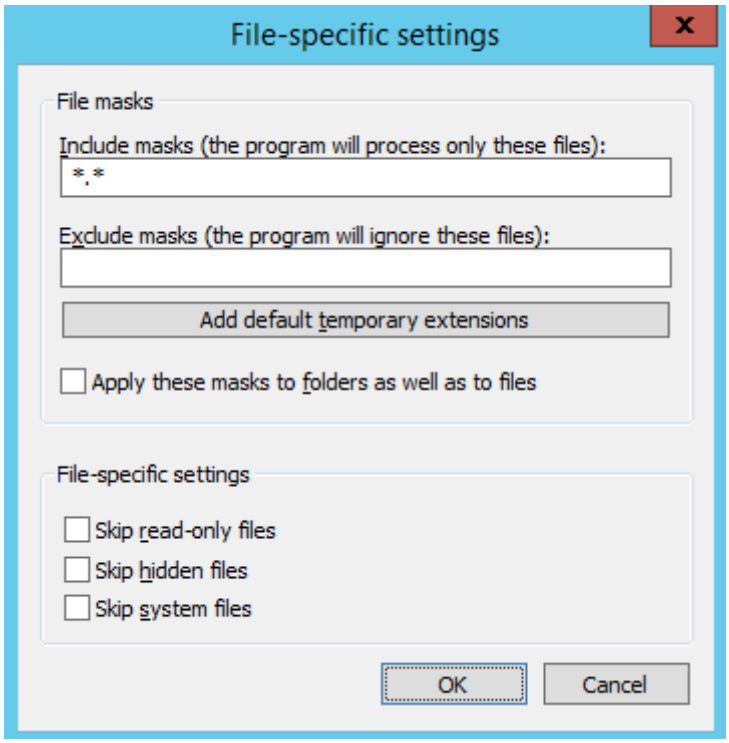


The **Select data...** dialog shows what you can back up from the selected source. All data is presented as files and folders that correspond to different objects available in the data source. For example, files and folders of the **Computer** plug-in are common file system objects, while for **MySQL** plug-in, folders are databases, and files are database tables. To learn more, refer to Plug-in File Systems.

Note: Selecting all objects in a folder is equal to selecting the entire folder. In this case, folder path is added to Backup Set without any information about its child items. All future files that may appear in the folder, will be backed up too.

3. In the **Select data...** dialog, check the boxes next to files and folders you want to back up. Left pane of the window displays folder tree view, and right pane displays contents of the folder selected in the left pane. You can do the selection in both panes.
4. When finished the selection, click **OK**. Selected data appears in the **Backup Set** pane of the New Task Wizard.
5. (Optional) Click the **File filters...** button below the **Backup Set** pane to set up filtering. The **File-specific settings** dialog opens.

In the **File-specific settings** dialog, you can specify filtering options that will be checked for each file backed up.



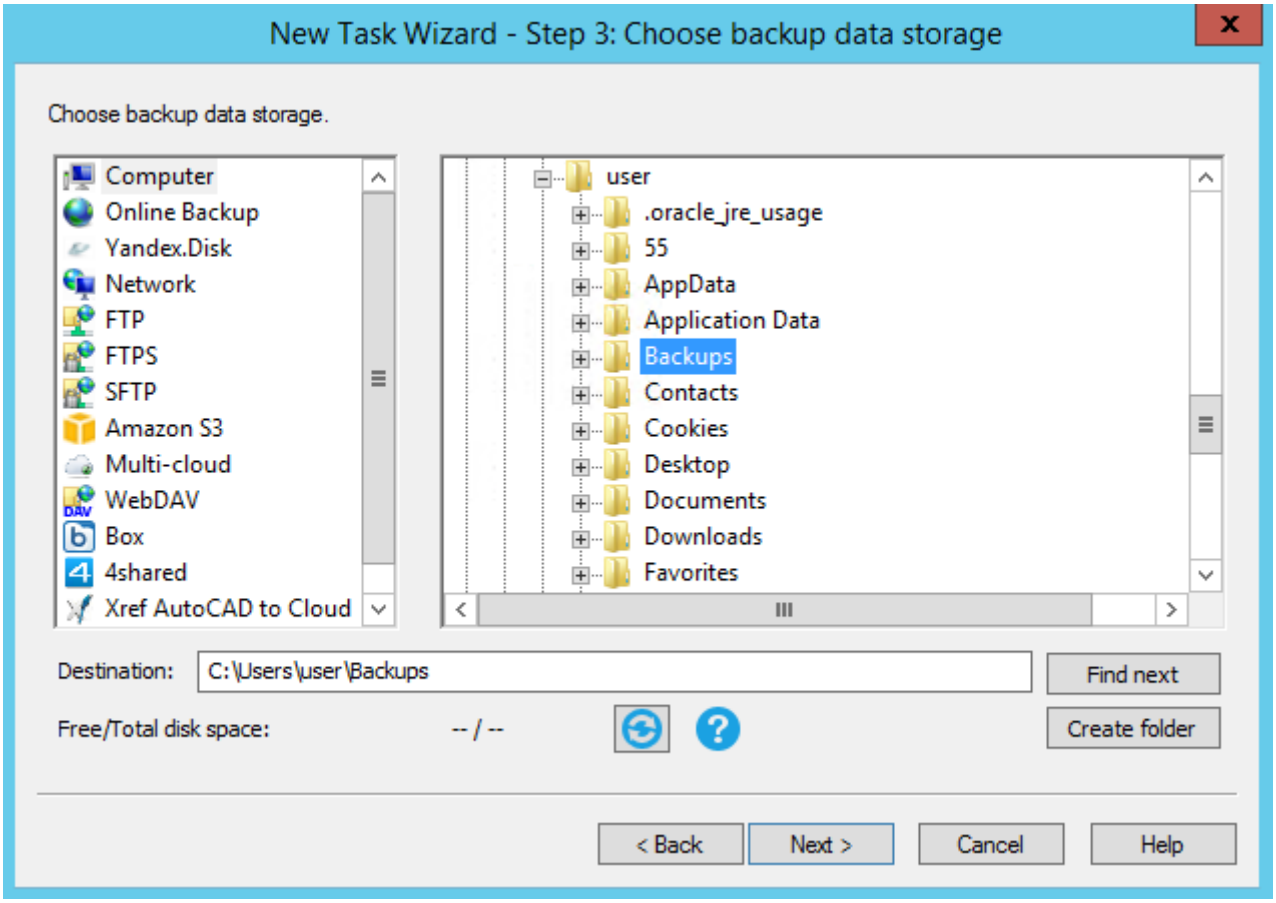
Include and Exclude masks: Filling out these fields enables you to back up only files matching to a specific file mask. Use * (asterisk) as a wildcard, separate different masks with | (vertical line). For example, ***.avi|*.mp4** will select files with any names and AVI and MP4 extensions only.

6. When finished with adding data to backup set, click **Next**.

• Choose Backup Storage

This page describes the third step of creating a backup task with the New Task Wizard.

On the third step of the New Task Wizard, you need to select where you want to store the backup. The window consists of two panes: **Storage Destinations** and **Folder Selection**.



- In the **Storage Destinations** pane, you can see different types of storage where you can copy your data. For example, if you want to store backups in local file system, you need to select **Computer**.

Technically, storage destinations are **plug-ins**. During the trial period, you can use all plug-ins without any limitations. After registration, the list of plug-ins will be limited respectively to the edition you register. To learn more, please see Registration...

- In the **Folder Selection** pane, you can see folders available in the selected destination.

Note: Most of the storage plug-ins are configurable. For example, to store backups on FTP, you will need to create an FTP configuration. To learn more, please see Plug-in Configurations...

Selecting Destination

To select backup destination, follow these steps:

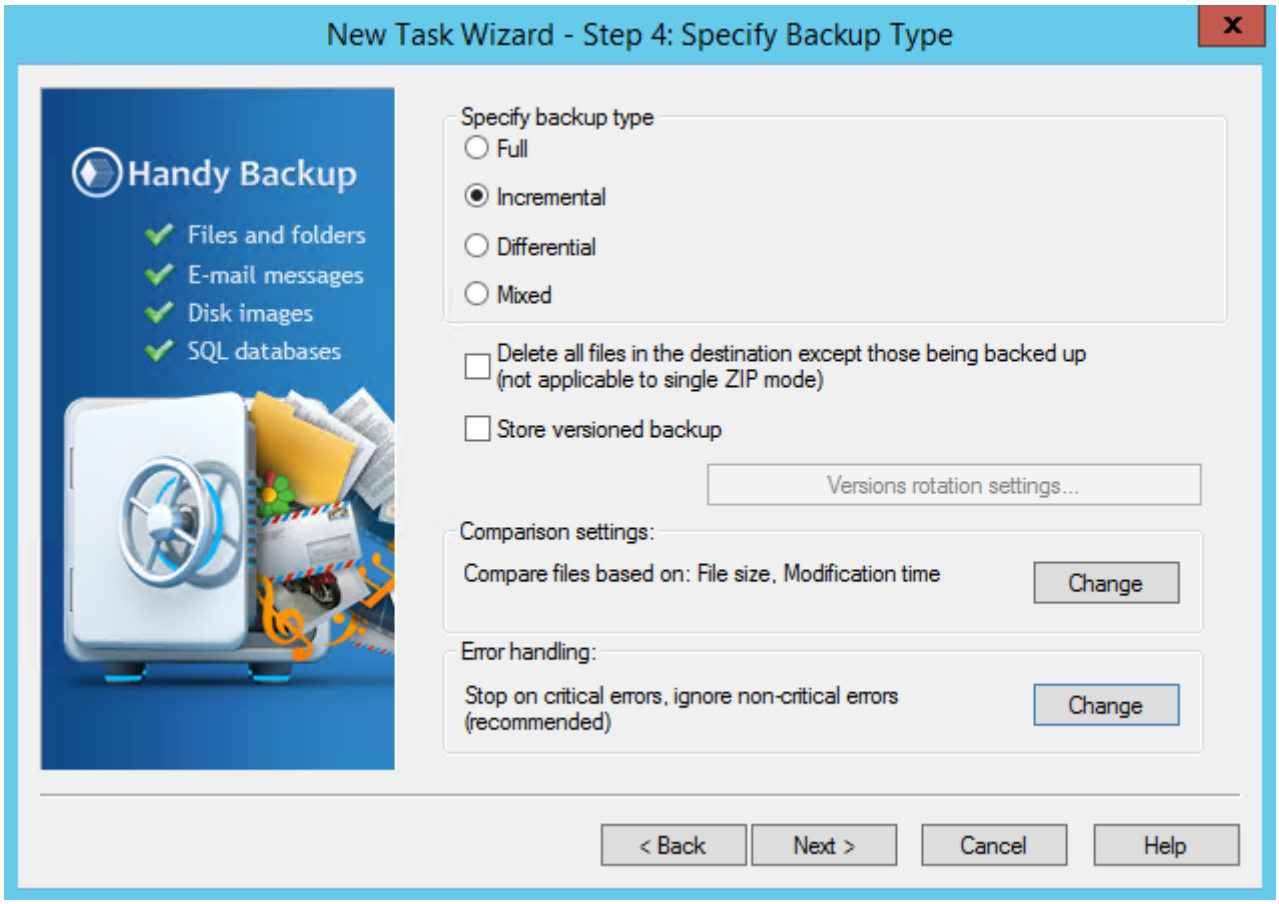
1. (Server edition only) In the dropdown menu at the top left corner of the window, select Workstation that will store the data.
2. In the **Storage Destinations** pane, select a plug-in. The list of folders appears in the **Folder Selection** pane.

3. In the **Folder Selection** pane, browse for a target folder. To create a new folder, use the **Create folder** button.
4. When finished selecting destination folder, click **Next**.

- ## Advanced Backup Settings

This page describes the fourth step of creating a backup task with the New Task Wizard.

On the fourth step of the New Task Wizard, you need to select type of backup and versioning options. Advanced users can also change comparison settings and error handling settings (read below).



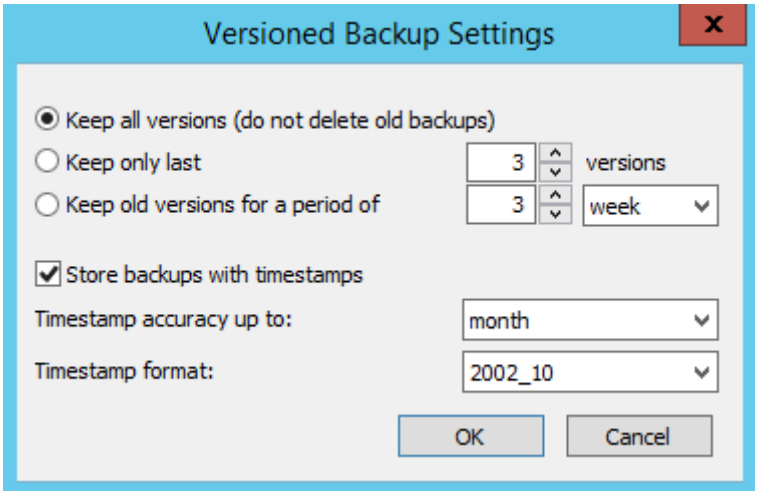
Type of backup determines the program's behavior when running backups regularly on a schedule. Taking into account the **Store versioned backup** option, there are five variants:

- **Full backup** copies all files from backup set to selected destination. If target folder already contains some backup files, they are overwritten.
- **Incremental backup** compares files in destination and files in backup set, and copies only new and modified files. It is faster than full backup, because existing backups are not overwritten.
- **Full backup with versioning.** Each time you run backup, this method creates in destination a new versioned folder (0, 1, 2, etc.) and copies data into it.

- **Incremental backup with versioning.** This method is similar to full backup with versioning. Execution of the task creates versioned folders containing only changes, i.e. new and modified files that appeared since the previous backup. Restoration of any version requires you to have a full chain of increments.
- **Differential backup** calculates byte-level differences between all files in the backup set and the latest full backup, and then stores them to versioned folders. This type of backup is always versioned, and to restore it you need to have two backups: full and differential. (See also about backing up with time stamps.)
- **Mixed full and differential backup** is a combination of a full backup with a chain of differential backups. When the program reaches the end of a chain (defined by a time or by a quantity of differential backups), all chain repeats, starting with a full backup again.

For **full backup with versioning**, you can click the **Versions rotation settings...** button to specify how many versions of backups you want to keep.

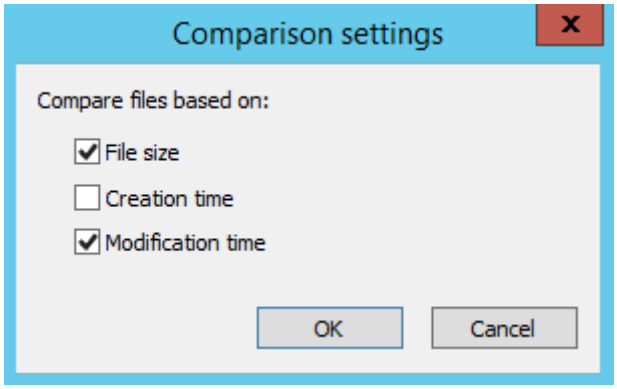
This dialog can also set a number of mixed backups kept by the program, before considering old mixed backup cycles obsolete.



Comparison Settings

By default, when running incremental or differential backup, the program will create a new version of file if **File size** or **Modification time** attributes are different. **Creation time** is not checked, because some storage file systems (for example, FTP) don't have this attribute.

This behavior is task-specific, i.e. it can be different for different tasks. To change it, click the **Change** button in **Comparison settings**.

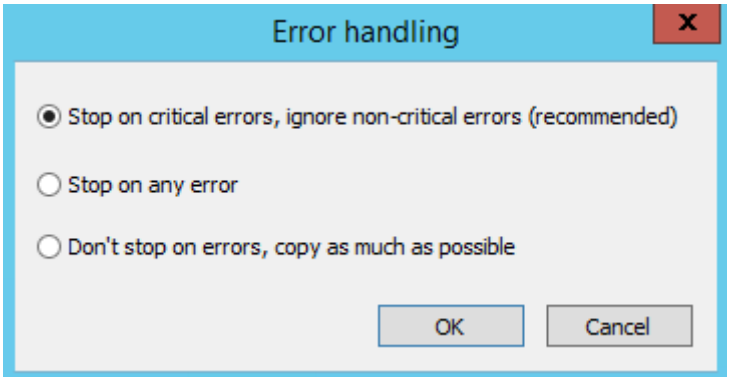


Error Handling

Error handling lets you set the program's behavior when it encounters an error:

- **Critical errors** are plug-in specific. For example, failing to initialize Volume Shadow Copy service in **MS SQL** plug-in is a critical error, while in **Computer** plug-in it is not.
- **Non-critical errors** are one-time errors that are not specific to the entire backup set. For example, the "Access denied" error may be a result of a conflict with another application, and running the same task again will back up the same file successfully.

You can choose whether the task must stop on any error, stop only on critical errors, or don't stop on errors at all.



If there are any errors during backup, the task will end with an **Error** status.

When finished selecting type of backup and specifying advanced settings, click **Next**.

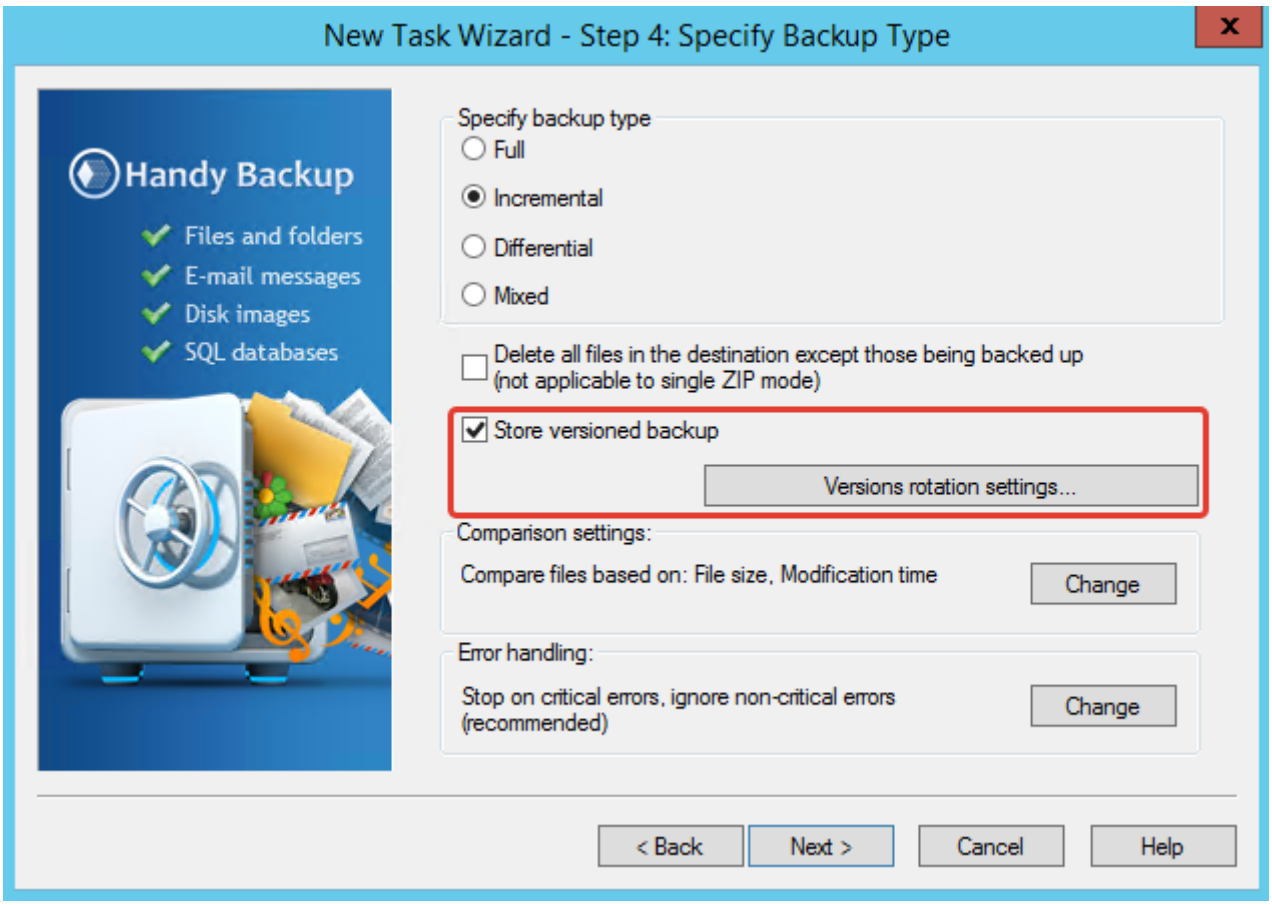
Creating Time Stamps

Before setting up backup task with time stamps, you may carefully plan the strategy of taking and keeping copies of your data. This may be necessary for both optimizing backup frequency and saving storage space from excessive flow of data.

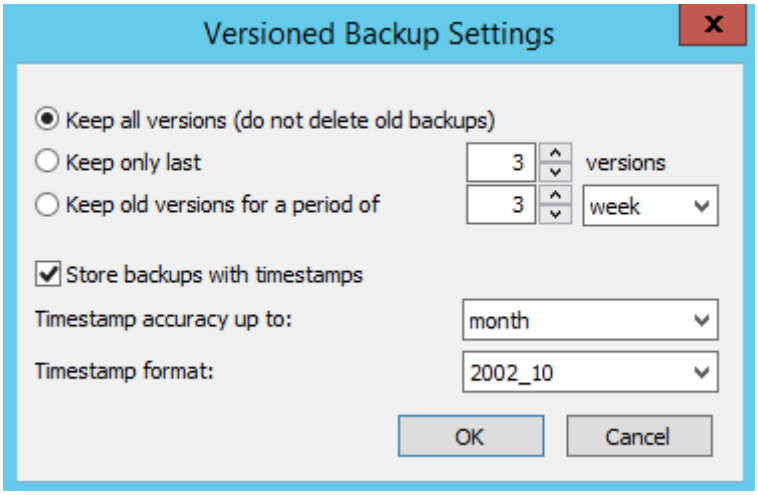
Performing Time-Stamped Backup

To create time stamp backup user can apply the following sequence:

1. Create a new task (using the main menu or clicking the button on a control panel).
2. Specify the backup task, set of data and the place to store backup file with a date-time stamp.
3. On Step 4, “Backup type”, select the full, incremental or differential backup.



4. Check the box marked “Store versioned backup” to backup with time stamp.
5. The button “Versions rotation settings” will be available; press it.
6. The dialog window will appear, with all the parameters for time stamp backup settings.



7. Set up the parameters of time stamp backup and press OK.
8. Continue to set other parameters of the task. These steps are not specific for backup tasks performed with time stamp.

Adding Time Stamp to an Existing Backup Task

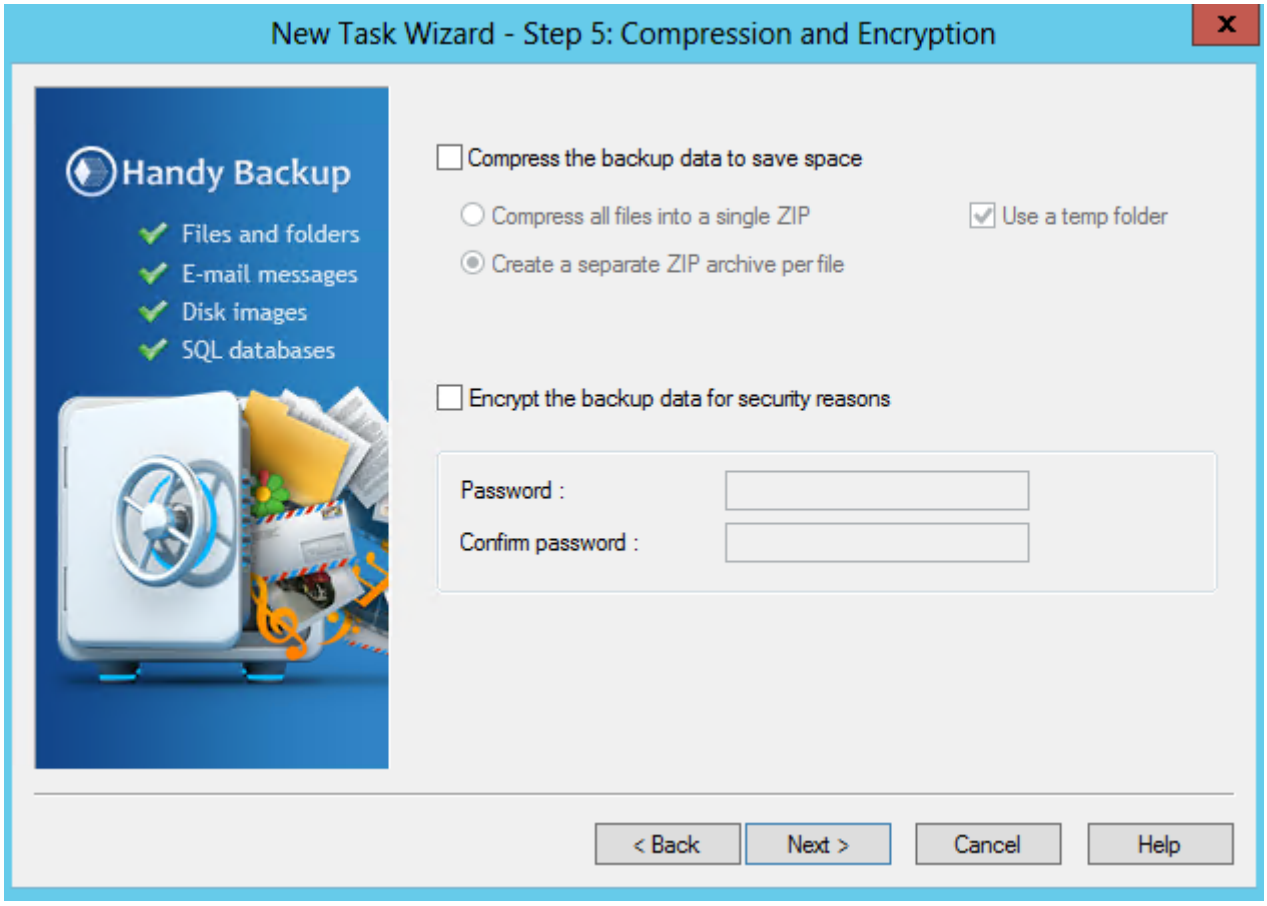
If you are planning to add time stamps to an existing backup task, do the same except editing properties of backup task (selecting “Properties…” in the main menu or the task context menu, or using the appropriate button).

Note: Removing the time stamp from the particular backup task is impossible for now. If you need to change some time stamp settings, edit the time stamp properties instead of completely removing it.

• Compression and Encryption

This page describes the fifth step of creating a backup task with the New Task Wizard.

On the fifth step of the New Task Wizard, you can enable compression and encryption. Both options are applied to data stream “on-the-fly” and use no temporary files. This is especially useful if you back up very large files, e.g. HDD images.



- To enable compression, check **Compress the backup data to save space**. There are two types of compression:
  - **"Many-to-one".** If you want to create a SingleZIP archive for the entire backup set, select the first option.

  By default, this option **creates a temporary directory**, providing more convenient compression. You can also force the program to **make no temp folder** by clearing a checkbox. Then, files are packed to the single ZIP directly, saving both the job time and resources of the operating hard drive.

  - **"One-to-one".** Select the second option (MultiZIP archive) if you want to create a separate ZIP archive for each file backed up.
- To enable encryption, check **Encrypt backup data with a modified BlowFish algorithm for security reasons** and specify password in the respective fields.

Note: Encryption of your backup do not depend on compression options selected earlier.

When finished, click **Next**.

5.3 Restore Task

Restore tasks have three main parameters:

- Backup index file* (contains information about data to restore);
- Restore location;
- Type of restoration.

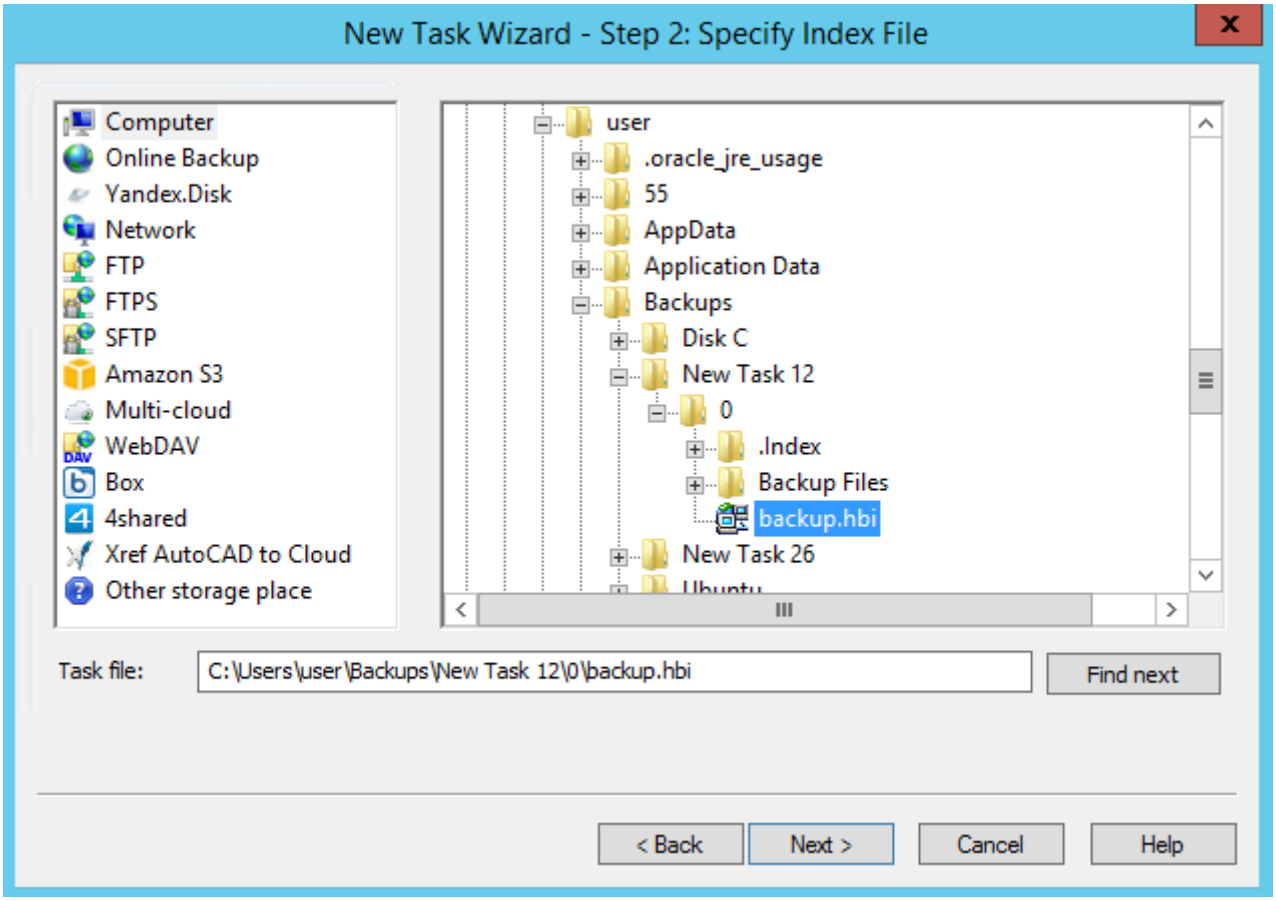
*Required parameter

The New Task Wizard guides you step-by-step through specifying these and other parameters. For quick start, you can only select index file to restore, and skip all other steps by clicking **Next**. For detailed description of all options, please refer to next chapters.

• Specify Index File

This page describes the second step of creating a restore task with the New Task Wizard.

On the second step of the New Task Wizard, you need to select index file containing information about the backup you want to restore. The window consists of two panes: **Storage Destinations** and **Index File Selection**.



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- In the **Storage Destinations** pane, you can see different types of storage where you can read your backups from. For example, if your backups are accessible on a local computer, you need to select **Computer**.

Technically, all destinations are **plug-ins**. During the trial period, you can use all plug-ins without any limitations. After registration, the list of plug-ins will be limited respectively to the edition you register. To learn more, please see Registration…

- In the **Index File Selection** pane, you can see contents of the selected destination.

Note: Most of the storage plug-ins are configurable. For example, to restore backups from Amazon S3, you will need to create an Amazon S3 configuration. To learn more, please see Plug-in Configurations…

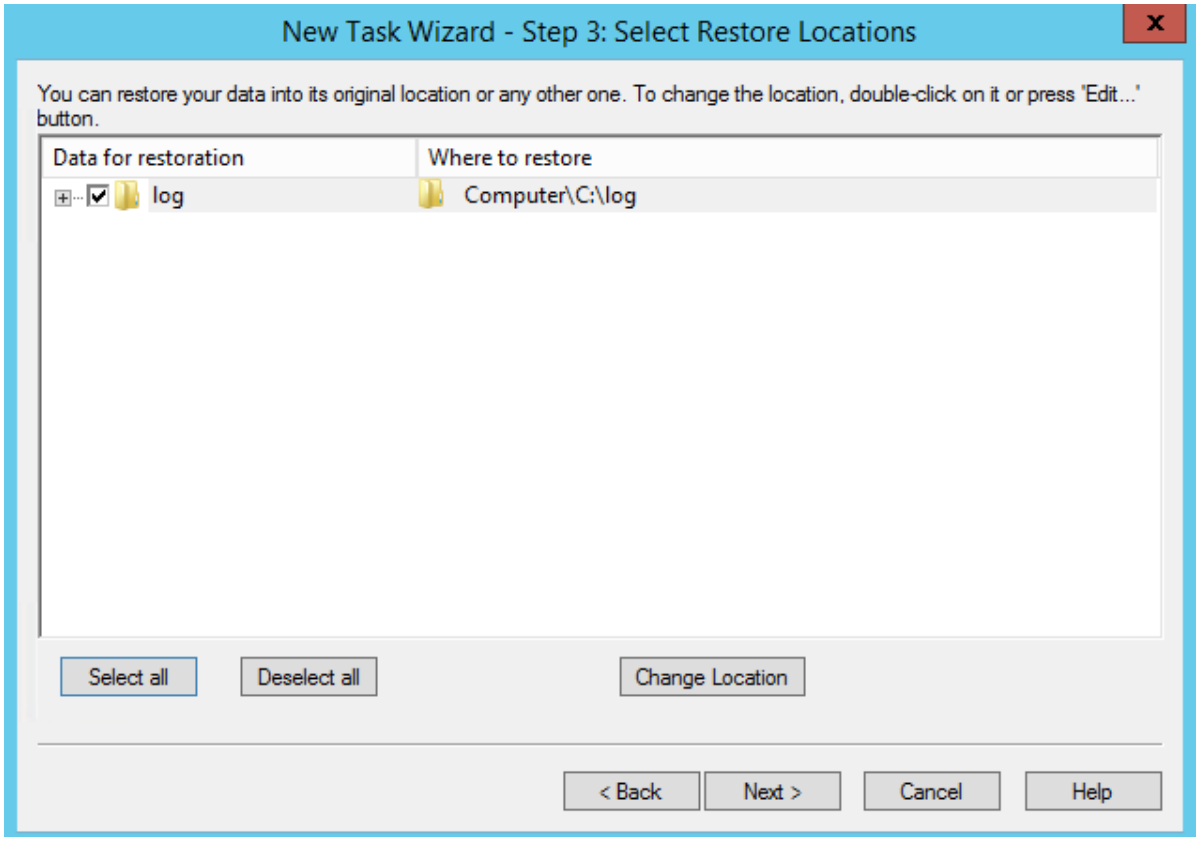
Selecting Data for Restoration

1. (Server edition only) In the dropdown menu at the top left corner of the window, select Workstation that can access the backup.
2. In the **Storage Destinations** pane, select destination where the backup is stored.
3. In the **Index File Selection** pane, browse for the backup and select index file.
4. When finished the selection, click **Next**.

• Select Restore Locations

This page describes the third step of creating a restore task with the New Task Wizard.

On the third step of the New Task Wizard, you can select data for restoration and where you want to it. In the window, you can see all backed up files and default restoration paths.



By default, all backed up data is restored to its original location. If you want to restore the entire backup, skip this step by clicking **Next**.

Performing Selective Restoration

If you want to restore only specific files or folders*, follow these steps:

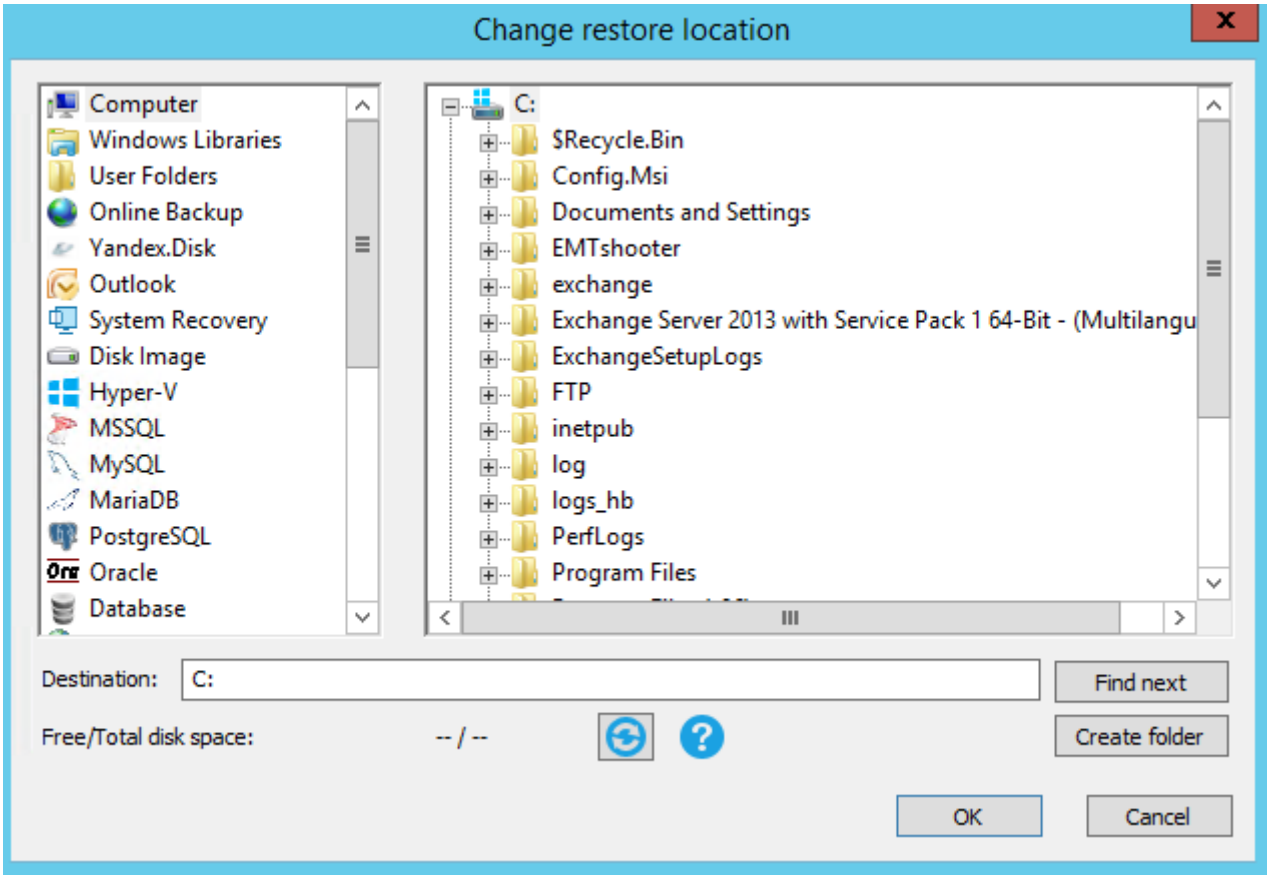
1. Expand the tree view, and browse for the data you want to restore.
2. Check or uncheck the boxes, so only the desired objects are selected. You can use **Select all** and **Deselect** all buttons.

***Note:** In these instructions, “files and folders” may also mean databases, tables, HDD partitions, and other objects. To learn more, please see Plug-in File Systems…

Changing Location of Restoration

To change restoration location, follow these steps:

1. Browse for a folder or file which you want to restore to a different place, and select it.
2. Click **Change Location**. The **Change restore location** dialog opens.



The **Change restore location** dialog consists of two panes, **Data Sources** and **Restore Location**.

- The **Data Sources** pane contains data sources.
- The **Restore Location** pane shows files and folders you can select as a restoration locations.

Technically, data sources are **plug-ins**. To make use of this or that plug-in, you need to have an appropriate license. During the trial period, you can use all plug-ins without any limitations. After registration, the list of plug-ins will be limited, respectively to the edition you register. To learn more, please refer to Registration...

When selecting a new restore location, you need to select a compatible plug-in. For example, you can't restore common files and folders to **MySQL** or **Disk Image** plug-in.

Some of the plug-ins are configurable. For example, to restore tables of a MySQL database, you will need to create the respective MySQL configuration (specify server, login and password). To learn more, please refer to Plug-in Configurations...

3. Select a new restore location. If you are changing path for a folder, then you need to select a folder. To change restore location for a file, select a file. Click **OK**.
4. Repeat steps 1-3 for each file you want to restore to a different place.

When selected data for restoration and restore paths, click **Next**.

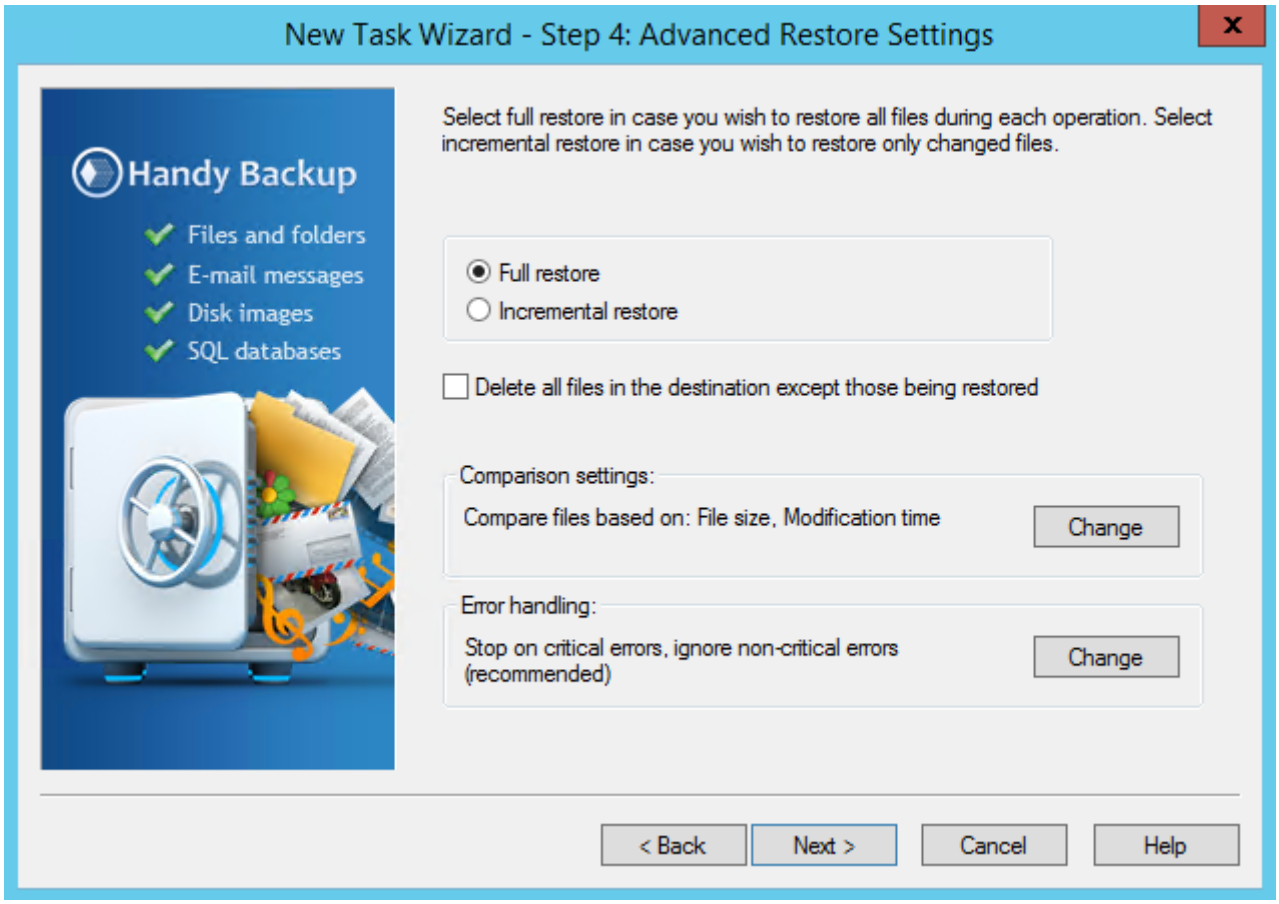
- ## Advanced Restore Settings

This page describes the fourth step of creating a restore task with the New Task Wizard.

On the fourth step of the New Task Wizard, you need to select type of restoration. Advanced users can also change comparison settings and error handling settings (read below).

Type of restoration determines if the program must check files* that already exist in folder where you restore the backup.

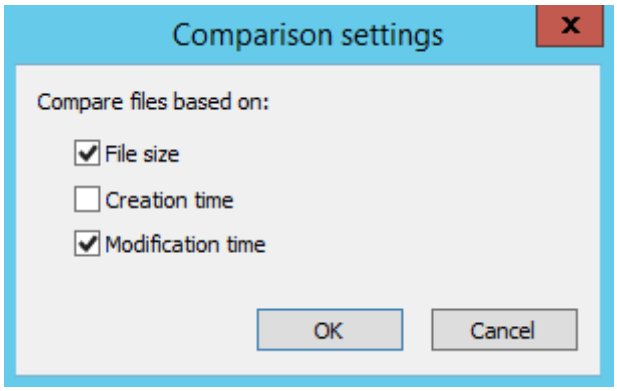
- **Full restore** always restores all files, overwriting any data in the restoration folder.
- **Incremental restore** compares attributes of files in the backup with files in the target folder, and restores only missing and modified files. You can read about comparison settings below.



***Note:** In these instructions, “files and folders” may also mean databases, tables, HDD partitions, and other objects. To learn more, please see Plug-in File Systems…

Comparison Settings

By default, when running incremental restore, the program compares data in the backup and in the restoration folder, and copies only files with different **File size** or **Modification time** attributes. This behavior is task-specific, and can be changed in **Comparison settings**. To change it, click the **Change** button.

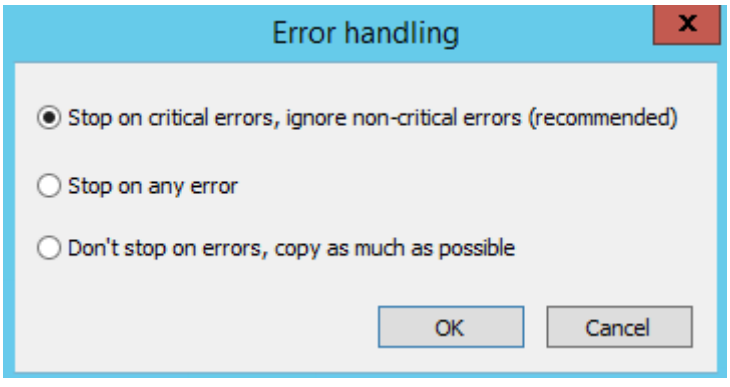


Error Handling

Error handling lets you set the program's behavior when it encounters an error:

- **Critical errors** happen, for example, when you try to restore an encrypted backup with a wrong password.
- **Non-critical errors** are one-time errors that are not specific to the entire restoration. For example, the "Access denied" error may be a result of a conflict with another application, and running the same task again will back up the same file successfully.

You can choose whether the task must stop on any error, stop only on critical errors, or don't stop on errors at all.



If there are any errors during restoration, the task will end with an **Error** status.

When finished selecting type of restoration and specifying advanced settings, click **Next**.

- ### Enter Password for Decryption

This page describes the fifth step of creating a restore task with the New Task Wizard.

Fifth step of the New Task Wizard is optional. If backup is encrypted, you need to enter password for decryption.

Enter the password, and then click **Next**.

5.4 Synchronize Task

Synchronize tasks have three main parameters:

- First folder*
- Second folder*
- Type of synchronization*

*Required parameter

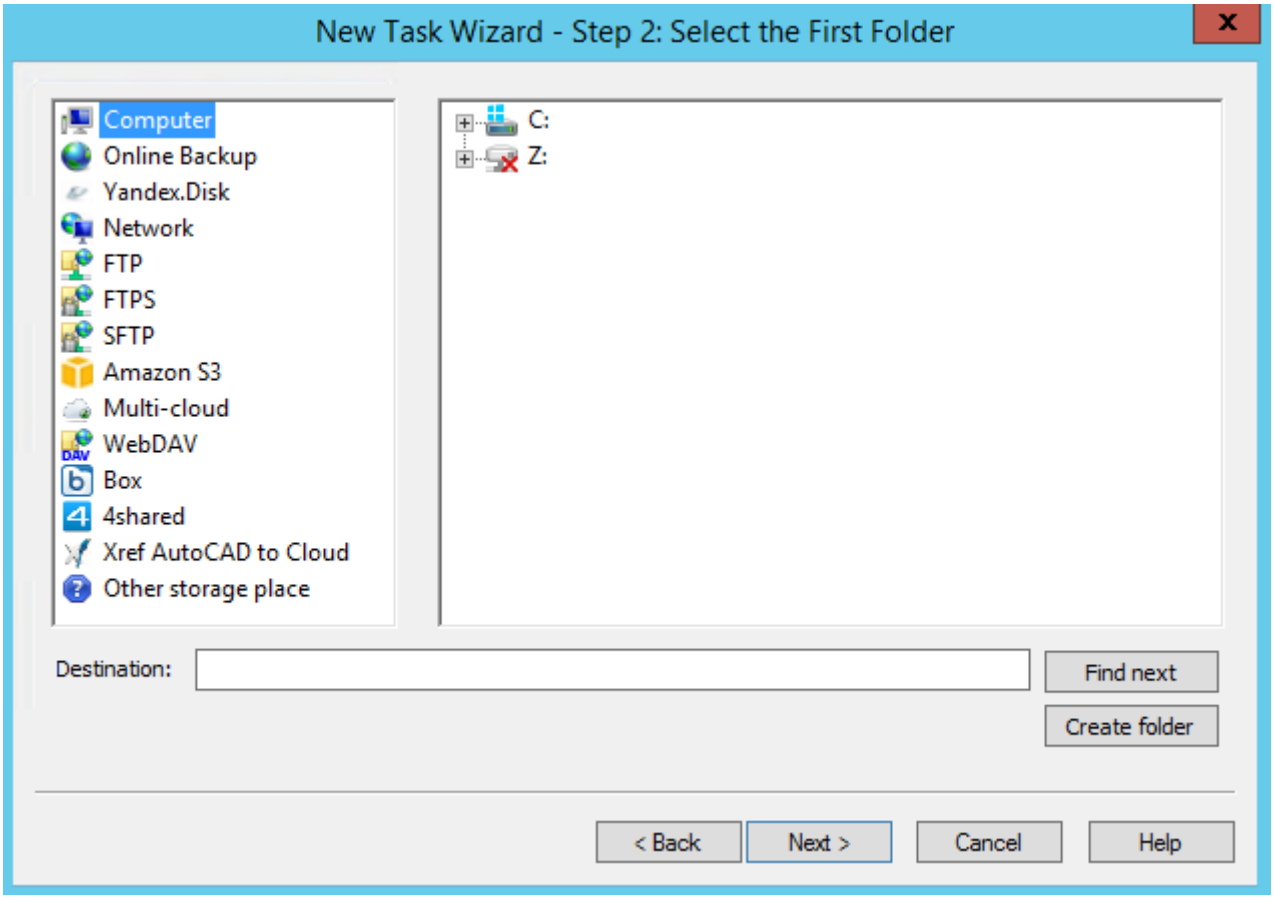
The New Task Wizard guides you step-by-step through specifying these and other parameters. For quick start, you can only select first folder and second folder, and skip all other steps by clicking **Next**. Default type of synchronization is “first-to-second”, which means that all data from the first folder will be copied to the second one.

For detailed description of all options, please refer to next chapters.

- ### Select the First Folder

This page describes the second step of creating a synchronize task with the New Task Wizard.

On the second step of the New Task Wizard, you need to select a first folder for synchronization. The window consists of two panes: **Data Source** and **Folder Selection**.



- In the **Data Source** pane, you can see different types of storage file systems that may contain a folder you want to synchronize.
- In the **Folder Selection** pane, you can see folders available in the selected source.

Technically, all data sources are **plug-ins**, and usage of some plug-ins requires you to have an appropriate license. During the trial period, you can use all plug-ins without any limitations. After registration, the list of plug-ins will be limited, respectively to the edition you register. To learn more, please refer to Registration...

To select a folder for synchronization, follow these steps:

1. (Server edition only) At the top left corner of the window, select Workstation that contains the folder that you want to synchronize.
2. In the left pane (**Data Sources**), select a source of data. For example, if you want to synchronize a network folder, select Network.
3. In the right pane (**Folder Selection**), select a folder you want to synchronize. Don't worry about direction of synchronization: it is set in the next steps.
4. When finished, click **Next**.

- ## Select the Second Folder

This page describes the third step of creating a synchronize task with the New Task Wizard.

On the third step of the New Task Wizard, you need to select a second folder for synchronization. This step is absolutely identical to the previous step, Select the First Folder.

- ## Advanced Synchronizing Settings

This page describes the fourth step of creating a synchronize task with the New Task Wizard.

On the fourth step of the New Task Wizard, you can select type of synchronization and set up filtering. Advanced users can also change comparison settings and error handling settings (read below).

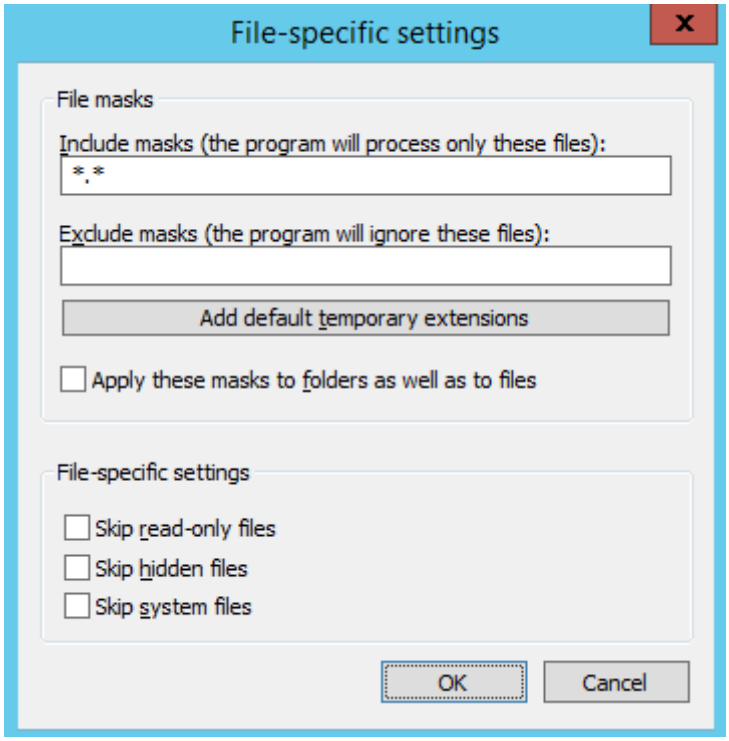
Type of synchronization determines the direction in which the program must copy contents:

- **Copy from the first folder to the second.** This option is used to synchronize contents of the second folder with the first one. For files with identical names, the program compares attributes, according to comparison settings (see below), and overwrites all different files.
- **Copy from the second folder to the first.** This option is used for synchronizing the first folder with the second one. Files with identical names are compared, different files are overwritten.

- **Mirror both folders.** This option performs two-way synchronization of two folders. For files with the same names, you can choose priorities: **copy newer**, **copy older**, **copy smaller**, **copy larger**, or **skip**.

If you want to synchronize files of specific type only, you can enable filtering. To do it, click **File filters...** The **File-specific settings** dialog opens.

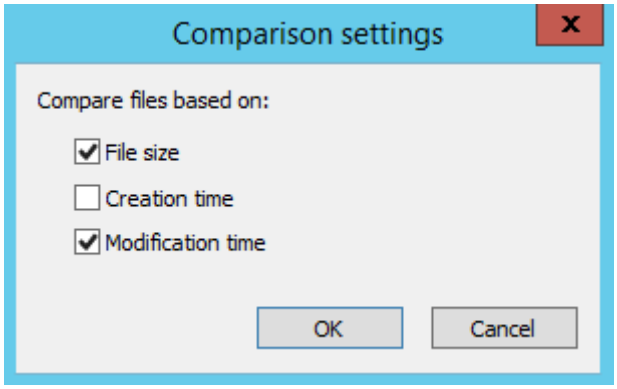
In the **File-specific settings** dialog, you can specify filtering options that will be checked for each file being copied.



Include and Exclude masks: Filling up these fields enables you to synchronize only files matching to a specific file mask. Use ***** (asterisk) as a wildcard, separate different masks with **|** (vertical line). For example, `*.docx|*.xslx` will select documents with any names and of Microsoft Word and Excel only.

Overwrite Settings

By default, when running synchronization, the program compares attributes of files in the first and in the second folder, and copies only files of different **File size** or **Modification** time. This behavior is task-specific, and can be changed in **Overwrite settings**. To change it, click the **Change** button.

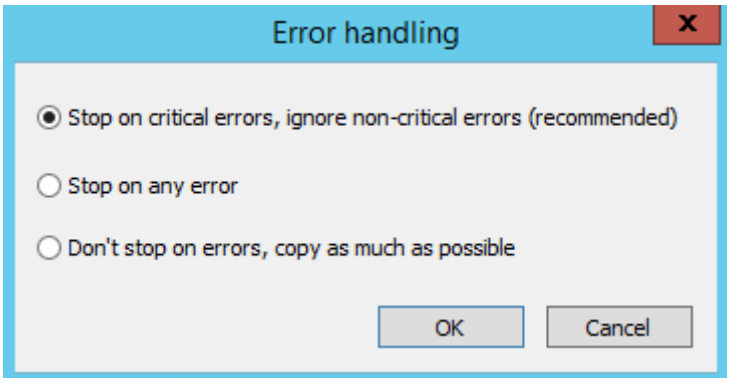


Error Handling

Error handling lets you set the program's behavior when it encounters an error:

- **Critical errors** happen, for example, when you try to synchronize an FTP folder, and enter a wrong password for authorization.
- **Non-critical errors** are one-time errors that are not specific to the entire synchronization. For example, the "Access denied" error may be a result of a conflict with another application, and running the same task again will back up the same file successfully.

You can choose whether the task must stop on any error, stop only on critical errors, or don't stop on errors at all.



If there are any errors during synchronization, the task will end with an Error status.

When finished with this step, click **Next**.

5.5 Scheduling

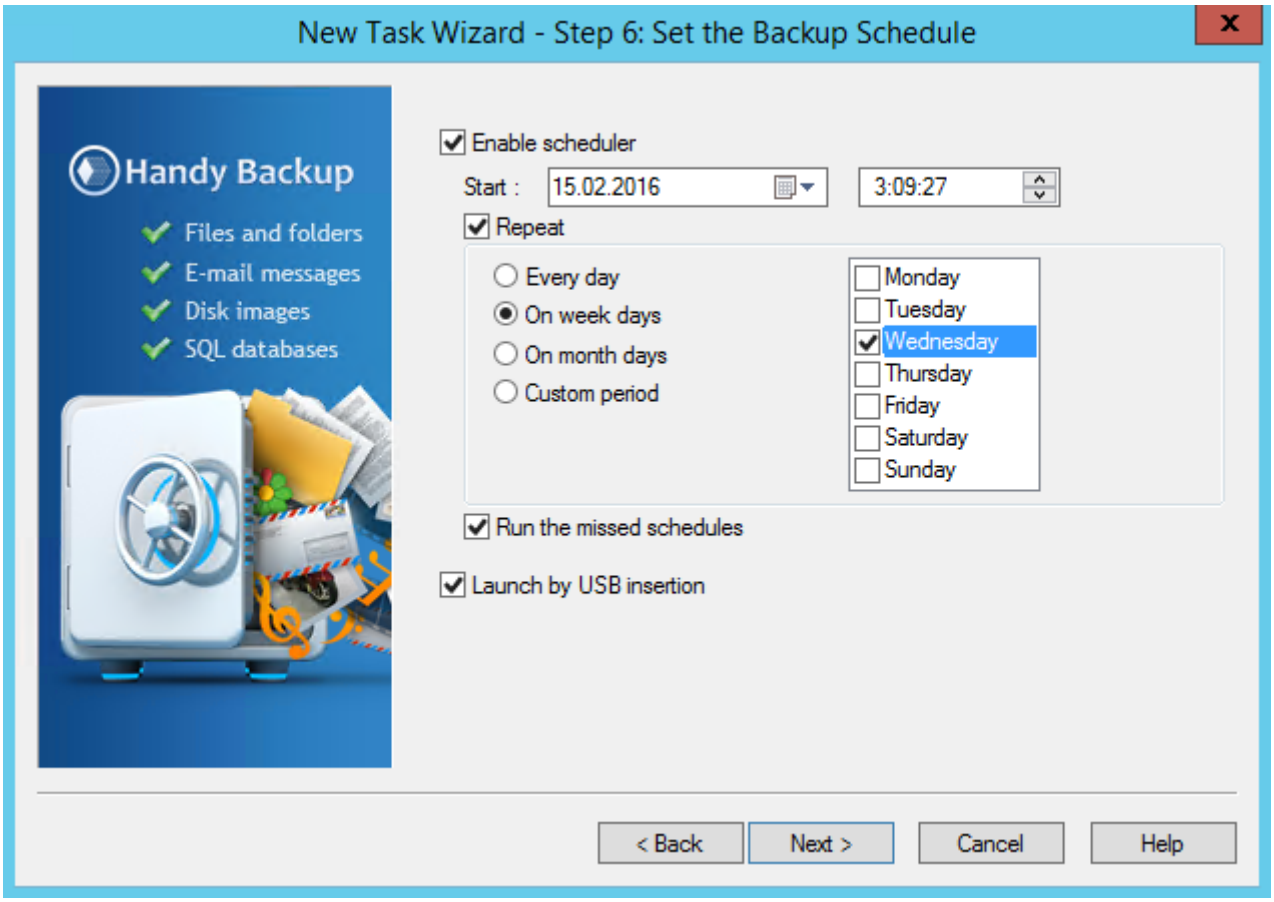
This page describes task scheduling with the New Task Wizard.

This step is similar for all types of tasks: step 6 of **backup** task, step 4 or 5 of **restore** task, and step 5 of **synchronize** task.

To set up a schedule, follow these steps:

1. Check **Enable scheduler**.
2. Select start date and time.
3. If you want the task to be repeated automatically, check **Repeat**.

You can repeat the task daily, weekly, monthly, or with any custom period.



4. Check **Run the missed schedules** if you want the program to automatically run missed tasks on program startup.

Besides time-based scheduling, you can also run the task on plugging a particular USB device (linked to a task) into a USB slot on your PC. The program will recognize the device regardless of a slot used.

5. When finished, click **Next**.

5.6 Run as Windows Service

Using Handy Backup as Windows service provides the next advantages:

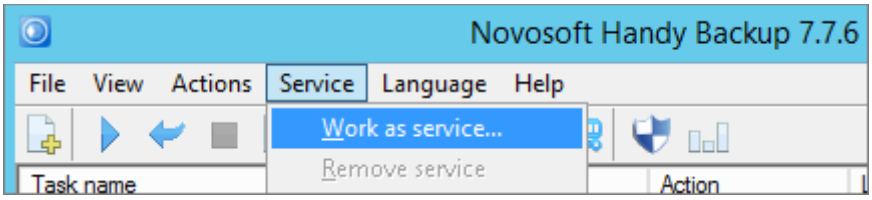
- Backup and restore tasks can be executed when the user interface will be closed (e.g. the program terminated);
- Execution of backup and restoration tasks will be continued after user's logoff.

These possibilities allows user not to control backup and restoration tasks directly, performing other job required instead.

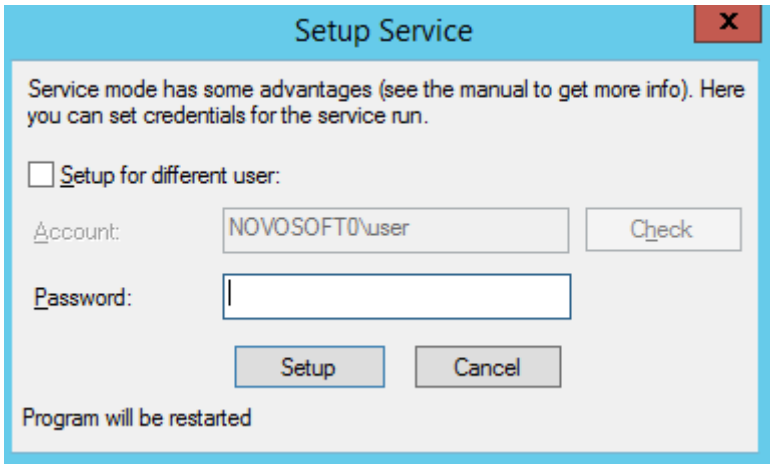
Running Handy Backup as Windows service

To run Handy Backup as Windows service, please follow the steps described below.

1. On the main menu, find "Service" item and then select "Work as service…" option.



2. The dialog window will appear, when you can enter the password for the current Windows user to add Handy Backup to the list of this user's services.



3. If you want to add Handy Backup as a Windows service for the different user, mark the checkbox called "Setup for different user" above the name and password fields. Enter the user's name (preceded by domain name if needed). You may check this user's consistency pressing the "Check" button.
4. **Note:** User running Handy Backup as Windows service must have administrative privileges to start services!
5. When you finish, press the "Setup" button. Program will be restarted.

Removing Handy Backup from the List of Services

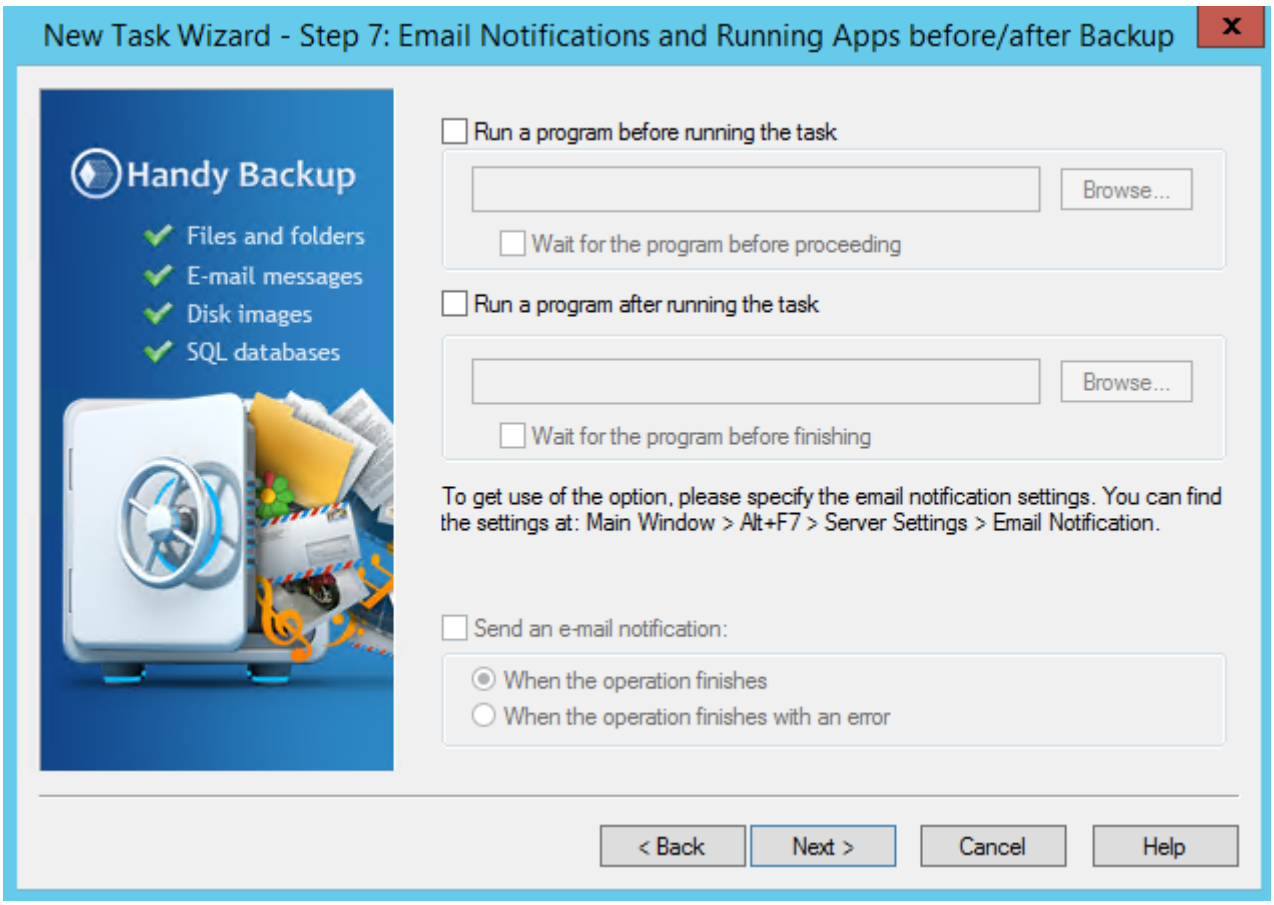
To remove Handy Backup service from Windows, please act in the sequence described next:

1. On the main menu, click “Service” and then select “Remove service” item.
2. Program will be restarted. Continue to use it as usual.

5.7 Pre -, Post - Operation Actions

This page describes how to set pre- and post-operation actions with the New Task Wizard.

This step is currently available only in **backup** task. In this step, you can enable running third-party applications before or after running the task.



To enable pre- or post-action, follow these steps:

1. Check **Run a program before running the task** or **Run a program after running the task**.
2. Specify the program in the activated field.
3. Check **Wait for the progress before proceeding** or **Wait for the progress before finishing** to specify when the copying starts or ends.

Also, in this window you can enable e-mail notification about task results. To do it, follow these steps:

1. Check **Send an e-mail notification**.
2. Select **When the operation finishes** if you want to be notified of all tasks, or **When the operation finishes with an error** if you want to be notified of failed tasks only.

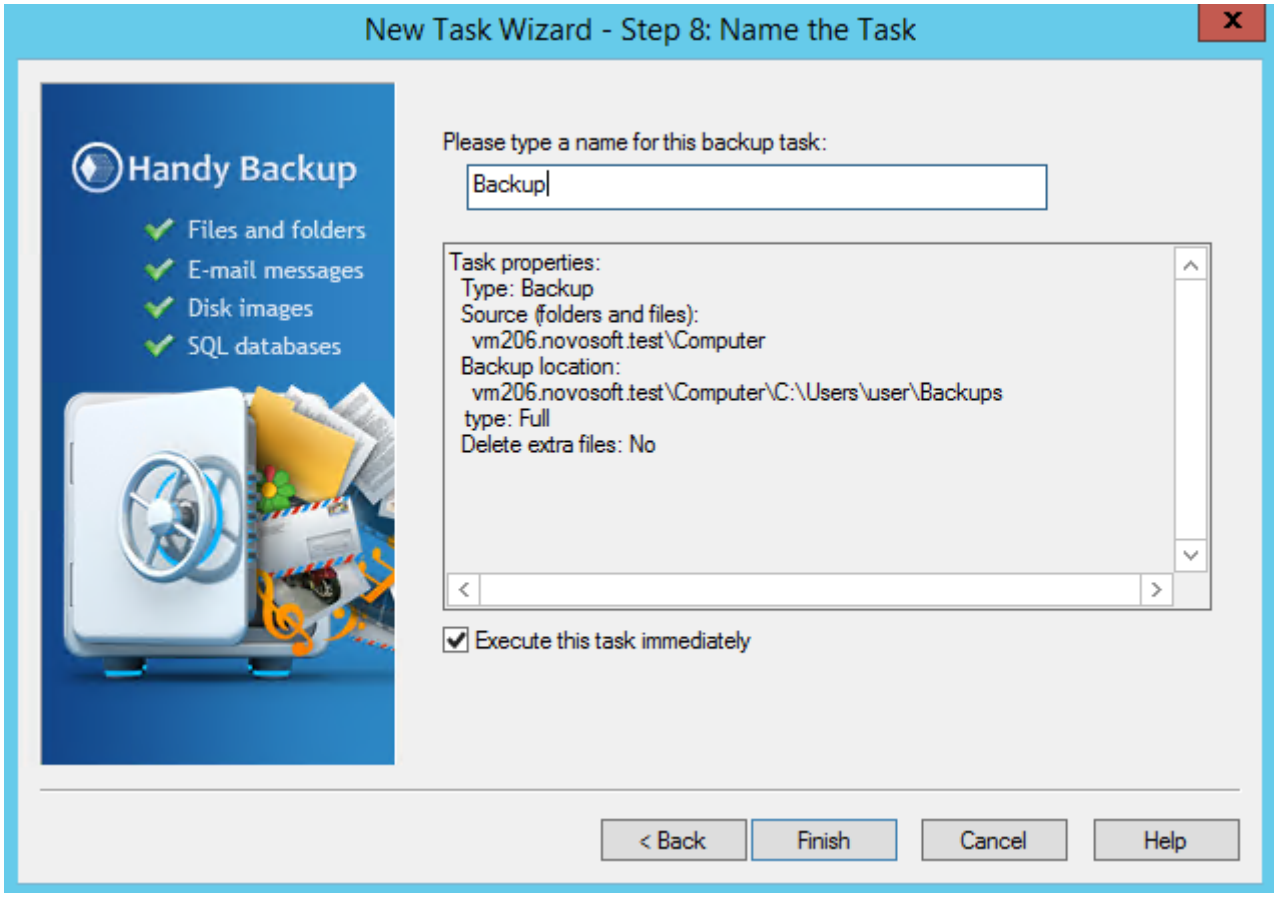
E-mail notifications can be enabled only if you have configured mailing options in Settings. If you haven't done it, you can skip this step, and then turn it on later by modifying task properties. To learn more, see E-mail Notification Settings.

5.8 Ready to Create New Task

This page describes the last step of the New Task Wizard.

This step is similar for all types of tasks: step 8 of **backup** task, step 5 or 6 of **restore** task, and step 6 of **synchronize** task.

1. Name the task. It is recommended that you give meaningful names, so you can then easier track overall status of your data.
2. Review task parameters. If some you want to change something, you can go to the previous steps and do it.
3. Check **Execute the task immediately** to run the task straight after you click **Finish**.
4. Click **Finish**.



Running a Task Manually

You can start any task at any time in a manual mode, regardless of existing schedule for this task.

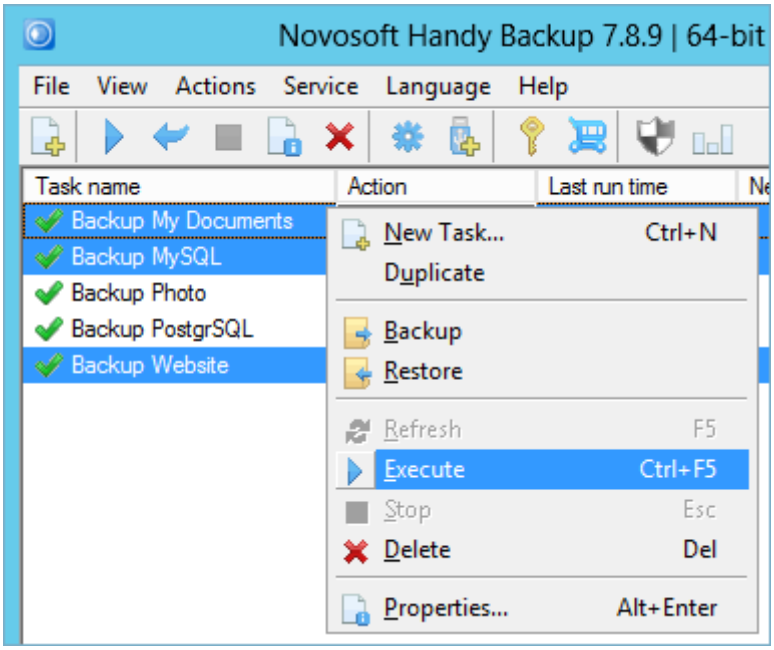
The Instruction

To start any task you want, please do the following sequence of actions.

1. In the Task View section of a main window, **select a task (or multiple tasks)** that you are planning to run now.

> **Note:** You can use standard Windows selecting tools (i.e. **Shift** and **Ctrl** keys in a combination with mouse left clicks) to select groups of tasks easily.

2. When selected, click on an **execution button** on the Management Panel, or select the "**Execute**" item on the context (right-click) menu. (You can also just press **Ctrl+F5** to run selected tasks).



6 Technologies Behind the Software

In this chapter you can find the information about the key technologies of Handy Backup. The main parts of the section are here:

Architecture

This section describes the architecture of the program and the main features of it's work. You will learn more about what are the Client, Server, Workstation, and their role in the backup process. Also the technologies used by the program are described (CORBA, VSS, Linux Knoppix, and others).

Plug-ins

In this section you can find information about special built-in plug-ins that are used for backup and program's configuration. Handy Backup effectively makes a backup of different software with plug-ing:

Data Source Plug-ins. Data source plug-ins get the information from any data source, such as a database (Outlook, MySQL, Oracle, Database, MS Exchange, DB2, Lotus Notes, 1C) or the computer's hard drive (Computer, User Folders, Disk Image).

Storage Plug-ins. Storage plug-ins provide the access to the file system. These plug-ins are created for remote backup. Now there are the following plugins: FTP, FTPS, SFTP, Online, Network, Amazon S3, OneDrive, Google Drive, 4shared, Box, Xref for AutoCAD, WebDAV.

Filters

This section contains information about the filters included in the program. Now Handy Backup can do a compression (SingleZIP and MultiZIP), and encryption (BlowFish cipher).

Incremental and Differential Backup

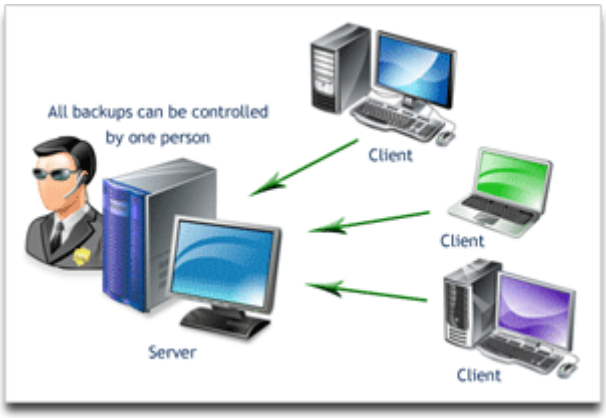
This section provides information about the incremental and differential backup technologies. These technologies doesn't do full backup or overwriting new over the old backup every time, but only save the changes made, so it saves time and disk space.

6.1 Architecture

Handy Backup performance is based on several technologies. Here we will concentrate on most important information.

Client-Server

The backup in Handy Backup 7 is based on the principles of Client-Server technology. It's enough to have just one server to manage all the client computers.



In general, Users may not even know that their computer is under backup procedure. To perform a backup, it's sufficient to set up all the server-side settings and then backup will be done on all of the client-side computers.

Such efficiency is achieved by clever structural scheme of Handy Backup.

Handy Backup 7 components

Handy Backup 7 consists of several key components. **Handy Backup Network** and **Handy Backup Server Network** are server-side software using the **Management Panel** as the interface, and both **Workstation agent** and **Server Agent** are client-side utilities called **Network Agents**. All the components together form a so-called **"Backup Network"**.

Workstation Agent

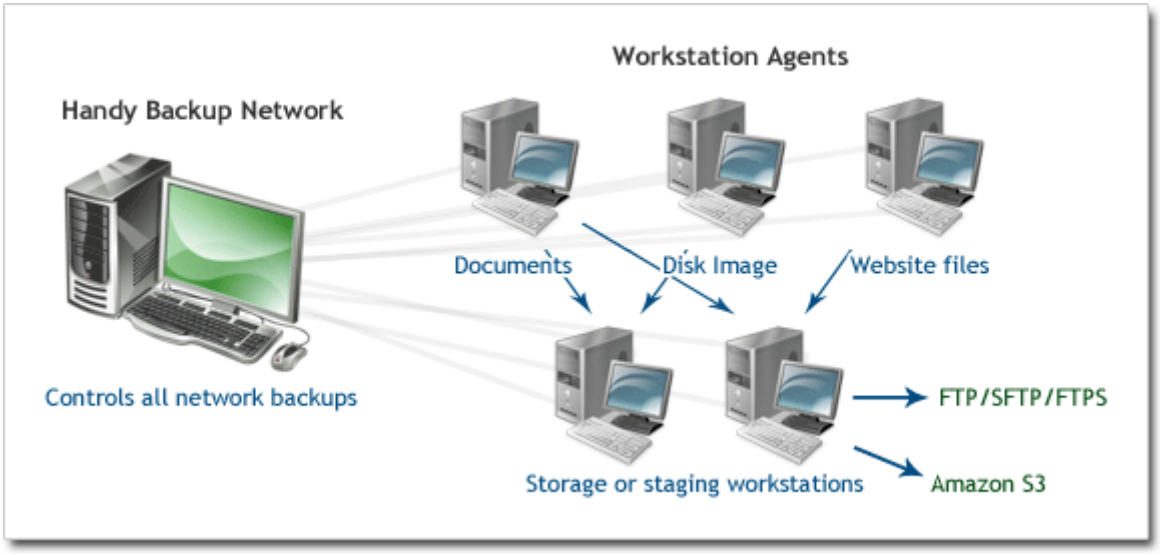
The Workstation Agent provides access to data located on the remote computer and has a special interface to the objects (file system, databases, FTP, e-mail servers). All the objects can be presented in the "files and folders" form, so you can perform different operations such as copy, delete, view attributes, etc. When you do a backup, Handy Backup accesses the file system through a Workstation Agent.

Workstation agent allows you to do the backup of Individual Files and Folders, Windows Registry, disk image, E-mail.

Server Agent

Server Agent has all the Workstation Agent's features, but also has additional plug-ins for backing up databases and server applications: Microsoft SQL Server, MySQL, Oracle, PostgreSQL, DB2, Lotus Notes, and others.

Handy Backup Network



Handy Backup Network creates and starts tasks, does the monitoring, stores the logs, manages data setting, checks user authentication, and also is responsible for system protection.

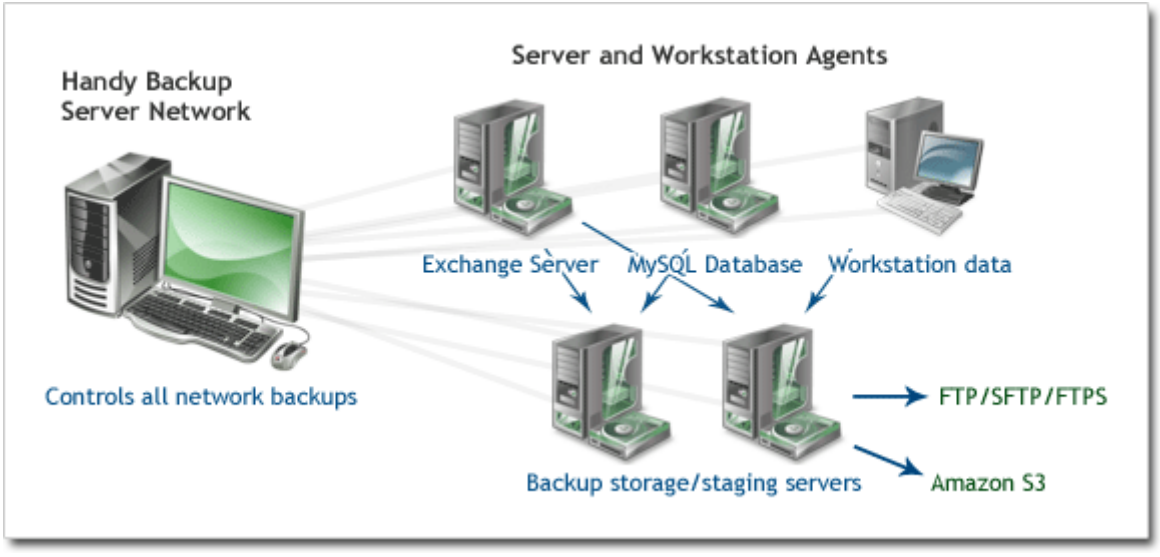
It has a number of unique parts, such as the settings manager (system setup) and access manager (checking user's data). Handy Backup Network can perform a wide range of operations according to client's commands.

Handy Backup Network controls all the Workstation Agents.

Handy Backup Server Network

Handy Backup Server Network is more powerful software, because it has all the Handy Backup Network's features, but can manage not only Workstation Agents, but also Server Agents.

Here is a brief look on how it works:



Version 7, Published on October 2017
support@handybackup.net

Management Panel

Management Panel is a special program that can be used as an interface to the administrator's computer (to simplify the configuration, monitoring or even perform data management). The Management Panel has the direct access to the files and folders where Workstation and Server Agents are running.

The interaction of all parts of the system is good via the use of CORBA technology. CORBA is a special standard that allows different operating systems, services and components to communicate with each other using common share.

For more information about the system, you can also read about client-server backup.

• Network Agents

Network Agents, divided on Workstation Agents and Server Agents, are the main components for data copying. The Agent provides access to the computer's resources and a uniform interface to objects (file system, databases, FTP, e-mail servers). All objects are represented in the form of files and folders, thus you can do different operations such as copy, delete, view attributes, etc. When you perform backup tasks, **Handy Backup** accesses the file system through an Agent.

Both Workstation and Server Agents in simple explanation consist of two main components:

1. Filters

Filters are a special type of plug-ins for converting the data stream. Unlike file system plug-ins, filters do not provide access to the file system (file system plug-ins are terminal elements reading/writing data directly to the file system). The filters are logically built between the workstation and the plug-ins.

Here is an example how filters work in the case of data backup with compression and encryption options enabled:

1. File system manager creates an instance of the file system plug-in and opens a file for writing.
2. The data stream is sent through a chain of filters.
3. ZIP-filter archives the data file with ZIP compression.
4. BlowFish-filter encrypts that compressed data.
5. The plug-in gets ready (already packed and encrypted) data stream.

2. Plug-ins

Network Agents use Handy Backup's plug-in architecture. With the help of plug-ins the program has access to a particular file system. Agent provides a convenient interface to the computer's data via plug-ins. Thus, the details and features of the file system are "hidden" in the plug-in.

Agent controls the loading of plug-ins (and their properties), mounts and dismounts the file system, authenticates the users and checks the availability of specific functions. Agent receives all commands from the **Handy Backup Network** (or **Handy Backup Server Network**), although in some cases, it can check the user's authorization itself.

Differences between Workstation Agent and Server Agents

The main difference between Workstation and Server Agent is a built-in plug-in set. Workstation Agent aimed to do a full-featured backup of the computer's resources and has a special interface to the objects (file system, e-mail servers).

Server Agent is more powerful because it also has special plug-ins for backing up databases and server applications: Microsoft SQL Server, MySQL, Oracle, PostgreSQL, DB2, Lotus Notes, and others.

Setting Up the Network Agent

Auto configuration this is the main method of setting up the backup network.

The Network Agent is installed as Windows service. When you create a backup network, try automatic installation of the Agent. As the all the Network Agent's depends entirely on the administrator server-side commands, the service will automatically look for proper server in your network, and will try to connect it.

In cases where the program can not connect to the server, refer to the Network Agent Configuration.

Technologies behind Network Agents

Technologies used by Workstation and Server Agents include:

FUSE for Windows - a special module that allows any program to create their own file systems. FUSE is particularly useful for writing virtual file systems. Unlike traditional file system, a virtual file system does not store the data itself. It is a "presentation", essentially a "bridge" between the actual kernel and an application.

ZIP Backup. ZIP is an extremely popular method of the data compression. Currently, the ZIP format is the standard for many applications, including backup and data exchange.

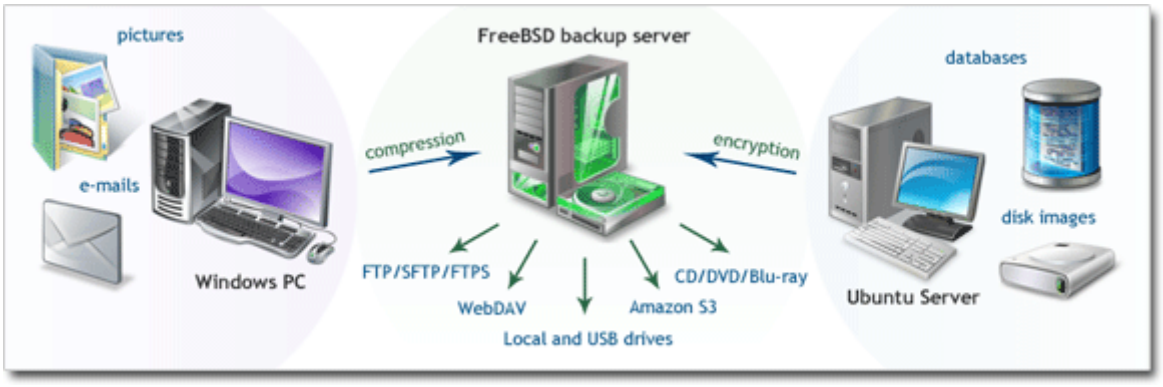
Blowfish Cipher. Blowfish is an effective method of data encryption. It uses a 64 -bit block size and variable key length from 32 bits up to 448 bits. It provides a highly reliable data protection.

- ## Management Panel

The **Management Panel** is a very important component of Handy Backup program. **Handy Backup Server Network** and **Handy Backup Network** software perform a role of server in Handy Backup. Next, the Management Panel and the computer hosting it will be called collectively as **server**, when the Management Panel will mean the software only.

Server is used for creating and starting tasks (and monitoring), storing logs, managing data setting, user authentication, system protection.

Some of these tasks can be performed by other components of Handy Backup, but server has a number of unique features:



Some of these tasks can be performed by other components of Handy Backup, but Management Panel has a number of unique features:

- **Manage Settings.** All settings of Handy Backup 7 are stored on a server in special files.

- **Data protection.** The server is responsible for data protection (for example, plug-ins do not encrypt the passwords, server does).

- **Access Control.** The server is responsible also for user's authenticating. Authorization is based on login and password. Only authorized users can access the Server.

- **Logging.** The server is responsible for maintaining log files. Log files contain the information about the start and the stop of the server and other events related to the tasks. This can be used to analyze the server's operation.

The Management Panel uses advanced technologies to ensure stable functioning of the all entire client-server Handy Backup structure.

The main technologies we should tell about are:

CORBA (Common Object Request Broker Architecture) - a special technology that allows you to create, distribute and control remote objects across a network. In the early 1990's it was a nightmare to link different computers into one communication network (because of different hardware, operating systems and programming languages). To solve that problem SORBA was presented.

CORBA is a standard that allows programs written in different languages and operating systems to communicate to each other using common shared services.

Today, CORBA often used to link different running components inside corporate networks.

RSYNC (Remote Synchronization) is a special program that allows you to synchronize files and directories. It minimizes the total traffic and enable data encryption if necessary. The minimality is achieved by using of the client-server architecture. This technology is often used for incremental and differential backups.

The main advantage of this technology is that in a case of small changes in files, *rsync* will transmit only a few bytes (instead of rewriting the entire file).

- ## Client

Handy Backup client can be used as interface to the server (to simplify the configuration, monitoring or even perform data management). Client has the direct access to the files and folders via the Workstation and Server Agents.

At the moment, users can use Handy Backup two clients - **GUI client** and the **Console client** (included in program's distributive). In principle, it's possible to run any client program for Handy Backup, because client doesn't have any kernel's function. It's used to setup the program, controlling the functionality and results.

GUI client

GUI (graphical user interface) - a technology that allows users to control the system through a graphical interface that includes graphical icons and visual indicators. This technology is quite different from the old text clients where all the commands are entered from the keyboard via the command line.

GUI client is the first and main client for Handy Backup. Allows users to connect remotely to the server, manage and start tasks, analyze the results. It's also simplifies the registration and configuration of the application.

Console client

Allows users to view a list of the tasks and to start/stop them, delete tasks, turn off Handy Backup Server, register the program.

Shell Extension client

New Shell Extension client is currently under development. This client can be integrated with Windows Explorer in future.

- **Other Services**

Handy Backup uses other services to ensure it's stable and efficient operation.

Volume Snapshot Service (VSS)

This technology allows any-data-copying, even if the files are locked by the operating system (e.g., in a case of system files). This technology requires NT File System.

Handy Backup 7 uses this technology for data backup. With VSS it's possible to do a full backup of the disk. Furthermore, the use of this service will not interfere other programs and operation system's services.

Linux Knoppix

The **Knoppix** Linux is a special "portable" distributive of the Linux operating system that does not require installation on a computer or laptop. It has several built-in base packages with basic software (Internet browsers, file managers, text editors), that is necessary to use for full-functional computer's use.

This system is ideal in the case of "disaster recovery", when you need to restore other "broken" operating system. It can be saved to a flash drive or hard drive for full-featured use as a operation system. That's why Linux Knoppix is the main component of Handy Backup Disaster Recovery (HBDR).

6.2 Plug-ins

Plug-ins are responsible for retrieving, processing and storing data. Each time you run backup, restoration or synchronization, data stream is passed through a series of plug-ins.

There are three types of plug-ins:

- **Data Source** plug-ins can be used as source of data in **backup** tasks, and as target of restoration in **restore** tasks.
- **Storage** plug-ins can be used as both source of data and destination in **backup** tasks, as target of restoration in **restore** tasks, and can provide folders for syncing in **synchronize** tasks.
- **Processing** plug-ins, or **Filters** allow processing data streams during copying. They cannot be used in **synchronize** tasks.

For convenience of terminology, term “plug-in” in this manual is used to refer to **Data Source** and **Storage** plug-ins, and all processing options are referred to as “filters”.

Understanding Plug-ins

Simply speaking, plug-ins contain instructions on what needs to be done to copy the data. Instructions are plug-in-specific and depend on direction of copying. For example, copying from a database plug-in (backing up) will use `SELECT` statements, and copying into a database (restoring) will use `CREATE` and `INSERT` statements.

Each plug-in creates a virtual file system and allows working with its data as with “common” files and folders. All plug-ins support the same set of operations, which allows the program’s core to work with abstract data stream without knowing any details about it. To learn more, please see Plug-in File Systems.

Plug-ins and Filters in the Architecture

Plug-ins are a part of **Workstation**, and therefore are platform-specific. For example, 32-bit version of Workstation will not be able to access data of 64-bit version of Microsoft Exchange Server.

Say that you want to back up a local file to an FTP server, with ZIP compression. To perform this operation, **Workstation** must have the **Computer** and **FTP** plug-ins, and the **ZIP** filter. Also, **Server** must have a valid **FTP Configuration** for the **FTP** plug-in. Architecturally, the scheme works as follows:

1. **Workstation** receives a command to copy **Computer\[Path to Local File]** to **FTP\FTP Configuration\[Path to FTP Folder]**, with ZIP filter.
2. **Workstation** requests a file from the file system of the **Computer** plug-in.
3. The **Computer** plug-in starts reading the file from the local computer’s hard drive. The respective data stream is sent to **Workstation**.
4. **Workstation** sends the data stream to the **ZIP** filter.
5. The **ZIP** filter performs “on-the-fly” compression and sends the data stream back to **Workstation**.
6. **Workstation** sends the compressed data stream to the **FTP** plug-in.
7. The **FTP** plug-in receives the data stream and a path the data must be written to. The path includes **FTP Configuration** which contains server address and authorization parameters. The plug-in connects to the FTP server and uploads the respective file.

Technically, **Workstation** doesn’t “know” anything about the data it copies and about filters it uses to process it. It takes a data stream from **Data Source** plug-in, passes it through **Filters**, and then sends it to **Storage** plug-in.

You can learn more about plug-ins in the next chapters.

• Plug-in File Systems

To understand how the program works, it is important to get the concept of plug-in file systems. Each plug-in creates a virtual file system that allows working with its data as with “common” files and folders:

- **Data Source** plug-ins map computer information to files and folders, and translate all file system operations (reading folder contents, creating files, and other) to plug-in-specific context. For example, creating a new file in a file system of the **MySQL plug-in** makes it connect to the MySQL database and use a **CREATE TABLE** statement.
- **Storage** plug-ins provide one-to-one access to the respective file systems. For example, reading files of the **FTP** plug-in is the same as downloading them with any other FTP client.

The main idea of plug-in file systems is to provide the program’s core with “abstract” files and folders that support common operations, while hiding their implementation.

Attributes

Files and folders in plug-in file systems have attributes:

- File size;
- Creation time;
- Modification time;
- (and other).

Generally, file systems are not obliged to support all of them. For example, there is no exact way to determine size of a database table, so the respective files will have zero size. In the practice, this doesn’t have much effect, except for some inconvenience when calculating total size of backup.

Configurations

Some plug-ins are configurable. For example, to work with a remote FTP folder, you need to specify server address and authorization parameters. To do it, you need to create a **Configuration** for the **FTP** plug-in.

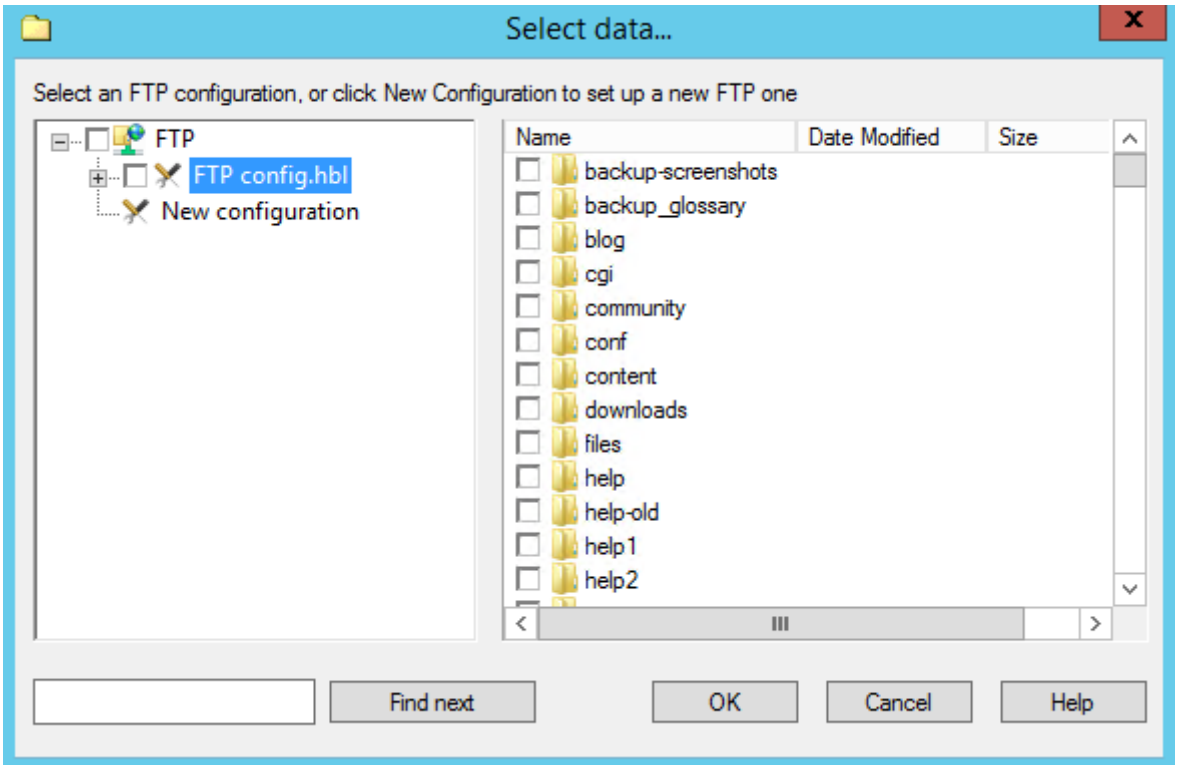
In terms of plug-in file system, each configuration is a top-level folder. Expanding this folder makes the plug-in read settings from the configuration file and initiate connection to the respective data source (e.g. FTP server, MySQL database, and other).

You can learn more about configurations in the next chapter, Plug-in Configurations.

- ## Plug-in Configurations

Some plug-ins are configurable. To use them, you need to determine parameters of data source or storage by creating a configuration.

Configurations appear in plug-in file systems as top-level folders. Expanding the configuration initiates connection with data source or storage and reads contents of the respective folder.

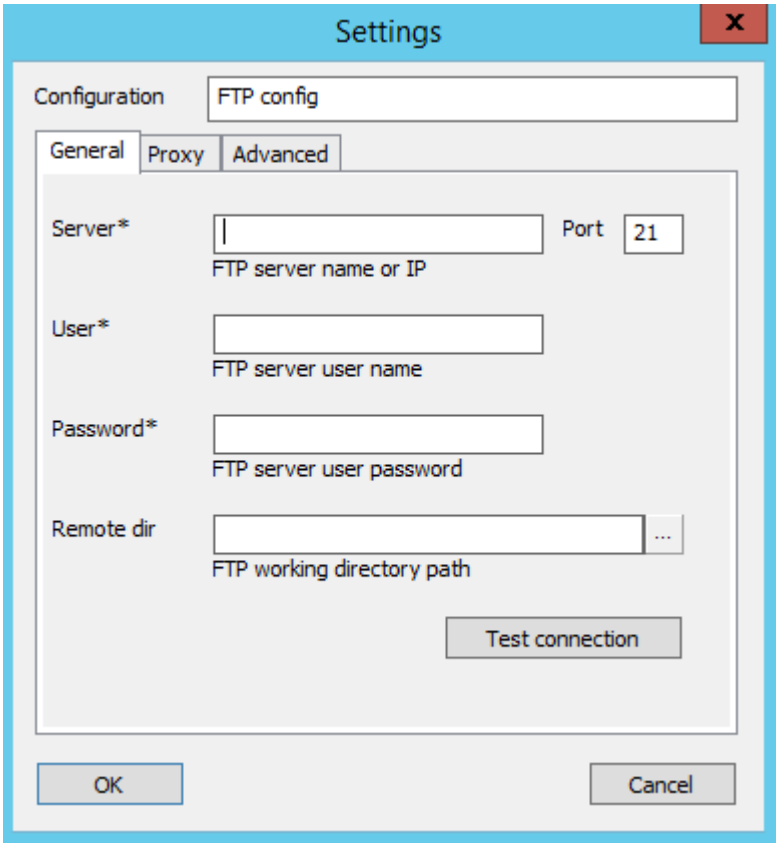


Creating Plug-in Configurations

To create a plug-in configuration, you need to open any dialog displaying file system of a configurable plug-in. To create a new configuration, follow these steps:

1. Click **New configuration**. The **Settings** dialog opens.

Each plug-in has its own unique options, and the **Settings** dialog is different for each plug-in.



2. Fill in parameters of the configuration.
3. Click **Test connection** to make the plug-in connect to data source. This button is available for all configurable plug-ins.
4. When finished, click **OK**.

Modifying Plug-in Configurations

Existing configurations are displayed in plug-in file system as top-level folders. To modify a configuration, right-click the configuration name, and then click **Edit...** The **Settings** dialog is the same as during creation of a new configuration.

Modifying configurations can be tricky. When the program copies files from one plug-in file system to another (i.e. when you run a task), the files are taken from a specific path. For configurable plug-ins, the path always starts with configuration name, i.e. renaming the configuration will result in a **"Path not found"** error. When modifying plug-in configurations, you should also modify tasks using them.

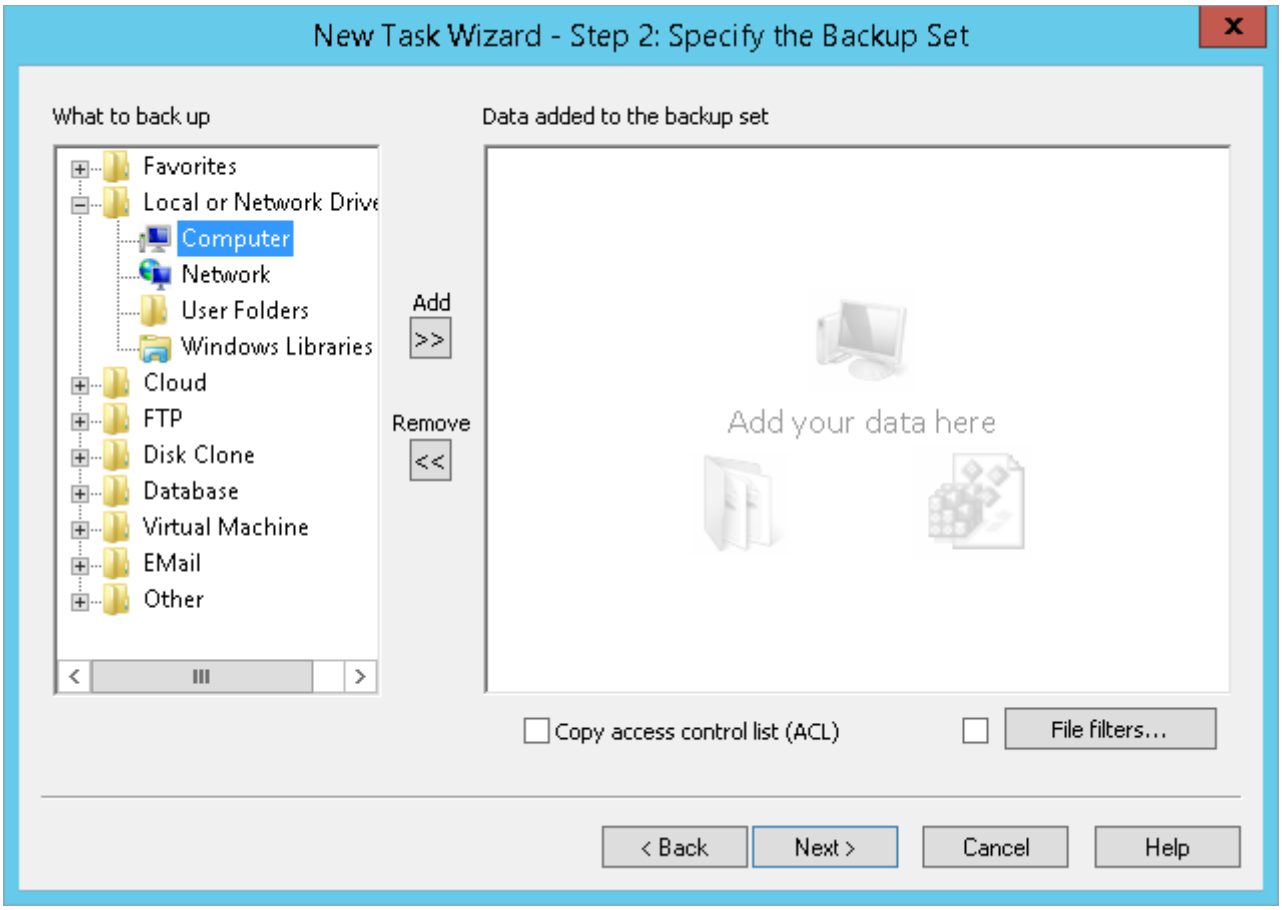
• Data Source and Storage Plug-ins

Data Source plug-ins are components of the program that contain instructions on how to retrieve information from different sources of data, and how to store it back. For example, a database plug-in may use the **SELECT** statement to back up tables, and **CREATE-INSERT** statements to restore them.

Note: In our software, the term **"plug-in"** is used to refer to a certain type of features that can be updated independently from the program's core. These features are not "minor" or "supplementary" in any way. Plug-ins are used for all operations: for example, copying of local HDD files relies on the Computer plug-in.

To learn more about the concept of plug-ins, see Plug-ins.

You can see all plug-ins on the second step of the New Task Wizard, in the **Data Sources** pane to the left.



File Systems

Each plug-in creates a virtual file system with hierarchical structure. Files and folders of the file system correspond to objects of the respective data source: for example, files of the Disk Image plug-in are used to access HDD partitions. When the program runs backup, restore or synchronization, it works with objects provided by plug-ins as if they were common files and folders.

You can learn more about virtual file systems in Plug-in File Systems.

List of Plug-ins

Generally, there are two types of plug-ins:

- **Data source** plug-ins provide access to local PC objects.
- **Storage destination** plug-ins provide one-to-one mapping to storage file systems (e.g. local HDD, or remote FTP location).

Both types of plug-ins can be used as a source of data. You can see a full list of plug-ins in the table below.

Plug-in	Type	Edition	32-bit/64-bit?	User-specific?
Computer	Storage	All	both	Yes*
Windows Libraries	Source	All	both	Yes
User Folders	Source	All	both	Yes
Online Backup	Storage	All	both	No, configurable
Database	Source	Small Server+	both	No, configurable with ODBC Connector
MSSQL	Source	Small Server+	both	Yes**
MySQL	Source	Small Server+	both	No, configurable
MariaDB	Source	Small Server+	both	No, configurable
PostgreSQL	Source	Small Server+	both	No, configurable
Oracle	Source	Small Server+	both	Yes
Lotus Notes	Source	Small Server+	32-bit only	Yes
DB2	Source	Small Server+	both	Yes
Email	Source	All	both	No, configurable
MS Exchange	Source	Small Server+	both	Yes**
Outlook	Source	All	both	Yes
Disk Image	Source	Professional+	both	No*
System Recovery	Source	Professional+	both	No, configurable
Registry	Source	All	both	Yes

Plug-in	Type	Edition	32-bit/64-bit?	User-specific?
VMware	Source	Small Server+	both	No, configurable
Hyper-V	Source	Small Server+	both	No, configurable
Network	Storage	All	both	Yes
FTP	Storage	All	both	No, configurable
SFTP	Storage	Professional+	both	No, configurable
FTPS	Storage	Professional+	both	No, configurable
WebDAV (Multi-cloud)	Storage	All	both	No, configurable
Amazon S3	Storage	Professional+	both	No, configurable
S3 Cloud	Storage	Professional+	both	No, configurable
Google Drive	Storage	All	both	No, configurable
Microsoft OneDrive	Storage	All	both	No, configurable
Dropbox	Storage	All	both	No, configurable
BackBlaze	Storage	All	both	No, configurable
Box	Storage	All	both	No, configurable

Value in the **User-specific** column indicates if access to data depends on the user account that the **Workstation** component runs from. To learn more, please see Workstation...

* To use the **Disk Image** plug-in and to back up open files with the **Computer** plug-in, Workstation must be launched from a user account with administrator privileges, and you need to have a running **Volume Shadow Copy Service**. Without the service, the **Computer** plug-in will not be able to copy files that are opened by other applications.

** Workstation must be launched from a user account with administrator privileges, and you need to have running **Volume Shadow Copy Service** and **SQL Writer Service** (for the **MSSQL** plug-in) or **Exchange Writer Service** (for the **MS Exchange** plug-in).

Note: The above information may change from the time of publication (version 7.17.0, September 2018).

List of Storage Plug-ins

You can see a full list of storage plug-ins in the table below.

Plug-in	Edition	32-bit/64-bit?	User-specific?
Computer	All	both	Yes*
Online Backup	All	both	No, configurable
Network	All	both	Yes
FTP	All	both	No, configurable
SFTP	Professional+	both	No, configurable
FTPS	Professional+	both	No, configurable
WebDAV (Multi-cloud)	All	both	No, configurable
Google Drive	All	both	No, configurable
Microsoft OneDrive	All	both	No, configurable
Dropbox	All	both	No, configurable
Amazon S3	Professional+	both	No, configurable
Backblaze	All	both	No, configurable
Box	All	both	No, configurable

The **Computer** and **Network** plug-ins access data with privileges of the user under which the Workstation component runs. All other plug-ins are configurable. To learn about configurations, please see Plug-in Configurations.

Note: The above information may change from the time of publication (version 7.17.0, September 2018).

Computer

The **Computer** plug-in is used to work with local computer's file system. It can be used as both source of data and storage destination.

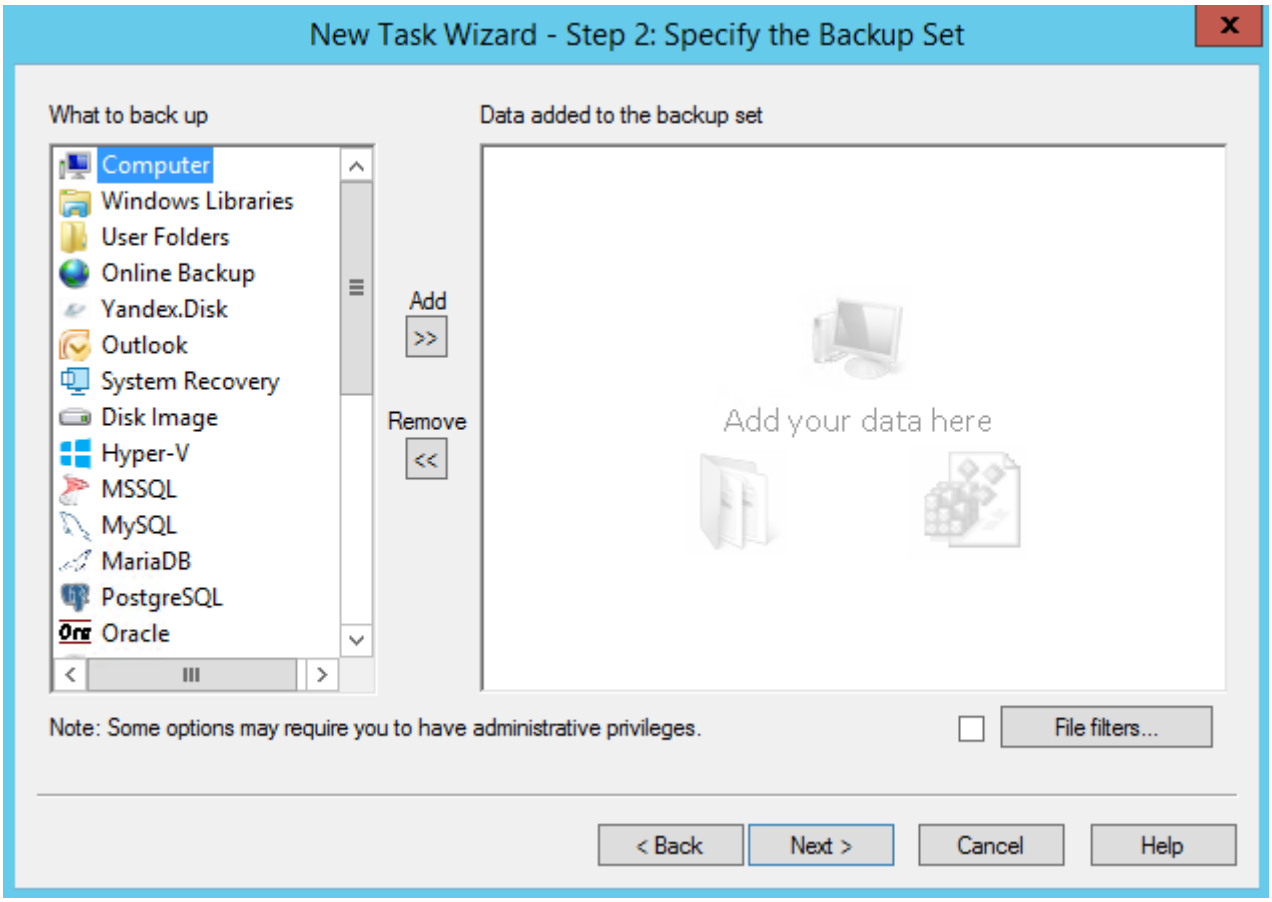
Files and folders of the plug-in file system correspond to common files and folders. They support all attributes, such as file size, creation time, modification time, and other.

Prerequisites

The plug-in can back up open files, i.e. files that are locked by other applications. This is made with the use of the **Volume Shadow Copy Service**. If you want to back up open files, then you need to have this service running on your system.

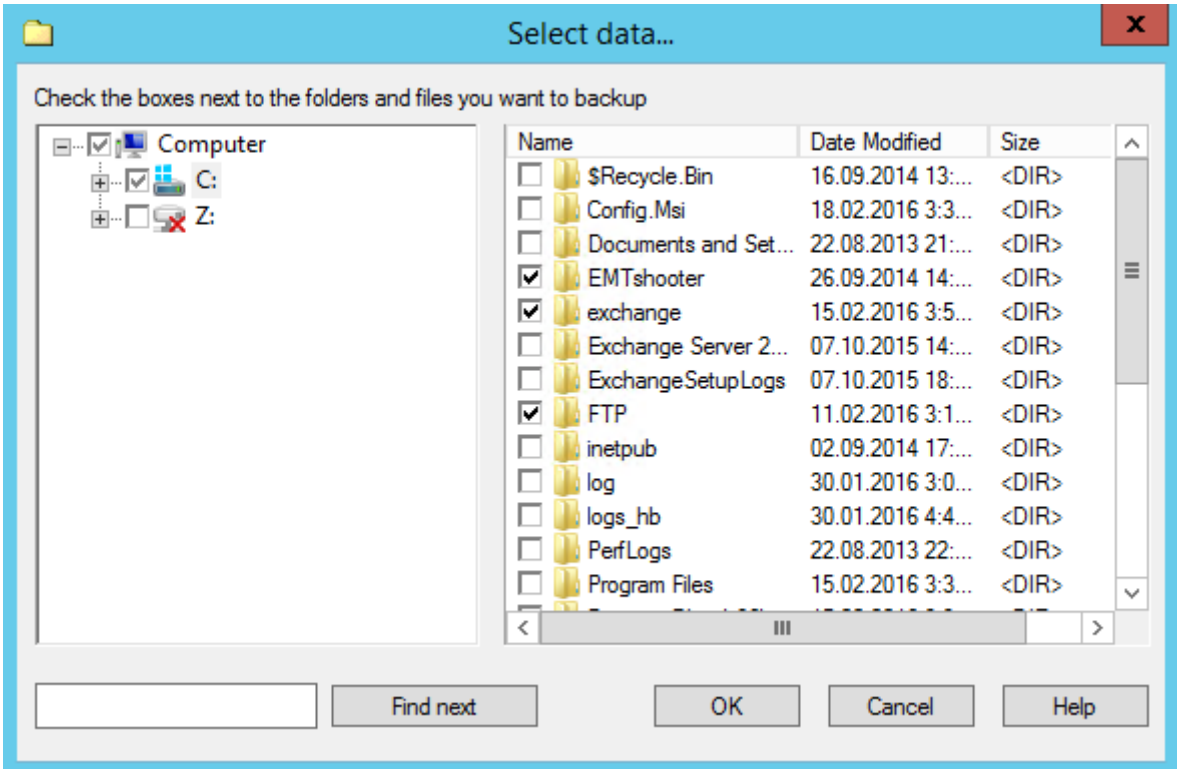
Using Computer Plug-in as Data Source

The **Computer** plug-in is the main way to back up local files and folders.



To add data to backup set, follow these steps:

1. In the **Data Sources** pane, select **Computer**, and then click **Add**. The **Select data...** dialog opens.
2. Check the boxes next to files and folders that you want to back up.
3. When finished the selection, click **OK**. Selected data appears in the **Backup Set** pane of the New Task Wizard.



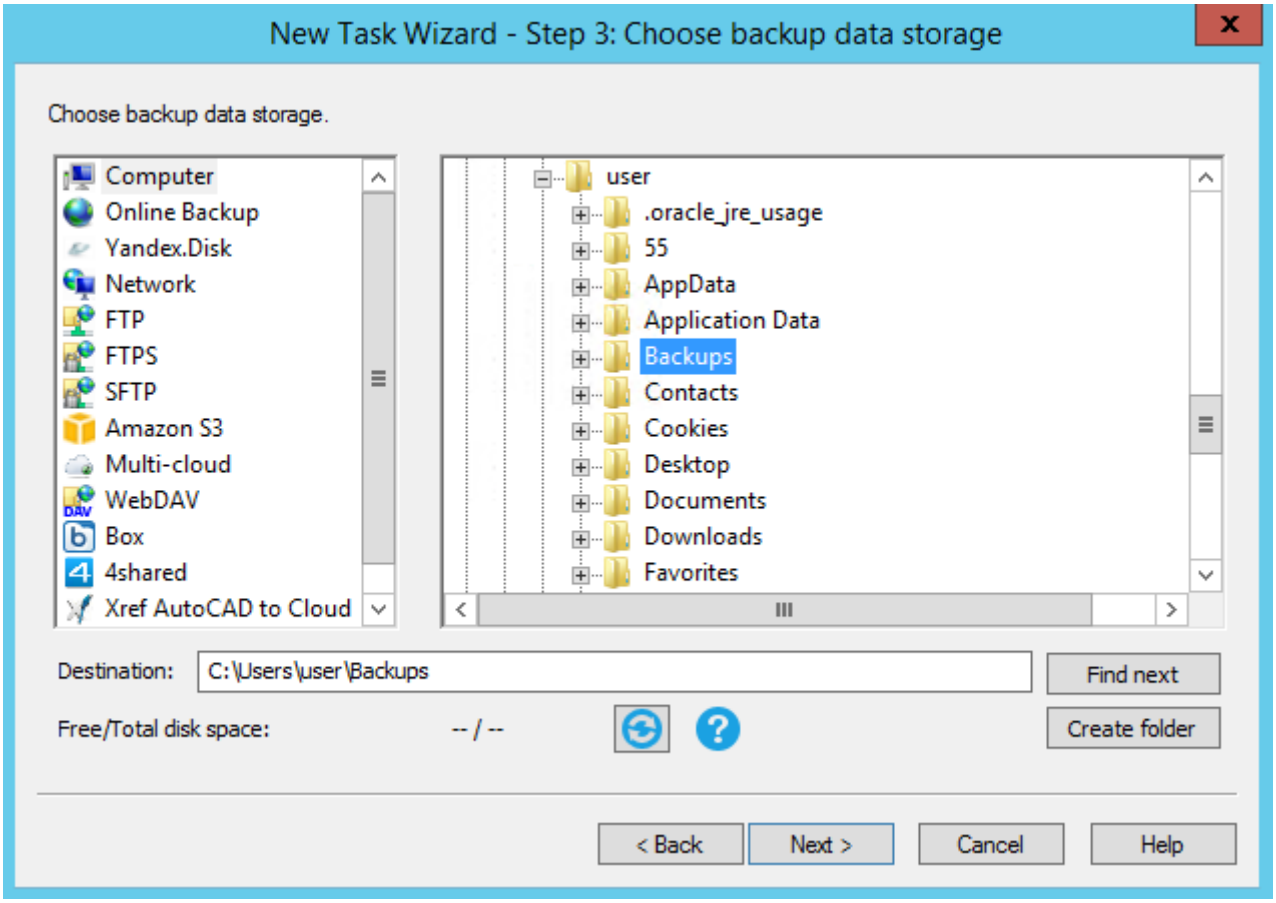
You can find more information about selecting data for backup in the Specify Backup Set chapter.

Using Computer Plug-in as Destination

Using the **Computer** plug-in as storage (i.e. copying backups to a local folder) is made in a very straightforward way. After selecting data for backup, you need to select destination.

To select a local destination, follow these steps:

1. In the **Storage Destinations** pane, select **Computer**. Your local file system is displayed in the **Folder Selection** pane.
2. In the **Folder Selection** pane, browse for a target folder.



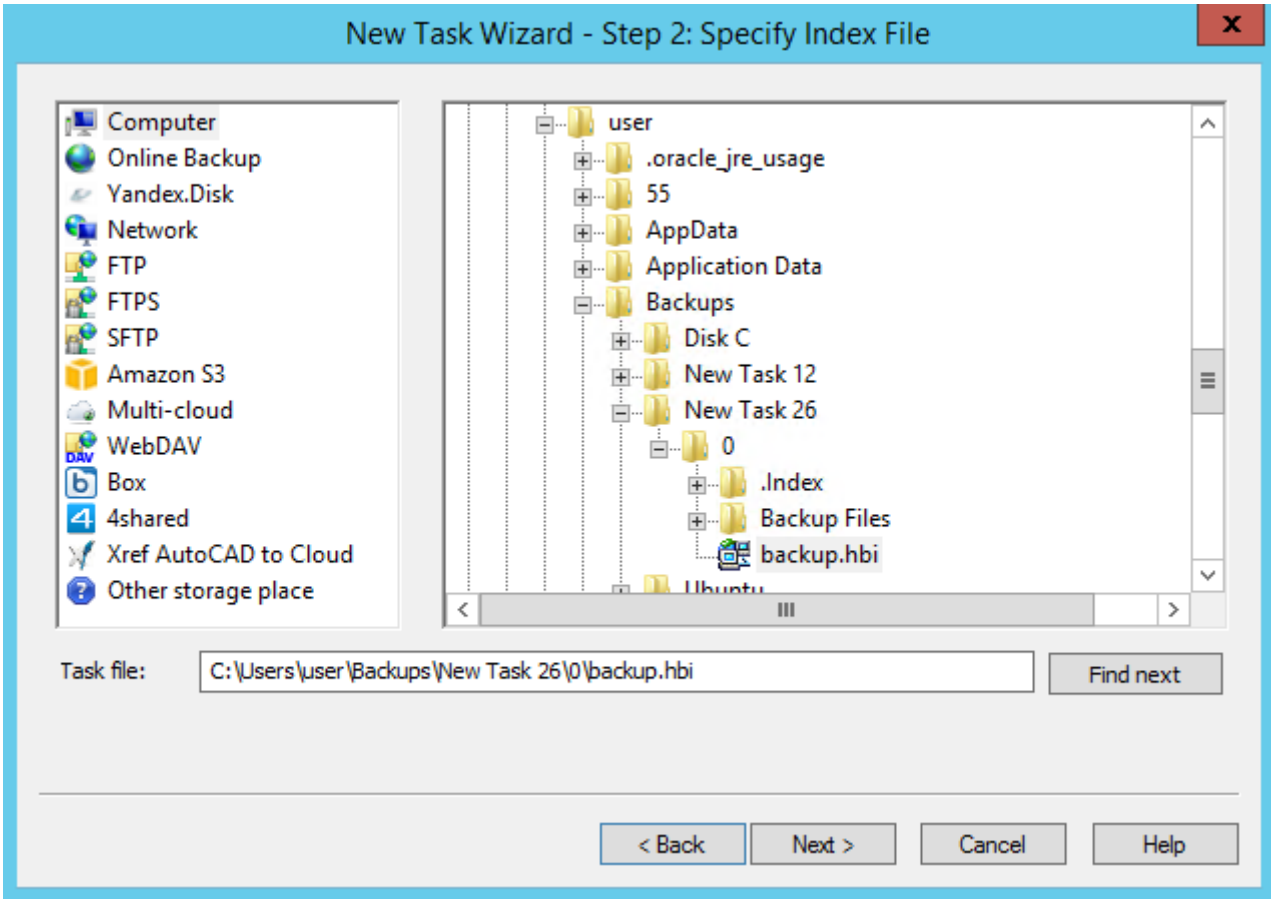
3. Click **Next**.

You can read general description of this step of the New Task Wizard in the Select Destination chapter.

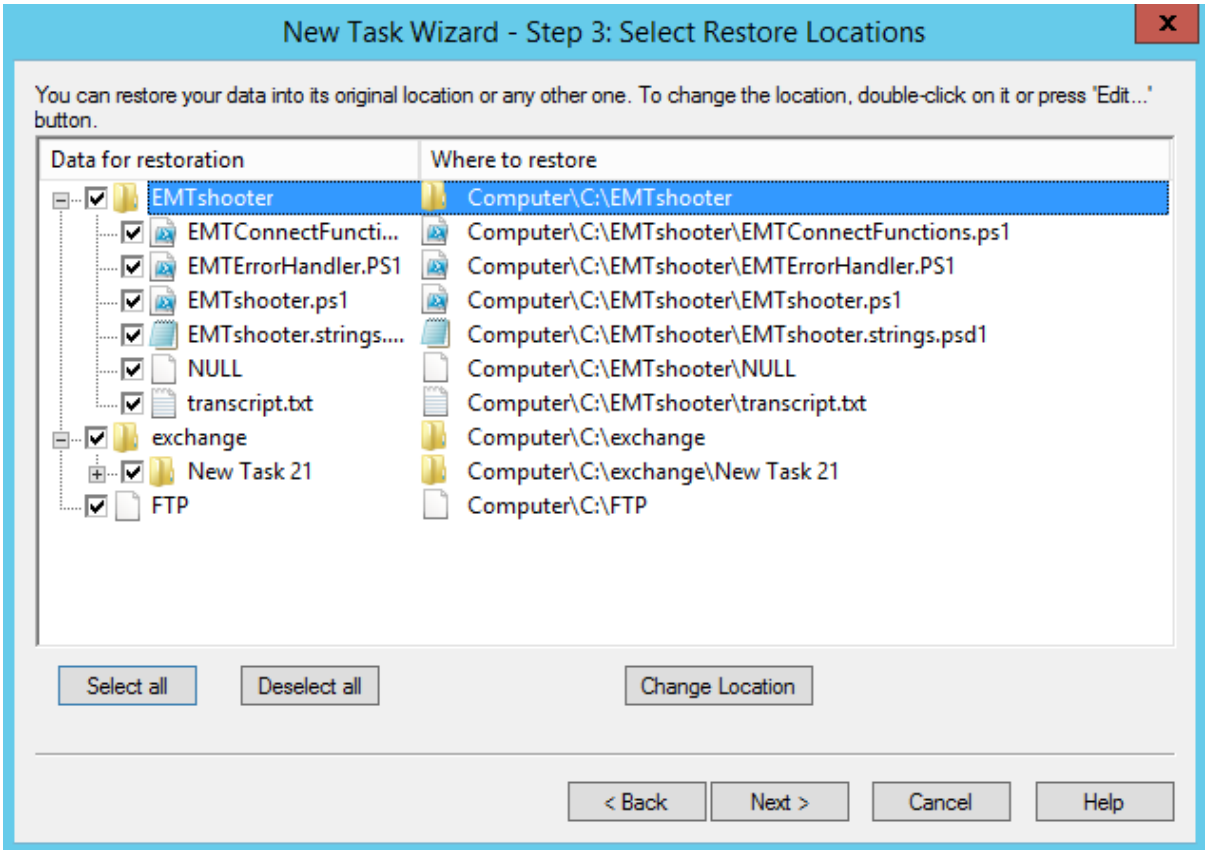
Using Computer Plug-in in Restore Tasks

General scheme of restore task creation is as follows:

1. Open New Task Wizard.
2. Select **Restore task**, and then click **Next**.
3. Browse for the index file (**backup.hbi**). If your backups are located in a local file system, then you need to select **Computer** in the **Storage Destinations** pane to the left, and browse for the index file in the **Index File Selection** pane to the right. Click **Next**.

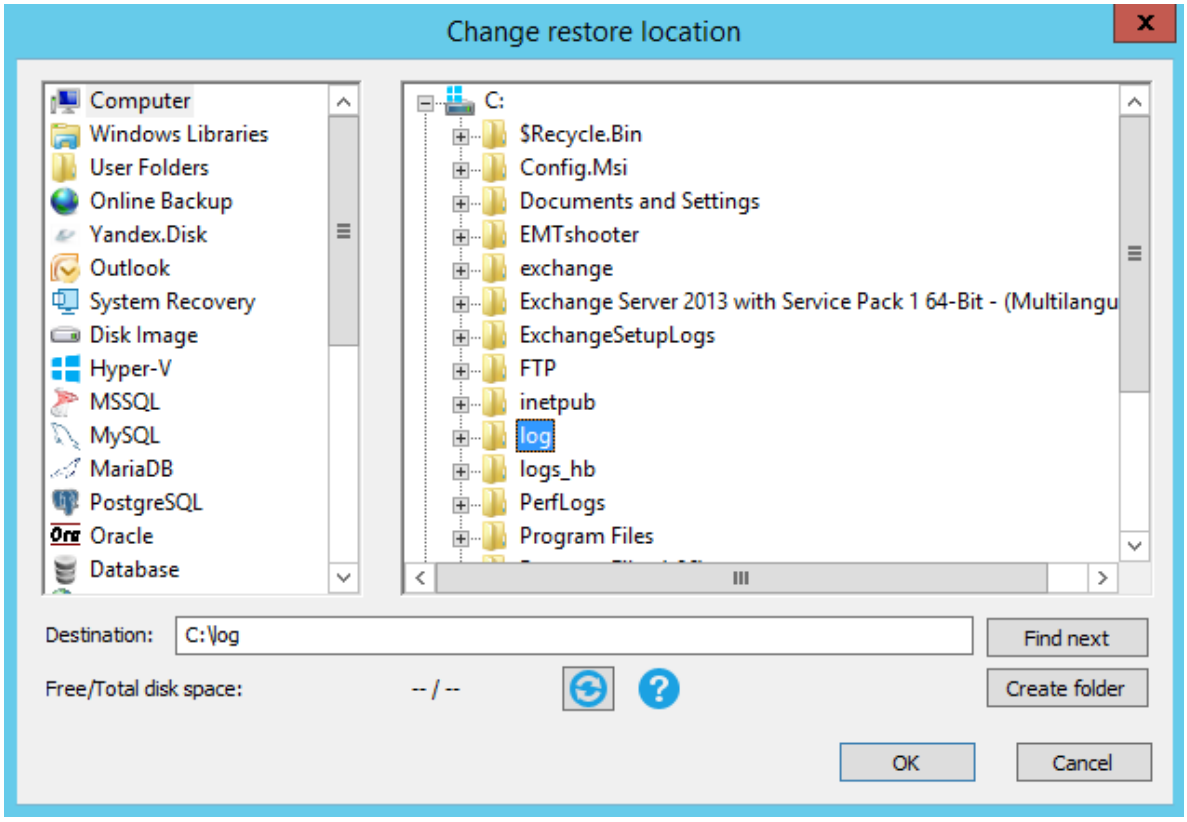


4. If you are restoring backups of local files and folders, default path of restoration will have the **Computer** plug-in.



If you want to restore your files to a different folder, follow these steps:

4.1 In the **Select Restore Locations** dialog, select a file or a folder, and then click **Change Location**. The **Change restore location** dialog opens.



4.2 In the **Change restore location** dialog you can also select other file systems than the one provided by the **Computer** plug-in, e.g. FTP or WebDAV. Select a new location, and then click **OK**.

After verifying paths of restoration, you need to select type of restoration, enter decryption password (optional), and name the task. These steps are not specific to the **Computer** plug-in. Learn more about Restore Task.

Network

Network Backup is available in v7. By default, you can make a backup of the objects for two types of Windows networks - **Microsoft Windows Terminal Server** and **Microsoft Windows Network.**

Prerequisites

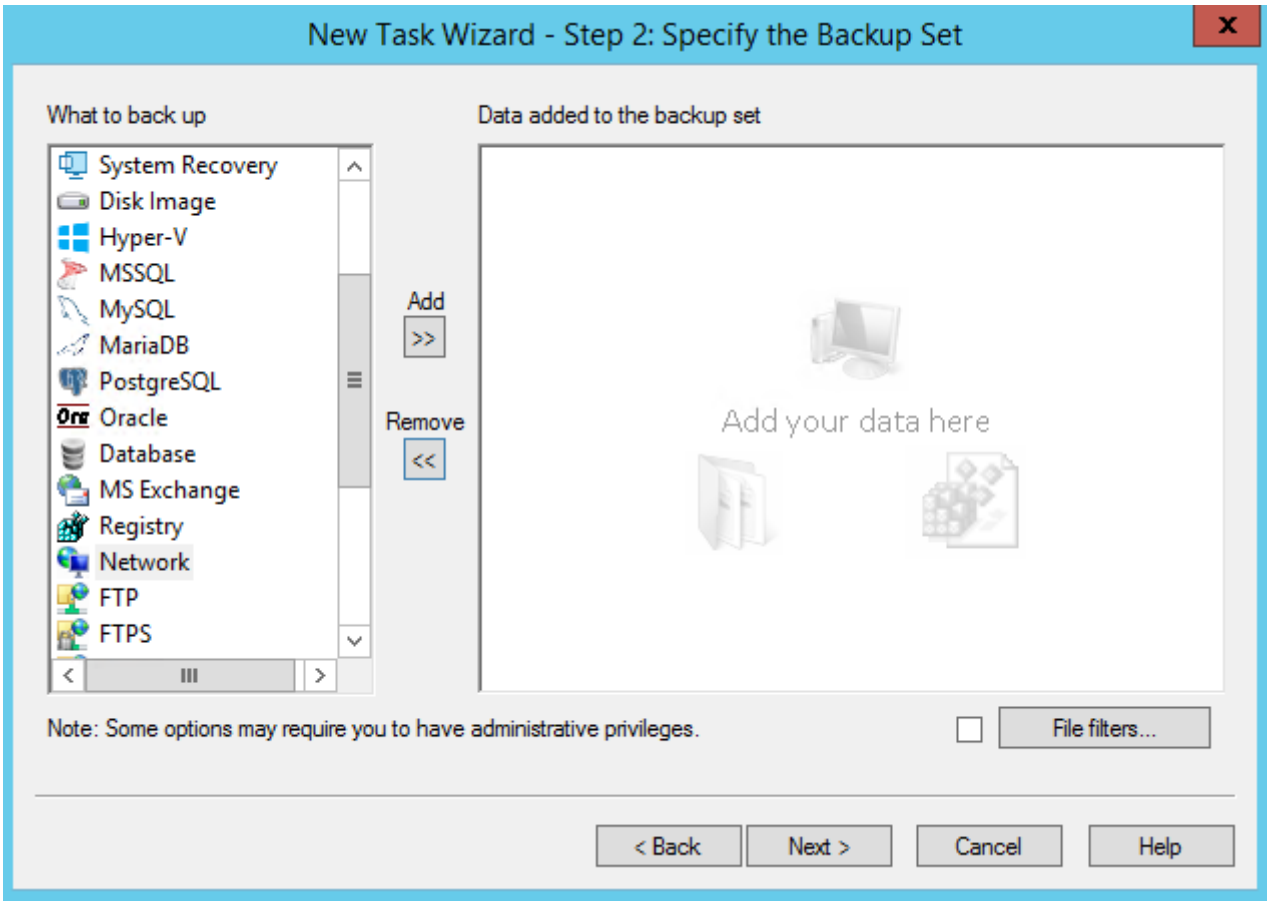
Microsoft Windows Terminal Server (presented in Microsoft Windows Server) provides computer's resources (memory, disk space) for various tasks. Technically, the terminal server is a very powerful computer (or cluster) connected on a network with terminal clients (for remote maintenance via user desktops).

Backup of Microsoft Windows Network is a built-in Windows network-based connection to the necessary objects.

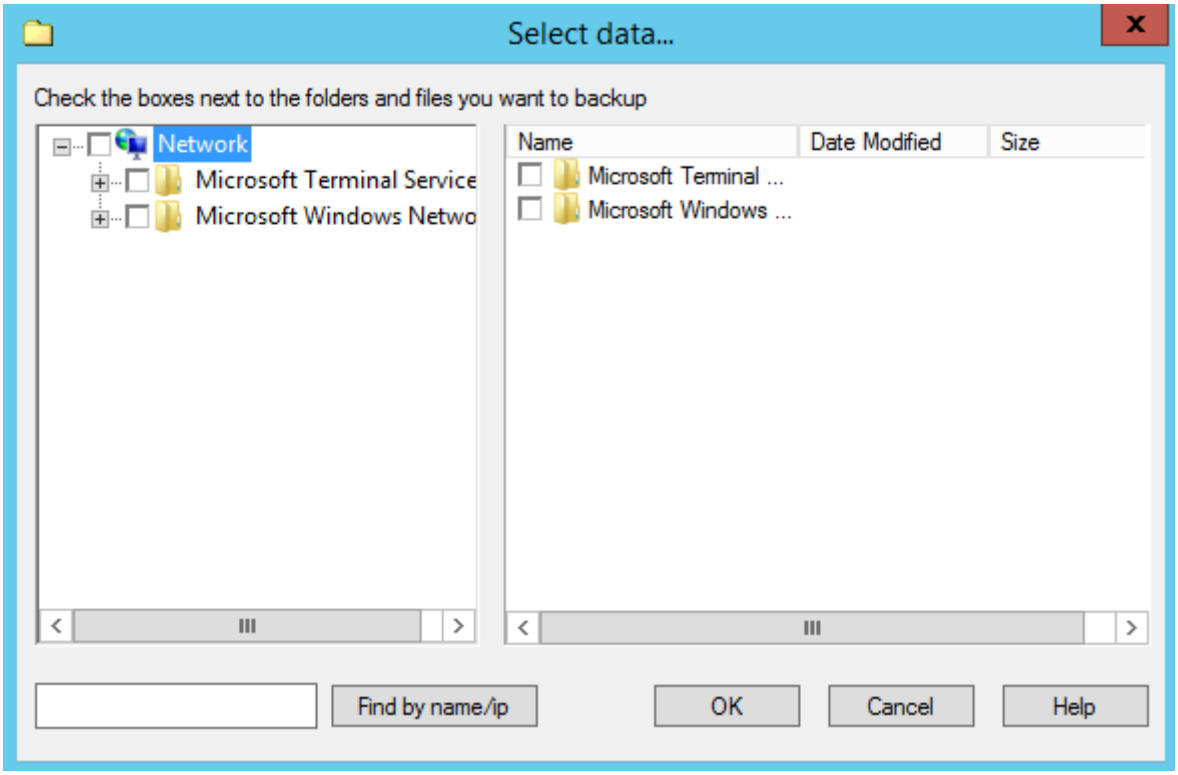
To make a backup:

1. Select the **Backup task** in New Task Wizard.
2. Select **Network** option on step 2 of New Task Wizard.

Double click on it or click “Add” button to add Network to backup set.



3. Select **Network** for backing up: click **Microsoft Windows Terminal Server** or **Microsoft Windows Network** and find objects for backup, then click OK.



4. Select **backup destination** and set up other parameters.

Windows Libraries

The **Windows Libraries** plug-in provides fast access to folders added to Windows libraries. It is user-specific and depends on access rights and privileges of the account under which the Workstation component runs.

Prerequisites

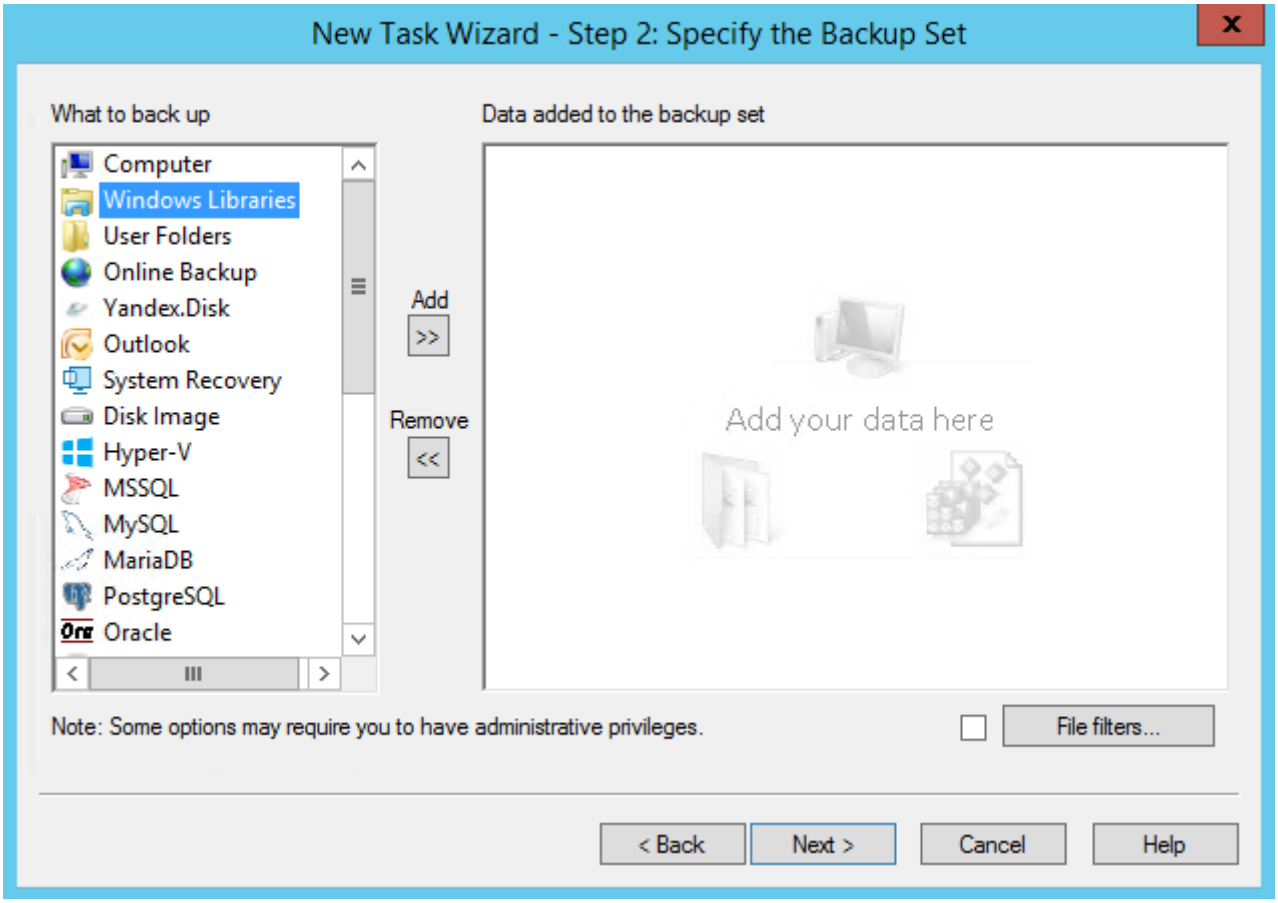
The plug-in is based on the Computer plug-in, and inherits its functionality. It allows working with files locked by other applications, and copying them with the **Volume Shadow Copy Service**. To use this feature, you need to have the VSS service running on your system, and run **Workstation** from a user that can access it.

Plug-in File System

The plug-in provides one-to-one mapping to common HDD file system. Files and folders support all common attributes, such as file size, time of creation, and other.

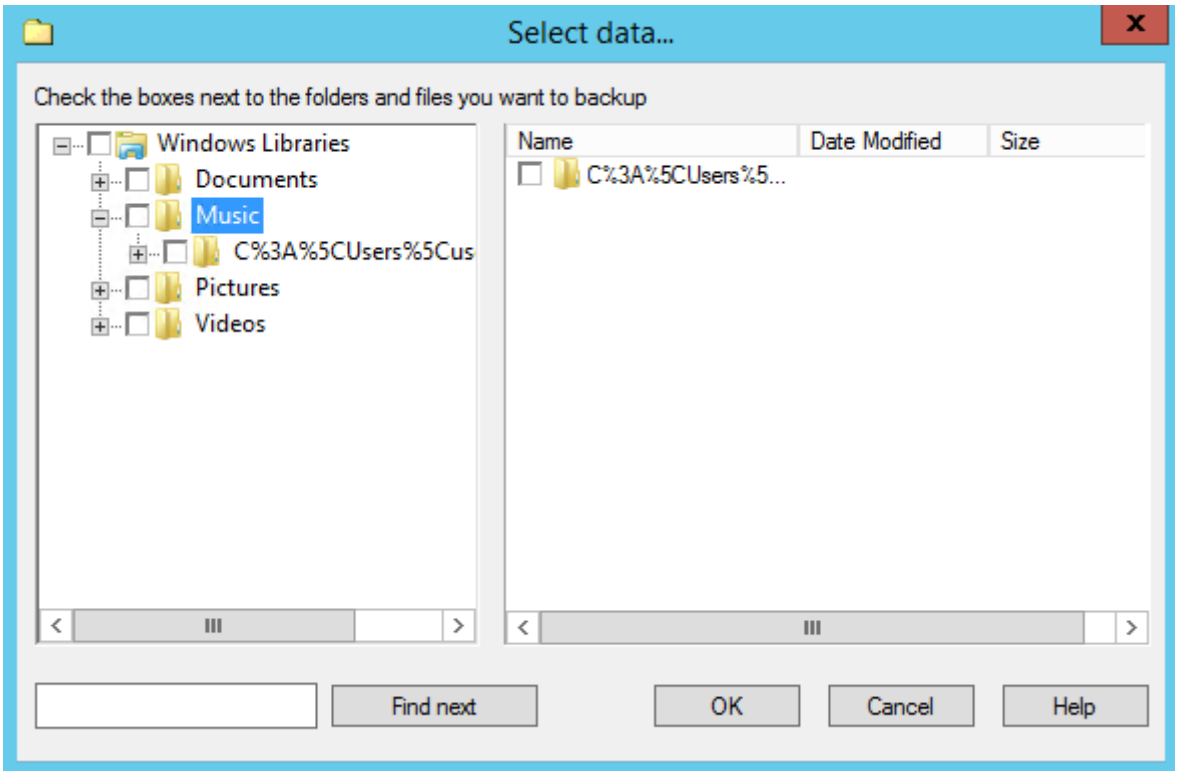
Backing up

The Windows Libraries plug-in can act as a source of data for **backup** tasks, and as a target for **restore** tasks.



When creating a new backup task, to add data from Windows Libraries to backup set, follow these steps:

1. In the **Data Sources** pane, select **Windows Libraries**, and then click **Add**. The **Select data...** dialog opens.



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Each library contains folders that a named respectively to the paths of folders added to the library. Inside these folders, you can actual contents of each library.

2. Check the boxes next to files and folders that you want to back up.
3. When finished the selection, click **OK**. Selected data appears in the **Backup Set** pane of the New Task Wizard.

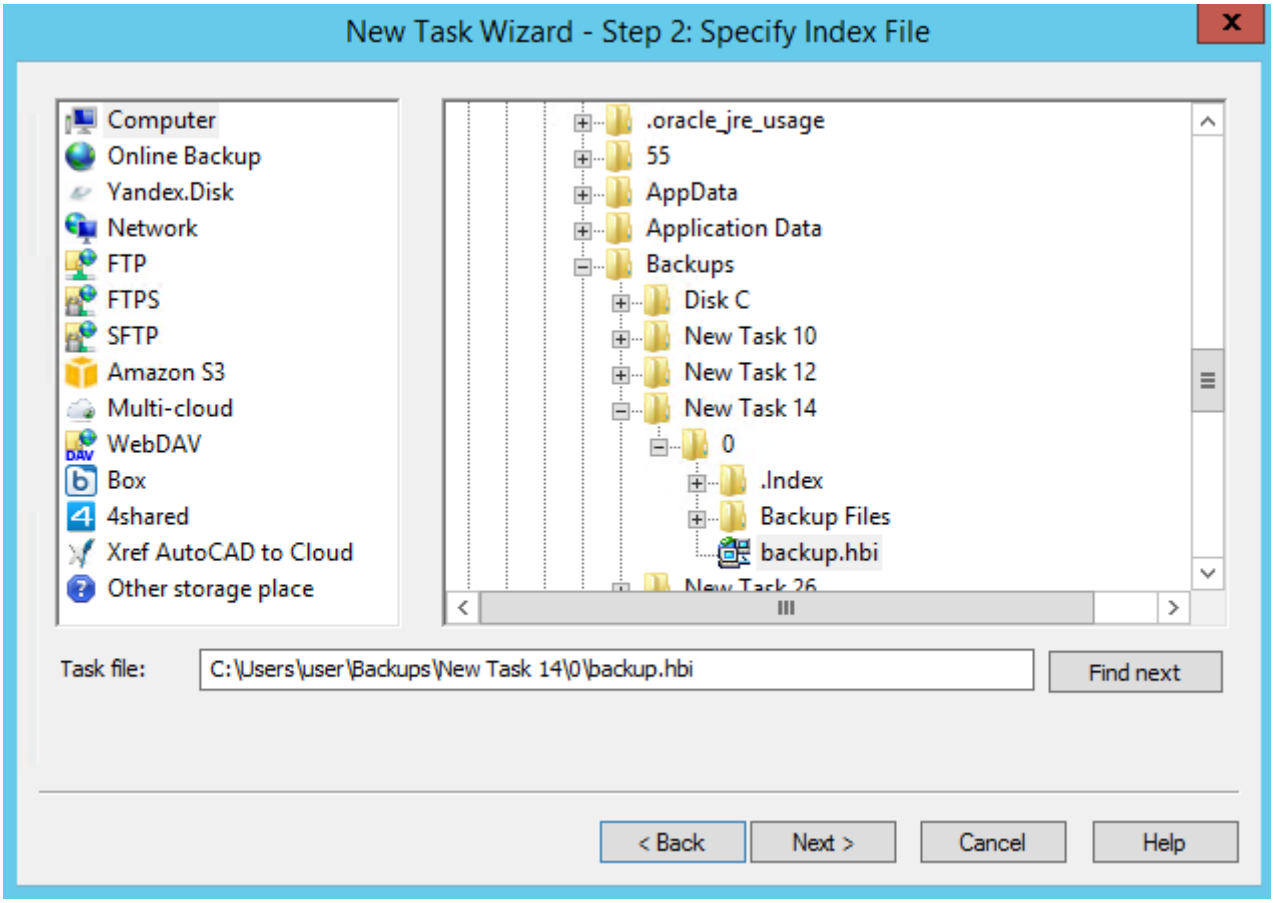
For a detailed description of creating backup tasks, please refer to Specify Backup Set.

Restoring

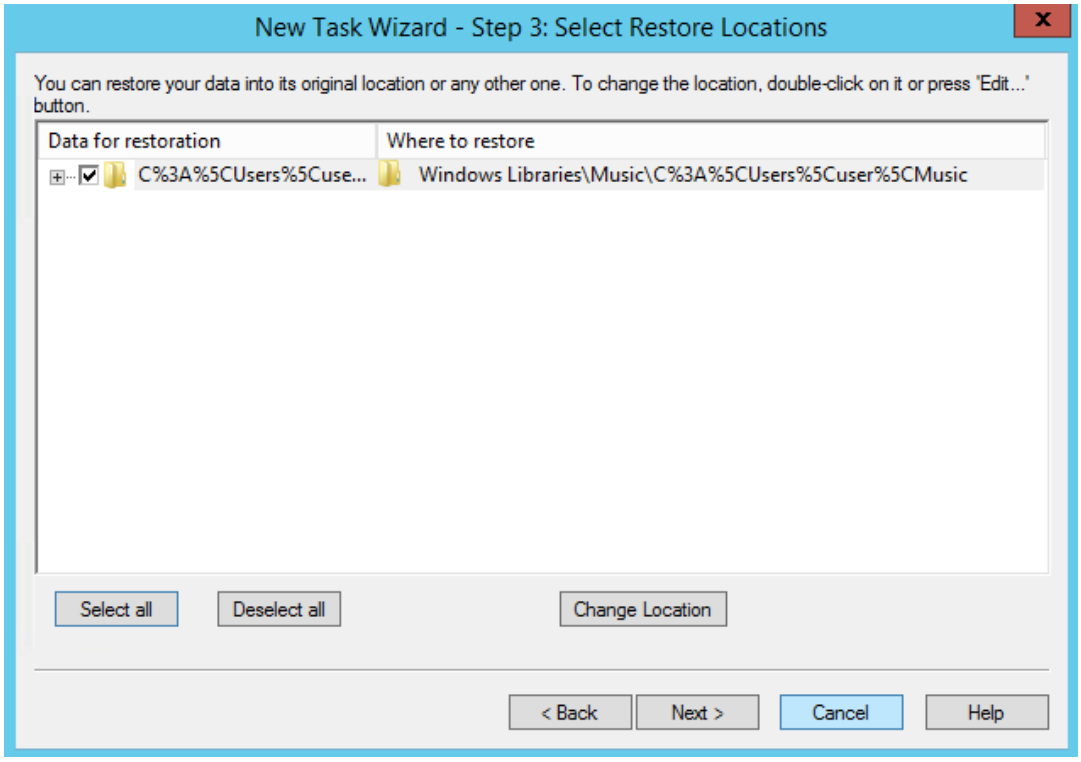
To restore a backup made with the **Windows Libraries** plug-in, follow these steps:

1. Open the New Task Wizard.
2. Select **Restore task**, and then click **Next**.
3. In the **Specify Index File** dialog, browse for a backup index file (**backup.hbi**), and then click **Next**.

For example, to restore backups from local HDD, select **Computer** in the **Storage Destinations** pane to the left, and then browse for **backup.hbi** in the **Index File Selection** pane to the right.

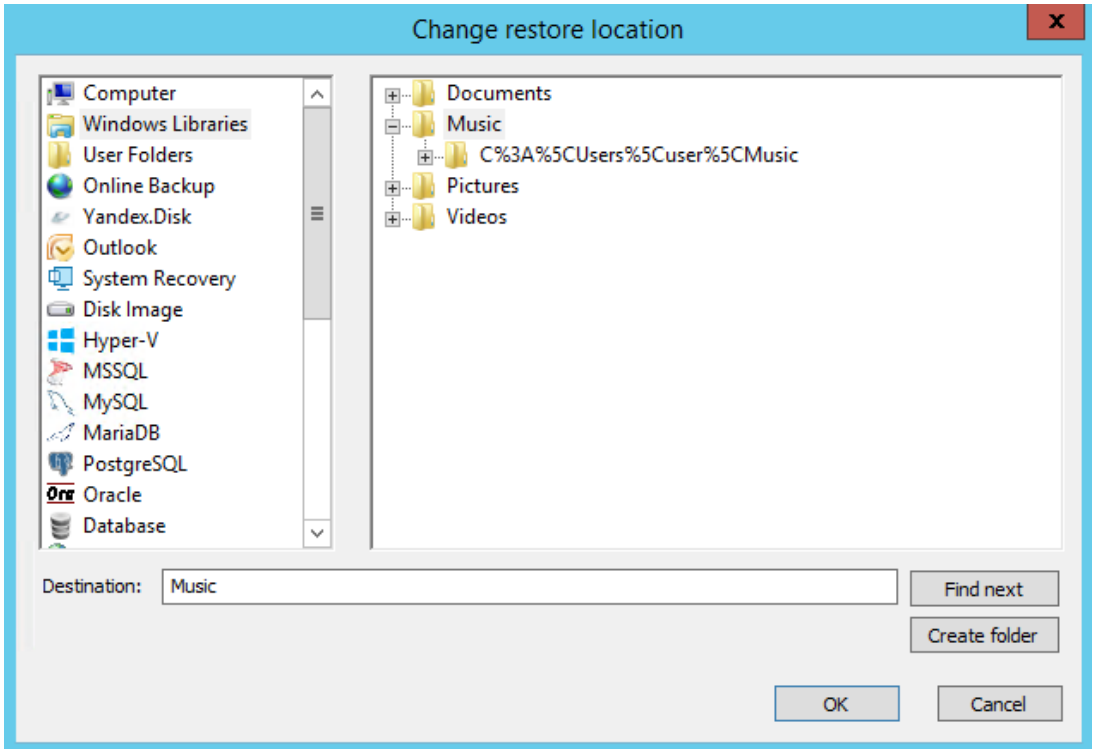


4. In the **Select Restore Locations** dialog, check details of the restoration.



By default, you will see original restore paths starting with the **Windows Libraries** plug-in. To restore data to a different folder, follow these steps:

4.1 Select a file, or a folder that you want to restore to a different place, and then click **Change Location**. The **Change restore location** dialog opens.



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4.2 In the **Change restore location** dialog, you can select a folder located in any plug-in file system, for example **Network** or **FTP**. Select a new path for restoration, and then click **OK**.

After verifying restoration details, you will need to select type of restoration, schedule it (optionally), and name the task. These steps are common for all restore tasks, and not specific to the Windows Libraries plug-in. You can learn about restoring data in the Restore Task chapter.

User Folders

The **User Folders** plug-in allows working with standard Windows folders (Documents, Desktop, Pictures, and other) that are located in `C:\Users\[Username]`. It is user-specific, and depends on account, under which the Workstation component runs.

Prerequisites

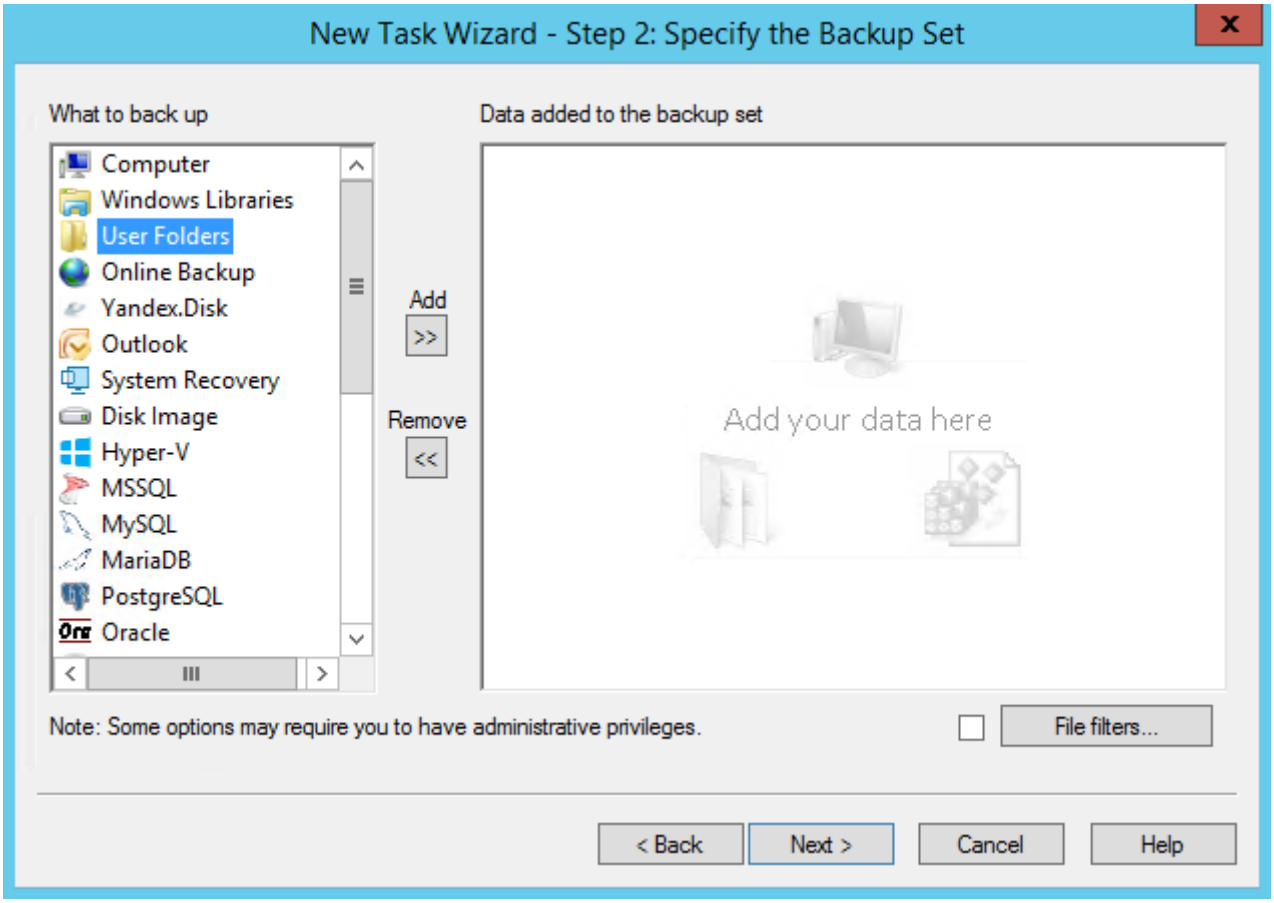
The plug-in is a “child” of the Computer plug-in, and inherits all of its properties. Particularly, it can back up files that are exclusively opened by other applications, through the use of the **Volume Shadow Copy Service**. If you want to back up open files, then you need to have this service running on your system, and Workstation must be launched from a user that can access it.

Plug-in File System

The **User Folders** plug-in provides one-to-one mapping to common file system. Files and folders support all attributes, such as file size, modification time, and other.

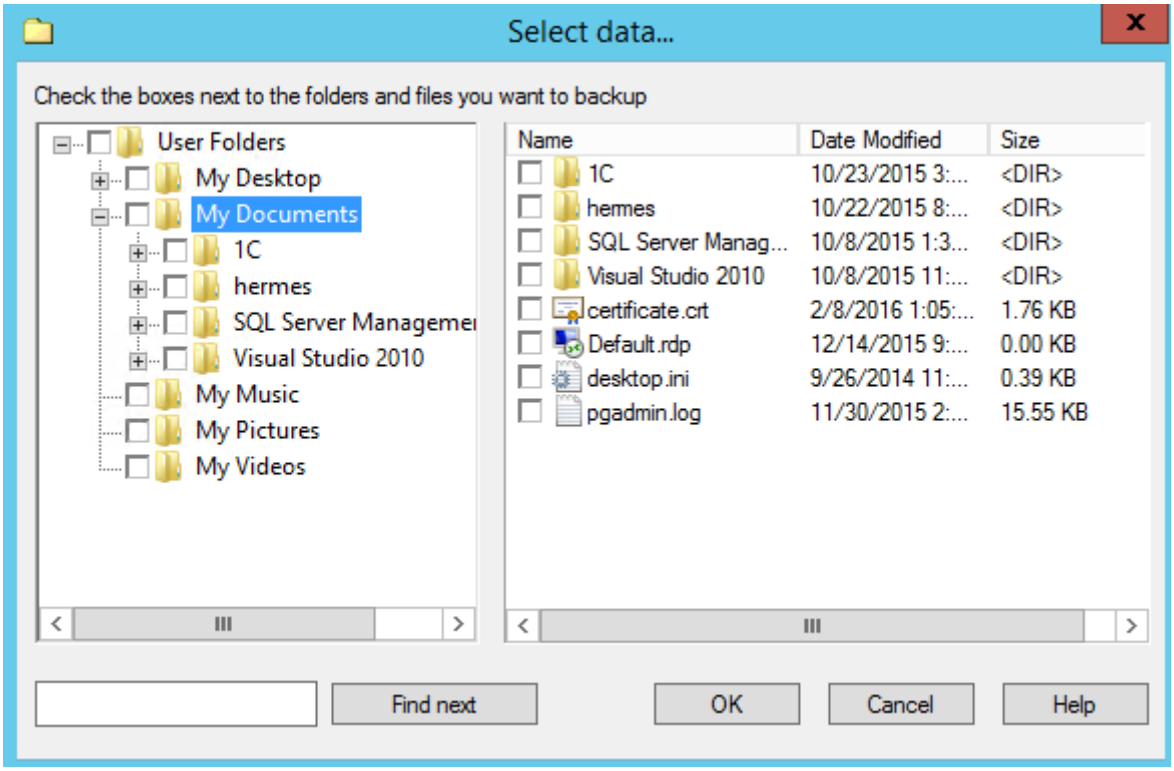
Backing up

The User Folders plug-in can only be used as a source of data for **backup** tasks, or as a target for **restore** tasks.



To add data from User Folders to backup set, follow these steps:

1. In the **Data Sources** pane, select **User Folders**, and then click **Add**. The **Select data...** dialog opens.



Note: Although top folders are named in Windows XP-style, they correspond to the respective folders in Windows Vista and higher.

2. Check the boxes next to files and folders that you want to back up.
3. When finished the selection, click **OK**. Selected data appears in the **Backup Set** pane of the New Task Wizard.

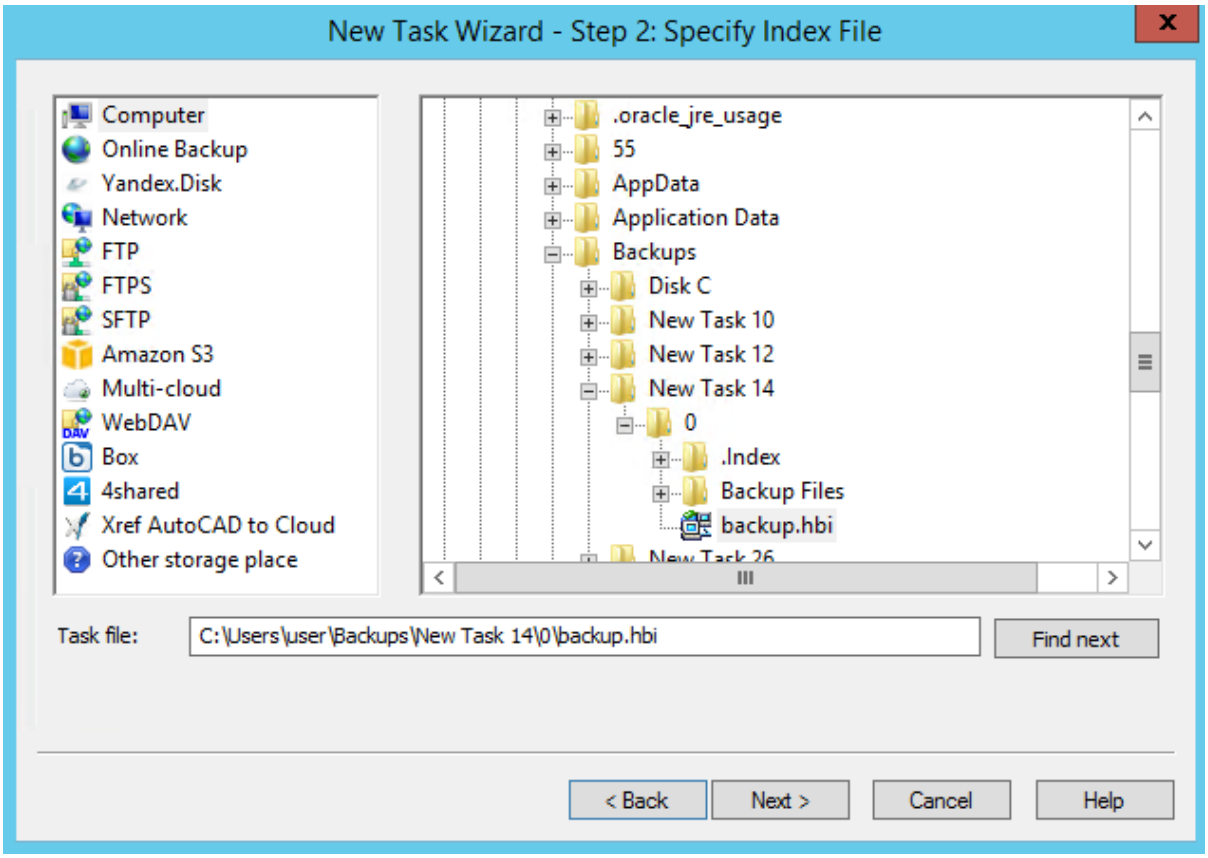
For general instructions on selecting data for backup, please see Specify Backup Set.

Restoring

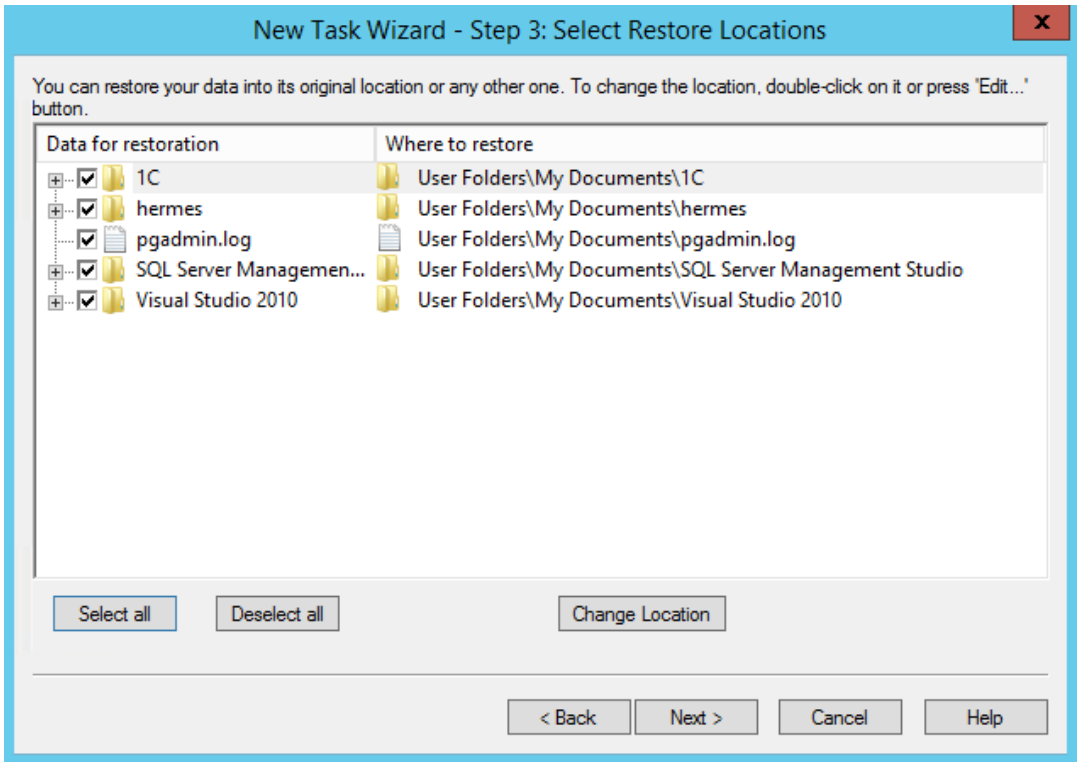
To restore a backup made with the **User Folders** plug-in, follow these steps:

1. Open the New Task Wizard.
2. Select **Restore task**, and then click **Next**.
3. In the **Specify Index File** dialog, browse for the backup, select an index file (**backup.hbi**), and then click **Next**.

For example, if your backups are stored in a local file system, then you need to select **Computer** in the **Storage Destinations** pane to the left, and then browse for the backup in the **Index File Selection** pane to the right.

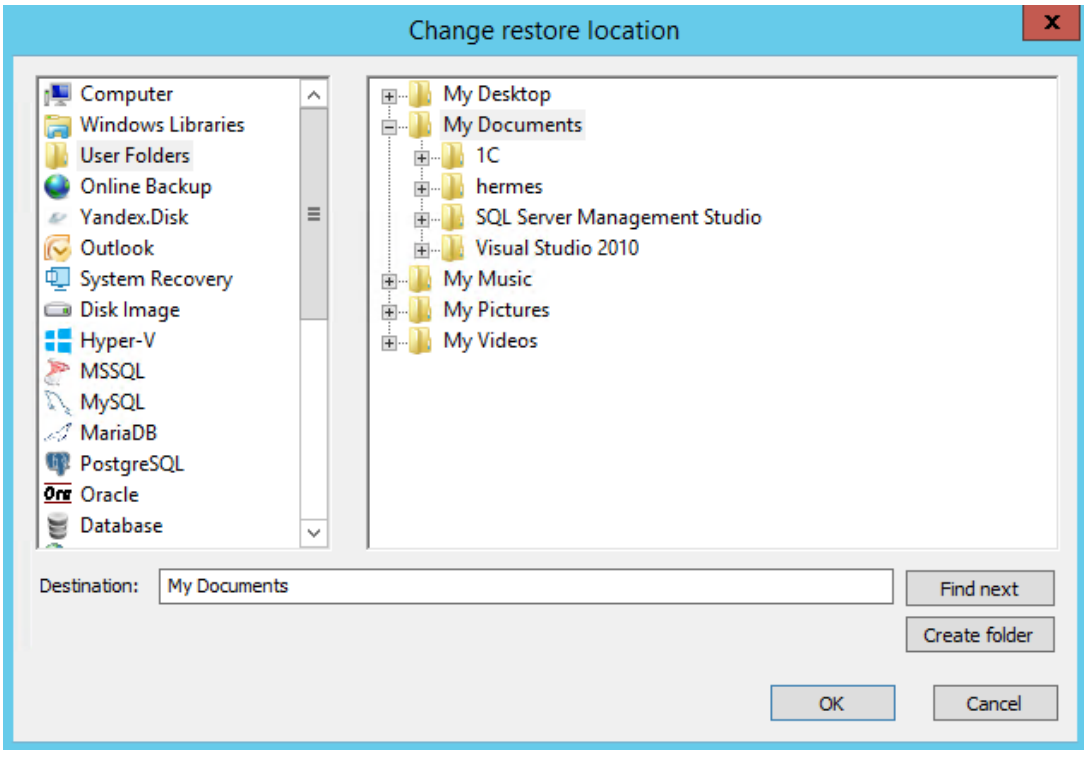


4. In the **Select Restore Locations** dialog, verify details of the restoration.



By default, files are restored to their original location in the file system of the **User Folders** plug-in. If you want to restore them to a different folder, follow these steps:

4.1 Select a file, or a folder for which you want to change restore path, and then click **Change Location**. The **Change restore location** dialog opens.



4.2 In the **Change restore location** dialog, select where you want to restore file or folder, and then click **OK**.

Note that in this dialog you can select a different file system than the one provided by the **User Folders** plug-in, e.g. **Computer** or **FTP**.

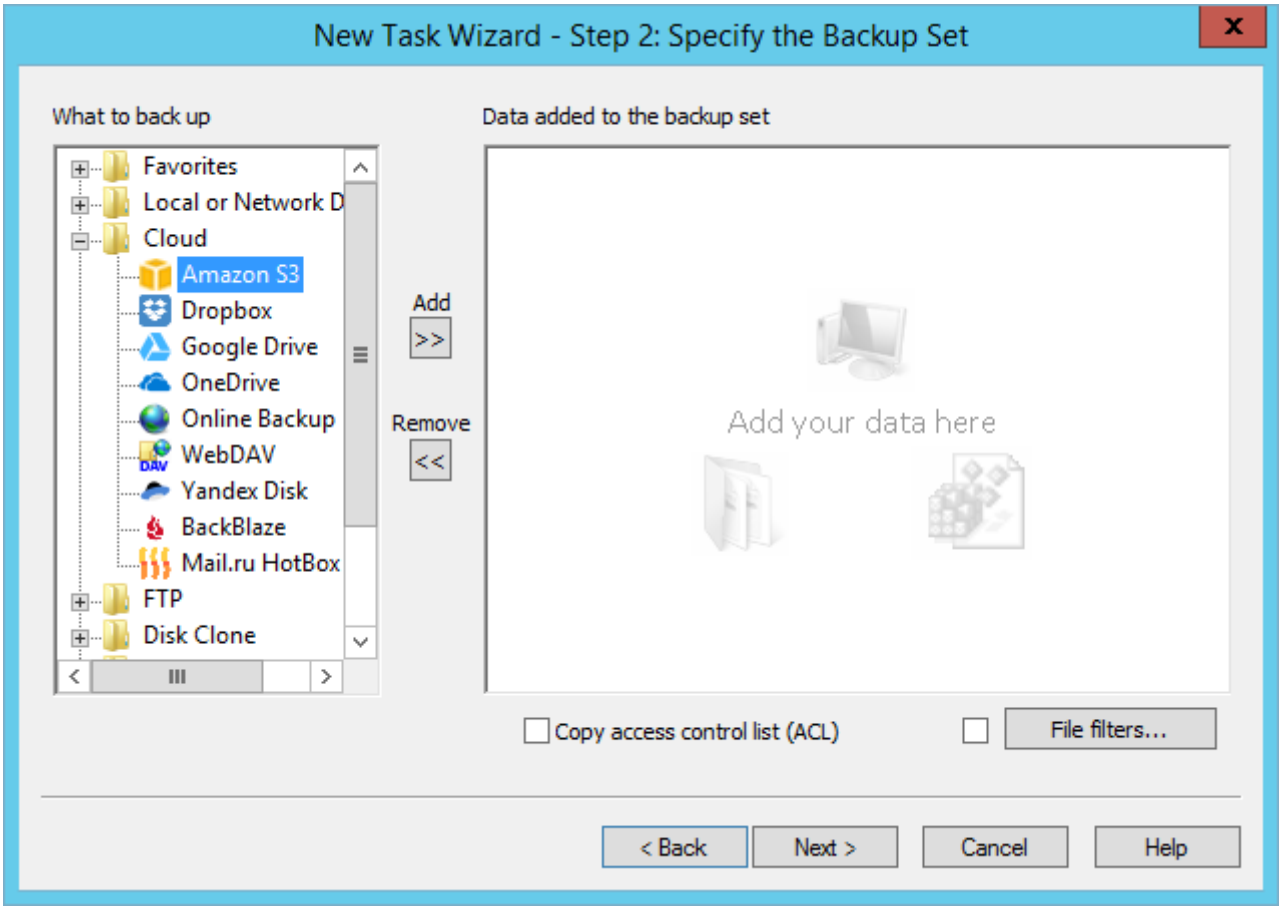
After verifying paths for restoration, you need to select type of restoration, enter password for decryption (if the backup is encrypted), schedule the task, and name it. These steps are not specific to the **User Folders** plug-in. To learn about restoring data, please see Restore Task.

Amazon S3

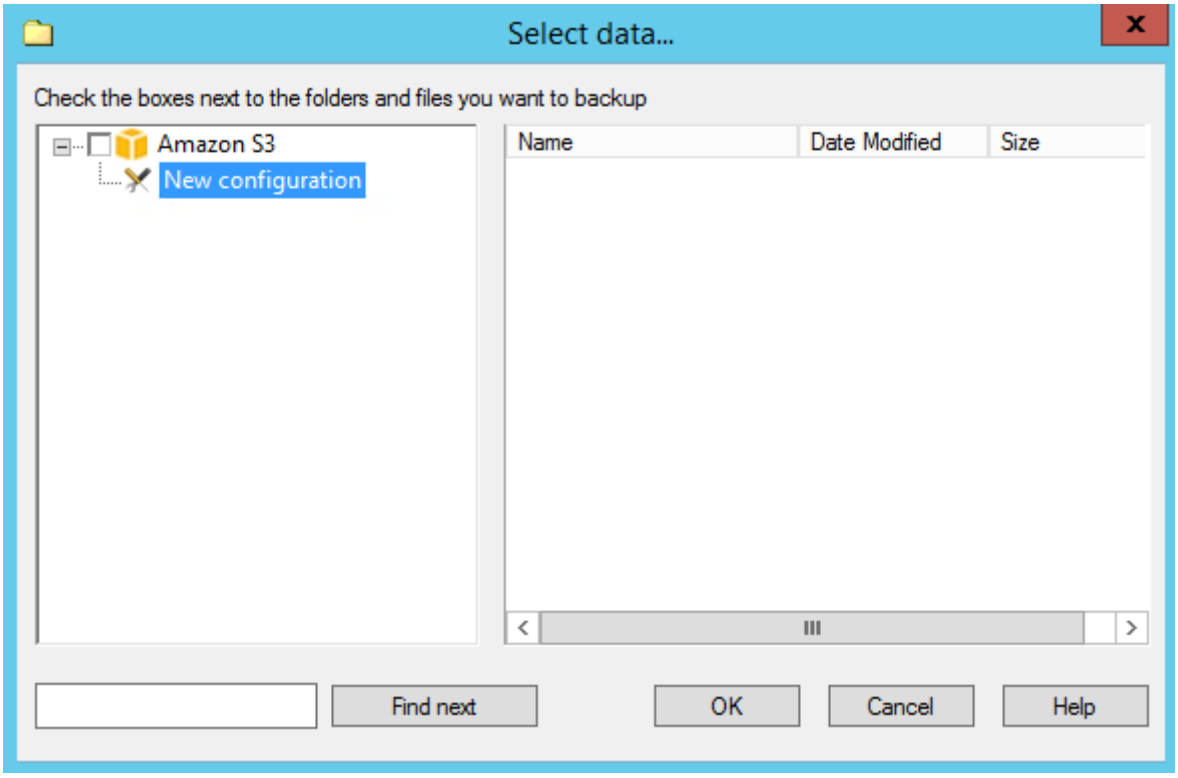
Amazon S3 plug-in allows backup to Amazon S3 cloud storage. That storage uses “bucket” principle: it is like a virtual folder with a name and a key. To get access to Amazon S3 you must have Amazon S3 account.

To make a backup, do the following:

1. Select **Backup task** in New Task Wizard.
2. Select **Amazon S3 plug-in** on step 2 of New Task Wizard.

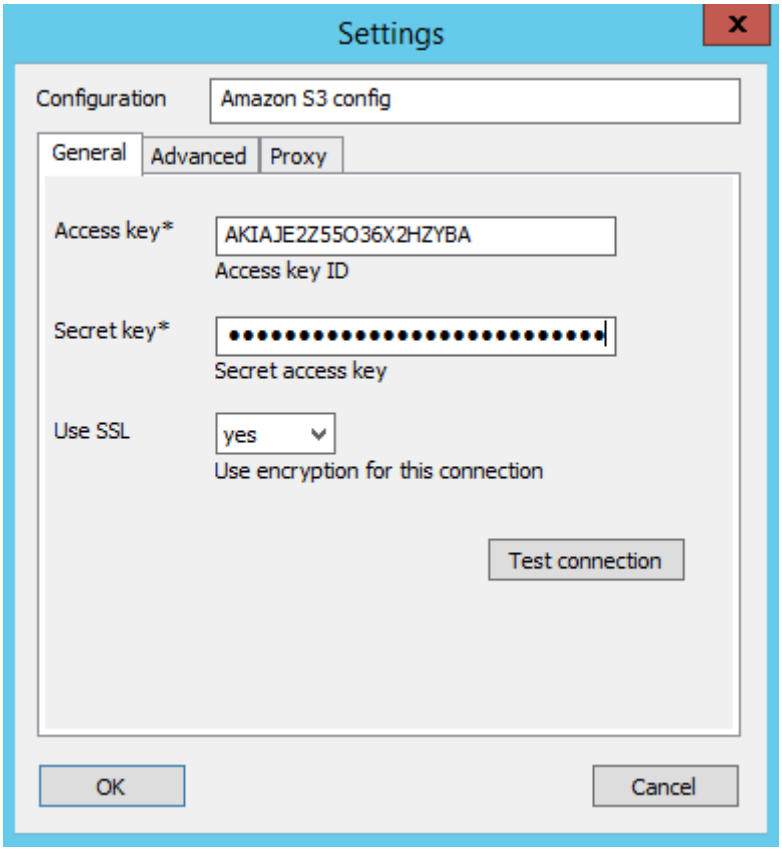


3. Select **New Configuration**, then click OK.



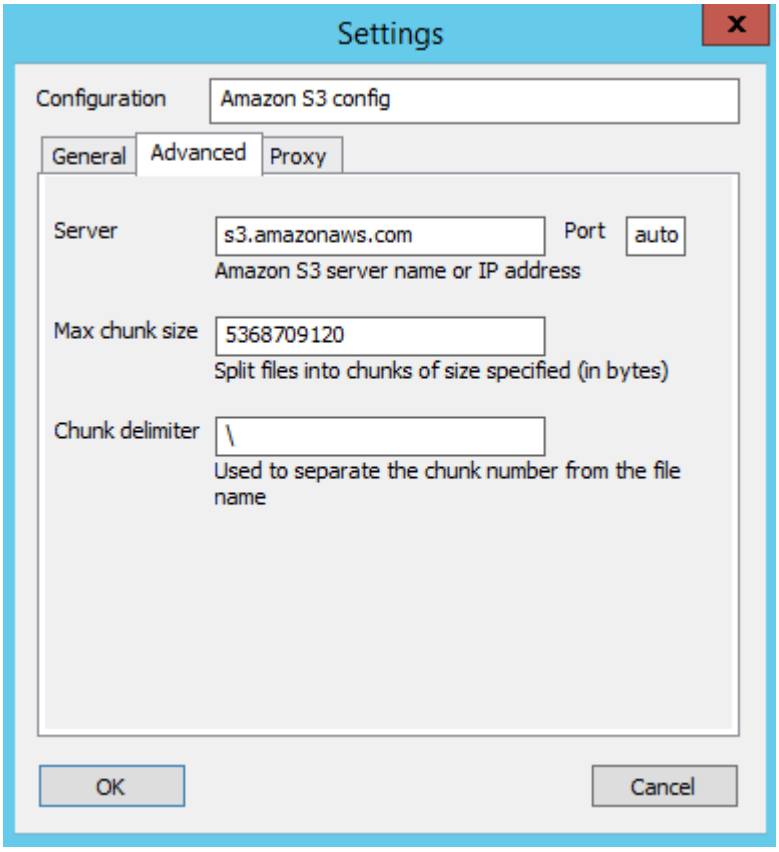
4. Set up **Amazon S3 Access settings.**

   - **Access key**. Enter your Amazon S3 access key (take this from your Amazon S3 account).
   - **Secret key**. Enter your Amazon S3 secret key (take this from your Amazon S3 account).
   - **Use SSL**. Choose **Yes** or **No** for SSL-encryption of the connection to Amazon S3. SSL is a cryptographic protocol. Selecting **Yes** provides additional communication security over the Internet.



5. Set up **Amazon S3 advanced settings.**

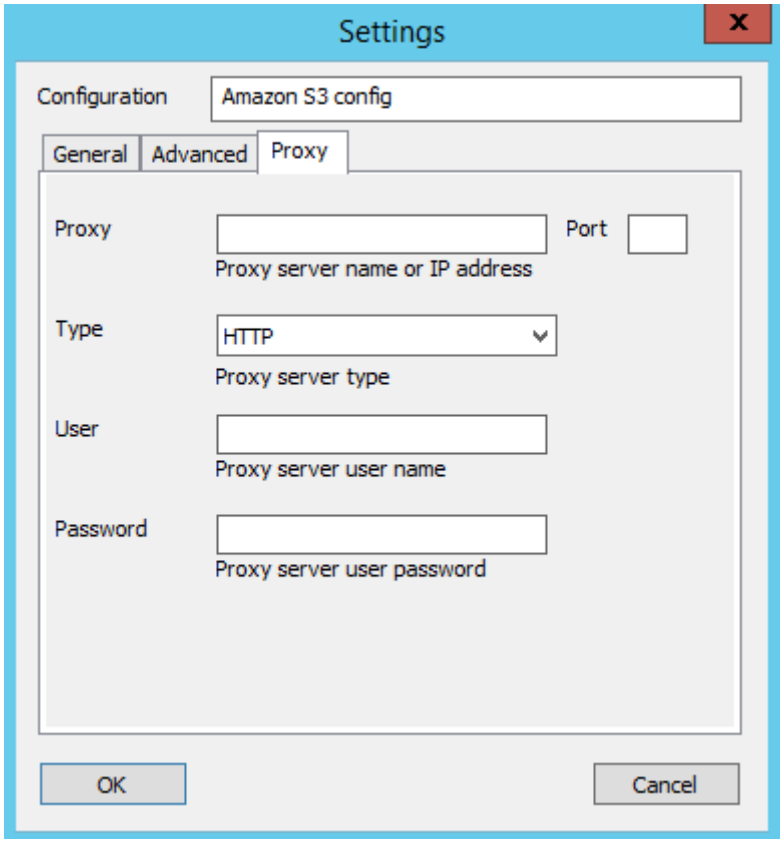
- **Server and port**. Enter Amazon S3 server name or IP address. If you can't find that information in your Amazon S3 account, contact us by mailing to support@handybackup.net and we will provide you with correct Server's name or IP. Default option for port is **Auto**.
- **Max chunk size**. If you have limitations on file size in bytes, enter new value. If no, leave default option.
- **Chunk delimiter**. Select the symbol for separation chunk number from file name. Default option is "/".



6. Set up **proxy settings.**

If you use proxy server to access Internet, enter all the parameters to that box.

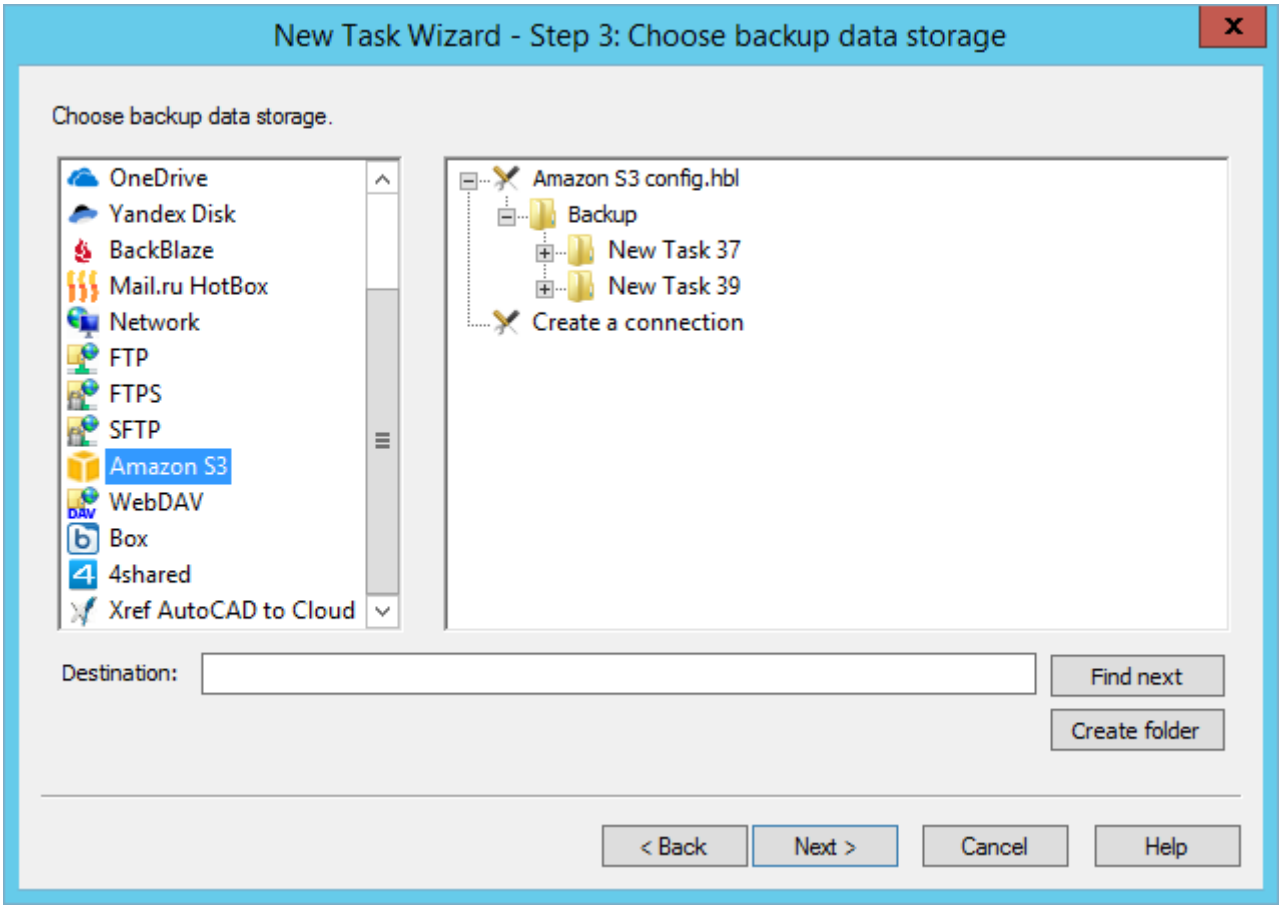
- **Proxy**. Enter your proxy server name or it's IP address. Specify the number of port.
- **Type**. Select the type of your proxy connection (you may choose **HTTP**, **socks 4** or **socks**).
- **User and password**. Enter **Username** and **Password**.



7. Connect to Amazon S3 and set up your backup. You'll get an access to inner Amazon S3 structures and do a backup as usual file-and-folder way.

Using as Backup Destination

To backup to Amazon S3, choose it as a destination on the Step 3 of a new task wizard.



Note: If you still have no configuration for your preferred Amazon S3 bucket, double-click on the "Create a connection…" string and enter the parameters for appropriate bucked, as described above.

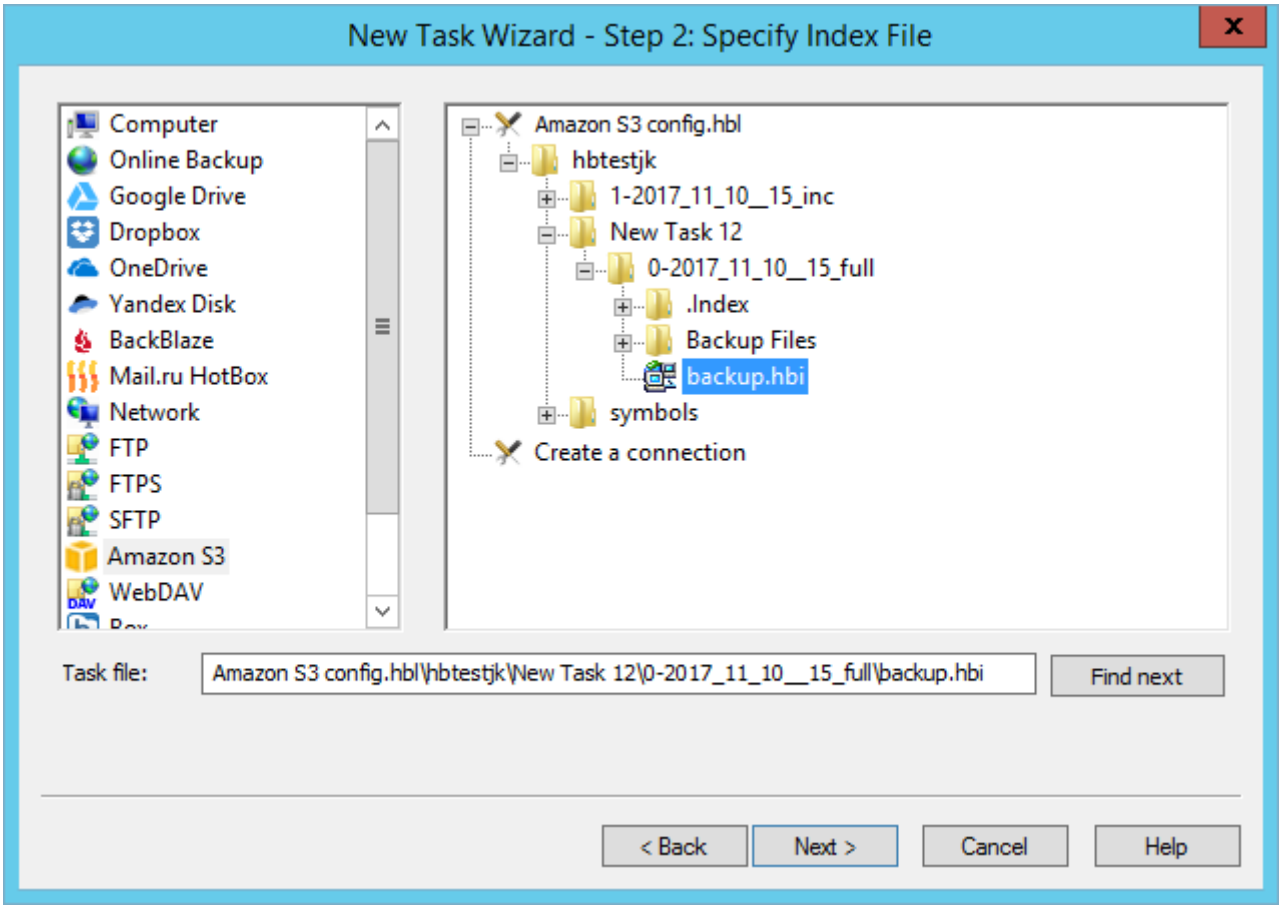
- At this step, creating a new Amazon S3 account is a viable solution! Just click the "Create an account" button and follow the Amazon S3 website instructions to make a new bucket for storing your backups!

After choosing a configuration for being a backup destination, select a folder in your bucket to store backups, then click OK and continue creating a backup task as usual. There are no any specific limitations or options to back up to Amazon S3.

Restoring

To restore data from Amazon S3, create a new restoration task. Then follow the next instruction:

1. On the Step 2, select "Amazon S3" as the backup storage. Choose an appropriate connection.
2. On the connected bucket, find a folder containing your backup data.



3. Select a file ***backup.hbi***, which contains all necessary restoring information, and click "Next".
   - Choose a place to restore your backup from Amazon S3.
4. If you need to change data destination, click at the "Change location" button.
5. Continue creating a task as described in the User Manual.

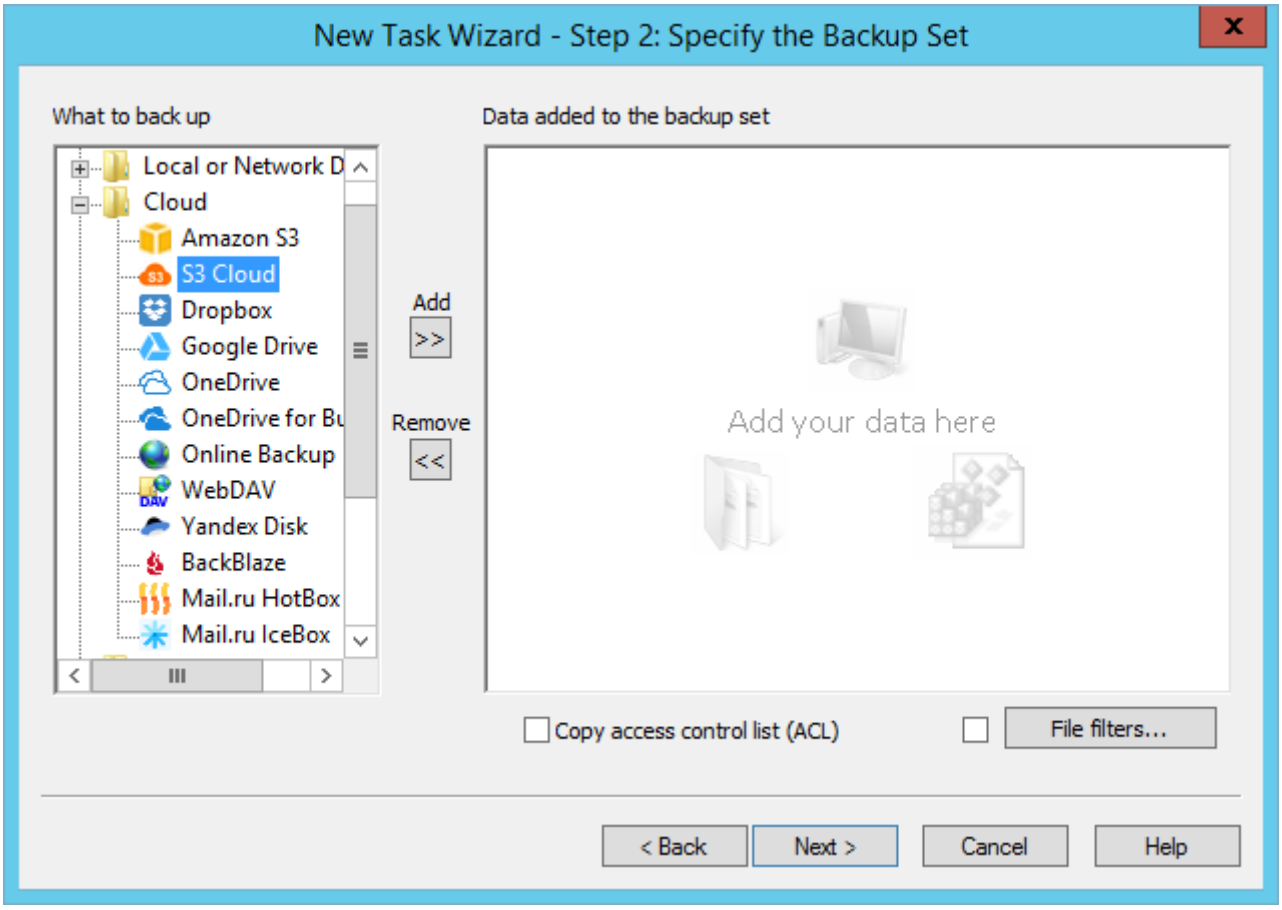
S3 Cloud Plug-in

The S3 plug-in allows storing data to and from any storage that supports the S3 protocol (example, backup to Wasabi, Zenko CloudServer etc.).

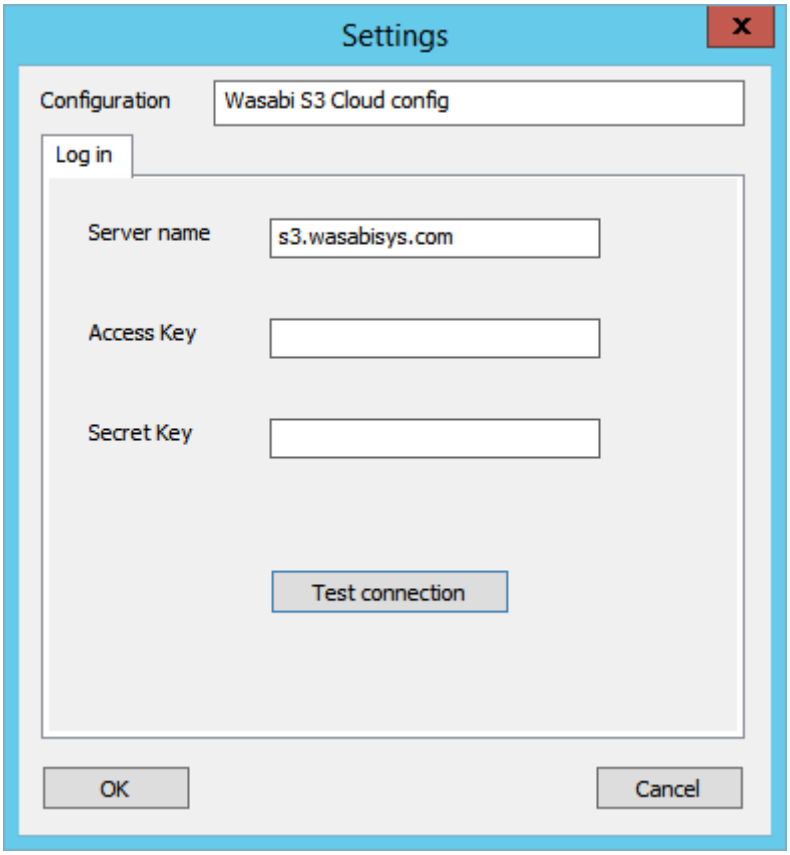
Using the S3 Cloud Storage as Data Source

To make a backup from an S3-driven cloud, do the following:

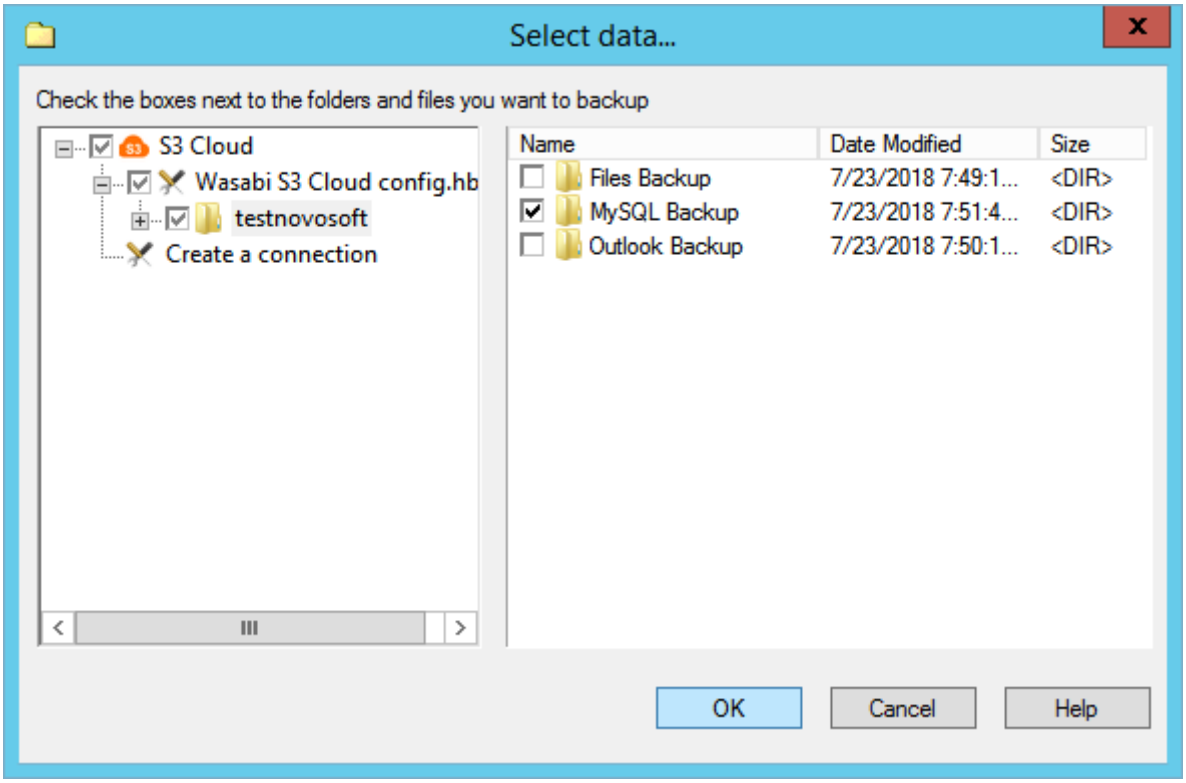
1. Select **backup task** in New Task Wizard.
2. Select the **S3 Cloud plug-in** in the Cloud group on the Step 2.
3. Click the ">>" button or double-click onto the plug-in name to add it to a backup list.



4. In the new window, double-click on the Create a connection option, or select it and click OK.
5. Set up the access settings to an S3 storage:
   - **Server name**. Enter here a name of an S3 storage server.
   - **Access key**. Enter your S3 access key (according to your particular S3 storage account).
   - **Secret key**. Enter your S3 secret key (again, from your S3 account).



6. Test your connection if you want to do it. Then click OK to return to the plug-in window. You will see the list of data stored on your selected S3 storage bucket.

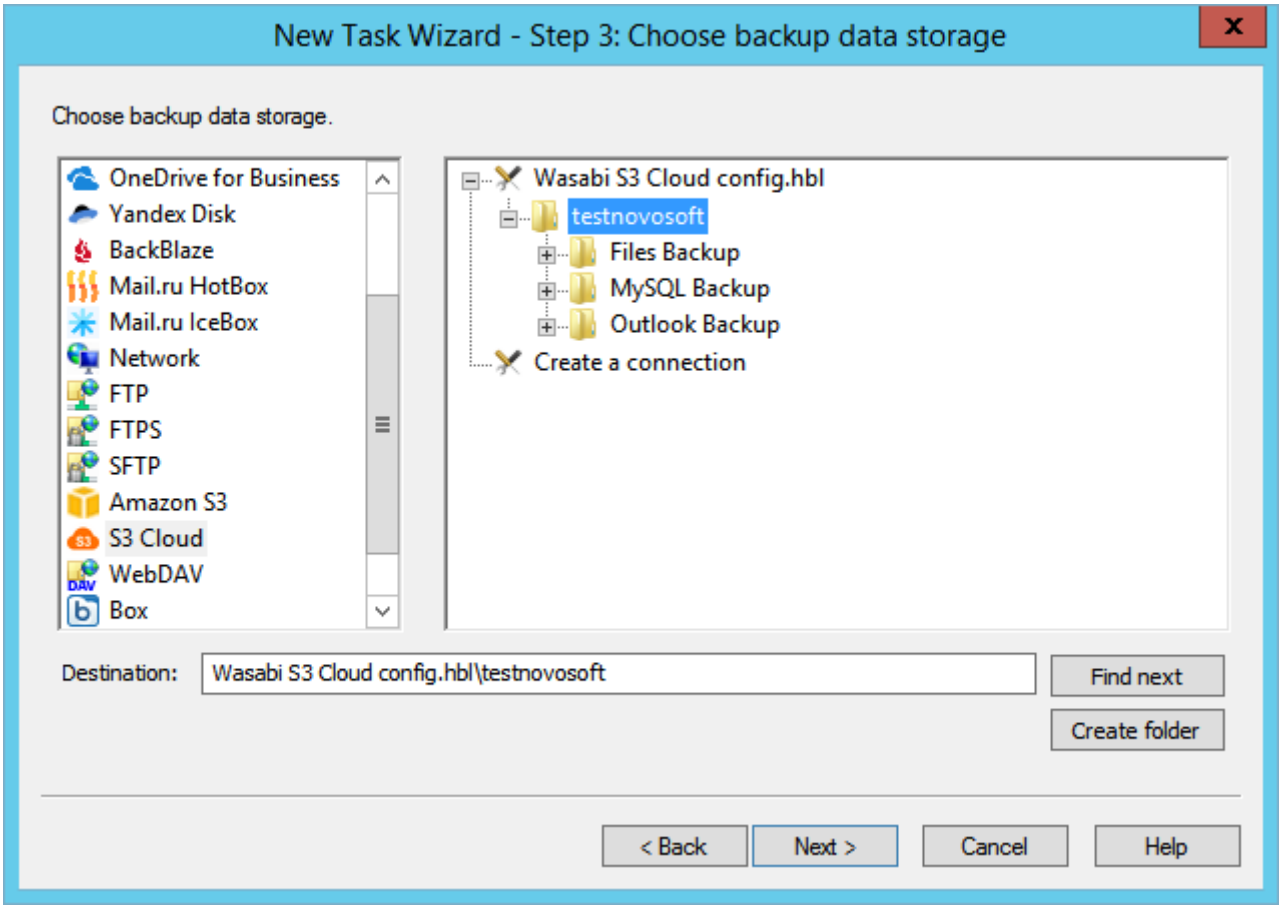


7. Check the boxes against names of different files or folders that you plan to back up. When finishing, click OK and return to the Step 2.

8. Continue creating a backup task as usual. No other step will be specific for backup from S3.

Using the S3 Cloud Storage as Destination for Backups

To back up to some S3 storage, choose it as a destination on the Step 3 of a new task wizard. This is a very simple action.



Note: If you still have no configuration for your particular S3 storage, double-click on the "Create a connection..." string and enter the parameters for an appropriate bucket, as described above.

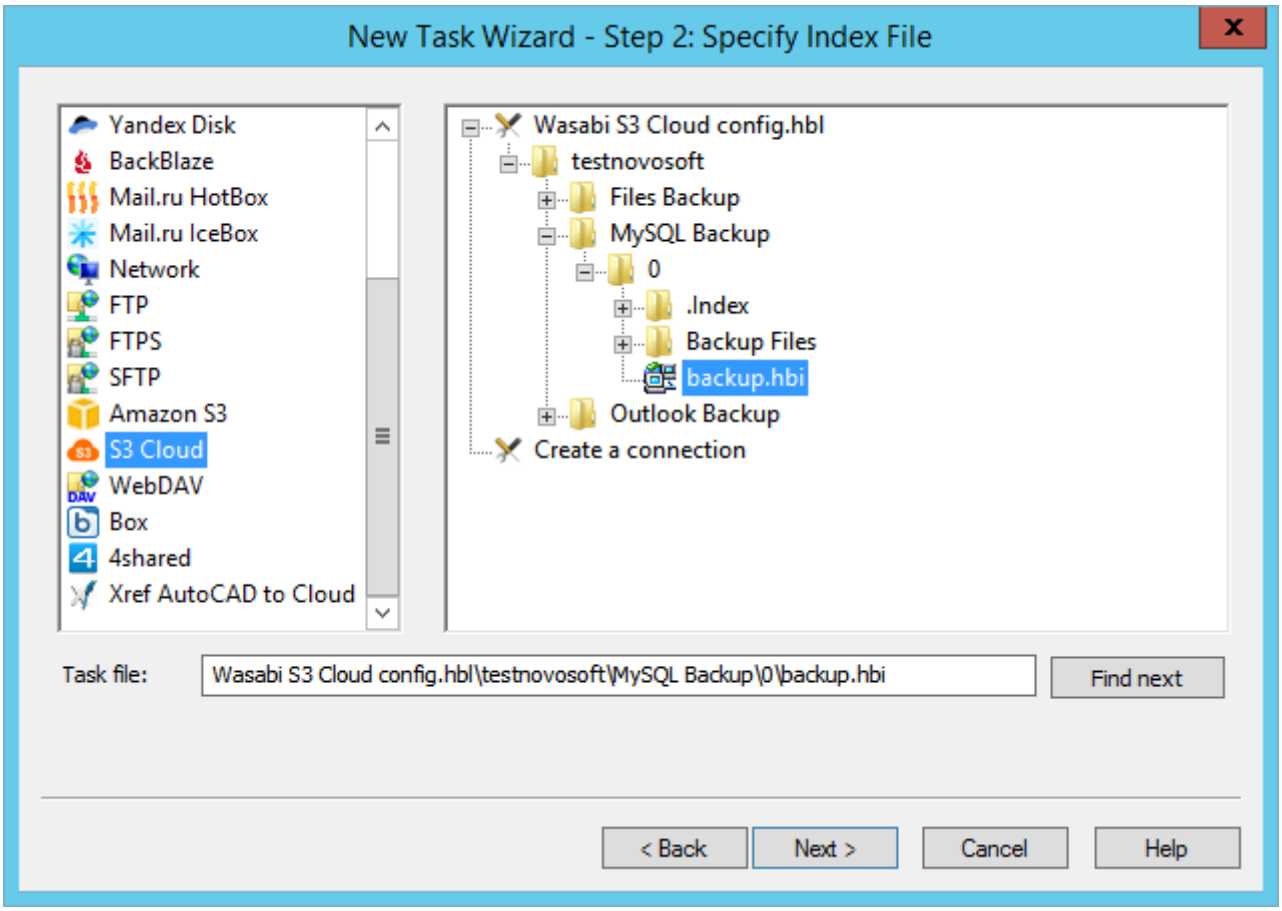
After completing a configuration for an S3 backup destination, please select a folder in your bucket to store your backups, and then click OK to continue creating a backup task. There are no any specific limitations or options to back up to S3-driven storages.

Restoring Data from S3 Storage

To restore your backups from an S3 cloud, please create a new recovery task as described above (just select a restoration task type on the Step 1). Then follow the next sequence of actions:

1. On the Step 2, select S3 Cloud as backup storage. Choose an appropriate connection by name.

2. On the connected S3 bucket, find a folder that contains your backup data.



3. Select a file called **backup.hbi**, with all necessary data for restoration. Click Next.
4. Choose a place to restore your backup data from an S3 service.
   - If you need to change data destination, click at the "**Change location**" button.
   - **Select a new destination** for your restored dataset, and then click OK.
5. Continue creating a recovery task, as described in the User Manual.

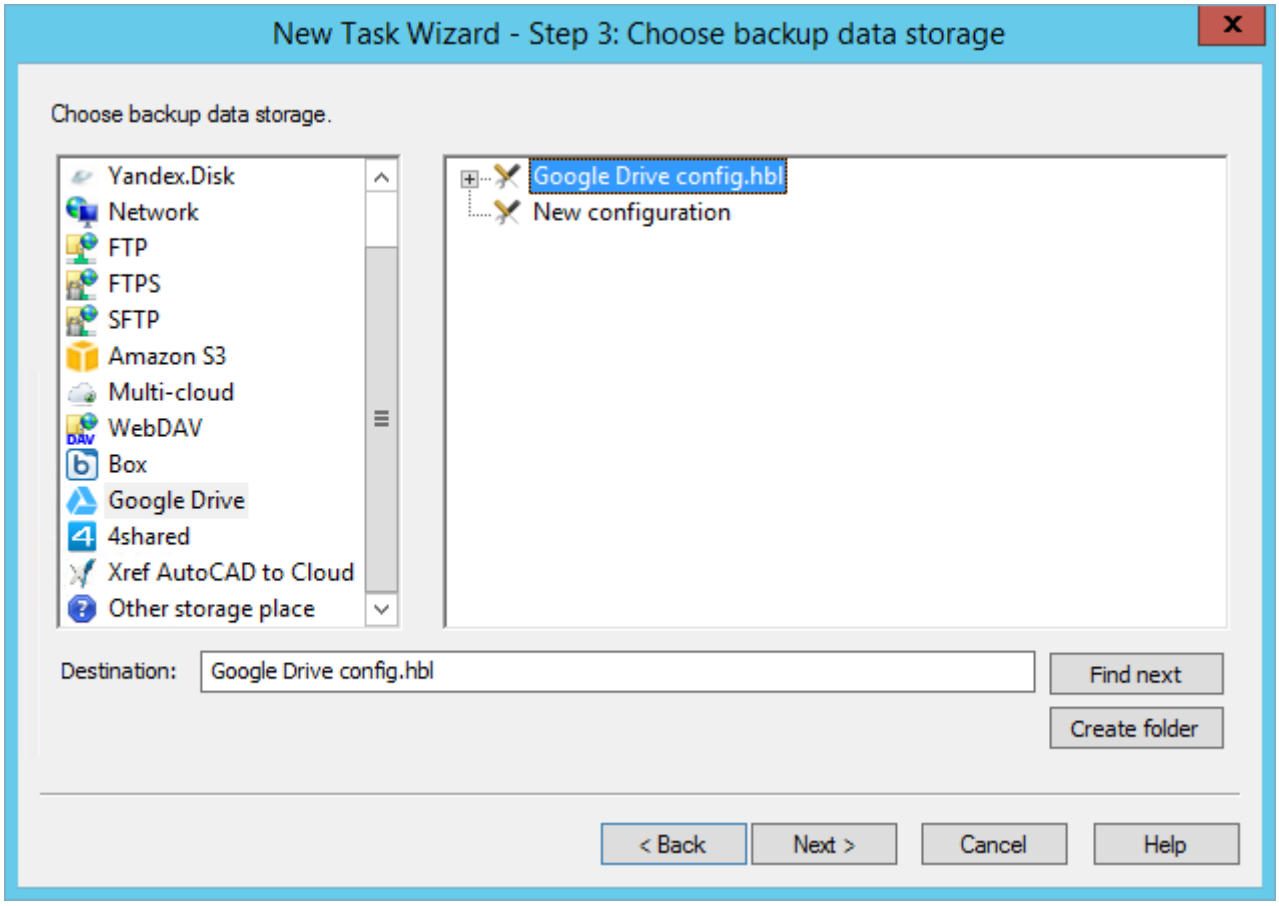
Google Drive

Google Drive feature allows Handy Backup connecting with a Gdrive cloud service as a backup source or as a storage for data backed up.

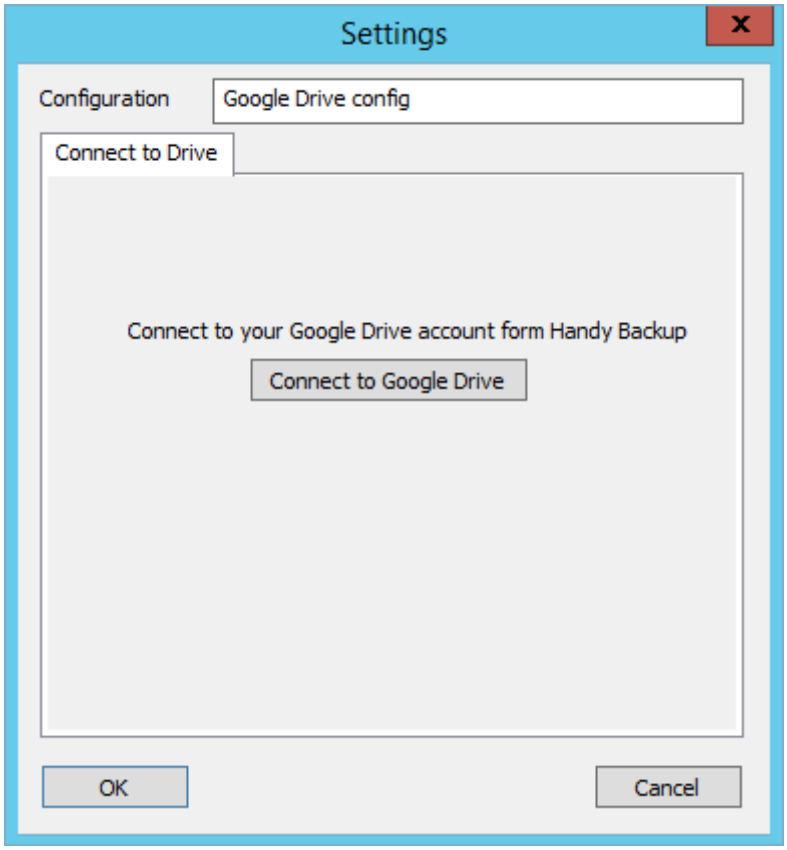
Using the Google Drive Feature for Storing Backups

To use the Google Drive plug-in for backing up data to a particular account, please use the next steps:

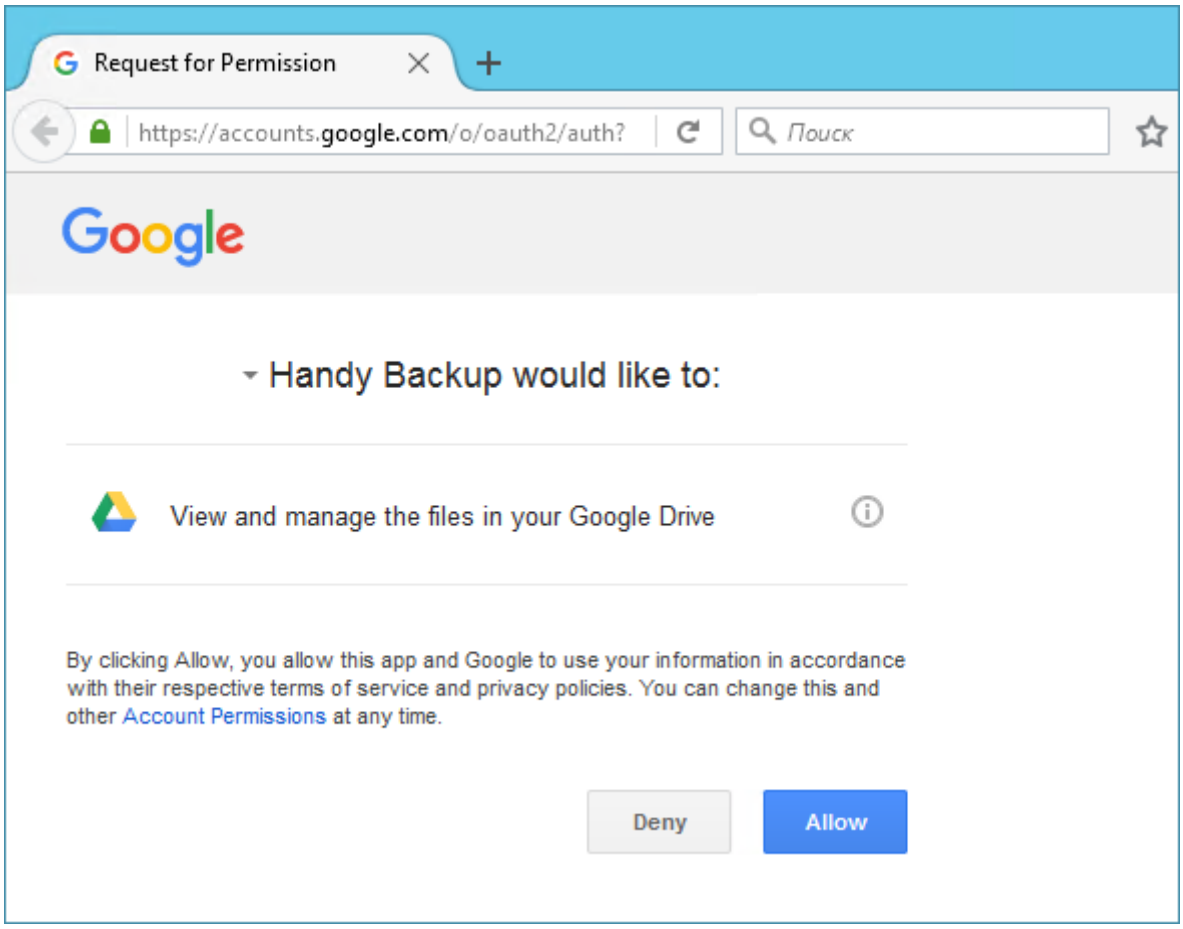
1. Make a new backup task, and on a Step 2, choose the dataset you want to back up.
2. Proceed to a Step 3 and select the “Google Drive” option. You will see the window like this:



3. Double-click on a “New configuration…” option; it opens an account settings dialog.



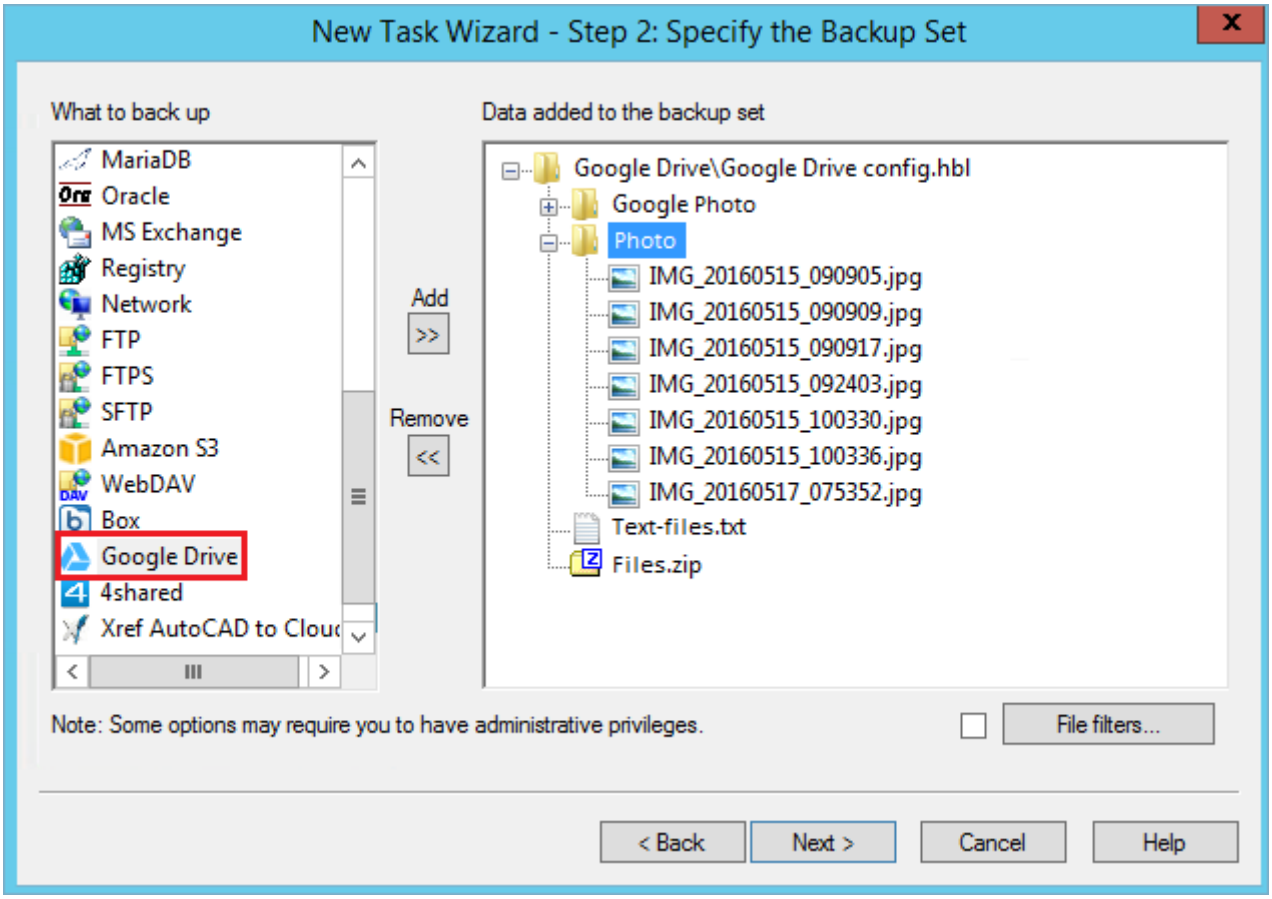
4. Click on the “Connect to Google Drive” button. The program will redirect you to your default browser, where you must enter your Google Drive connection parameters.



5. Allow Handy Backup to use this particular Google Drive account.
6. Return to Handy Backup. The program will test your established Google Drive connection.
7. Click twice on your Google Drive configuration. Now Handy Backup will use it as a data storage.
8. Click on the “OK” button to continue creating your tasks. Other steps of the task creation are unspecific for backing up to Google Drive.

Backing up a Google Drive Account

All steps described earlier are also actual for using your Google Drive account as a data source for backing it up. Select the “Google Drive” feature as a data source on a Step 2, then set up a new configuration or use an existing connection like described before.



Note: You cannot back up internal Google Apps files, such as documents or tables, by this way. This option is voluntarily restricted to provide as much protection for these data as possible, since the Google cloud protects this content by its own means.

Restoring from a Google Drive Account

To restore data, you must firstly provide a connection to Google Drive by selecting a pre-configured account connection created as a data destination earlier, as described before. Then use the file backup.hbi located at your Google Drive account to restore the files kept on the Gdrive.

OneDrive Plug-in

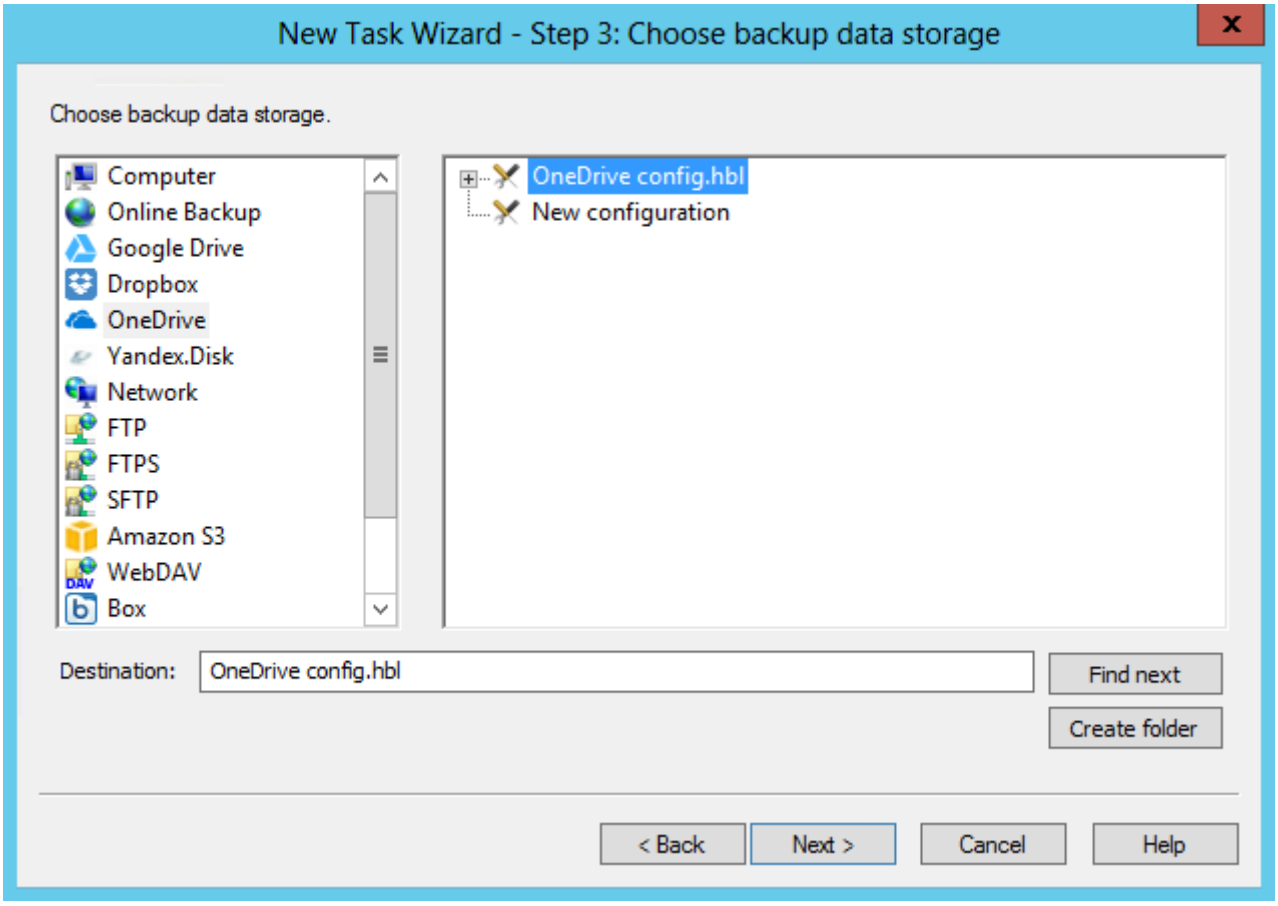
The **OneDrive** feature allows Handy Backup using OneDrive cloud accounts both as a backup data source and as a vault for copies of the information.

Using the OneDrive Feature as the Backup Vault

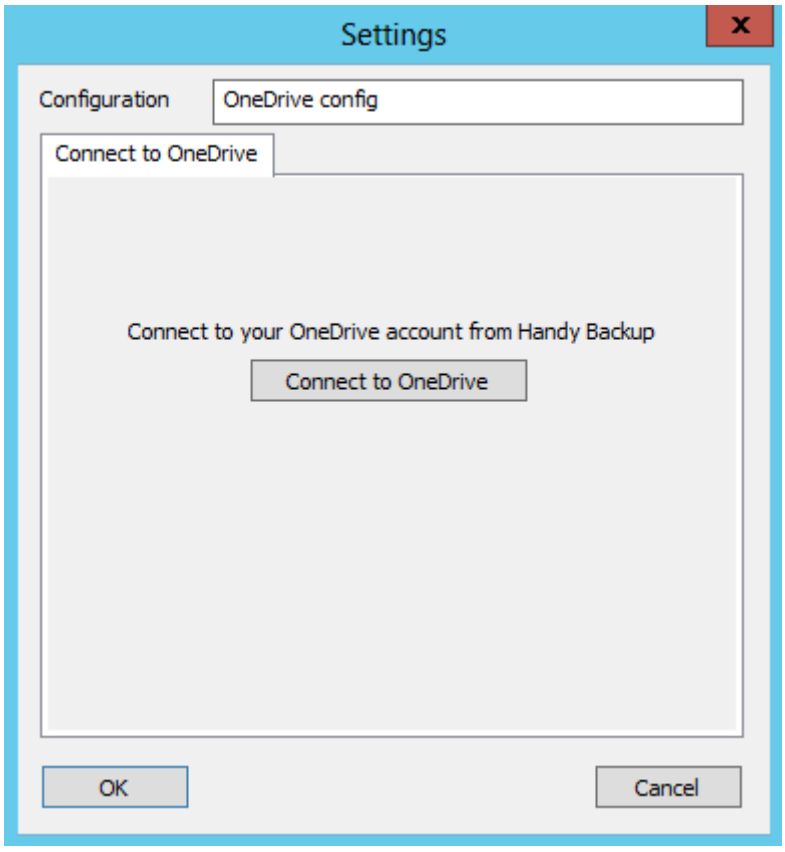
To use the OneDrive backup software plug-in for backing up data to a particular account, please follow the instruction below:

1. Make a new **backup task**, and on a **Step 2**, choose the dataset you want to back up.

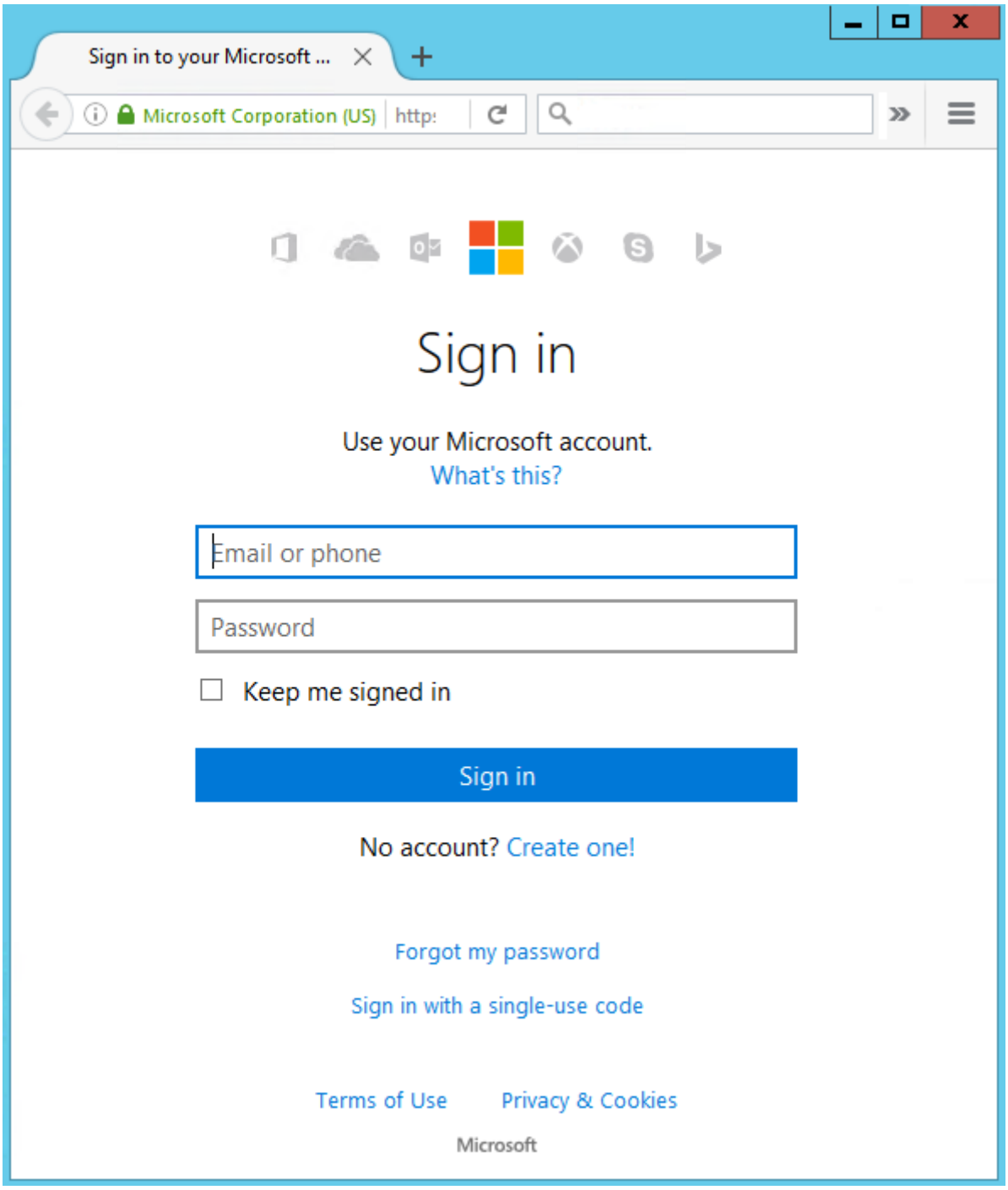
2. On a Step 3 and select the “**OneDrive**” option. You will see the OneDrive list of options:



3. Double-click on a "**New configuration**…" string; it will open an account settings dialog.



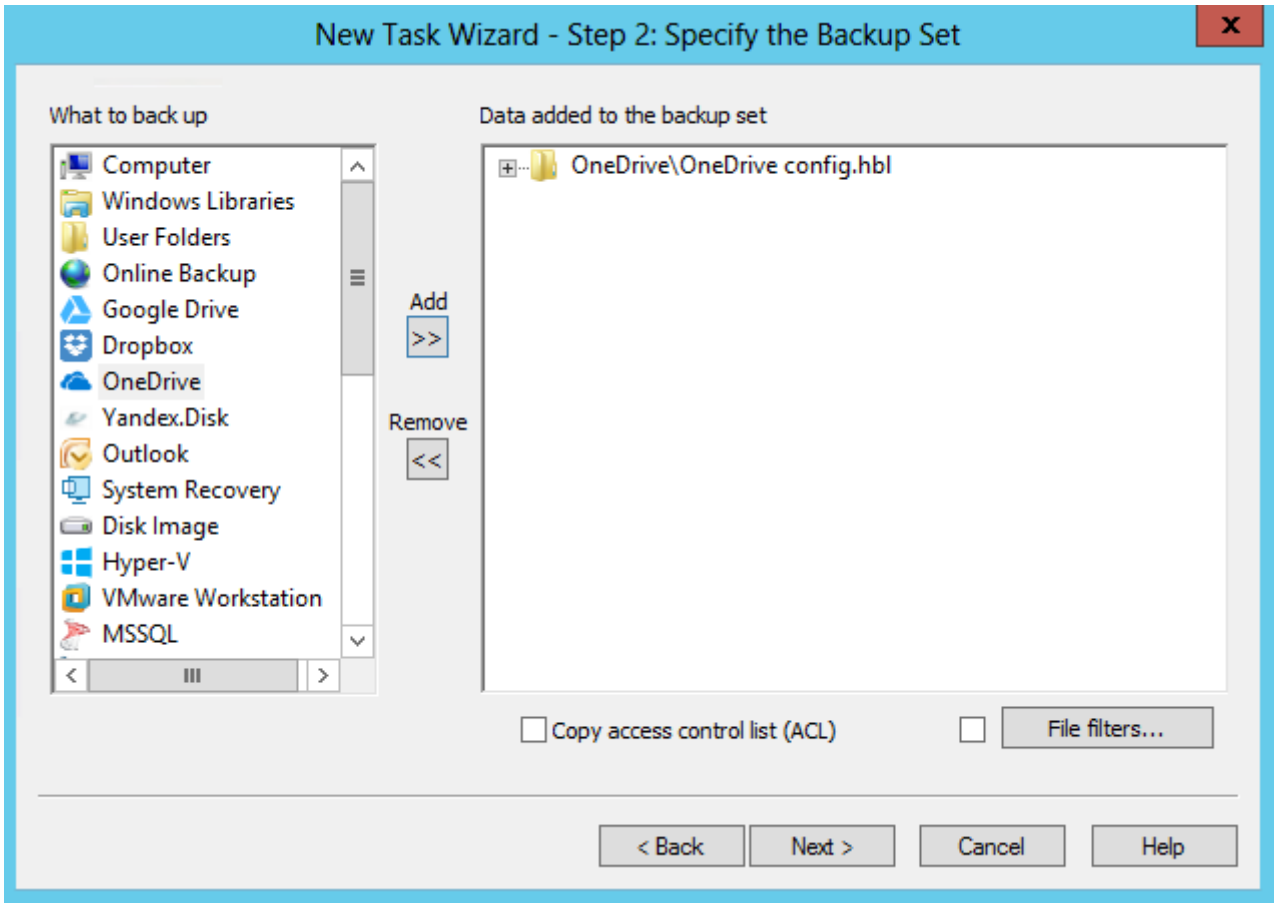
4. Click on the button “**Connect to OneDrive**”. You will see the browser window, where you must enter your OneDrive connection parameters. After entering the parameters, just sign in.



5. Return to Handy Backup. The program will test your established OneDrive connection.
6. Click twice on your obtained OneDrive configuration to use it as a data storage.
7. Click on the “OK” button to continue creating your tasks. Other steps of the task creation are unspecific for backing up to OneDrive cloud.

Backing up from the One Drive Account

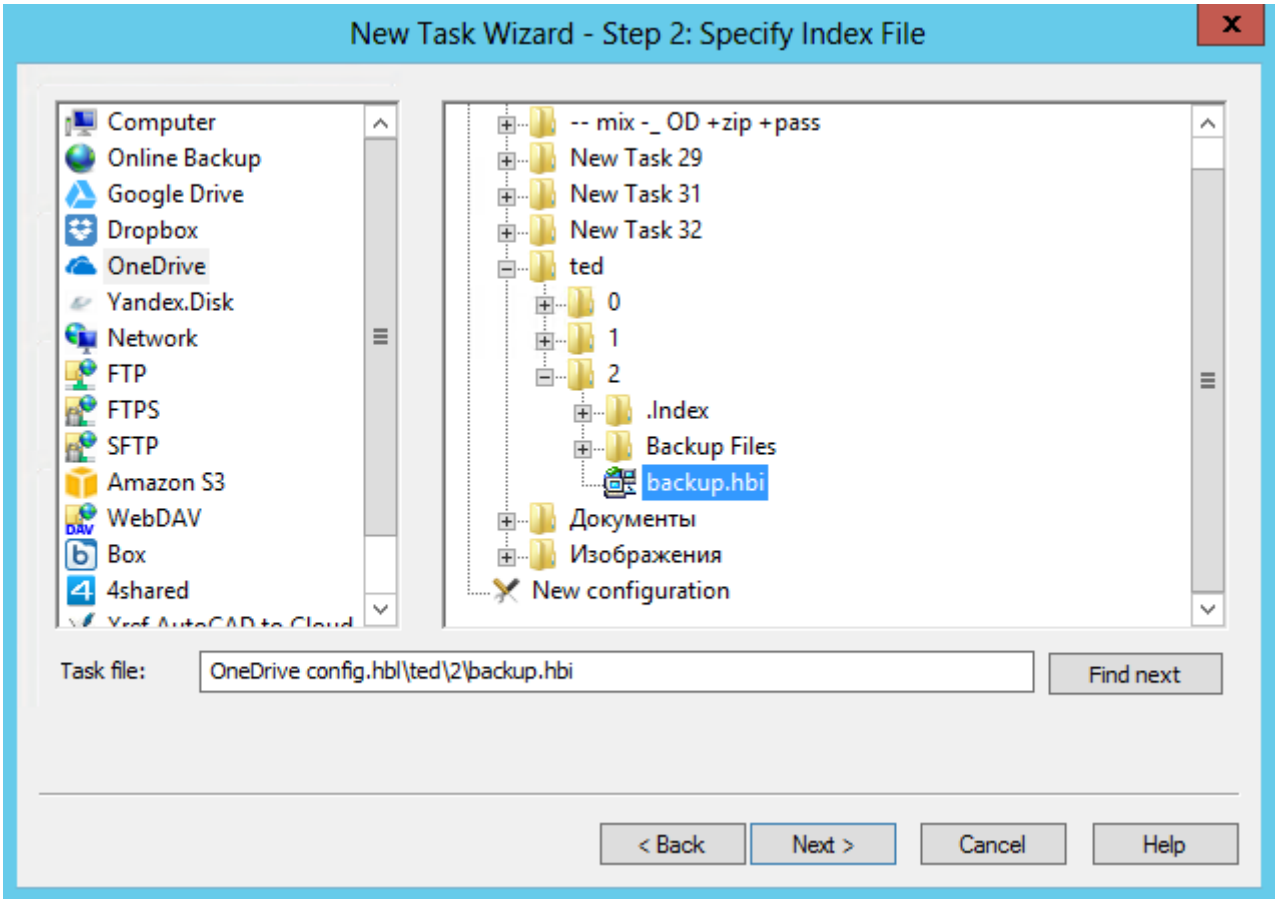
All steps described earlier are also actual for **using your OneDrive account as a backup source**. Just select and configure the "**OneDrive**" feature as a data source on a **Step 2**, then set up a new configuration or use an existing connection like described before.



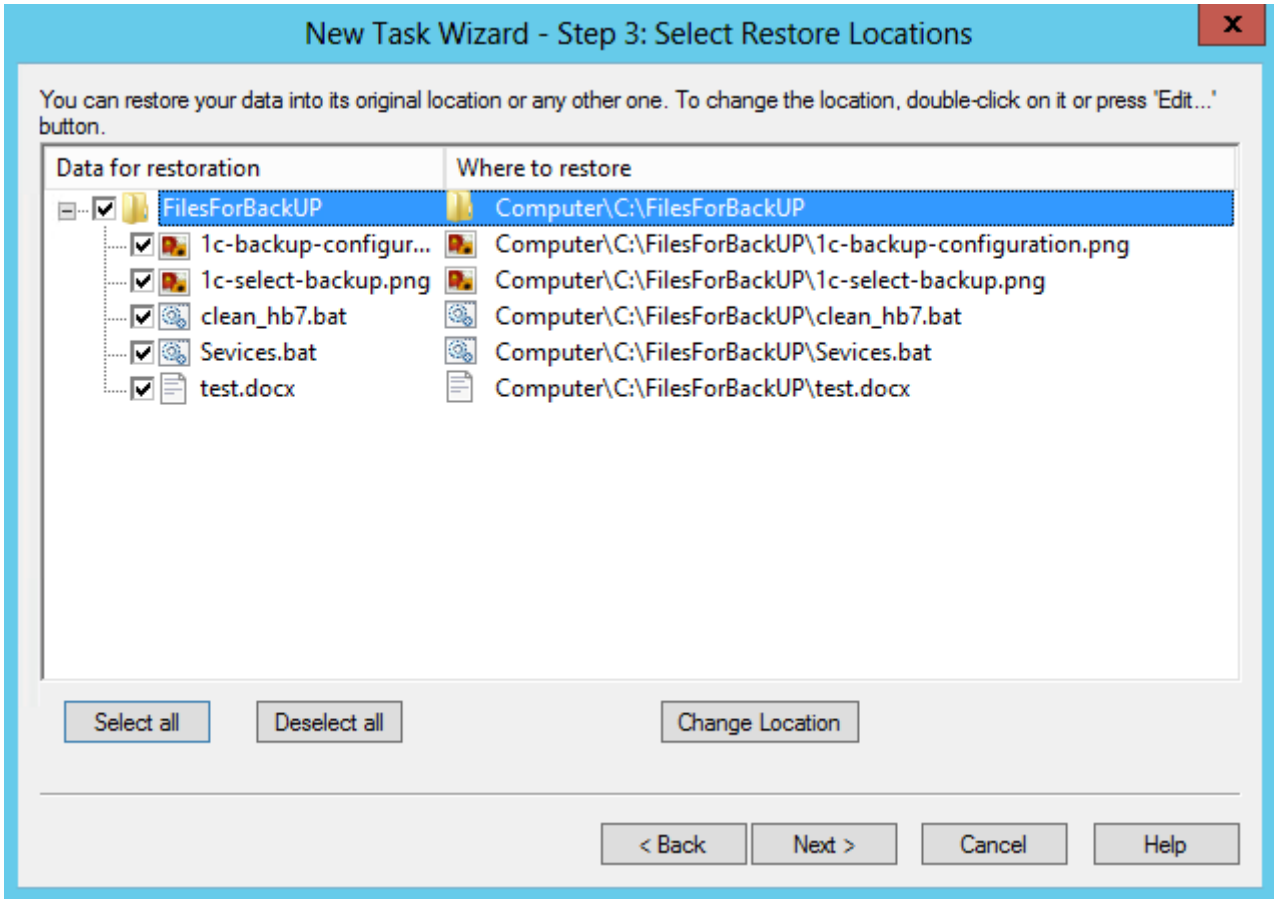
Restoring Data from OneDrive Account

To restore data from OneDrive, please use the next sequence of actions.

1. Open Handy Backup, create a new task and select a restoration task on the Step 1.
2. On the Step 2, select the OneDrive plug-in and choose a configuration you need.
3. Browse your OneDrive content for a file called **backup.hbi**, which is the index file.



4. Select this file to restore your data to its original place.
5. If you want to restore data from OneDrive to another location, click “**Change Location**”.
    - Select a new location for your information to restore (or just to clone) it.



6. Click OK and return to the task creation wizard.
7. Continue to create the restoration task as described in the User Manual. That is all.

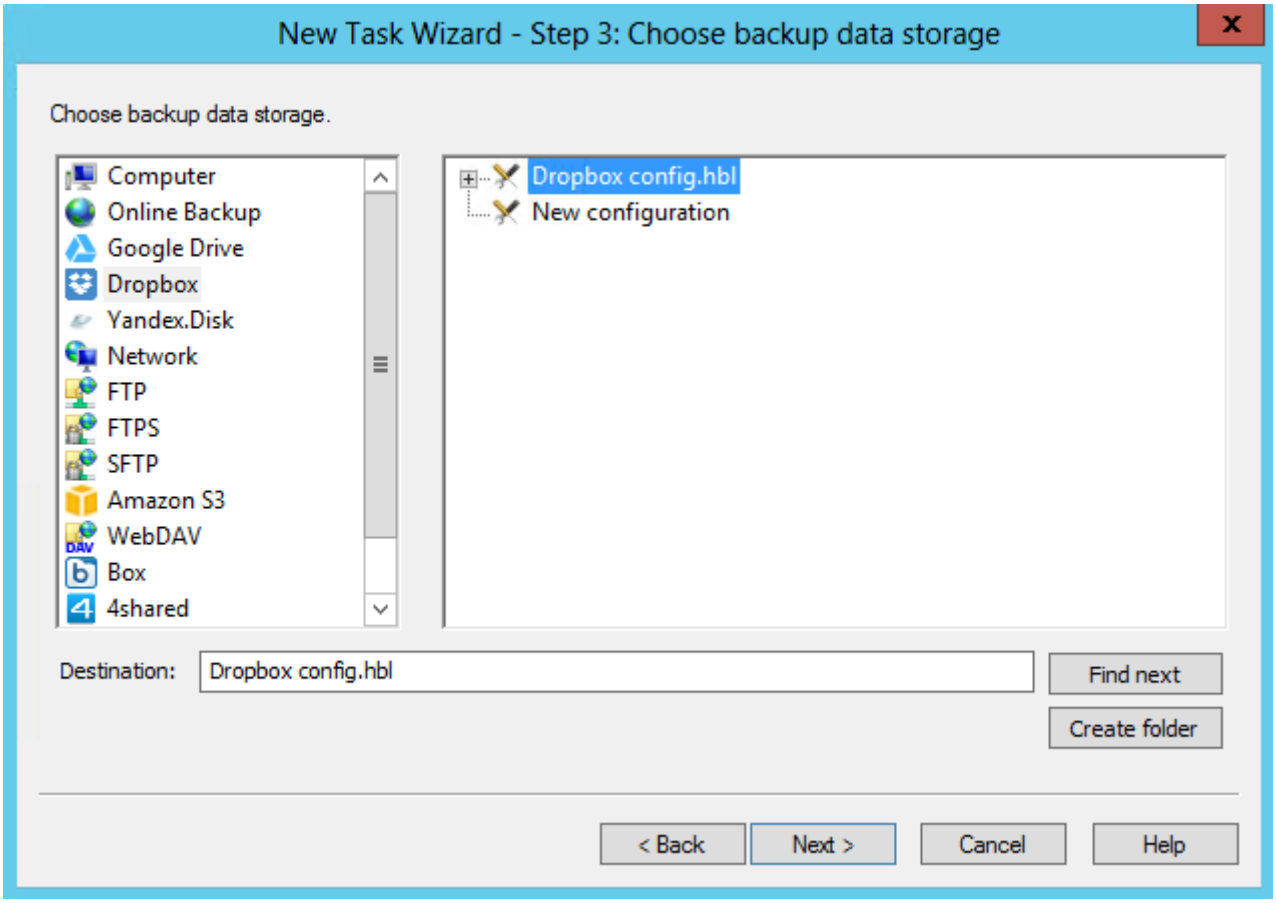
Dropbox Plug-in

Dropbox feature allows saving Dropbox files and, reversely, store your backup copies to Dropbox.

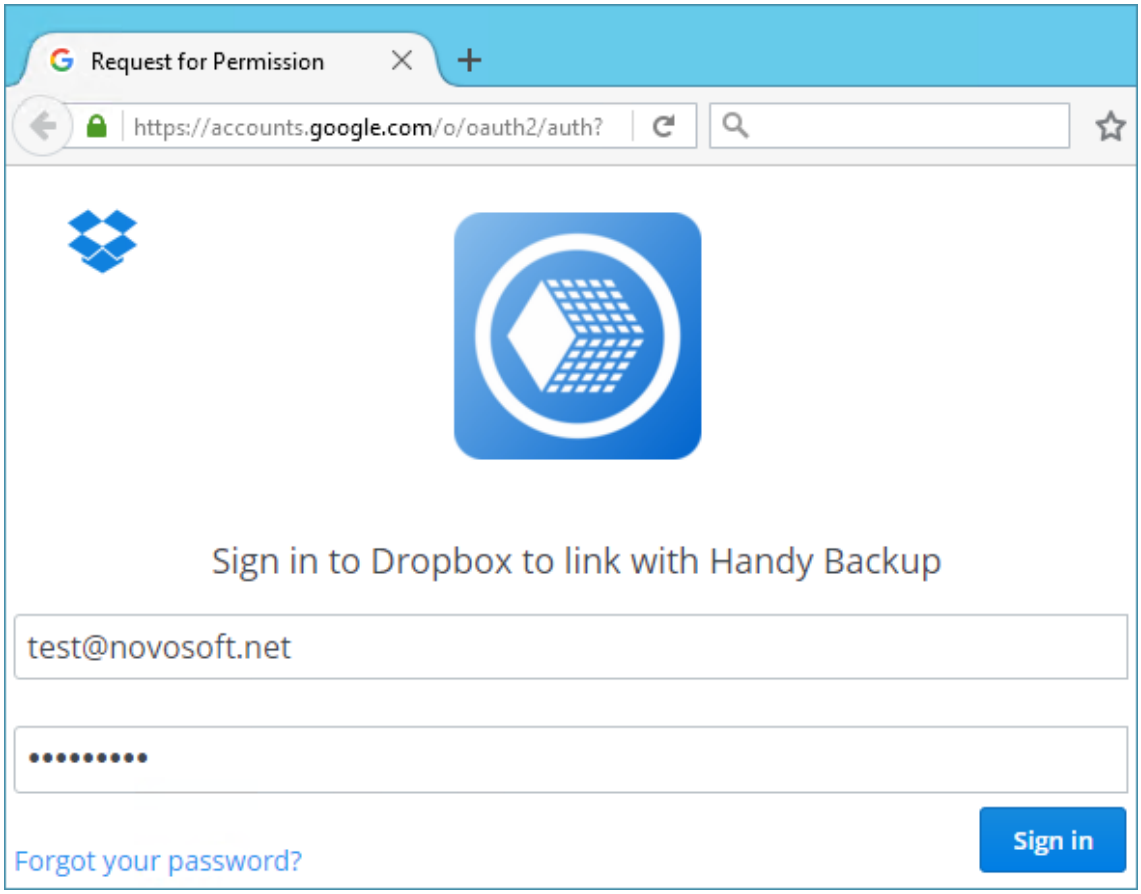
Using the Dropbox Plug-in as a Backup Storage

To create a backup task using a particular Dropbox account as a storage, please use the following instruction:

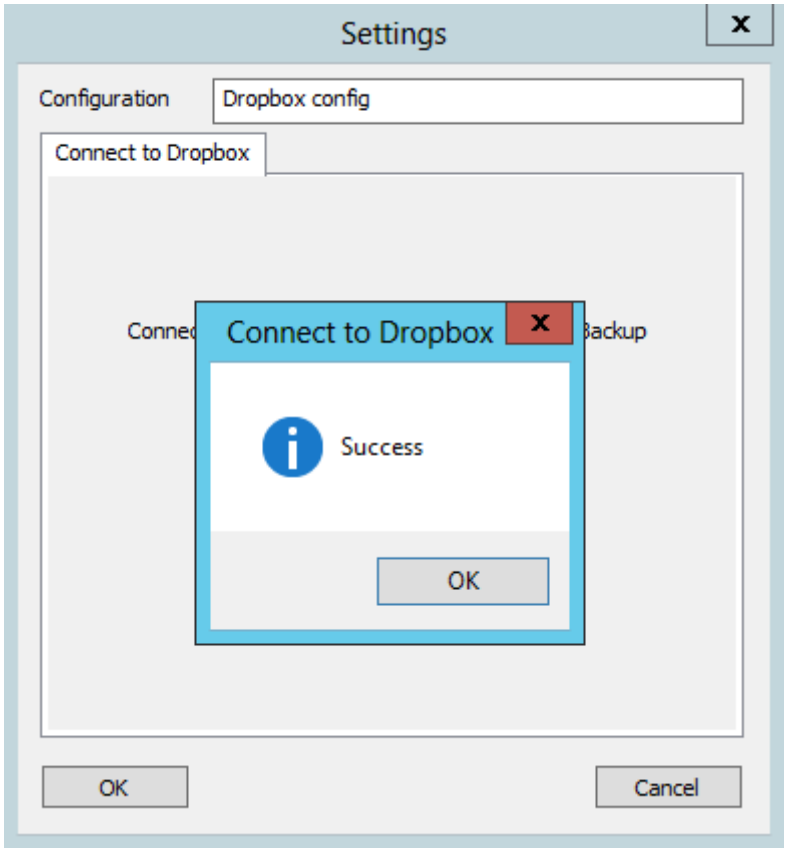
1. Create a new backup task by selecting a menu item or by pressing Ctrl+N.
2. On a Step 2, choose data you want to save to Dropbox.
3. On a Step 3, select the “Dropbox” feature. You will see the new configuration option:



4. Double-click on a "New configuration..." option and enter to the account settings dialog.
5. Click on the "Connect to Dropbox" button. The program will redirect you to the browser and open a Dropbox login window.



6. Enter your Dropbox account connection parameters, e.g. username/email and password.
7. Allow Handy Backup to connect with this particular Dropbox account.
8. Return to Handy Backup. The program will test your established Dropbox connection.



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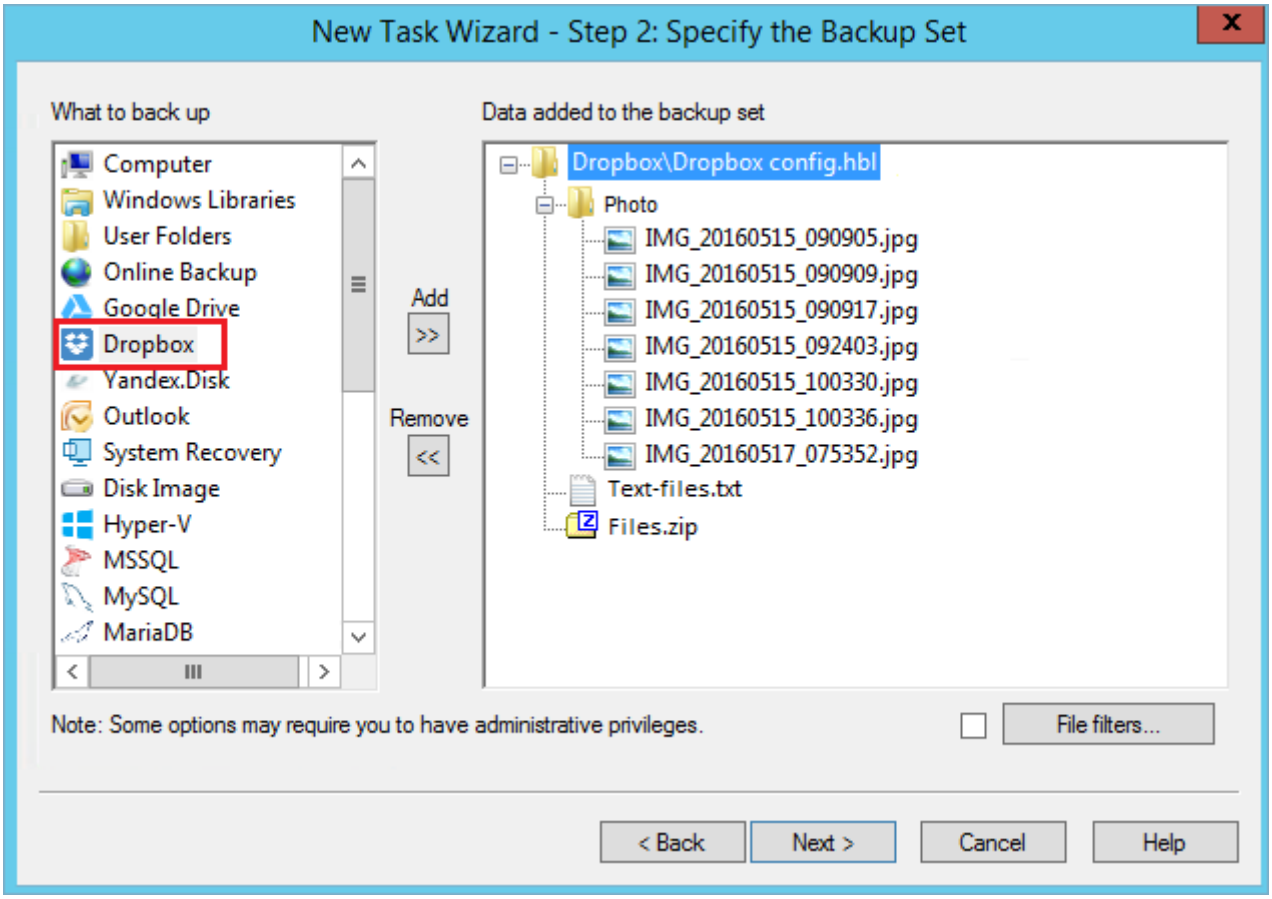
support@handybackup.net

9. If the connection has a success, click on OK to return, then click twice on your Dropbox configuration to use it as a data storage.
10. Click on the "OK" button to continue creating your tasks. All next steps of the task creation are unspecific for Dropbox-using tasks.

Backup Dropbox Account Content

Use an existing Dropbox configuration created as described above, or create a new configuration on a Step 2 instead of a Step 3 to save Dropbox files from your account. You can backup Dropbox to an external hard drive, save files online (e.g. on a NAS) or into a folder somewhere on your computer.



Restoring from a Dropbox Account

Users can apply the “Dropbox” feature for auto recovery from Dropbox. In case of restoration, the task often uses the Dropbox configuration created previously for backing up; in this case, just select a needed configuration from a list that opens in the “Dropbox” feature.

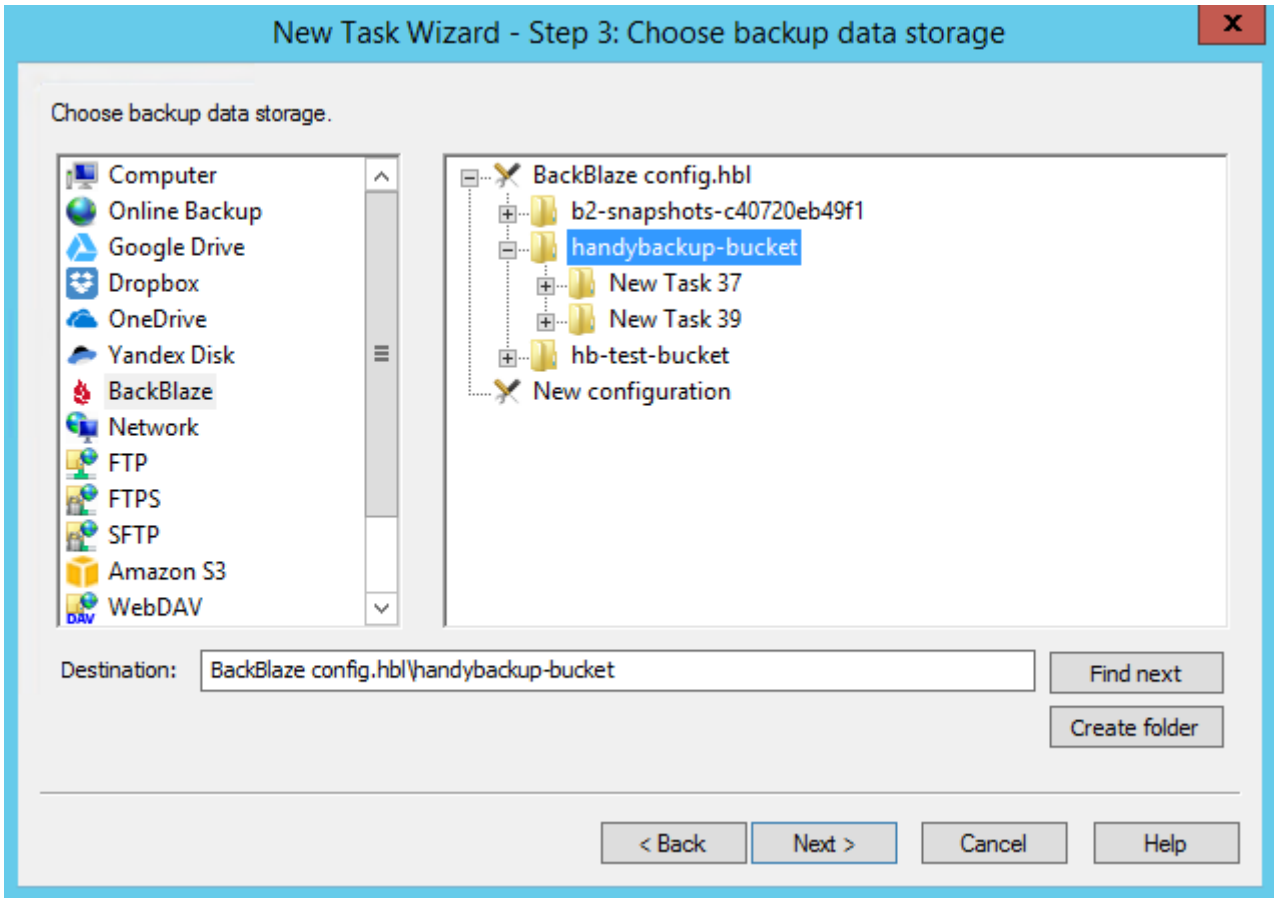
Backblaze Plug-in

The **Backbaze** plug-in allows Handy Backup using Backblaze cloud accounts both as a backup data source and as a storage for data copies.

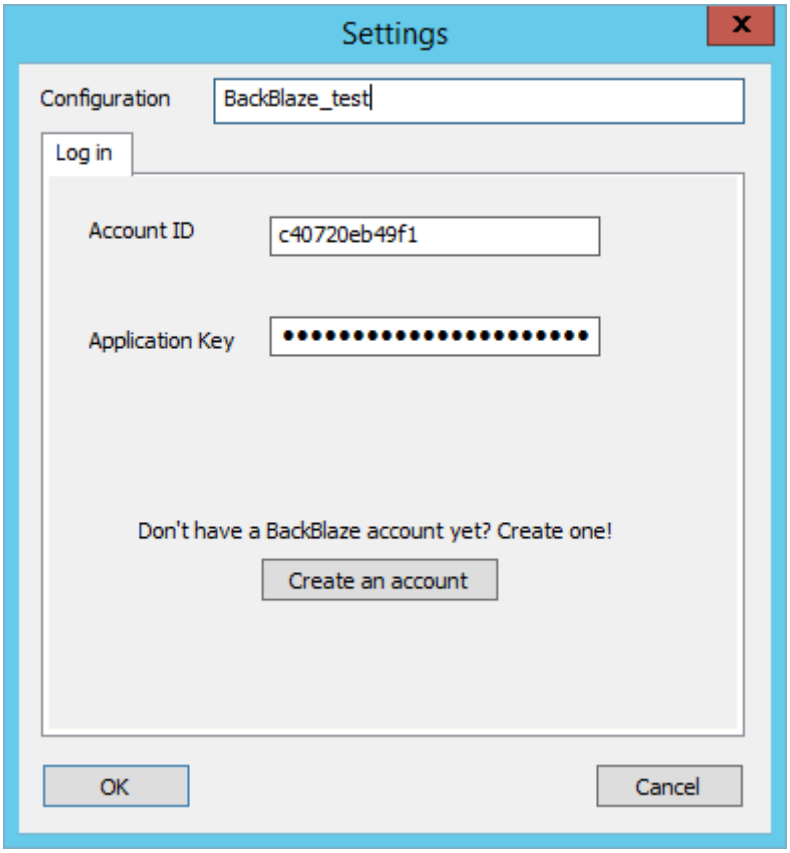
Using the Backblaze Feature as the Backup Vault

To use the Backblaze plug-in for saving the dataset to a particular Backblaze cloud account, please follow the instruction below:

1. Make a new **backup task**, and on a Step 2, choose the dataset you want to back up.
2. On a Step 3 and select the "**BackBlaze**" option. You will see the BackBlaze list of options:



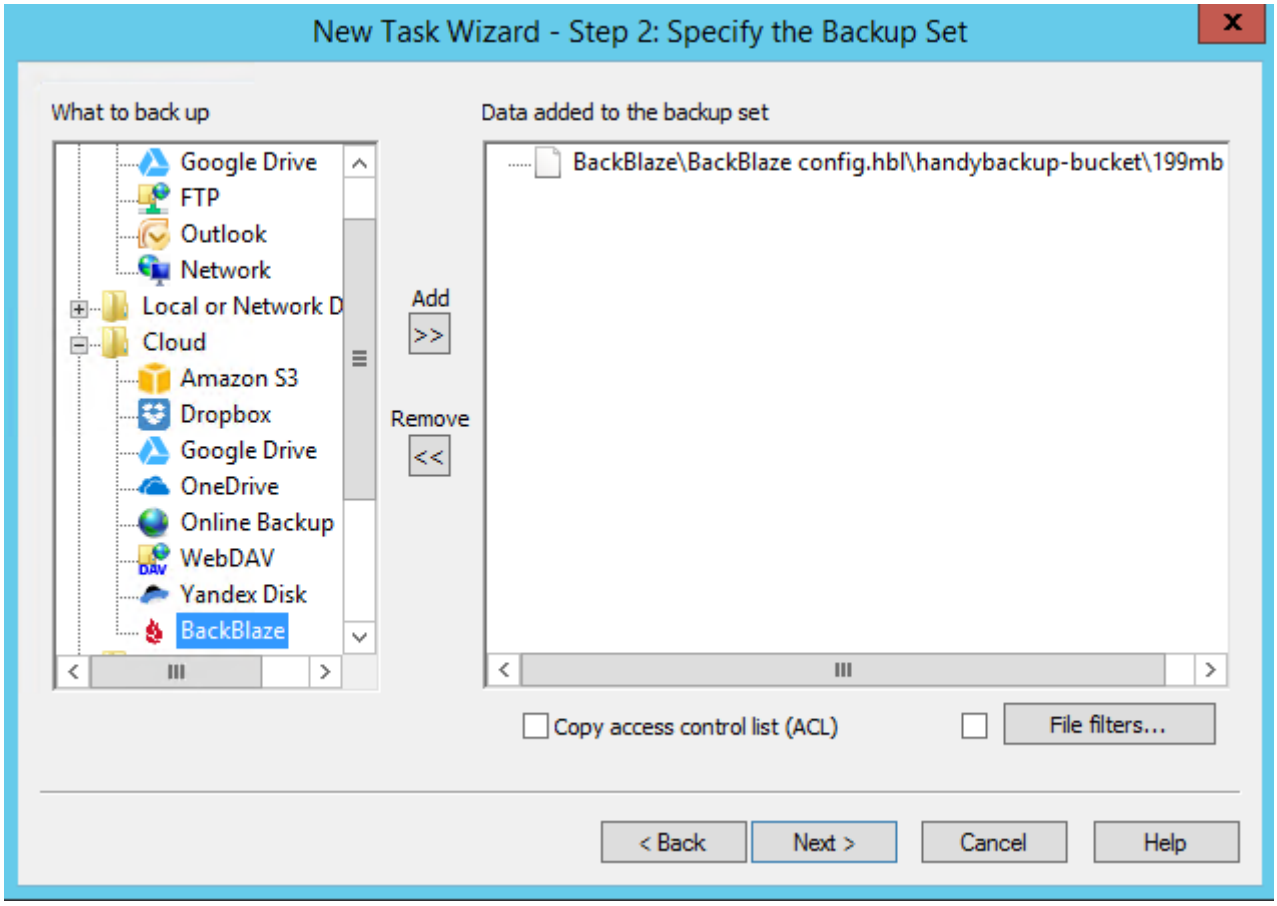
3. Double-click on a "**New configuration...**" string; it will open an account settings dialog.
4. Create a new configuration (i.e. login and password for a Backblaze account) to set a connection between Backblaze and Handy Backup. Click OK after finishing.



5. Click twice on your obtained Backblaze configuration to use it as a data storage.
6. Click on the “OK” button to continue creating your tasks. Other steps of the task creation are unspecific for backing up to Backblaze cloud.

Backing up from the Backblaze Account

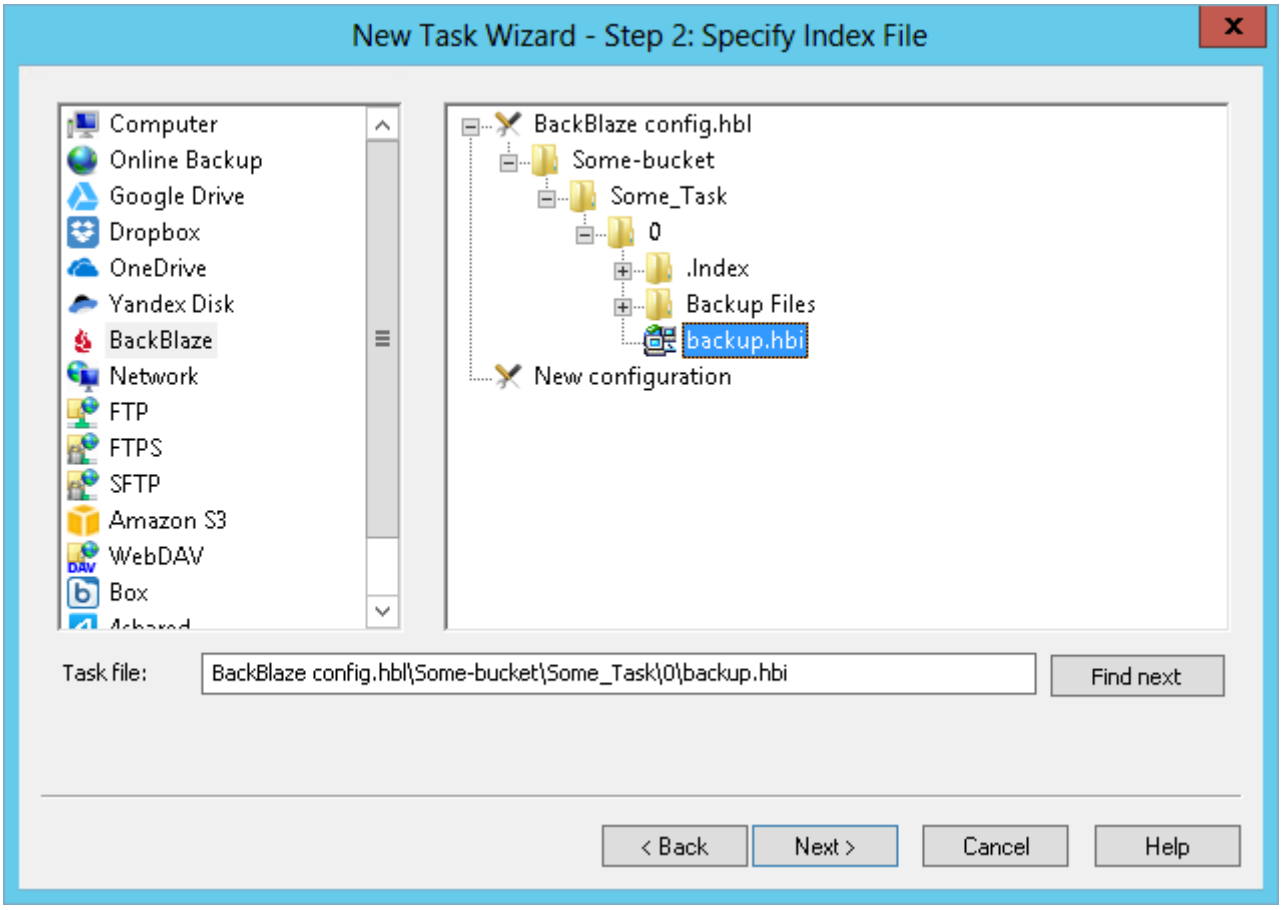
All steps described earlier are also actual for using your Backblaze account as a backup source. Just select and configure the "**BackBlaze**" feature as a data source on a **Step 2**, then set up a new configuration or use an existing connection like described before.



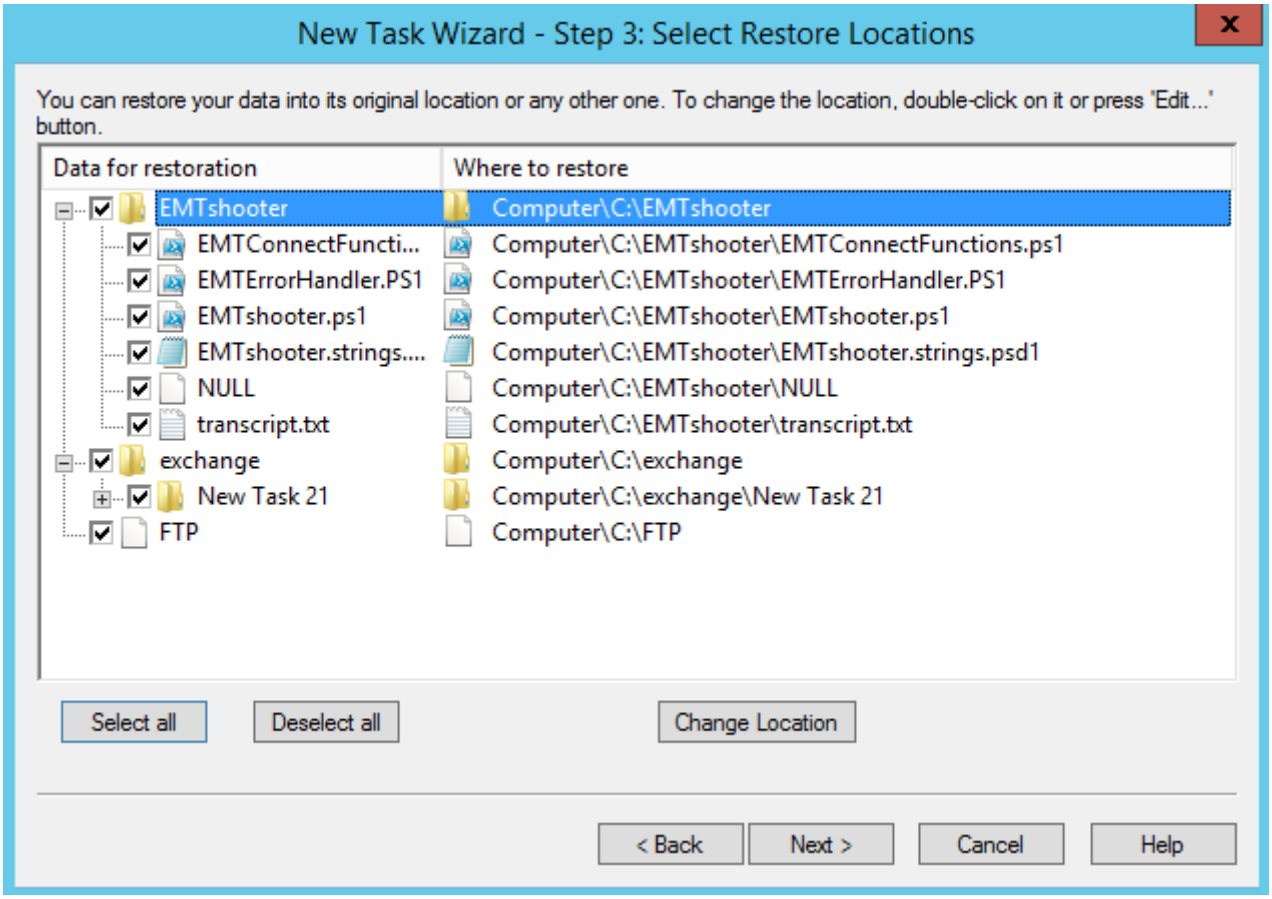
Restoring Data from Backblaze Account

To retrieve data from a Backblaze cloud account, please use the next sequence of actions.

1. Open Handy Backup, create a new task and select a restoration task on the Step 1.
2. On the Step 2, select the **BackBlaze plug-in** and choose a configuration you need.
3. Browse your Backblaze account for a file called **backup.hbi**, which is the index file.



4. Select this file by double-clicking on it to restore your data to its original place.
5. If you want to restore data from a BackBlaze cloud to another location, click “Change Location”.
    - Select a new location for your information to restore (or just to clone) it.



6. Click OK and return to the task creation wizard.

7. Continue to create the restoration task as described in the User Manual. That is all.

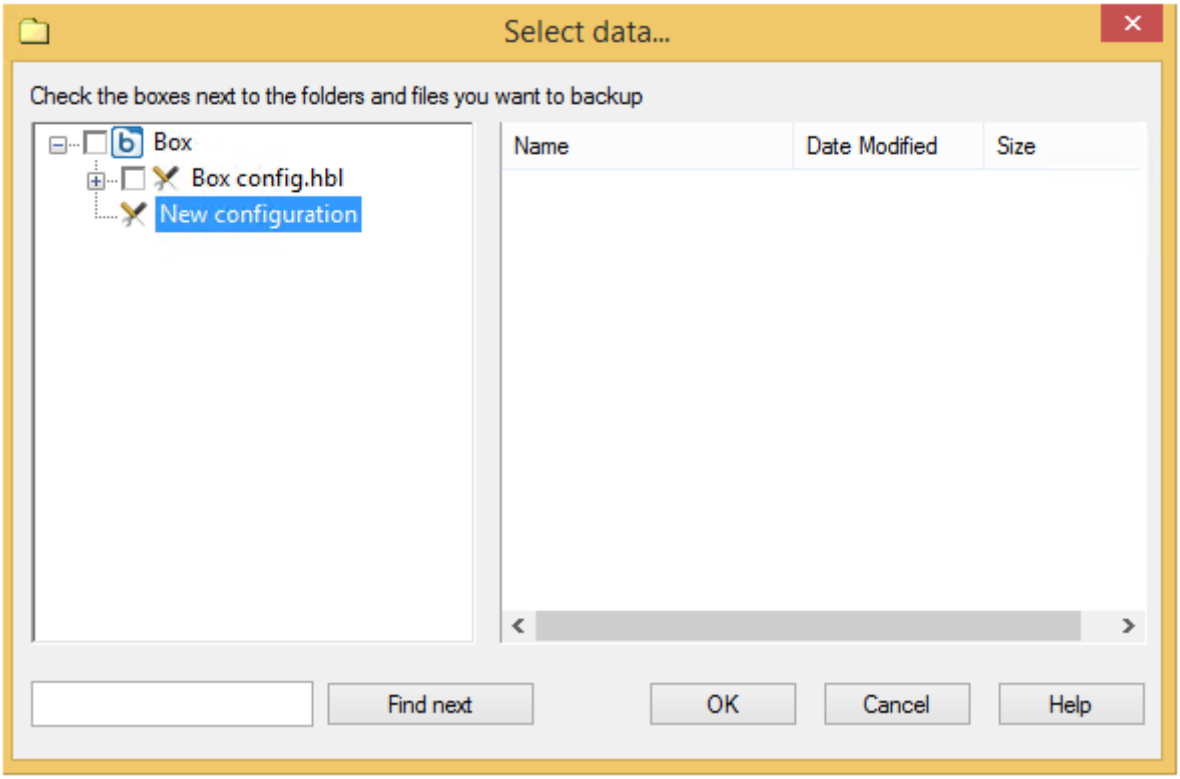
Box Cloud

By using the **Box** feature, Handy Backup allows a direct access to data stored in a Box cloud account. You can use this option as either a data source for backups or a storage media.

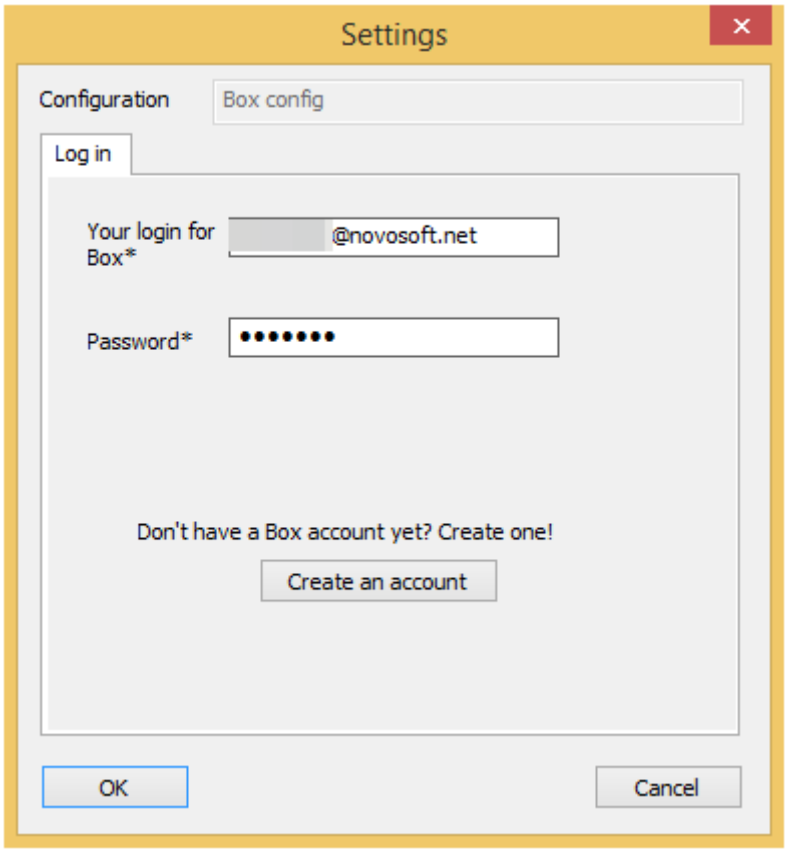
Backing up from a Box Account

To save data from an account on a Box cloud using a typical Handy Backup automated approach, please follow the instruction below:

1. Create a new task and choose the backup task type.
2. On a **Step 2**, select the “Box” data source on the left panel. A new window will appear.



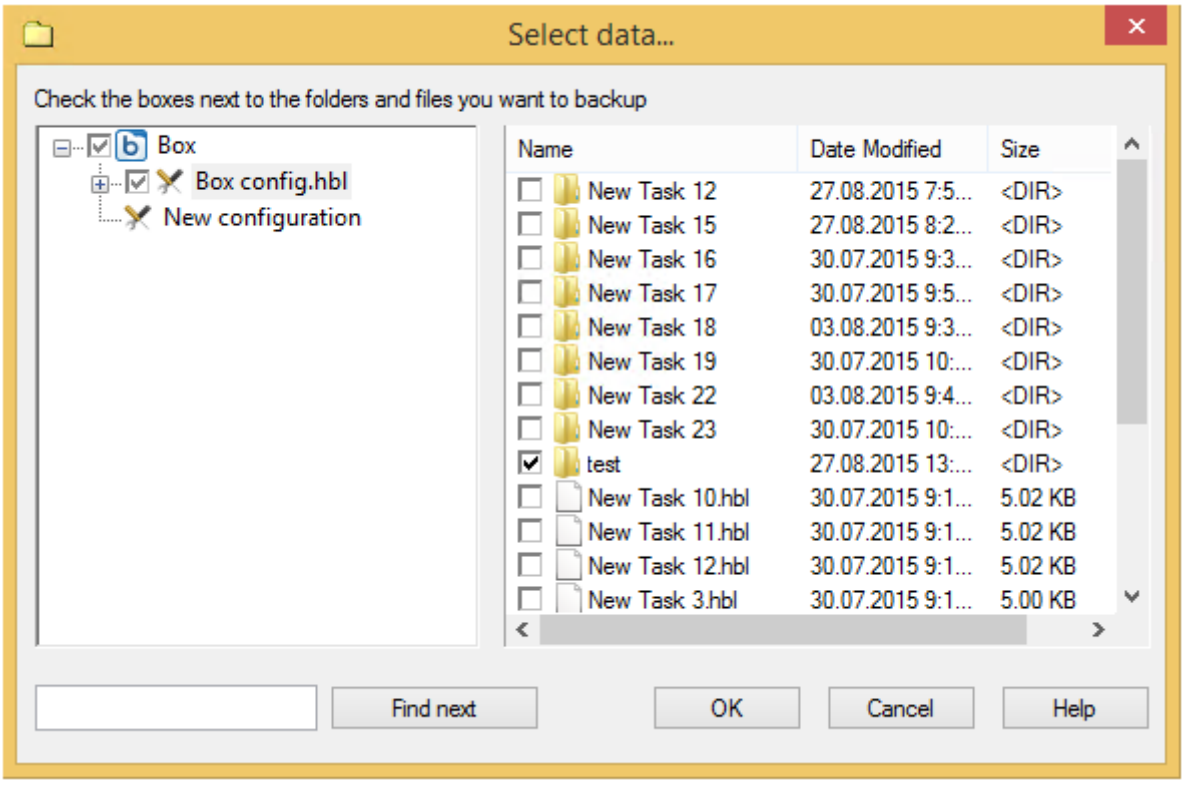
3. Choose a "**New configuration**…" item to open a Box account dialog.



Note: You can create a new Box account at this step, by clicking on the appropriate button in this dialog.

4. Enter your Box.com account email and password into the appropriate fields. Press "OK".

5. You will see the account name you entered in the Box feature window. Click twice on it.



6. Select data you need to back up from your Box, by marking checkboxes on these data.

7. Press "**OK**" to return to the data selection step. Continue to make a new task as usual.

Using a Box Account as a Backup Storage

The overall sequence of actions is quite same as for backing up from a Box account, although you must specify a Box feature as the data destination on the Step 3. All other actions (new configuration, selecting an account) are unchanged from a previous instruction.

You can even copy one Box account content to another, by using the Box feature with different accounts specified on both Step 2 and Step 3.

Box Feature and WebDAV Interface

To access a Box account, you can use a WebDAV feature, but this way, as any other "generic" approach, is somewhat slower and more difficult to configure an access properly than a specialized **Box** feature. We are recommending using always a dedicated **Box** option to access your Box accounts.

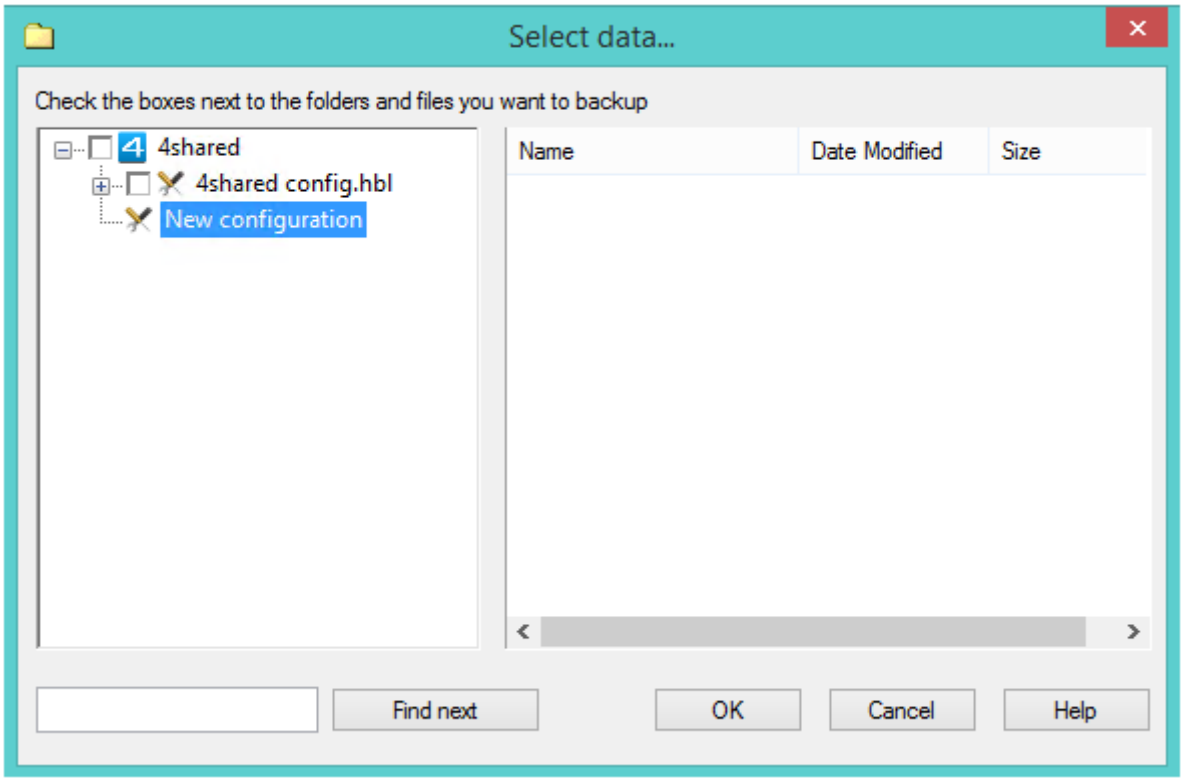
4shared

The **4shared** instrument provides Handy Backup an access to accounts on a 4shared.com service, a popular file-sharing cloud tool.

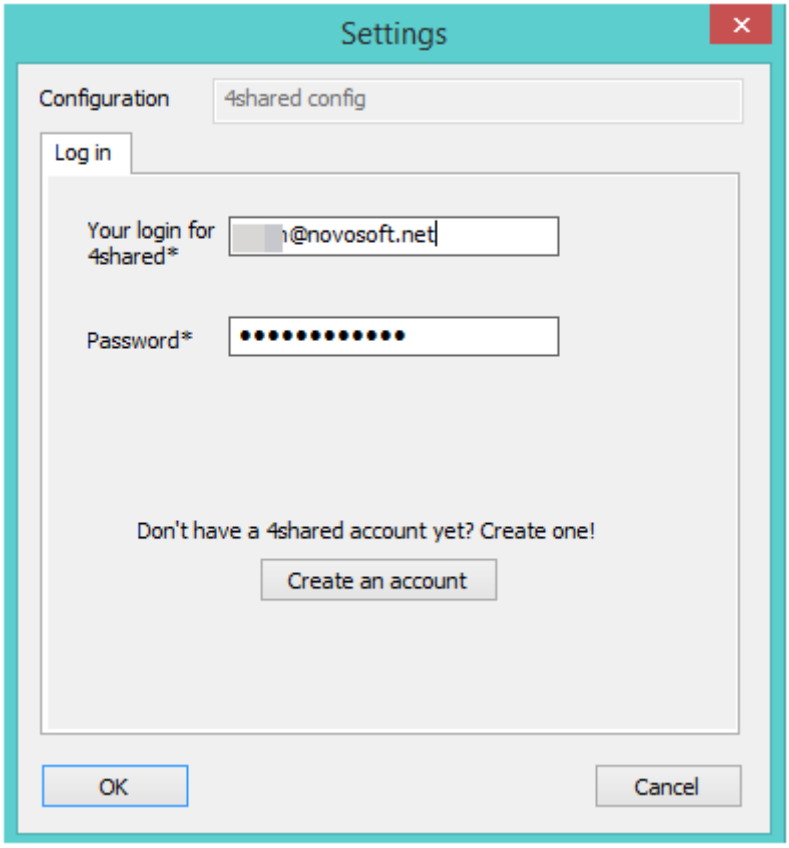
Making 4shared.com Backups

To use a 4shared account as a source, please use the following sequence:

1. Create a new backup task.
2. On a **Step 2**, select the “4shared” feature on the left panel. You will see a new window.

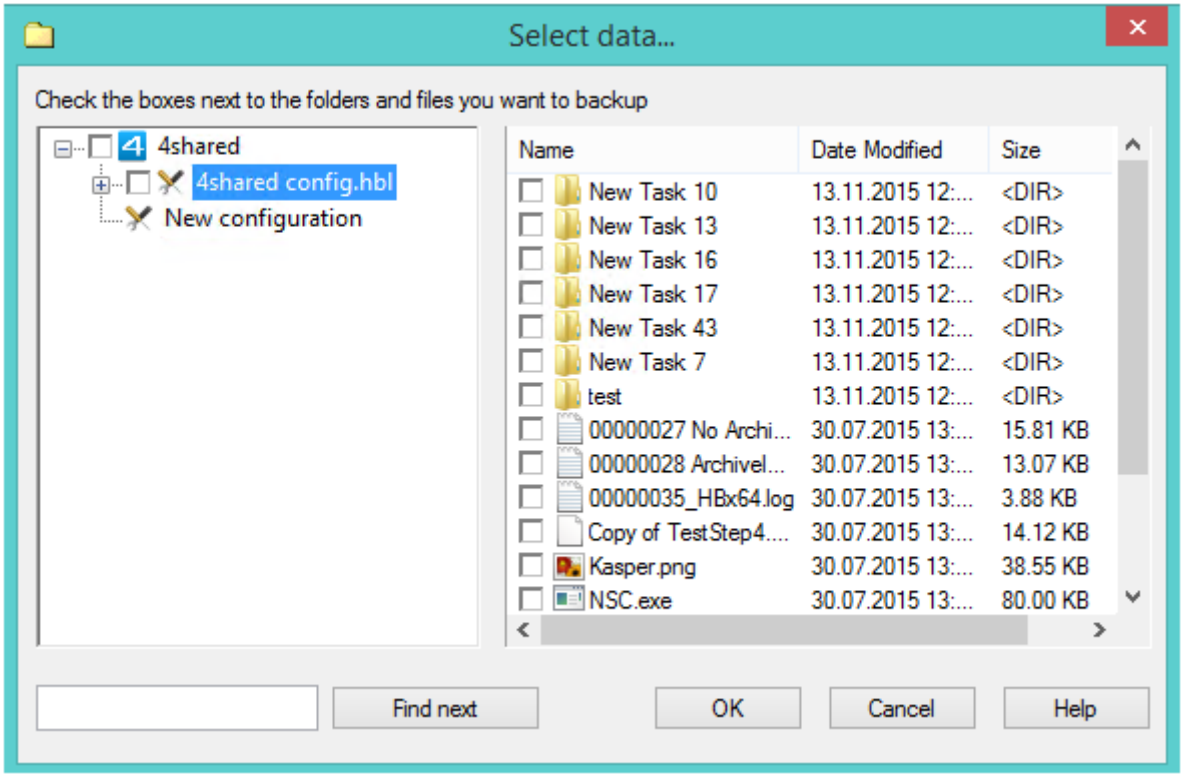


3. Choose a “New configuration…” item to open a dialog providing an access for a 4shared.



Note: At this point, by clicking on the appropriate button in this dialog you can create a new 4shared account.

4. Enter your 4shared.com account data into the provided fields, then press “OK”.
5. Click twice on a new string in the 4shared tool window, containing your account name.



6. Select data you need to save from 4shared by marking these data with checkboxes.
7. Press “OK” to return to the data selection and proceed to make a new task as usual.

Using a 4shared Service as a Data Destination

You can imply the steps described above for making a 4shared.com account your data destination, specifying all the information described before on a Step 3 instead of a Step 2. Connecting to an account is quite a same procedure than for choosing 4shared account as a data source.

Online Plug-In

Online Backup is a configurable plug-in that allows working with our proprietary cloud storage service **HBDrive**. To learn more about the service, please refer to Handy Backup Drive.

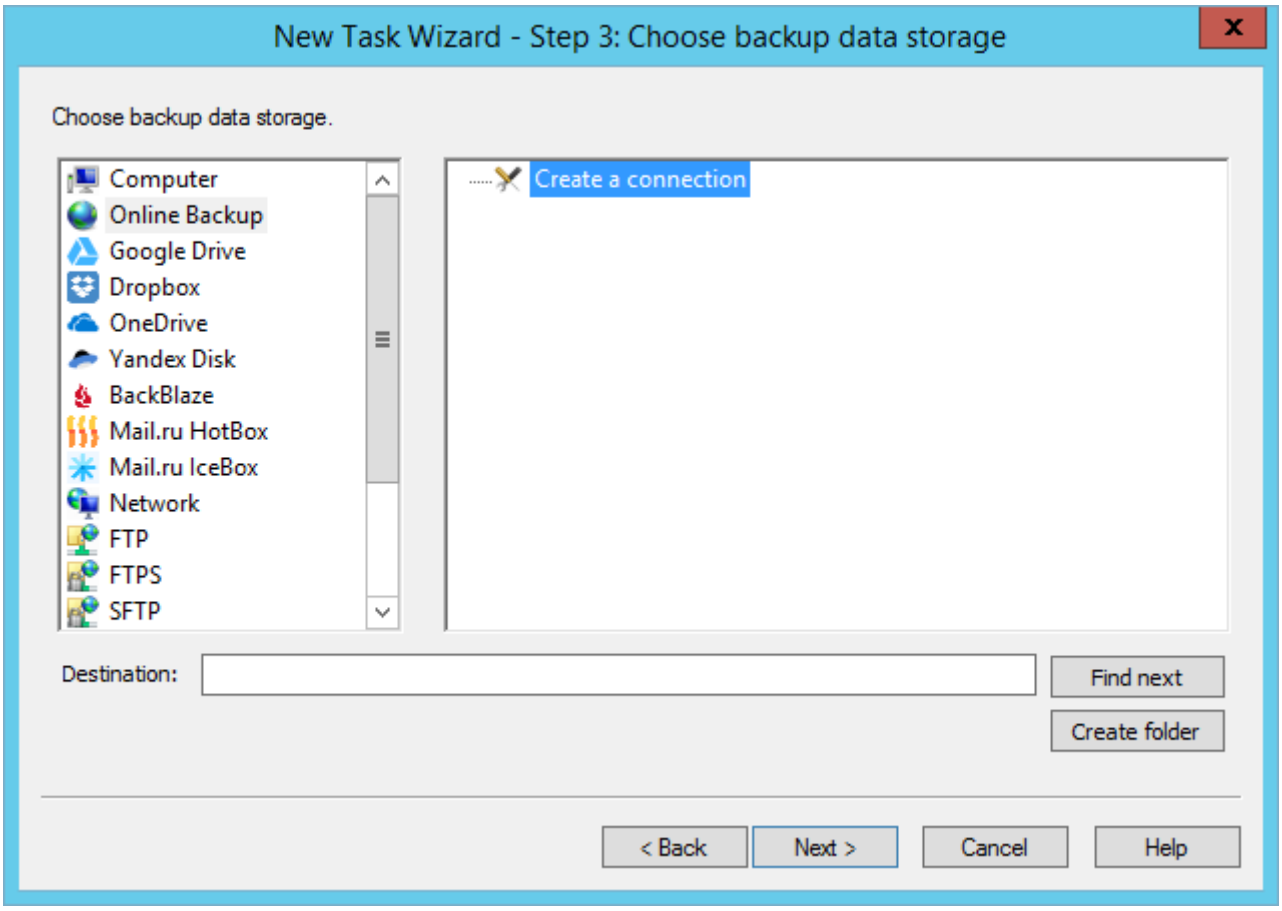
The plug-in is primarily designed to be used as a destination, but can also be used as a source of data. File system provided by the plug-in is organized as follows:

- **Top-level folder** is a plug-in configuration.
- **Folders** are common folders. They have no attributes.
- **Files** are common files. Supported attributes include file size and modification time.

To learn about files, folders and attributes provided by plug-ins, please refer to Plug-in File Systems.

Using Plug-in as Destination

In most cases, the Online plug-in is used as a storage destination for backups (see Select Destination).

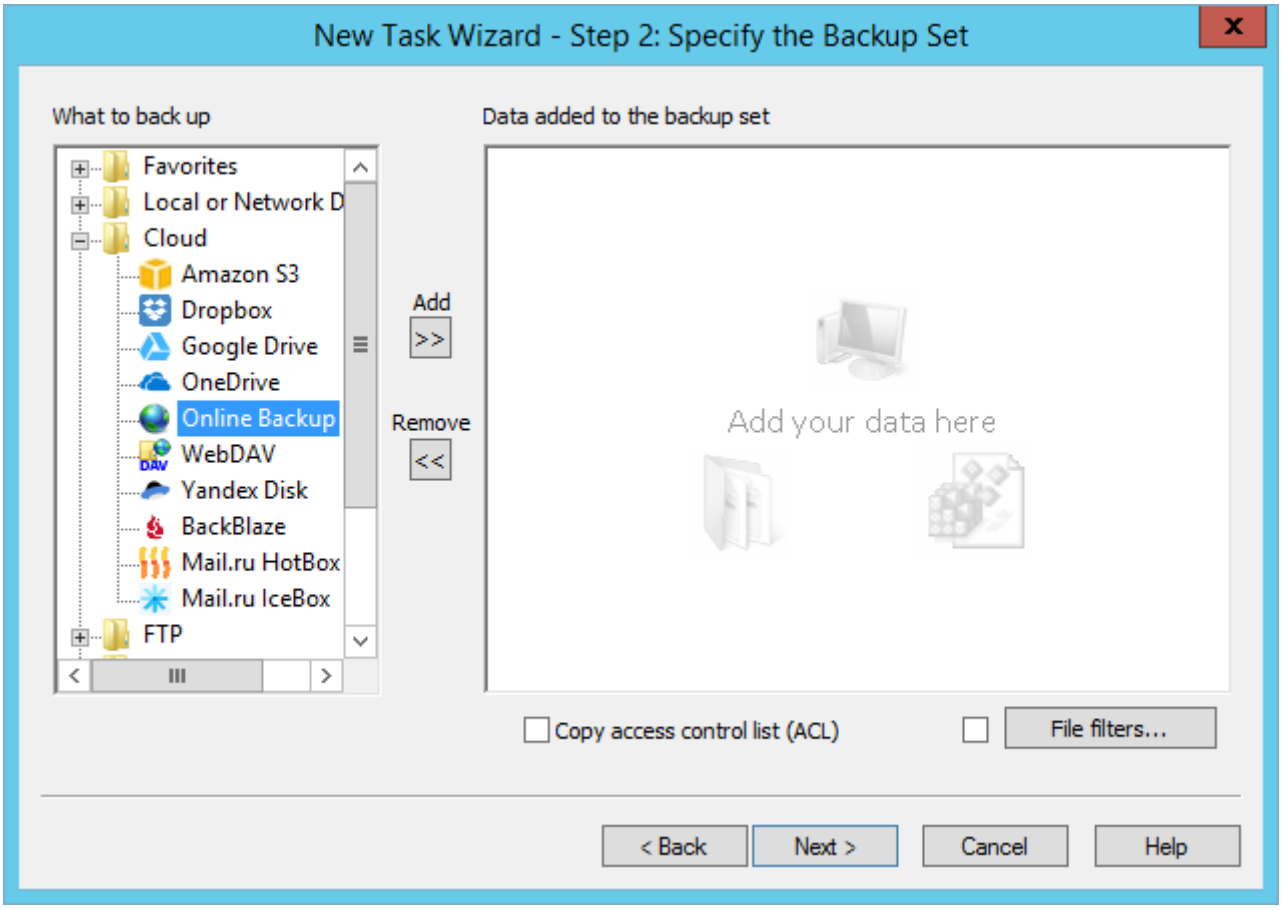


To select **Online Backup** as a destination for your data, follow these steps:

1. In the **Storage Destinations** pane, select **Online Backup**. The list of configurations appears in the **Folder Selection** pane.
2. If you don't have a configuration for a HBDrive account, click **Create a connection**. The **Settings**dialog will appear.
   - Fill in the fields in the **Settings** dialog, and then click **OK**. For details, refer to Plug-in Configurations.
3. In the **Folder Selection** pane, browse for a target folder on HBDrive. When you expand a configuration, the program connects to the HBDrive account specified in it, and then displays contents of the respective path. Since you don't have direct access to the HBDrive file system, it is recommended that you always back up to the root folder, i.e. select configuration as a target for backups.

Using Plug-in as Data Source

Handy Backup allows making snapshots from HBdrive backup accounts. To do it, select the Online Backup plug-in from the Cloud group on the Step 2 of a New Task Wizard, and click the ">>" button.



Make a connection with an existing Online Backup account if you need. To do it, double-click the "Create a connection…" string at the plug-in window.

To learn about configurations of the plug-in, refer to the next chapter, Plug-in Configurations.

Restoring Data from Online Plug-in

To make a restoration task, select this task type on the Step 1. On the next step, find and select the "Online Backup" as storage. Browse for the folder on your account containing a particular backup, and select the file backup.hbi, which contains all necessary backup data. Go to the next step.

Restoring from HBDrive requires no one specific option to do. Just create a restoration task as usual, according to this User Manual.

Online Plug-in Configurations

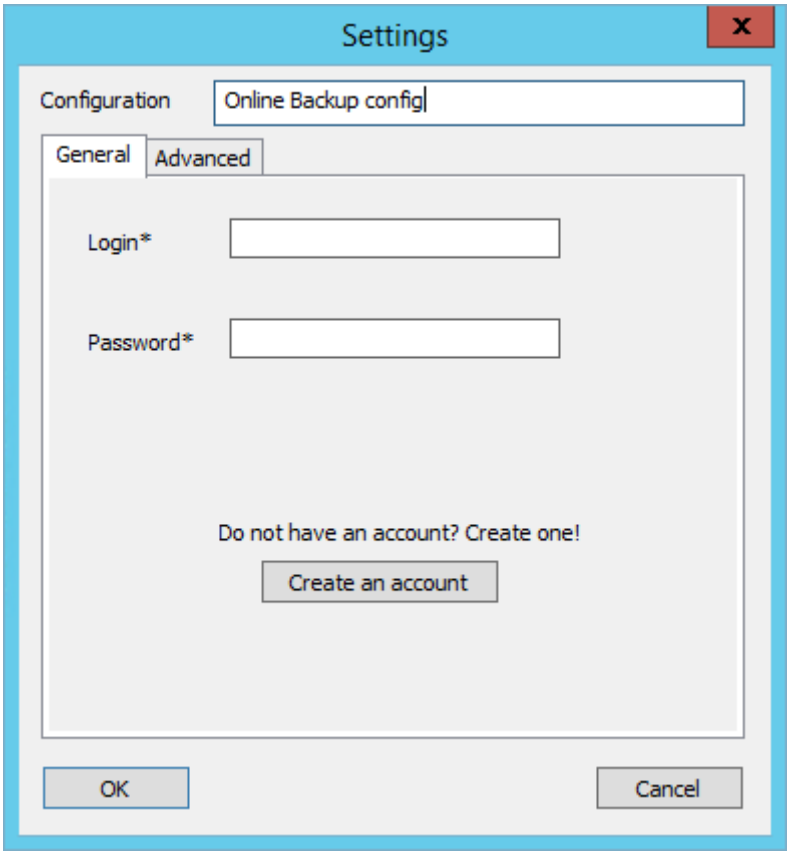
To backup, restore, or synchronize data located at HBDrive, you need to create a configuration for the **Online Backup** plug-in. If you want to learn about HBDrive and creating an account, please refer to Handy Backup Drive (Online Storage Service).

The configuration dialog consists of three tabs: **General** and **Advanced**.

Online Configuration: General

In a top field, enter a unique name for your particular online backup configuration.

On the **General** tab you can set up basic connection parameters to HBDrive.



These are the two self-explained fields:

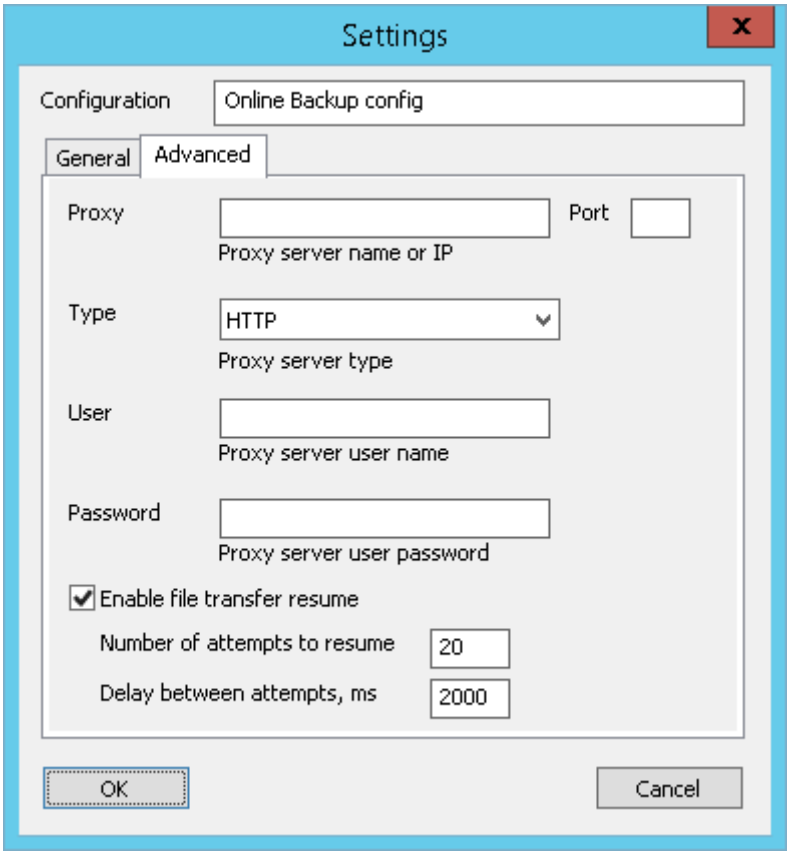
- **User***
- **Password***

*These are required fields!

The "**Create an account**" button opens a browser window with a HBdrive registering page. You can register on a HBdrive manually by using the following URL: www.hbdrive.com

Online Configuration: Advanced settings

With the Advanced tab you can set up advanced parameters of HBDrive connection, such as proxy data. Please note that plug-in proxy settings override the common proxy parameters of a program (please refer to the Proxy Settings article of this manual).



These are the seven fields on this tab:

- **Proxy** - the proxy server name
- **Port** - the port number utilized
- **Type** - HTTP, SOCKS4 or SOCKS5
- **User** - username for a proxy
- **Password** - user password for a proxy

If your proxy server doesn't require authorization, leave **User** and **Password** fields empty.

The two other fields handle the plug-in reaction over the unexpected problems encountered.

- **Enable file transfer resume** – if there is a connection problem, the program will automatically reconnect to the HBDrive servers and resume the work.
    - **Number of attempts to resume**
    - **Delay between attempts, ms**

To learn more about HBDrive, please refer to HBDrive (Online Storage Service).

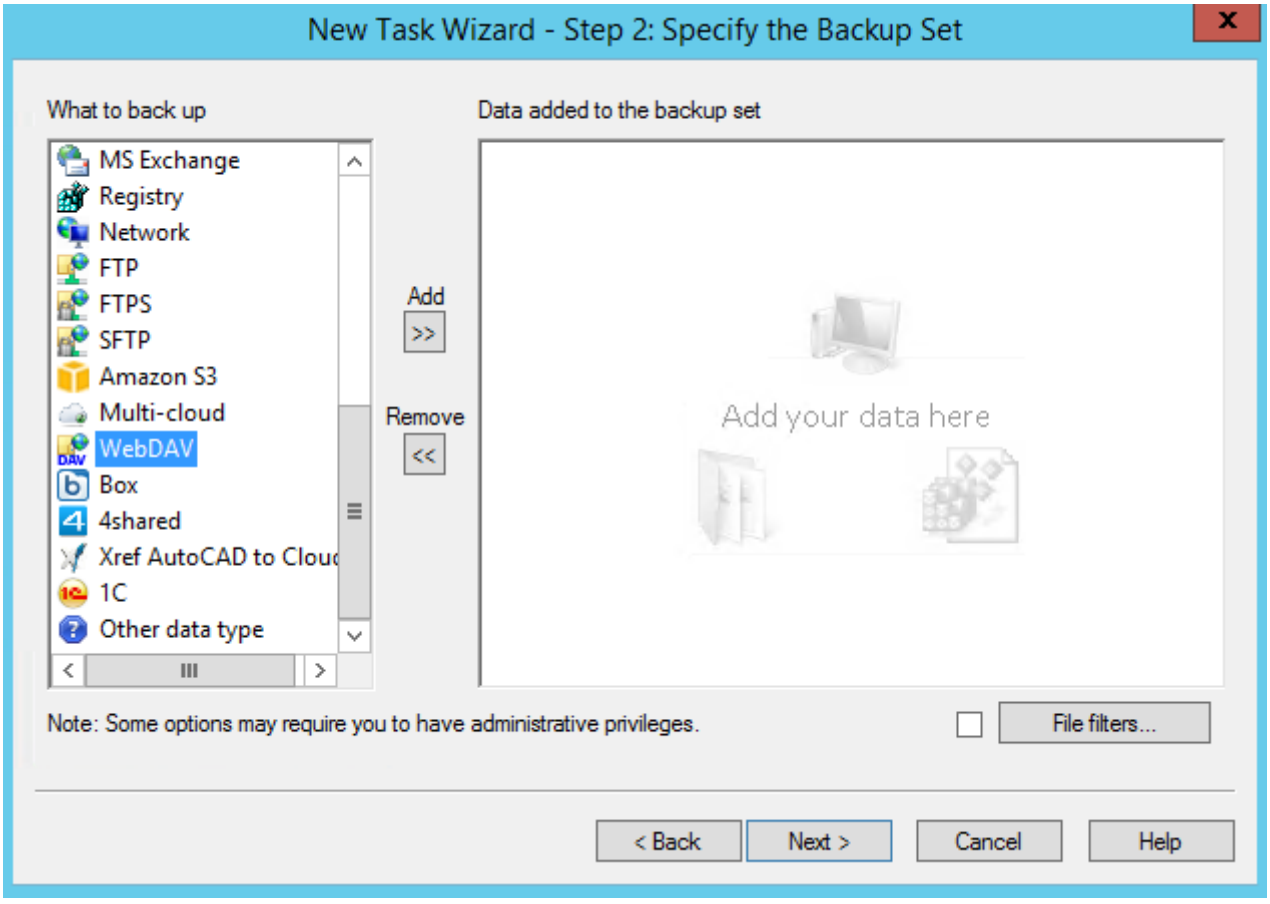
WebDAV

WebDAV (Web-based Distributed Authoring and Versioning) - a special secure network-level protocol that runs over the HTTP. WebDAV provides working with online storages such as OneDrive, Google Drive, Dropbox, Box.com and others.

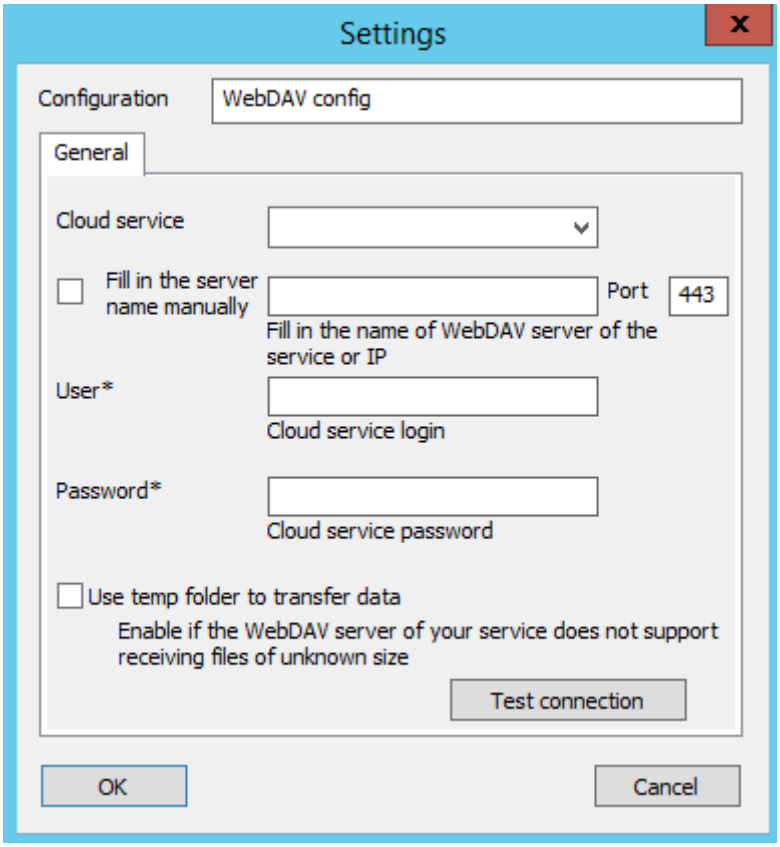
Prerequisites

WebDAV can perform basic and advanced file object-operations on a remote server, and also has build-in support of simultaneous-users working. This allows you to use WebDAV for backups in the rather same way as the local computer. You can make copies in two directions: backup from WebDAV share and backup to WebDAV.

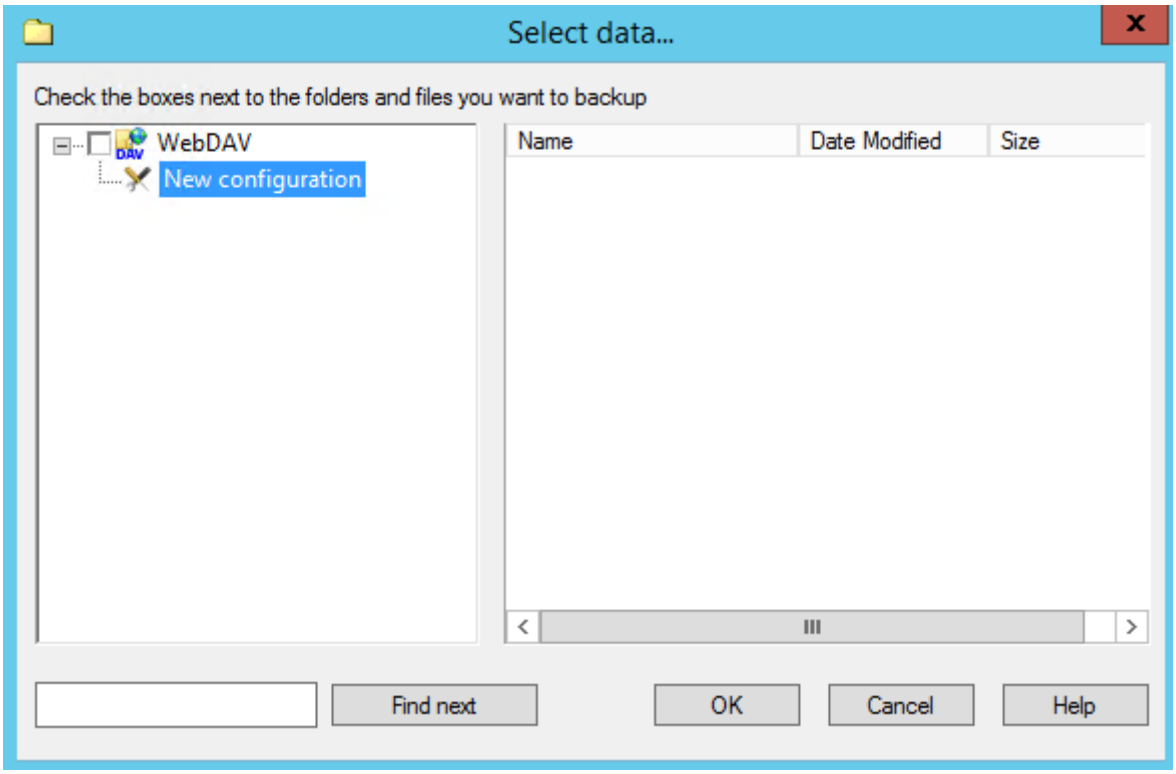
To make a **backup via WebDAV**, go to Step 2 of New Task Wizard and select **WebDAV** options.



Select **New Configuration on Step 3 of New Task Wizard**, then click OK.



Configure the connection via WebDav.



To configure the connection do the following:

1. **Select the cloud service** from the list or fill in the server name of WebDav manually. It's possible to enter the name or IP address.
2. **Set up the port**. Default port for WebDav is 443 (over SSL) or 80.
3. **Enter User and Password**.

Check "Use temp folder to transfer data" option if server-side of your service does not support receiving files of undetermined size.

Now you can use WebDav for backing up your folders and files.

FTP, SFTP and FTPS Plug-ins

The FTP plug-in, and its secured SFTP and FTPS counterparts, transfers files to a remote server using the FTP (File Transfer Protocol) and a SSH. A user can utilize these configurable plug-ins for saving data from an FTP server, to an FTP server, or for restoring data from a FTP vault.

Plug-in File System

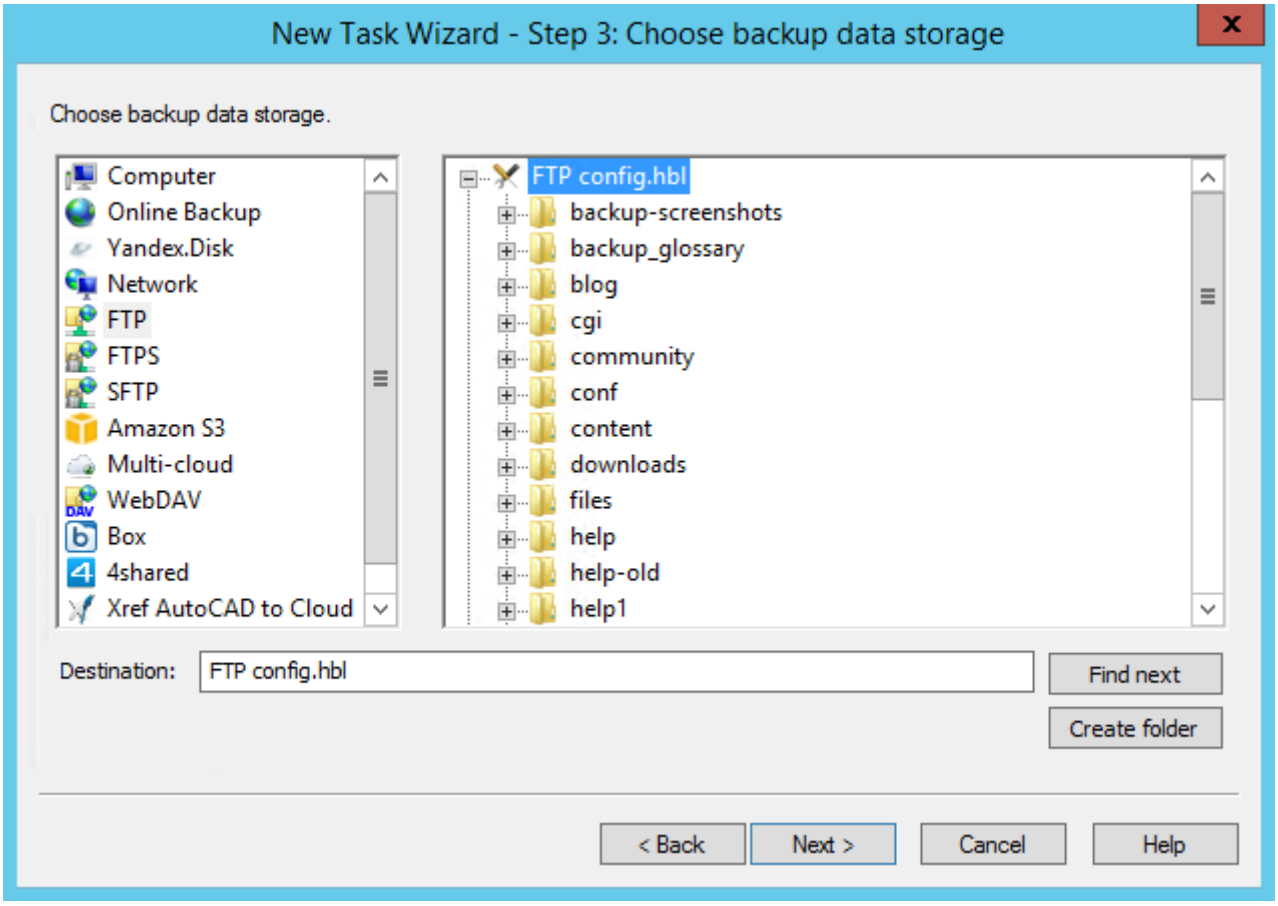
The file system provided by the plug-in is organized as follows:

- **Top-level folders** are FTP/SFTP/FSTP configurations
- **Folders** correspond to common folders on the FTP/SFTP/FTPS server. They have no attributes.
- **Files** correspond to common files on the FTP, SFTP or FTPS server. Supported attributes: file size, modification time.

To learn about virtual file systems and file and folder attributes, please see Plug-in File Systems.

Using FTP/SFTP/FTPS Plug-in as Destination

In most cases, the FTP/SFTP/FTPS plug-in is used as a target destination for backups.



Destination selection is made on the third step of the New Task Wizard (see Select Destination for more details). To select an FTP, SFTP or FTPS as a target destination, follow these steps:

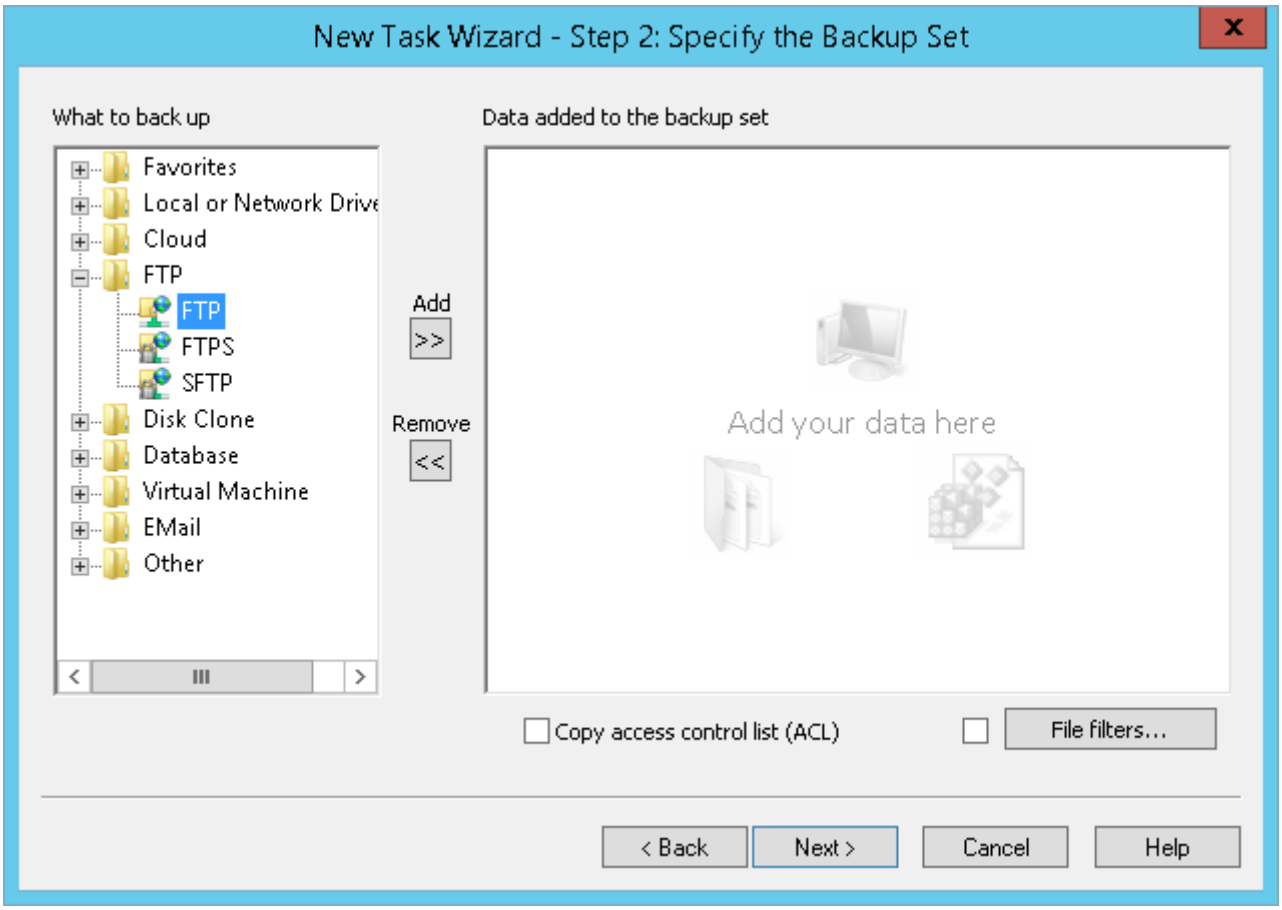
1. In the **Storage Destinations** pane to the left, select FTP, SFTP or FTPS. The list of configurations appears in the **Folder Selection** pane to the right.
2. If you don't have a configuration for your FTP/SFTP/FTPS server, click **New configuration**. The **Settings** dialog will appear.
    - In the **Settings** dialog, fill in the fields, and then click **OK**. Learn more about FTP configuration, SFTP configuration or FTPS configuration.
3. In the **Folder Selection** pane, expand a top-level folder (configuration) to make the program connect to the respective FTP/SFTP/FTPS server, and then browse for a target folder.
4. Select a folder of the FTP, SFTP or FTPS server, and then click **Next**.

All next steps are common for all backup tasks (not specific to the plug-in). Learn more about Backup Task.

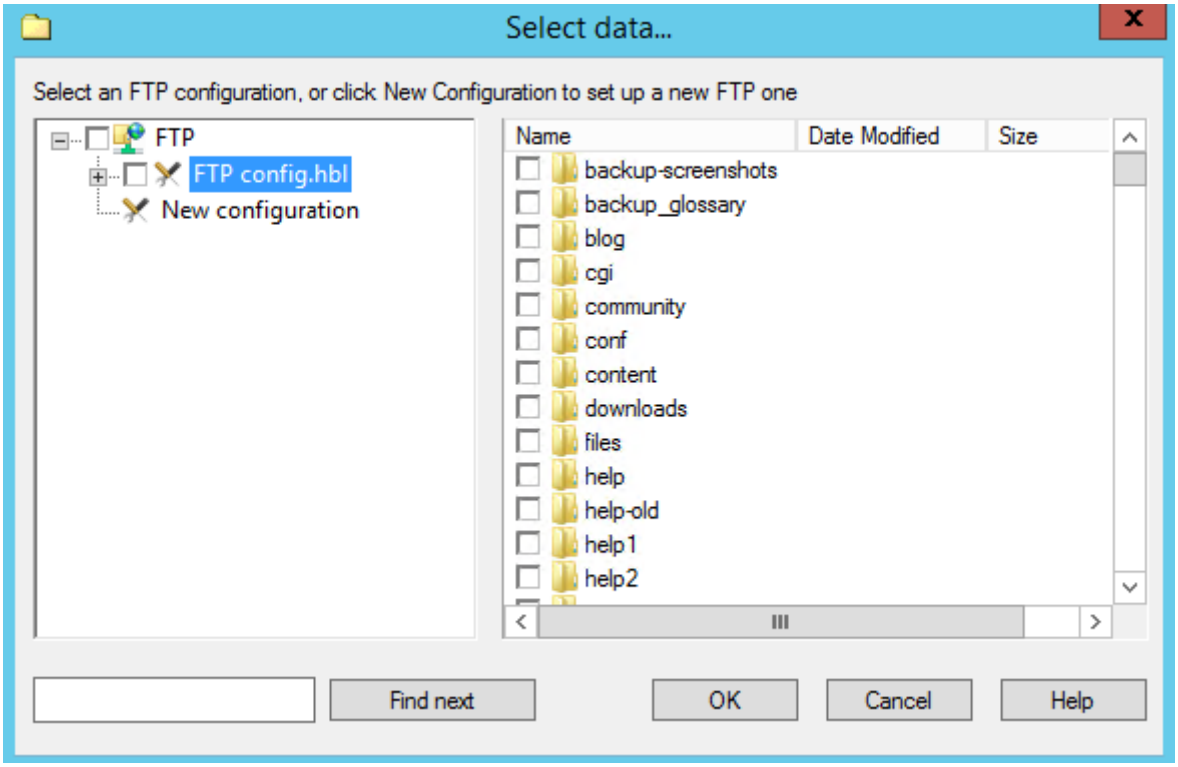
Using FTP/SFTP/FTPS Plug-ins as Data Sources

FTP, **SFTP** and **FTPS** can be used not only to store backups, but also as data sources. To back up FTP/SFTP/FTPS files and folders, please follow these steps:

1. Open the New Task Wizard.
2. Select **Backup Task**, and then click **Next**.



3. In the **Data Sources** pane to the left, select FTP, **SFTP or FTPS in the FTP group,** and then click **Add**. The **Select data...** dialog will open.
4. If you don't yet have a configuration for the FTP/SFTP/FTPS server you want to back up, click **Create a connection**. The **Settings** dialog will appear.
   - In the **Settings** dialog, fill in server and authorization parameters, and then click **OK**. Learn more about FTP configuration, SFTP configuration or FTPS configuration.
5. Check the boxes next to FTP/SFTP/FTPS files and folders that you want to back up.



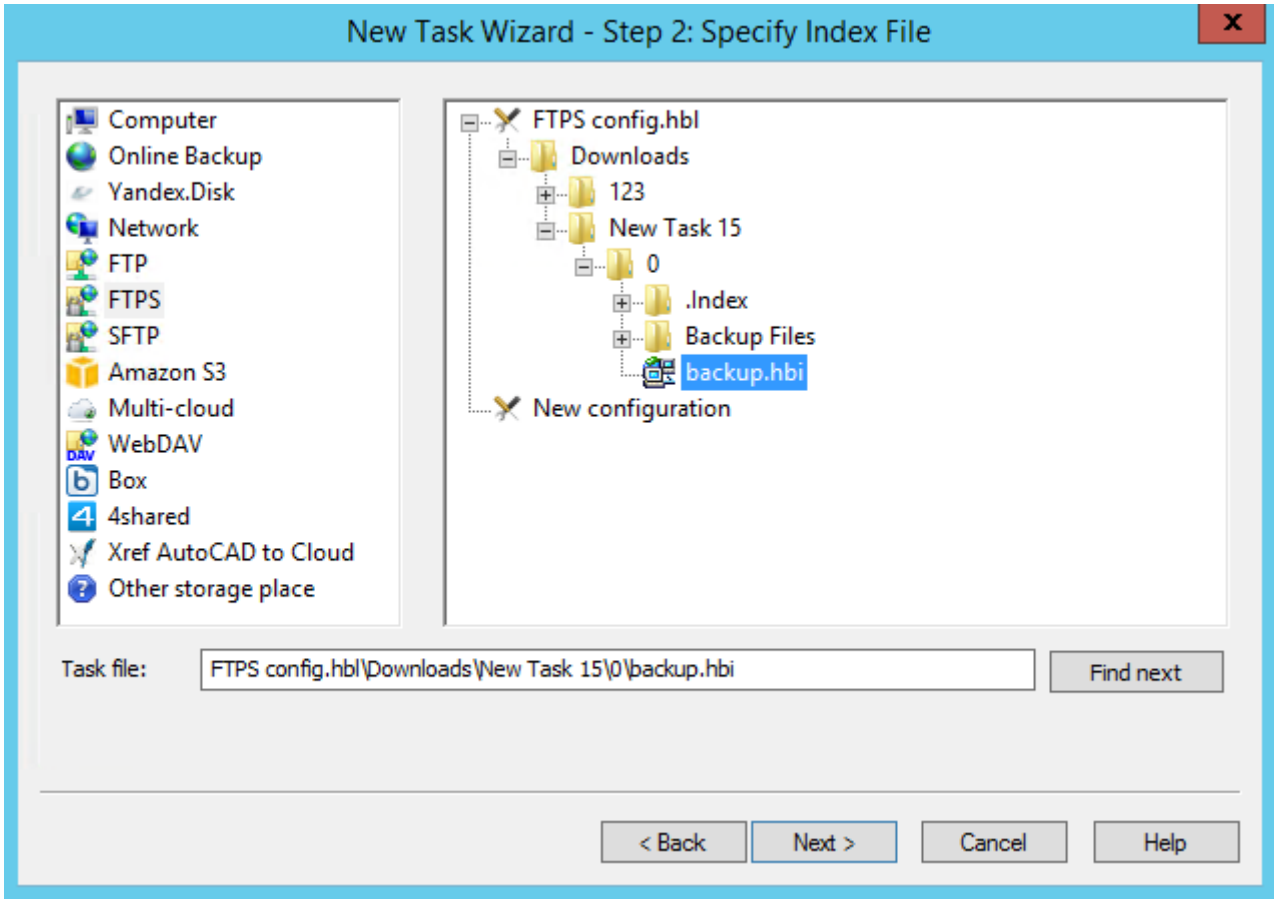
6. When finished selection, click OK. Selected data appears in the **Backup Set** pane of the New Task Wizard.

Next steps of New Task Wizard are common for all backup tasks, and are not specific to the plug-in. Please see Backup Task for more details.

Restoring Copies from FTP, SFTP or FTPS Server

To restore a backup stored on an FTP/SFTP/FTPS server, follow these steps:

1. Open the New Task Wizard.
2. Select **Restore task**, and then click **Next**.
3. In the **Storage Destinations** pane to the left, select **FTP, SFTP or FTPS**. The list of your FTP configurations will appear in the **Index File Selection** pane to the right.
4. If you don't have a configuration for the particular FTP/SFTP/FTPS server where your backups are located, click **New configuration**. The **Settings** dialog appears.
   - In the **Settings** dialog, specify server address, user and password, and then click **OK**. Learn more about FTP configuration, SFTP configuration or FTPS configuration.
5. Browse for the index file (**backup.hbi**) located in the destination folder on your FTP, SFTP server. Select it, and then click **Next**.



In the next steps of New Task Wizard, you need to verify restoration details, specify different options, and name the task. These steps are common for all restore tasks, and are not specific to the plug-in. For more details, see Restore Task.

FTP Plug-in Configurations

To perform backup, restoration, or synchronization with the **FTP** plug-in, you need to create a configuration defining how to connect to an FTP server. The configuration dialog consists of three tabs: **General**, **Proxy** and **Advanced**.

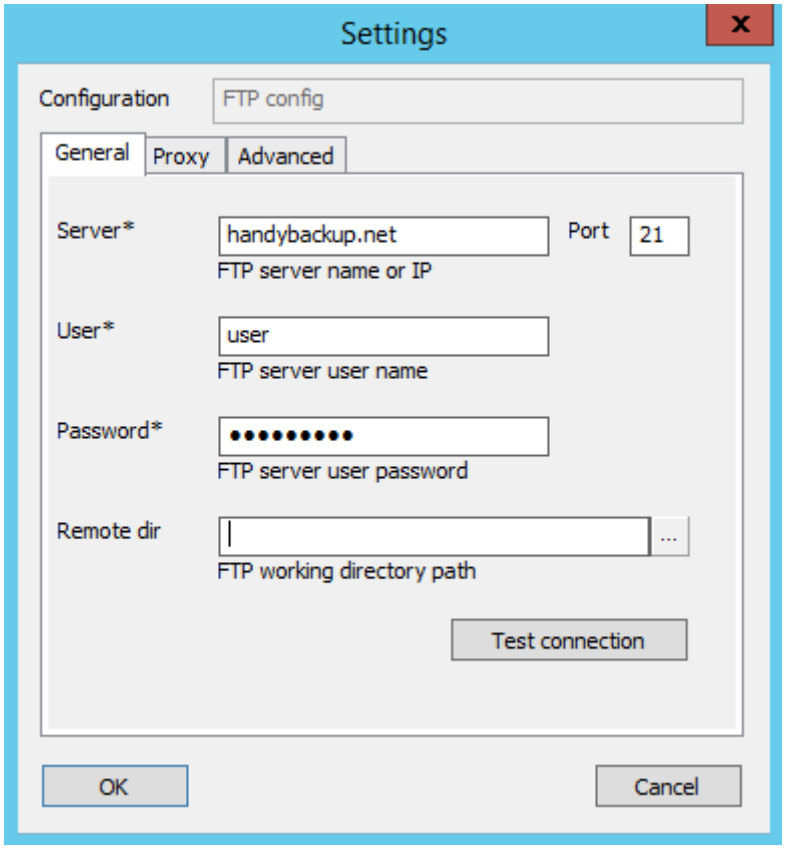
FTP Configuration: General

Under the **General** tab, you need to specify server address, authorization parameters and, optionally, remote FTP folder.

There are five fields, most of which don't require additional explanation:

- **Server**
- **Port**
- **User**
- **Password**

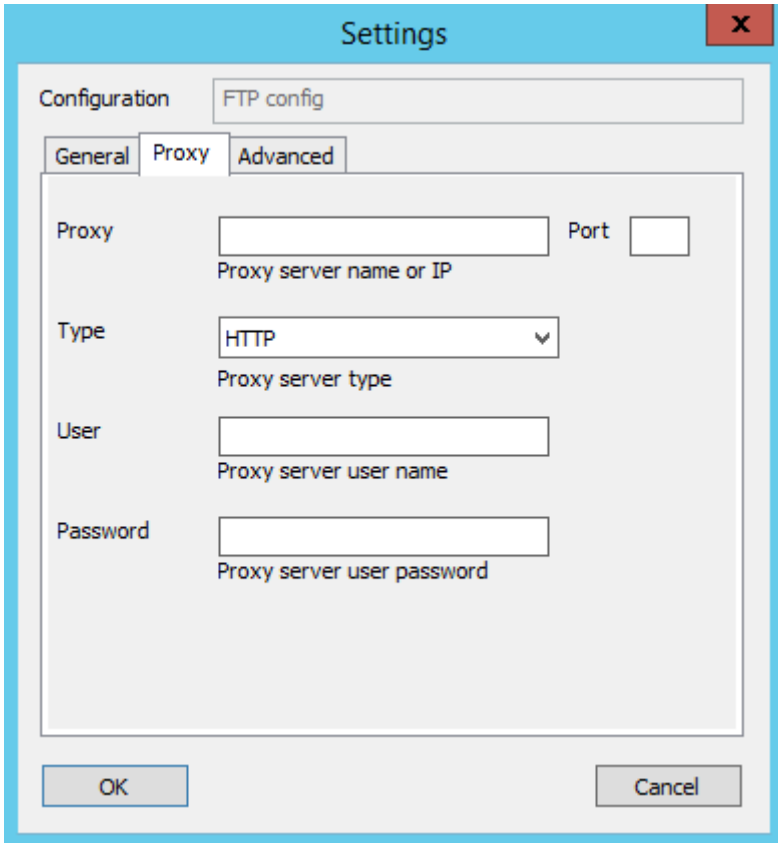
- **Remote dir.** If you leave this field empty, the FTP configuration (top-level folder in plug-in file system) will act as a root folder provided by the FTP server for the given user. To select a different root folder, click the **Select Folder** button and browse for it.



The only required fields are **Server**, **User** and **Password**. To test that everything is filled correctly, click the **Test connection** button.

FTP Configuration: Proxy

Under the **Proxy** tab, you can specify settings of a proxy server. Proxy settings in configuration override general proxy settings set in the program (see Proxy Settings for more details).



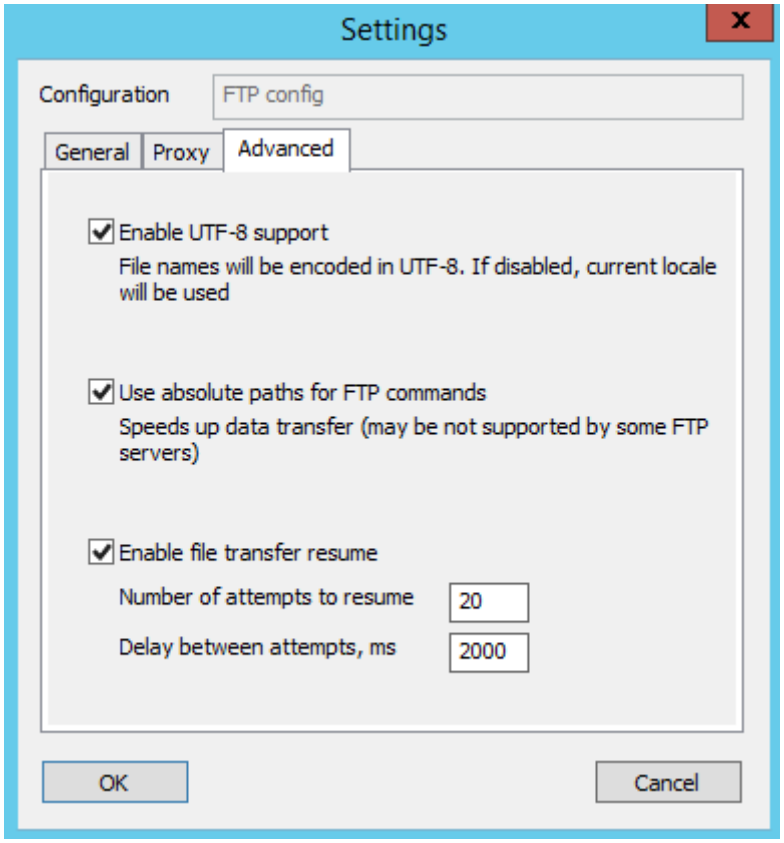
There are five fields:

- **Proxy**
- **Port**
- **Type** - HTTP, SOCKS4 or SOCKS5
- **User**
- **Password**

If your proxy server doesn't require authorization, leave **User** and **Password** empty.

FTP Configuration: Advanced

Under the **Advanced** tab, you can change how the plug-in must interact with the FTP server specified under the **General** tab. The default settings should work well for most servers, but there may be situations when you want to change them.



There are the four main options:

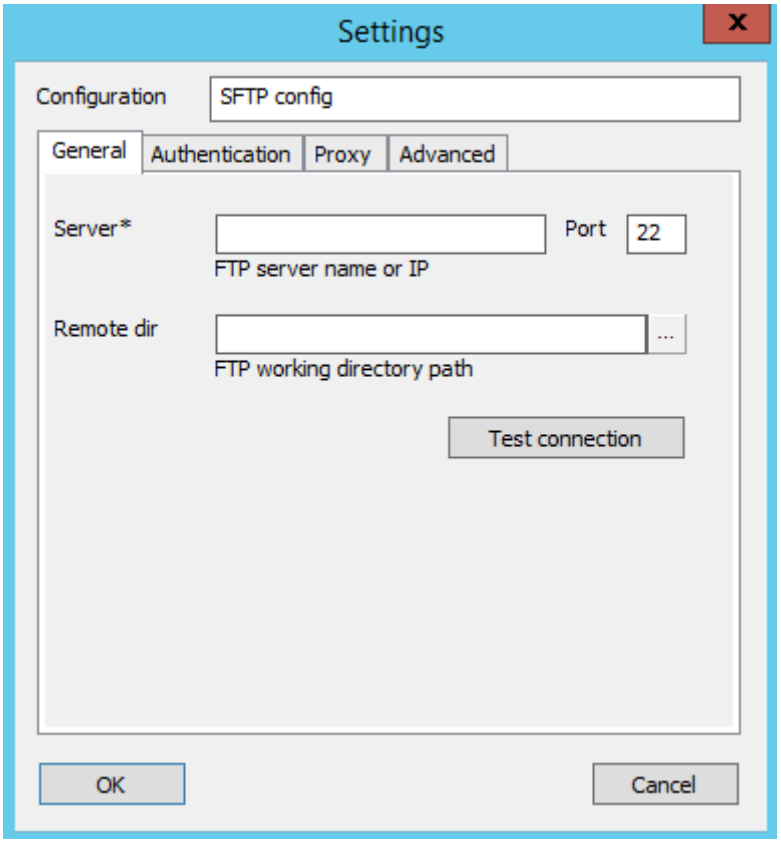
- **Enable UTF-8 support**
- **Use absolute paths for FTP commands.** If the default settings don't seem to work for your FTP server, uncheck this box and try again.
- **Use passive mode of FTP connection.** Again, if you failed to connect to your chosen your FTP server, uncheck this box and try to reconnect.
- **Enable file transfer resume.** The two fields after this option allow to select a pause between reconnection attempts and a quantity of these attempts, respectively.

SFTP Plug-in Configurations

To use the plug-in in your backup, restore or synchronize tasks, you need to create SFTP configurations. Basically, each configuration contains parameters determining how to work with a remote server. Configuration dialog consists of four tabs: **General**, **Authentication**, **Proxy** and **Advanced**.

Configuration: General

Under the **General** tab, you need to enter SFTP server address, and select a folder that the configuration will point to.



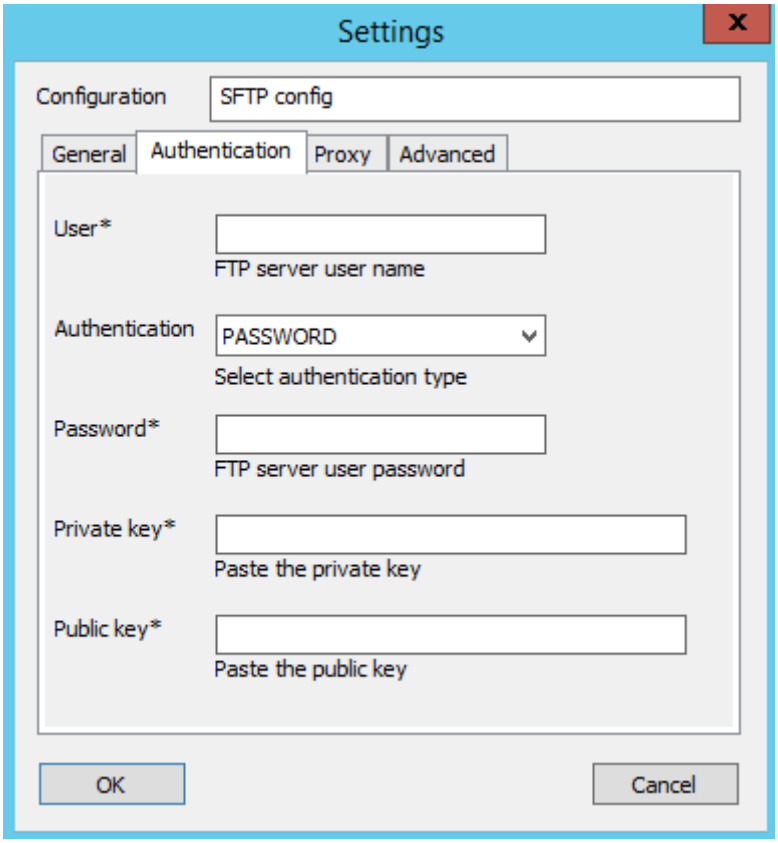
There are three fields:

- **Server**
- **Port**
- **Remote dir.** By default, the configuration will provide access to a root folder provided by the SFTP server. If you want, you can change it to an inner folder: in this field, you can enter a path to an SFTP directory, or click the **Select Folder** ... button to browse for it.

Click **Test connection** to test the connection. To enter login and password, go to the **Authentication** tab.

SFTP Configuration: Authentication

Under the **Authentication** tab, you need to specify how to connect to your SFTP server.



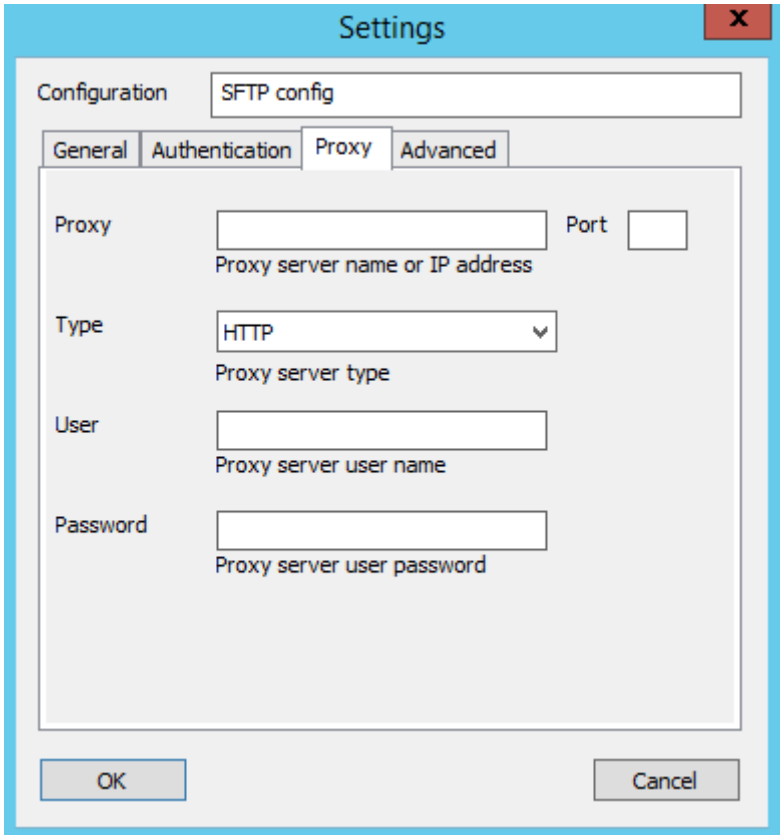
The fields are as follows:

- **User**
- **Authentication.** In this menu, you can select type of authentication: **PASSWORD** or **PUBLIC_KEY**.
- **Password**
- **Private key**
- **Public key**

After specifying authorization parameters, you can check connection under the **General** tab.

SFTP Configuration: Proxy

Under the **Proxy** tab, you can specify proxy settings. These settings override general proxy settings of the program (see Proxy Settings for more details).



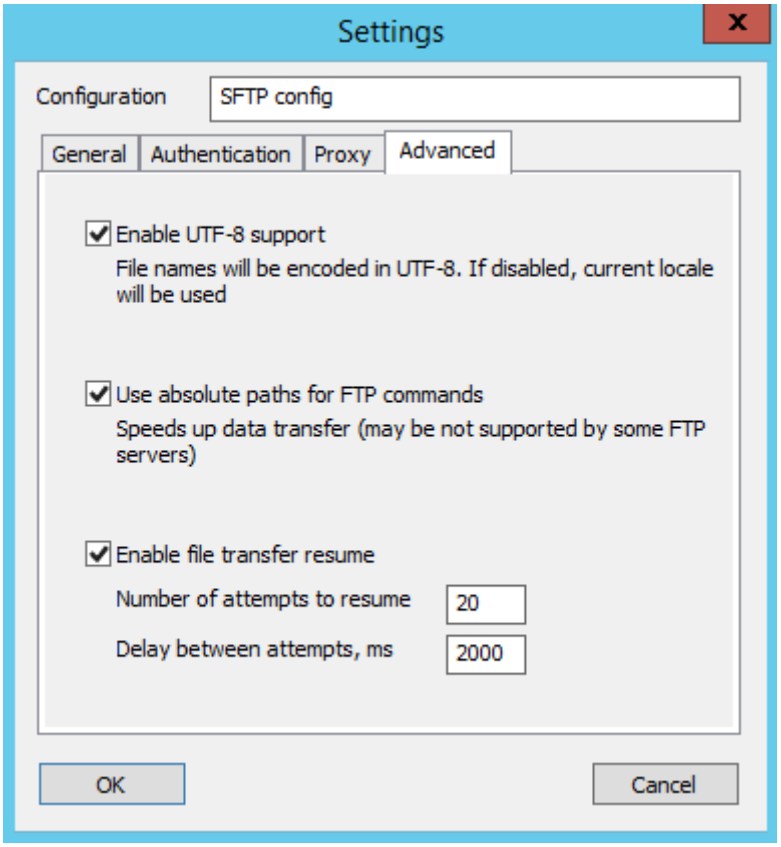
There are five options:

- **Proxy**
- **Port**
- **Type** – HTTP, SOCKS4 or SOCKS5
- **User**
- **Password**

If you are behind a proxy server that doesn't require authorization, leave **User** and **Password** empty.

SFTP Configuration: Advanced

Under the **Advanced** tab you can change some advanced specifics of the plug-in's work. For most SFTP servers, default settings should work well, but there are situations when you may want to change them.



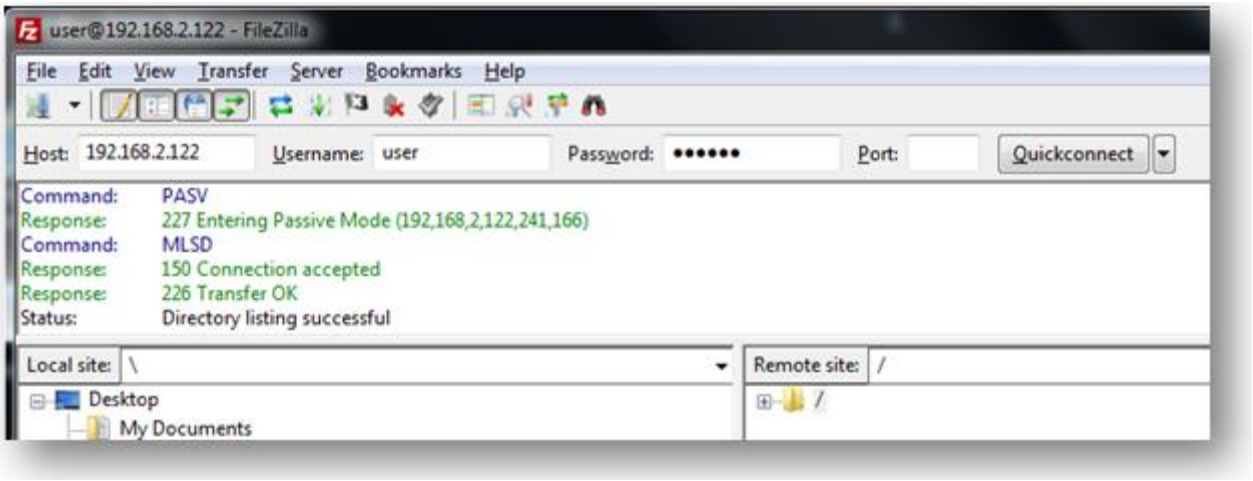
There are three options:

- **Enable UTF-8 support.**
- **Use absolute paths for FTP commands.** If changing SFTP folders doesn't seem to work correctly, uncheck this box.
- **Enable file transfer resume.**

Using Security Keys for SFTP

To back up data using SFTP, please follow the next instruction:

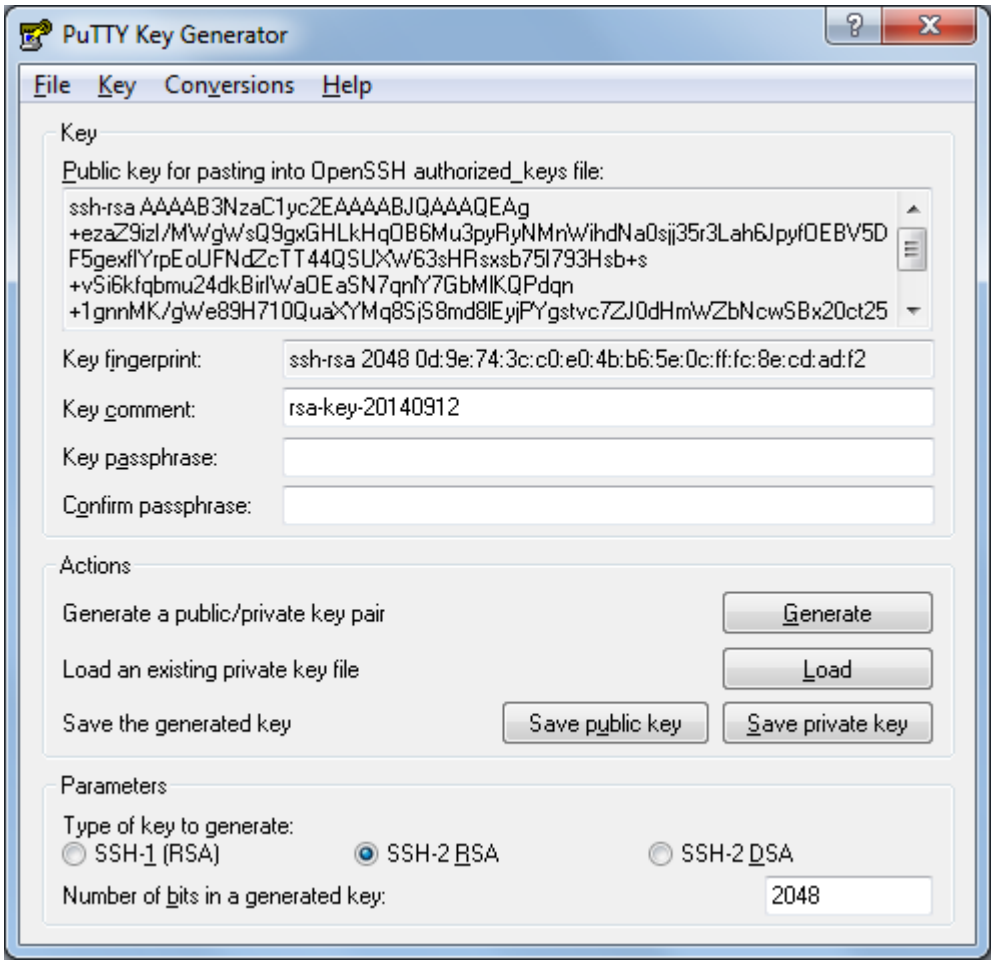
1. Check your SFTP connection using any external SFTP client. E.g. in FileZilla, enter the server IP address, your login and password, port number; then press "Quickconnect". If connection is successful, continue; else remove connection problems and try the test again.



2. Next you must authorize in Handy Backup using a pair of private and public keys. For example, you can use the following sequence with the PuTTYgen utility:

   a. Open **PuTTYgen** and press “Generate”. Move mouse cursor to and fro in the dedicated area; then save your new key using “Save private key” option.

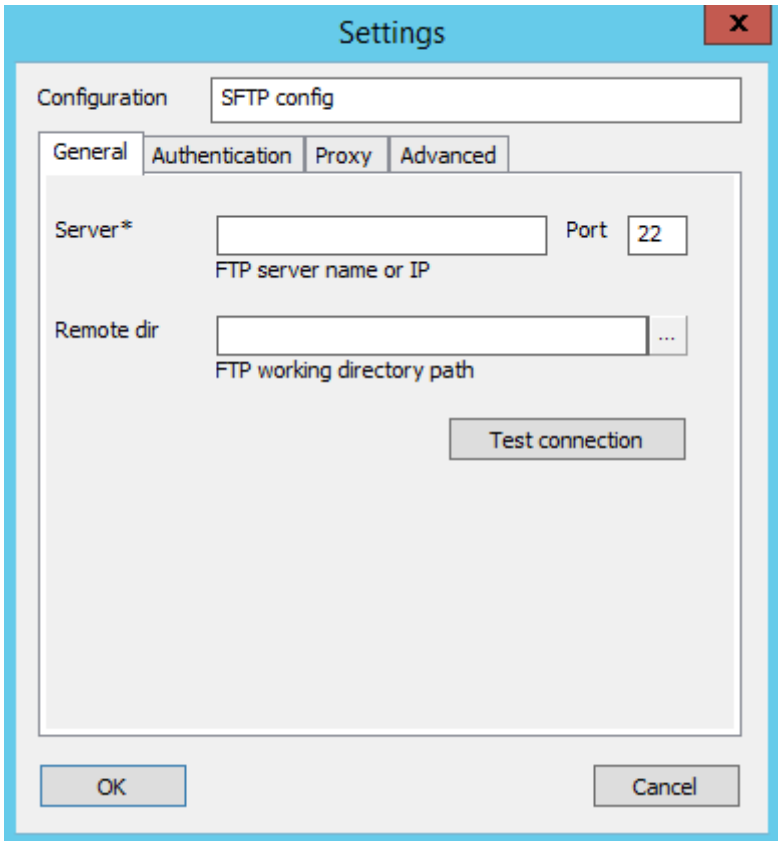
   b. Then select “Conversions”. Choose the “Import key” option (File -> Load private key). Copy the generated public key to the “Public key” field in Handy Backup SFTP configuration dialog.



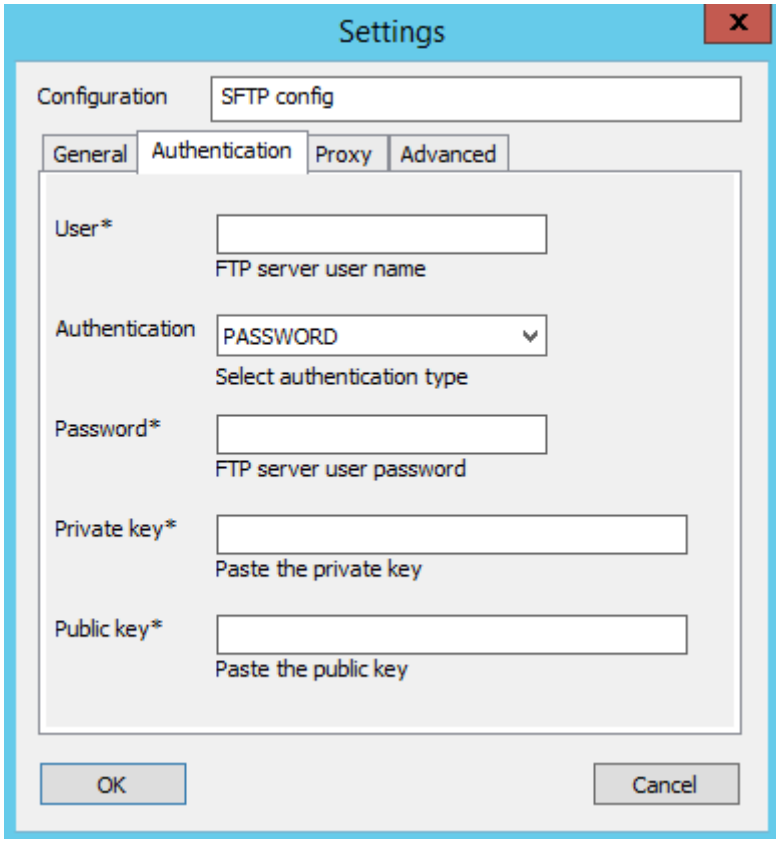
   c. Now choose “Export open SSH key”. Save the key to the file.

d. Open **Handy Backup** and select SFTP (as the data source or backup vault). Click “New configuration” to continue.

e. These are four tabs on the configuration window, called “General”, “Authentication”, “Proxy” and “Advanced”. Let us start with “General” tab. (Other tabs are described in previous chapter.)



f. On the “General” tab, enter the IP address of the SFTP server. Switch to the “Authentication” tab. Enter the user name.



g. Copy the public key generated by **PuTTYgen** to the “Public key” field in Handy Backup SFTP configuration dialog.

h. Open the key file using **Notepad** or any other text editor. Copy all the content to the “Private Key” field in **Handy Backup** SFTP configuration dialog.

i. Press the “Test connection” button to validate SFTP parameters.

Note: Different key-generation utilities uses different algorithms for creating private and public keys. If you are following all instructions but can’t connect the SFTP server using Handy Backup, you may use **PuTTYgen as default keygen utility**.

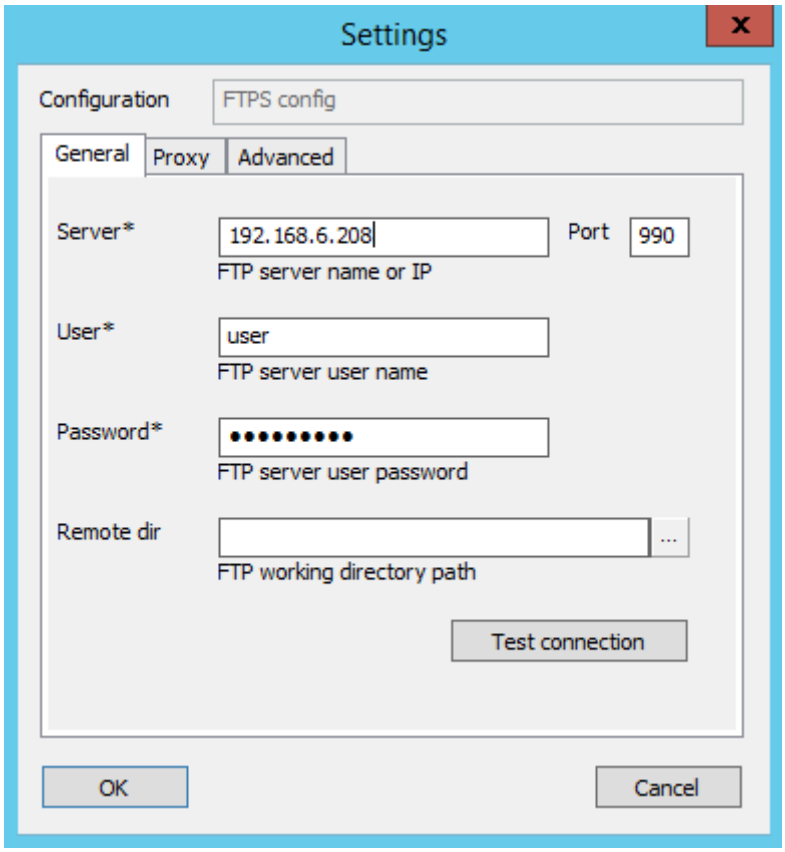
If you have troubles with SFTP connection please send us E-mail, informing us about your key generation software and about the results of using PuTTYgen, on support@handybackup.net

FTPS Plug-in Configurations

To create backup, restore, or synchronize tasks with the use of the **FTPS** plug-in, you need to create the respective configuration. Configuration defines how to connect and work with your FTPS server. The configuration dialog contains three tabs: **General**, **Proxy** and **Advanced**.

FTPS Configuration: General

Under the **General** tab, you need to specify FTPS server address, authorization parameters, and remote FTPS folder (optionally).



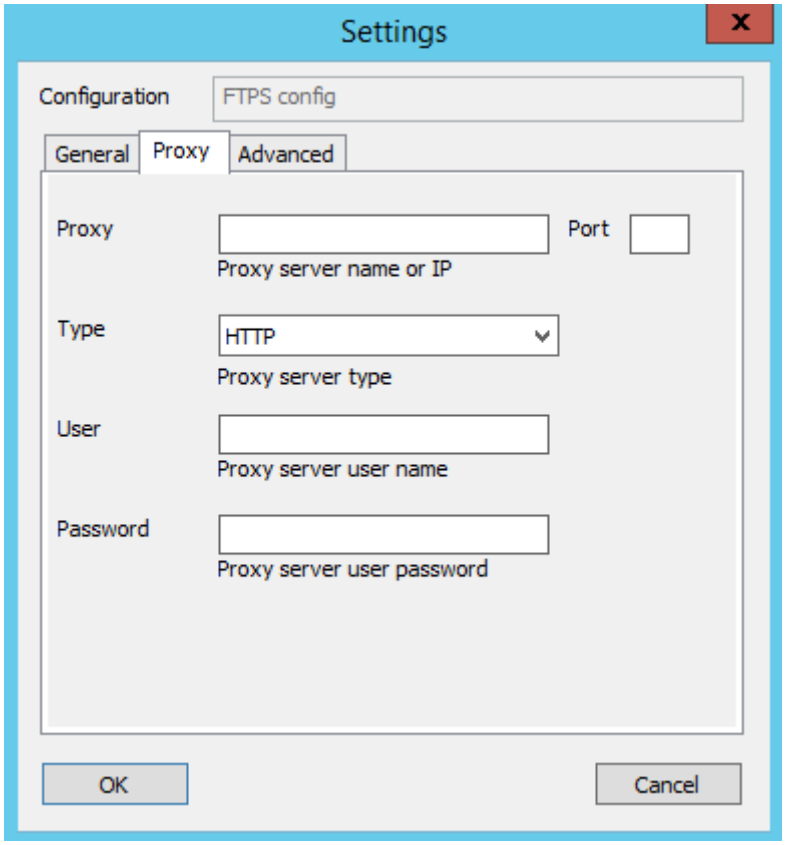
The dialog consists of five fields:

- **Server**
- **Port**
- **User**
- **Password**
- **Remote dir.** In this field, you can specify FTPS folder that configuration will point to. This is the folder that you will see when expanding top-level folder in the **FTPS** plug-in file system. You can enter a path manually, or click the **Select Folder** ... button and browse for it. If you leave this field empty, then the configuration will point to a root folder provided by the server for the given user.

To test that server parameters are correct, click the **Test connection** button.

FTPS Configuration: Proxy

If you are behind a proxy, you can specify its parameters under the **Proxy** tab. If you leave these field empty, the program will use general settings set in the program (refer to Proxy Settings for details). Settings in plug-in configuration override general settings.



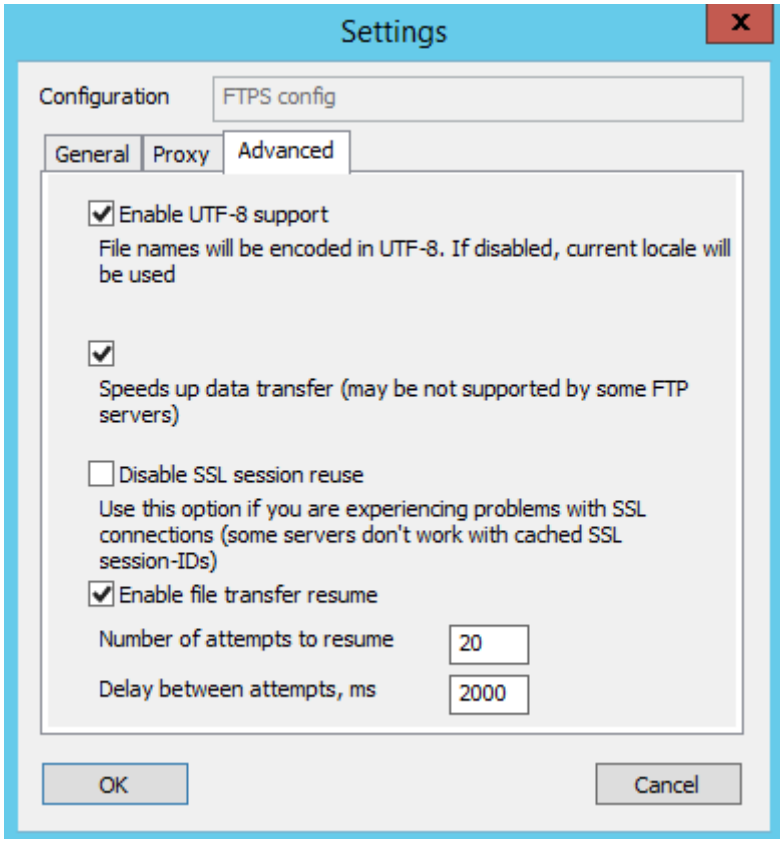
There are five fields:

- **Proxy**
- **Port**
- **Type** – HTTP, SOCKS4 or SOCKS5
- **User**
- **Password**

If your proxy server doesn't require authorization, leave the **User** and **Password** fields empty.

FTPS Configuration: Advanced

Under the **Advanced** tab, you can tune how the plug-in interacts with a remote server. Default settings should work well with all popular FTPS servers, but if something doesn't work for you, you can change them.



There are four options:

- **Enable UTF-8 support**
- **Use absolute paths for FTP commands.** If the default settings don't seem to work with your FTPS server, try unchecking this box.
- **Disable SSL session reuse**
- **Enable file transfer resume**

Disk Image

The **Disk Image** plug-in allows creating and restoring snapshots of hard drives and individual partitions. It supports "live" disk imaging, i.e. allows performing the backup without stopping Windows.

Snapshots can be restored only to a "cold" hard drive that has no software running on it. If you want to restore a system partition, it is recommended to boot from a recovery USB drive. See **Disaster Recovery Module** for more details.

Prerequisites

The plug-in requires you to have **Volume Shadow Copy Service** running on your system.

Privileges

To use the **Disk Image** plug-in, Workstation must run from a user account with administrator privileges.

Plug-in File System

The file system provided by the plug-in is organized as follows:

- **Top-level folders** represent physical drives (hard disks) available for backup. Inside them, there always is a file called **full drive image** and a folder called **Partitions**. They have no attributes.
- The **full drive image** file is used to back up the entire drive as a whole. It has no attributes.
- **Files** in the **Partitions** folder allow backing up individual partitions and partition table. They have no attributes.

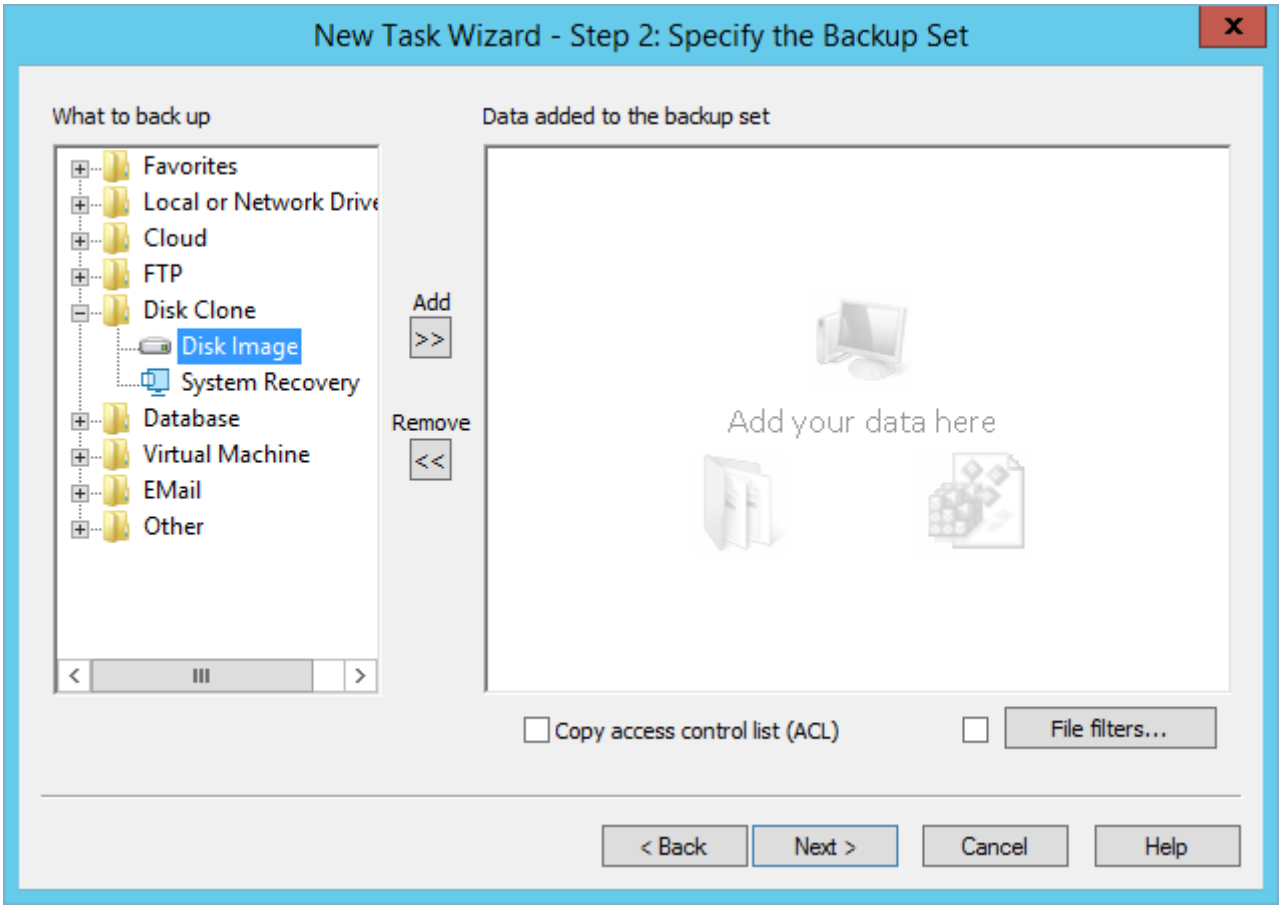
Files and folders in the plug-in's file system don't have any attributes, which means that when compared to other files and folders, they will be always considered as different. Incremental backup will always copy the entire set of data; if you want to optimize usage of disk space, use differential backup.

Format of Backup Files

As a result of backup, you will have binary snapshots of the objects you selected. At present, these images cannot be mounted or browsed (you can only restore them completely).

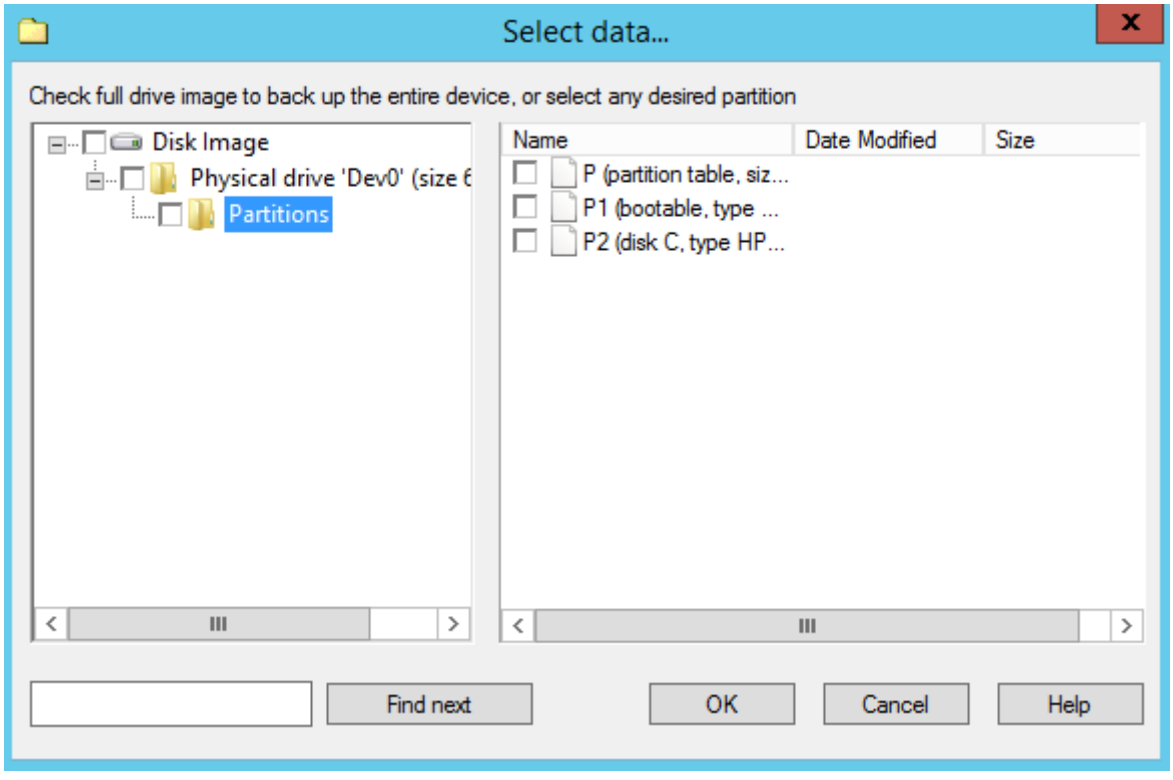
Backing Up

The **Disk Image** plug-in can only be used as a source of data for backup tasks. To learn more, please refer to Specify Backup Set.



To add an image to backup set, follow these steps:

1. In the **Data Sources** pane, select **Disk Image**, and then click **Add**. The **Select data...** dialog opens.



2. Check the boxes next to disk images that you want to back up.

Note: The **full drive image** file (located in the **Physical drive** folder) is used to access all HDD data, i.e. it also includes all objects from the **Partitions** folder. When adding data to backup, make sure you don't do double selection.

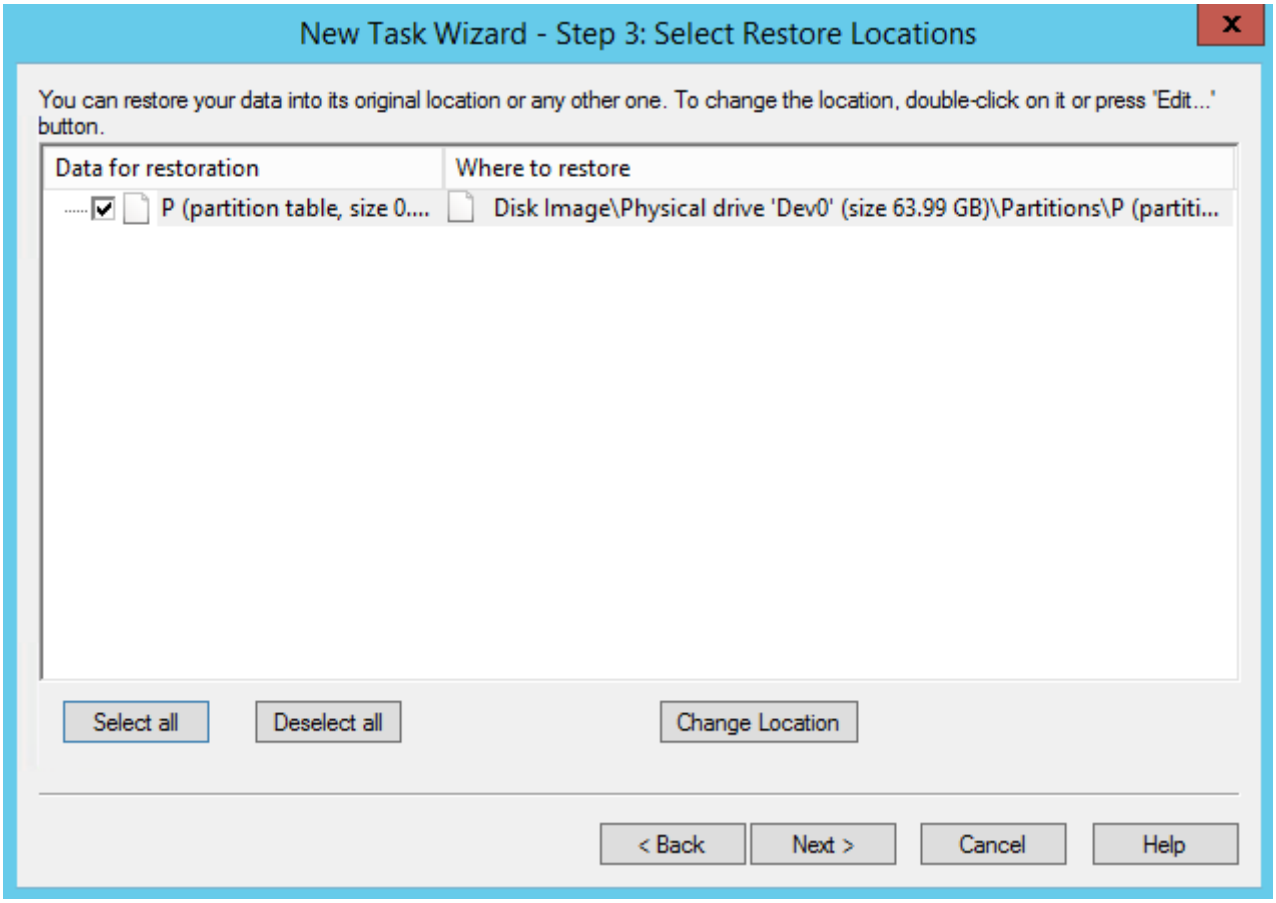
3. When finished the selection, click **OK**. Selected data appears in the **Backup Set** pane of the New Task Wizard.

Restoring

When restoring a disk image backup, target drive must be a "cold" media, i.e. have no applications working with it. When you run a restore task, the firstly locks the drive, then performs the copying, and then unlocks it.

To restore a disk image, follow these steps:

1. Open New Task Wizard.
2. Select **Restore task**, and then click **Next**.
3. Browse for the index file (**backup.hbi**) located in the destination folder. Select it, and then click **Next**.
4. In the **Select Restore Locations** dialog, verify the details of restoration.



If you want to restore a snapshot to a different drive, follow these steps:

In the **Select Restore Locations** dialog, select an object, and then click **Change Location**. The **Change restore location** dialog opens.

Select a physical drive and a new path, and then click **OK**.

Note: By restoring a snapshot to a different place, you can effectively clone your HDD.

After verifying paths of restoration, you need to select type of restoration, enter decryption password (optional), and name the task. These steps are not specific to the **Disk Image** plug-in. Learn more about Restore Task.

System Recovery

The **System Recovery** plug-in allows saving an image of a whole system as a VHD file. User can open this file later for browsing its content, use it as an image for a VirtualBox machine, or just restore it as a whole. It allows backing up a system from inside without stopping it.

Privileges

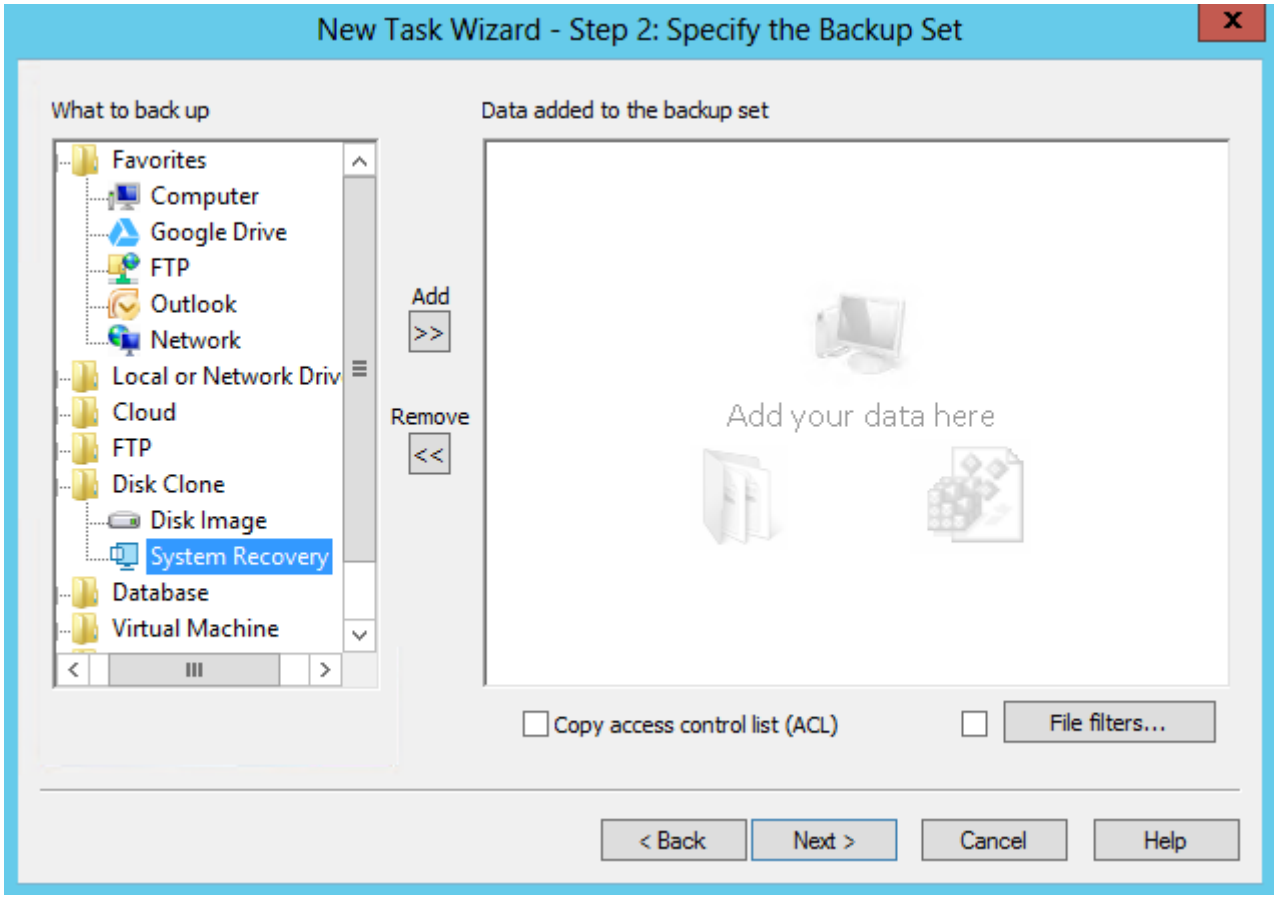
A user must have an administrative privileges on the system assigned to backup, to grant Handy Backup a full access to an entire system data.

Procedure

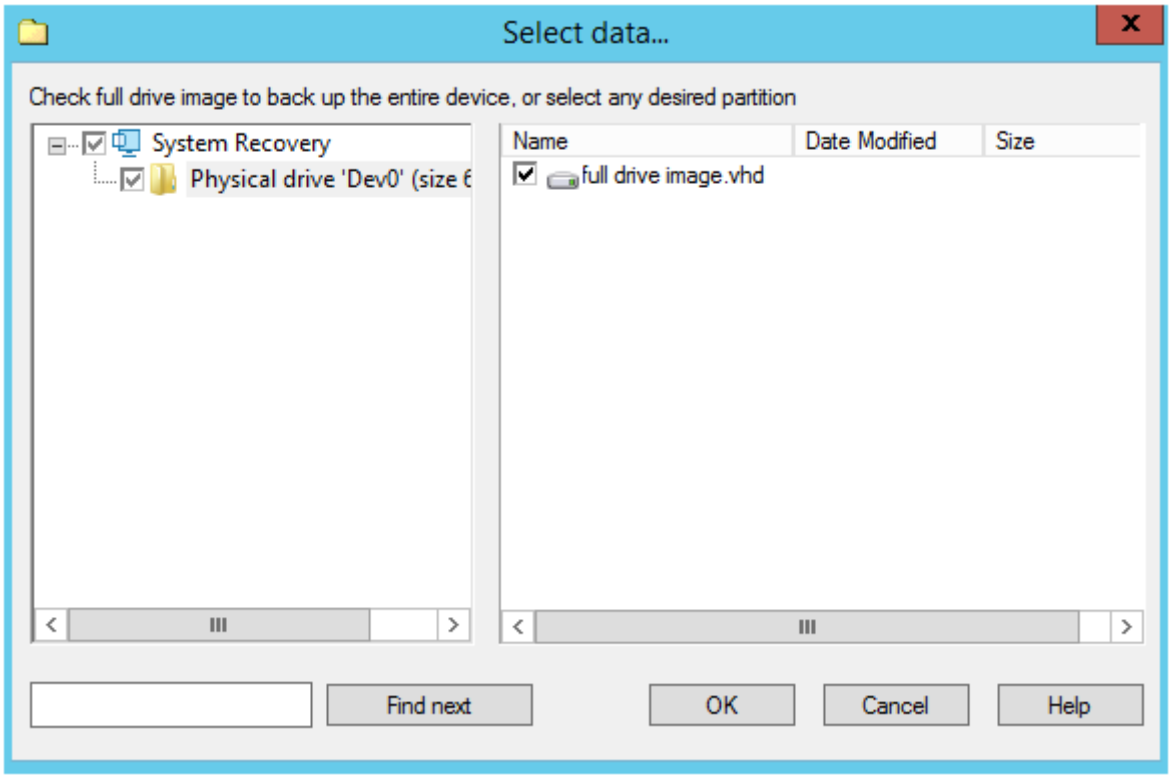
- **Backing up a System Image**

To save a copy of your system using the **System Recovery** plug-in, please follow the instruction below:

1. Open Handy Backup as an administrator and create a new backup task.
2. On the Step 2, select a “System Recovery” data source on the left panel.



3. You will see a new window called “Select data…” with the list of drives attached to your system.
4. Select drive(s) you are planning to back up by marking checkboxes against these drives.



5. Press “OK” to return to the data selection window. Continue to create your task as usual.

Version 7, Published on October 2017
support@handybackup.net

- **Restoring a System Recovery Image**

To restore a system drive from backup with this tool, please follow the next steps:

1. Open Handy Backup and make a new restoration task.
2. On the Step 2, select a file **backup.hbi** located in your backup folder.
3. In the “Select Restore Location…” dialog, you can click OK to restore a file to an original place, or a “Change location” button to call for a destination-changing dialog.

Note: To restore a system from your VHD file to a different drive, this drive must have at least a storage capacity of an original drive, or more.

4. Click OK to proceed a restoring task creation as usual.

Using VHD Files

The two ways to use a VHD image file besides its complete restoration are the next methods:

- Mounting a VHD to a VirtualBox as the executable system image;
- Browsing a file as a folder containing different data.

Both of these methods are not parts of Handy Backup. Please see the next chapter about implementing these ways: **Using a VHD Drive Image without Restoring It**.

- **Using a VHD Drive Image without Restoring It**

To use a VHD-type disk image created by **System Recovery** plug-in, you can just write it to some data storage to make a bootable media; therefore, these are the other methods of using these files for different purposes, i.e. browsing for specific information and starting as a virtual machine.

Note: Both these options are not parts of Handy Backup! Use these methods according to recommendations and detailed instructions of external software manufacturers; we are providing these extra possibilities, not an external software.

Attaching a VHD File to VirtualBox Machine

To use your VHD system image as a VirtualBox virtual machine, please follow the next instruction:

1. Create a new VirtualBox machine, with an OS type and memory size matching your original system.
2. Use your VHD file as a bootable virtual hard disk, instead of creating a new hard disk (the default option for making a new VirtualBox machine).

3. Adjust some settings of a new virtual machine using the “Settings” section of main VirtualBox control panel. Enable I/O APIC, disable PAE/NX features and configure your VHD disk as a SATA device if you need it.

Well done; you can use your virtual machine with an original system image. Fine-tuning VirtualBox machines will open many possibilities for you!

Browsing a VHD File as a Virtual Drive

To attach your VHD file to your Windows file system, please use the next sequence of actions:

1. Open “Start” menu, right-click on the “Computer” item and call to a “Management” in the context menu appearing.
2. Select the “Disk Management” section.
3. In the “Action” menu, click on the “Attach VHD” item.
4. Select a VHD file in an opening dialog appearing. Mark the “Read-only” option to prevent changing your VDH file by accidental writing to it.
5. Your virtual disk will appear in the list of system drives, marked by blue. You may use it as a common drive to browse the information stored on it.
6. When you finish, go to the disk management section again and use the “Detach VHD” option in the “Action” menu to unmount a VHD file.

Again, that is all you need to browse your system recovery image.

MSSQL

The **MSSQL** plug-in allows backing up and restoring databases of Microsoft SQL Servers. The plug-in allows working with SQL Server located on local computer only. Its work relies on the following Windows services:

- **SQL Writer Service** (always installed as a part of an SQL Server);
- **Volume Shadow Copy Service**.

Snapshots of databases are made without interrupting the server’s work (Volume Shadow Copy Service provides recoverability of backups). To restore a database, the plug-in stops the respective SQL instance, then copies the files, and then re-launches it.

Supported Versions

You can use the **MSSQL** plug-in to back up and restore all versions of Microsoft SQL Server 2005, 2008, 2012 and 2016. Note that for 32-bit and 64-bit versions of Windows Server, you need to use 32-bit and 64-bit version of Handy Backup, respectively.

Privileges

To use the **MSSQL** plug-in, Workstation must have enough privileges to make API calls to **SQL Writer Service** and **Volume Shadow Copy Service**.

Plug-in File System

The file system provided by the plug-in is organized as follows:

- **Folders** correspond to SQL Servers and carry the respective names. They have no attributes.
- **Files** correspond to databases available on the selected SQL Server, and carry the respective names. They have no attributes.

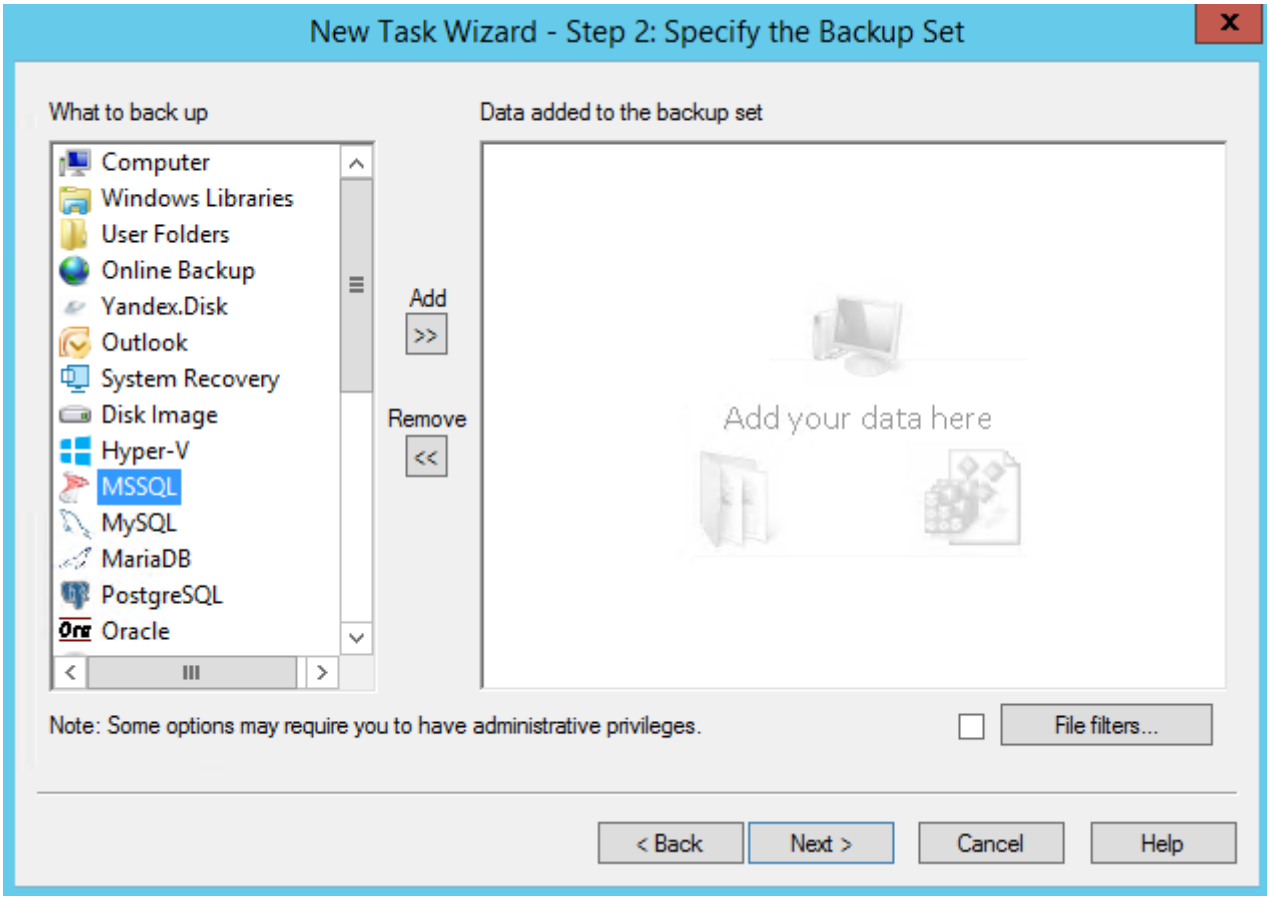
Since the plug-in's files and folders have no attributes, during comparison with files that are already backed up, they will be always considered as different. This means that incremental backup (backing up of new and changed files) won't work: for effective versioning, use differential backup.

Format of Backup Files

As a result of backup, you will have files that are named similarly to databases. Each file is basically a ZIP archive with all data files and transaction logs of the respective database.

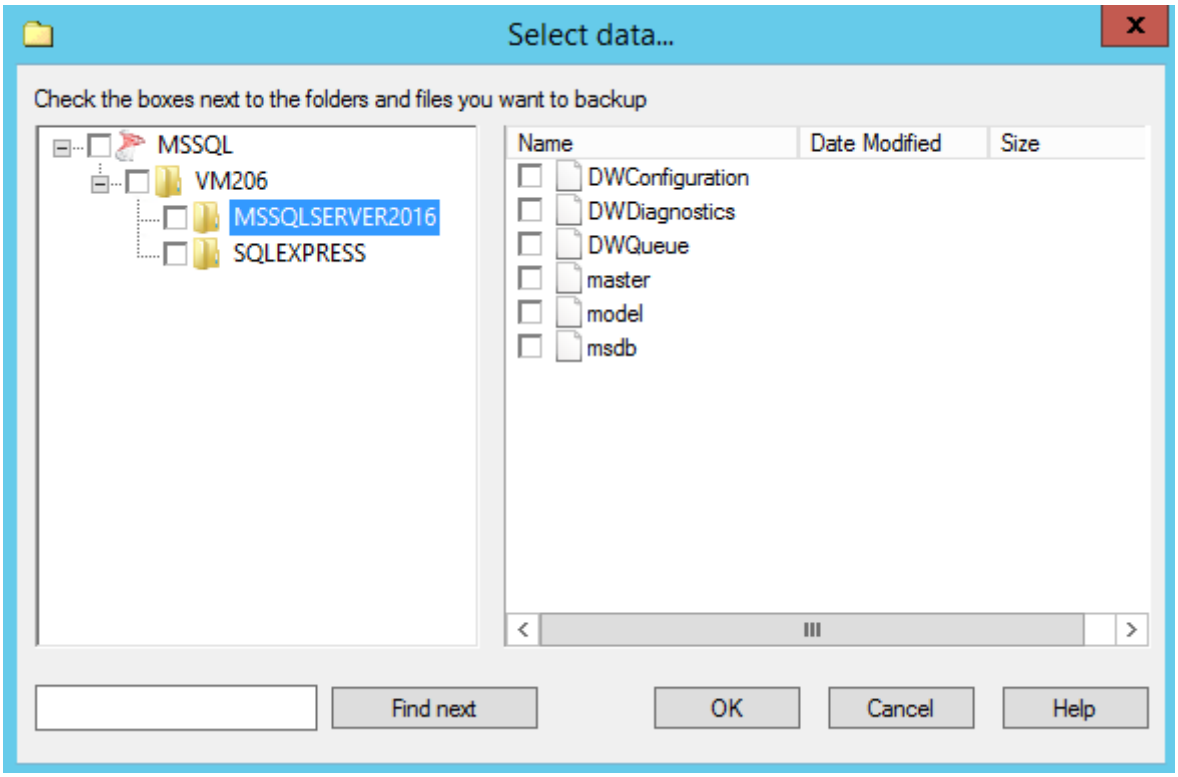
Backing Up

The **MSSQL** plug-in can only be used as a source of data for **backup** tasks. To learn more, please refer to Specify Backup Set.



To add an SQL database to backup set, follow these steps:

1. In the **Data Sources** pane, select **MSSQL**, and then click **Add**. The **Select data...** dialog opens.

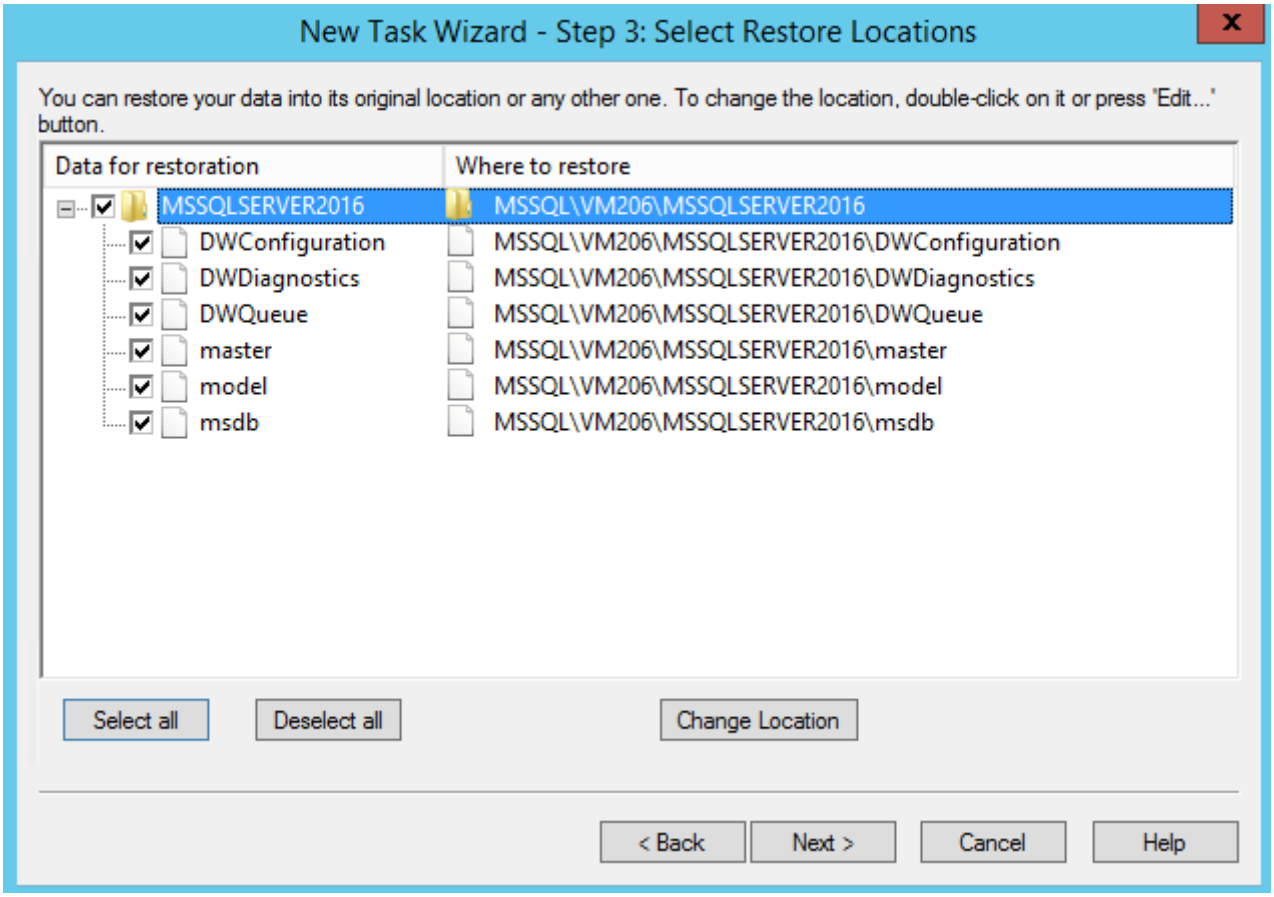


2. Check the boxes next to files (i.e. databases) that you want to back up.
3. When finished the selection, click **OK**. Selected data appears in the **Backup Set** pane of the New Task Wizard.

Restoring

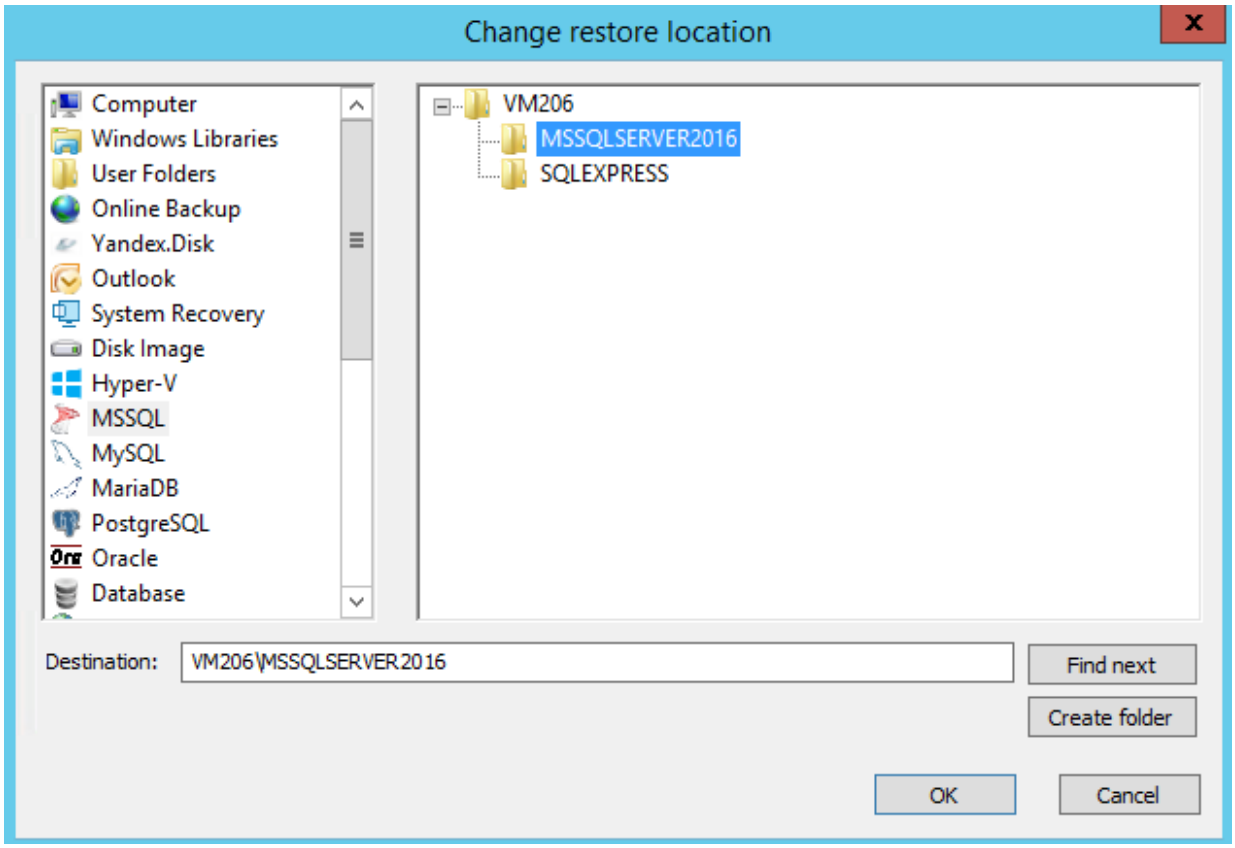
When the plug-in restores databases, it queries the **SQL Writer Service** to identify paths of the respective files. If new paths don't correspond to the ones in backup files, restoration will be performed to the new paths. This means that if you want, you can restore databases to a different place.

1. Open New Task Wizard.
2. Select **Restore task**, and then click **Next**.
3. Browse for the index file (**backup.hbi**) located in the destination folder. Select it, and then click **Next**.
4. In the **Select Restore Locations** dialog, verify the details of restoration.



If you want to restore a database to a different place, follow these steps:

4.1 In the **Select Restore Locations** dialog, select a database (file of the **MSSQL** plug-in file system), and then click **Change Location**. The **Change restore location** dialog opens.



4.2 Select a new path for the database, and then click **OK**.

After verifying paths of restoration, you need to select type of restoration, enter decryption password (optional), and name the task. These steps are not specific to the **MySQL** plug-in. Learn more about Restore Task.

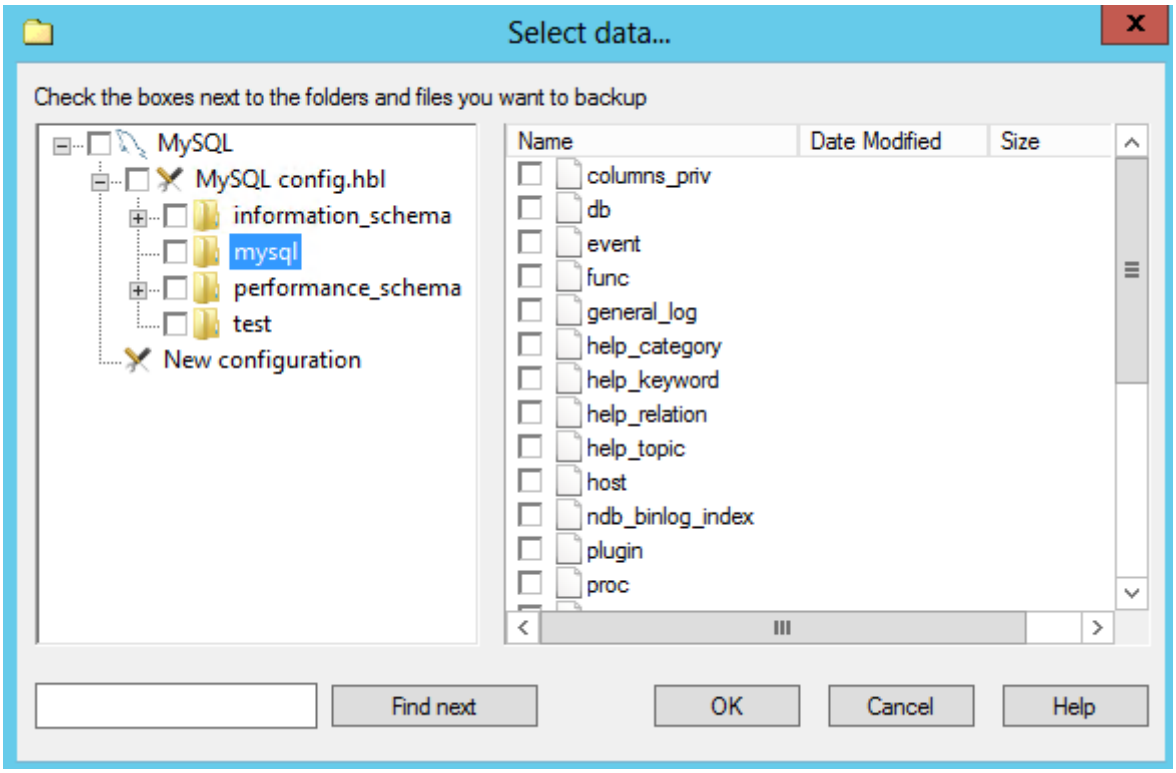
When you run the restoration, the plug-in firstly stops the respective SQL instance and all Windows services that depend on it. Then it copies the files to their original locations, and re-launches the services.

MySQL

The **MySQL** plug-in acts as a common MySQL client application and provides access to MySQL databases and tables. File system provided by the plug-in is organized as follows:

- **Folders** correspond to MySQL databases. Folder attributes are not supported.
- **Files** correspond to tables. File attributes are not supported.

Since the plug-in provides no attributes for folders and files, it cannot be effectively used with incremental backup option, i.e. allows for differential backup only. To learn how the software works with file attributes, please refer to Plug-in File Systems.



*File system provided by the **MySQL** plug-in. Folders are databases, files are tables.*

Format of the Backup Files

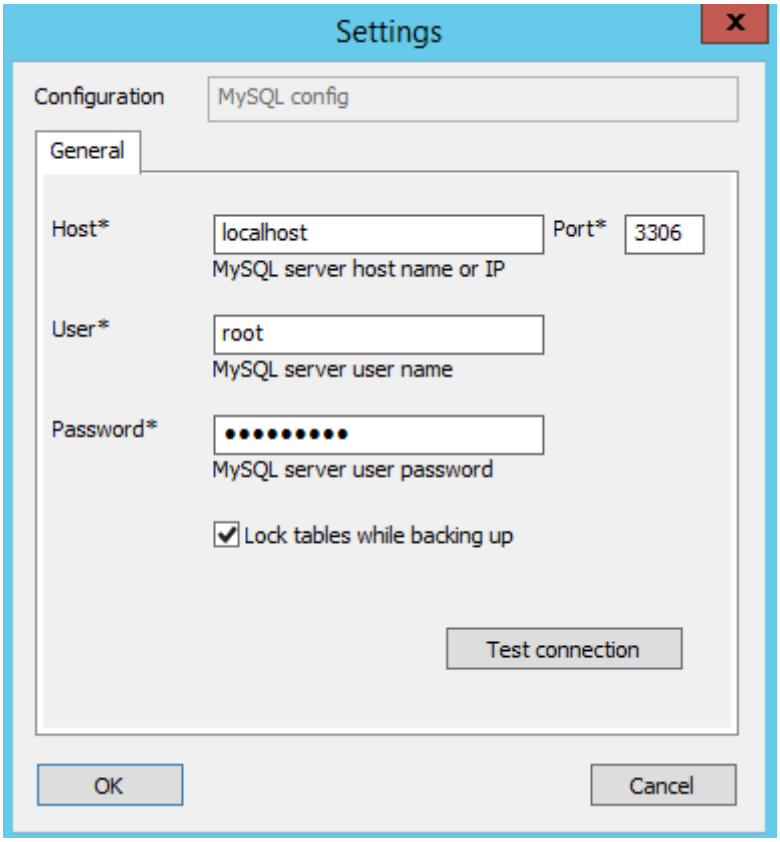
The software creates database dump files, one file per table. Each backup file is named after the respective table and contains all SQL statements required to create the table and fill it up with data. The format is very

understandable and can be easily modified prior to restoration (provided that you keep the SQL syntax correct).

At present, the plug-in supports only the **DROP-CREATE** method that suggests that restoration of the backup will firstly delete database or table, and then rebuild it from zero.

- ## Configurations

To perform backup or restoration with the **MySQL** plug-in, you need to create a configuration defining how to connect to your databases. The configuration dialog looks as follows:



*Configuration dialog for the **MySQL** plug-in.*

To create a configuration for the **MySQL** plug-in, follow these steps:

1. Click **New configuration** during creation of a backup or a restore task. The **Settings** dialog opens.
2. In the **Configuration** field, enter a name for the configuration.
3. In the **Host** field, enter host name or IP address of your MySQL server.
4. In the **Port** field, enter port number to connect to MySQL. The default port is **3306**.
5. In the **User** field, enter MySQL user name.
6. In the **Password** field, enter MySQL password.
7. Click **Test connection** to verify that all fields are filled correctly.

8. When finished, click **OK**.

The MySQL user must have sufficient privileges to perform the desired actions:

- To open plug-in listings, browse through the list of databases and select data to be backed up, the MySQL user must be allowed to run the `SHOW DATABASES` and `SHOW TABLES` statements.
- To create backups, the MySQL user must have the privileges to run the `SELECT` statements for each database and table that you want to back up.
- To restore data, the MySQL user must have full privileges to drop databases and tables and restore them from zero.

Backing Up

To back up a MySQL database, follow these steps:

1. Click the **New Task** icon on the toolbar.
2. Select **Backup** task, and then click Next.
3. Select **MySQL**, and then click **Add**. The **Select data...** dialog opens.
4. Select a MySQL configuration, and click the plus **[+]** sign control next to it. When a connection is established, a list of available databases appears.

Note: If you have no MySQL configurations, then you need to create one. To learn how to do it, please see Creating MySQL Configurations.

5. Navigate through the list of databases by expanding and collapsing the tree structure through the plus **[+]** and minus **[-]** sign controls.
6. Check the boxes next to the databases and tables that you want to back up.
7. When finished, click **OK**.
8. Click **Next** to finish data selection.

After selecting data for backup, you will need to select destination, enable compression and other options, and name the task. These steps are not specific to MySQL, and you can find the respective instructions in the Backup Task chapter.

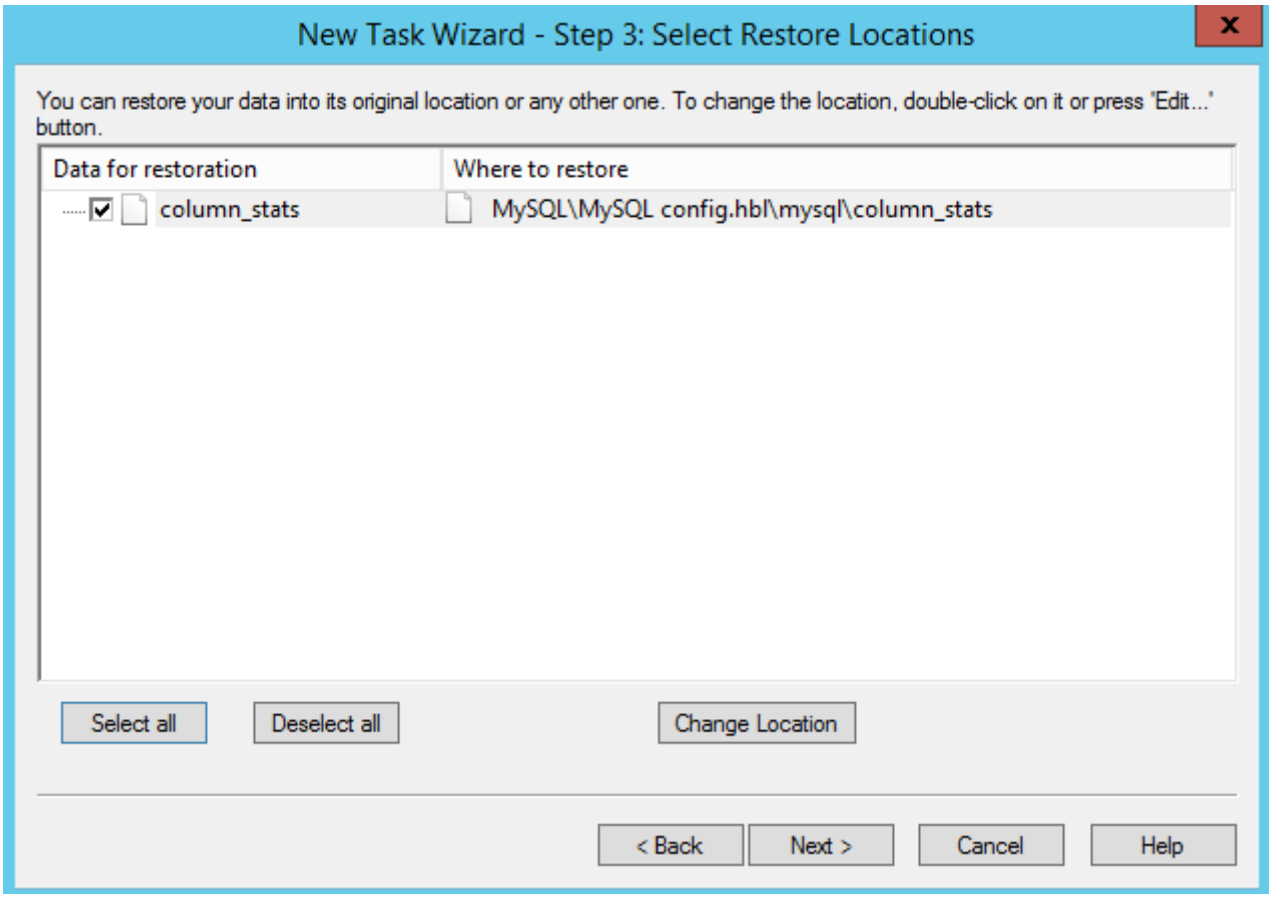
User Privileges

To browse the databases, select data, and run backups, the MySQL user must have enough privileges to run the `SHOW DATABASES`, `SHOW TABLES` and `SELECT` statements for each object that you are planning to back up.

- ## Restoring

To restore a backup made with the **MySQL** plug-in, follow these steps:

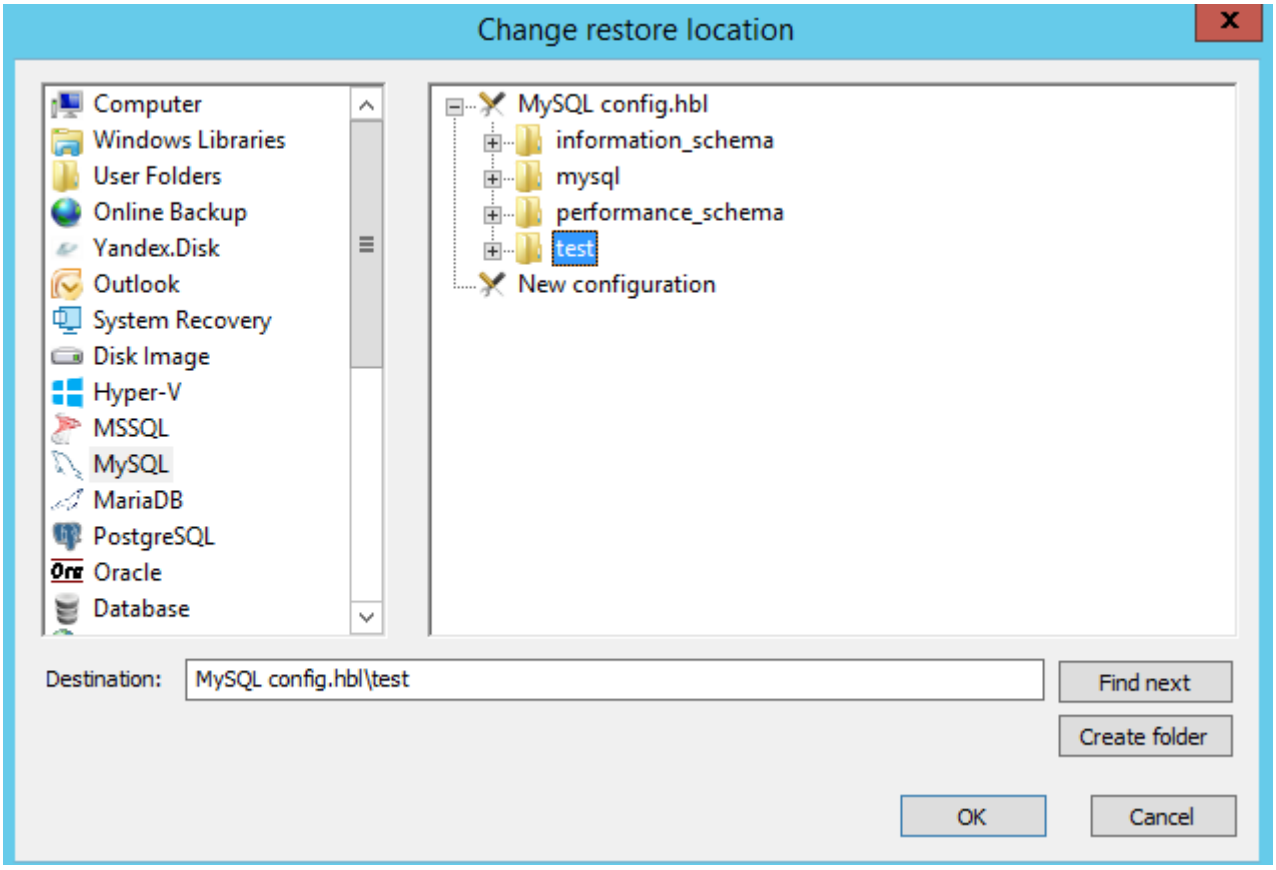
1. Click the **New Task** icon on the toolbar.
2. Select **Restore** task, and then click **Next**.
3. Browse for the index file (**backup.hbi**) located in the destination folder. Select it, and then click **Next**.
4. In the **Select Restore Locations** dialog, verify the details of restoration.



Selecting MySQL restoration paths

Note: The **MySQL** plug-in requires you to have a configuration that defines how to connect to the database. If you are restoring the backup on the same machine where it was made, then you should already have it. If you want to restore the backup with a different or fresh installation of Handy Backup, you need to create it. To do it, follow these steps:

4.1 In the **Select Restore Locations** dialog, select any object (database or table), and then click **Change Location**. The **Change restore location** dialog opens.



Changing restore location to create a MySQL configuration

4.2 Make sure that **MySQL** is selected in the left pane. In the right pane, double-click **New configuration**. The **Settings** dialog opens.

4.3 Create a MySQL configuration named identically to the original configuration. To learn how to do it, please see MySQL Plug-in: Configurations.

4.4 After creating the configuration, click **Cancel** to return to the **Select Restore Locations** dialog. You don't need to actually change restore location, only create the configuration.

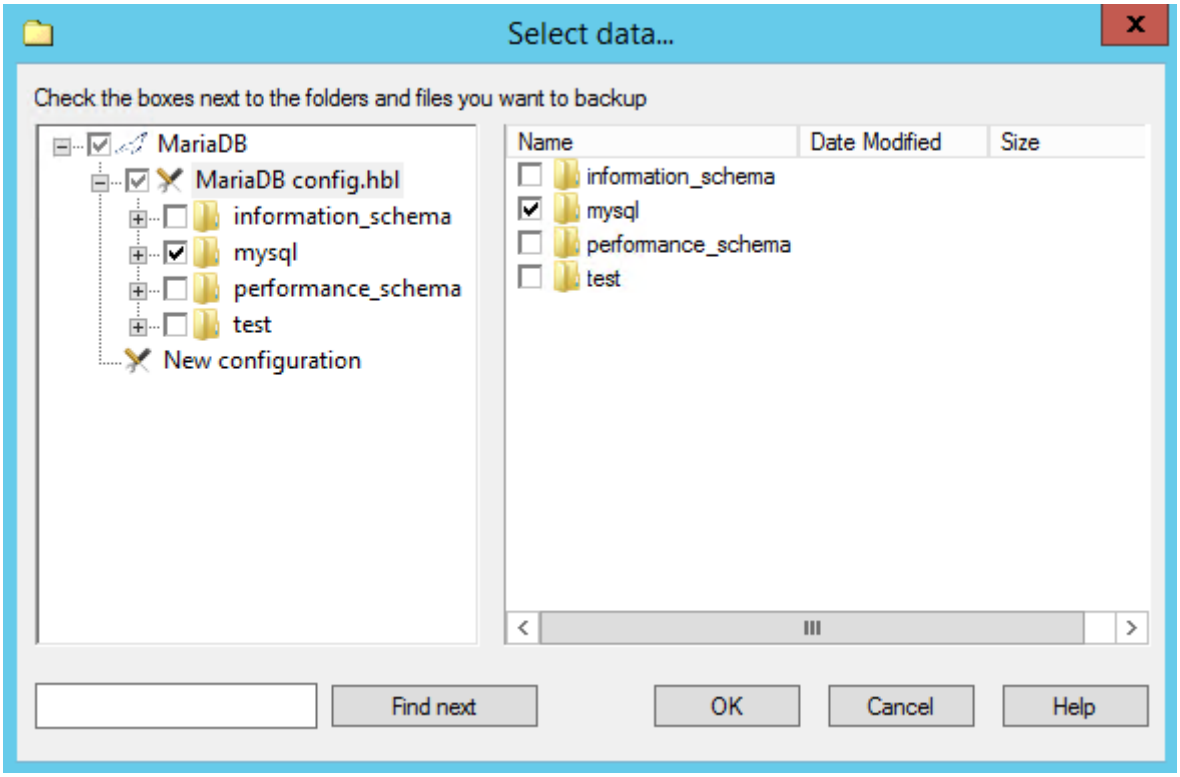
After selecting the backup to be restored, you will need to select type of restoration, enter decryption password (for an encrypted backup), etc. These steps are not specific to MySQL, and you can find the respective instructions in the Restore Task chapter.

MariaDB

The **MariaDB** plug-in acts as a common MariaDB client application and provides access to MariaDB databases and tables. File system provided by the plug-in is organized as follows:

- **Folders** correspond to MariaDB databases. Folder attributes are not supported.
- **Files** correspond to tables. File attributes are not supported.

Since the plug-in provides no attributes for folders and files, it cannot be effectively used with incremental backup option, i.e. allows for differential backup only. To learn how the software works with file attributes, please refer to Plug-in File Systems.



*File system provided by the **MariaDB** plug-in. Folders are databases, files are tables.*

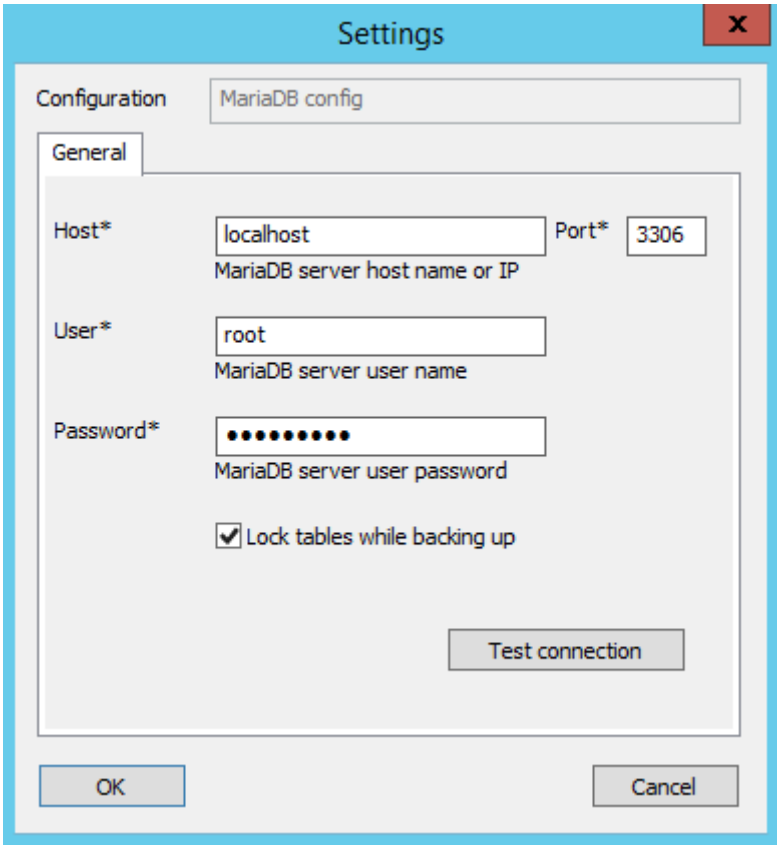
Format of the Backup Files

The software creates database dump files, one file per table. Each backup file is named after the respective table and contains all SQL statements required to create the table and fill it up with data. The format is very understandable and can be easily modified prior to restoration (provided that you keep the SQL syntax correct).

At present, the plug-in supports only the **DROP-CREATE** method that suggests that restoration of the backup will firstly delete database or table, and then rebuild it from zero.

- ### Configurations

To perform backup or restoration with the **MariaDB** plug-in, you need to create a configuration defining how to connect to your databases. The configuration dialog looks as follows:



*Configuration dialog for the **MariaDB** plug-in.*

To create a configuration for the **MariaDB** plug-in, follow these steps:

1. Click **New configuration** during creation of a backup or a restore task. The **Settings** dialog opens.
2. In the **Configuration** field, enter a name for the configuration.
3. In the **Host** field, enter host name or IP address of your MariaDB server.
4. In the **Port** field, enter port number to connect to MariaDB. The default port is **3306**.
5. In the **User** field, enter MariaDB user name.
6. In the **Password** field, enter MariaDB password.
7. Click **Test connection** to verify that all fields are filled correctly.
8. When finished, click **OK**.

The MariaDB user must have sufficient privileges to perform the desired actions:

- To open plug-in listings, browse through the list of databases and select data to be backed up, the MariaDB user must be allowed to run the `SHOW DATABASES` and `SHOW TABLES` statements.
- To create backups, the MariaDB user must have the privileges to run the `SELECT` statements for each database and table that you want to back up.

- To restore data, the MariaDB user must have full privileges to drop databases and tables and restore them from zero.

Backing up

To back up a MariaDB database, follow these steps:

1. Click the **New Task** icon on the toolbar.
2. Select **Backup** task, and then click Next.
3. Select **MariaDB**, and then click **Add**. The **Select data...** dialog opens.
4. Select a MariaDB configuration, and click the plus **[+]** sign control next to it. When a connection is established, a list of available databases appears.

Note: If you have no MariaDB configurations, then you need to create one. To learn how to do it, please see Creating MariaDB Configurations.

5. Navigate through the list of databases by expanding and collapsing the tree structure through the plus **[+]** and minus **[-]** sign controls.
6. Check the boxes next to the databases and tables that you want to back up.
7. When finished, click **OK**.
8. Click **Next** to finish data selection.

After selecting data for backup, you will need to select destination, enable compression and other options, and name the task. These steps are not specific to MariaDB, and you can find the respective instructions in the Backup Task chapter.

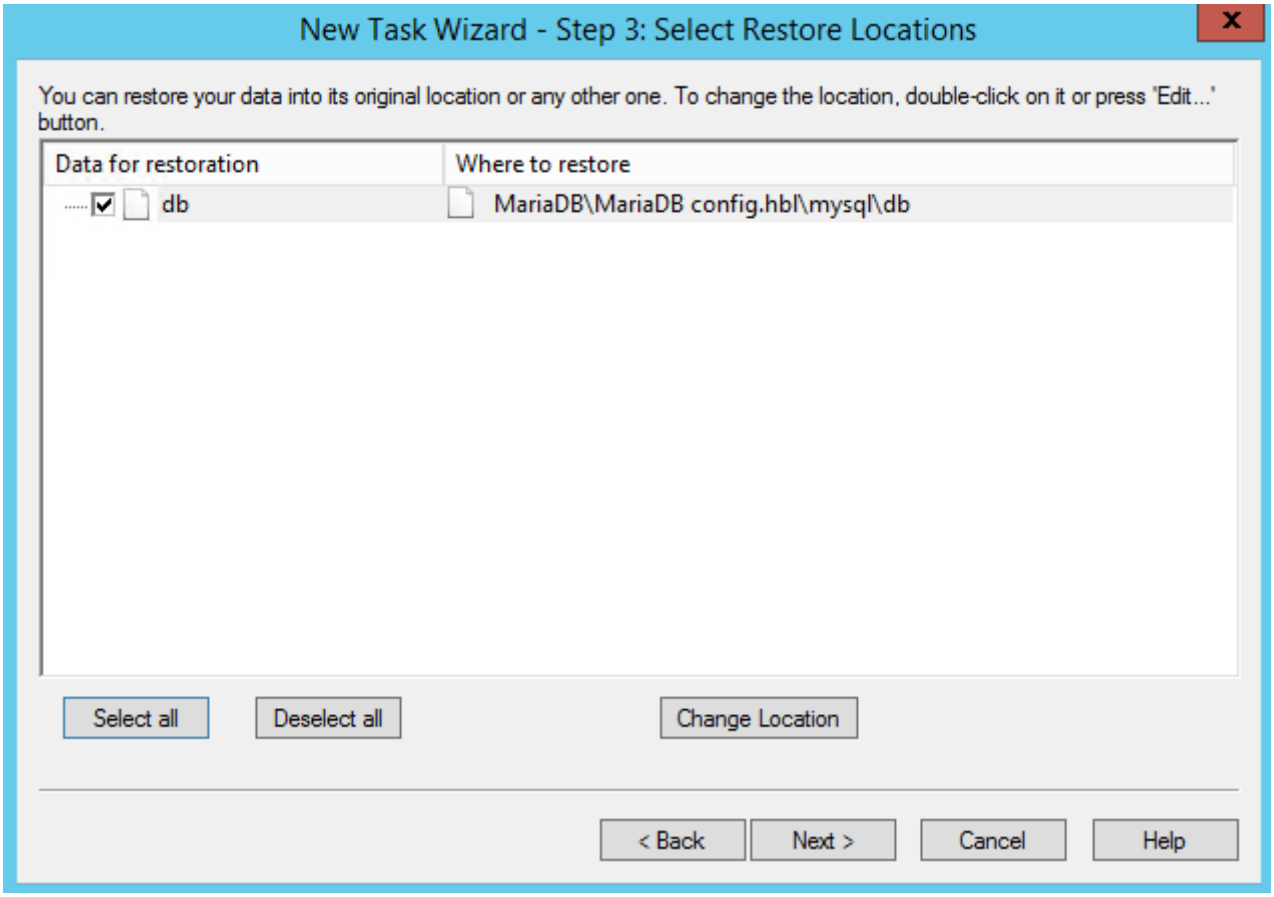
User Privileges

To browse the databases, select data, and run backups, the MariaDB user must have enough privileges to run the `SHOW DATABASES`, `SHOW TABLES` and `SELECT` statements for each object that you are planning to back up.

Restore

To restore a backup made with the **MariaDB** plug-in, follow these steps:

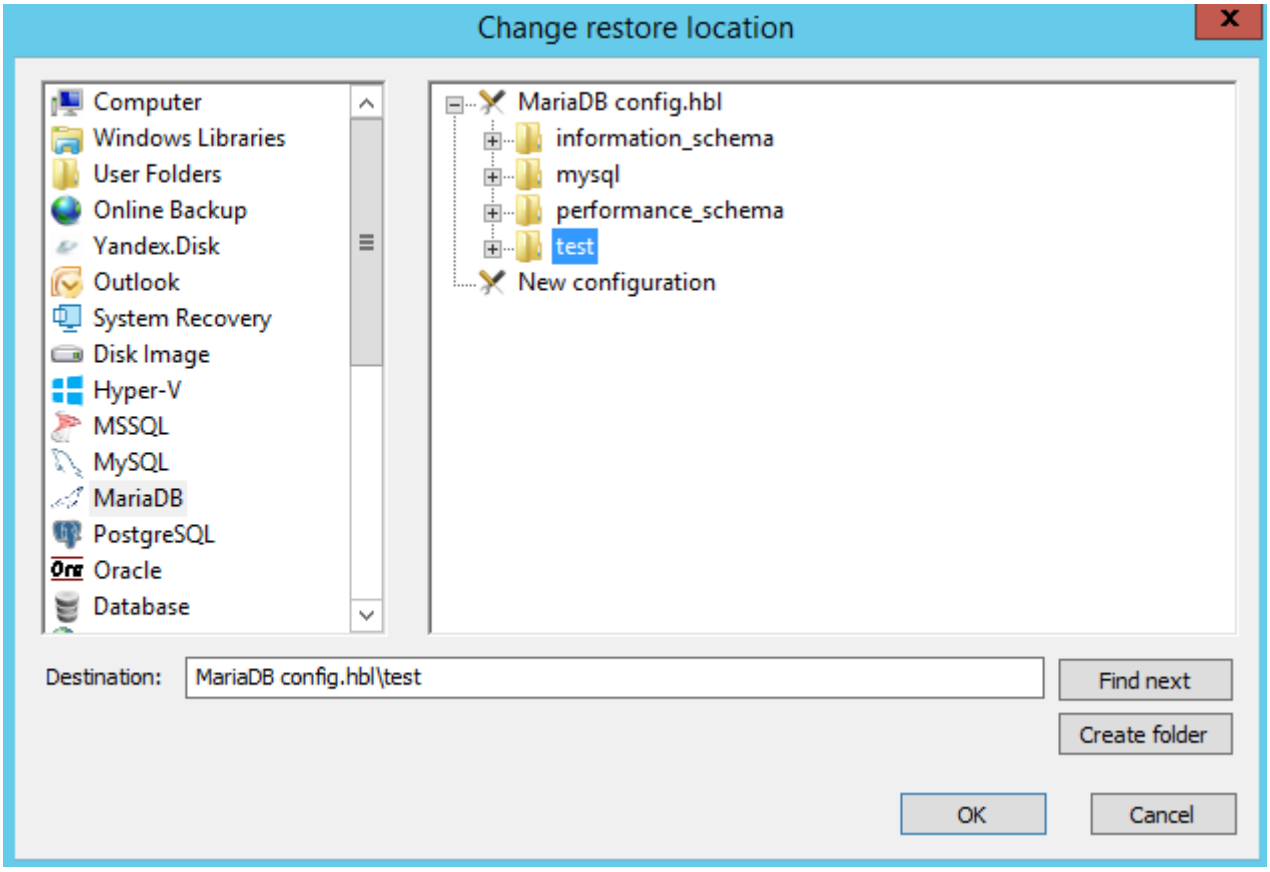
1. Click the **New Task** icon on the toolbar.
2. Select **Restore** task, and then click **Next**.
3. Browse for the index file (**backup.hbi**) located in the destination folder. Select it, and then click **Next**.
4. In the **Select Restore Locations** dialog, verify the details of restoration.



Selecting MariaDB restoration paths

Note: The **MariaDB** plug-in requires you to have a configuration that defines how to connect to the database. If you are restoring the backup on the same machine where it was made, then you should already have it. If you want to restore the backup with a different or fresh installation of Handy Backup, you need to create it. To do it, follow these steps:

4.1 In the **Select Restore Locations** dialog, select any object (database or table), and then click **Change Location**. The **Change restore location** dialog opens.



Changing restore location to create a MariaDB configuration

4.2 Make sure that **MariaDB** is selected in the left pane. In the right pane, double-click **New configuration**. The **Settings** dialog opens.

4.3 Create a MariaDB configuration named identically to the original configuration. To learn how to do it, please see MariaDB Plug-in: Configurations.

4.4 After creating the configuration, click **Cancel** to return to the **Select Restore Locations** dialog. You don't need to actually change restore location, only create the configuration.

After selecting the backup to be restored, you will need to select type of restoration, enter decryption password (for an encrypted backup), etc. These steps are not specific to MariaDB, and you can find the respective instructions in the Restore Task chapter.

Oracle

Oracle Database is a database management system produced and marketed by Oracle Corporation. Oracle Database software have been translated into more than 60 languages.

The Oracle Backup plug-in allows protecting data stored and used by Oracle database, without stopping the service.

Before using Oracle plug-in you must configure the Oracle database engine first, and then add a specific user in a ORA_DBA group allowing him or her to run Oracle backup and restoration procedures. If you have already configured the plug-in, please refer to the next chapter.

Configuring the Oracle Plug-in

In order to make “hot backups” without stopping an Oracle engine, it is necessary first to enable the **ARCHIVELOG** mode. If the database runs in the **NOARCHIVELOG** mode, then it will backed up in “cold” mode only (after stopping it).

To check which mode is active just now, use the following SQL operation:

```
SQL> select log_mode from sys.v$database;
```

If the value of **LOG_MODE** is **NOARCHIVELOG**, then you need to change it applying the following query:

```
SQL> alter database archivelog;
```

Note: To change the mode, your Oracle database instance must be mounted but not open. If it is open, you need to shutdown it, startup it with the **mount** option, enable the ARCHIVELOG mode, and then open the database for normal use:

```
SQL> shutdown immediate;
SQL> startup mount;
SQL> alter database archivelog;
SQL> alter database open;
```

Configuring of Remote Backup

If you use the **Server Network** edition of this software, it is possible to work with Oracle databases located on a workstation connected with the server via network. Follow these steps to set up this option properly:

1. First, install **Workstation Agent** on the computer with Oracle database.
2. Add the user account under which the Workstation will be launched to the **ORA_DBA** group.

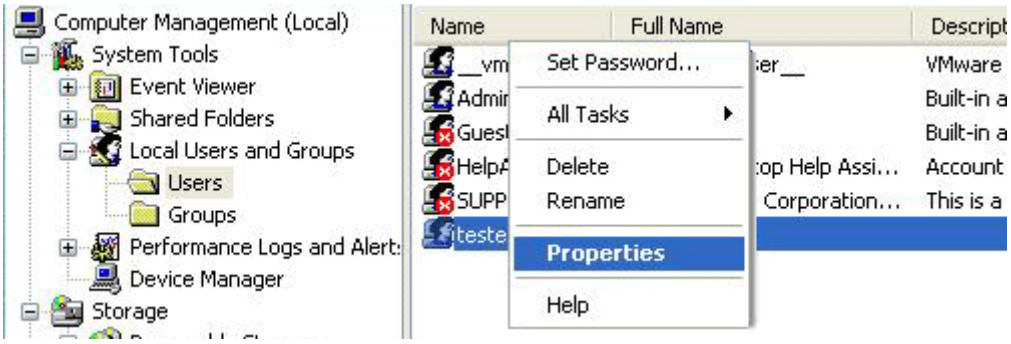
Backups of local database can be created with any edition that has the **Oracle** plug-in available. The user account under which the program runs must have membership of the **ORA_DBA** group.

Adding Users to the ORA_DBA Group

To add a user to the ORA_DBA group, you must perform these next operations:

1. Make sure that you have Oracle installed on your PC.

2. On the **Windows Start** menu, right click **Computer**, and then click **Manage**. The **Computer Management** dialog opens.
3. In the left pane, expand **System Tools**, then expand **Local Users and Groups**, and then click **Users**.
4. In the right pane, right-click the desired user account, and then click **Properties**. The **User Properties** dialog opens.



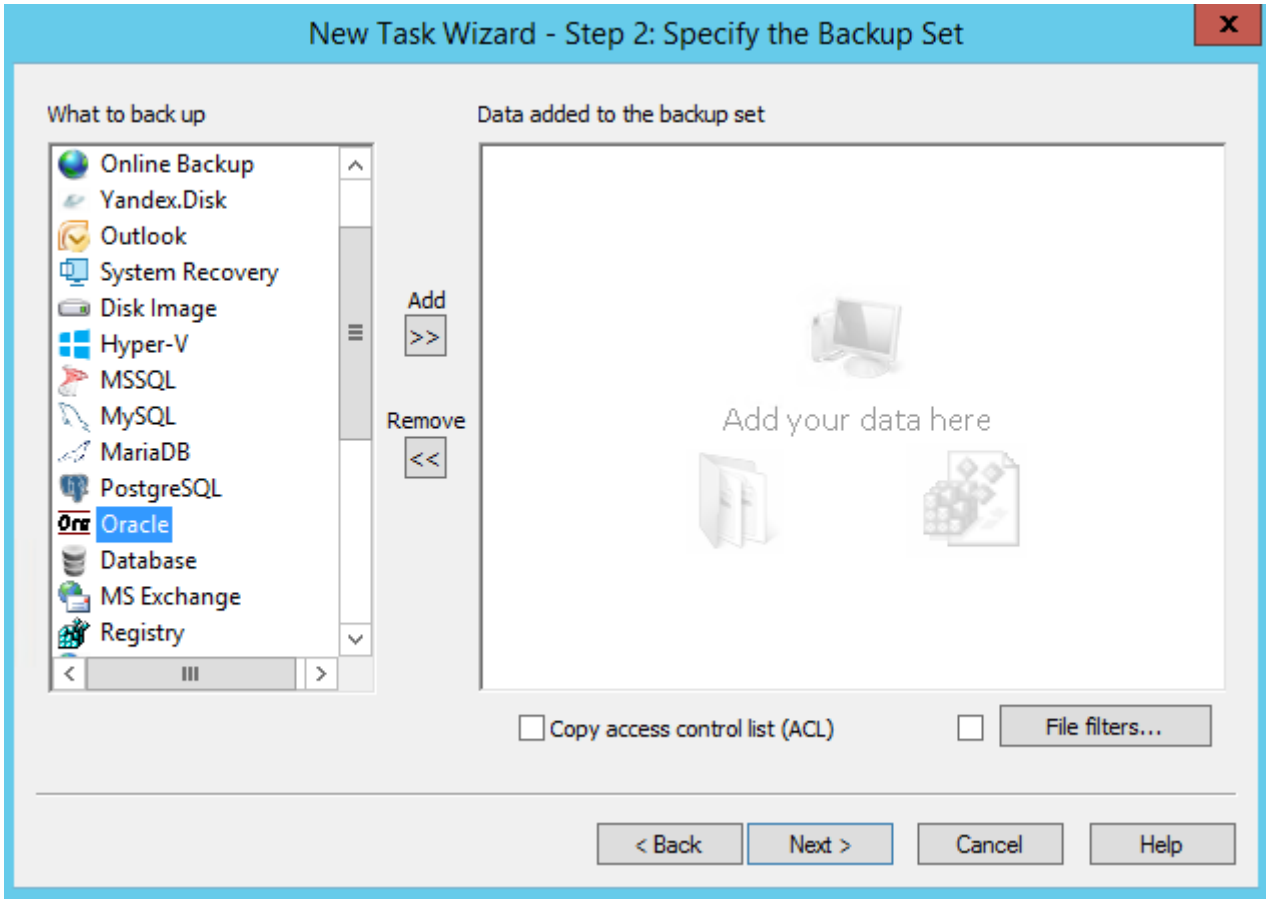
5. Under the **Member Of** tab, click **Add**.
6. In the bottom pane, select **ORA_DBA**, and then click **OK**.
7. Click **OK**.
8. Click **OK**.

Backing up Oracle databases

After an Oracle engine has tuned properly, you can easily make backup or restoration tasks using Oracle databases as target data type.

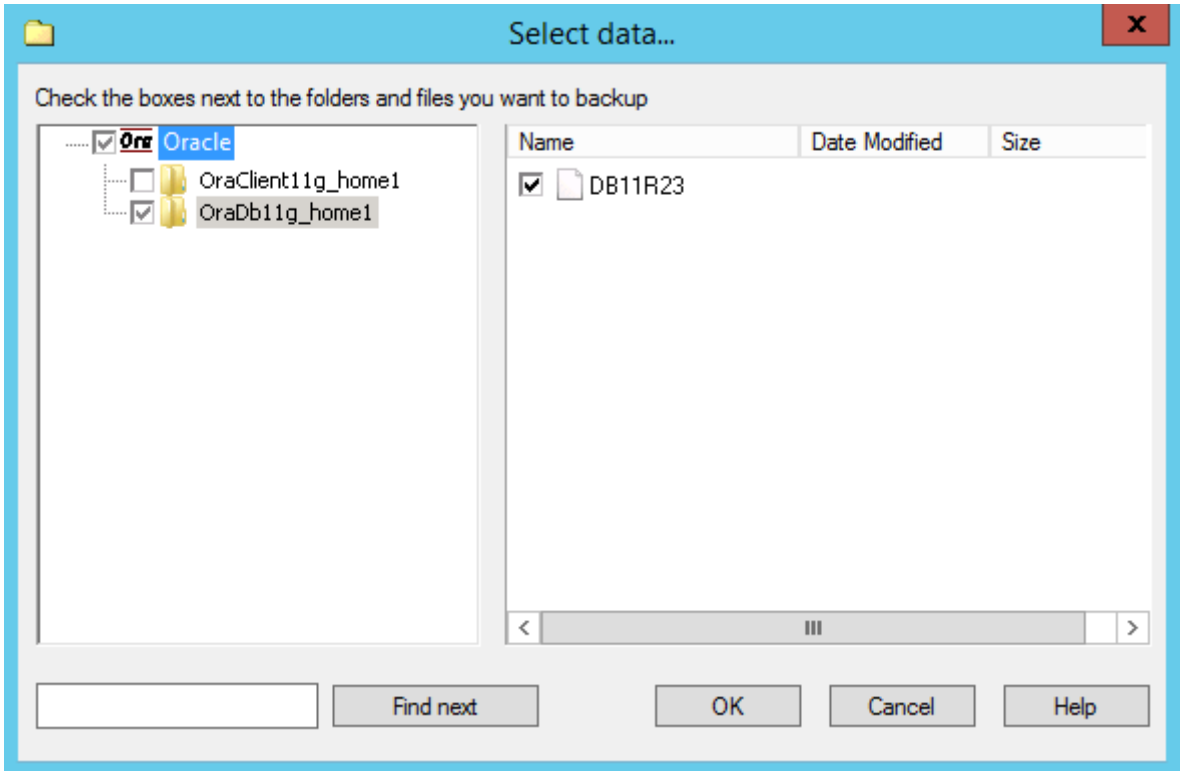
To make a backup, do the following:

1. Select **Backup task** in New Task Wizard.
2. Select **Oracle** option on step 2 of New Task Wizard.



3. Select **Oracle** option for Backup.

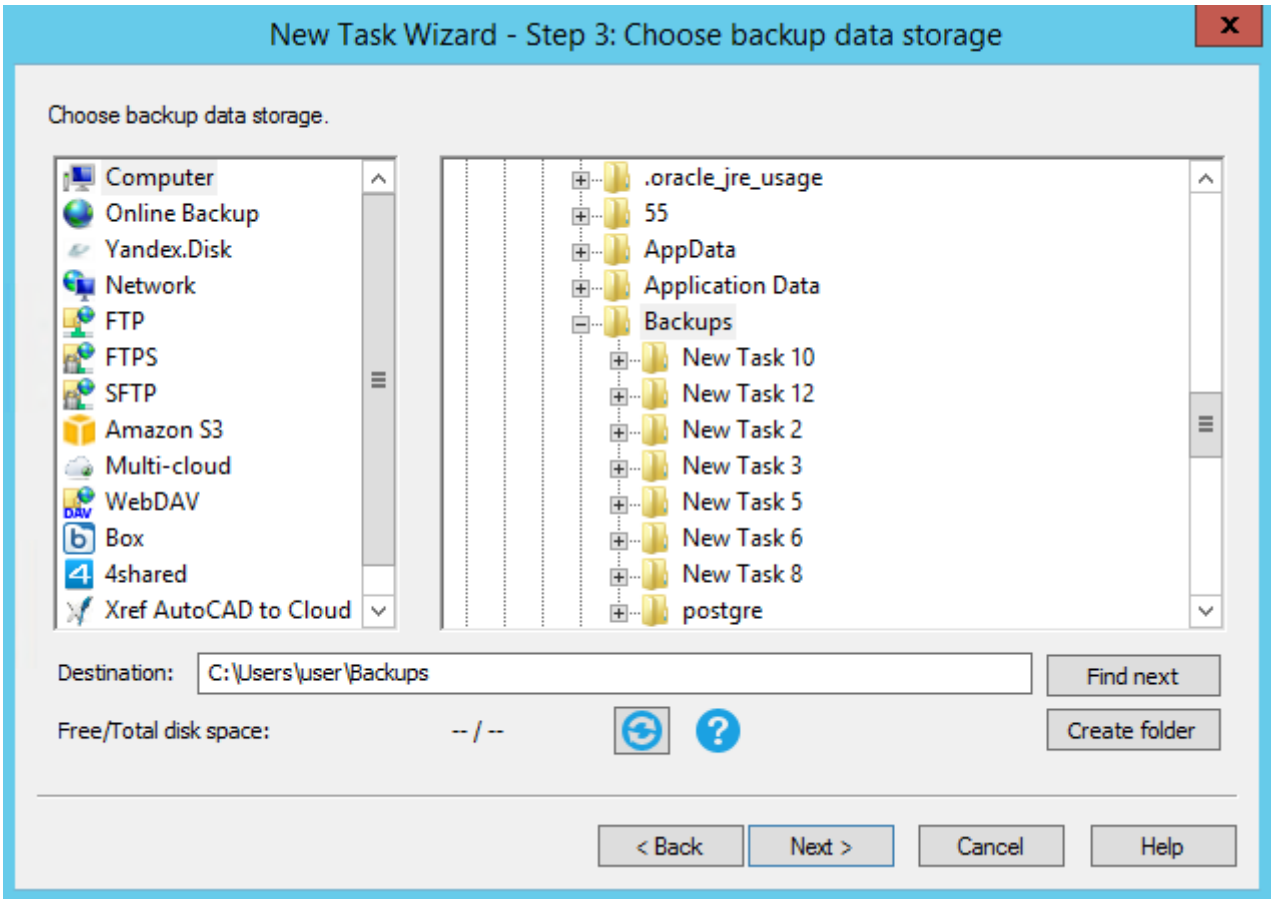
Double click on **Oracle** option or click **Oracle** option and then **OK**.



4. Select destination for Backup.

Version 7, Published on October 2017
support@handybackup.net

Select option for backup, then click **Oracle** option or click **Oracle** option and then click **Next**.



5. Set up all other task parameters and click OK. Your backup is ready.

Restoring Oracle databases

To restore Oracle Database from the backup, follow this instruction:

- Open **New Task Wizard.**
- Select **Restore task**, and then click **Next**.
- Find the **index file** (backup.hbi) located in the destination folder. Select it, and then click **Next**.
- Select **Restore Location**.

Oracle Database will be restored form saved state.

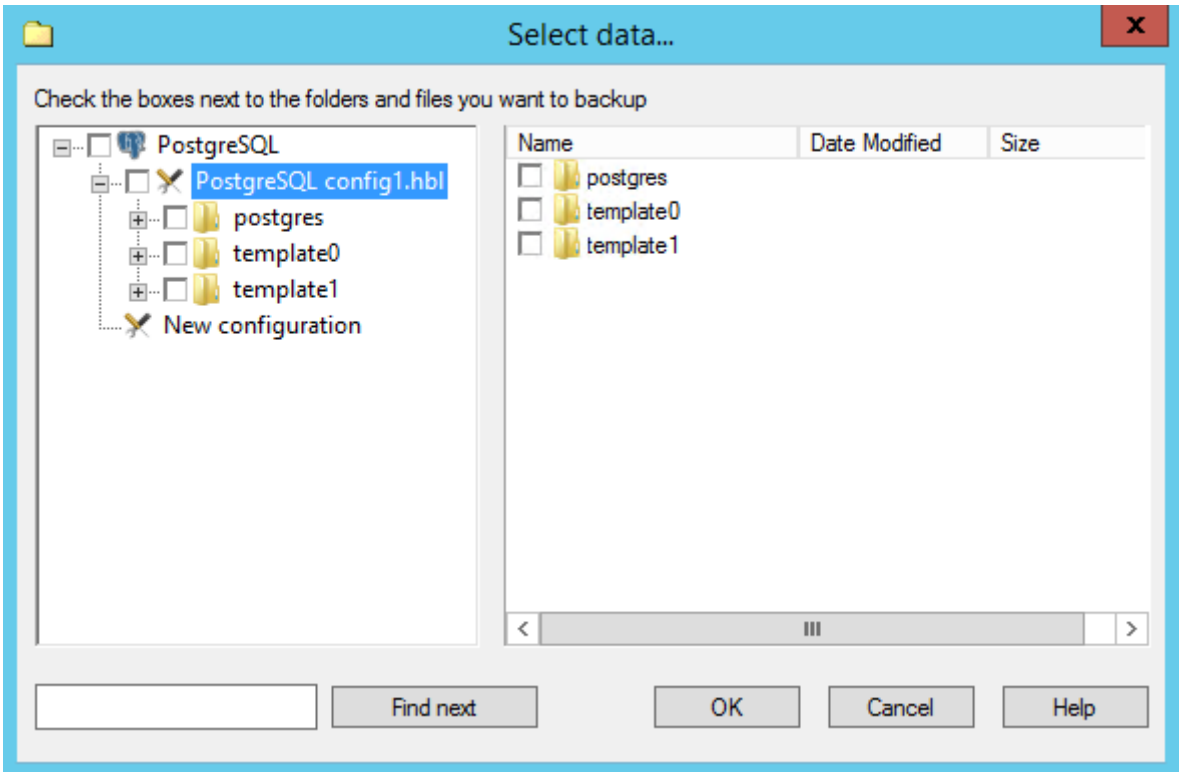
We are strongly recommending you to check all necessities several times before restoration, as this process can completely destroy any data collected or processed by database engine after the last backup. It seems reasonable to call for help of experienced personnel operating with Oracle (e.g. database administrator) every time a user feeling a need to restore some data from previous state.

PostgreSQL

The **PostgreSQL** plug-in operates as the standard PostgreSQL client application. It provides the software with access to all declared PostgreSQL databases and tables. The resulting file system provided by this plug-in looks like this structure:

- **Folders** correspond to PostgreSQL databases. Folder attributes are not supported.
- **Files** correspond to tables. File attributes are not supported.

Since the plug-in provides no attributes for folders and files, it cannot be effectively used with incremental backup option, i.e. allows the differential backup only. To learn more about how the software works with file attributes, please refer to Plug-in File Systems.



*File system provided by the **PostgreSQL** plug-in. Folders are databases, files are tables.*

Format of the Backup Files

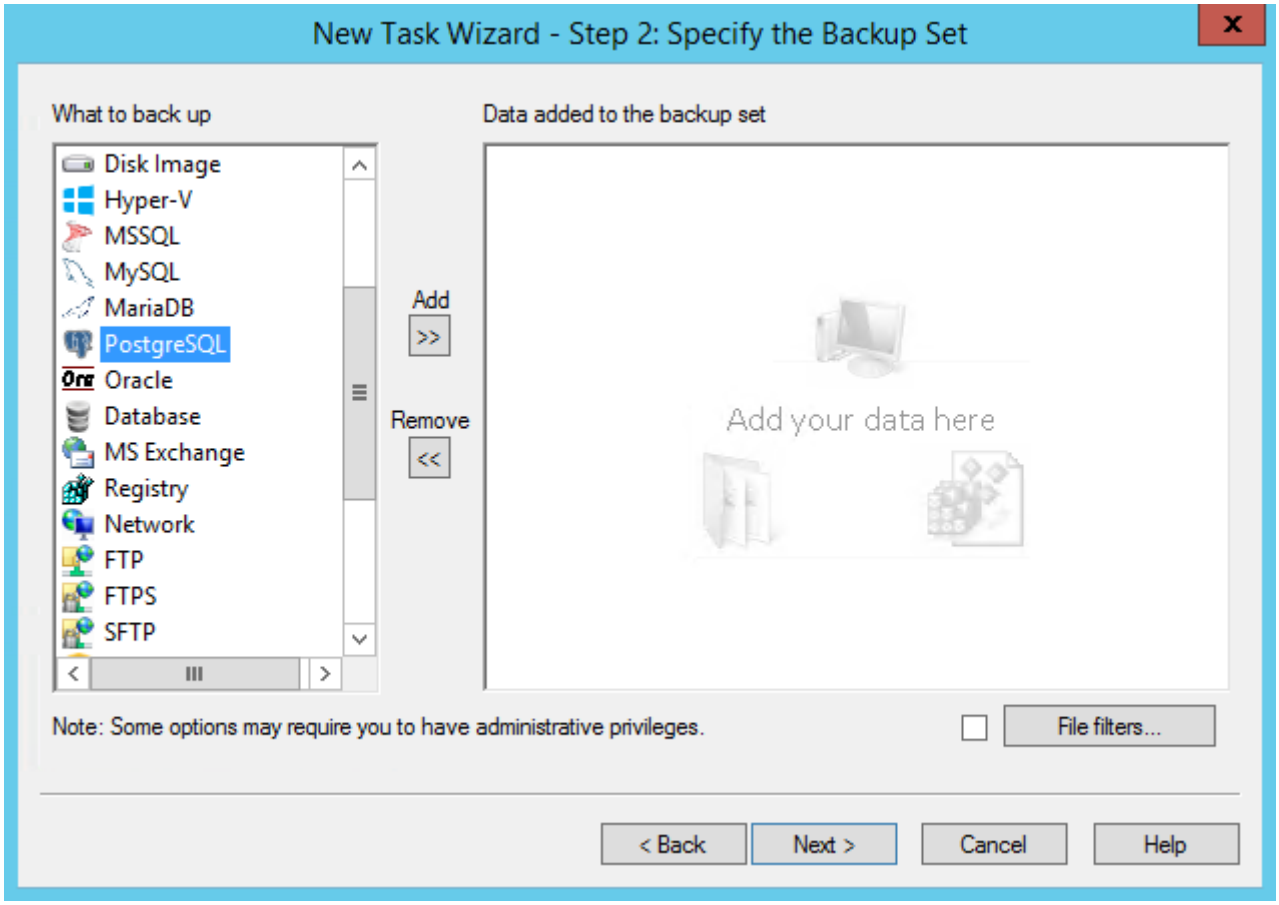
The PostgreSQL plug-in creates database dump files, one file per table. Each backup file is named after the respective table and contains all the PostgreSQL statements and actions required to create and fill up the table with data. This format is completely understandable and readable. It can be easily modified prior to restoration (provided that you keep the SQL syntax correct).

At present, the plug-in supports only the **DROP-CREATE** restoration method, deleting the table before restoration and then rebuilding it from zero.

Backing Up Using PostgreSQL Plug-in

To back up a PostgreSQL database, follow these steps:

1. On the toolbar, click the **New Task** icon.



2. Select the **Backup task**, and then click **Next**.
3. Select **PostgreSQL** as a backup source, and then click **Add**. The **Select data…** dialog opens.
4. Select a PostgreSQL configuration, and click the plus **[+]** sign control next to it. When a connection is established, a list of available databases appears.

Note: If you have no PostgreSQL configurations, then you need to create one. To learn how to do it, please see about creating PostgreSQL Configurations.

5. Browse through the list of databases by expanding and collapsing the tree structure through the plus **[+]** and minus **[-]** sign controls.
6. Check the boxes next to the databases and tables that you want to back up.
7. When the selection finished, click **OK**.
8. Click **Next** to finish data selection.

After selecting data for backup, you will need to select destination, enable compression and other options, and name the task. These steps are not specific to PostgreSQL, and you can find the respective instructions in the Backup Task chapter.

User Privileges

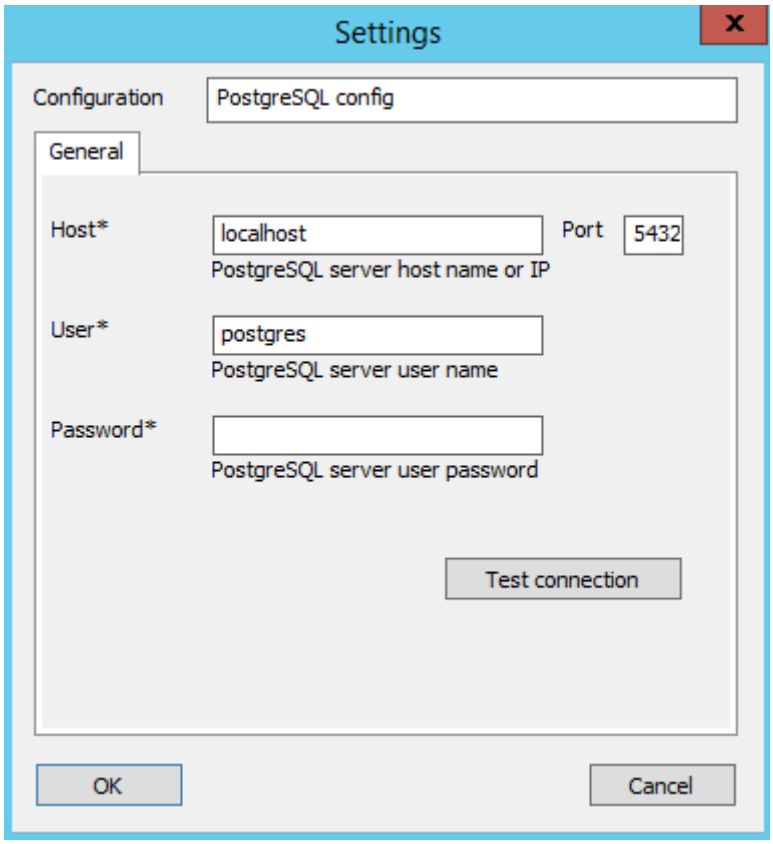
To browse PostgreSQL databases, select data and run backups, the PostgreSQL user must have enough privileges to run the SELECT statements for each object that you are planning to back up.

Restoring

To restore PostgreSQL from the backup, follow this instruction.

• Configuration

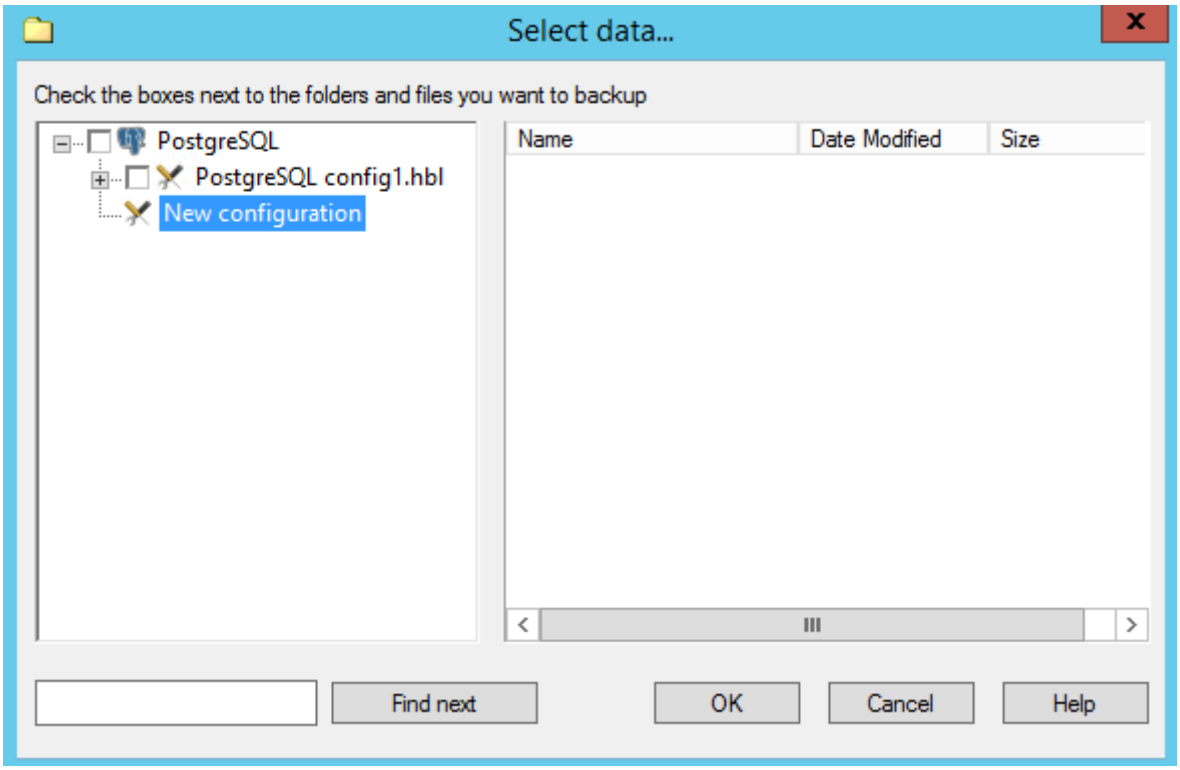
To use **PostgreSQL** plug-in properly for backing up or restoring data, you will need to create a plug-in configuration specifying the connection to your databases. The configuration dialog looks like the picture shown:



*Configuration dialog for the **PostgreSQL** plug-in.*

To specify the configuration for the **PostgreSQL** plug-in, please follow these steps:

1. Click on the **New configuration** option during creation of a backup or a restore task. The **Settings** dialog opens.



2. In the **Configuration** field, enter a name for the configuration created.
3. In the **Host** field, enter host name or IP address of your PostgreSQL server.
4. In the **Port** field, enter the port number to connect to PostgreSQL. The default port is **5432**.
5. In the **User** field, enter your PostgreSQL user name.
6. In the **Password** field, enter the PostgreSQL password specified for you.
7. Click the **Test connection** to verify that all fields are filled correctly.
8. When all these steps finished, click **OK**.

The user configuring PostgreSQL plug-in must have sufficient privileges to perform these actions:

- To create backups, the PostgreSQL user must have the privileges to run the `SELECT` statements for each database and table that you want to back up.
- To restore data, the PostgreSQL user must have full privileges to drop databases and tables and restore them from zero.

- ### Restoration

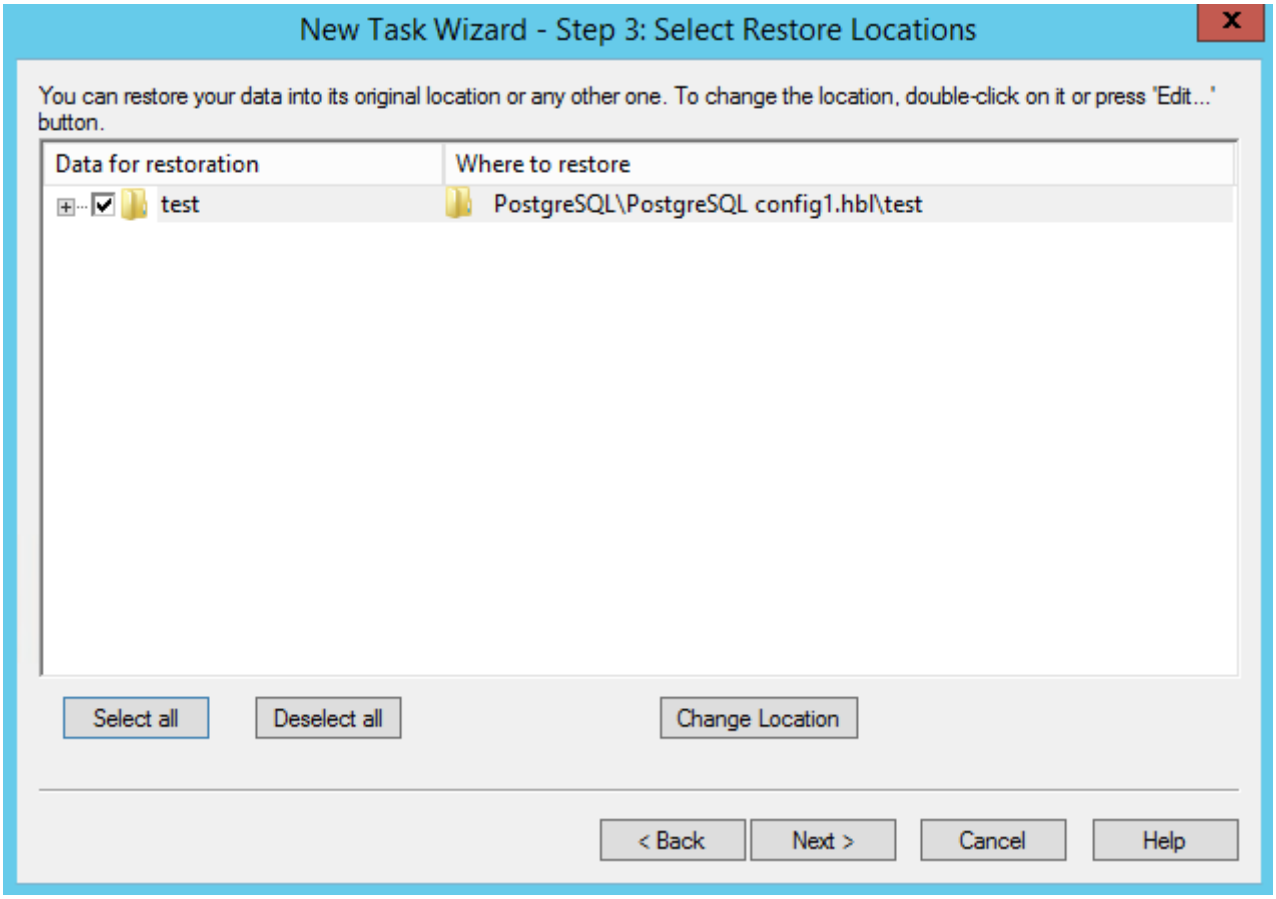
To restore a backup made with the **PostgreSQL** plug-in, follow these steps

1. On the toolbar, click the **New Task** icon.

2. Select **Restore** task, and then click **Next**.

3. Browse for the index file (**backup.hbi**) located in the destination folder. Select it, and then click **Next**.

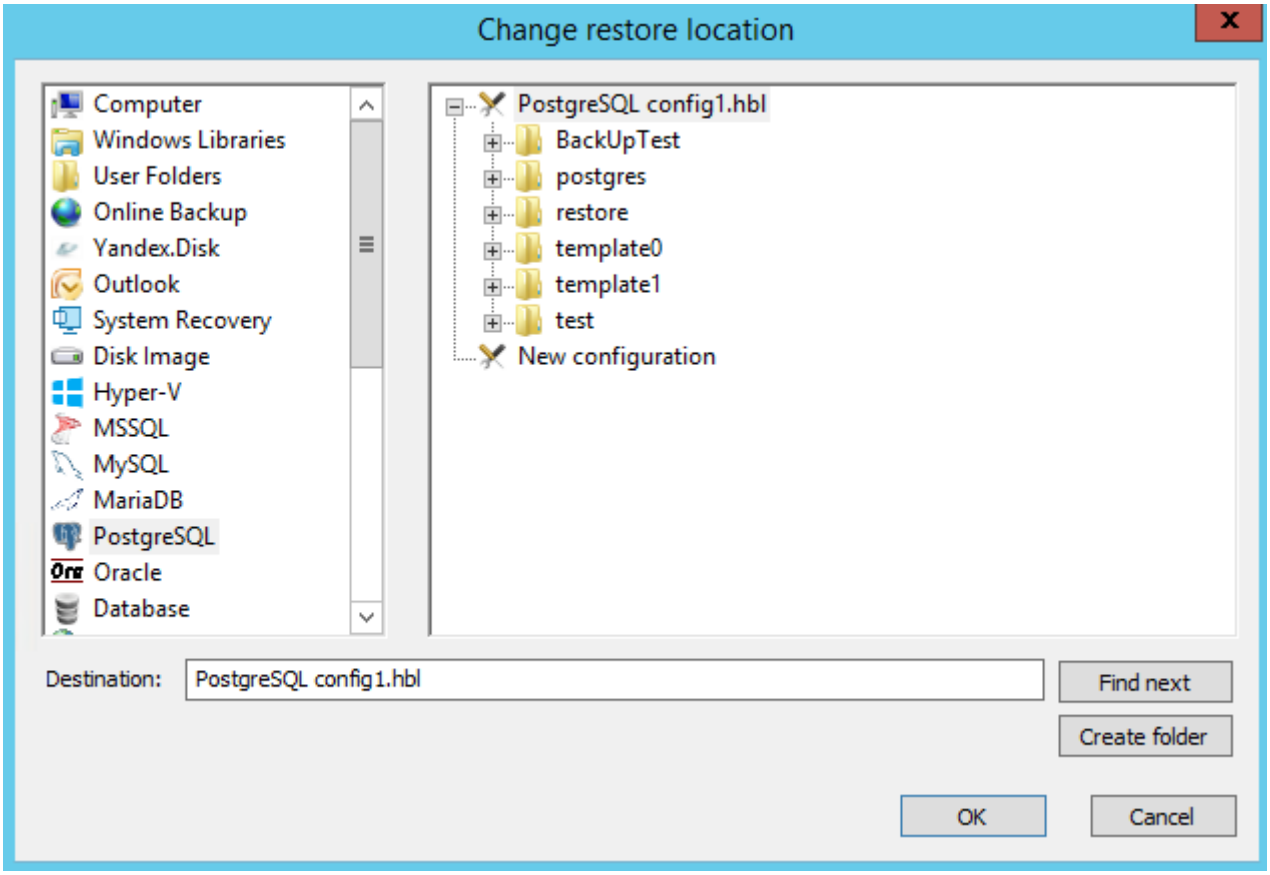
4. In the **Select Restore Locations** dialog, verify the details of restoration.



Selecting PostgreSQL restoration paths

Note: Using the **PostgreSQL** plug-in you must have a configuration that defines how to connect to the database. If you are restoring the backup on the same machine where it was made, then you should already have it. If you want to restore the backup with a different or fresh installation of Handy Backup, then you will need to create it. To do it, follow these steps:

4.1 In the **Select Restore Locations** dialog, select any object (database or table), and then click **Change Location**. The **Change restore location** dialog opens.



Changing restore location to create a PostgreSQL configuration

4.2 Make sure that **PostgreSQL** is selected in the left pane. In the right pane, double-click **New configuration**. This action will open the **Settings dialog**.

4.3 4.3. Create a PostgreSQL configuration named identically to the original configuration. To learn how to do it, please see about configuring PostgreSQL plug-in.

4.4 After creating the configuration, click **Cancel** to return to the **Select Restore Locations** dialog. You don't need to actually change restore location, only create the configuration.

After selecting the backup data for the restoration, you will need to select the type of restoration, to enter the decryption password (for an encrypted backup), etc. These steps are not specific to PostgreSQL, and you can find the respective instructions in the Restore Task chapter.

Database

The **Database** plug-in allows backing up and restoring different databases through the use of standard ODBC (Open Database Connectivity) drivers.

Prerequisites

To use the plug-in, you need to have the respective ODBC driver installed on your system.

File System

File system of the plug-in is organized as follows:

- **Folders** display different ODBC data sources. Folders have no attributes.
- **Files** correspond to database tables. Files have no attributes.

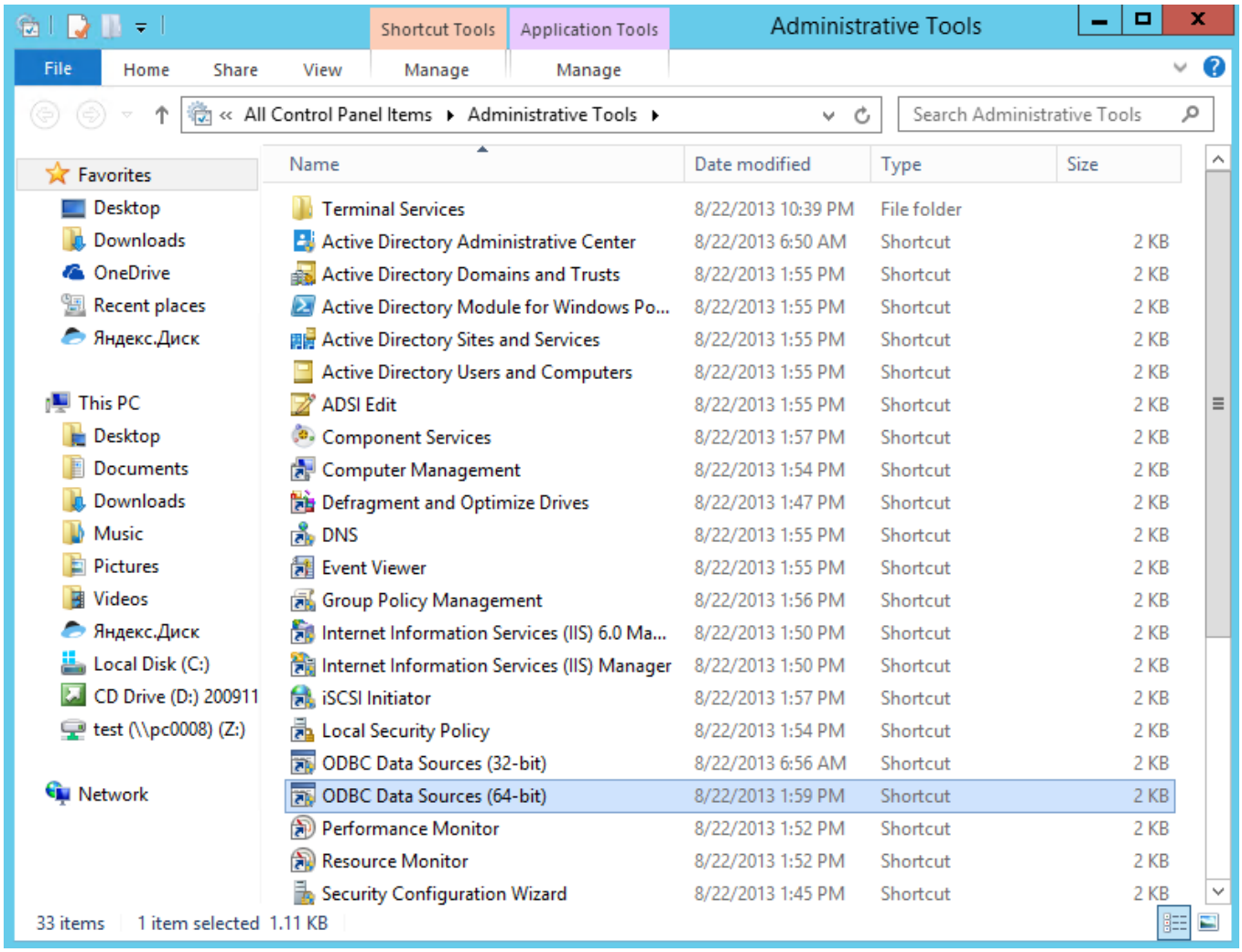
When you open a folder, the program connects to the respective ODBC data source. If it is for some reason not valid (e.g. if you change a password), the program opens a configuration dialog.

See instructions on adding ODBC data sources below.

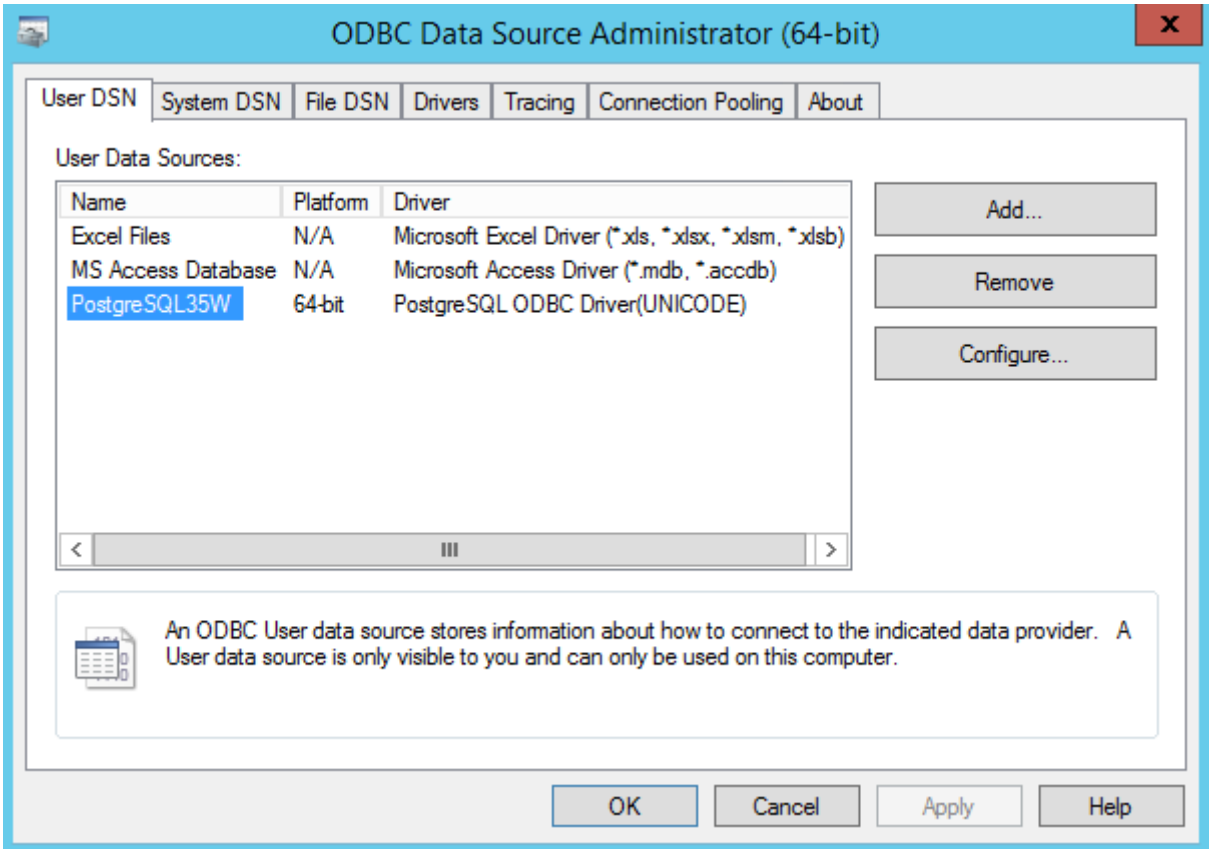
Adding ODBC Data Sources

To add a new ODBC data source, follow these steps:

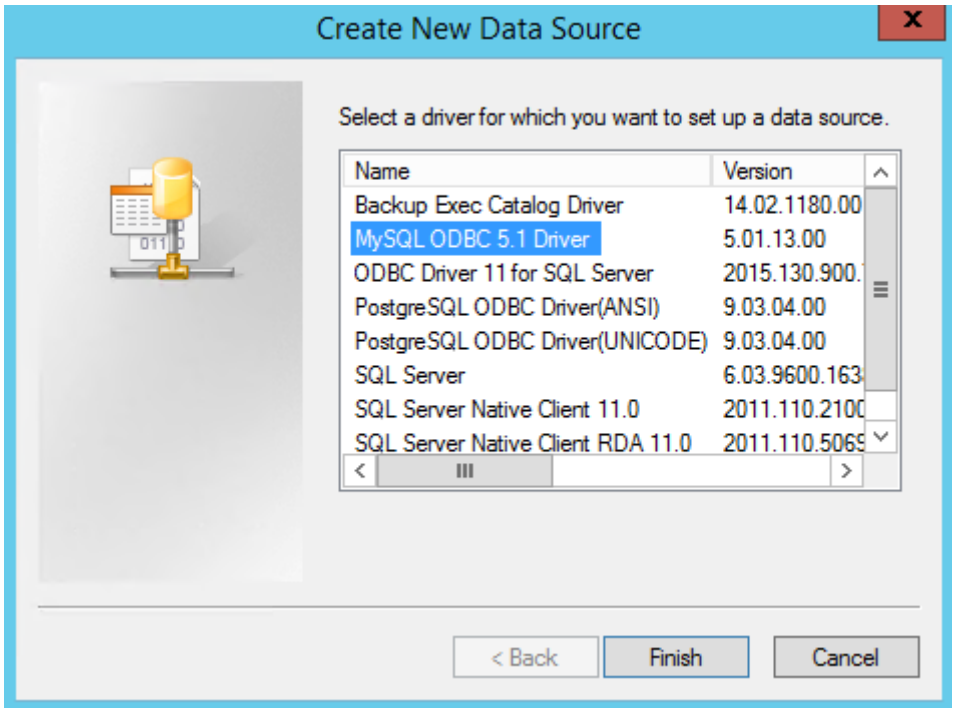
1. Open **Control Panel**, then go to **System and Security**, and then go to **Administrative Tools**.



2. Double-click **Data Sources (ODBC)**. The **ODBC Data Source Administrator** opens.



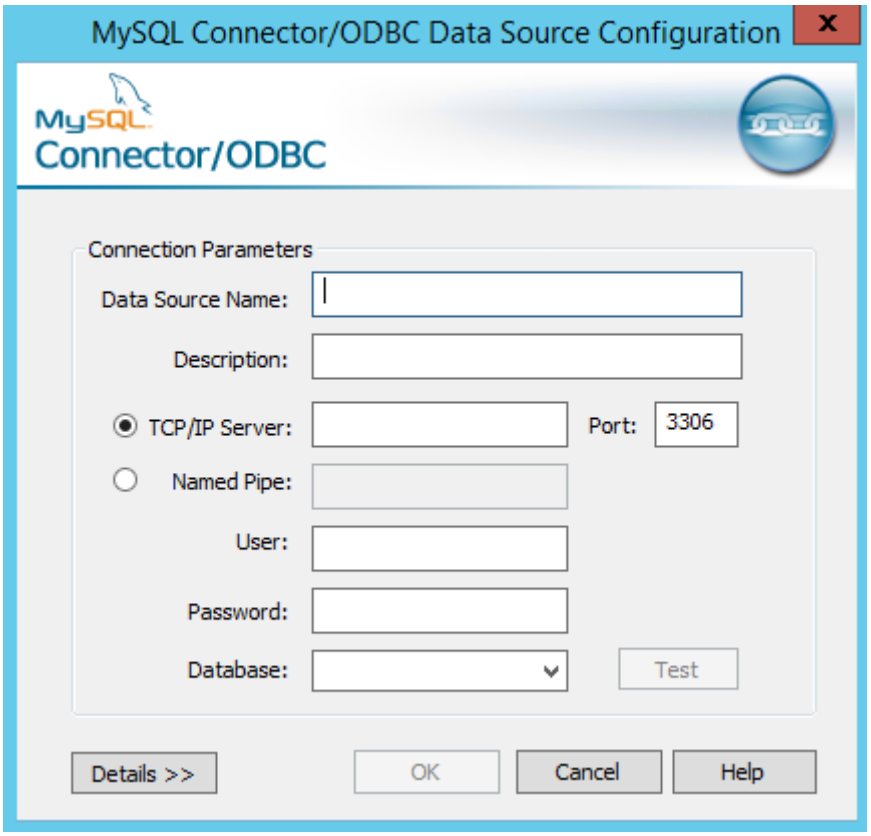
3. In **ODBC Data Source Administrator**, click **Add**. The **Create New Data Source** dialog opens.



4. Select an ODBC driver, and then click **Finish**. The **ODBC Data Source Configuration** dialog opens.

Note: The above instructions are valid for Windows 7, and may slightly vary for other systems.

Then you need to configure a data source for your database. For example, the MySQL configuration dialog looks as follows:



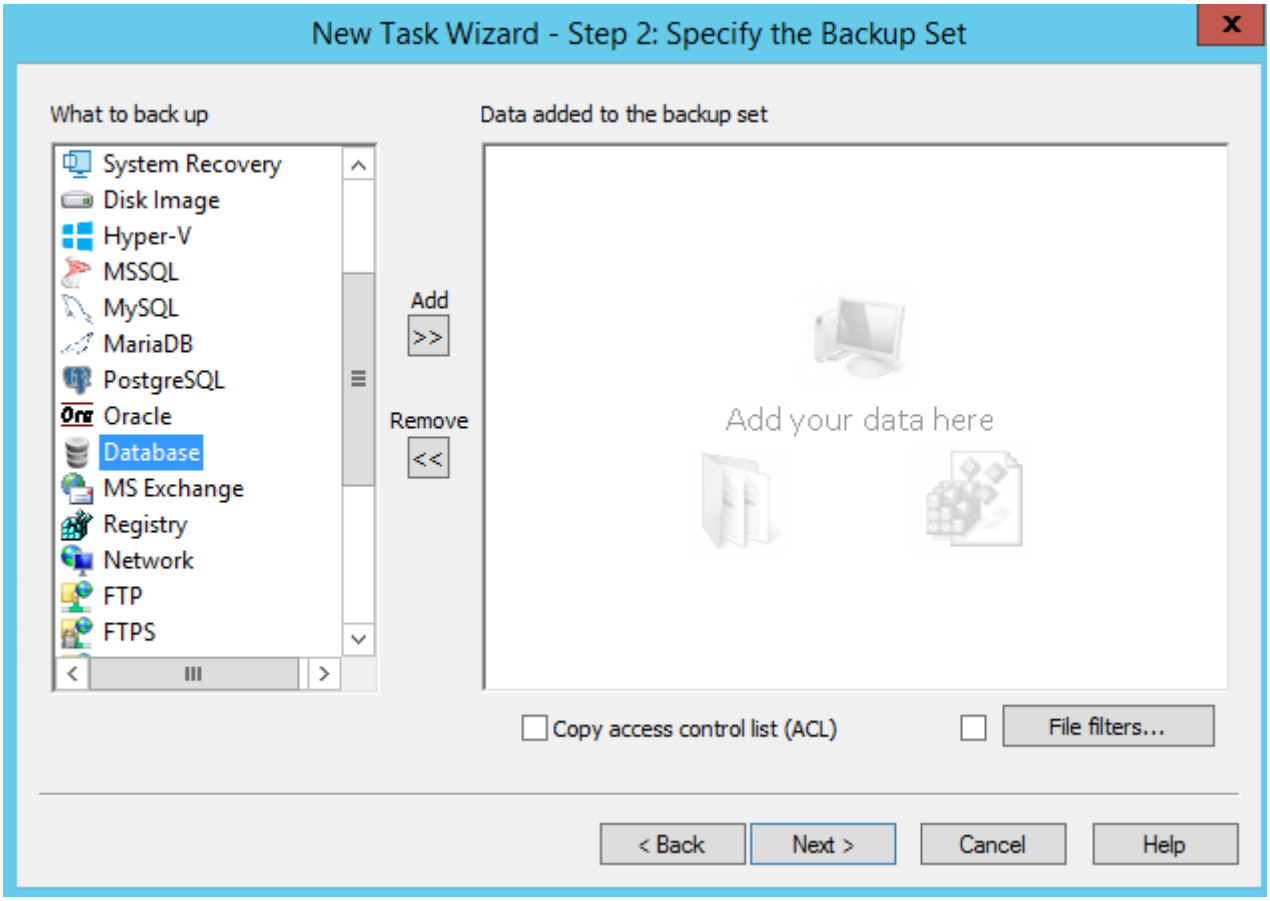
Format of Backup Files

The **Database** plug-in creates files that are named similarly to the names of tables. Each file stores data in a binary format provided by the ODBC connector.

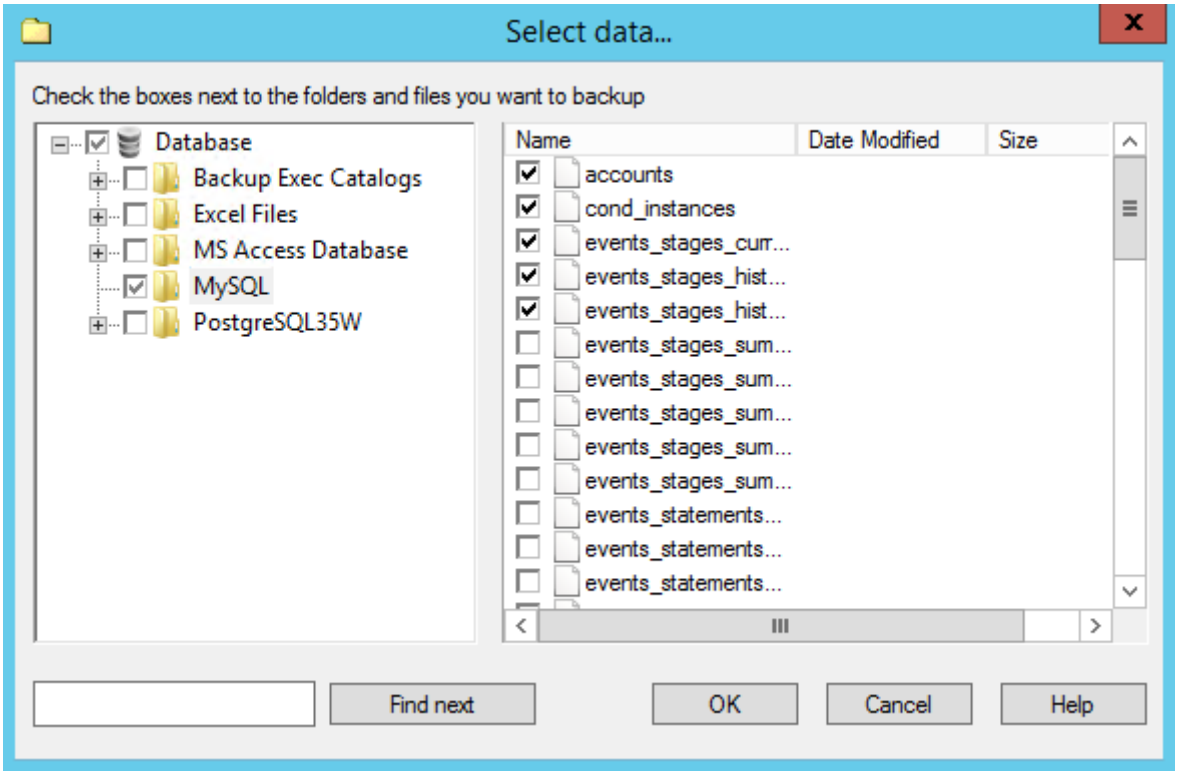
Backing Up

To create a backup task with the use of the **Database** plug-in, follow these steps:

1. Open New Task Wizard.
2. Select **Backup task**, and then click **Next**.



3. In the **Data Sources** pane, select **Database**, and then click **Add**. The **Select data...** dialog opens.



4. Check the boxes next to files and folders (tables and ODBC data sources) that you want to back up.

5. When finished the selection, click **OK**. Selected data appears in the **Backup Set** pane of the New Task Wizard.

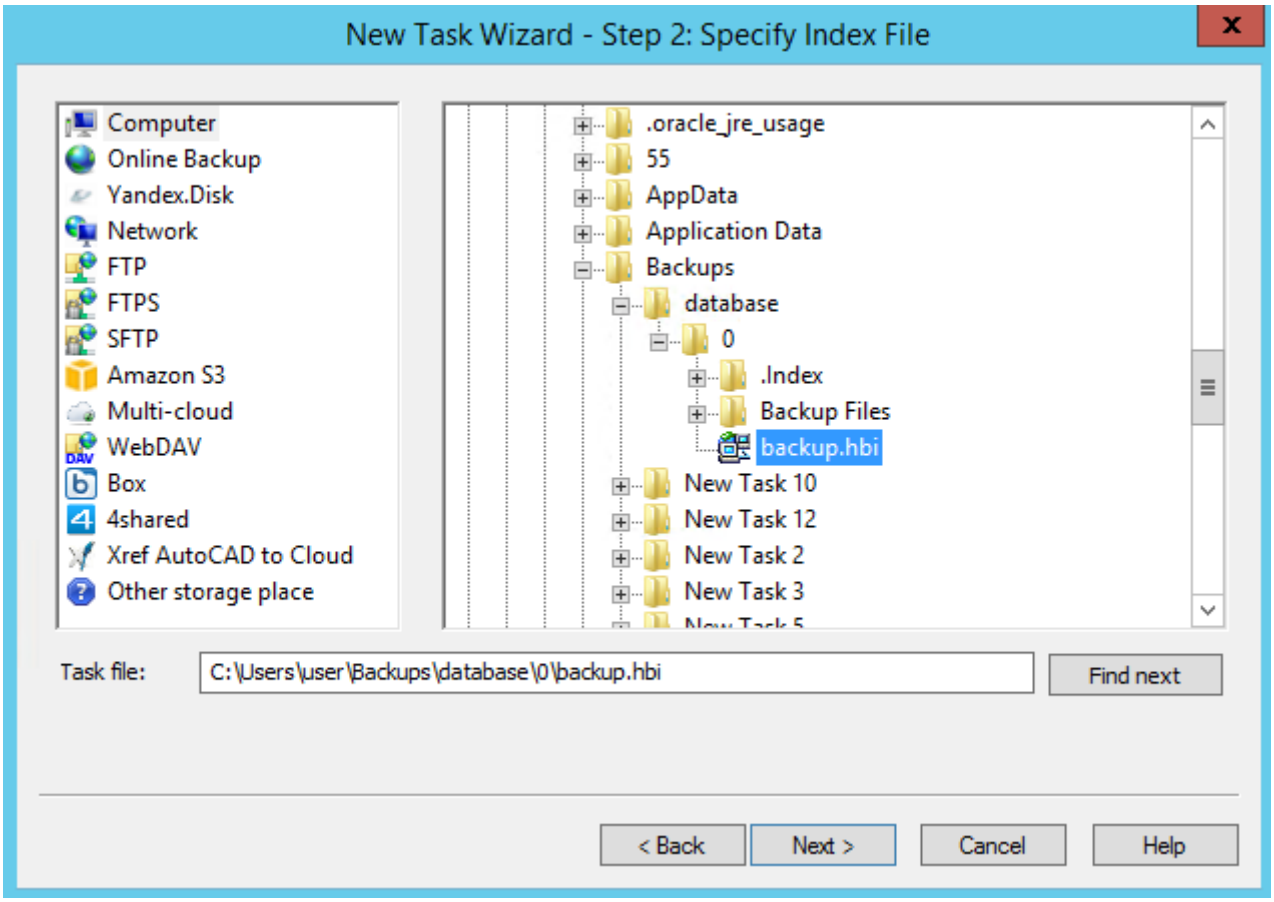
Next steps are common for all **backup** tasks and are not specific to the **Database** plug-in. For detailed instructions on creating backup tasks, refer to Backup Task.

Restoring

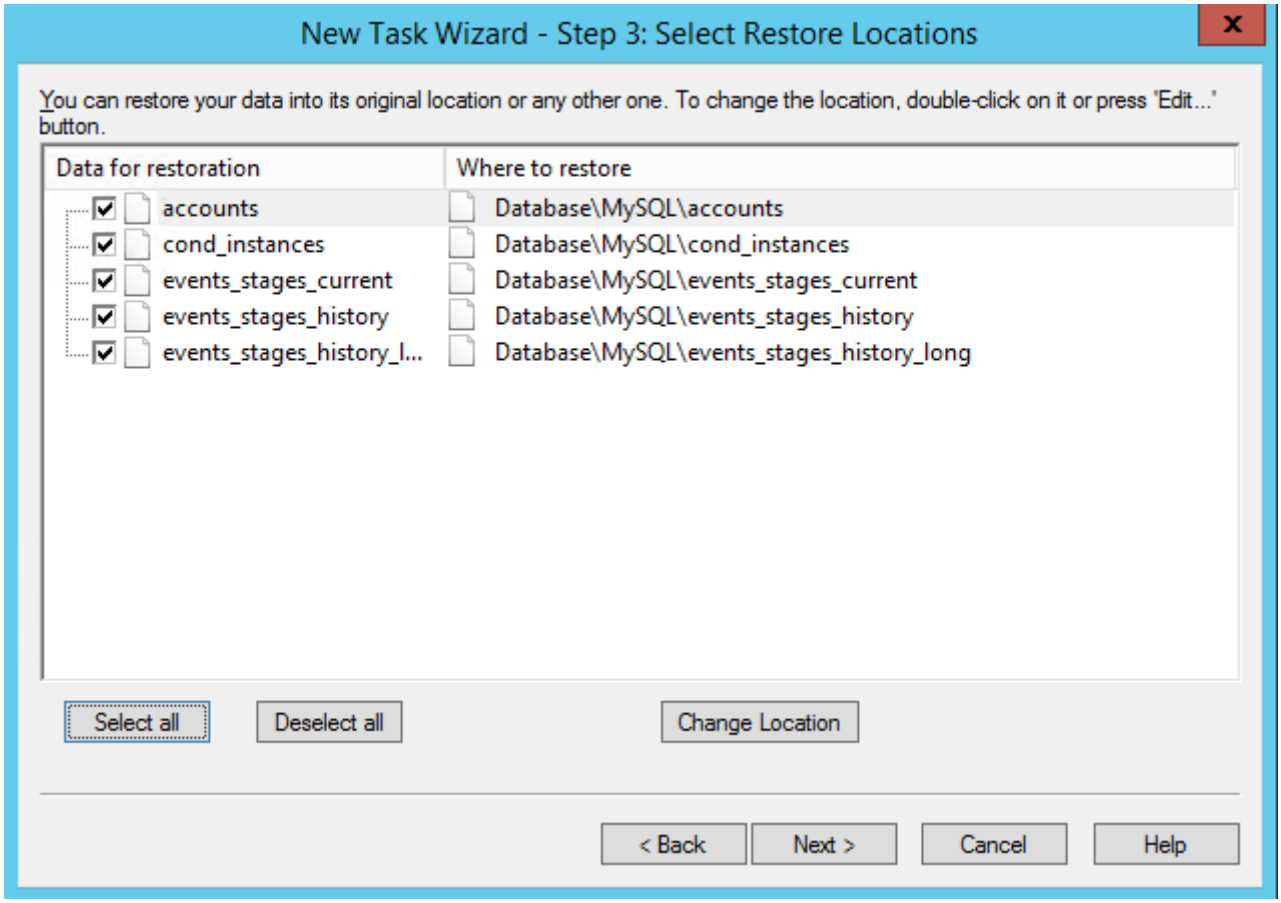
To restore a backup made with the **Database** plug-in, follow these steps:

1. Open New Task Wizard.
2. Select **Restore task**, and then click **Next**.
3. Browse for the index file (**backup.hbi**) located in the destination folder. Select it, and then click **Next**.

For example, if your backups are stored on a local hard disk, then you need to select **Computer** in the **Storage Destinations** pane to the left, and then browse for **backup.hbi** in the **Index File Selection** pane to the right.



4. In the **Select Restore Locations** dialog, verify details of restoration.



In this dialog, you can uncheck data that you don't want to restore. At present, backups made with the Database backup plug-in can be restored only to their original locations, and you can't change it.

In the next steps of the New Task Wizard, you need to specify restoration options and name the tasks. They are not specific to the **Database** plug-in. To learn more, please see Restore Task.

E-mail Plug-in

This plug-in backups email messages from web services over the IMAP protocol.

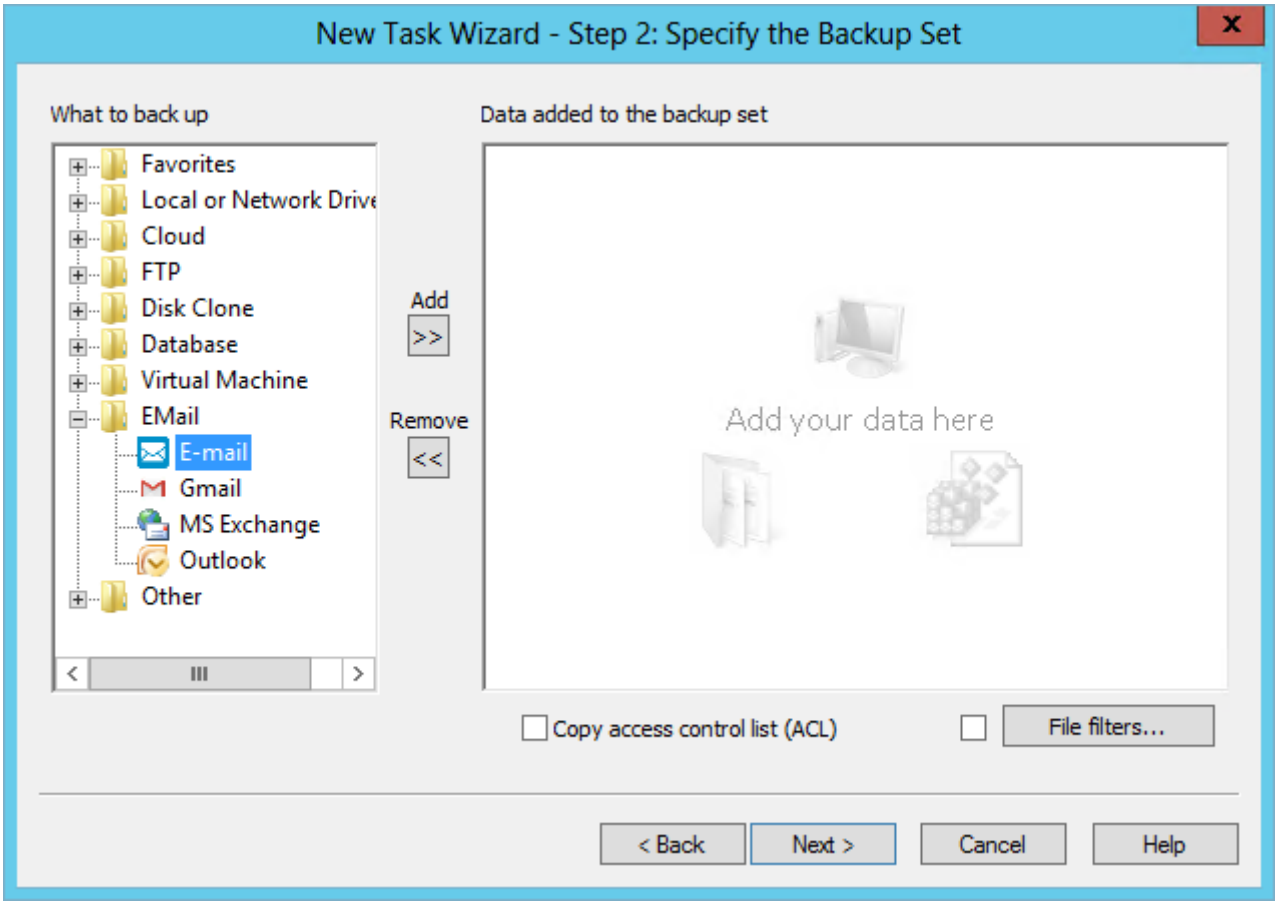
Before Backup or Recovery

Many Web mail servers require an additional permission for using a local client (which Handy Backup is in this context). To give this permission, you can open your email account in a browser and click a button or mark a checkbox in account settings to give this permission.

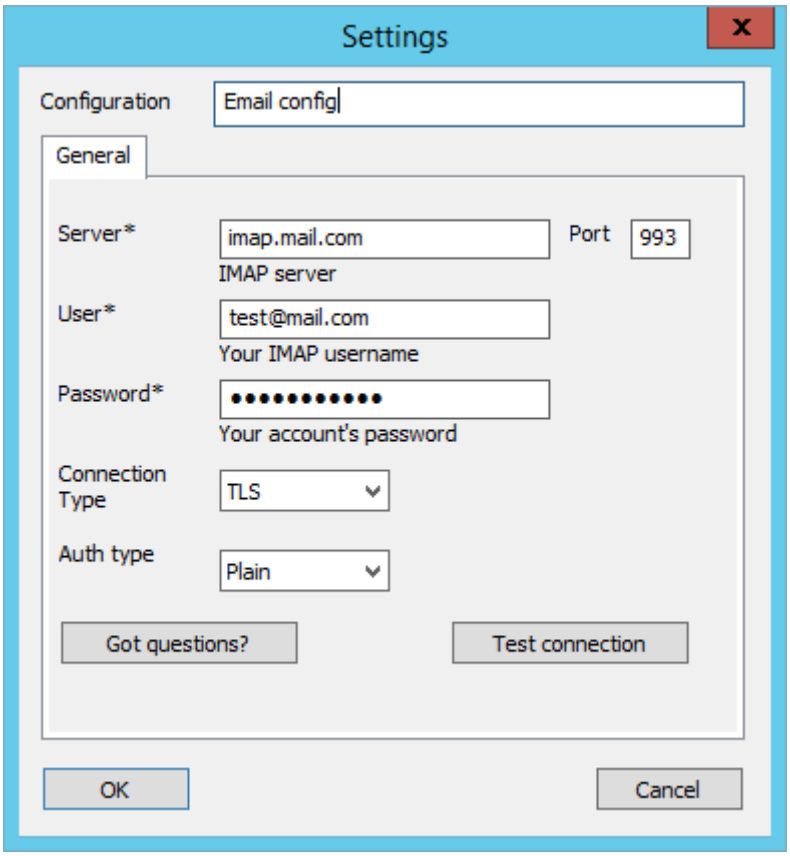
Using the "E-mail" plug-in

To use the plug-in (on an example of Gmail backup here) please follow the instruction below:

1. Create a new Handy Backup task. Select a backup task on the Step 1.
2. On the Step 2, select the "Email" plug-in from "Email" group.



3. In the appearing dialog window, create an email access configuration.



4. Give your configuration some name, typing it in the "Configuration" string at the top.
5. In the "IMAP Server" string, enter a particular IMAP configuration for your server.

For IMAP connections, the typical server name is

imap.(yourserveraddress)

or

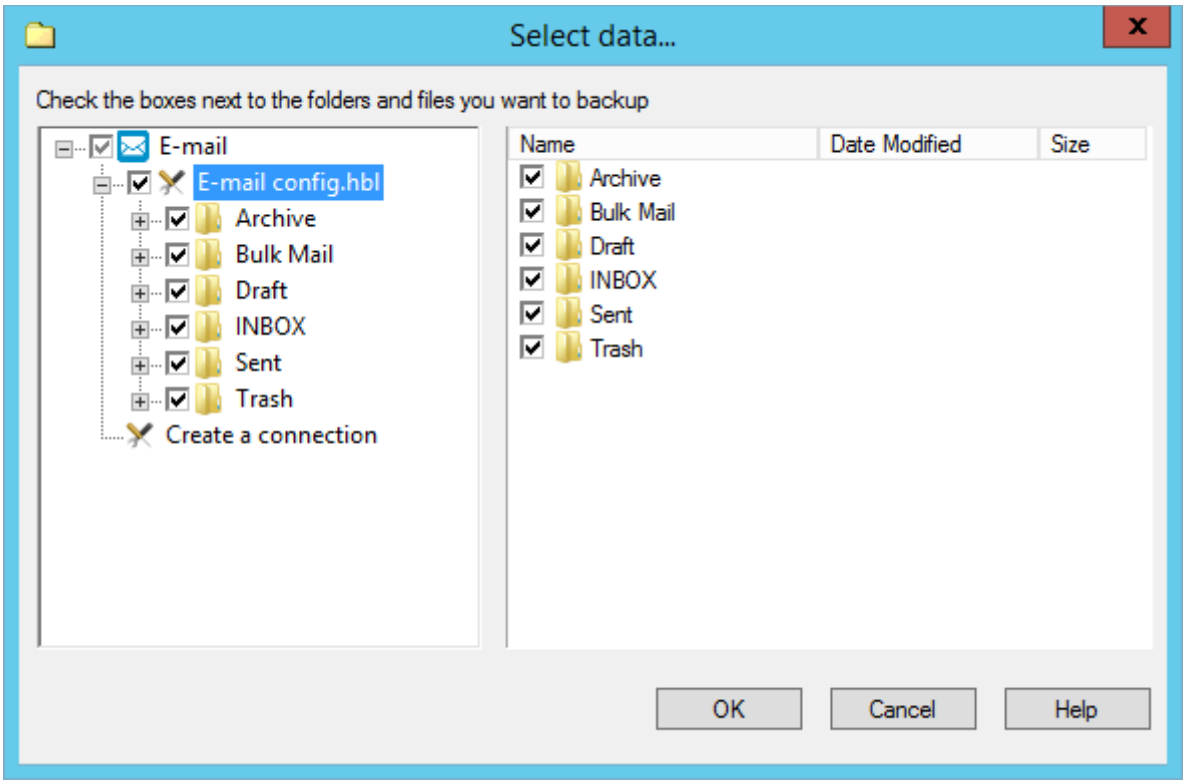
mail.(yourserveraddress)

Here the (yourservername) is a substitution for your webmail server address, without parenthesis or any prefixes over the "imap".

6. Enter the port number (the default port for encrypted IMAP is 993, for unencrypted IMAP is 143).
7. Provide your username and password for an email account onto the appropriate fields.

Note: The server can either require a short username (only a name before "@") or a full name with a server name after "@". For details about server name, please refer to a setup manual for a particular server settings.

8. Select the connection type according to your particular server requirements: TLS, StartTLS or other.
9. Select an authorization type (you can learn what to use from a server settings or via the Internet). The default type is "Plain".
10. Now you can either test your connection, open this page from the program, or just click OK and return to the plug-in window.



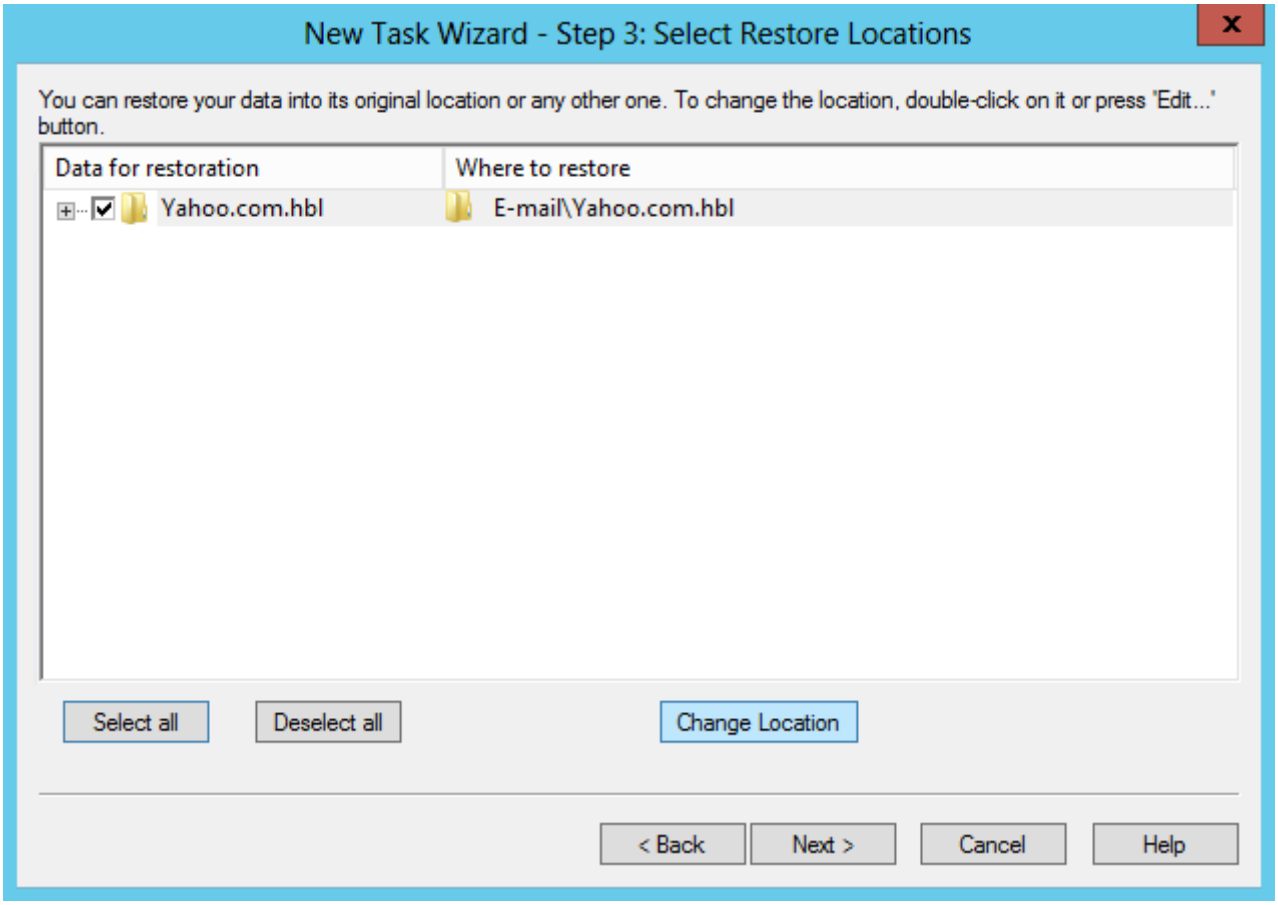
11. You will see the plug-in window with email folders in an account you entered.
12. Check/uncheck the boxes against the particular data you will plan to back up/exclude.
13. Click OK button to return to the Step 2.
14. Now you may add another data to a task; then proceed to next steps.
15. All next steps are unspecific to webmail backup. Read the User Manual for detailing these steps.

Restoring Emails from Backup

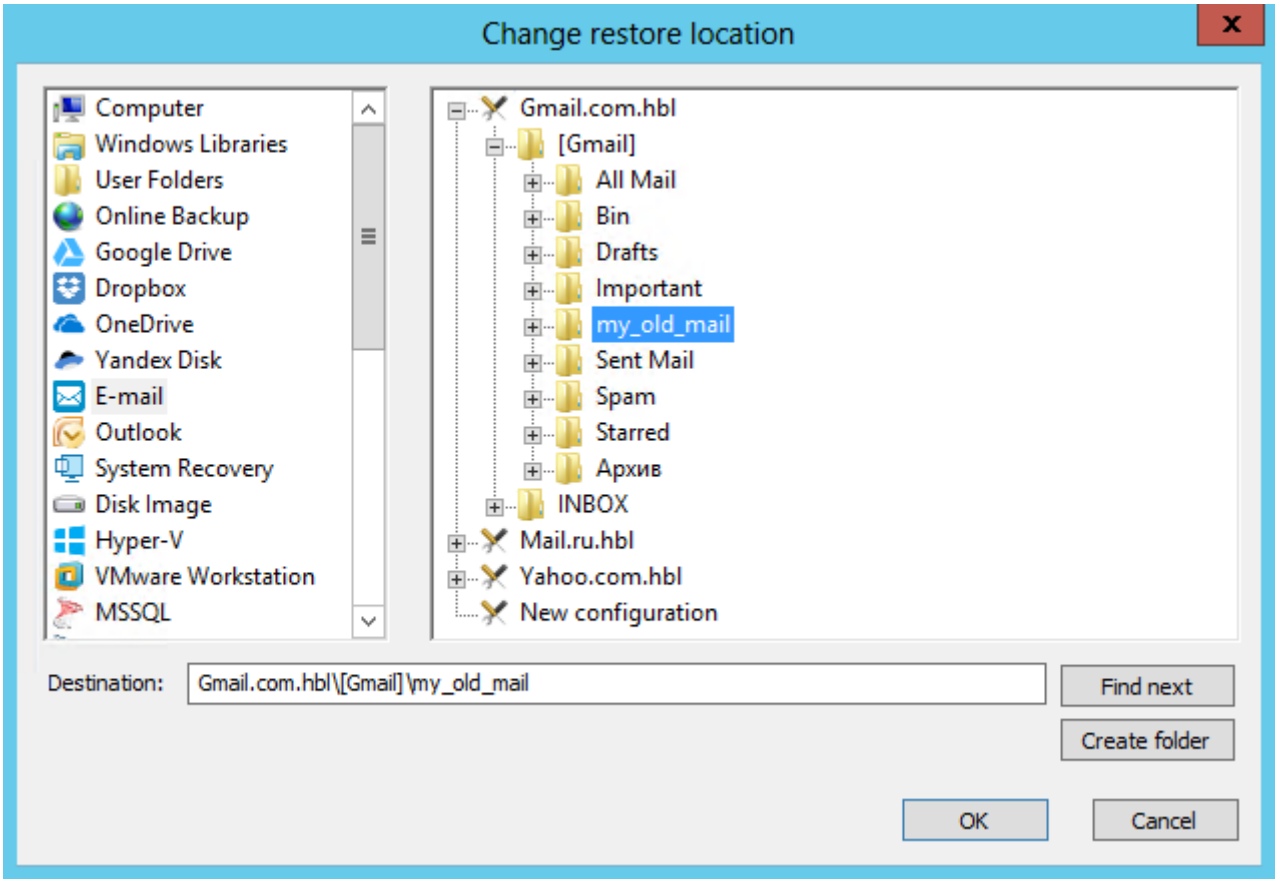
The Email plug-in also allows automatic restoration. To do it, create a restoration task on the Step 1 of the new task wizard. Then select a backup vault on the Step 2 and find the file **backup.hbi**, which contains all the data about restoring email messages.

Duplicating or Moving Email Content

Sometimes, you may have a need to restore some or all of your messages to a different mailbox, or even to a different webmail server than an original copy backup. For these cases, click on the "**Change restore location...**" button in the restoration dialog when creating a new task, and select a new destination.



After selecting this option, you will see a data locations window. Select the "**Email**" plug-in, and then choose a new server to restore your data. We are strongly recommending saving the information moved to another server in a new folder – click the "**Create folder**" to do it!



Plug-in Architecture

The Email plug-in uses the IMAP protocol for data connection. Almost all modern webmail services, including Gmail, Yahoo! and Outlook mail, support IMAP. This protocol allows both backup and restoration of email bases.

Saving Email Backups

Handy Backup stores email copies in the dedicated EML file format, supported by many email local clients. Therefore, you can read, modify, sort or change the backups, assuming these backups are uncompressed and/or unencrypted. You can even restore EML just by moving it with a file manager!

MS Exchange

The **MS Exchange** plug-in allows backing up and restoring Information Stores of Microsoft Exchange Servers. The plug-in allows working with Exchange Server located on local computer only. Its work relies on the following Windows services:

- **Exchange VSS Store Writer** (always installed as a part of an Exchange Server);

- **Volume Shadow Copy Service.**

Backup is made without stopping the server (the use of the VSS service ensures consistency and recoverability of snapshots). To restore data, the plug-in firstly stops Exchange Store Service and all dependent services, then copies the files, and then re-launches them.

Supported Versions

The plug-in supports all versions of Microsoft Exchange Server 2003, 2007, 2010 and 2013. It is important that your version of Handy Backup match your operating system, i.e. for 64-bit version of Windows Server, you need to use 64-bit version of the program.

Privileges

To use the **MS Exchange** plug-in, Workstation must be launched from a user account that can make API calls to the **Exchange VSS Store Writer** and **Volume Shadow Copy Service** services.

Plug-in File System

In the file system provided by the plug-in, any path starts with **Microsoft Exchange Server\Microsoft Information Store**. Inside these folders, the file system is organized as follows:

- **Folders** correspond to Exchange Servers and carry the respective names. They have no attributes.
- **Files** correspond to Stores (databases) available on the respective Exchange Server. File names correspond to internal identifiers of the databases. They have no attributes.

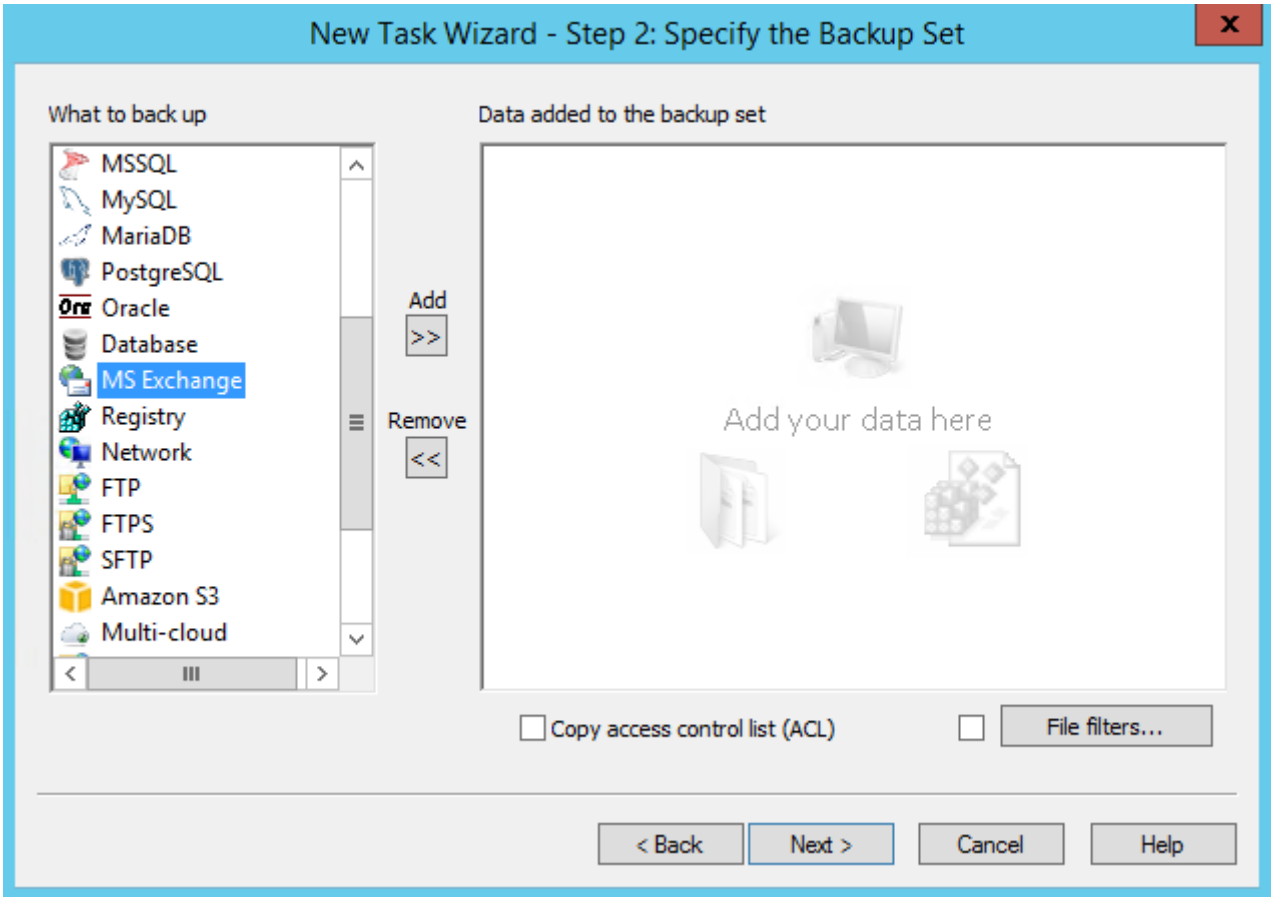
Since the plug-in provides no attributes for files and folders, it cannot be used with incremental backup option. When files of the **MS Exchange** file system are compared to files already backed up, they are always considered as new, which means that each increment is effectively a full backup. To optimize the usage of disk space, use differential type of backup.

Format of Backup Files

During backup, the software creates files that are named similarly to identifiers of databases. Each file is basically an archive that contains all data files and logs of the respective database.

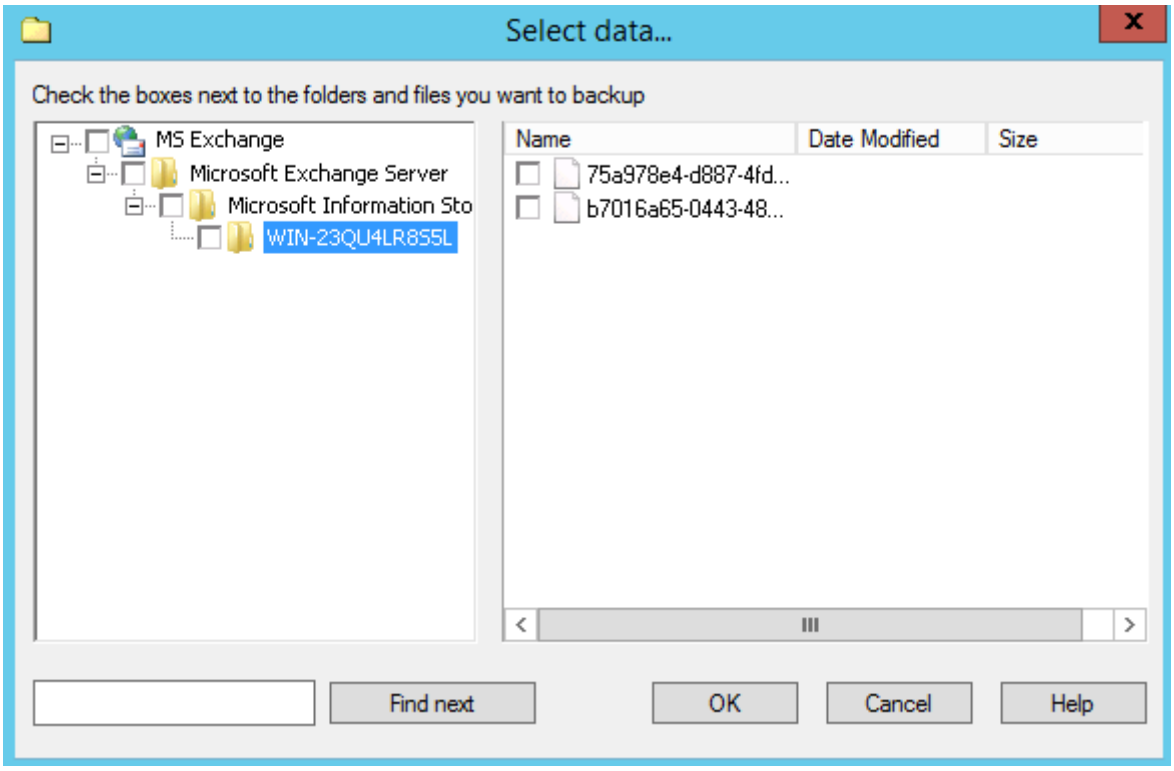
Backing Up

The MS Exchange plug-in can only be as a source of data for backup tasks. See Specify Backup Set for more details.



To add an Exchange Server Store to backup set, follow these steps:

1. In the **Data Sources** pane, select **MS Exchange**, and then click **Add**. The **Select data...** dialog opens.



2. Check the boxes next to databases (files of the **MS Exchange** plug-in) that you want to back up.
3. When finished the selection, click **OK**. Selected data appears in the **Backup Set** pane of the New Task Wizard.

Restoring

At present, you can only restore backups made with the **MS Exchange** plug-in only to their original locations. Because of this, the process of restoration is very straightforward:

1. Open New Task Wizard.
2. Select **Restore task**, and then click **Next**.
3. Browse for the index file (**backup.hbi**) located in the destination folder. Select it, and then click **Next**.
4. Skip the **Select Restore Locations** dialog by clicking **Next** (as there is no way to restore data to a different location).
5. Skip the next steps by clicking **Next**.

When you run the restoration, the plug-in firstly stops the Exchange Store Service and all Windows services that depend on it. Then it copies the files to their original locations, and re-launches the services.

Outlook

The **Outlook** plug-in lets you quickly access data files of Microsoft Outlook, Outlook Express and Windows Mail. The main idea is that you can back up all e-mails without knowing exactly where the files are located.

The plug-in is user-specific and depends on the account under which the Workstation component runs.

Prerequisites

The **Outlook** plug-in inherits some functionality from the Computer plug-in. Particularly, if the files are locked by other applications, it copies them with the use of the **Volume Shadow Copy Service**. If you don't have this service running, then you need to close your e-mail client to perform a backup. If you want to run backups without closing e-mail client, you need to have the VSS service running on your system, and the **Workstation** component must run from a user that can access it.

Plug-in File System

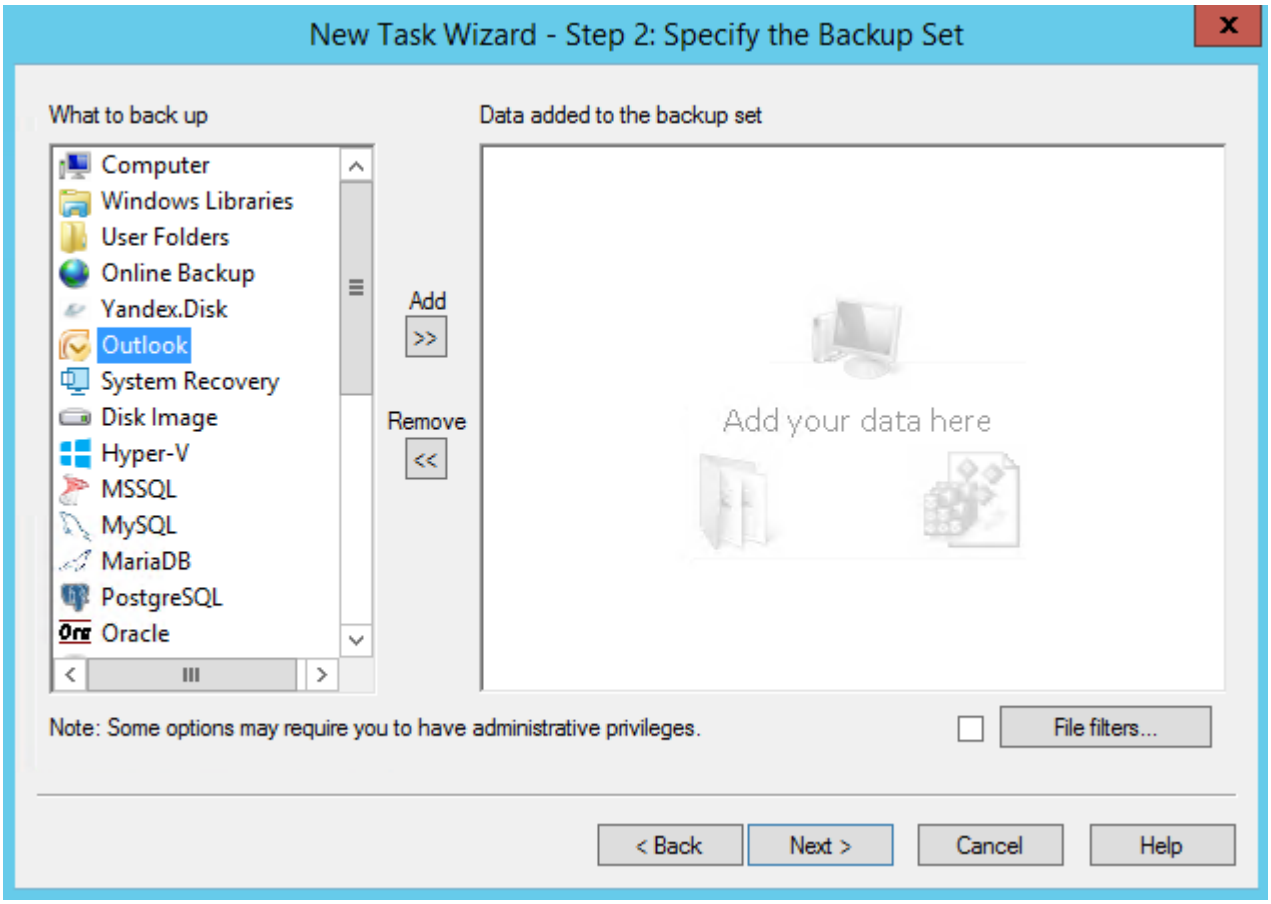
The plug-in file system is organized as follows:

- **Top-level folders** correspond to e-mail clients installed on your system: **MS Outlook**, **Outlook Express**, or **Windows Mail**. They have no attributes.

- **Files** in the top-level folders correspond to data files of the respective e-mail client. They have all common file system attributes, such as file size, time of creation and modification, and other.

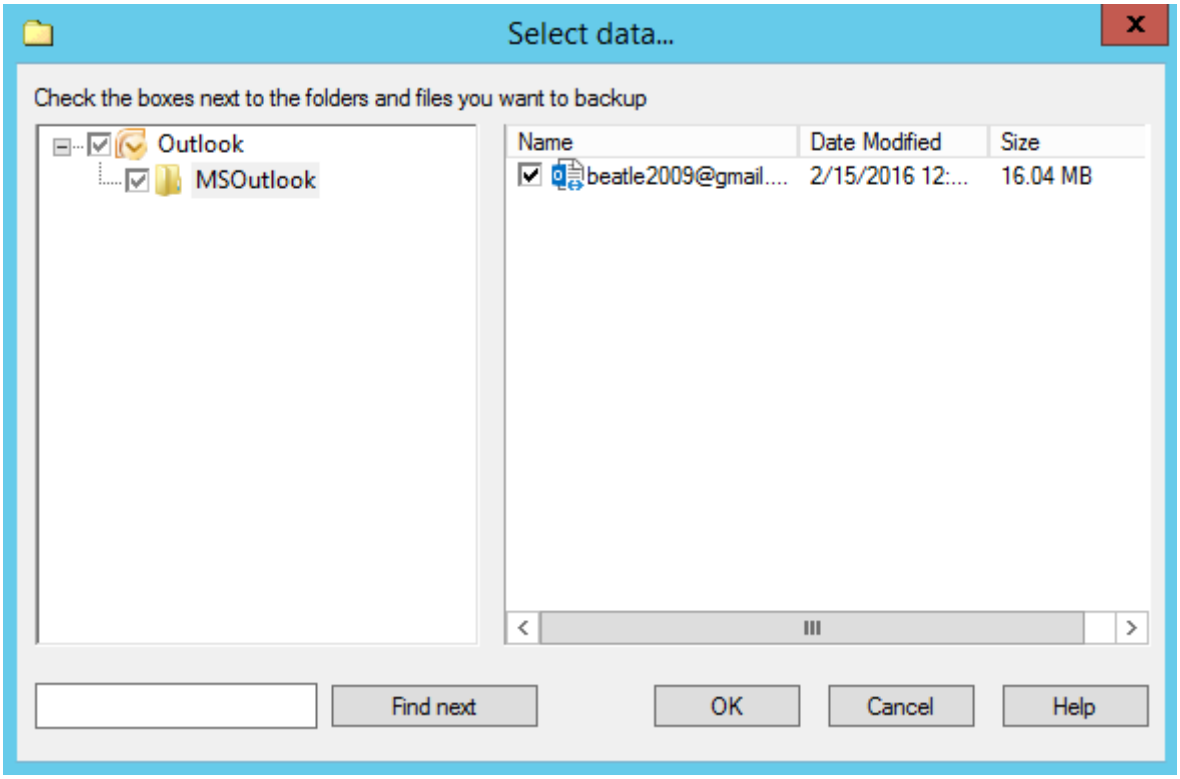
Backing up

The **Outlook** plug-in can be used as a source of data for **backup** tasks, and as a target folder for **restore** tasks.



To use the plug-in in a backup task (in Step 2: Specify the Backup Set of the New Task Wizard), follow these steps:

1. In the **Data Sources** pane, select **Outlook**, and then click **Add**. The **Select data...** dialog opens.



If your e-mail client has several accounts, the respective folder will have several data files (even if they are physically located in different places).

2. Check the boxes next to files and folders that you want to back up.
3. When finished the selection, click **OK**. Selected data appears in the **Backup Set** pane of the New Task Wizard.

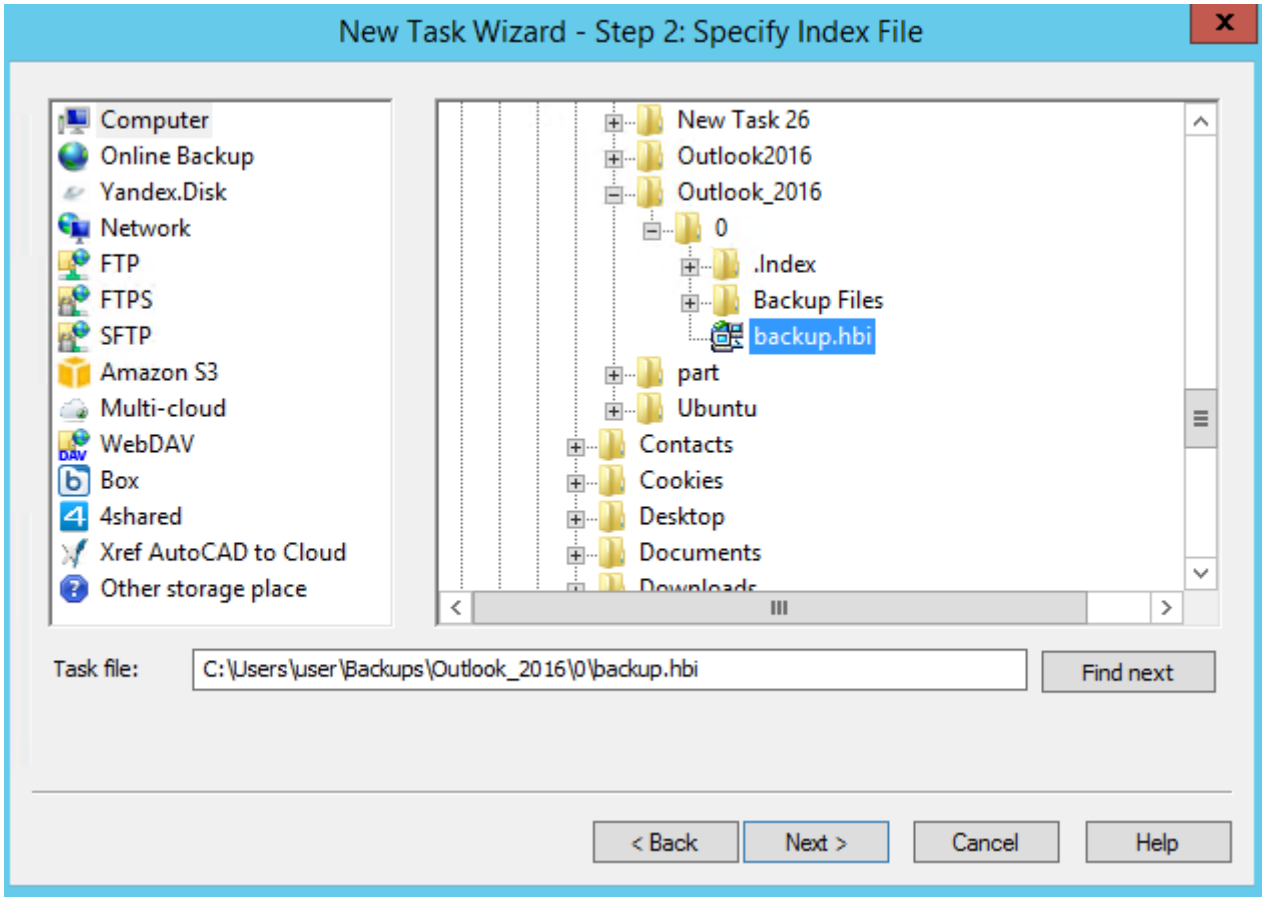
For a complete instruction on how to create a backup task, please refer to Backup Task.

Restoring

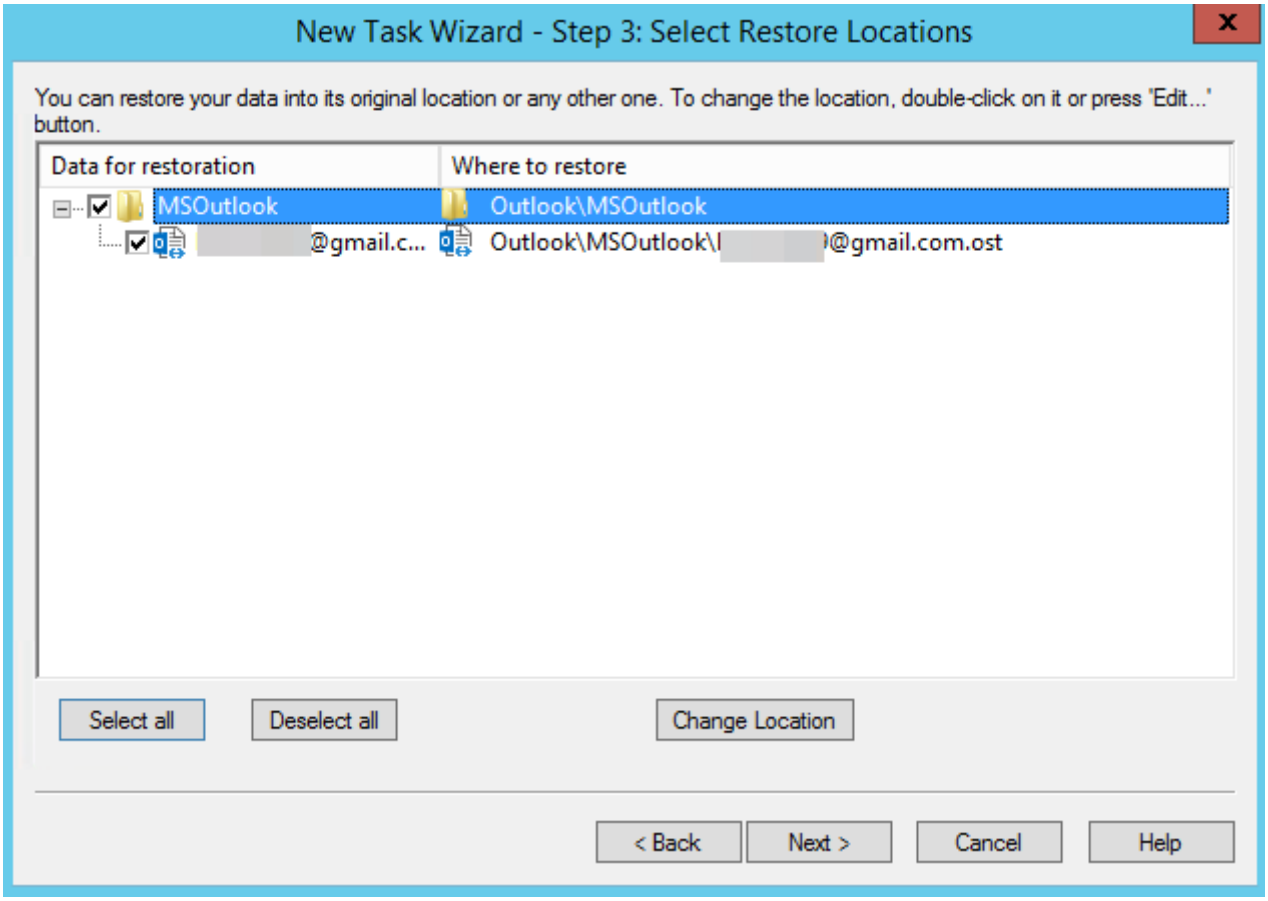
To restore files copied with the **Outlook** plug-in, follow these steps:

1. Open the New Task Wizard.
2. Select **Restore task**, and then click **Next**.
3. In the **Specify Index File** dialog, browse for a backup index file (**backup.hbi**), and then click **Next**.

For example, if backups are stored on a local hard disk, select **Computer** in the **Storage Destinations** pane to the left, and then browse for **backup.hbi** in the **Index File Selection** pane to the right.



4. In the **Select Restore Locations** dialog, check details of the restoration.



At the moment, you can restore files of the **Outlook** plug-in only to their original locations.

After verifying restoration details, you will need to select type of restoration, specify scheduling and task name. These steps are not specific to the **Outlook** plug-in. For more details on restoration, please see Restore Task.

Gmail Plug-in

This dedicated easy-to-use plug-in backs up messages from the popular Gmail service. You can quickly backup and restore an entire account, a folder or as few as one single message by using this plug-in.

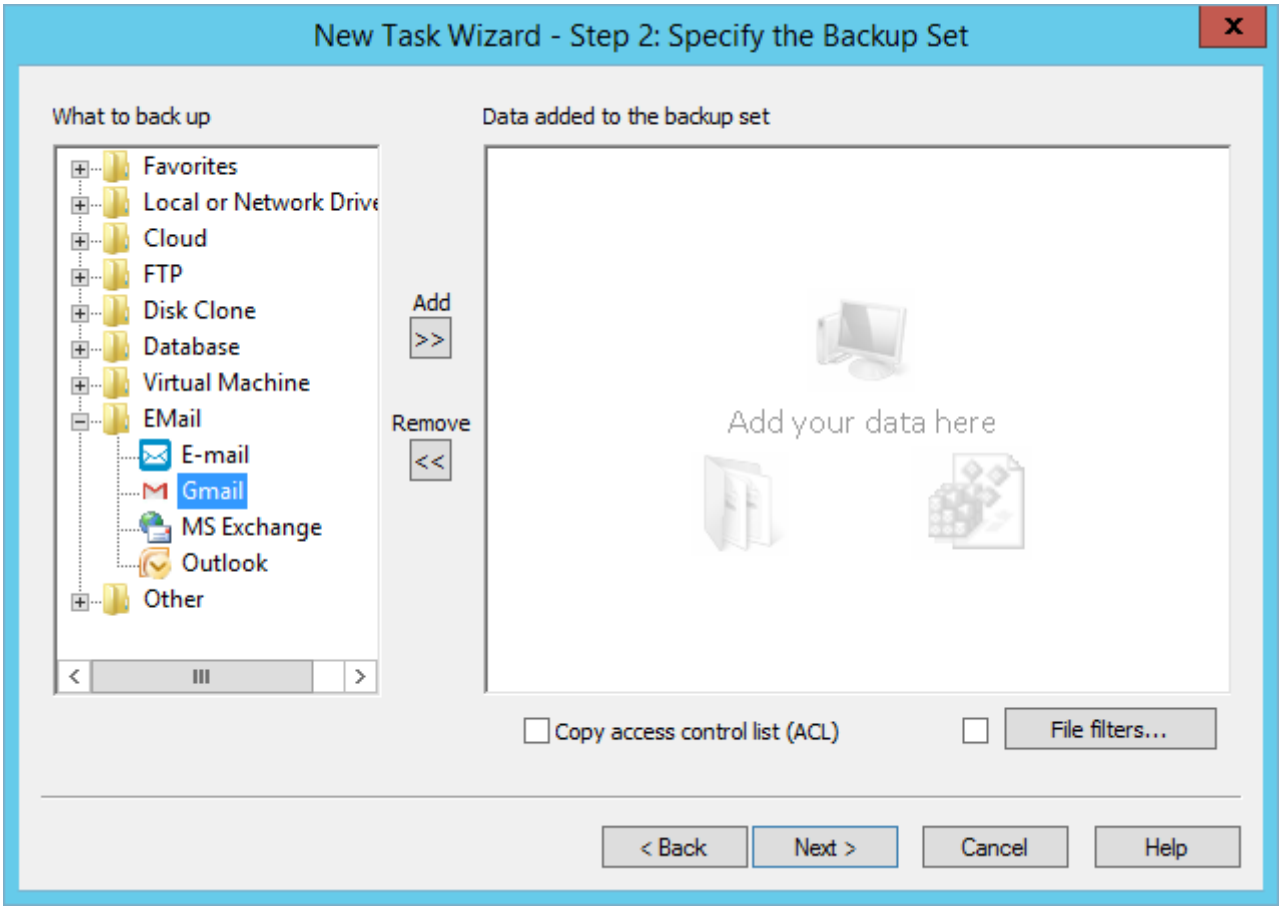
Plug-in Architecture

The **Gmail plug-in** utilizes both the IMAP mail transferring protocol and the Google Mail API, providing the stable and secured connections.

Organizing Backup Task

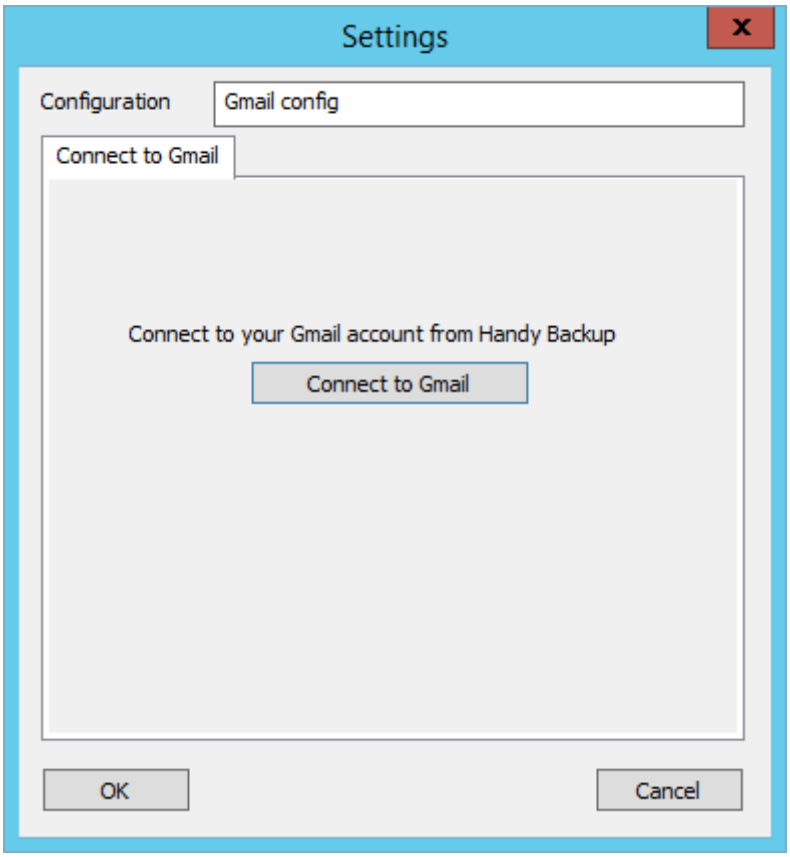
To set up the task with the Gmail plug-in, please follow the next instruction:

1. Open Handy Backup and create a new task. Select a **backup task** on the Step 1.
2. On the Step 2, select the **Gmail plug-in** from "Email" group.



3. Double-click onto the "**Create a connection**" string on the right pane.

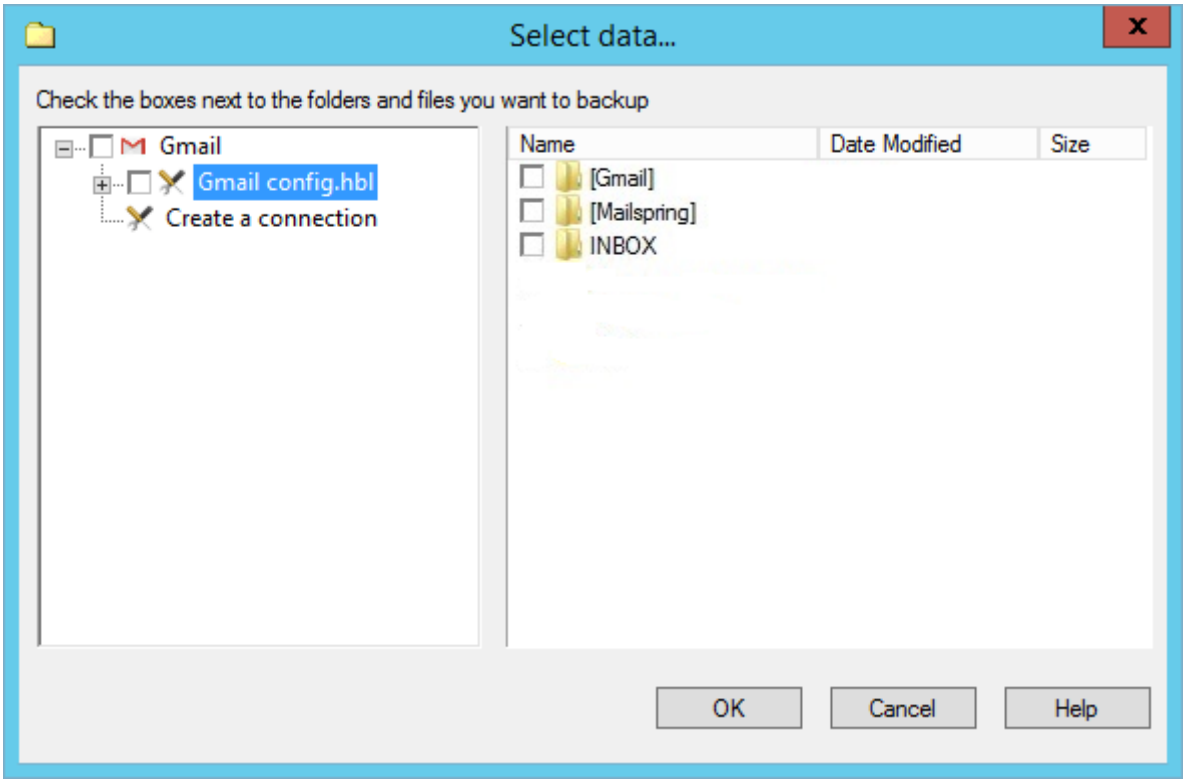
4. In the next dialog window, give a name for your particular Gmail backup configuration.



5. Click to the "**Connect to Gmail**" button.

> **Caveat!** To connect Gmail successfully, you must open any browser manually and authorize on the mail login page before clicking "Connect to Gmail" button in Handy Backup!

6. You will see a web browser window with a Gmail login page opened.
7. Enter to your Gmail account through the Web interface as usual.
8. Do not forget to allow Handy Backup accessing your Gmail account when Google will ask you this question.
9. Now dooble-click onto your new configuration name in the plug-in window. This will open you an access to the Gmail account.



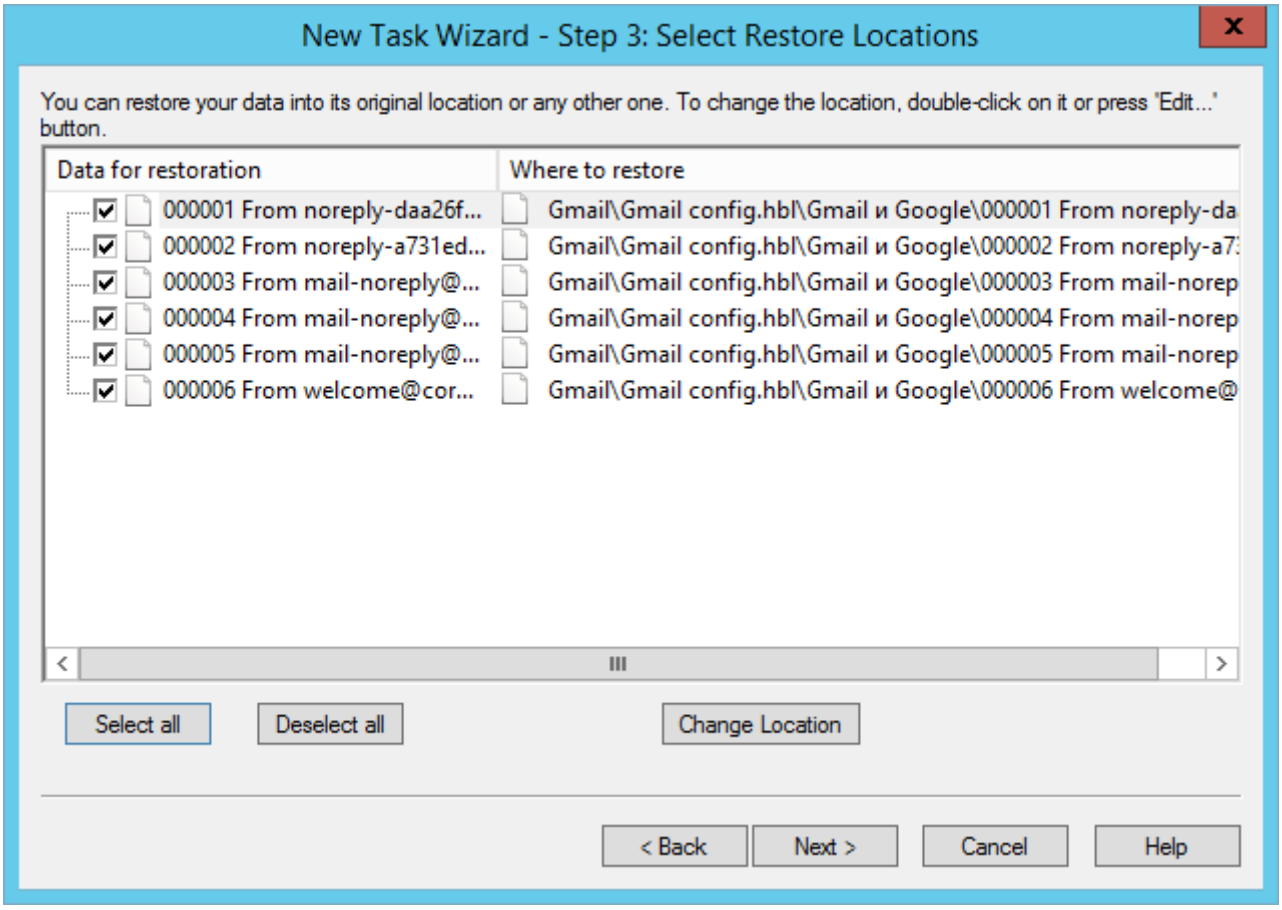
10. Mark the checkboxes against the names of data from your account to back up.

> **Note:** You can select separate messages or entire folders. To browse folders for the messages you need, use "+" and "-" symbols to expand or hide the folder content.

11. After finishing, click OK and return to the Step 2.
12. Now you may add another data to your backup task; then proceed to next steps.
13. All next steps are unspecific to Gmail backup. Please read the User Manual for learning these steps in details.

Restoring Emails from Backup

You can also use the Gmail plug-in for automatic message restoration. To do it, create a restoration task on the Step 1 of the new task wizard. Then on the Step 2, select a backup storage containing your Gmail data and find the file called ***backup.hbi***, which provides the program all data about Gmail backup.



An advice: You can also browse your Gmail backup dataset without complete restoration, to find and read/process any uncompressed, unencrypted message (Handy Backup stores backups in clearly readable native data formats). In addition, you can restore separate messages instead of full recovery.

Duplicating or Moving Gmail Messages

Due to native email format of all messages backed up by Gmail, you can restore the Gmail backup content not only to its original location, but also to another Gmail account by using the same "Gmail" plug-in, or even to another web server that supports the same "EML" message format as Gmail.

Registry

The **Registry** plug-in provides access to Windows Registry keys and values. It is user-specific and depends on privileges and account under which the Workstation component runs.

Primary use case of the plug-in is to back up configuration and installation information of Windows applications. It is generally used in combination with the Computer plug-in.

Plug-in File System

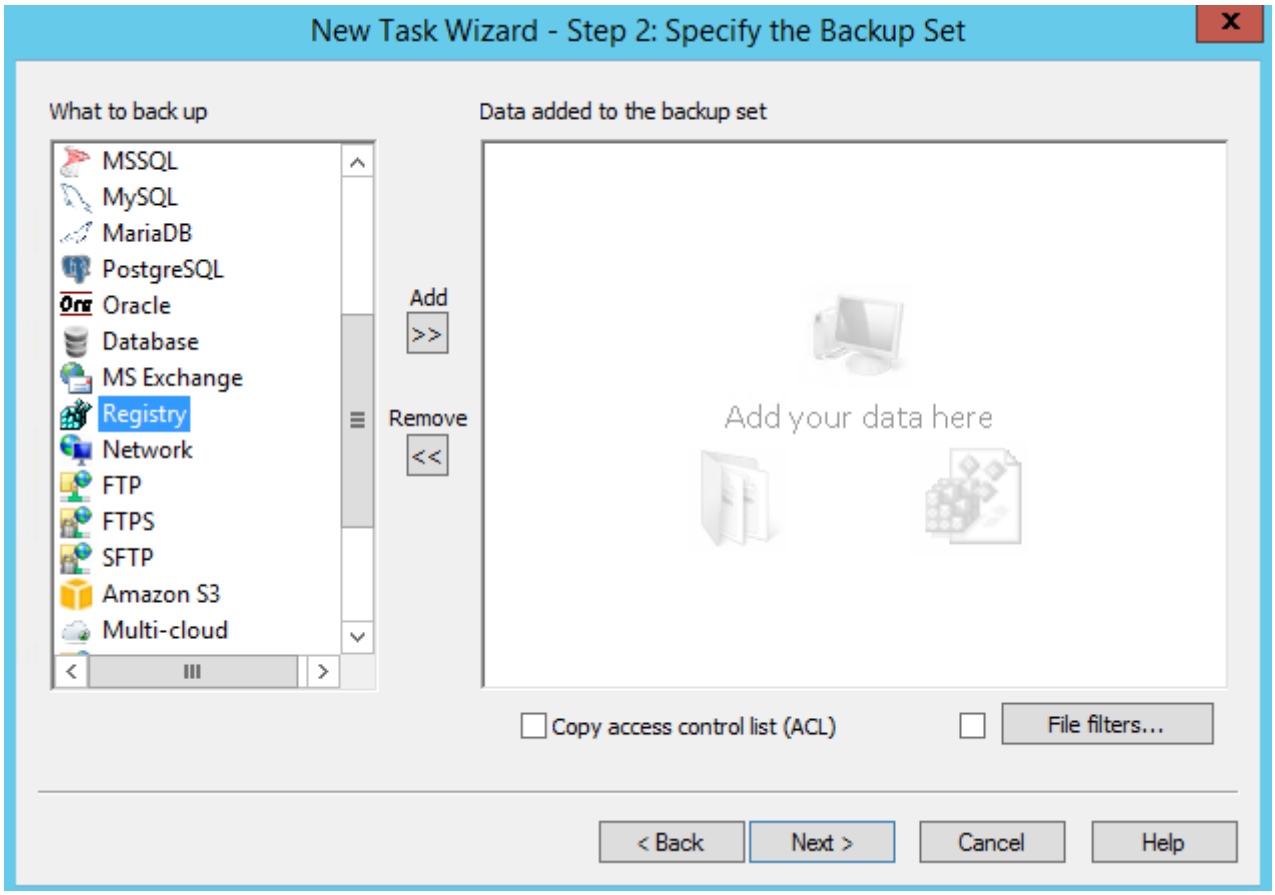
File system provided by the **Registry** plug-in is organized as follows:

- **Folders** correspond to registry keys. Supported attributes: time of modification.

- **Files** correspond to registry values. Supported attributes: file size.

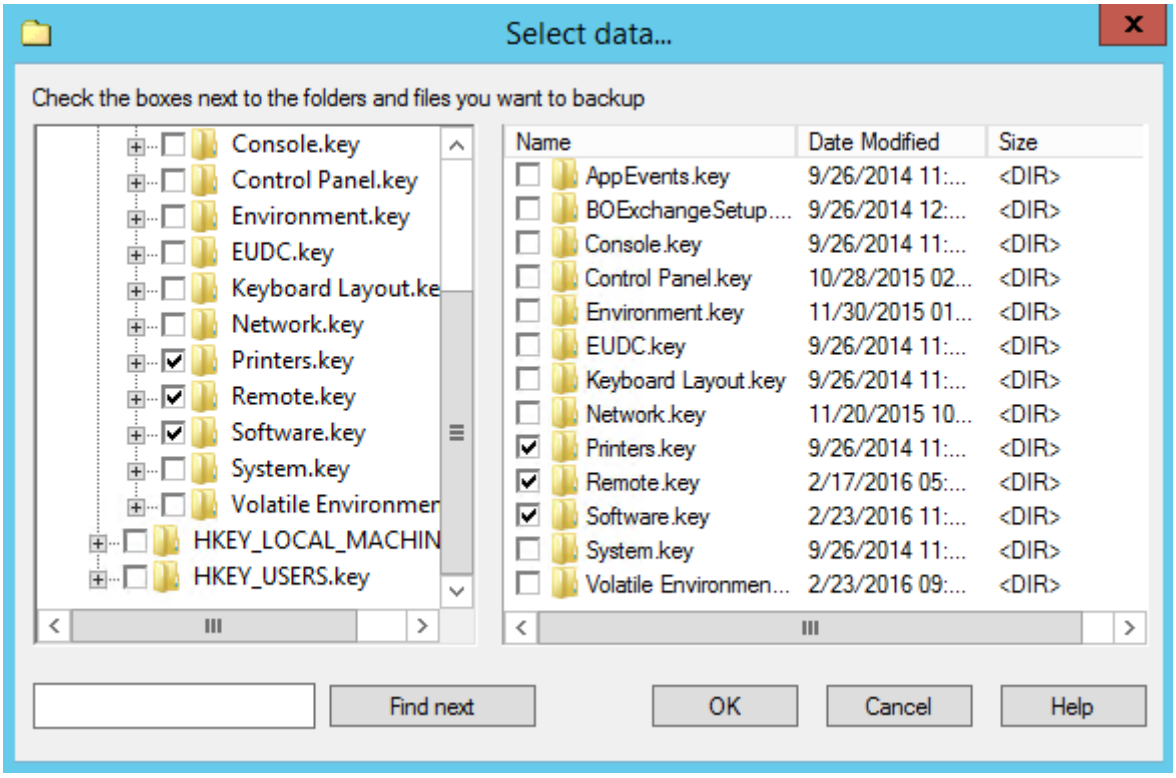
Backing up

The **Registry** plug-in can be used as a data source in **backup** tasks, and as a target in **restore** tasks.



To add Windows Registry to backup (see Step 2: Specify the Backup Set), follow these steps:

1. In the **Data Sources** pane, select **Registry**, and then click **Add**. The **Select data...** dialog opens.



2. Check the boxes next to files and folders (registry values and keys) that you want to back up.

3. When finished the selection, click **OK**. Selected data appears in the **Backup Set** pane of the New Task Wizard.

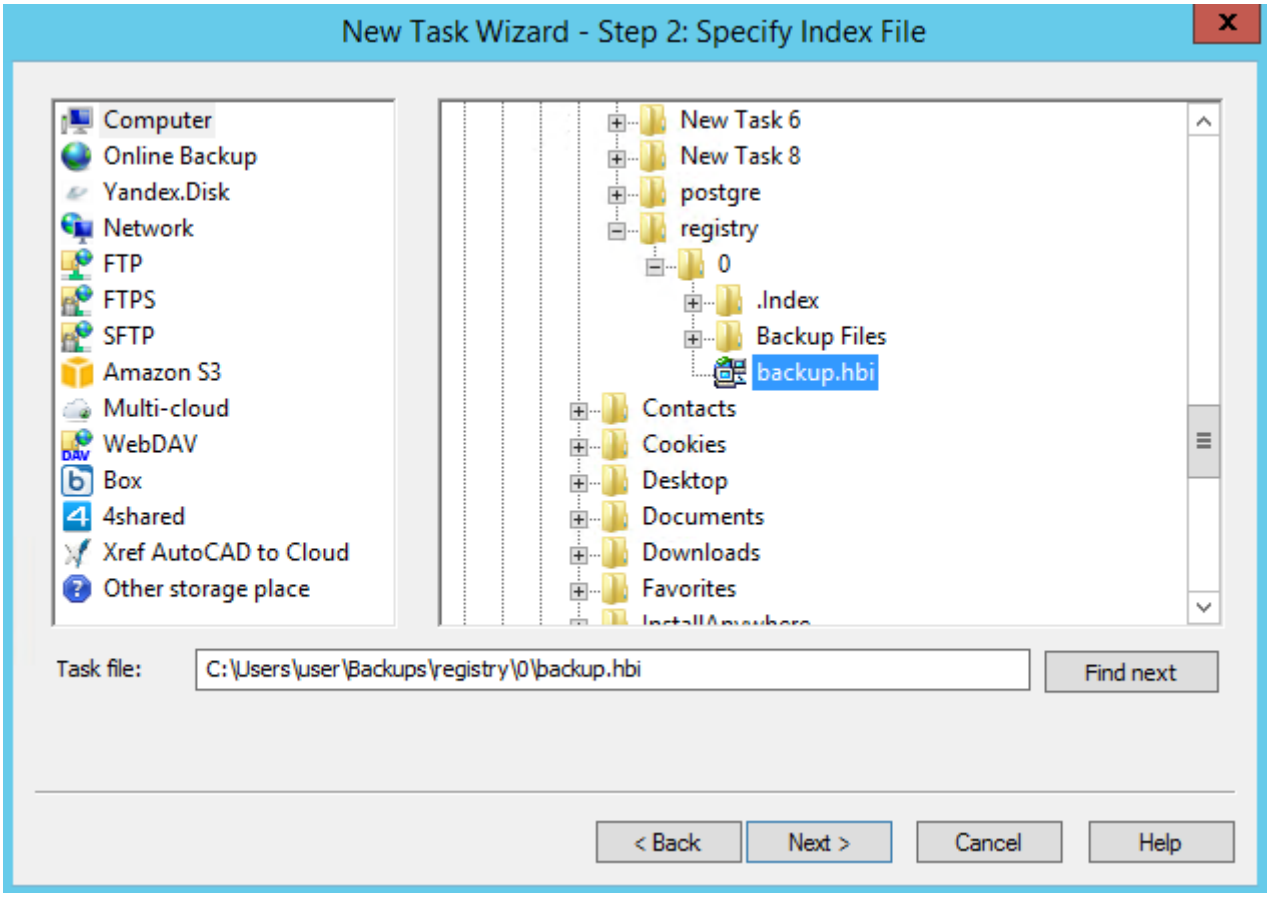
For detailed information on creating backup tasks, please see Backup Task.

Restoring

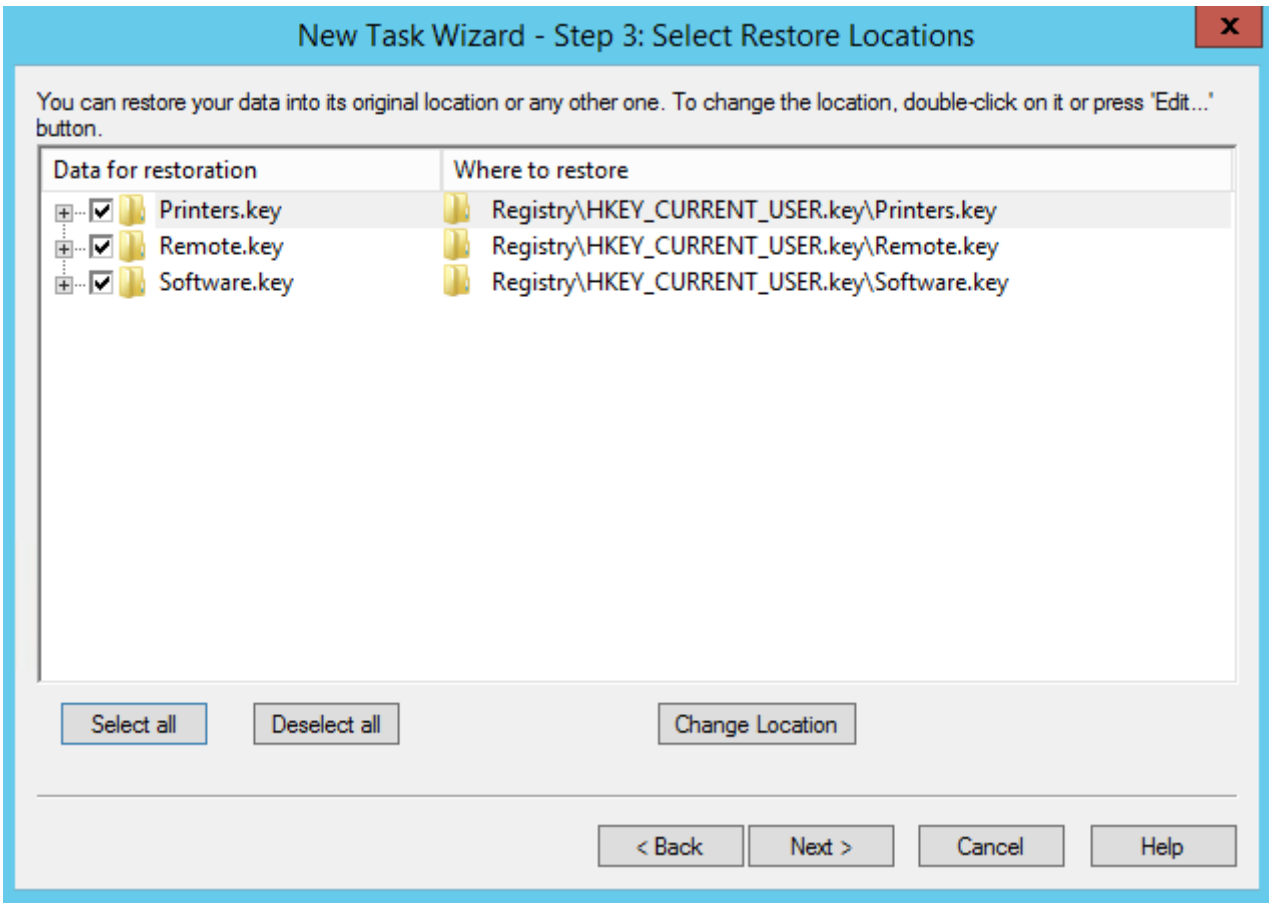
To restore Windows Registry, follow these steps:

1. Open the New Task Wizard.
2. Select **Restore task**, and then click **Next**.
3. In the **Specify Index File** dialog, browse for a backup index file (**backup.hbi**), and then click **Next**.

For example, if your **Registry** backups are stored on a local drive, select **Computer** in the **Storage Destinations** pane to the left, and then browse for **backup.hbi** in the **Index File Selection** pane to the right.



4. In the **Select Restore Locations** dialog, verify details of the restoration.



Note: Registry entries can be restored to their original locations only.

After checking details, you need to specify various restore options and name the task. These steps are not specific to the **Registry** plug-in. For detailed instructions on restoration, please see Restore Task.

DB2

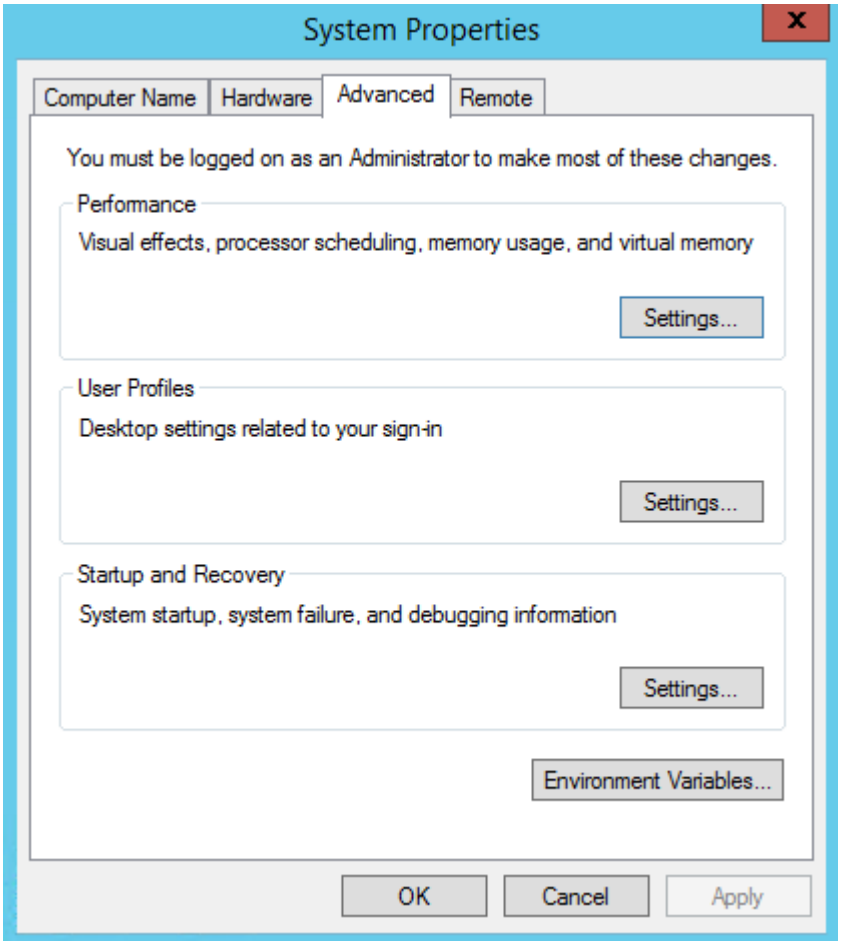
DB2 (IBM DB2) is a family of database servers developed by IBM. It provides stable relation-based database engine suitable for many commercial software, including business databases, web services etc.

Preparing your system for DB2 backup

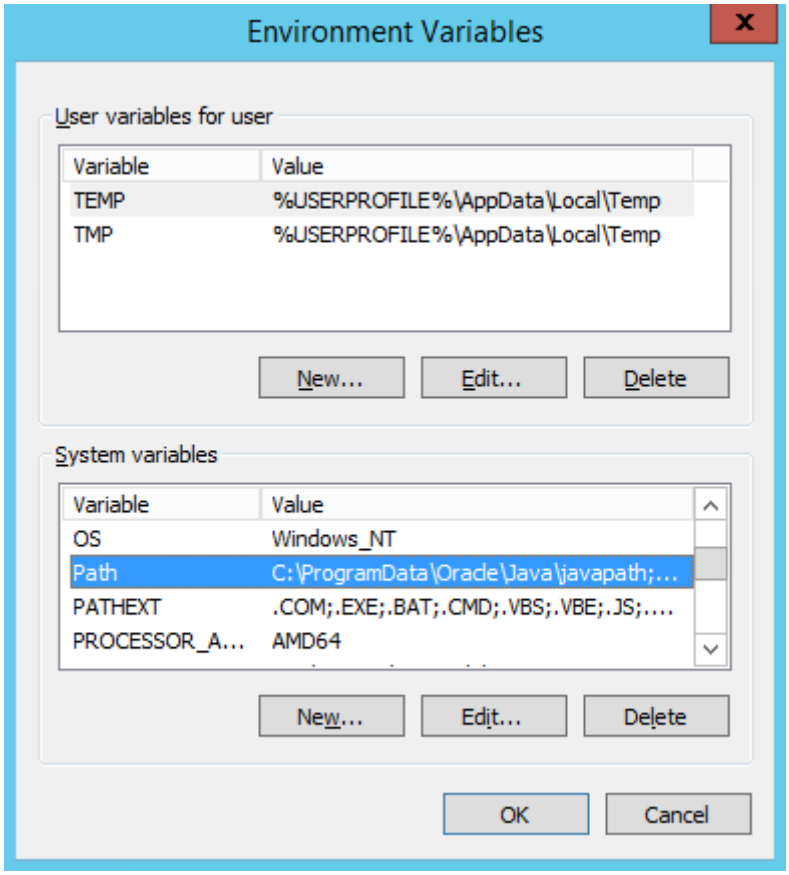
To make your DB2 engine accessible for Handy Backup, you must specify first the environment variable providing the correct path to your DB2 SQL libraries. By default, this way is **C:\Program Files\IBM\SQLLIB\lib**, but it can be varied depending on installation considerations and settings.

All you must to do is to find environment variables called LIB and PATH on your Windows. Then write a character **";"** at the end of each value string. After that, add the path **C:\Program Files\IBM\SQLLIB\lib;** for both strings. To find and edit environment variables, please perform the next actions depending on your system:

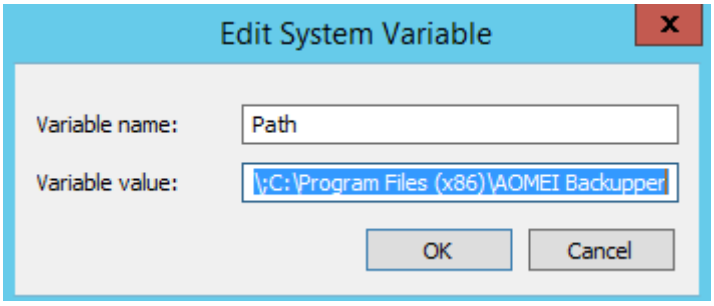
- **For Windows 7**, click Start -> Computer -> Properties -> Advanced System Settings -> Environment Variables.



Advanced System Settings screen in Windows 7



Environment variables list in Windows 7



*Changing the value of **PATH** variable in Windows 7*

- **For Windows XP**, click Start -> Control Panel -> System and go to the **Advanced** tab. Find the option Environment variables, and change variables LIB and PATH as described above.
- **For Windows Server 2008** you must be eligible to change system variables before you try. Go to Control panel -> System and Security -> System and then jump to **Advanced** tab for original 2008 version, or click the “Advanced system settings” on Windows Server 2008R2. Then change variables LIB and PATH as described above.

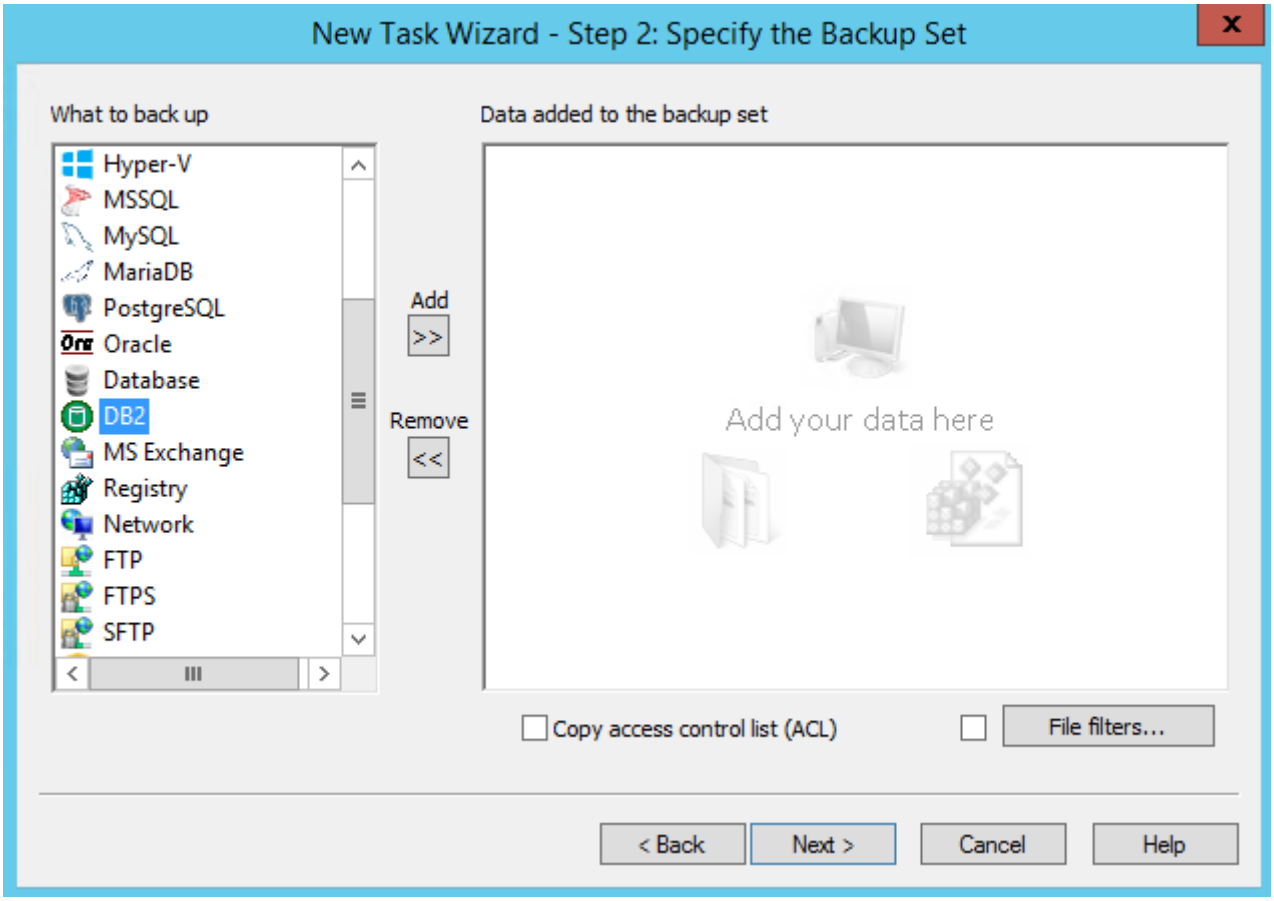
After the variables are changed, you can back up or restore your DB2 data freely using DB2 plug-in. If you still have any troubles seeing DB2 plug-in operating, try to restart the computer; after the system loading up again, problems will be surely fixed.

Performing DB2 Backup

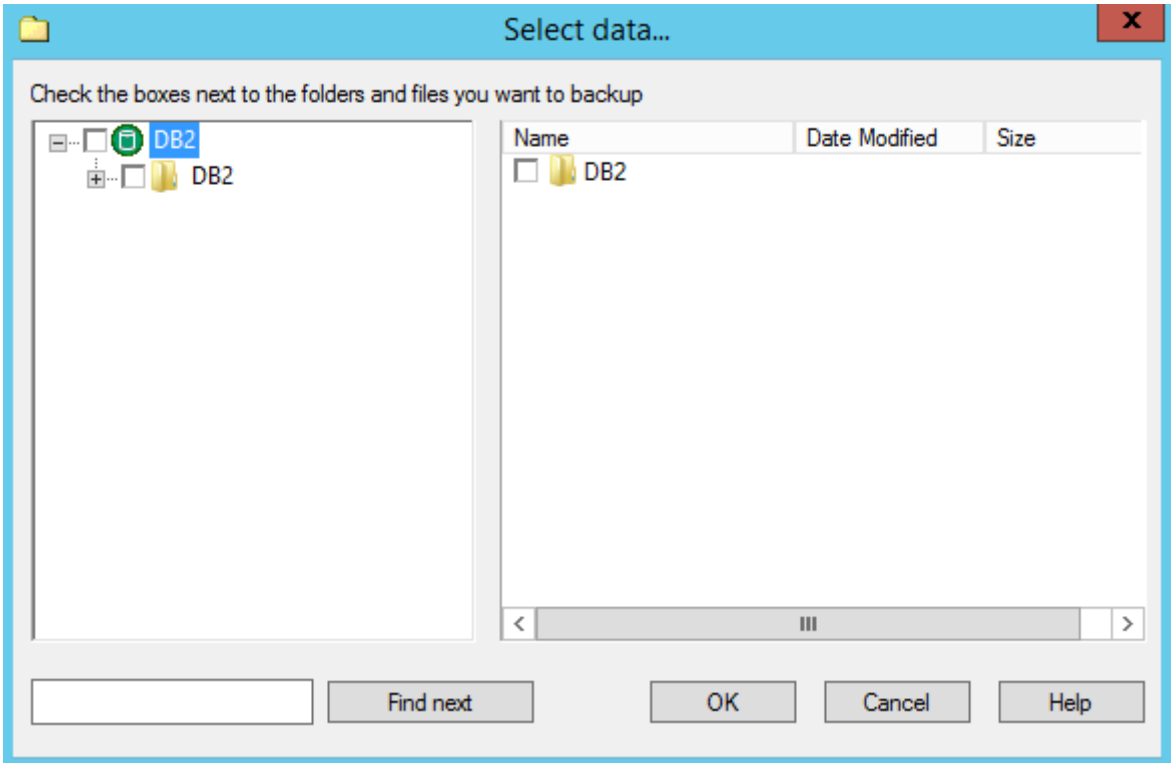
To make a backup, do the following:

1. Select the **Backup** task in New Task Wizard.
2. Select **DB2** option on step 2 of New Task Wizard.

Now you will see the folder structure of DB2.

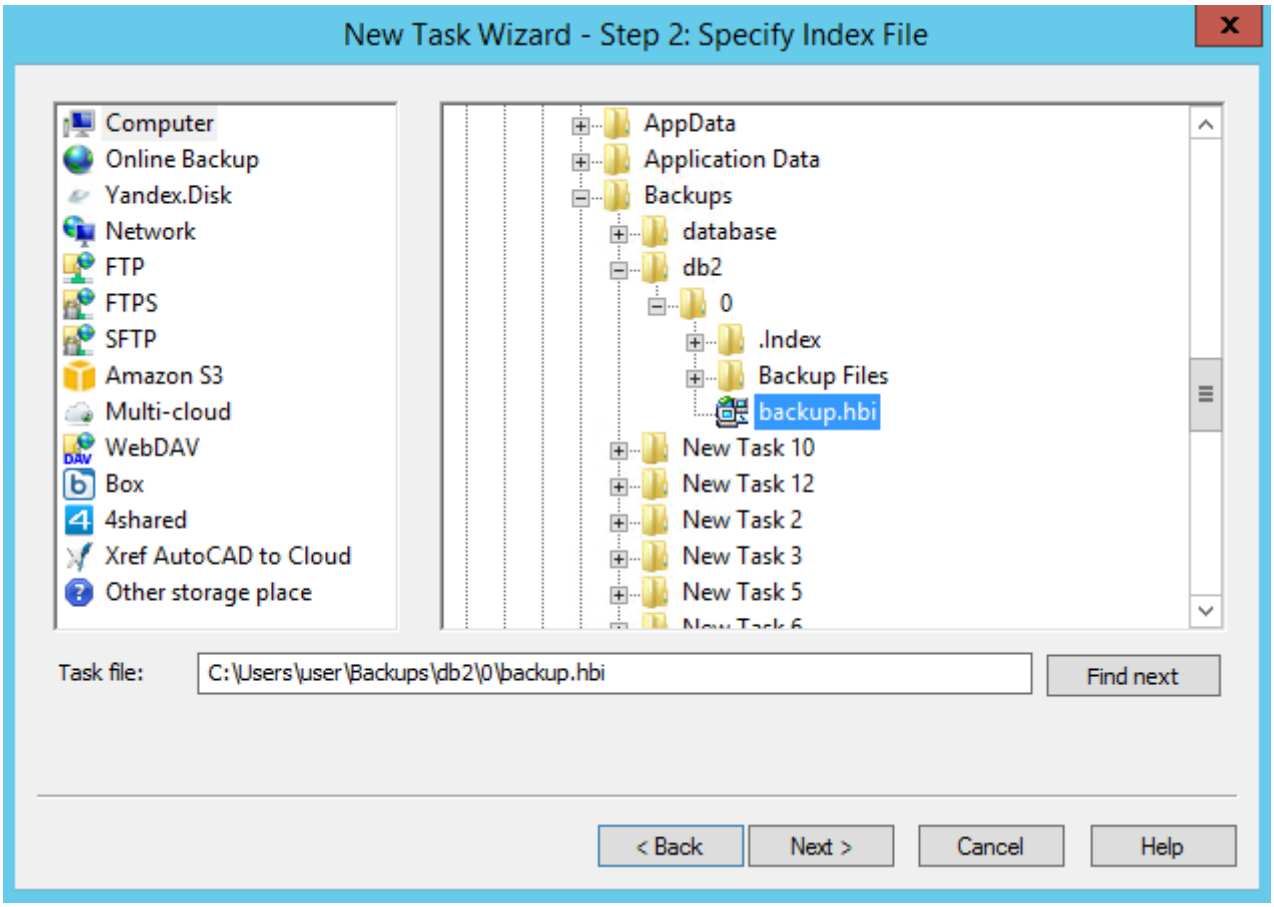


3. Choose the folders of DB2 for backup. You can select all the folders or only one/several of them. When you are ready, click OK.



4. Select destination for Backup.

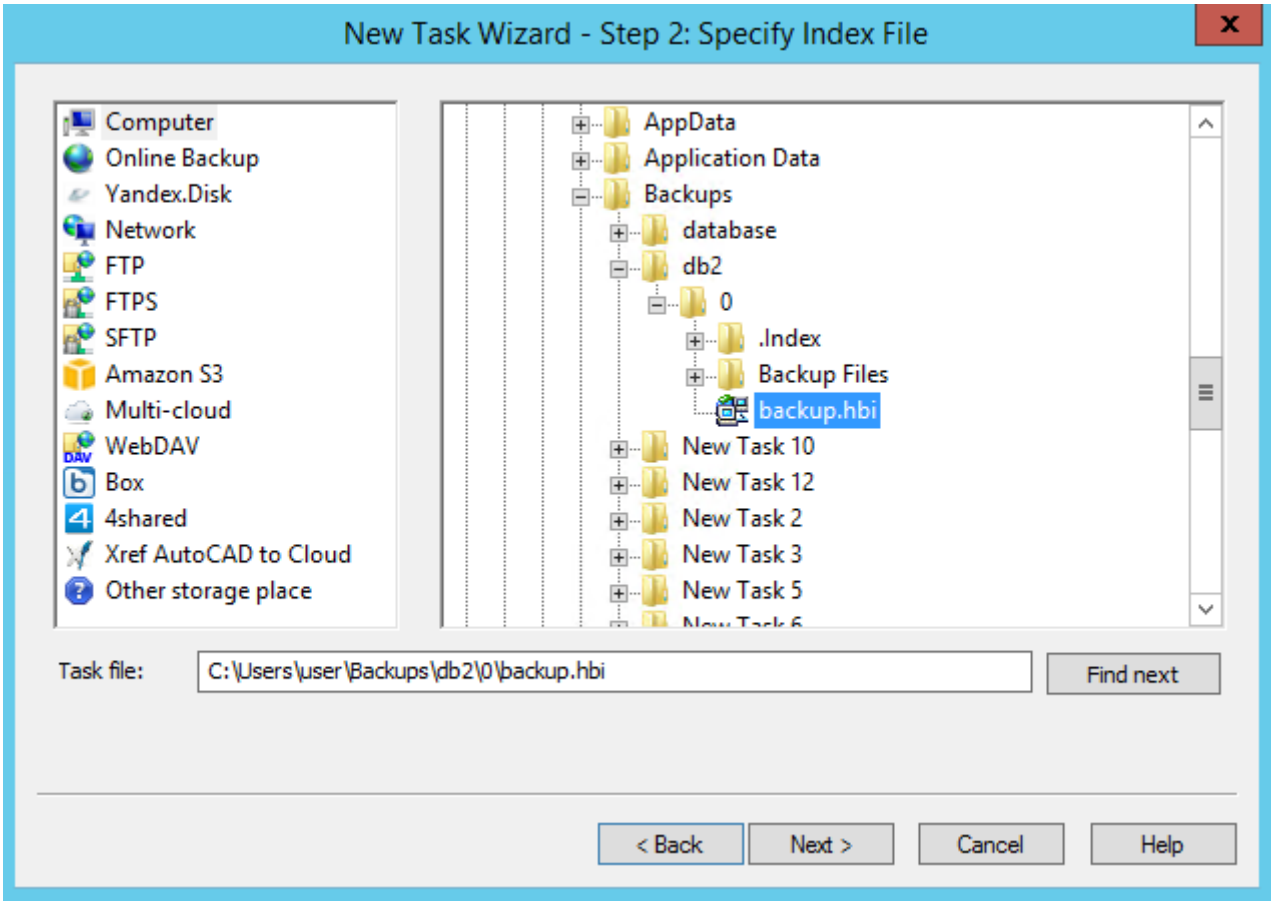
Select option for backup destination, and then click **Next**.



- ## DB2 Restore

To restore DB2 from the backup, follow this instruction:

1. Open **New Task Wizard.**
2. Select **Restore task**, and then click **Next**.
3. Find the **index file** (backup.hbi) located in the destination folder. Select it, and then click **Next**.



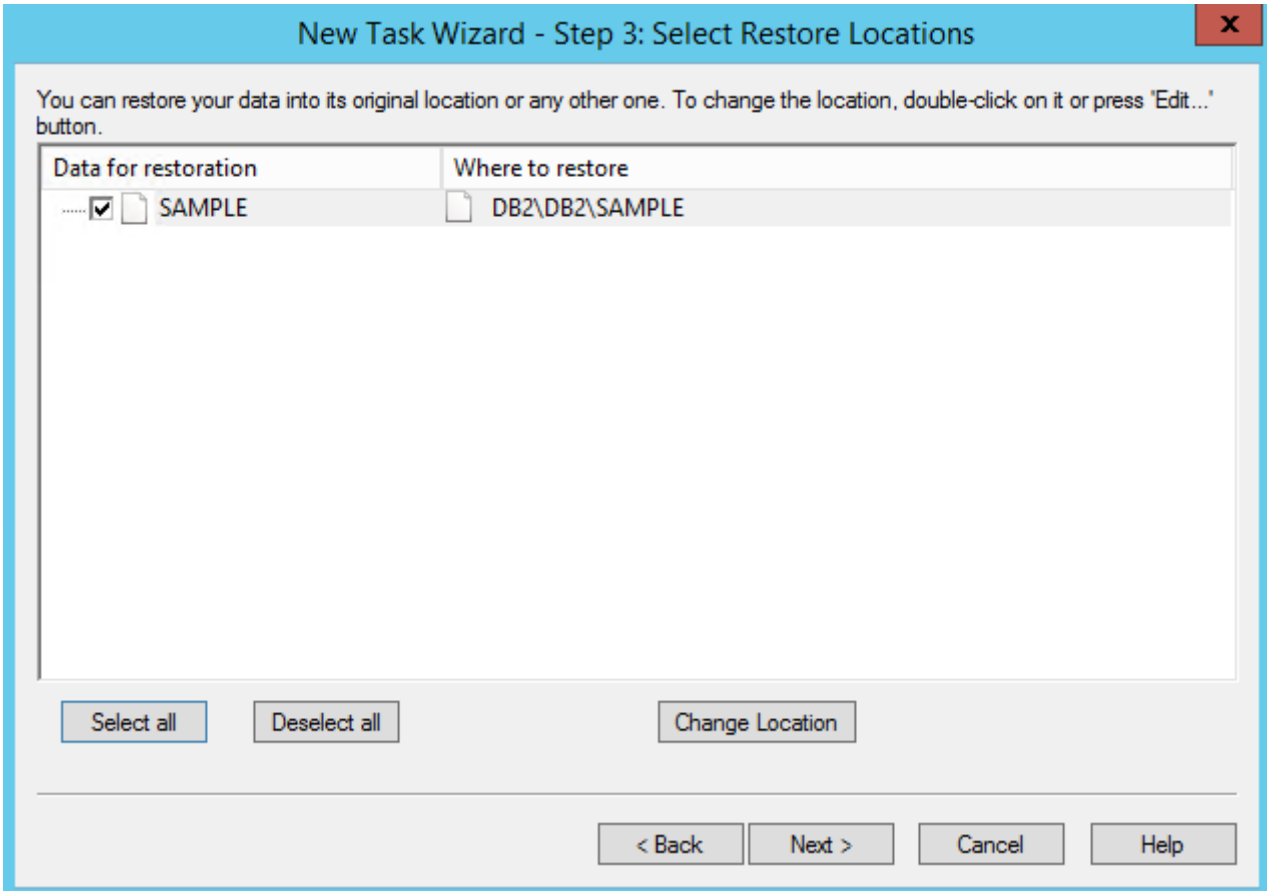
Selecting the DB2 index file for restoration

4. Select **Restore Location**.

Your DB2 data will be restored form backup.

If you want to restore a database to a different place, follow these steps:

4.1. In the **Select Restore Locations** dialog, select a database (file of the **DB2** plug-in file system), and then click **Change Location**. The **Change restore location** dialog opens.



Selecting the DB2 restore location

4.2. Select a new path for the database, and then click **OK**.

After verifying paths of restoration, you need to select type of restoration, enter decryption password (optional), and name the task. These steps are not specific to the DB2 plug-in. To learn more, please see Restore Task.

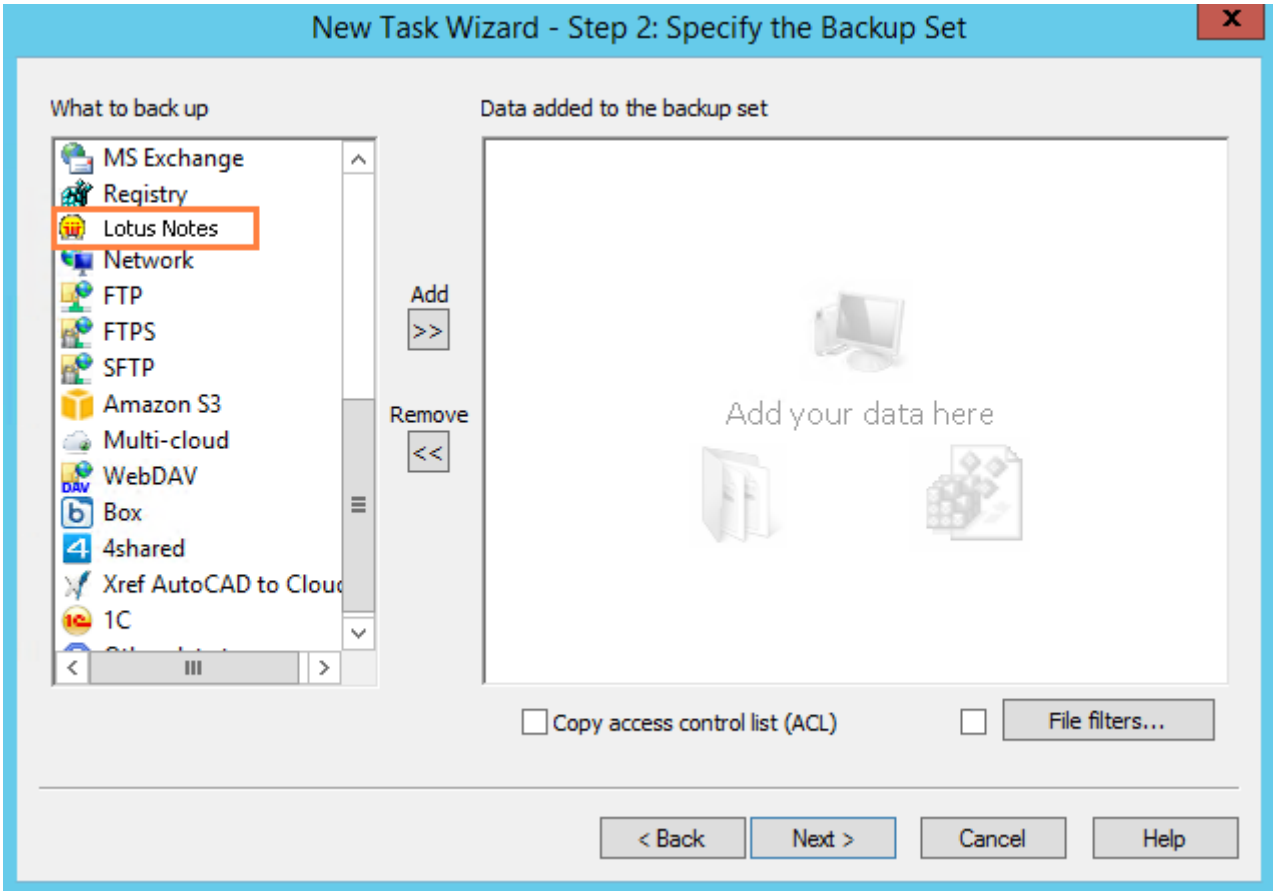
When you run the restoration task, the PostgreSQL plug-in firstly stops the respective SQL instance and all Windows services that depend on it. Then it copies the files to their original locations, and re-launches the services.

Lotus Notes

Lotus Notes (IBM Notes) is a client-server software platform from IBM. It provides wide business functionality, including email, calendars, contacts management, discussion forums, instant messaging, blogs, etc.

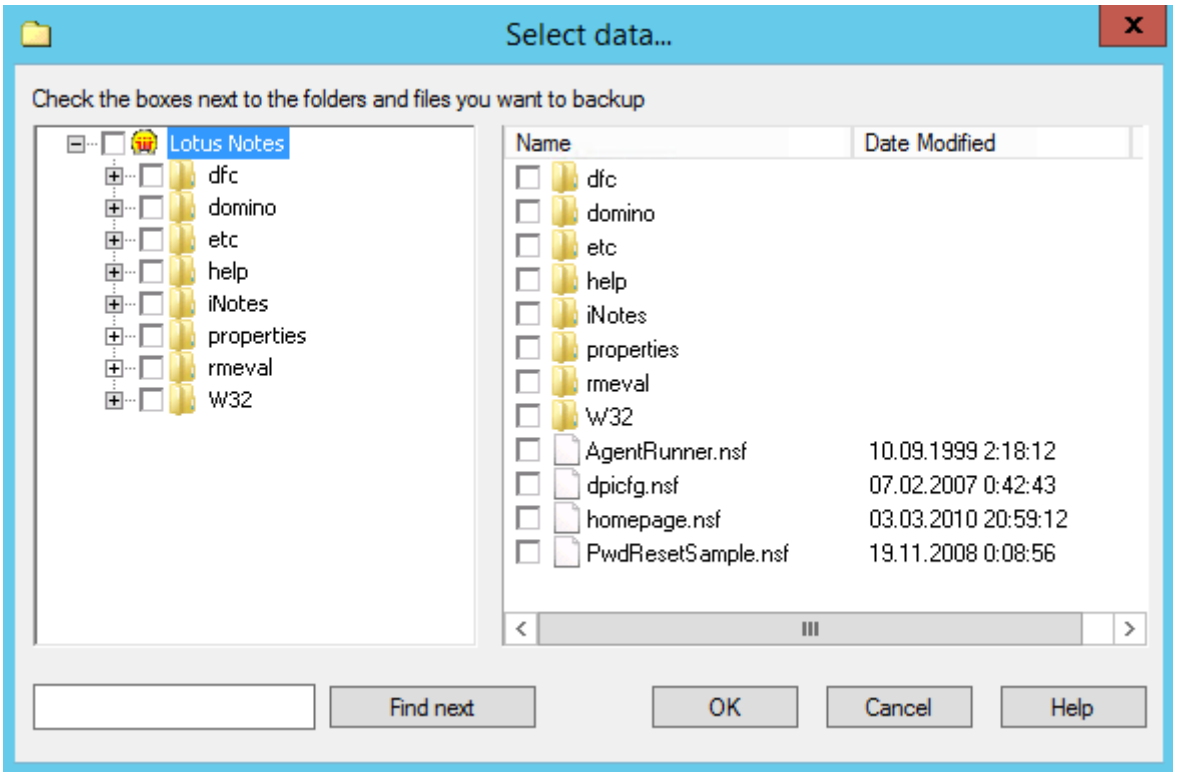
To make a backup, do the following:

1. Select **Backup task** in New Task Wizard.
2. Select **Lotus Notes** option on step 2 of New Task Wizard.



If everything is OK, you will see the folder structure of Lotus Notes.

3. Choose the folders of **Lotus Notes** software for backup. You can select all the folders or only one/several of them. When you are ready, click on **OK**.



4. Set up destination and other parameters and click OK. You made Lotus Notes backup.

Restoring

To restore Lotus Notes from the backup, follow this instruction:

- Open **New Task Wizard.**
- Select **Restore task**, and then click **Next**.
- Find the **index file** (backup.hbi) located in the destination folder. Select it, and then click **Next**.
- Select **Restore Location**.

Lotus Notes system will be restored form backup.

Hyper-V

Using a “Hyper-V” feature, you can save any number of Hyper-V virtual machines from one physical node. This is no need to install a copy of Handy Backup into a machine to make this plug-in works.

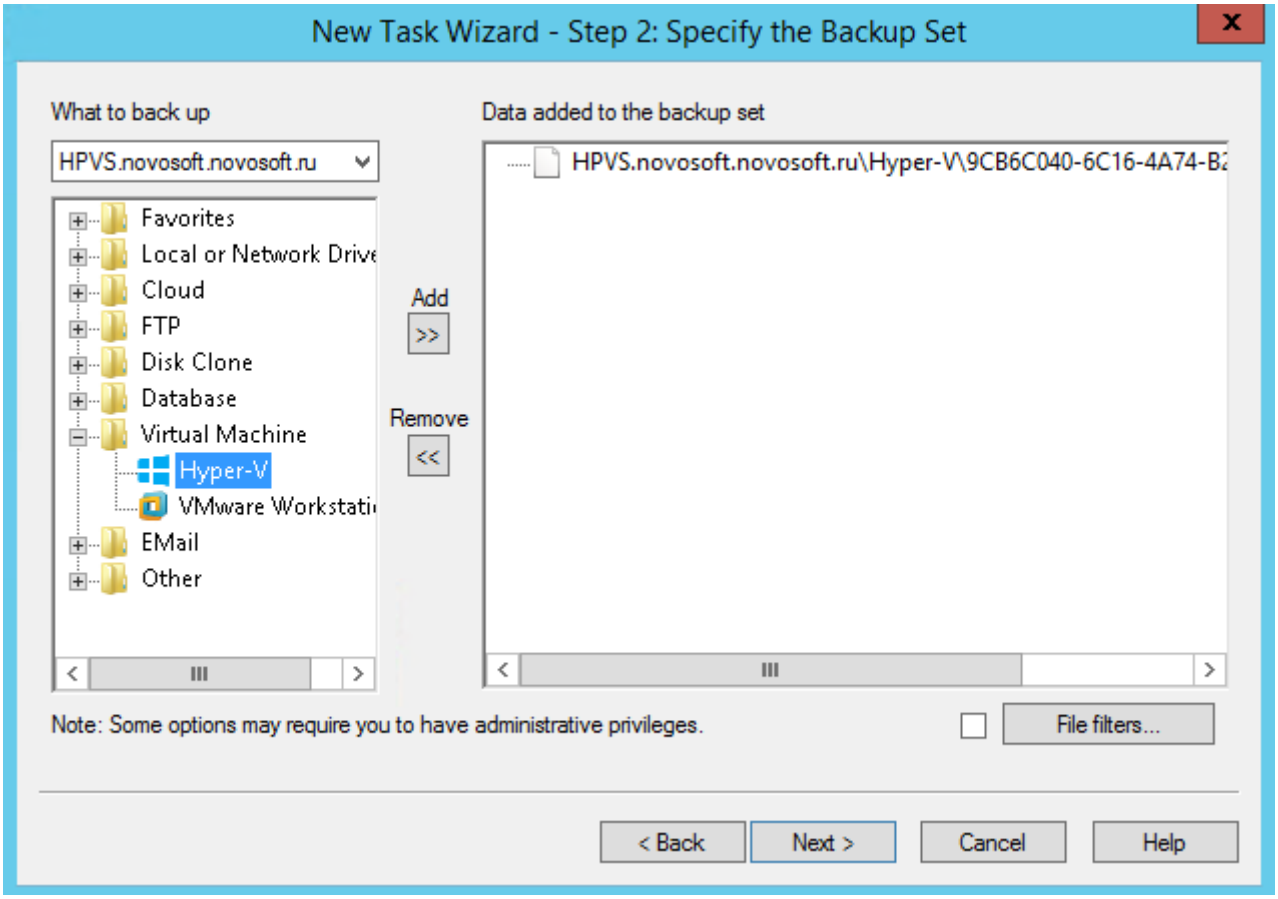
Before the Backup

It is to be mentioned the specialized Hyper-V servers have no GUI to operate with standalone editions of Handy Backup. Therefore, the most convenient way to use Handy Backup and a Hyper-V tool is to install a Network Agent on a Hyper-V physical server, linked to a Management Panel somewhere else.

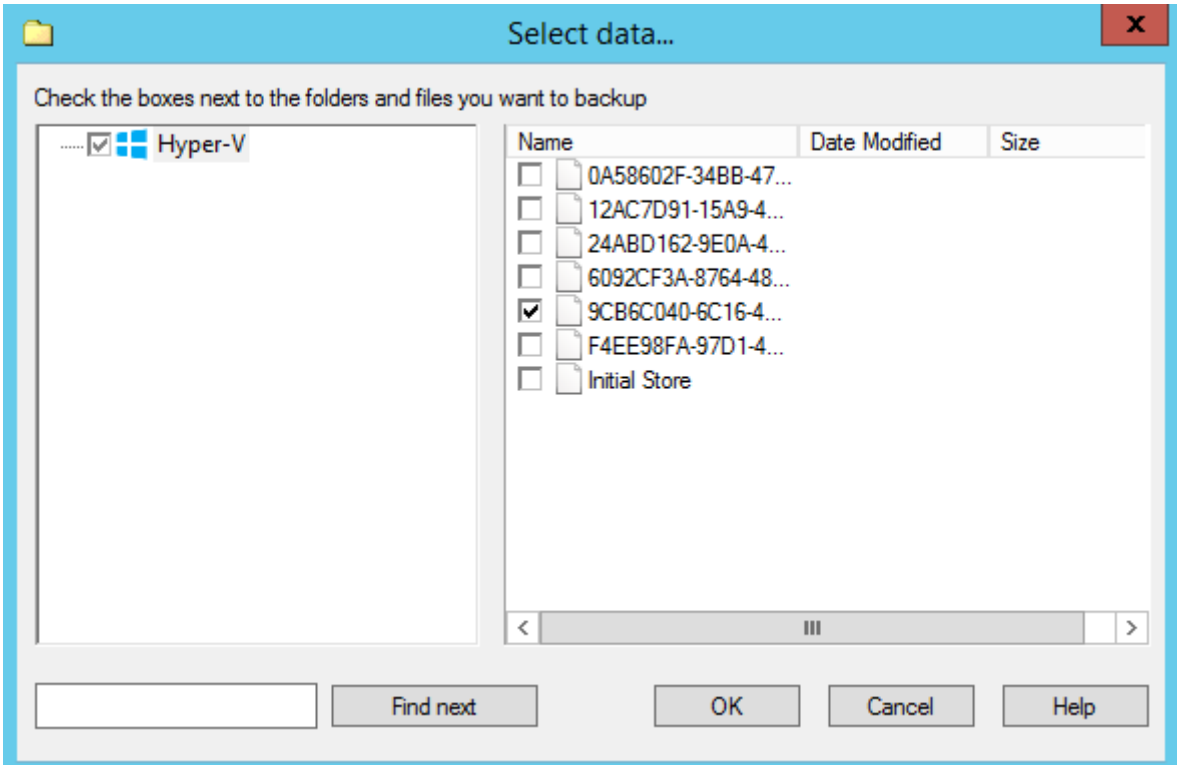
Backing up Hyper-V Machines

To save a copy of these data, use the following sequence:

1. Create a new backup task.
2. On a **Step 2**, choose the “Hyper-V” feature on the left panel. Click on a machine server name appeared on the right.



3. A new window will appear. Select any virtual machines you will plan to back up with the new task.



Note: this plug-in makes snapshot of particular virtual machines, not of entire arrays. To back up all

Hyper-V machines on the server, please select them all, not just mark a “Hyper-V” on the left panel.

4. Press “**OK**” when you finish selecting data, returning to the task creation window.
5. Now you may select where your backups will be placed.
6. Set up other task parameters, such as encryption and compression; choose the backup type, control pre- and post-actions within the task, etc.
7. Finish the task creation wizard. Your Hyper-V backup task is ready to use.

Restoring Hyper-V Data

At present, you can only restore backups made with the Hyper-V plug-in only to their original locations. Because of this, the process of restoration is very straightforward:

1. Open a **New Task** Wizard.
2. Select Restore task, and then click **Next**.
3. Browse for the index file (***backup.hbi***) located in the destination folder. Select it, and then click the “**Next**” button.
4. Skip the Select Restore Locations dialog by clicking **Next** (as there is no way to restore data to a different location).
5. Skip the next steps by clicking **Next**, until you finish the task creation.

When you run the restoration, the plug-in firstly stops the current instances of Hyper-V machines and all Windows services that depend on it. Then it copies the files to their original locations, and re-launches the services.

A Simple Troubleshooting

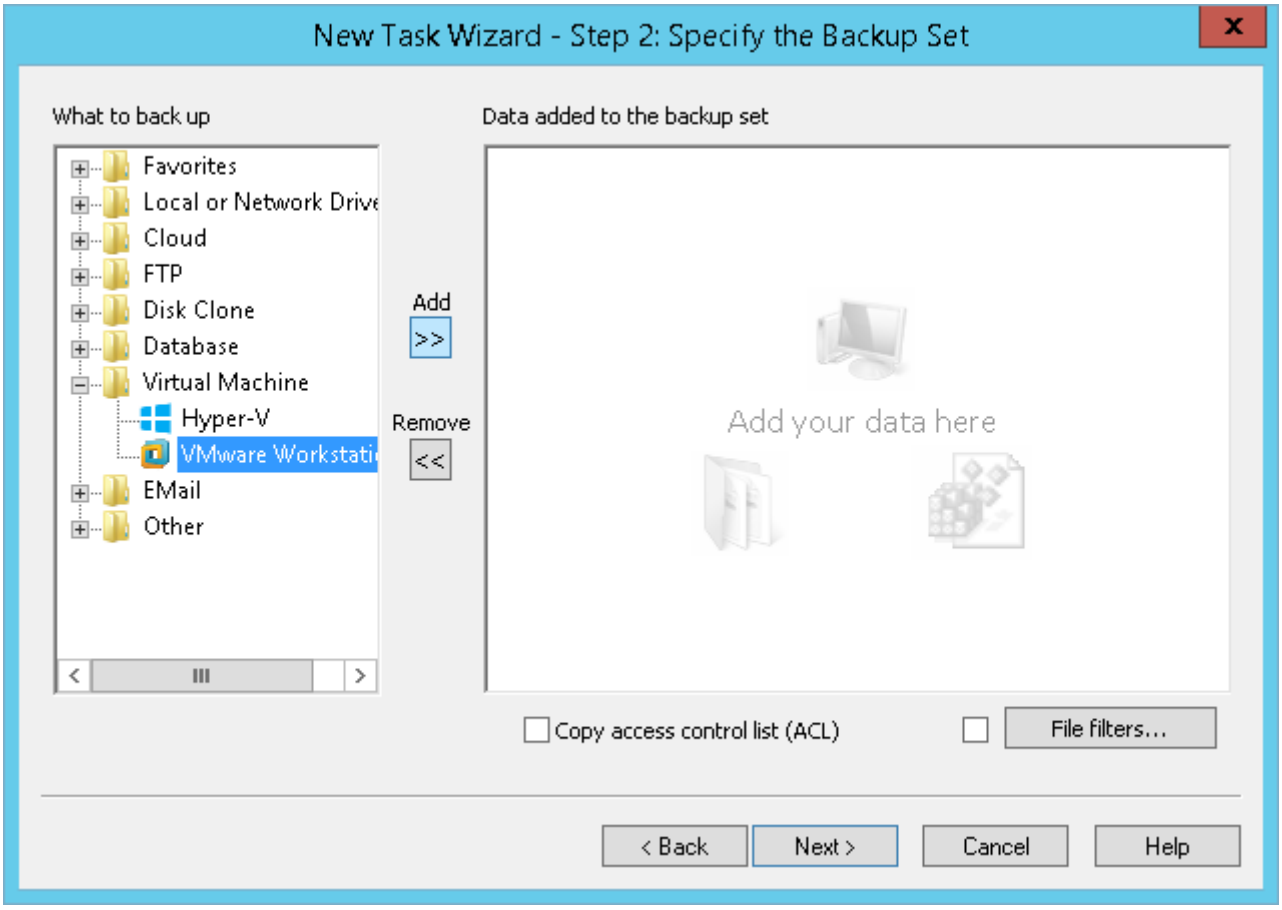
The Hyper-V feature utilizes the Volume Shadow Copying service (VSS); therefore, please make sure that the service is active before using the plug-in.

VMware Workstation

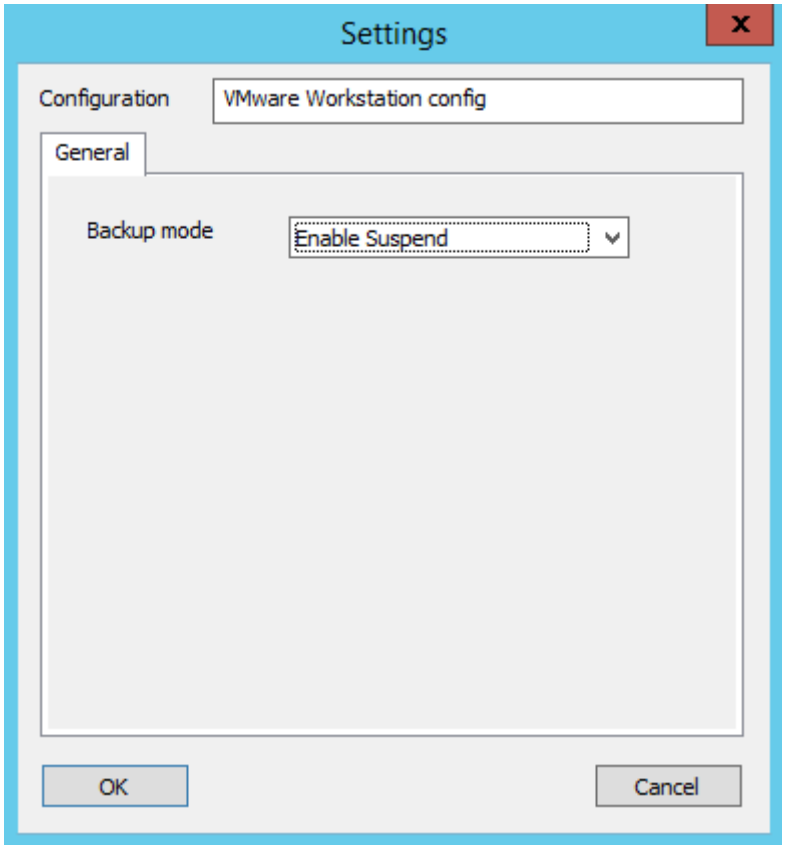
This dedicated plug-in allows saving images of VMware virtual machines. In this chapter, we are describing how to backup VMware images from outside using the plug-in.

Backup Task

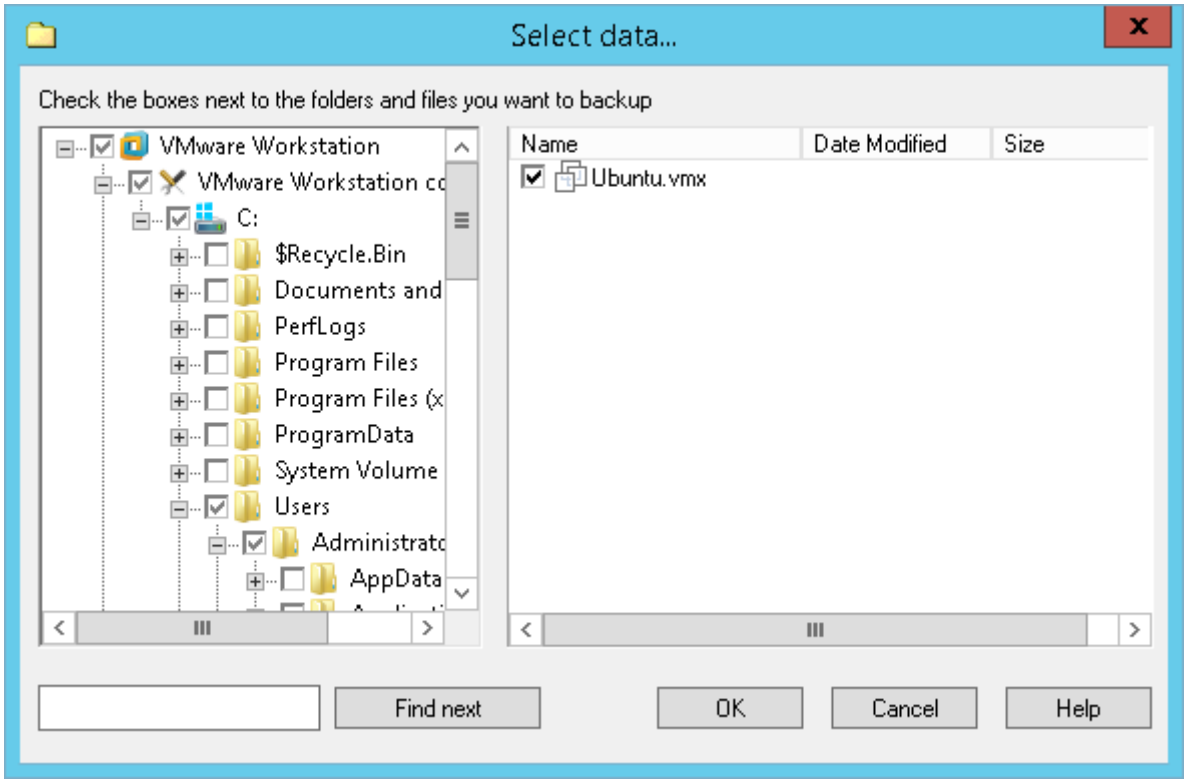
1. Open Handy Backup, call a New Task Wizard and create a new backup task on the Step 1.
2. On the Step 2, select the **VMware Workstation** plug-un from the Virtual Machine group on the left panel.



3. Select the "**New configuration**" option by double-clicking on it.
4. In a new dialog window, select either a "Hot" mode (without stopping a virtual machine) or an "Enable suspend" mode (with stopping a VM to take a perfect snapshot).



5. Then click OK. In a new window, mark checkboxes against names of particular VMware workstation instances.

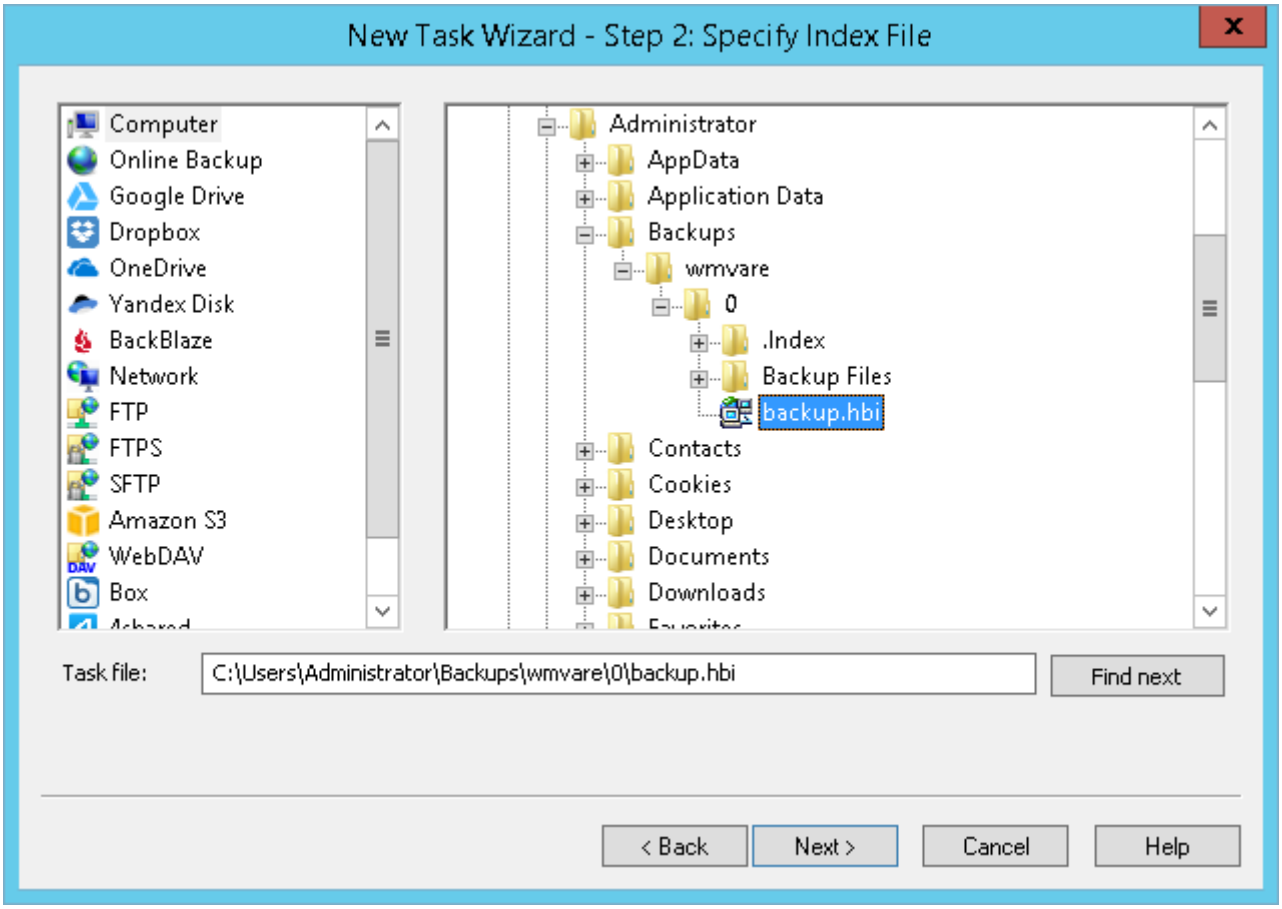


6. Proceed the task creation as usual.

Restoring Task from a VMware Image

The current version of Handy Backup 7 does not allow restoration of VMware workstations to another place. You can automatically restore a VMware snapshot only only to its original location. To create a restoration task, please follow the next steps:

1. Open a New Task Wizard. Select the “Restore” task type on the Step 1, then click “Next”.
2. On the Step 2, search for the index file (***backup.hbi***) located in the storage folder.



3. Select the file mentioned above, and then click the “Next” button.

> **Attention:** Do not click the "Change Location" button on the restoration dialog – it would not work for VMware workstations.

4. Skip all next steps of a restoration task wizard by clicking the “Next” button on each step, until you will give your task a name and complete creating your task.

When starting VMware restoration, the plug-in firstly stops all running instances of VMware virtual machines and all Windows services relating to these instances. Then the plug-in copies VMware backup images to their original locations, and restarts the services it stop earlier.

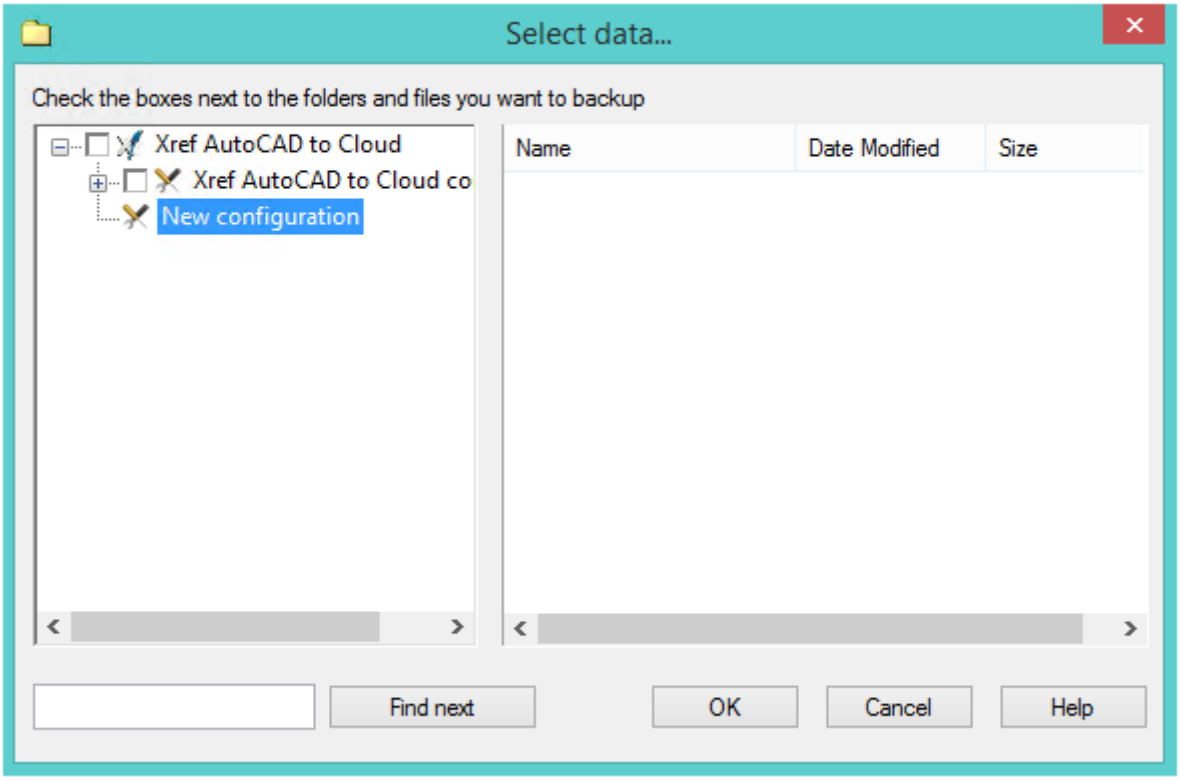
XRef AutoCAD

The **Xref** option allows Handy Backup to store data from or to an Xref.com cloud service account.

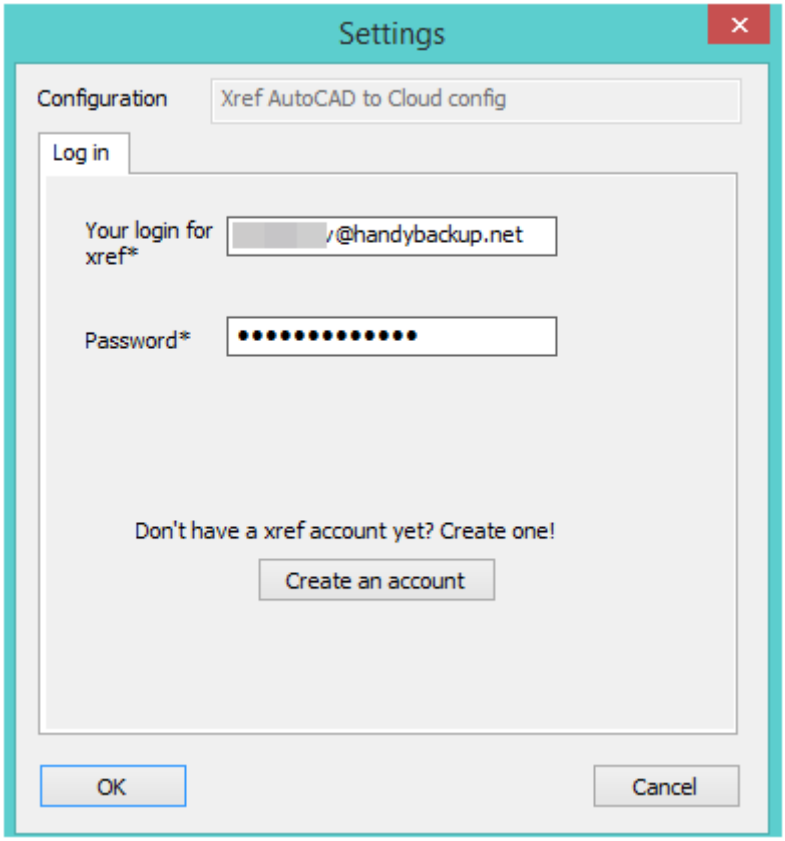
Using an Xref Feature for Backup

To imply an Xref instrument for backing up data from a particular account, use the next steps:

1. Make a new backup task, and select an “Xref AutoCAD to Cloud” on a Step 2. You will see a new window.

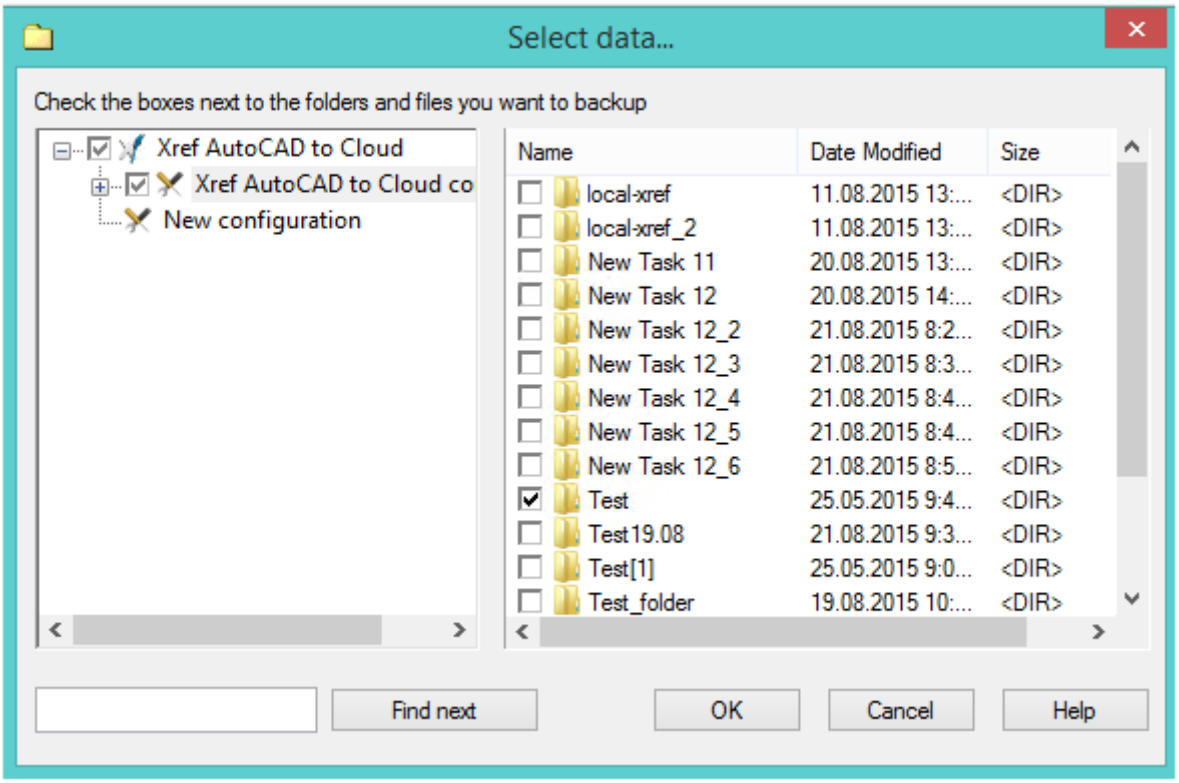


2. Double-click on a “New configuration…” option; it opens an account settings dialog.



Note: You can create a new account on a Xref cloud service by using a button called “Create an account” below registration fields.

3. Enter your email and password for an Xref account in appropriated fields. Press “OK”.
4. Click twice on your Xref account name in the tool window to set data for backup.



5. Select data you need to save from Xref.com by marking these data with checkboxes.

6. Press “OK” to return to the data selection and proceed to make a new task as usual.

Making an Xref Account a Backup Storage Media

All steps described earlier are also actual for creating a link to some Xref account when using it as a destination for backups. Select a dataset on a Step 2, and make a new configuration if you need it on a Step 3 for your Xref.com account.

Restoring from Xref Accounts

To restore data, you must firstly provide a connection to Xref via the “New configuration…” dialog, as described for backing up to Xref. Then use the file **backup.hbi** located at your Xref account as usual.

7 User Interface

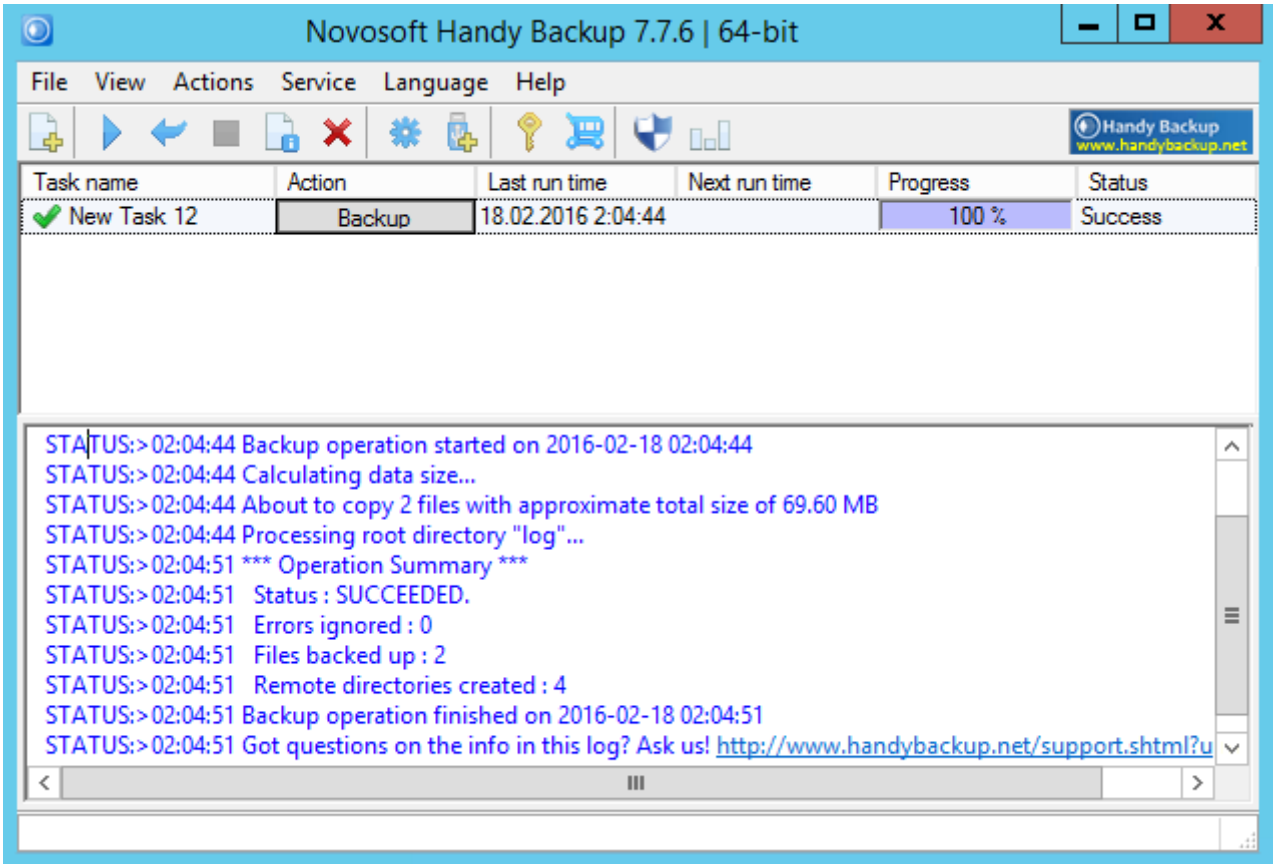
You can control the program in different ways: using GUI, Console Client, Web Access*, and other. Technically, all clients are independent from the program's core: they connect to **Server** which is then used to control all tasks on all **Workstations**. To learn more, please see Architecture...

*As of version 7.3.4 (March 2013), Web Access is temporarily unavailable.

This section describes Client GUI - main graphical interface that provides the easiest way to create tasks and manage data.

Main Window

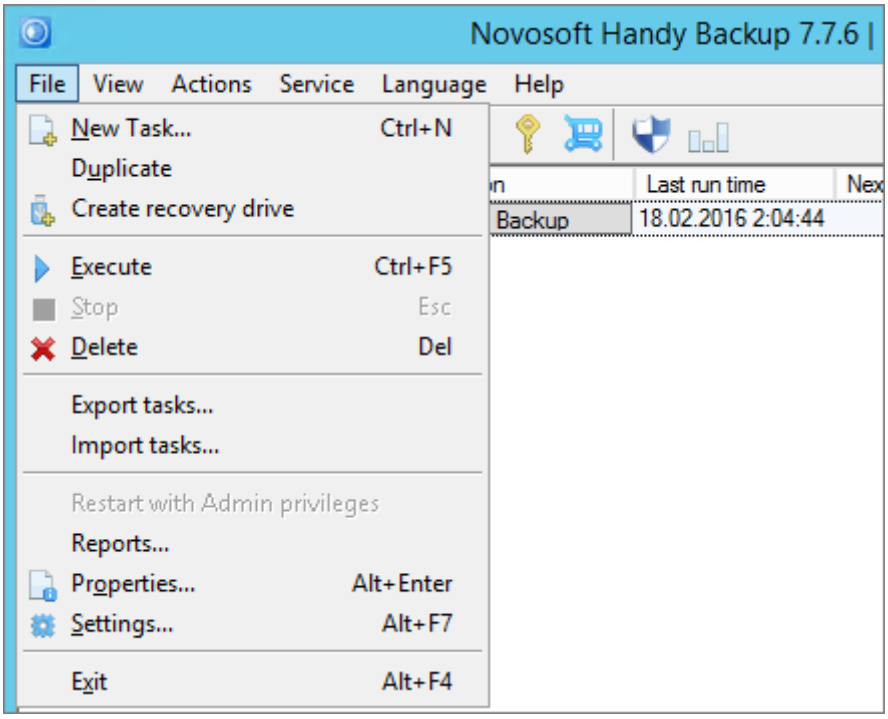
Main window consists of Main Menu, Toolbar, Task View and Log View:



To learn about each element of the Main Window, please refer to next chapters.

7.1 Main Menu

Main Menu contains all functions of the program. While many of them can be found in other parts of the program (for example, you can control tasks via toolbar, or context menu in the **Task View** pane), some commands are available in Menu only, e.g. language selection, Service mode, and other.



- **File**. Allows managing tasks, creating USB recovery drive, and changing settings of different components.
- **View**. Lets you change look and feel of the main window.
- **Actions**. Can be used to run tasks selected in the **Task View** pane of the main window.
- **Service**. (Standalone edition only) Enables you to run Workstation as Windows service. Workstation is a logical component of the software that is used to retrieve, process and store data. To learn about it and its communication with other components, please see Workstation...
- **Server**. (Server edition only) Allows connecting and disconnecting to different Servers. To learn more, please refer to Connecting to Server...
- **Language**. Lets you change language of the utility's user interface.
- **Help**. Used to access User Manual, request support, and register the program.

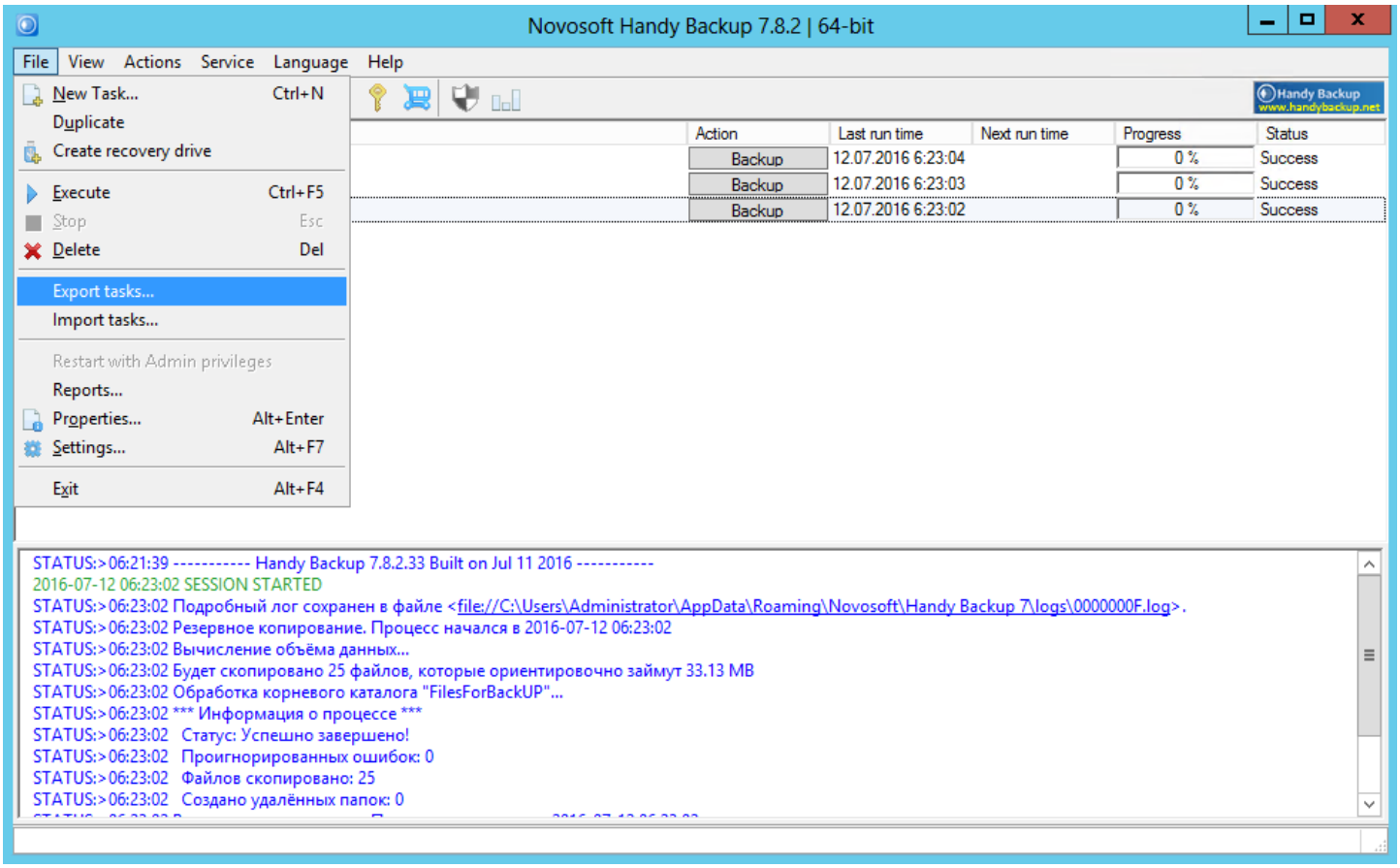
To understand the **Service** and **Server** menus, please read Workstation and Connecting to Server chapters, respectively. All other commands in the menu are very understandable and don't require additional explanation.

7.1.1 Export and Import Tasks

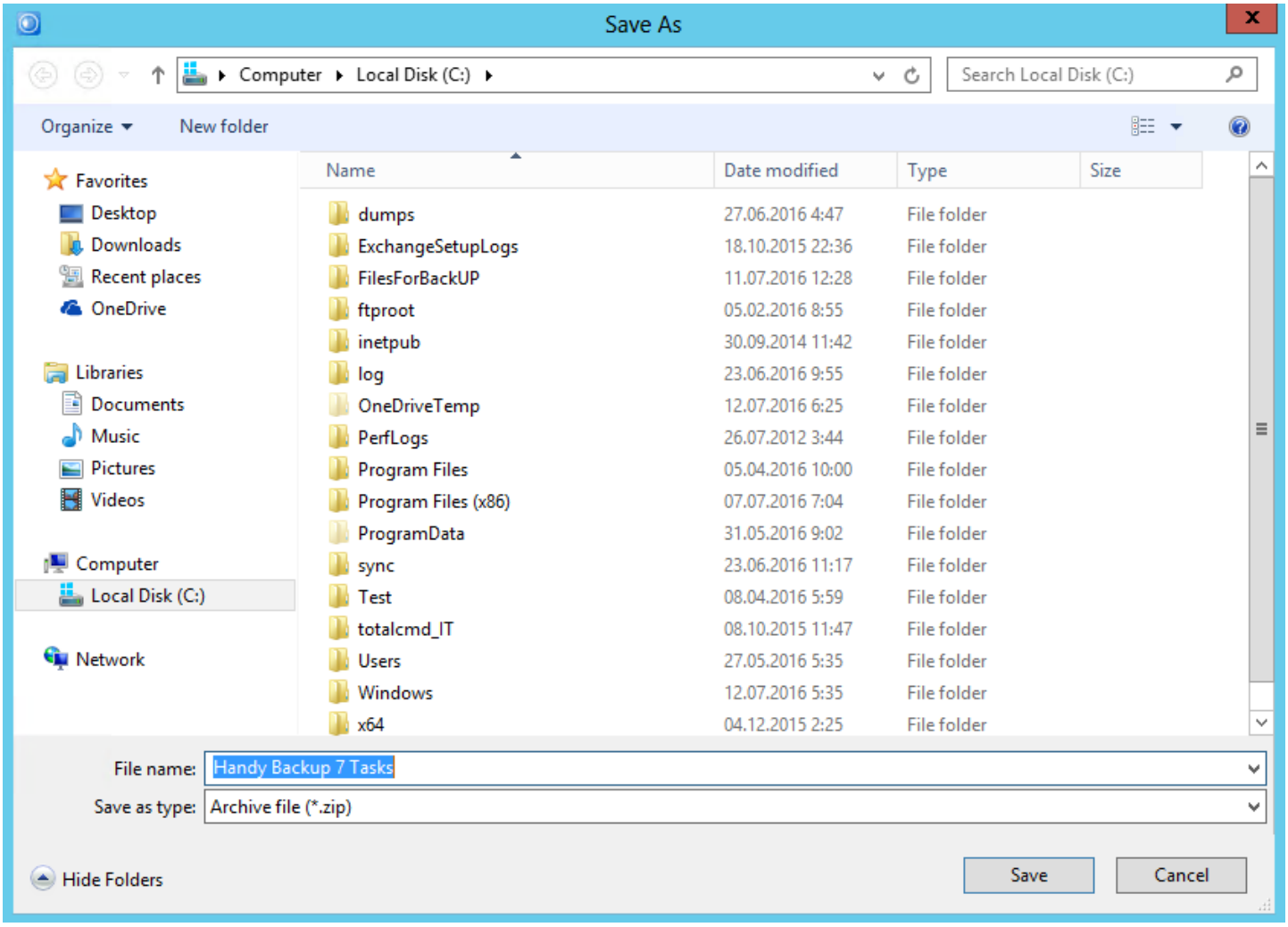
You can export your tasks as a single ZIP file, and import these tasks later into any copy of Handy Backup. It is useful for migrating, upgrading and for some other situations.

Exporting Tasks

To export your tasks, open the “File” menu and find an option called “Export tasks…”.



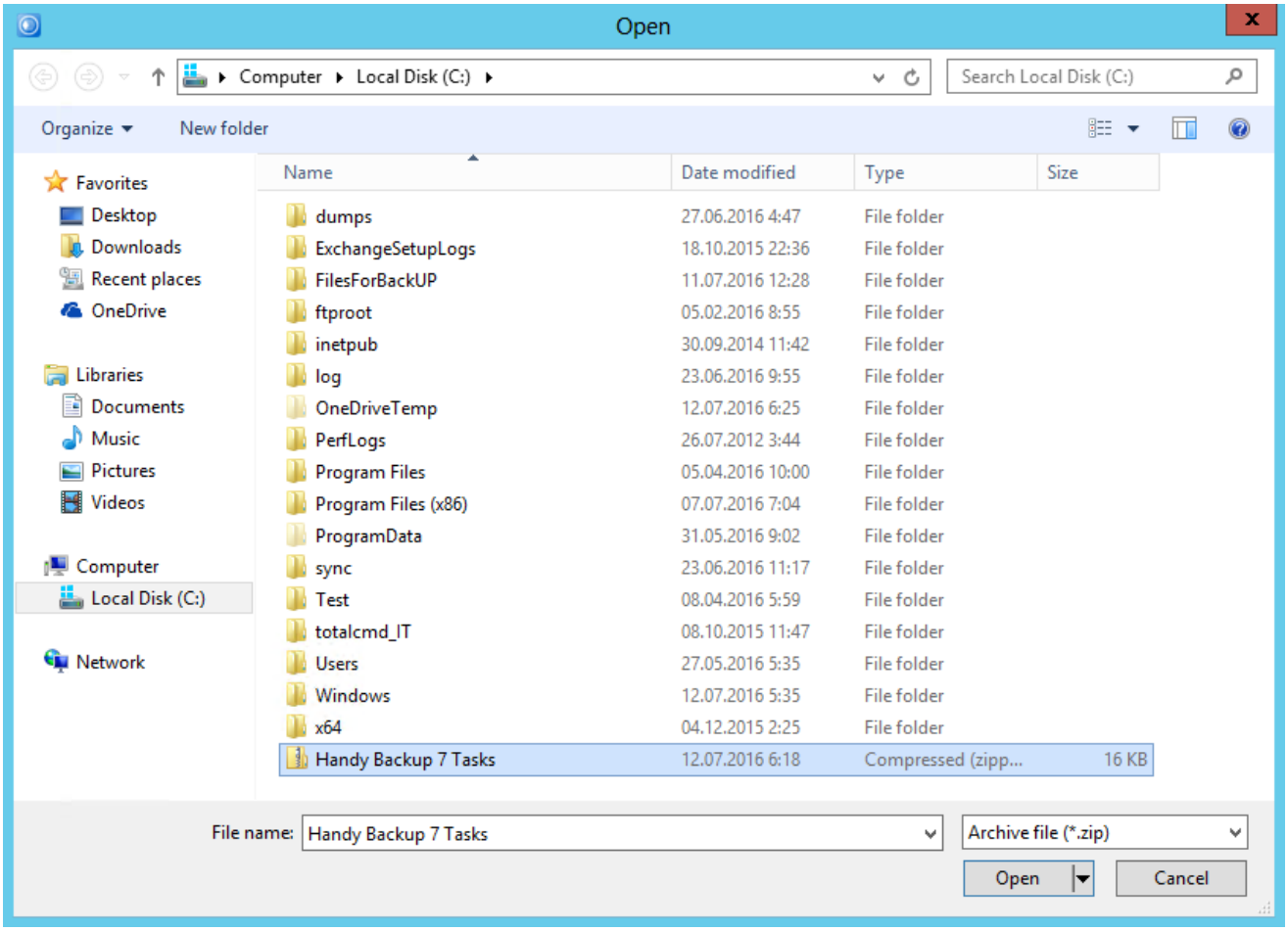
A file opening dialog will appear, to let you save your task list as a ZIP file.



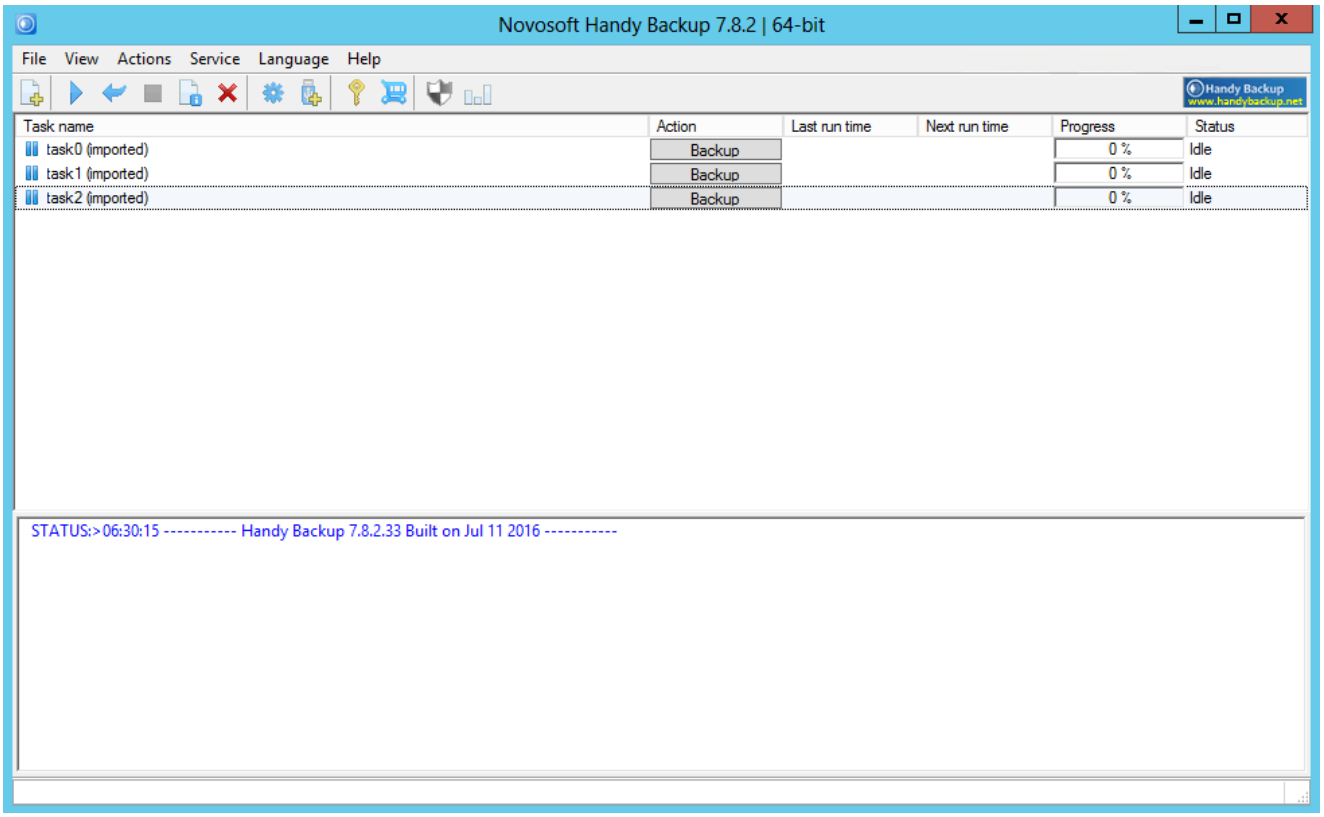
Change the name of a file if you need it, and click “Save” to proceed. That is all.

Importing Tasks

To import previously saved tasks, just open an “Import tasks…” dialog from a “File” menu. Then select a ZIP file containing a task list from a file opening dialog window.

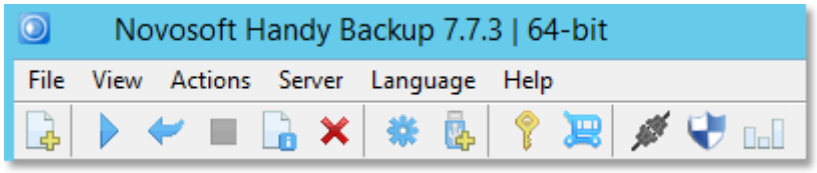


Click to the “Open” button and add all the tasks from the saved list into your active task list. The imported tasks will be marked as “imported”.



7.2 Toolbar

The toolbar contains buttons for all main operations related to managing your data.

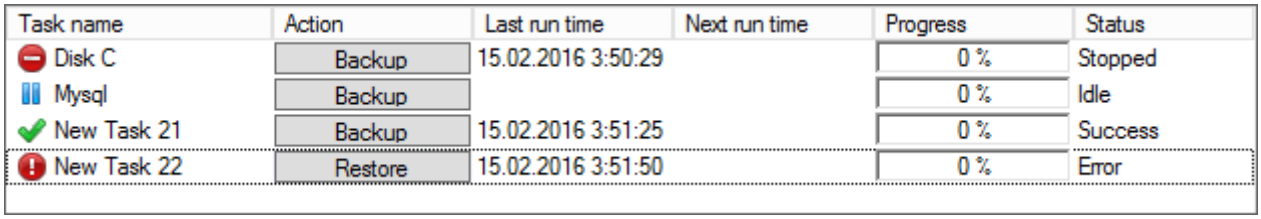


The toolbar is organized as follows:

- **New Task.** The **New Task** button opens the New Task Wizard. This is the main way to create backup, restore and synchronize tasks. To learn more, please see New Task: Choose Task Type.
- **Execute.** The **Execute** button runs tasks selected in the **Task View** pane below.
- **Restore.** The **Restore** button runs restoration for backup or restore tasks selected in the **Task View** pane below. When used on a backup task, the latest version of backup is restored to its original location.
- **Stop.** The **Stop** button interrupts tasks selected in the **Task View** pane below. Note that before stopping a task, the program tries to finish copying current file first.
- **Properties.** The **Properties** button opens properties of a task selected in the **Task View** pane below.
- **Delete.** The **Delete** button removes tasks selected in the **Task View** pane below.
- **Settings.** The **Settings** button opens the program's settings. To learn more, please see Settings.
- **Create Recovery Drive.** The **Create Recovery Drive** button opens a Wizard that guides you through the process of creating a USB recovery drive.
- **Register.** The **Register** button opens a registration dialog. To learn more, please see Registration.
- **Buy Now.** The **Buy Now** button opens information about different purchase options on the program's website.
- **Connect.** (Server edition only) The **Connect** button lets you connect or disconnect to Server. To learn more, please see Connecting to Server.

7.3 Task View

The **Task View** pane contains all tasks with their status, names, progress and scheduling information. It is a central part of the program's main window that lets you easily track overall status of your backups.



The pane is customizable. In the **View** menu, you can point to **Task View**, and then select columns to be displayed in it. Generally, there can be six columns:

- **Task name.** This column contains task name and status, so you can quickly track failed operations.
- **Action / Task Type.** By default, this column has a button that lets you quickly run the task. To prevent accidental operations, you can change it to task type in the **View** menu.
- **Last run time.** (Not displayed by default) In this column you can see last time when the task was run.
- **Next run time.** In this column you can see time of a next scheduled run.
- **Progress.** For running tasks, this column shows a progress bar and percentage indicator.
- **Status.** This column shows current task status.

You can sort tasks by clicking the column name.

Tracking Task Status

Each task can be in several statuses, as follows:

Success. The task has completed successfully.

Success with Warning. The task has completed successfully, but there were minor errors during copying. This can happen, for example, if the program could not back up some file's attributes, or if some other application modified the backup set during the process. In most cases, repeating the task will end with success.

Success with Scheduling. The task is scheduled, and last run ended with a success.

Error. The task has ended with an error.

Error with Scheduling. The task is scheduled, and last run ended with an error.

Scheduled. The task is scheduled, but has never been executed yet.

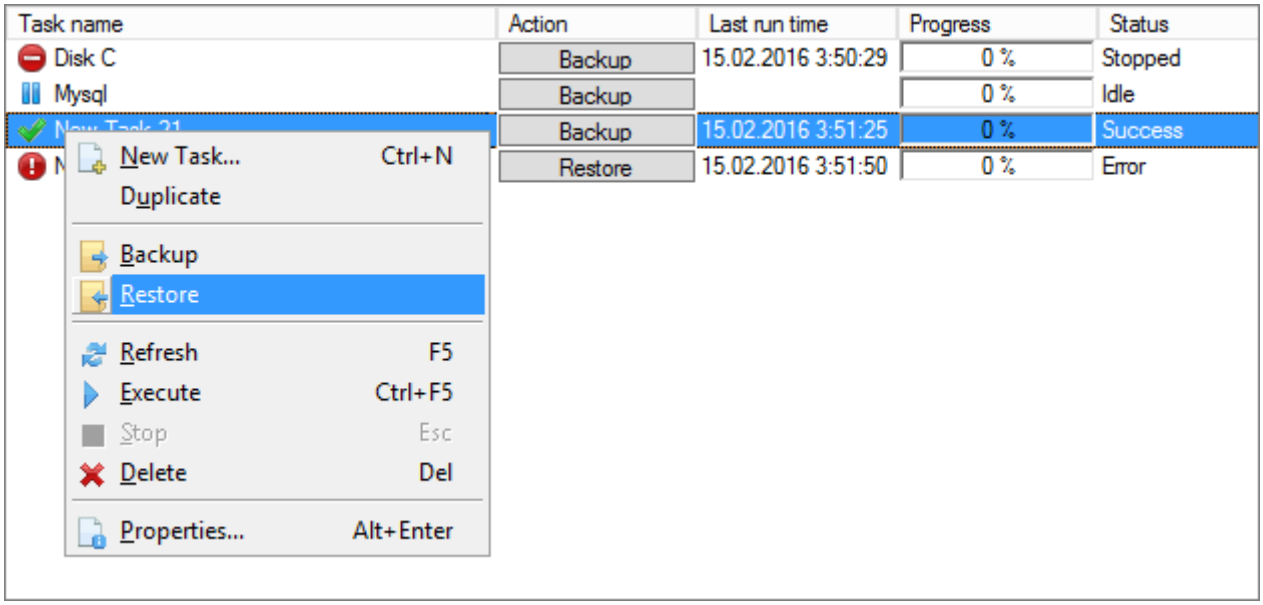
Idle. The task is not scheduled and has never been executed yet. New task.

Running. The task is running.

Stopped. The task was stopped by the user.

Task Context Menu

You can right-click each task, to open a dropdown menu and see the full list of available operations.

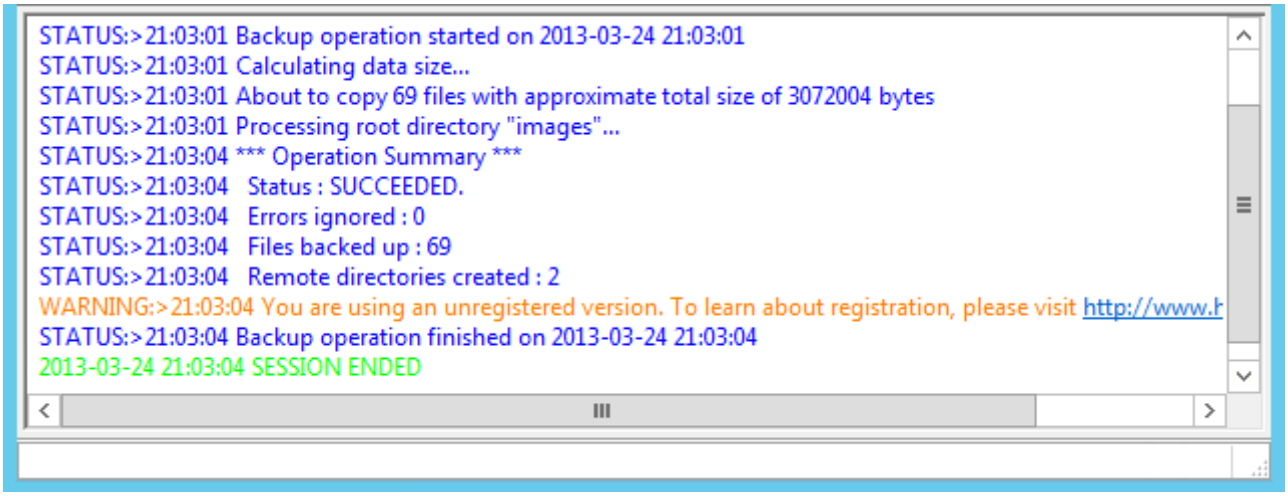


- **New Task.** Opens the New Task Wizard. This is the only non-task-specific command in the list.
- **Duplicate.** Duplicates the task. As a result, a task named **"Copy of <Task Name>"** appears.
- **Backup**, **Restore** or **Synchronize.** Runs the task. For backup tasks, there are two commands: **Backup** and **Restore**. The latter option restores the latest version of the backup.
- **Refresh.** Does nothing (old option, not removed since version 6).
- **Execute.** Runs the task.
- **Stop.** Stops the task. Can be used only for running tasks.
- **Delete.** Deletes the task.
- **Properties.** Opens properties of the task.

Note: Most context menu commands are common for all tasks, and can be used for multiple tasks at once.

7.4 Log View

The **Log View** pane contains short log of all operations related to a task that is selected in the **Task View** pane. Besides the short log, there also is a detailed log which is written to a file on the disk. Link to a detailed log is given in the beginning of each short log.



Together with the **Task View** pane, the **Log View** pane is one of the most important control elements. When one of your task finishes with an error, the fastest way to understand what went wrong is to select it in the list, and skim through the respective log. In most cases, the problem can be found in several seconds.

If you want, you can hide the **Log View** pane. To do it, go to the **View** menu, point to **Log View**, and then click **Hide/Show Log**.

Managing Logs

There is a number of commands related to logs and the **Log View** pane.

- **Copy to Clipboard.** To copy the log into the clipboard, right-click it top open the shortcut menu, and then click **Copy**.
- **Save to File.** To save the log, right-click it to open the shortcut menu, and then click **Save Log...**. The **Save As** dialog opens. Select a path and a file name, and then click **OK**.
- **Clear Log.** To clear log, right-click it to open the shortcut menu, and then click **Clear Log**.

All of these commands are also available in the **View** menu.

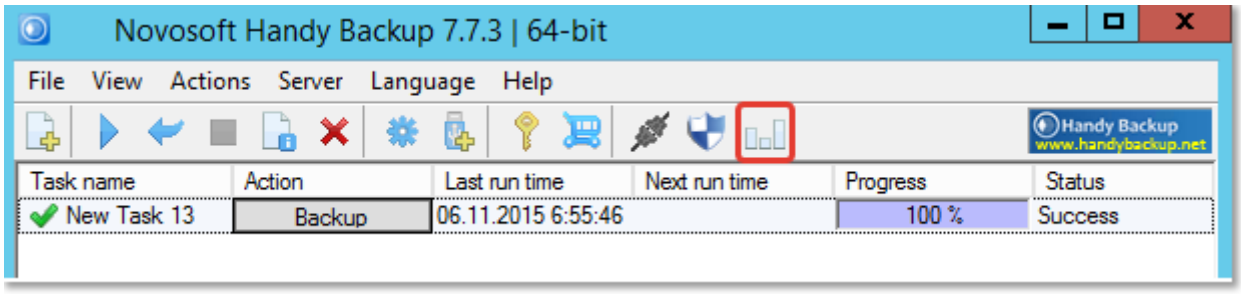
You can also tune log appearance by selecting colors for different type of messages (status, errors, warning, etc.) To do it, right-click the log to open the shortcut menu, and then click **Colors**. This command opens Log Settings.

7.5 Reports

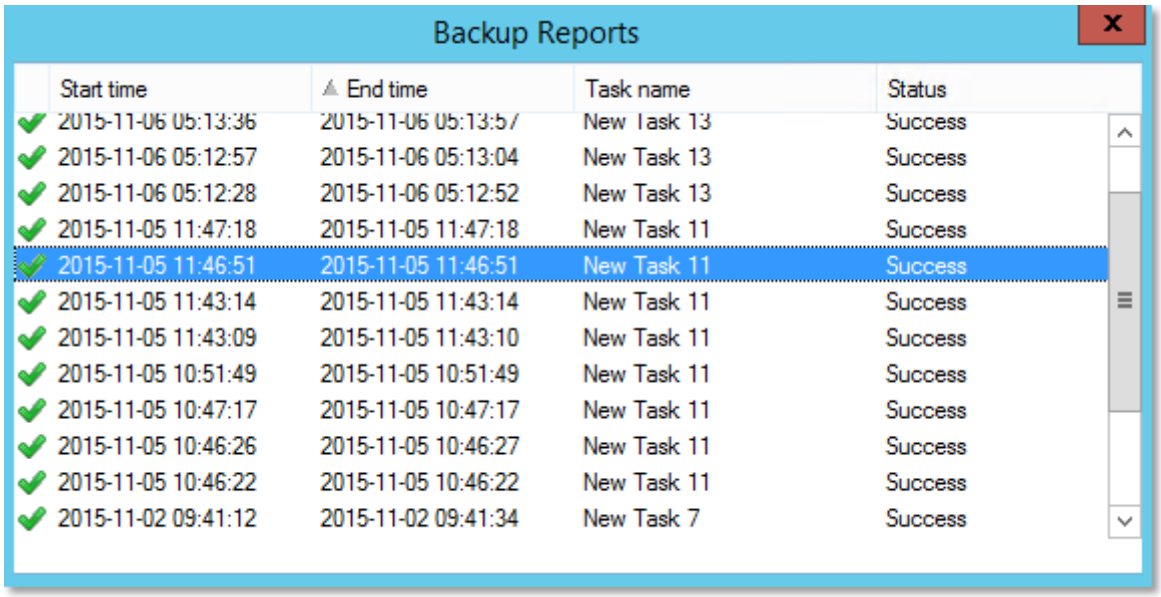
Using this feature, you can see all tasks attempted by Handy Backup, with a possibility to call for the detailed report about purposes, goals, sources, destinations and results of executing for any particular task in the report list.

Calling Backup Reports

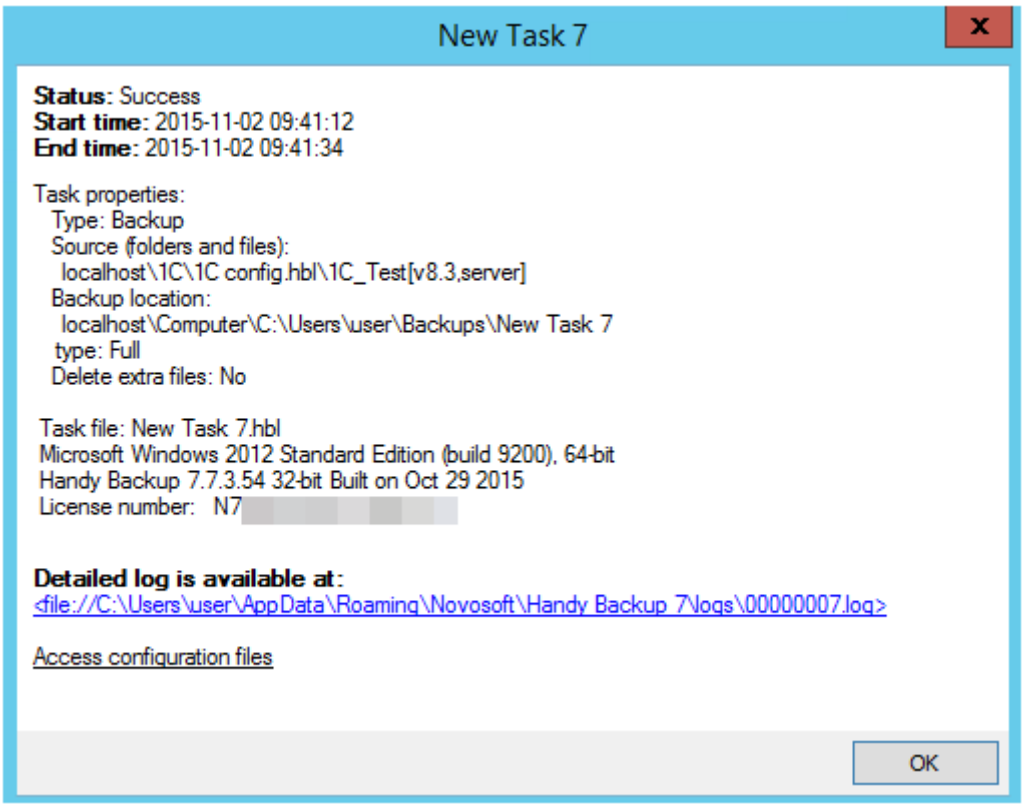
To see the **Backup Reports** window, just press a button on a Handy Backup Management Panel.



You will see the window containing a list of tasks attempted and executed by your Handy Backup. To close this window, please click on an [x] button at the top-right corner of a window.



If you need an extra information about any particular task, please double-click on this task. A new window will appear, containing a detailed report about this task.



To close a report and return to the report list, please click OK.

7.6 Hot Keys

Hot keys let you control the program and manage your tasks faster. They are not case-sensitive and can be used at any time.

Task-Specific Hot Keys

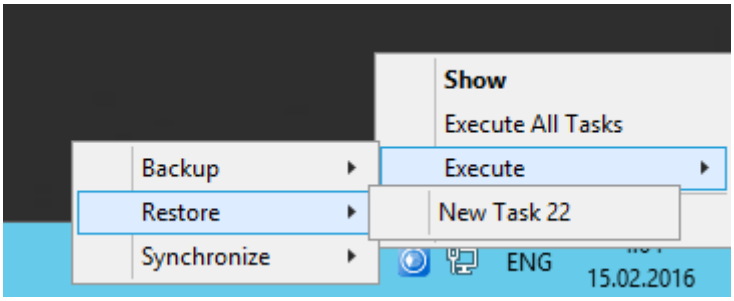
- **Ctrl+N** – Starts the **New Task Wizard**
- **Ctrl+F5** – Executes tasks selected in the **Task View** pane of the main window
- **ESC** – Stops tasks selected in the **Task View** pane of the main window
- **DEL** – Deletes tasks selected in the **Task View** pane of the main window
- **Alt+ENTER** – Opens properties of a task selected in the **Task View** pane of the main window

General Hot Keys

- **Alt+F7** – Opens settings
- **F1** – Opens user manual
- **Alt+F4** – Closes the program

7.7 Tray Menu

After installation of the program, its icon appears in system tray. To open the tray menu, right-click it.

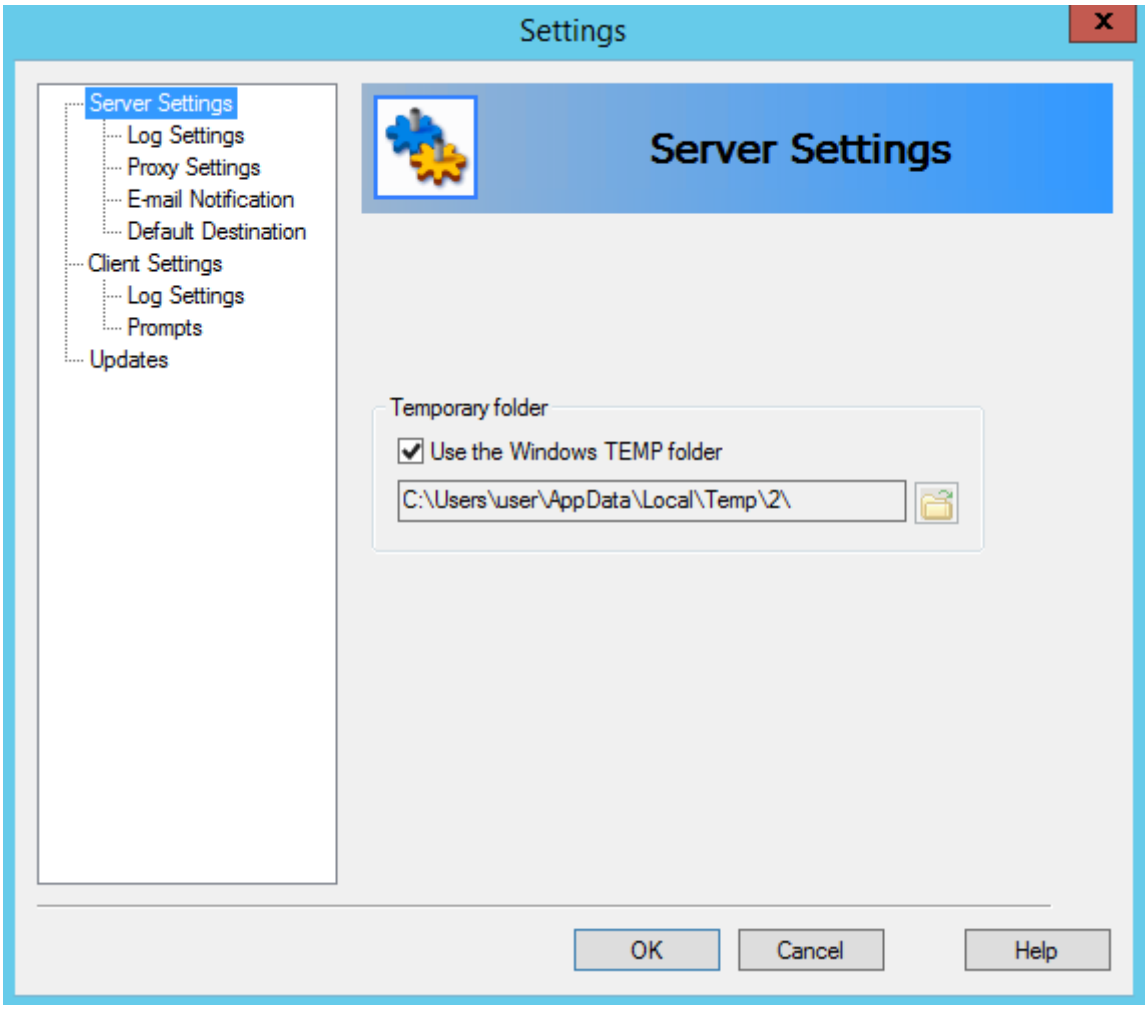


The tray menu contains four commands:

- **Show** - opens the program's main window.
- **Execute All Tasks** - runs all tasks simultaneously.
- **Execute** - opens a submenu in which you can select the task you want to run.
- **Exit** - in Standalone version, closes the program and all related processes. In Server version, closes Client GUI only.

8 Settings

In Settings, you can set default destination, set up e-mail notifications, and change the program's appearance. To open Settings, click the **Settings** button on the program toolbar.



Settings are divided into two main categories: **Server Settings** and **Client Settings**.

- **Server** is a core logical component of Handy Backup, responsible for controlling all operations, creating and running tasks, logging, etc.
- **Client** is graphical interface through which you work with the program. Technically, it is completely independent from **Server** and has individual settings.

Besides changing settings, this window also lets you check if you're using the latest version.

- Server Settings
  - Log Settings - Used to control logging.
  - Proxy Settings - Allows setting default proxy server.

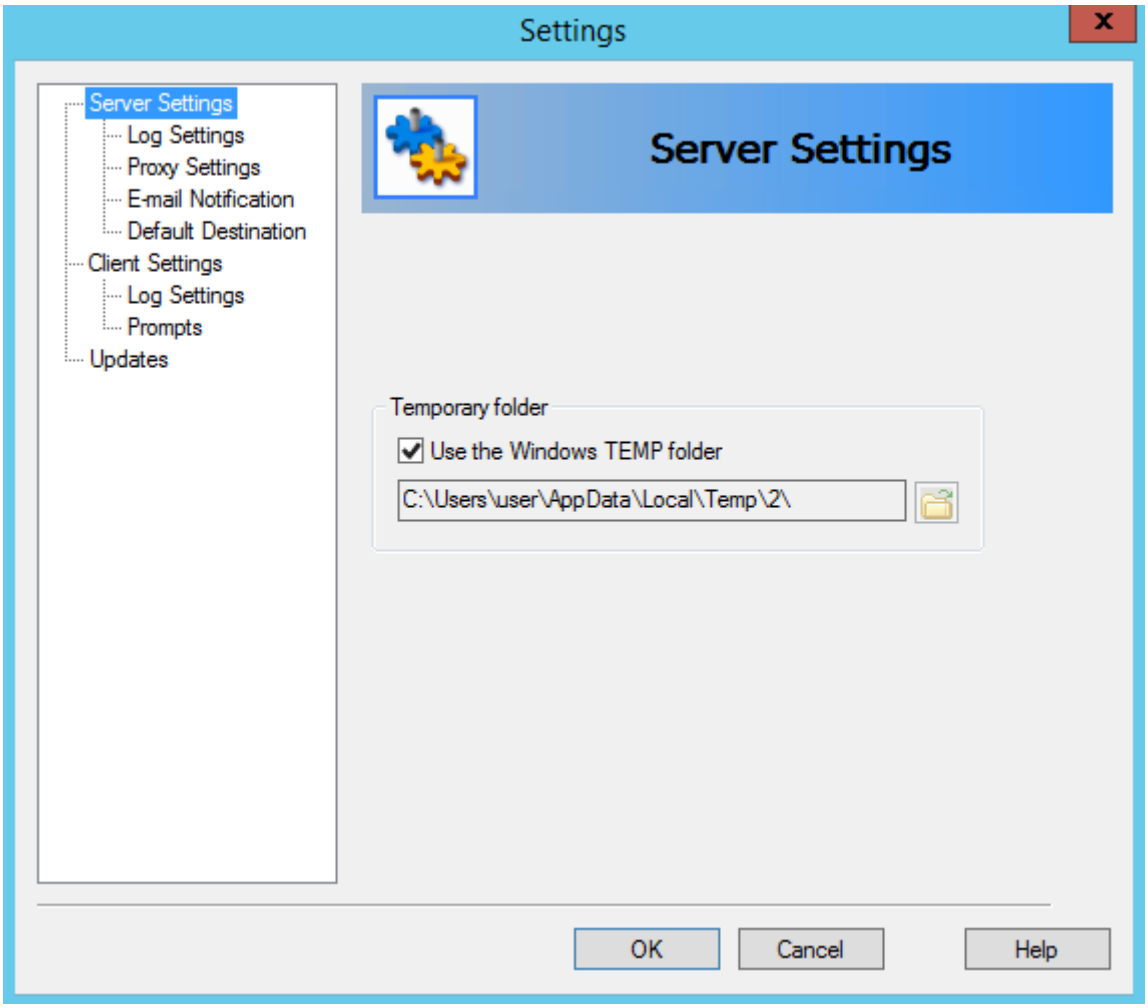
- E-mail Notification - Enables specifying mail server, so you can stay informed about task results.
- Default Destination - Lets you select a default destination and create backups faster and more easily.

- Client Settings
  - Log Settings - Allows selecting colors of different messages in the **Log View** pane.
  - Prompts - Defines if you want to be prompted when stopping or deleting tasks.
- Updates - Lets you check for updates, manually or on a scheduled basis.

For more details, please refer to the next chapters.

8.1 Server Settings

Server Settings contain general settings of the **Server** component of the software. In the program's architecture, the term **Server** is used to refer to a logical component responsible for creating and managing all tasks, scheduling, logging, e-mail notifications, etc.



Version 7, Published on October 2017
support@handybackup.net

- Check **Use the Windows TEMP folder** if you want the utility to use standard Windows temporary folder.
- To select a different folder, click the **Browse for folder** button and browse for another temporary folder.

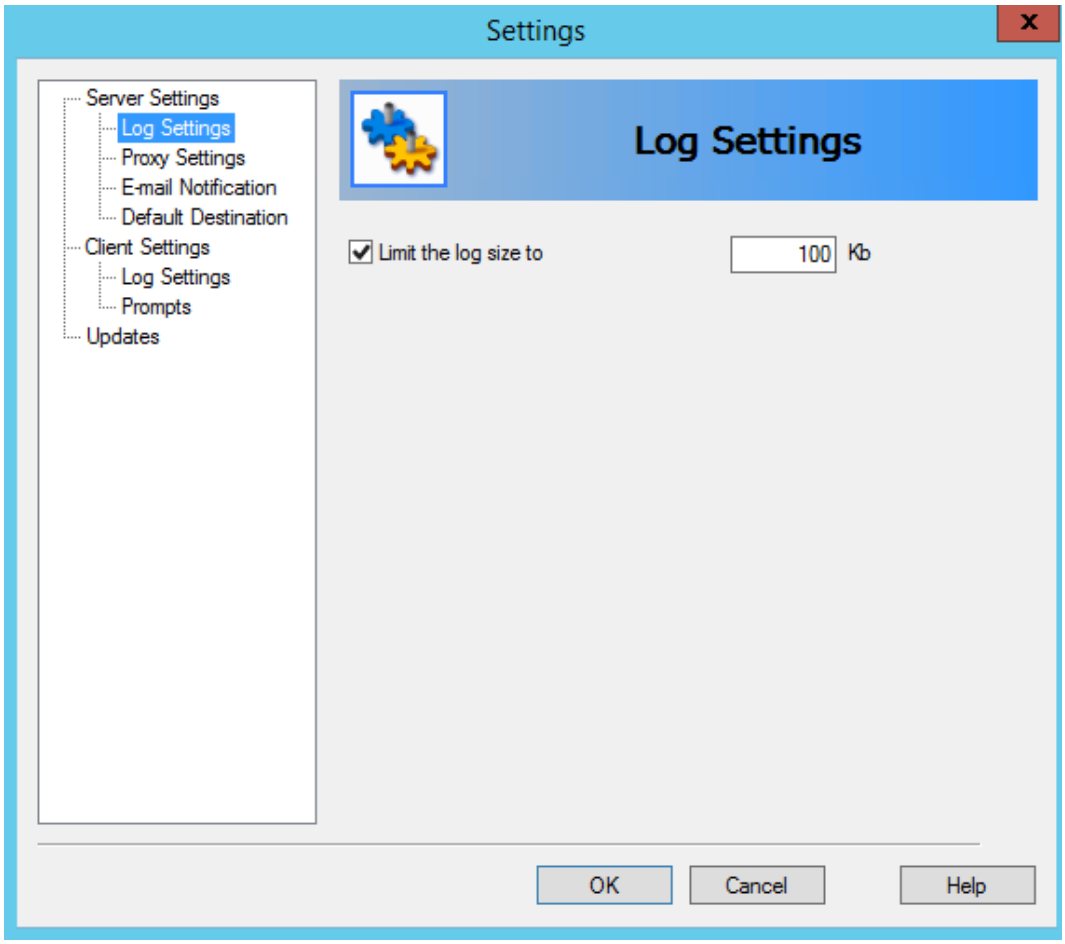
Generally, the program does all processing “on-the-fly”, i.e. without creating any temporary files. Temporary folder may be used for new and experimental features that haven’t yet made their way into the program’s core.

• Log Settings

All backup, restore and synchronize operations are logged. There are two types of logs:

- **Short logs** are available in the **Log View** pane of the main window. They contain brief information on time, size and status of a task.
- **Detailed logs** contain complete information about each file backed up. Link to detailed log is available in the beginning of a short log.

Each time you run a task, the program checks size of detailed log, and if it is large enough, deletes it. **Log Settings** are used to specify maximum size of the log.

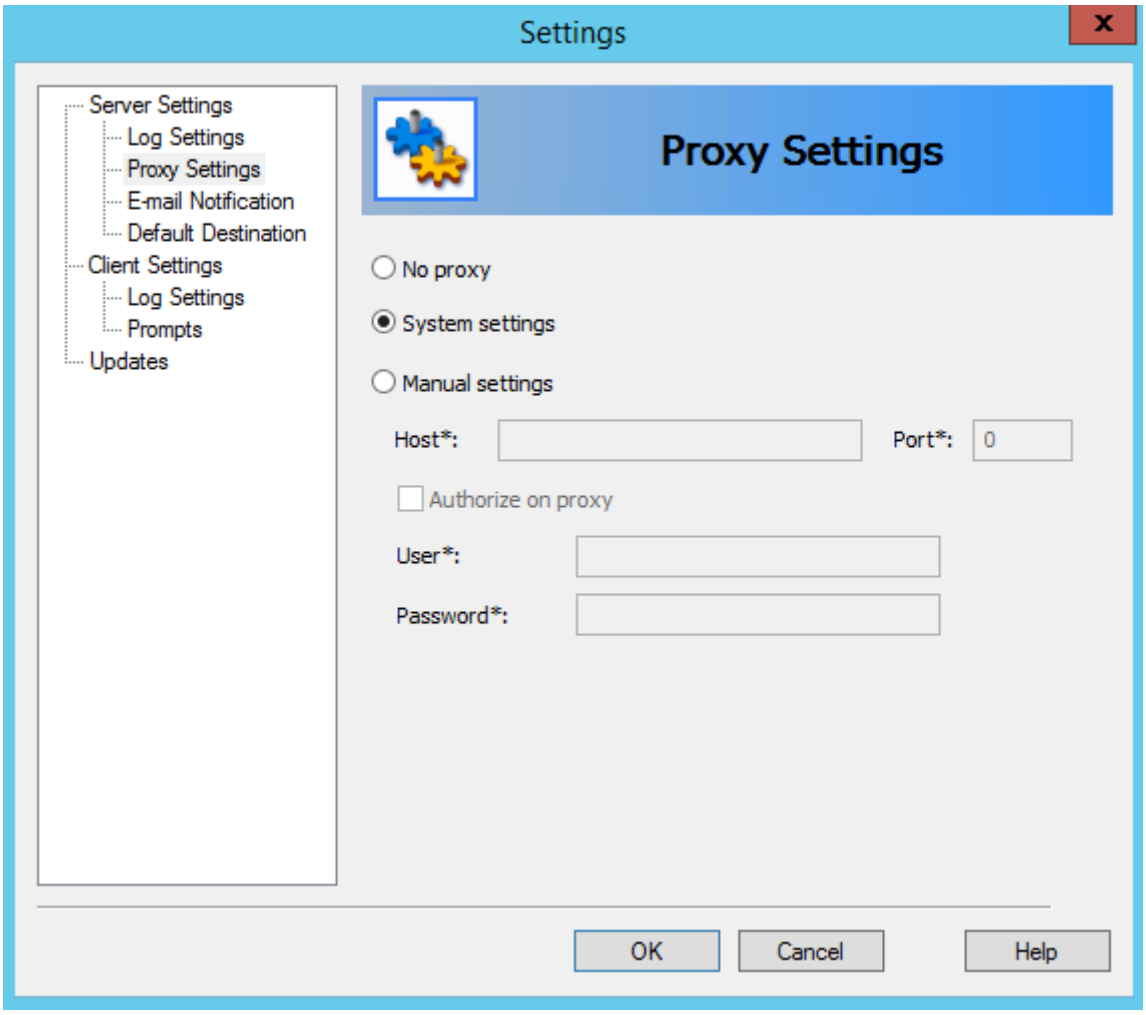


- Check **Limit the log size to** if you want to save disk space by automatically deleting unnecessary logs. Specify the limit in the field to the right.

Note: The program deletes old logs in the beginning of the task, so the latest log always comes without any limitations.

- ### Proxy Settings

In the program's architecture, **Server** is a core component responsible for logging, scheduling, creating and running tasks, and other operations. Technically, it can run on a different computer than other components, and communicate with them over network. **Proxy Settings** allow specifying proxy server parameters.

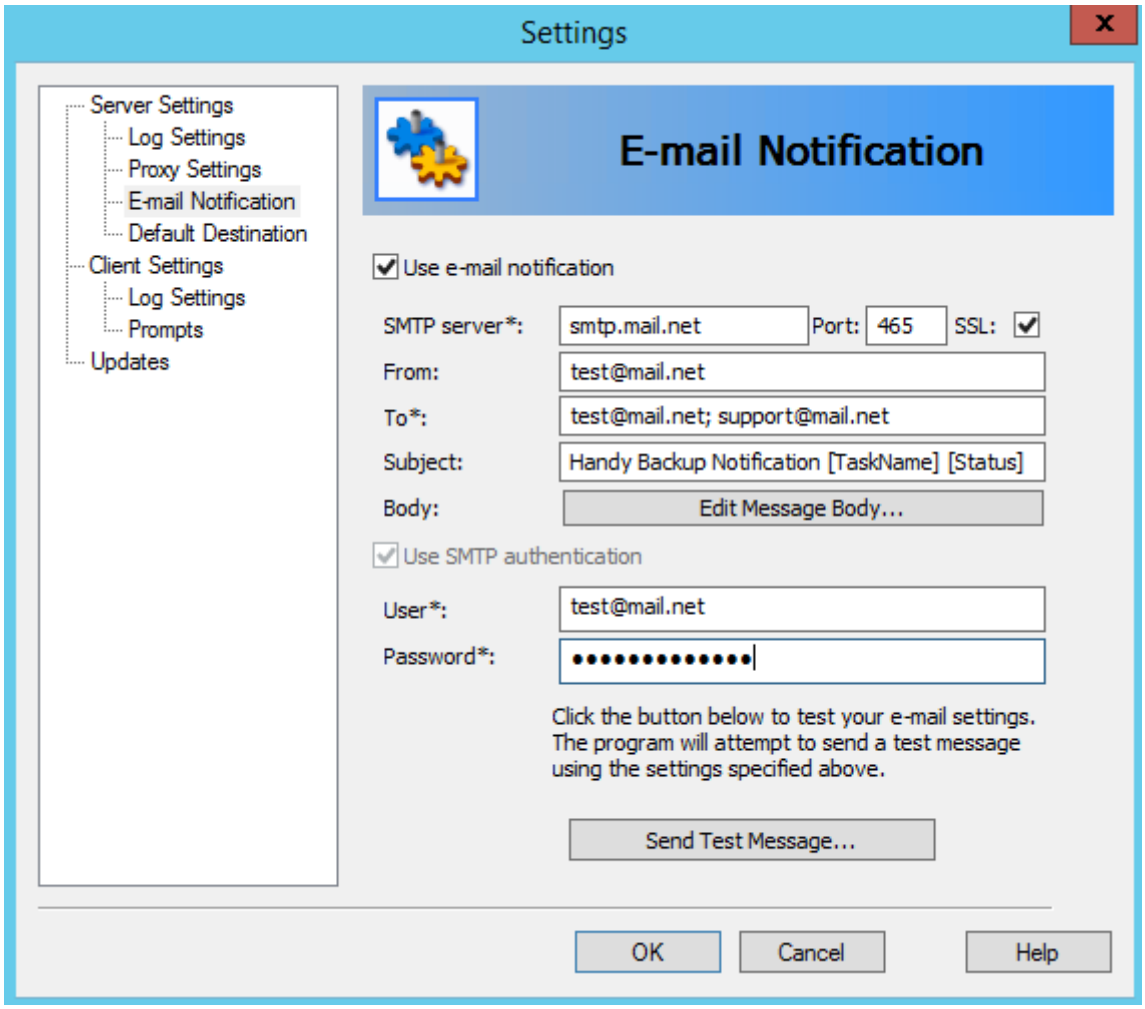


- Select **No Proxy** if you have no proxy
- Select **System Settings** to use general settings (the ones set in Internet Explorer)
- Select **Manual Settings** to set proxy parameters manually

- **E-mail Notification**

By default, to control status of your tasks, you need to open the program's main window and find them in the **Task View** pane. For more convenience, you can receive notifications about task results via e-mail. This behavior is task-specific and needs to be enabled for each task individually. For more details, please see New Task: Pre-, Post-Operation Actions.

E-mail notifications are sent by the **Server** component of the software. In settings, you need to specify parameters of your mail server, sender, message template, etc.



To enable e-mail notifications, follow these steps:

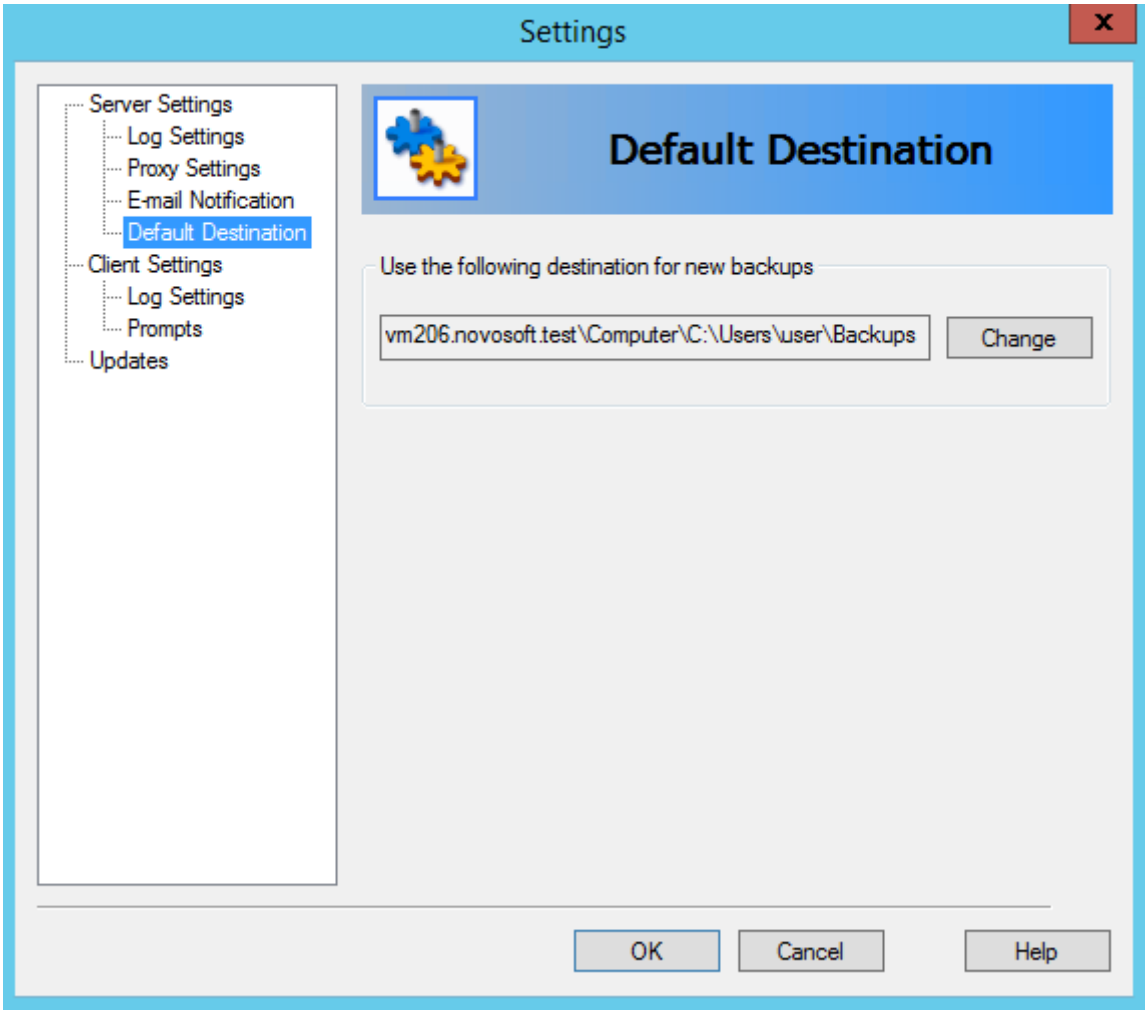
1. Check **Use e-mail notification**.
2. Fill the following fields:
   - **SMTP server.** Mail server to use to send e-mails.
   - **From.** Sender of the letter (recommended option is **Handy Backup** - so you can easily find it between other messages).
   - **To.** Target e-mail address where you want to receive the notifications.
   - **Subject.** Subject of the letter.

- **Body.** Click **Edit Message Body** to change welcome message, signature etc.

3. Check **Use SMTP notification** if your SMTP server requires authorization. Enter the required information in the **User** and **Password** fields.
4. Click **Send Test Message** to test that all fields are set correctly.

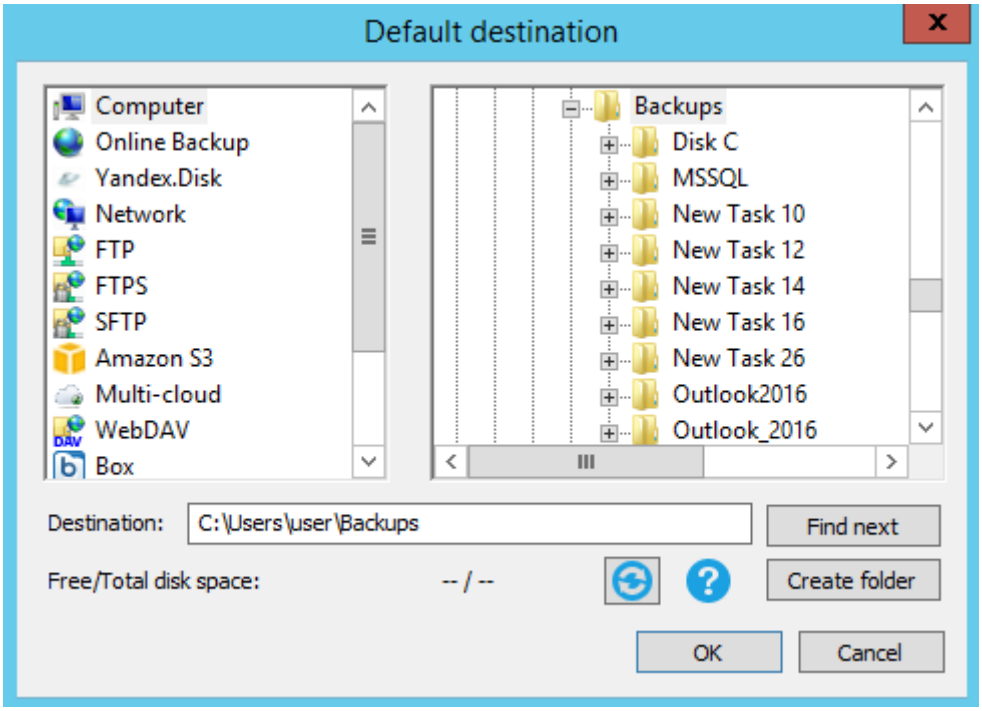
- ### Default Destination

When creating a new backup task, you need to select destination where to store the data (see Select Destination for more details). Having a default destination lets you create new tasks much faster.



To set or change default destination, follow these steps:

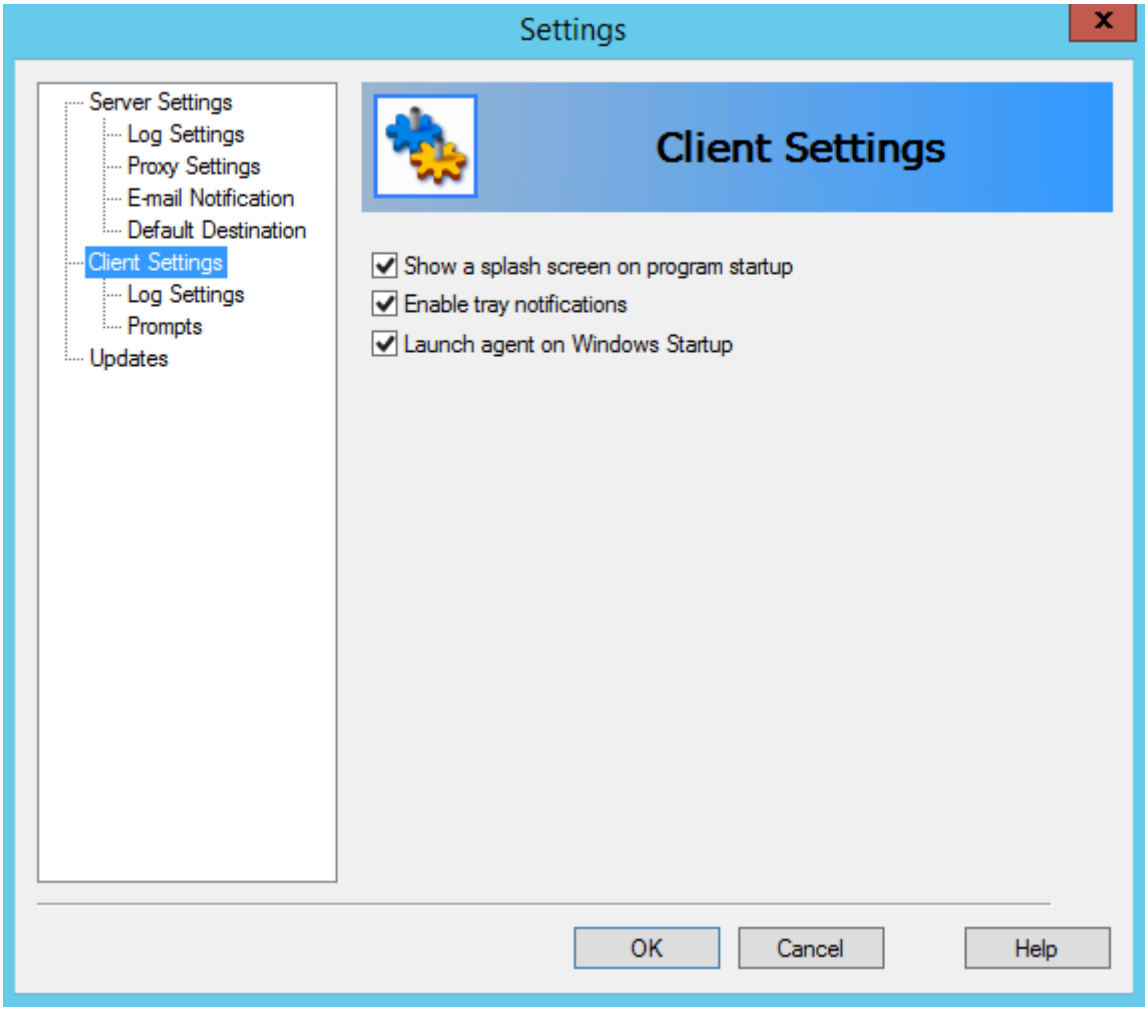
1. Click **Change**. The **Default Destination** dialog opens.



2. In the **Storage Destinations** pane to the left, select a plug-in. The list of folders appears in the **Folder Selection** pane to the right.
3. In the **Folder Selection** pane, browse for a target folder. If you need to create a new folder, click the **Create folder** button.
4. When selected a folder, click **OK**.

8.2 Client Settings

Technically, **Client** is a general name for component that connects to an instance of Handy Backup and allows accessing and managing tasks. In **Client Setting** you can change settings of the GUI Client (main application that you use to control the program).

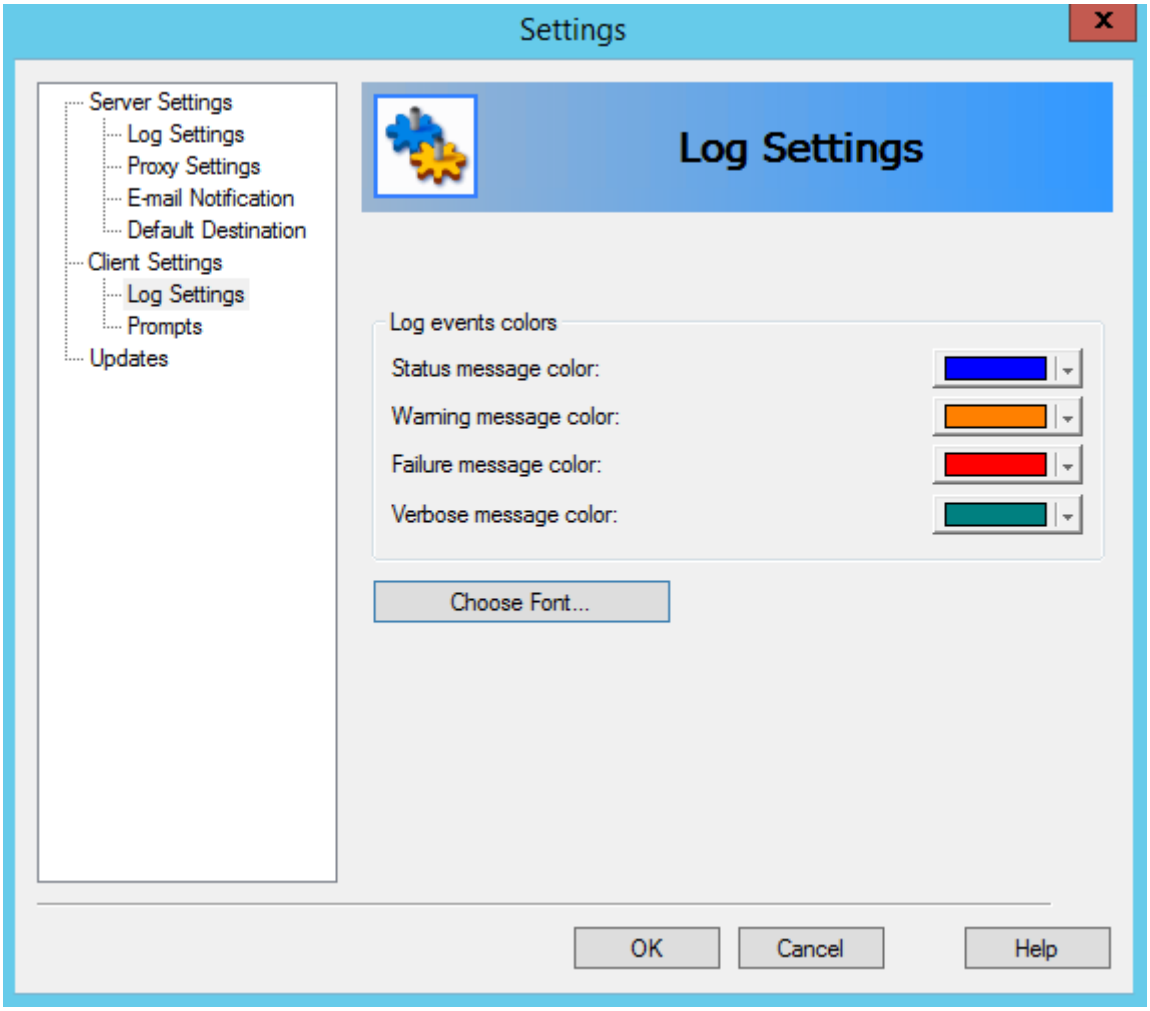


- Check **Show a splash screen on program startup** to display a splash screen indicating that the program is loading.
- Check **Enable tray notifications** to be notified of task results in system tray. The notifications appear only if main window of the program is closed.

The latter option, **Launch agent on Windows Startup** does nothing (temporary option, not removed since version 6 of the program).

- ### Log Settings

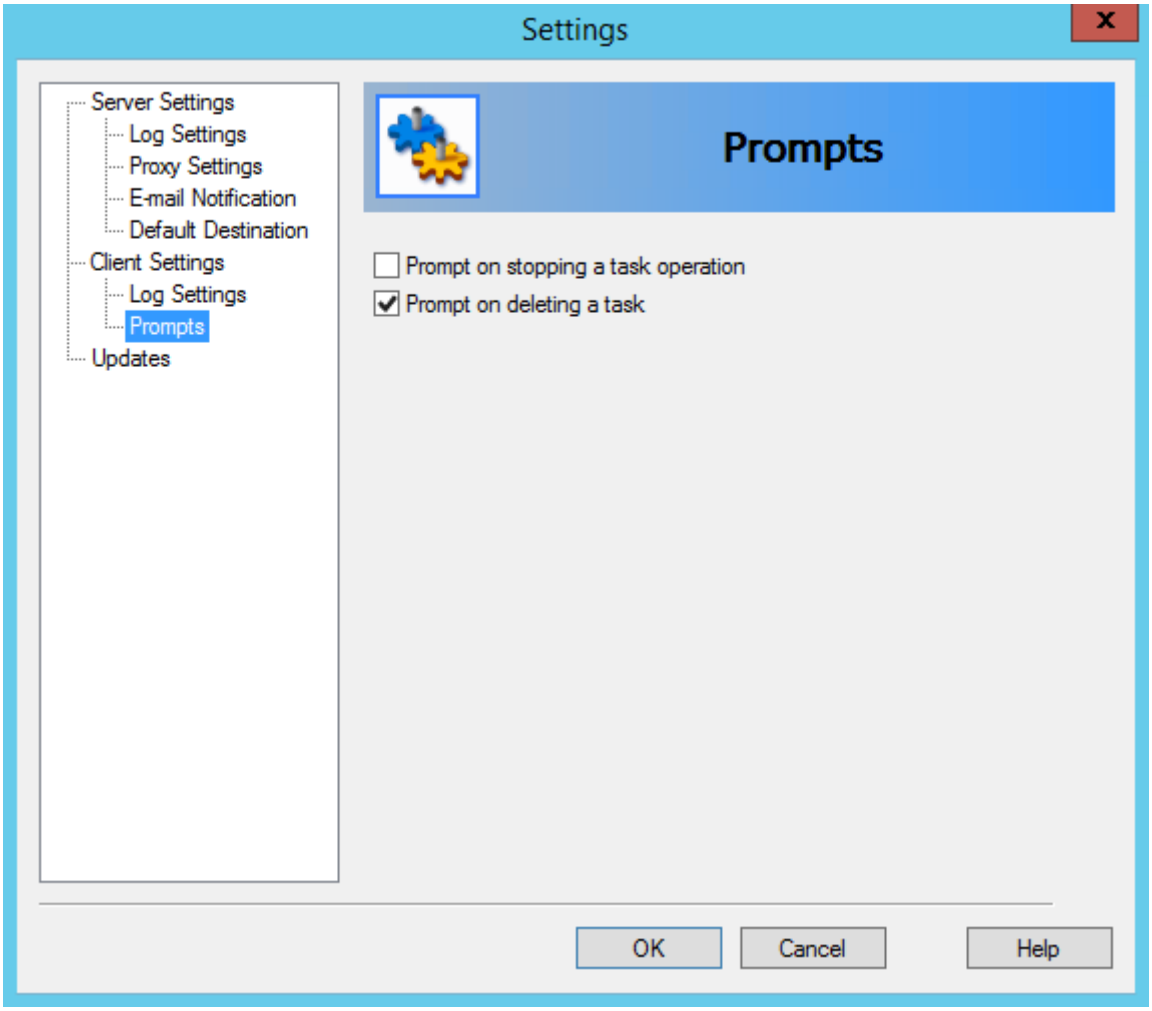
In **Log Settings**, you can select appearance of different messages appearing in the **Log View** pane of the program's main window.



These settings are client-specific. If you connect to the same instance of Handy Backup with a different client, the colors will be different.

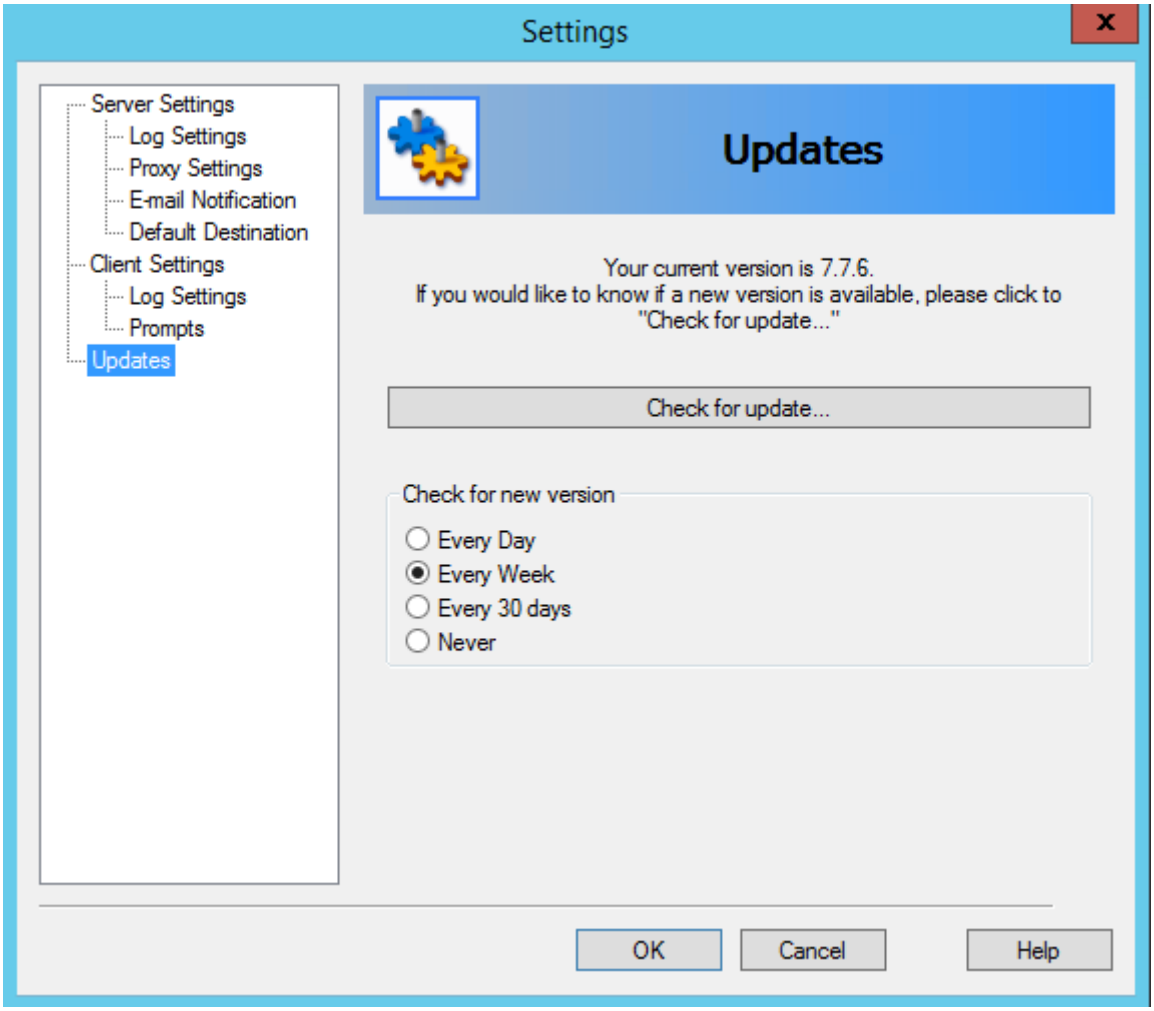
- **Prompts**

In **Prompts**, you can choose whether the program should ask for additional confirmation when stopping or deleting tasks.



8.3 Updates

In **Updates** you can check if there are new versions of the program, and adjust updates settings.



- Click **Check for update...** to connect to the program's website and check if there are any updates available for download. You can also check for the new version manually, by visiting the following page: www.handybackup.net/download

Select how often the application should check for updates:

- **Every Day;**
- **Every Week;**
- **Every 30 days;**
- **Never.**

9 Extras

In this section you can learn about other products and services based on Handy Backup:

- **Disaster Recovery.** Disaster Recovery is a separate module of the software, that can be installed on a USB drive and used for restoring system after major failures. It comes with four utilities: backup and recovery, antivirus, partition manager, and file undelete tool.
- **Online Storage Service.** Handy Backup Online is a cloud service that lets you store data in a distributed storage system physically located on our secured servers in San Diego, CA.
- **Console Client.** This is an alternate client software that lets you control the program's tasks using a command line interface. It is very useful if you want to run backup and synchronization from third-party applications or scripts.
- **Web Access.** This is another alternate client software that is integrated with a web server, and allows controlling tasks over the Internet.

You can learn about these solutions in the next chapters.

9.1 Disaster Recovery Module

Disaster Recovery is a module that lets you back up and restore data independently of your main operating system. If your computer fails, you can instantly load from a recovery flash drive and restore your data either to the original hard drive, or to a different place.

To learn how to install and use Disaster Recovery, please see the content of this chapter below.

• Product Overview

Disaster Recovery is a module of the software that lets you back up and restore data independently of your main operating system. If your computer fails, you can instantly load from a recovery flash drive and restore your data either to the original hard drive, or to a different place.

Bootable Media

The main idea behind Disaster Recovery is to enable users to perform system recovery by loading from a recovery drive and treating their primary HDD as a "cold" external media. The recovery drive includes the following software:

- Slax - a free Slackware-based LiveCD Linux distro.

- Java Runtime Environment - a computer environment implementing Java Virtual Machine.
- Handy Backup Java - an implementation of the program in Java.
- Web Access - a web-based interface that allows creating and running Handy Backup tasks via a browser.
- Mozilla Firefox - a free open source web browser.

Technical Support and Updates

All registered users are entitled to free support by e-mail, phone or Skype. If you experience any problems, or have any questions about our software, please don't hesitate to ask for assistance or send your feedback at support@handybackup.net.

Our program is constantly updated and improved. To stay informed of the latest updates, please watch the product website at www.handybackup.net, or follow us on Twitter.

Multiplatform Solution

Basically, Disaster Recovery is a branch of **Java Backup** project, which aims at creating a platform-independent solution that can run on all systems supporting the Java software (including Microsoft Windows, Linux, Mac OS, Solaris and other).

Extensibility

Designed with extensibility in mind, the module shares all concepts and techniques employed in the original program (Windows version).

It has a similar task-based, plug-in-driven architecture, where all backup and restore operations are initiated by creating and running the respective tasks.

The program is compatible with image-based backups created in Windows, but not with tasks (as of the first release in August, 2010).

Licensing Information

You can use the module on only one PC, i.e. backups won't run on other computers. Restore tasks are available regardless of the system.

For details, please see Registration in the User Manual.

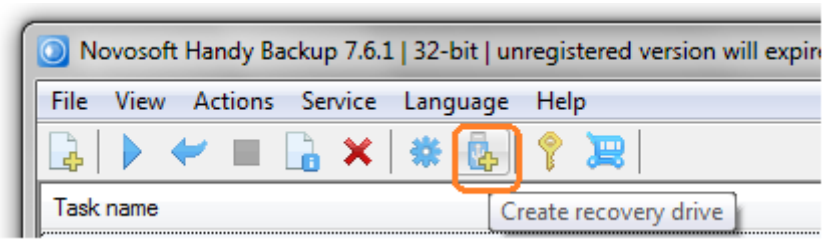
- ### Installation of Disaster Recovery Utility

Creation of a recovery drive is performed by **Disaster Recovery Installation Kit**. Installation Kit is a Windows application that lets you create bootable flash or USB drives with the module.

At present, there is no other way to create a recovery drive, than from Windows.

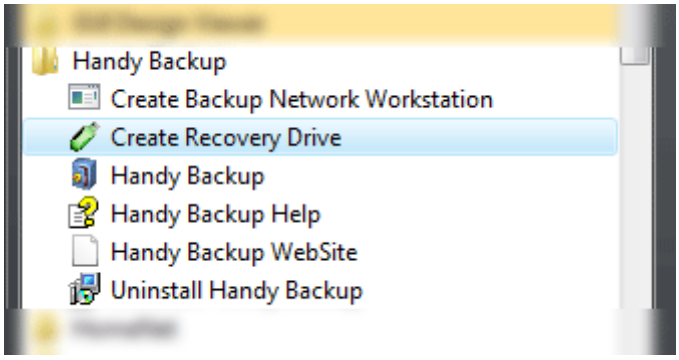
To create a recovery drive, follow these steps:

1. Download Disaster Recovery Installation Kit using the button on the main tool panel of Handy Backup (or order it via E-mail: support@handybackup.net);



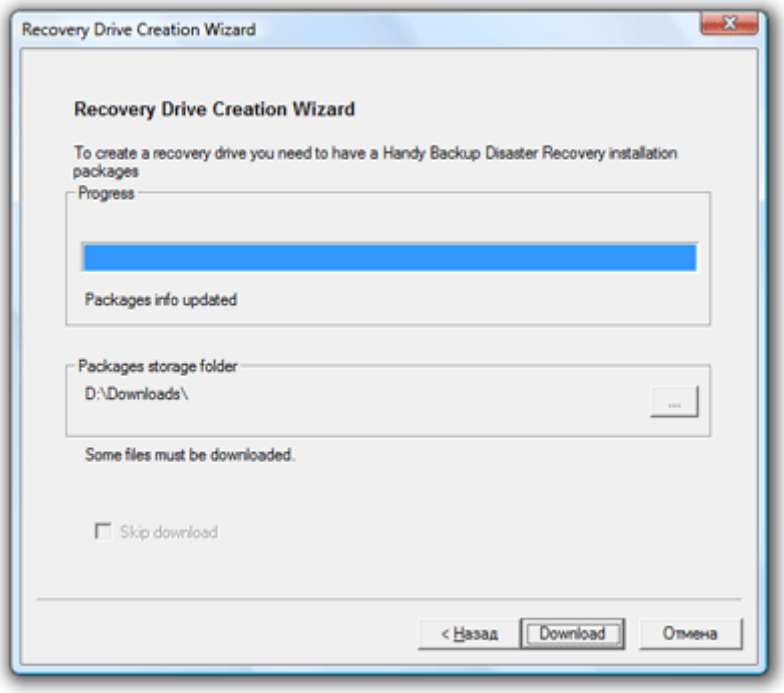
2. Install the Handy Backup Disaster Recovery utility.

By default, the program is installed into /Program Files/Novosoft/Disaster Recovery/. A shortcut called **Create Recovery Drive** appears in the Start menu.



3. Run **Create Recovery Drive**.
4. On the Welcome screen, click **Next**.

On the next screen, you are prompted to download an installation package.

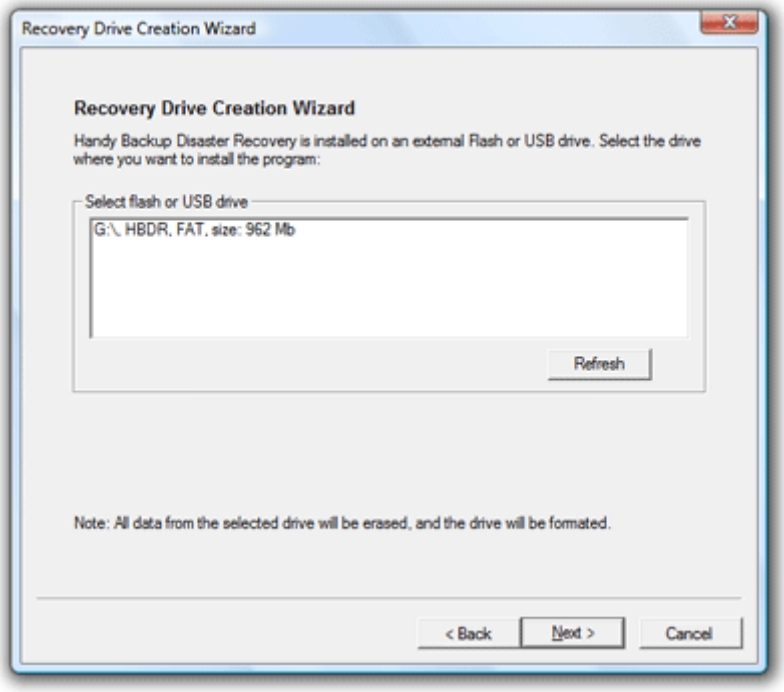


5. Specify the folder where installation package will be downloaded, and then click **Download**.

Note: If you already have the installation packages, simply select the folder where they are located, and the download will be skipped.

6. When download is finished, click **Next**.

On the next screen, you need to select the drive where to install the module.



7. Connect a Flash or USB drive that you want to use as a disaster recovery drive. It automatically appears in the **Select Flash or USB drive** field.
8. Select the Flash or USB drive where you want to install the module.
9. Click **Next**.
10. Click **Install**.

After you click **Install**, the program installs Disaster Recovery on the selected drive.

Note: You will be prompted to format the flash drive where you will install the Disaster Recivery utility. If you will select the installation without formatting the drive, please make sure that the drive has at least 400 Mbs of free space to install Disaster Recovery!

Note: The installation normally takes five to ten minutes, depending on the drive size and resources of your computer.

11. When installation is finished, click **Finish**.

To boot from this Flash or USB drive and run the software, you need to have USB listed in BIOS boot order at the first place.

Setting up BIOS Boot Order

Moving USB to the first place in the list of the BIOS boot order enables you to run the operating system that is installed on the USB device, rather than your primary HDD.

- Upon startup, the computer will check if there are any operating systems available on USB devices, and if there are any, it will load them. Otherwise, it will start as usual.

To change BIOS boot order, follow these steps:

1. Restart your computer.
2. Wait for the message that welcomes you to enter setup. Usually it looks like this:
   - Press [key] to enter setup.
   - Setup: [key].
   - Enter BIOS by pressing [key].
   - Press [key] to enter BIOS setup.
   - Press [key] to access BIOS.
   - Press [key] to access system configuration.
3. Press the respective key (usually, Del or F2) as soon as you see the message.

Since BIOS is a part of motherboard hardware, it is specific to each system, and boot order options may be located in different places.

4. Search for a menu item called Boot Options, Boot, Boot Order, etc. It is commonly located in a general menu, but may also appear within Advanced Options, Advanced BIOS Features, Other Options, etc.

The BIOS boot order lists all hardware connected to the computer's motherboard, from HDDs to USB and CD/DVD drives.

5. Select USB, and then follow BIOS instructions to move it to the first place in the boot order.
6. To save changes, follow BIOS instructions to select the **Exit** or **Save and Exit** commands.

After you restart the computer, it will automatically try to load the system from a USB drive.

• Quick Start

In this section you can find quick instructions for using the module.

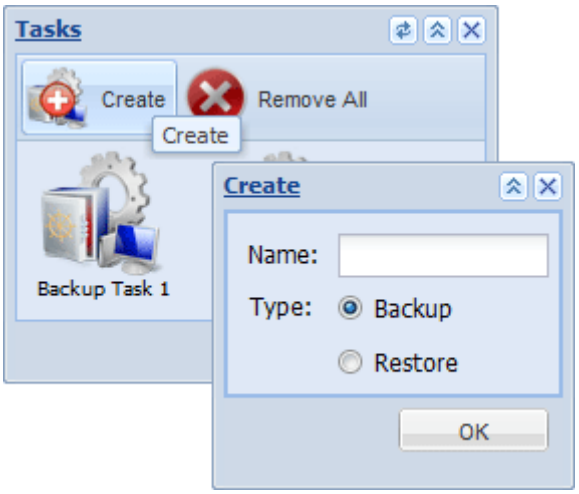
- Backing up HDD
- Restoring HDD

Backing up HDD

Note: This section contains only quick start instructions. For a detailed description, please see Managing Data with Disaster Recovery.

To back up your HDD, follow these steps:

1. On the desktop, open **My Computer**.
2. On the desktop, open **Tasks**.
3. In **Tasks**, click **New Task** on the window's toolbar.
4. Enter a name for the task, and then click **OK**.

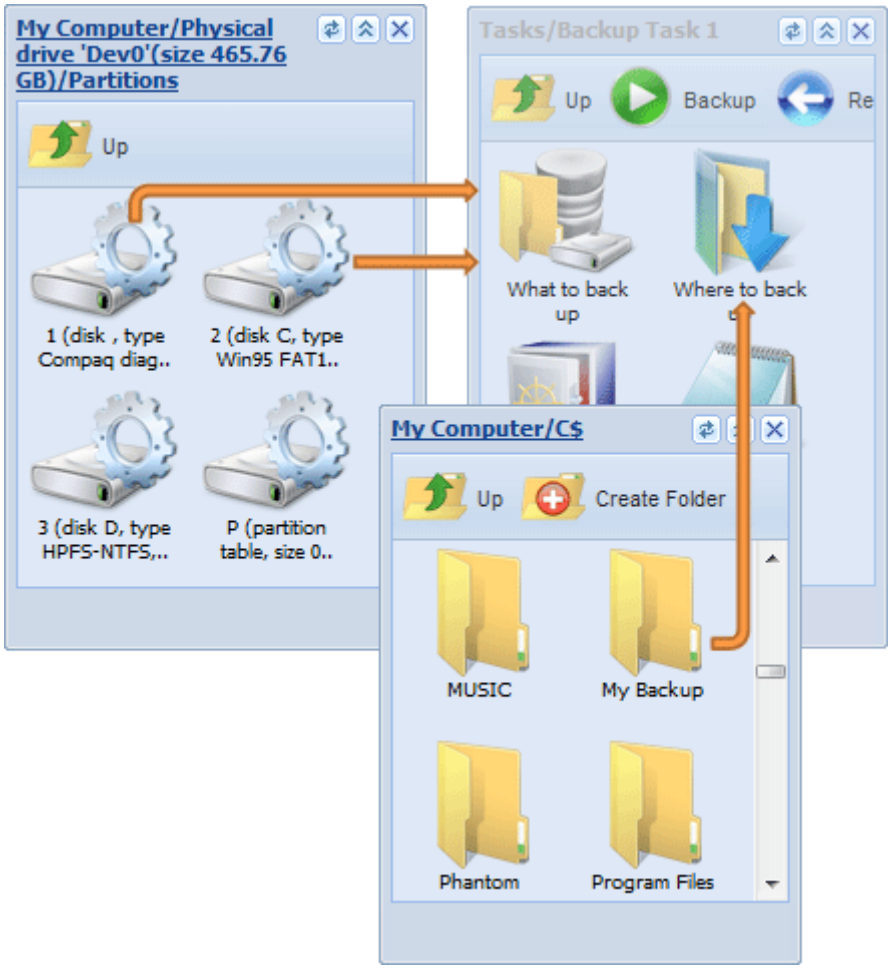


Version 7, Published on October 2017
support@handybackup.net

Note: If the program doesn't find any tasks during the startup, a new task is created automatically.

5. Find your HDD in the list of physical devices in **My Computer**, and then open it. To back up the entire HDD, drag-and-drop **full drive image** into the **What to Back up** folder of the task. To back up a partition, drag-and-drop an object from **Partitions**.
6. In **My Computer**, browse for a folder where you want to store the backup. This may be a folder on another HDD, an FTP location, or your Online Backup account. Drag-and-drop this folder into the **Where to Back up** folder of the task.

Note: FTP locations and Online Backup are configured via **FTP Configurations** which is available on the desktop. To learn more, please see Configuring FTP Locations.



7. Click **Backup** on the task's toolbar.

Immediately after you click **Backup**, the program starts copying data from **What to Back up** to folders specified in **Where to Back up**.

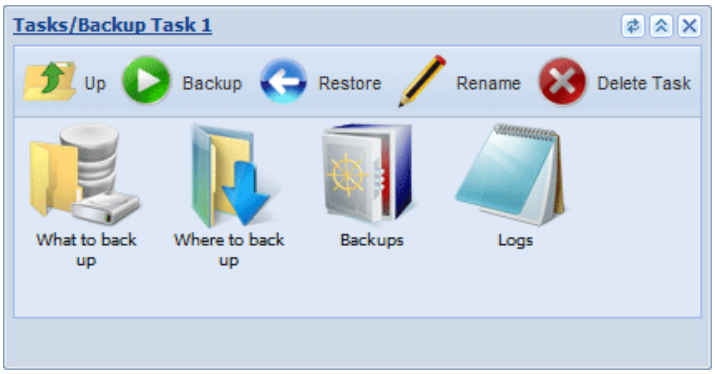
- To see a detailed log of all operations, double-click **Logs**.

Restoring HDD

Note: This section contains only quick start instructions. For a detailed description, please see Managing Data with Disaster Recovery.

To restore your HDD, follow these steps:

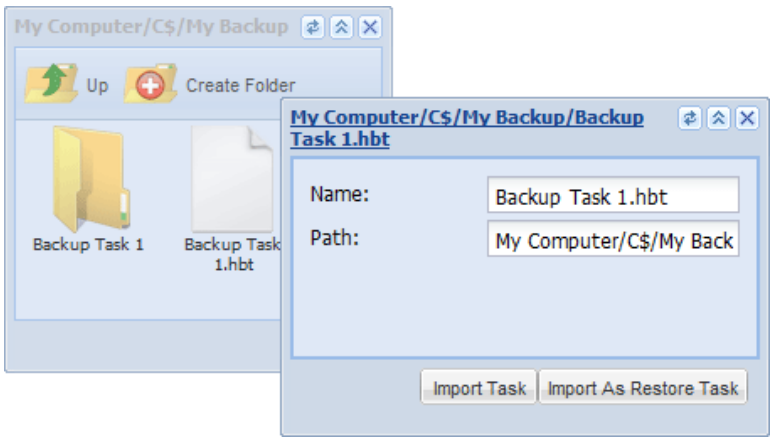
1. On the desktop, open **Tasks**.
2. In **Tasks**, open the task that you used to create the backup.
3. Click **Restore** on the task's toolbar.



If you don't have the task, follow these steps:

1. On the desktop, open **My Computer**.
2. In **My Computer**, browse for the folder where the backup is stored.
3. Double-click the Handy Backup Task **(.hbt)** file. The **Import Task** dialog opens.
4. Click **Import as a Restore Task**.
5. Click **Restore** on the task's toolbar.

Immediately after you click **Restore**, the program starts restoring the backup to the original place.



If you have a disk image file which is not accompanied by a .hbt file, for example, an HDD backup created in Windows version of the program, you can create a restore task from scratch. For more details, please see Restoring Image Backup Made in Windows.

- ## Managing Data with Disaster Recovery

The program's user interface is similar to Windows environment, where all data is available as folders and files. The top level, "Desktop", contains four objects:

My Computer. Contains all files, folders, FTP locations and other objects that can be used to create tasks.

Tasks. Used to manage all operations. To back up or restore your data, you need to create and run the respective task.

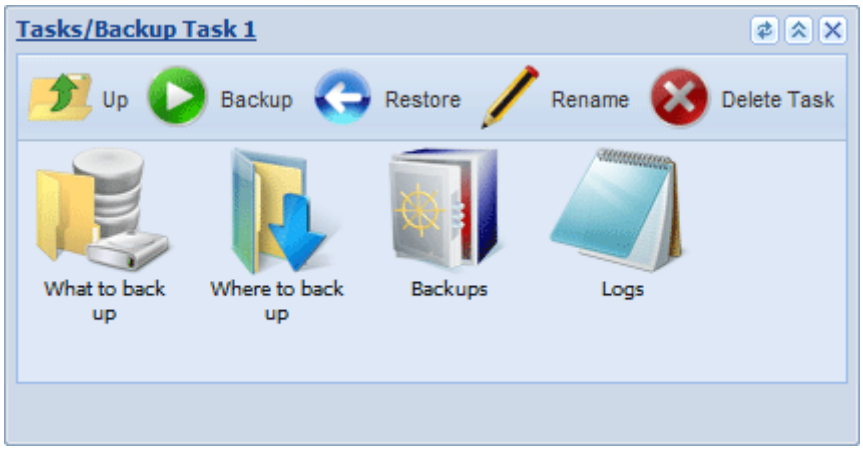
FTP Configurations. Allows adding and managing FTP connections, to use remote folders in tasks.

Trash. Used for removing unnecessary elements, e.g. data selected for backup, FTP configurations, etc.

Navigation

Navigation in the environment is very simple and straightforward:

- To open a folder, double-click it.
- To go to the parent folder, click **Up** on the toolbar.

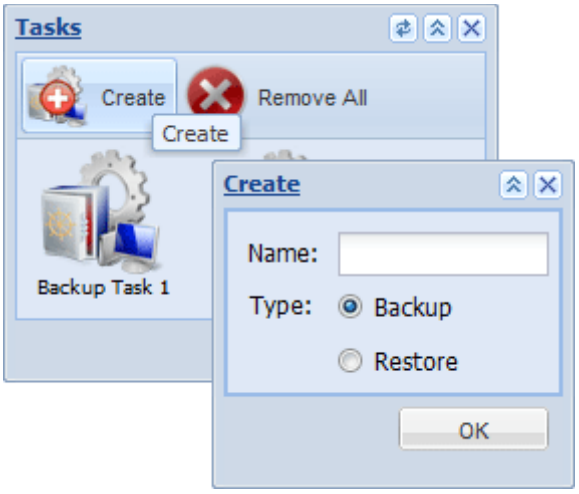


Toolbar is specific to each program's object and contains all available commands. To perform an action, e.g. run a backup task, you need to click to open the task window, and click the respective icon on the toolbar.

- ## Creating Backup and Restore Tasks

To back up or restore your data, you need to create the respective task. To create a task, follow these steps:

1. On the desktop, open **Tasks**.
2. Click **New Task** on the window's toolbar. The **New Task** dialog opens.
3. In the **Name** field, specify a name for a task.
4. Select **Backup** as a type of the task.
5. When finished, click **OK**. The respective task window opens.



Each task has a unique **Name** and a type, **Backup** or **Restore**.

Backup tasks are defined by two parameters:

What to Back up defines a set of data that will be backed up. This folder accepts any object from **My Computer**.

Where to Back up defines places where to store the backups. This folder accepts only containers (folders) from **My Computer**.

To select backup destination, click on **My Computer** and select **root$**. Then go to the folder named **mnt**. You see all your connected partitions named **sd*n*** where asterisk is a letter marking physical device sign and *n* is a number of partition located on it, e.g. *sda1, sdb0, sdb1* etc. The letter after "sd" is a mark of placement signing that partition is physically located on one of connected drives. Just select a folder on any partition you plan to use.

If you want to select a particular physical device for placing backup or restoration data, open a command terminal using **cmd** and enter a command line:

df -h

You will see all devices with sizes available.

There may be cases when you need to perform partial restoration, or restore data to a different place. That's why you can also create specific **Restore** tasks which are defined by the following two parameters:

What to Restore defines data to be restored.

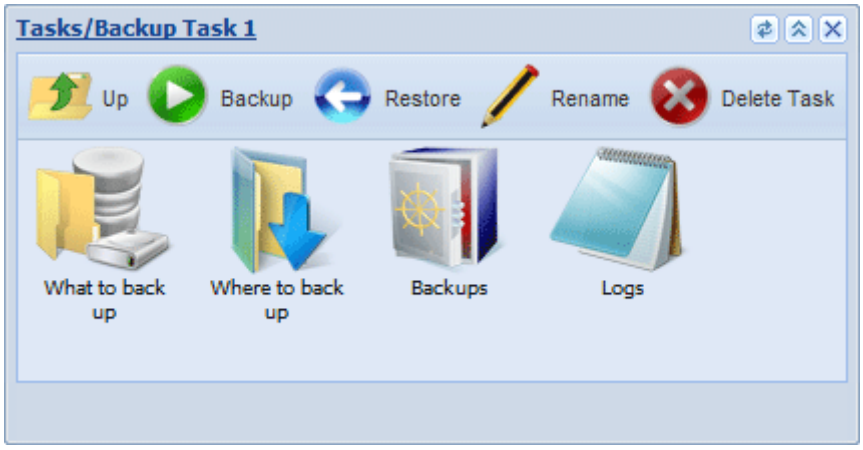
Where to Restore defines the place where to restore the backup.

All of the above parameters are specified by drag-and-dropping objects from **My Computer** into the respective folders of the task.

To remove an element from any folder, drag-and-drop it into **Trash** which is located in the bottom right corner of the screen.

- ## Running Tasks

Each task has a range of operations applicable to it. All commands are shown on the task's toolbar:



Runs backup. Upon execution of a backup task, the program copies data from **What to Back up** to all folders specified in **Where to Back up**, one by one.

Restores data. When used in a Backup task, restores data from the first location specified in **Where to back up** to the original place where it was taken from. When used in a Restore task, copies data from **What to Restore** to **Where to Restore**.

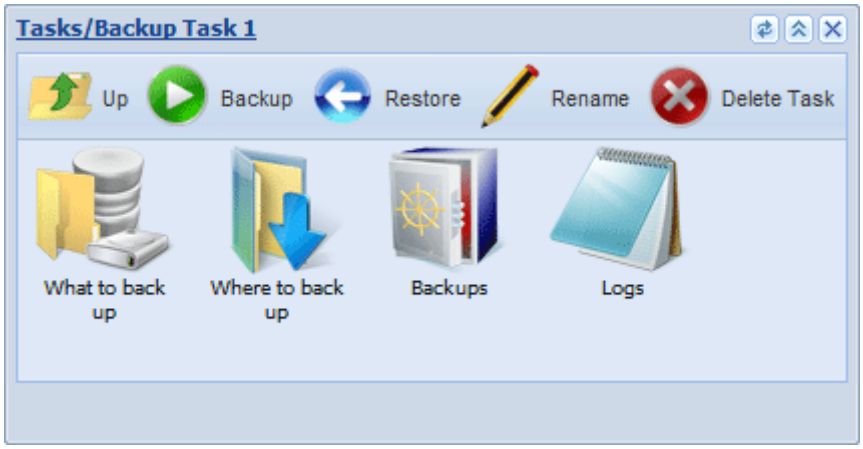
Stops the task.

Used to rename the task.

Deletes the task.

- **Browsing Backups**

When a backup task is finished, you can browse the data via the **Backups** folder in a task.



The **Backups** folder is organized as follows:

Backups

Destination 1
Destination 2
...

Sources

Inside the **Backups** folder you can see the list of destinations, where the backup was stored. Each destination folder contains the list of data sources, similarly to how you can see them in the **What to Back up** folder.

The **Backups** window can be also used for restoration. To restore data, drag-and-drop it from **Backups** into the desired place in **My Computer**. The respective restore task will be created.

- ## Restoring Image Backup Made in Windows

Disaster Recovery module is completely compatible with image-based backups made by Windows version of Handy Backup, but can't properly read its "index files" that carry information about tasks.

To restore a disk image made in Windows, you need to create the respective restore task and configure it manually. To do it, follow these steps:

1. On the desktop, open **Tasks**.
2. Click **New Task** on the window's toolbar. The **New Task** dialog opens.
3. In the **Name** field, specify a name for a task.
4. Select **Restore** as a type of the task.
5. When finished, click **OK**. The respective task window opens.
6. On the desktop, open **My Computer**.
7. Browse for the file containing a disk image that you want to restore.

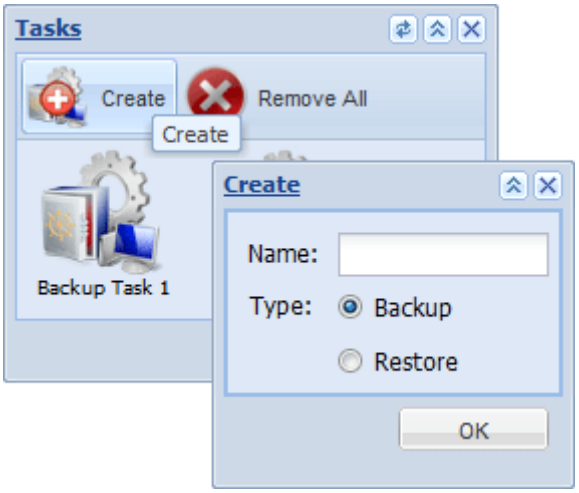


Image backups made by Windows version of the program are organized as followed:

/Task Name/

/backup.hbi
/Devices/

/Devices/full drive image
/Devices/Partitions/

/P (partition table ...)
/P1 (disk ...)
/P2 (disk ...)
...

8. Drag-and-drop the desired image file into the **What to Restore** folder of the task.

9. Go back to **My Computer** and double-click the physical device where you want to restore the image.
10. If you want to restore the entire hard drive, drag-and-drop **full drive image** into the **Where to Restore** folder of the task.
11. If you want to restore a specific partition, go to **Partitions**, and then drag-and-drop the desired partition into the **Where to Restore** folder of the task.
12. To run the task, click **Restore** on the task's toolbar.

• Configuring FTP Locations

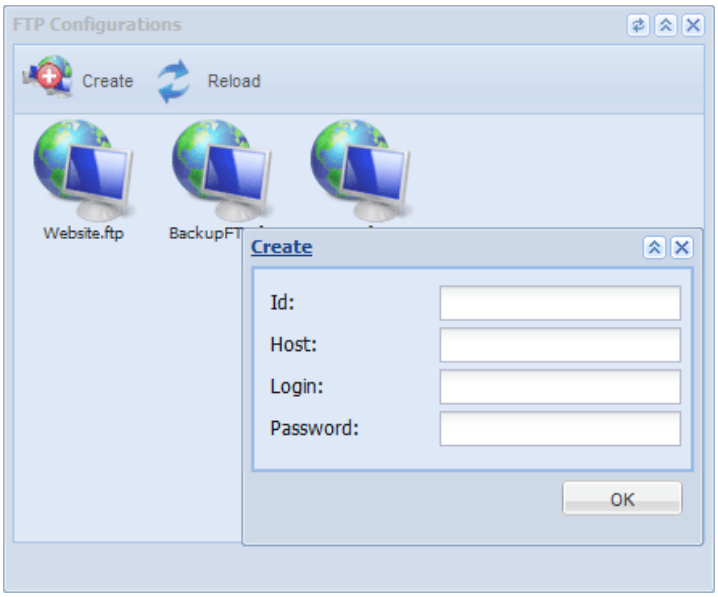
The **FTP Configurations** folder on the desktop allows you to add FTP locations, for later use in backup and restore tasks. To create a new FTP location, follow these steps:

Creating New FTP Location

1. On the desktop, open **FTP Configurations**.
2. Click **Create** on the window's toolbar. The **Create FTP** dialog opens.
3. In the **Id** field, enter a name for a location as you want to see it in **My Computer**
4. In the **Host** field, specify an IP address, or a hostname of an FTP server.
5. Specify **Login** and **Password** for authorizing on the server.
6. When finished, click **OK**.

After you have specified the above data, you will need to confirm the creation of a new FTP location by clicking **Save**.

FTP locations automatically appear in **My Computer**. They can be used in Backup and Restore tasks as common folders.



Backing up to Online Account

Users of Novosoft Remote Backup Service can back up data to their Online Backup accounts. To configure account data, follow these steps:

1. On the desktop, open **FTP Configurations**.
2. In **FTP Configurations**, double-click **Online Backup**. Online Backup configuration window opens.
3. Specify **Login** and **Password** for authorizing at Novosoft Remote Backup Service.
4. When finished, click **OK**.

Online Backup is always available in **My Computer**, and can be used as a common folder in backup and restore tasks.

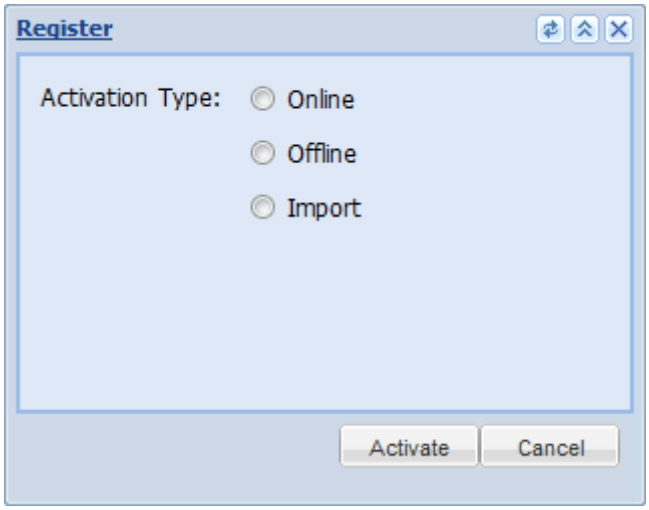
• Registration

Disaster Recovery module is a shareware. During the first 30 days after creation of the recovery drive, you can take advantage of all features, without any limitations. After expiration of the trial period, the program has to be registered.

In an unregistered version, you can only restore existing backups, but not create new ones.

The module can be registered in two ways. To register the program, follow these steps:

1. Click **Register** on the desktop's toolbar (always shown in an unregistered version). The registration dialog opens.



2. Select preferred type of registration, and then click **OK**.

- **Online registration**. This option requires you to have Internet connection. To register online, enter a registration number, and then click **OK**.

- **Offline (e-mail) registration)**. This option lets you register by receiving registration data from our support team. To register via e-mail, enter your registration number, and then click **OK**.

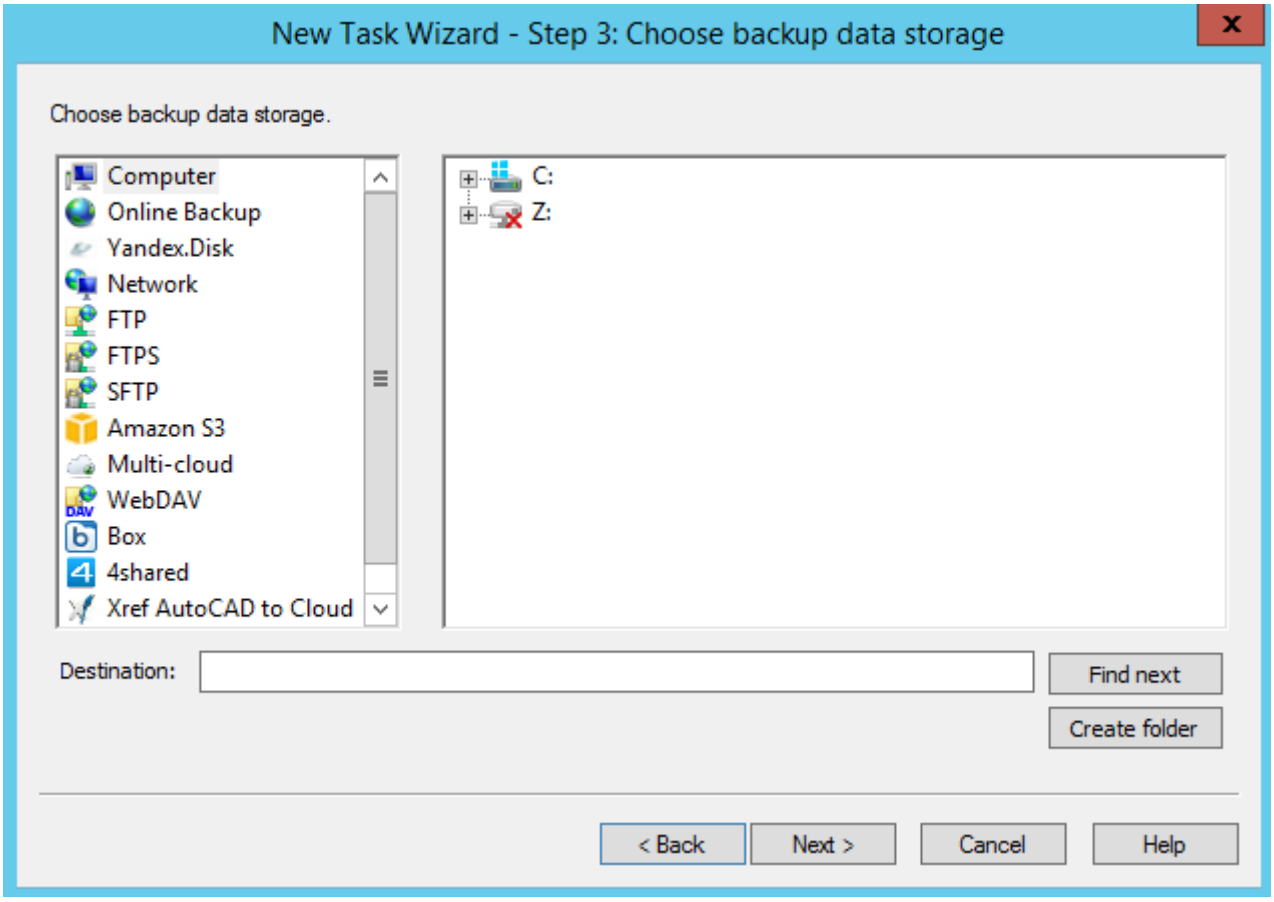
The program generates a special file that you need to send via e-mail to support@handybackup.net and receive a registration file in return. For further instructions, please see the next option.

- **Import registration**. This option lets you select a registration file and import it into the program. Browse for the activation file sent by our support team, and then click **OK**.

Then you can use this file to register Disaster Recovery on the same computer.

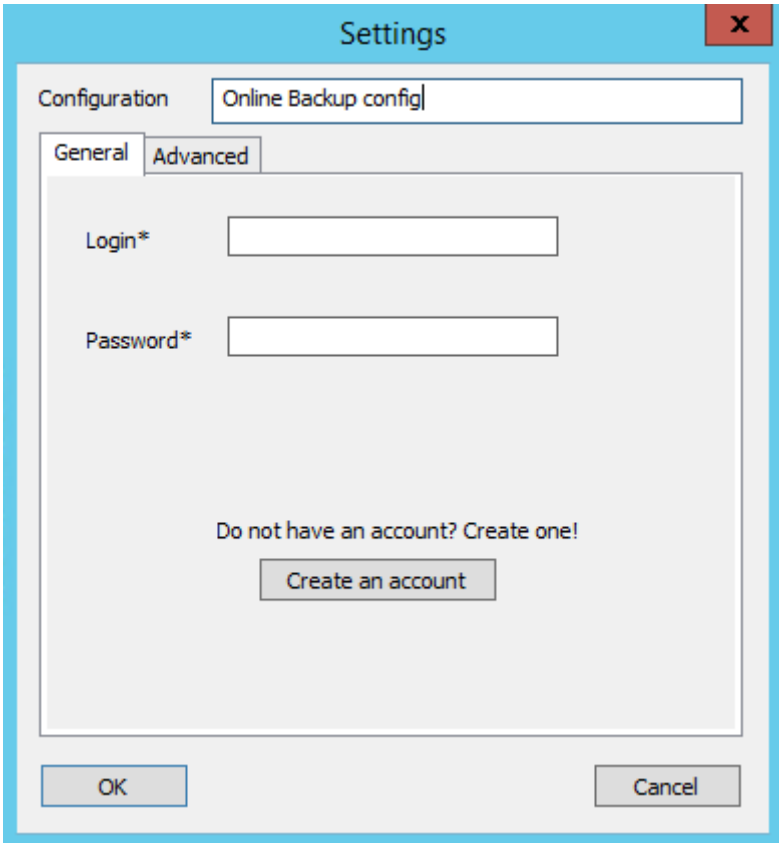
9.2 Handy Backup Drive (Online Storage Service)

HBDrive is a distributed storage service developed and maintained by our company. It is closely integrated with Handy Backup which has a special **Online Backup** plug-in that allows working with HBDrive file system.



To use **HBDrive**, you need to register an account. To do it, follow these steps:

1. When creating a task, select **Online Backup**, and then click **New configuration**. The **Settings** dialog opens.

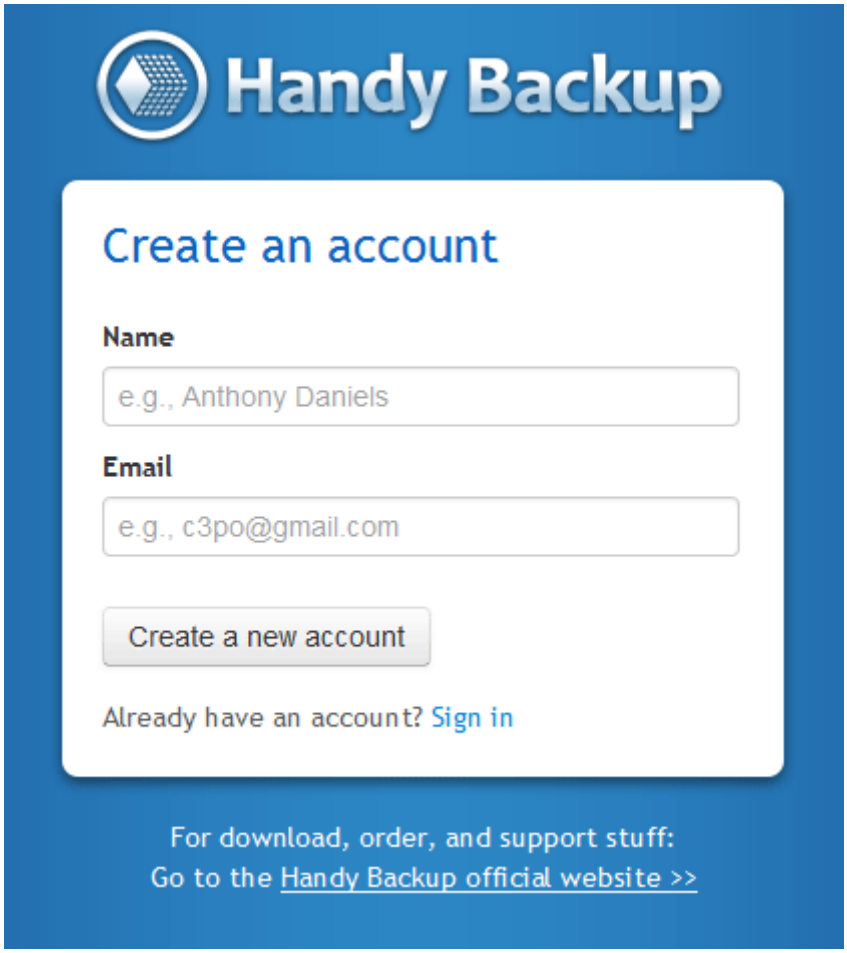


2. Click **Create an account**.

The program starts a browser and opens the **HBDrive** website. You can also open it manually: hbdrive.com

Creating HBDrive Account at HBDrive.Com

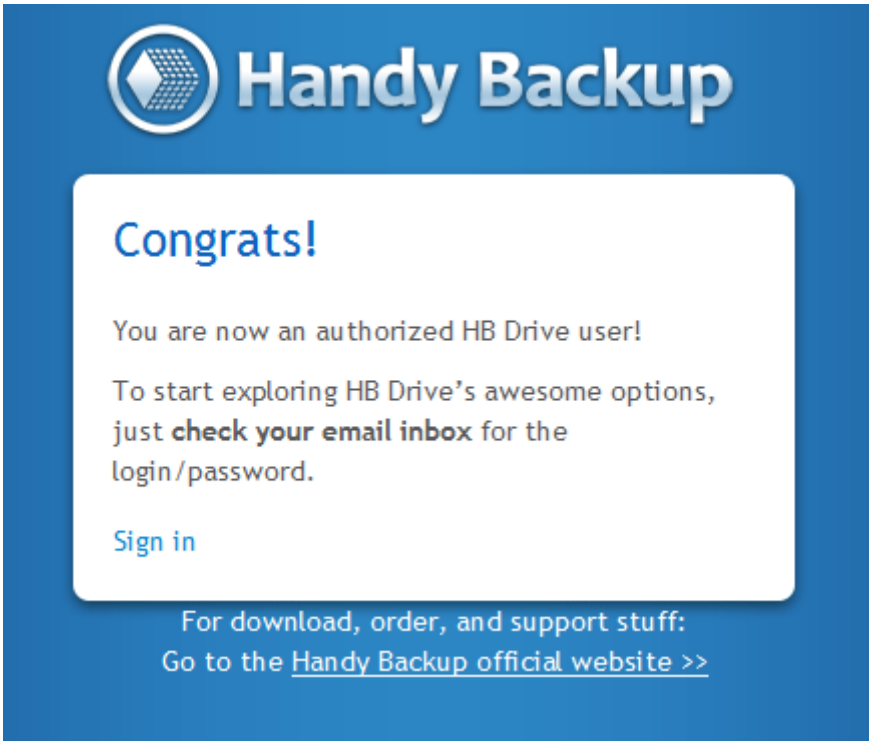
HBDrive account can be created at the service website. Registration is very straightforward:



To start using HBDrive, follow these steps:

1. Enter your name and e-mail address, and then click **Create a new account**.

The service creates an account, and sends authorization information via e-mail.



2. Check your incoming e-mails. You should receive a letter with a login and a password.

Use the authorization information to create a configuration for the **Online Backup** plug-in. To learn more, please see Online Backup Plug-in Configurations.

You can learn how to browse your data via the HBDrive website in the next chapter, Managing HBDrive Account.

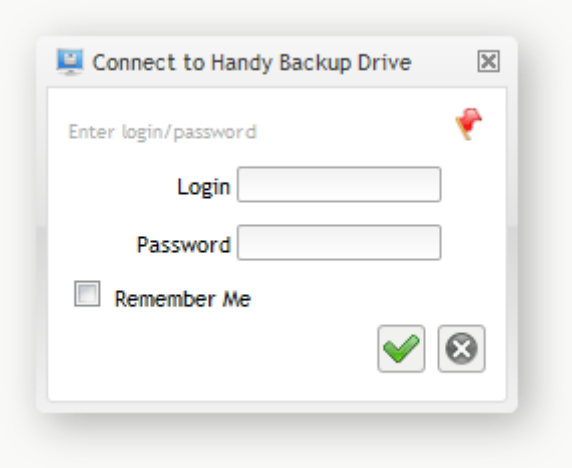
- ### Managing HBDrive Account

This chapter describes how to manage data backed up to HBDrive account. To learn about HBDrive and how to create an account, please refer to the previous chapter HBDrive (Online Storage Service).

To manage your HBDrive account (review status, browse and download files, etc.), follow these steps:

1. Go to the HBDrive website: hbdrive.com

2. Click **Sign in**.



3. Enter your login and password, and then click .

The application connects to HBDrive and displays data in your account.

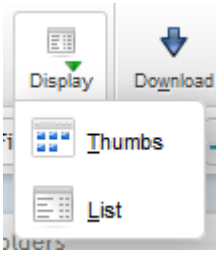
Using HBDrive File Browser

After logging into your account, you can browse and download files. The user interface consists of four main elements: **Toolbar**, **Navigation Bar**, **Navigation & Details Pane**, **File Browser**. You can learn about them below.

Toolbar

Toolbar contains six buttons that are used to customize HBDrive interface and manage data.

- **Left Pane.** Hides or shows the **Navigation & Details Pane**.
- **Display.** Allows changing view of the **File Browser**.

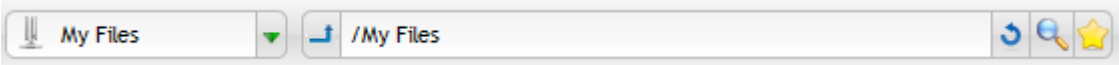


- **Download.** Downloads a file selected in the **File Browser**.
- **Rename.** Allows renaming a file selected in the **File Browser**.
- **Delete.** Moves a file selected in the **File Browser** to a Recycle Bin.
- **About.** Displays information about HBDrive.

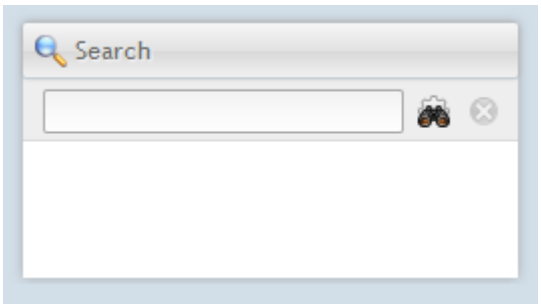
If you are not logged in, the toolbar replaces **File Browser** controls with a **Log in** button that opens authorization dialog.

Navigation Bar

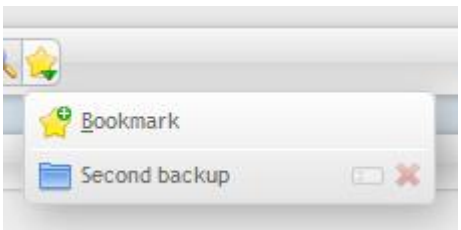
The **Navigation Bar** displays your current position in the **File Browser** and lets you quickly navigate in the HBDrive file system.



- **Scope Selection.** At present, this menu has only one option **My Files**. In future, when we introduce an option of file sharing, it will also contain **Shared Elements**.
- **Top** button. Opens a parent folder in the **File Browser**.
- **Path.** Contains a path to the current folder opened in the **File Browser**. You can use this field to quickly go to a desired path in the HBDrive file system.
- **Reload** button. Refreshes contents of the current folder in the **File Browser**.
- **Search** button. Opens the **Search** pane that can be used to search for files and folders in the HBDrive file system.*



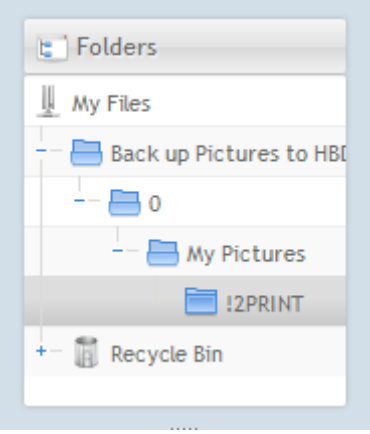
- **Favorite** button. Allows creating a bookmark in the HBDrive file system. Bookmarks help you quickly go to a bookmarked folder.



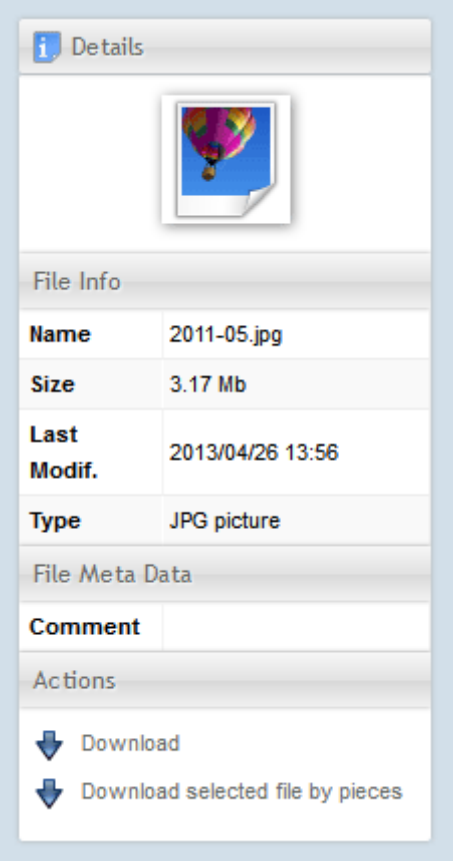
Navigation & Details Pane

The **Navigation & Details Pane** contains two inner panes: **Folders** and **Details**.

In the **Folders** pane, you can navigate through HBDrive folders. Selecting a folder displays its contents in the **File Browser**.



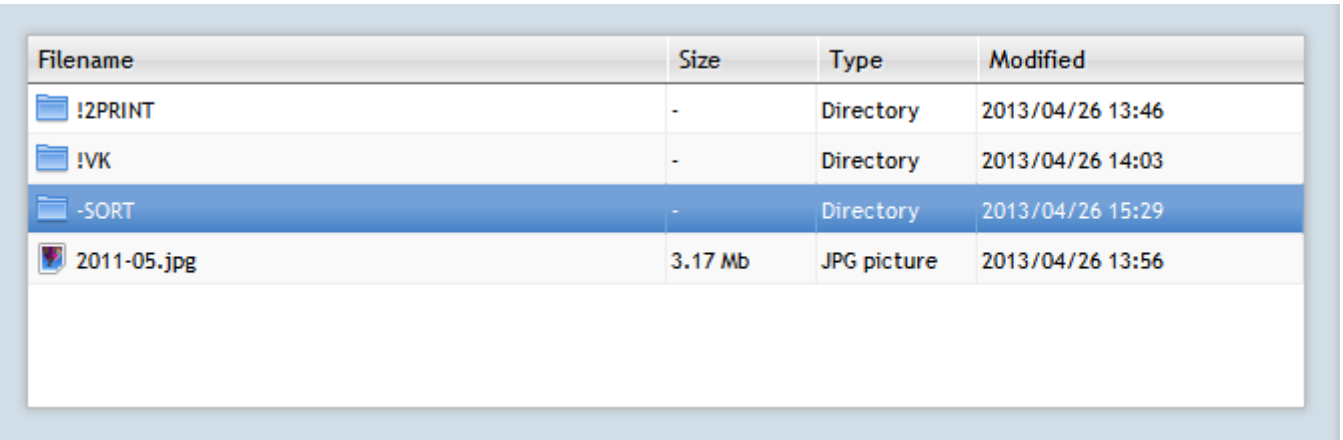
The **Details** pane displays information about the folder selected in the Folders pane, or object (file or folder) selected in the **File Browser**. For files, it also displays file info and provides the **Download** command.



Version 7, Published on October 2017
support@handybackup.net

File Browser

In the **File Browser** you can see all data that you have in your HBDrive account.



At present, the file browser supports only two commands: **Download** and **Delete**.

Downloading Files

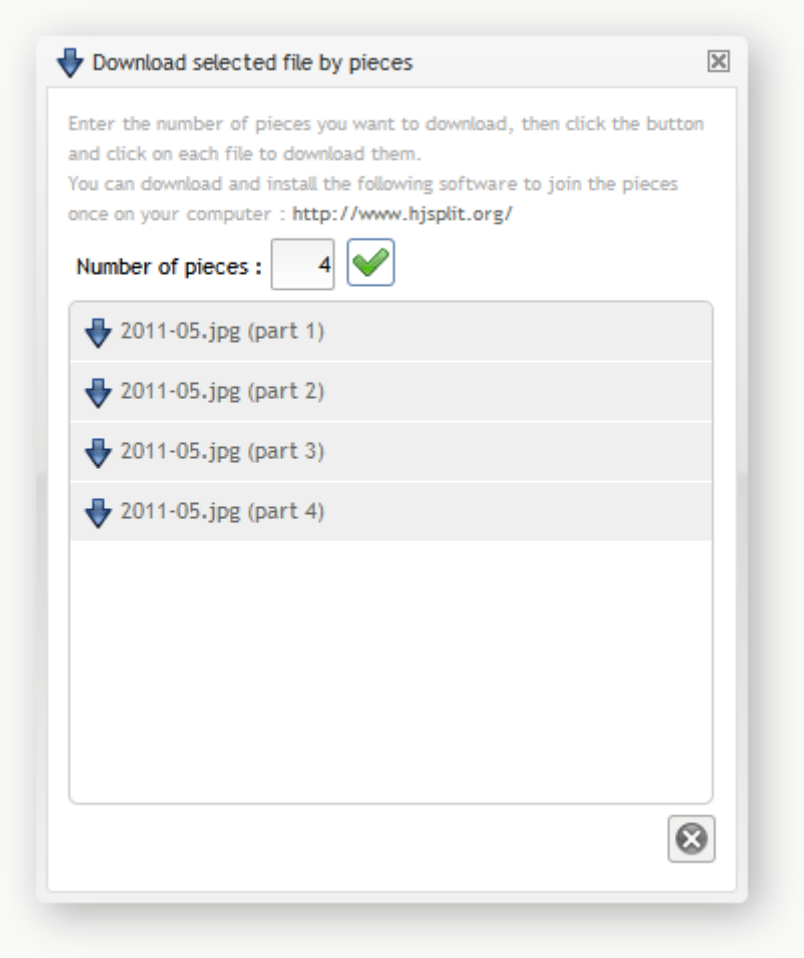
To download a file from HBDrive, follow these steps:

1. Select the desired file in the **File Browser**.
2. Click the **Download** button in the **Toolbar**, or the **Download** command in the **Actions** section of the **Details** pane.

The file is downloaded.

If you experience any problems with downloading large files, you can download them by parts. To do it, follow these steps:

1. Select the desired file in the **File Browser**.
2. Click **Download selected file by pieces** in the **Details** pane.
3. In the **Number of pieces** field, enter a number of pieces to split the file into, and then click .



The application displays links to the respective parts of the file. Click them to initiate the download.

Deleting Data

To delete a file or a folder from HBDrive, select it in the **File Browser**, and then click the **Delete** button in the **Toolbar**.