



BackupAgent®

ONLINE BACKUP SOFTWARE & SERVICES

BackupAgent Online Backup Client for Windows

3.11 User Manual

November 2007

Version 1.0

Disclaimer

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2. Product Information

Product: Online Backup Client
Version: 3.11.0.1

3. Benefits

The Online Backup Client has a lot of benefits. See below:

- ▶ Install and online within 5 minutes
- ▶ Automatic online backups and offline backup (local or removable hard disk)
- ▶ Convenient User Interface
- ▶ Incremental data traffic. Low bandwidth required
- ▶ High data security
- ▶ SSL connection (HTTPS)
- ▶ Encryption of data with AES 128 and 256 Bits
- ▶ Automatic update (always the latest version)



4. Features

The Online Backup Client has several features. It supports different kinds of data. It can backup normal data but also specific data.

Supported Data:

- ▶ Common data
- ▶ Favorites
- ▶ Microsoft Outlook
- ▶ Microsoft Outlook Express
- ▶ Microsoft SQL 2000/2005
- ▶ Microsoft Exchange 2000/2003 (Folder-Level and Store-Level)
- ▶ Windows System State

You can make one or more scheduled tasks to backup data automatically (e.g. daily, weekly).

When an internet connection is not available, the Online Backup Client can also perform a local backup. You can save the local backup file onto a removable hard disk, so the backup is safe and secured on an external disk.

The Online Backup Service also includes a Management Console, which can be accessed through an internet browser (e.g. Internet Explorer). It has several functions:

- ▶ Access your data to restore or remove a file
- ▶ Change user settings (e.g. password)
- ▶ Overview of your backups through logs and reports



5. System Requirements

The Online Backup Client is supported on different platforms. See below:

Platforms:

- ▶ Windows 2000 Professional
- ▶ Windows XP Home / Professional
- ▶ Windows Vista
- ▶ Windows Server 2000 / 2003 / Small Business Server
- ▶ Linux (RedHat, SuSE and Debian (and Debian based systems such as Ubuntu), all with Java 1.5 or higher)
- ▶ Mac OS X (Mac OS X 10.4.10 and higher (Tiger) and Mac OS X 10.5.0 and higher (Leopard))

On each Windows platform the .Net framework (1.1) needs to be installed. If the framework is not installed the setup will install the framework automatically. On Linux and Mac OS X the Java 1.5 platform or higher is required.

Note: This manual will cover the Online Backup Client for Windows. A separate manual is available for the Online Backup Client for Linux and Mac OS X

Hardware requirements:

- ▶ PC with 300 megahertz (MHz) or higher processor clock speed recommended
- ▶ 128 MB memory
- ▶ 25 MB of disk space
- ▶ Internet connection (e.g. ADSL, SDSL)



6. Setup

6.1. Setup Wizard

The setup has a size of 2 Megabytes. After executing the setup you can choose your own language. Currently English, Dutch, French, German, Spanish and Italian are supported.

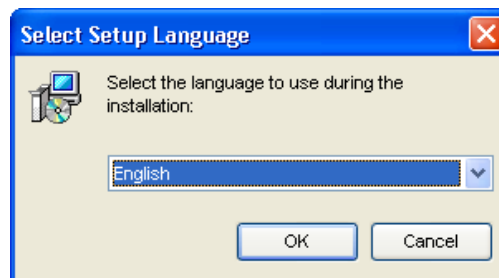


Figure 1: Choose language

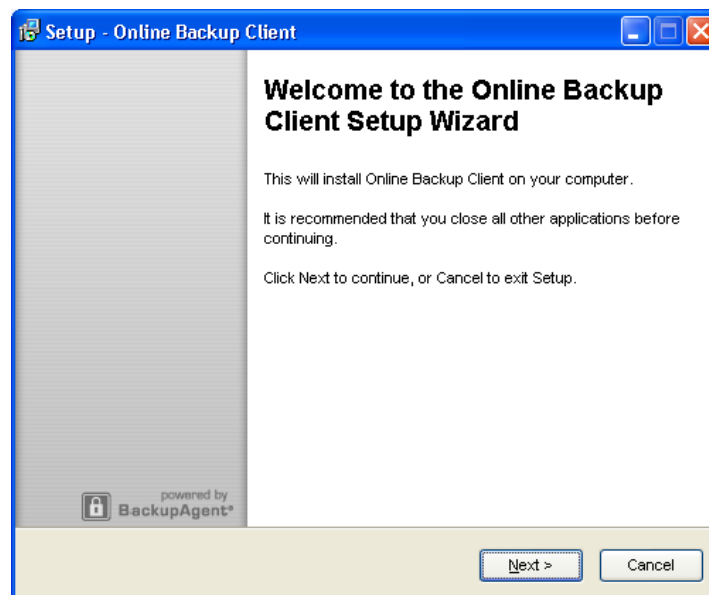


Figure 2: Setup Online Backup Client

Afterwards you will have to:

- ▶ Accept the license agreement,
- ▶ Choose the installation directory
- ▶ Choose to have a short cut on your desktop or not

If the .Net framework (1.1) is not yet installed on your computer, the setup will download and install the framework first. This can take a few minutes (23 MB).

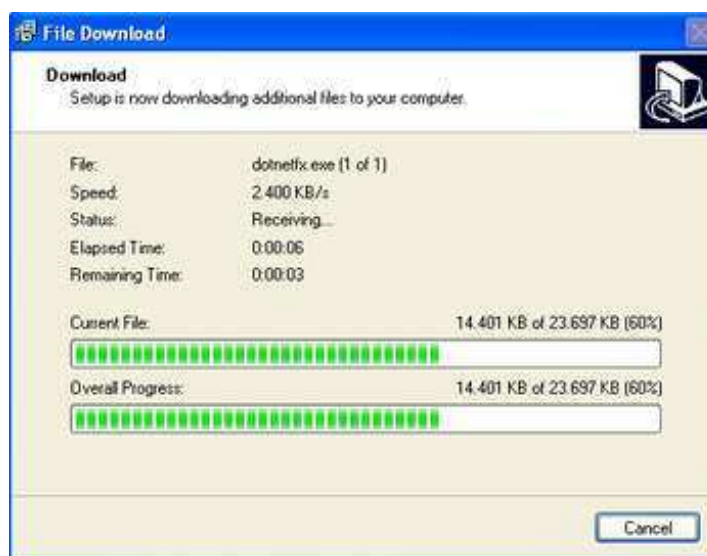


Figure 3: Installing the .Net Framework 1.1

The Online Backup Client is successfully installed on your computer.

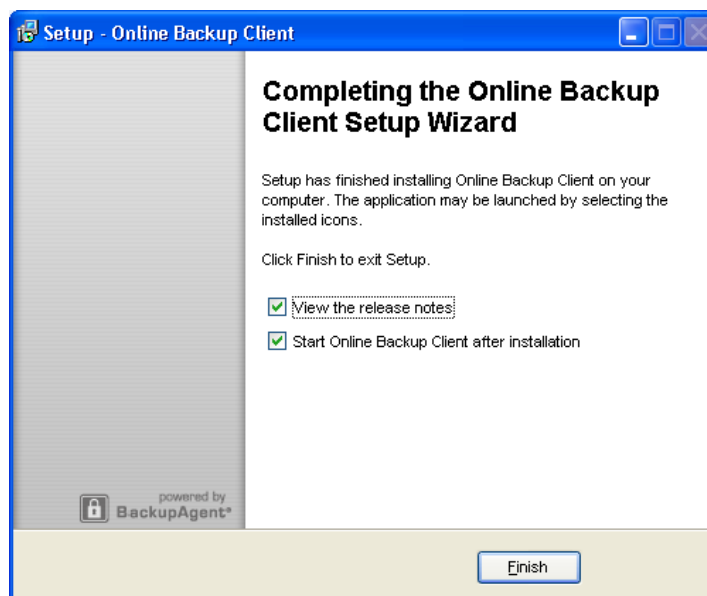


Figure 4: Finishing setup



6.2. Registration Wizard

When the Online Backup Client is started for the first time, it will start with the Registration Wizard. The Registration Wizard guides you to fill in the account information and encryption key. With the encryption key your data will be encrypted and decrypted.

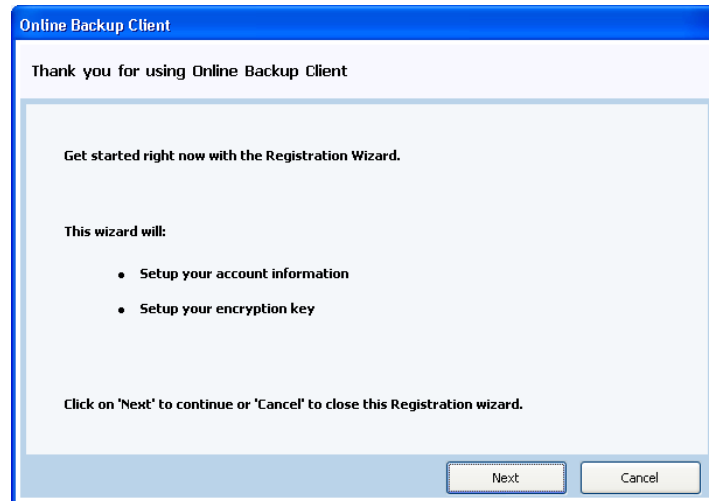


Figure 5: Registration wizard

You need to fill in the username and password that you created or obtained from your Online Backup Provider.

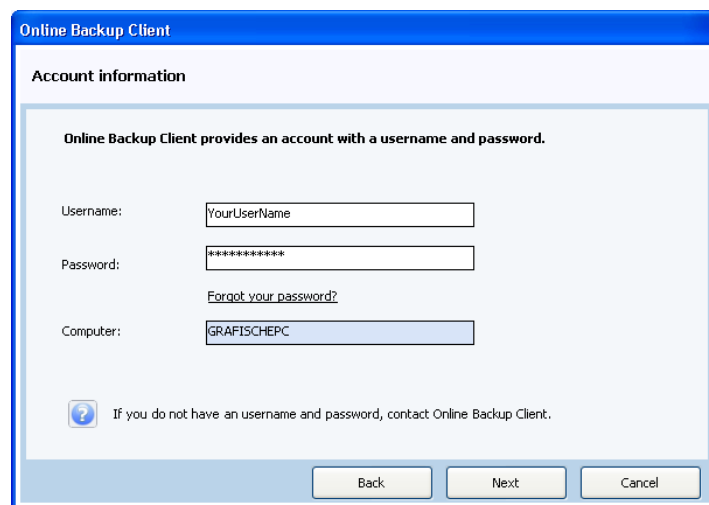


Figure 6: User account

Note: This screen also displays the computer name which will be registered at the Backup Server to store all files.



Note: If you don't remember your password you can click on the link below the password text field. A reminder will then be sent to your registered email address.

Note: If there is a problem with the username and password, the Online Backup Client will show a prompt that signing in is not possible. Several causes can apply to this:

- ▶ The username and/or password does not exist or is incorrect
- ▶ The time on the client machine differs very much from the real time (more than 24 hours)
- ▶ The Online Backup Client cannot access the online services while port 443 (SSL) is blocked by an anti-virus or firewall on the network

The next wizard page will ask you to set an encryption key. The purpose of this key is to encrypt all files before transferring them to the Backup Server and decrypt the files from the Backup Server when restoring them.

Figure 7: Encryption Key

You must type an encryption key and then confirm this key. You can only set the encryption key once. After setting the encryption key it cannot be changed. If you forget the encryption key, the data encrypted with this key cannot be accessed anymore. Please write down the encryption key in a safe place.

IMPORTANT: This key is unique and can only be chosen once and cannot be changed afterwards. Treat this key with great care, since it required to restore your files after a system crash.

Note: It is possible to store a reminder which can be sent to your personal email address. In this wizard the field to enter the reminder will change into a link: 'Forgot your encryption key?'

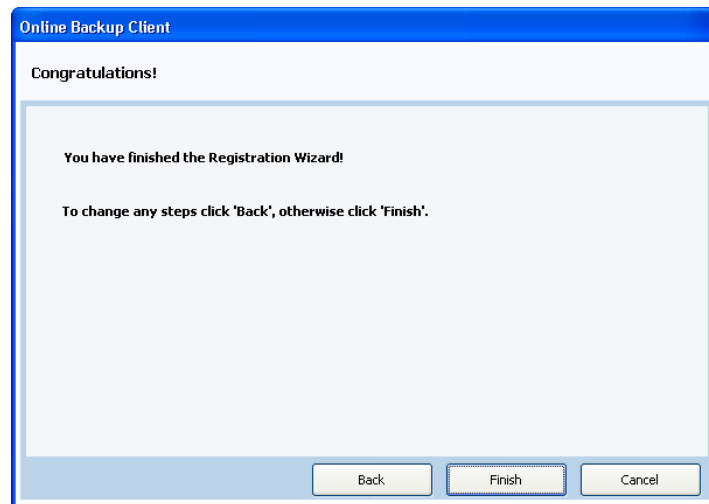


Figure 8: End of Registration Wizard

The wizard is now finished. The window will present the option to start the 'Backup Wizard' if no backup task is configured on the client machine. This is only the case when the Online Backup Client is installed for the first time.

6.3. Backup Wizard

The Backup Wizard provides a clear and friendly way to detect important data for backup and lets you configure a first backup task in a convenient way.

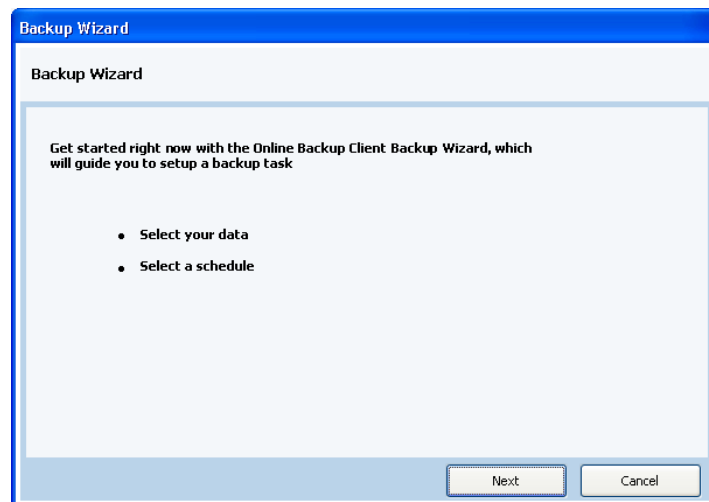


Figure 9: Start of Backup Wizard



Backup Wizard

Select your data

Name: Default Task

Description:

What do you want to backup?

Desktop
My documents and settings
Outlook
Let me choose what to backup

Includes the My documents folder, plus you outlook if installed, desktop and cookies.

Back Next Cancel

Figure 10: Set the task

The first view in the wizard allows you to name the task. It also provides a combo box with profiles of important data. Selecting an item in the combo box will also show a description of what the profile contains.

The next view will allow you to set the schedule for the backup task.

Backup Wizard

Select a schedule

Perform this task: Daily

Hour 16 05

Pick frequency and starting time of default scheduler task

Back Next Cancel

Figure 11: Set a schedule

To specify a schedule you can set the time and frequency of the schedule. By default the schedule is a daily schedule and the time is the current time. Other schedules can be: backup once, weekly schedules and monthly schedules.

Now the backup task is fully specified and will appear in the Online Backup Client as a task.

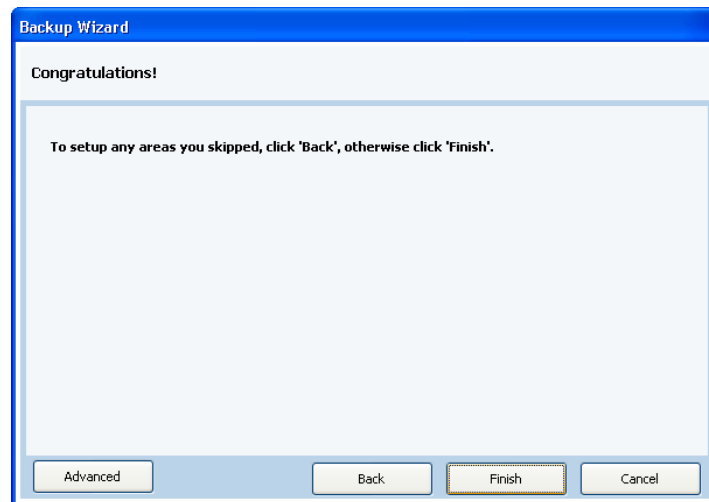


Figure 12: End of Backup Wizard

6.3.1. Advanced options

You can click on “Advanced” to go to the advanced options of the Backup Wizard.

Filter

The first view of “Advanced” allows you to select filters on the data in the task. You have to add a filter and determine if the filter ignores the files ('except files') or allows only the files in the filter and ignores all other files ('only files').

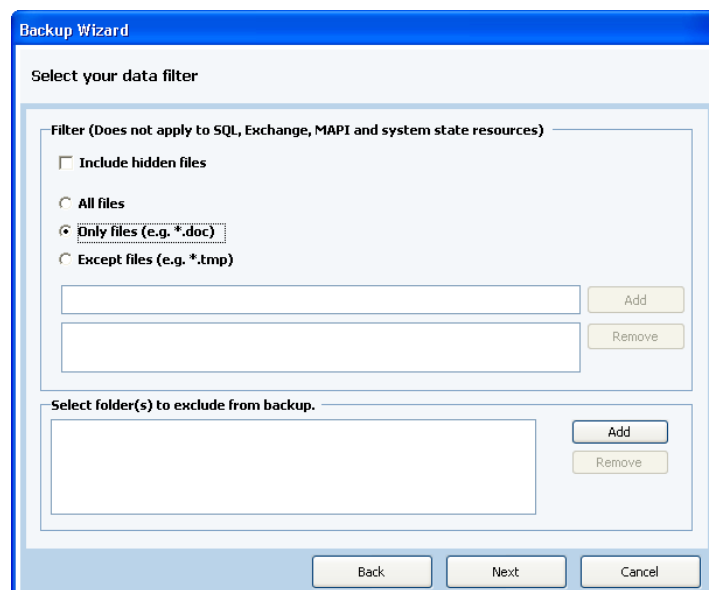


Figure 13: Select a filter



Local Backup

The next view of "Advanced" will allow you to determine if he wants to backup locally. When checking the box, the backup will be performed locally. In the textbox below the checkbox you can specify the exact location for the backup (a local folder on the pc or an external medium.)

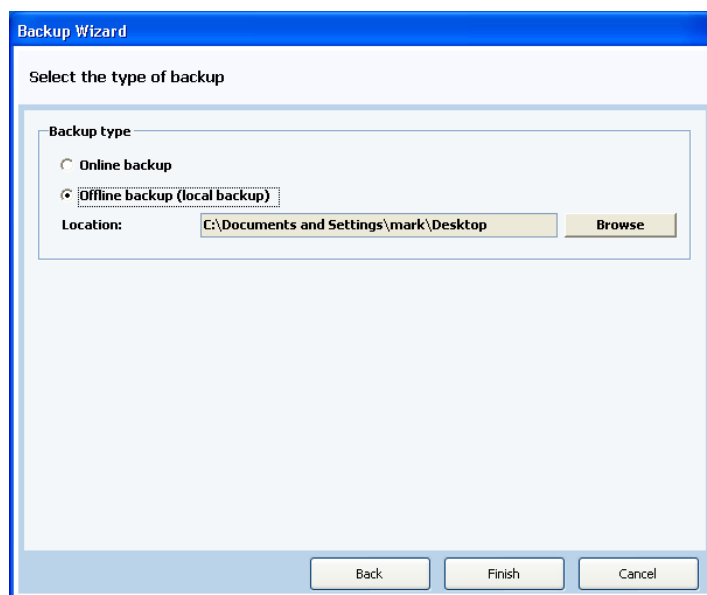


Figure 14: Select Offline Backup (local backup)

Tip: A removable hard disk can be selected as a local backup location.

6.4. Restore Wizard

The Restore wizard provides a clear and friendly way to restore important data for backup. Click on Restore Wizard in the 'Home' view in the Main interface of the Online Backup Client to start the Restore Wizard.

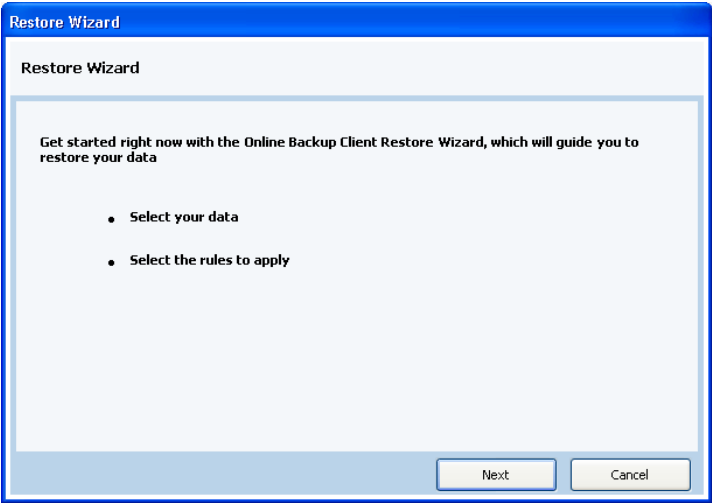


Figure 15: Start of Restore Wizard

In the next view you can select your data on the Backup Server that needs to be restored.

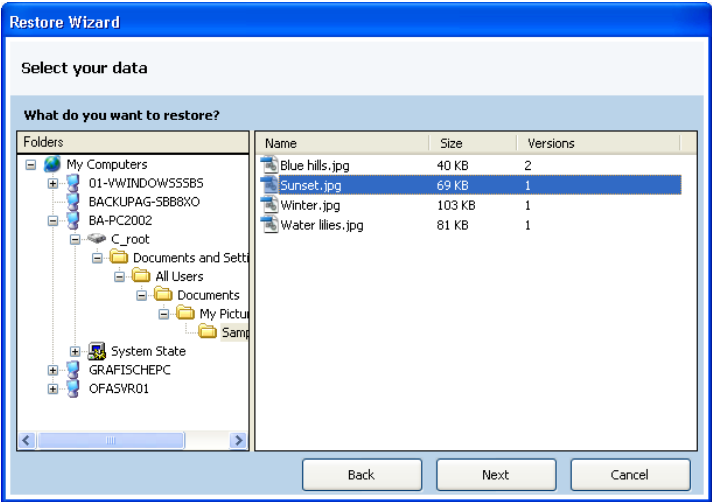


Figure 16: Select your file or folder

In the next view you can choose restore location and the overwrite rules of the wizard need to be specified.

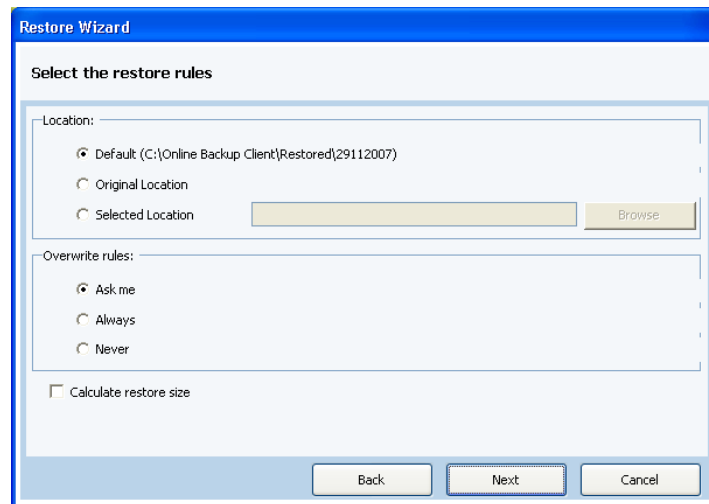


Figure 17: Restore rules

In the next view you can choose to filter for specific files or folders during restore.

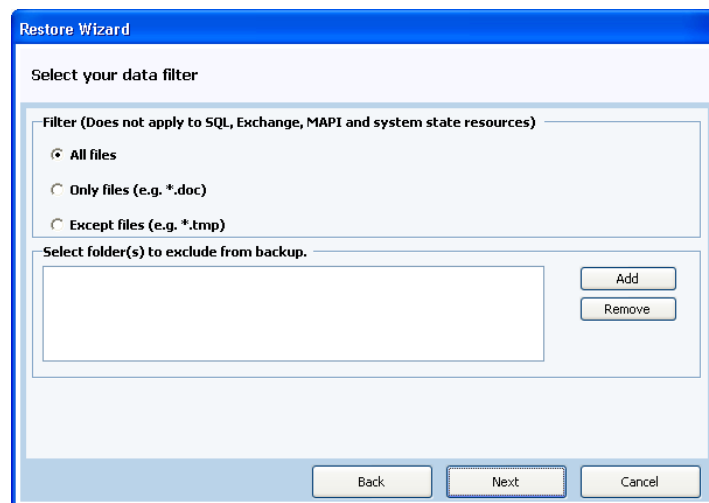


Figure 18: Data filter

By clicking [Start] in the last screen, the restore will start.



7. Online Backup Client main interface

This is the main interface of the Online Backup Client. Several components are displayed in the figure below:

- ▶ Navigation panel
- ▶ Account Information
- ▶ Main panel (e.g. Home)

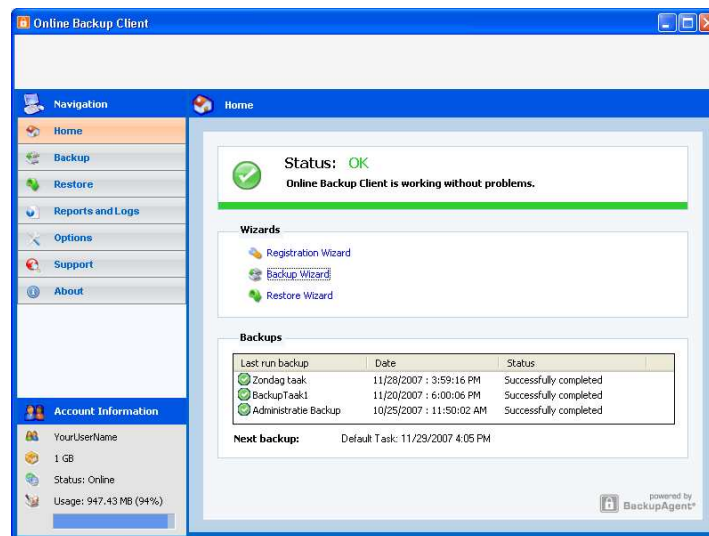


Figure 19: Online Backup Client main interface

Navigation panel

The Navigation panel is the main navigation through the Online Backup Client. The options:

- ▶ Home: Start View
- ▶ Backup: Select local data for a backup
- ▶ Restore: Select remote data for a restore
- ▶ Reports and Logs: View information on executed backups
- ▶ Options: Configure backup tasks
- ▶ Support: View contact information for support
- ▶ About: Additional information about the Online Backup Client

Account Information

Shows account details: account name, storage space, status and usage of storage space.

Main Panel

The main panel is the working space of the Online Backup Client. Depending on what you want to do, this panel will show the necessary views.



7.1. Home

When you start the Online Backup Client it will show the Online Backup Client Home view. This view shows the status of the last and the next backup task. It also offers a link to download and update the software if a new version is available.

Backups		
Last run backup	Date	Status
Zondag taak	11/28/2007 : 3:59:16 PM	Successfully completed
BackupTaak1	11/20/2007 : 6:00:06 PM	Successfully completed
Administratie Backup	10/25/2007 : 11:50:02 AM	Successfully completed

Next backup: Default Task: 11/29/2007 4:05 PM

Figure 20: Status of the last and next backup

7.2. Backup

You can backup data by clicking on “Backup” in the "Navigation" panel.

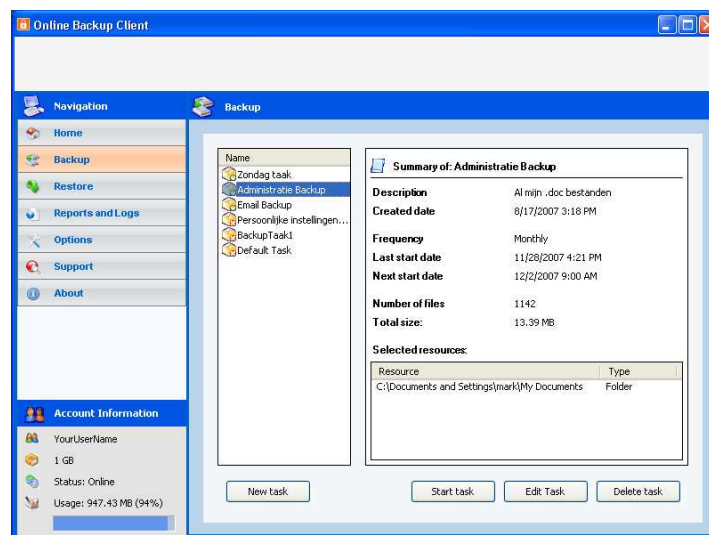


Figure 21: Backup

7.2.1. Create or change backup task

To create or change a backup task:

- ▶ Click on 'New Task' to create a new backup task.
- ▶ Select the task in the tree view, and open it. The Task Properties will open, and you can configure:
 - General options (backup type)
 - Data



- Schedule
- Filter

7.2.2. General

The 'General-tab' allows you to set the general options of the backup task.

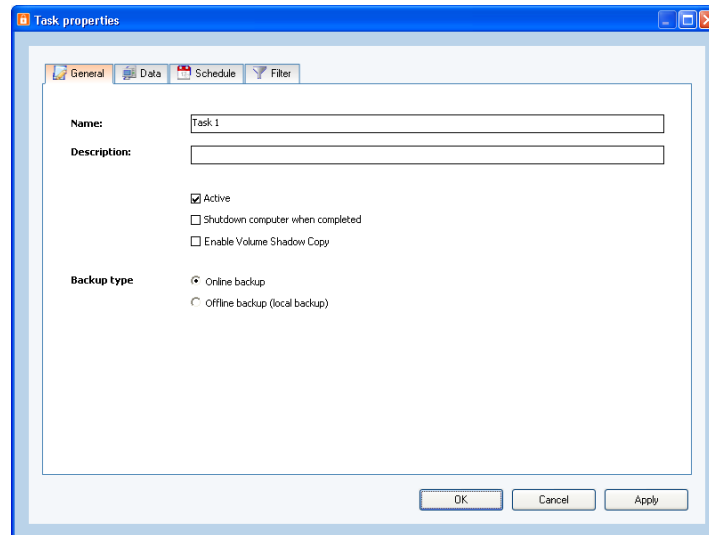


Figure 22: General view

Name and description

First you can give the backup task a name and a description.

Active

By selecting 'Active', the task is activated and will be performed on the specified time schedule. When 'Active' is not selected, the task will not be performed.

Shutdown Computer when completed

By selecting 'Shutdown computer when completed', the system will automatically shut down after completion of the backup task.

Enable Volume Shadow Copy

Volume Shadow Copy is a technique to backup files that are in use during the backup process (open files). By selecting 'Enable Volume Shadow Copy', files that are in use will be backed up.

Note: Volume Shadow Copy is only available only on Windows XP, Vista and Windows Server 2003

Backup Type (online or offsite backup)

Standard, the Online Backup Client will make an online backup, i.e. a backup to an external Backup Server, over the internet. It is also possible to make a local backup. It is possible to use a removable hard disk as location. This results in a self-extractable .zip file which can, for instance, be shipped to your Online Backup Provider. The Online Backup Provider can include the data in your backup account.



By selecting 'Offline backup (local backup)', a default local backup directory will be displayed in the 'Location' textbox. You can change the directory by clicking on the browse button which is located at right of the 'Location' textbox.

7.2.3. Data

You can select data to backup in the 'Data-tab' in the Task properties. You can easily expand and collapse the branches of the tree, by clicking the plus or minus signs displayed at the left. All items are displayed with their type.

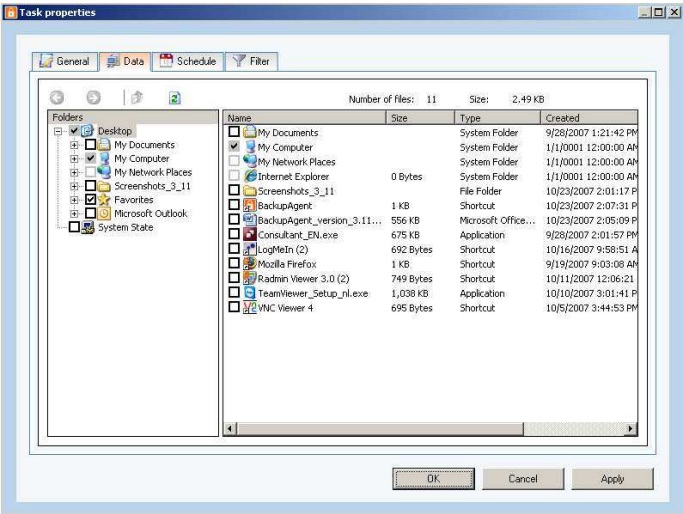


Figure 23: Select backup data

When a folder is selected for backup, underlying files and folders are automatically in the selection, unless explicitly deselected.

Note: If a folder is checked with a grey background only a subset of this folder is part of the backup set

Note: A light grey square in front of a file or folder means that it is not possible adopt that item in the backup set

Note: The backup of MS Exchange, SQL and System State is explained later in this manual



7.2.4. Schedule

You can set a schedule for the backup task in the 'Schedule-tab' in the Task properties.

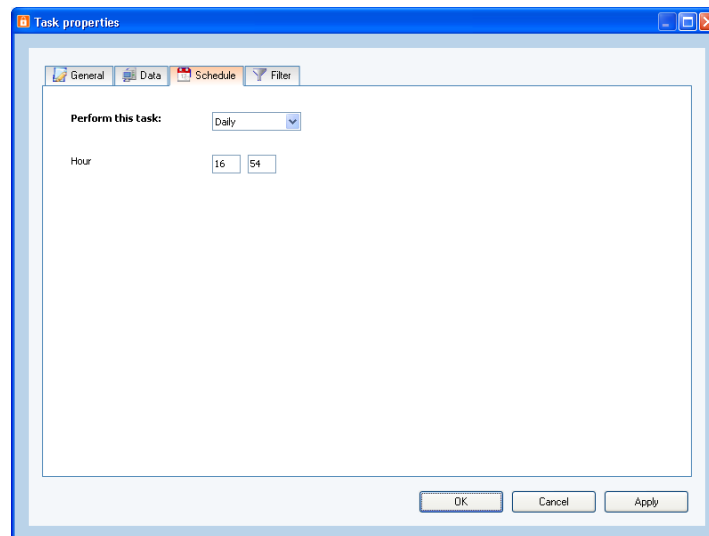


Figure 24: Set a schedule

The following schedule options are possible:

- ▶ **Once:** Performs a backup once on the time that is inserted
- ▶ **Daily:** Performs a backup daily on the time that is inserted
- ▶ **Weekly:** Use this option to select which time and day(s) the backup must be performed
- ▶ **Monthly:** Use this option to select which time and day of the week the backup must be performed

Note: If you select a task in the view "Backup", and click on 'Start task', the backup task will be performed immediately.

7.2.5. Filter

The 'Filter-tab' offers the possibility to set a filter on the selected backup data.

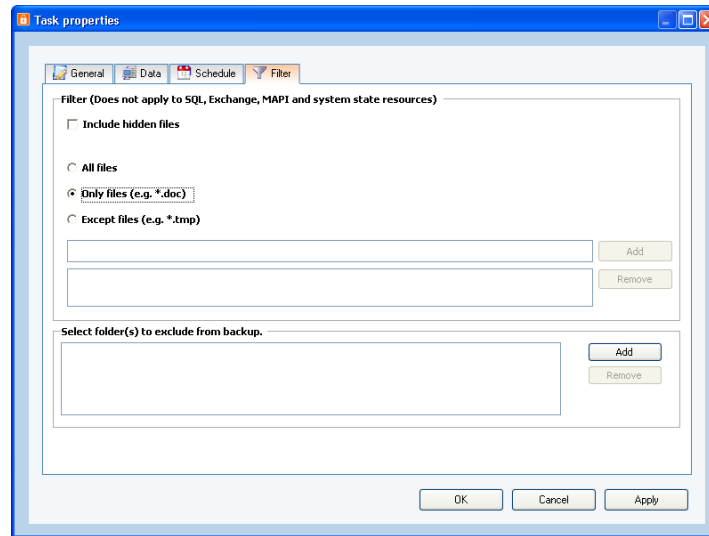


Figure 25: Filter view

The filter offers three types of filter options:

- ▶ Check the 'Include hidden files' checkbox to include hidden files within the selected data set in the backup set.
- ▶ Select the 'Only files' radio button to exclude all data, except the files in the filter
- ▶ Select the 'Except files' radio button to include all data within the selected data set, except the files in the filter.

A filter expression can be added to the filter. This is a regular expression (like *.*).

Note: To specify a filter, regular search expressions can be inserted:

- ▶ Only doc files: *.doc (all WORD document files will be backed up)
- ▶ Only files starting with hello: hello* (all file names starting with hello will be backed up)
- ▶ A specific file: ntuser.dat

7.2.6. Backup progress

The backup process can be monitored by clicking on 'Details' on the bottom of the application during the process of a backup (the details-screen will pop-up automatically when a backup task is initiated).

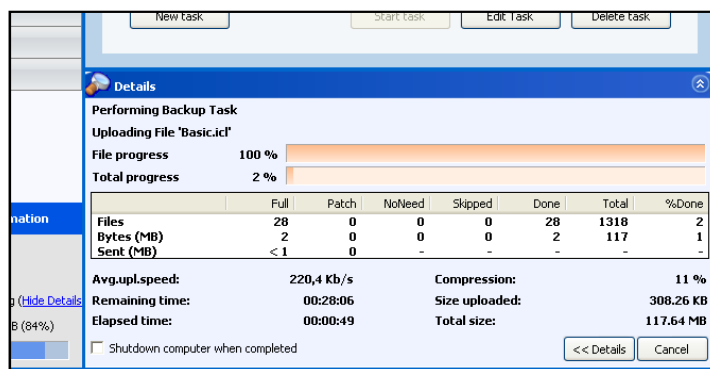


Figure 26: The detail screen while making a backup

The details regarding the backup of data:

Progress information

- ▶ File progress: The progress of the backup of the indicated file
- ▶ Total progress: The progress of the total backup task

In the table (the amount of files, the amount of selected MBs and the amount of sent MBs)

- ▶ Full: Full backed up files
- ▶ Patch: Patched backed up files (incremental backups)
- ▶ NoNeed: Unchanged files (unchanged compared to last backup)
- ▶ Skipped: Skipped files (details in the logs (explained later))
- ▶ Done: The total amount of processed data
- ▶ Total: The total amount of selected data
- ▶ %Done: The percentage of processed data

Other information

- ▶ Avg.upl.speed: The average upload speed
- ▶ Remaining time: The estimated remaining time
- ▶ Elapsed time: The elapsed time
- ▶ Compression: The average compression rate of the backed up data
- ▶ Size uploaded: The size of the uploaded data
- ▶ Total size: The total size of the selected data

7.3. Restore

Your backed up data can be accessed by clicking "Restore" in the "Navigation" panel.



7.3.1. View backed up data

The view shows a collection of computers in the tree view. These computers are the base of the backup schedules. If the Online Backup Client is (or was previously) installed on a computer, this computer will be shown in this screen. Furthermore, the tree view shows all backed up data in the same structure as it was on your computer. In this view you can restore data from the Backup Server and delete data from the server.

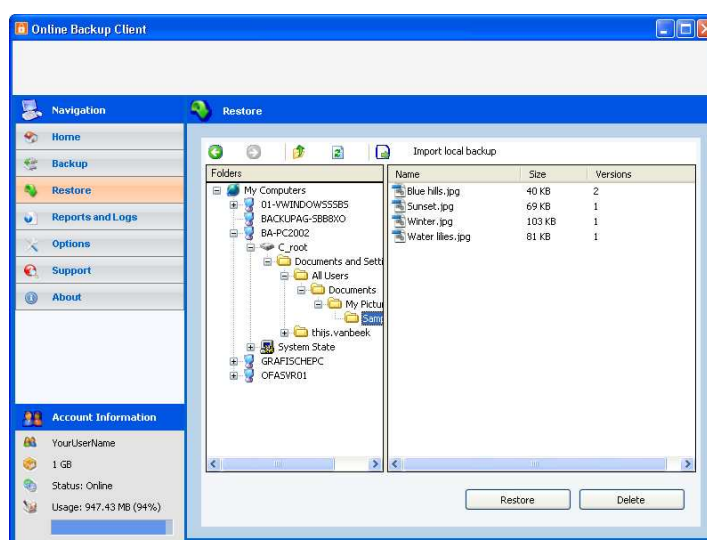


Figure 27: Restore

7.3.2. Restore latest versions of data

Data can be restored per file, folder or drive. Select files, folders or drives you want to restore, in the node tree. By clicking the 'Restore' button, the latest version of the data will be restored automatically. This is the most common option.

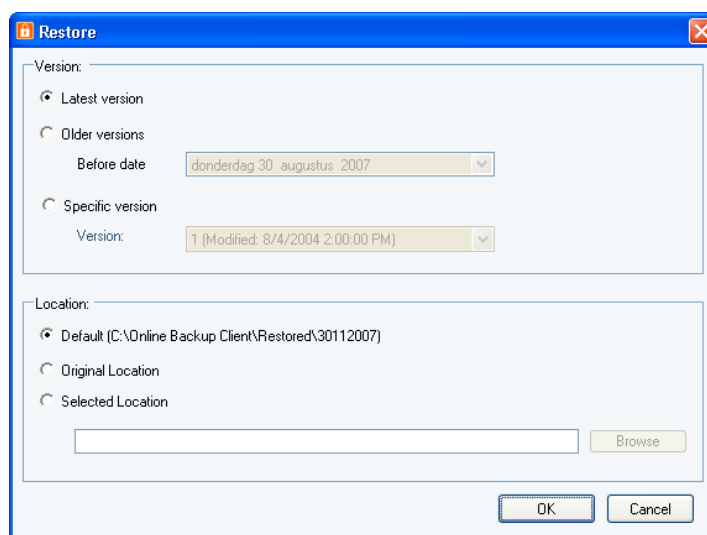


Figure 28: Restore screen



Before the restore starts, the client will ask you where you want to store the restored data. You can choose between the Default Location, the Original Location or a Selected Location.

Note: If a file already exists on the restore location, a prompt appears that allows you to skip, rename or overwrite the file.

7.3.3. Restore older versions of data

When a file has been changed within the period between two backups, the client will backup the file and notice that it is changed. The client will then create multiple versions of the file on the Backup Server (only if you have selected to store multiple versions, see later in this manual).

Restore at date

It is possible to restore a file or folder at a selected date in history. You select a file or folder in the 'Restore' view and click on 'Restore' in the lower main panel. In the 'Restore' view that appears, click on the 'Older Versions' button. Here you can select a date in history. The latest backed up versions of the selected files or folder before that date will be restored.

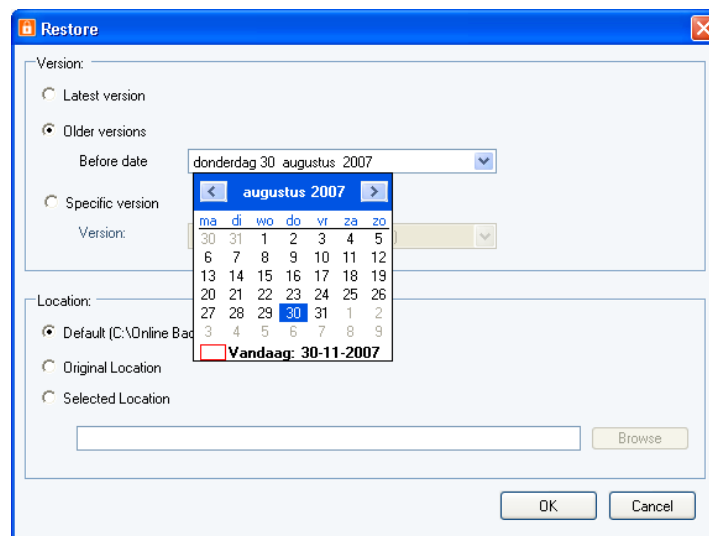


Figure 29: The calendar provides an easy date selection

Note: This feature only works if you have selected to store multiple versions of the backup data, see later in this manual.



Restore specific version

It is possible to restore a specific version of a file (this option only works with files, not on folder-level). You select a file or folder in the Restore-view and click on 'Restore' in the lower main panel. In the 'Restore' view that appears, click on the 'Specific version' button.

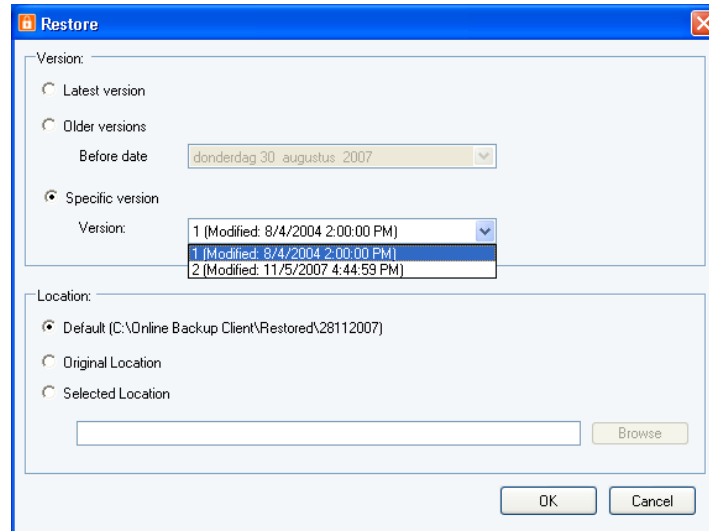


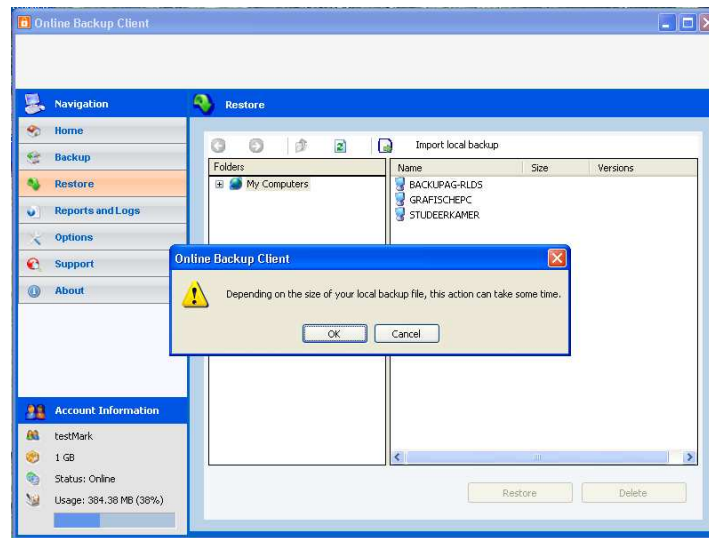
Figure 30: Available versions of the file

The available versions of the file will be displayed in the dropdown box. Here you can select a version of the file and start restoring.

Note: This feature only works if you have selected to store multiple versions of the backup data, see later in this manual.

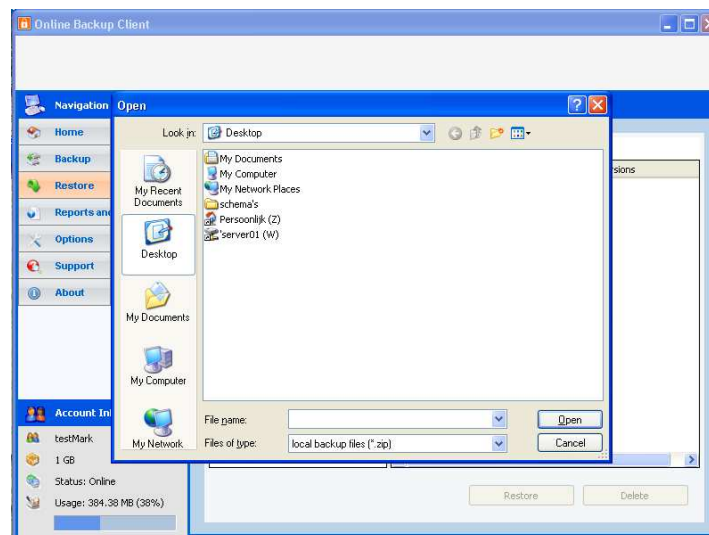
7.3.4. Import local backup

Within the 'Restore'-view it is also possible to import a local backup. This allows you to restore data from e.g. a local hard disk to your computer. You select 'Import local backup' in the Restore-view. This action can take some time.

**Figure 31: Import local backup**

You can navigate and open a 'local backup file', which is a ZIP-file. This can be a file that is created by yourself (making a local backup), or delivered by your Online Backup Provider, for fast restoring purpose.

Note: The ZIP file must be a file that is created by the Online Backup Client or delivered to you by your Online Backup Provider

**Figure 32: Select 'local backup file' for restore**

7.3.5. Deleting data from Backup Server



To delete data from the Backup Server, click on "Restore" in the "Navigation" panel. Select the data that needs to be deleted (you can select multiple files or folders). Click on the "Delete" button in the lower main panel to delete the file(s). The client will ask you to confirm the delete action.

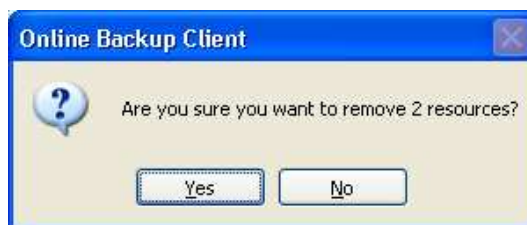


Figure 33: Confirm delete action

Note: Removing a folder with many files might cause the folder not to disappear immediately, since the server software will execute this in the background.

7.3.6. Restore process

The restore process can be monitored by clicking on 'Details' on the bottom of the application during the process of a restore (the details-screen will pop-up automatically when a restore is initiated).

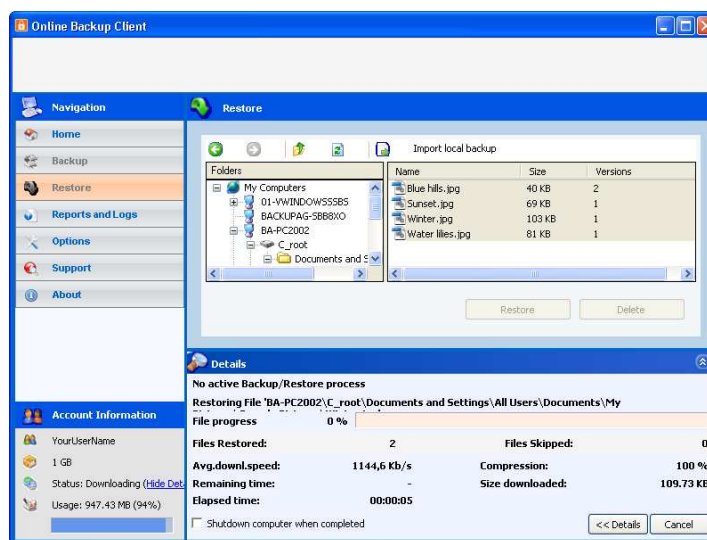


Figure 34: Restoring Data

The details regarding the restore of data:

Progress information

- File progress: The progress of the restore of the indicated file



- ▶ Files Restored: The number of files that have been restored
- ▶ Files Skipped: The number of files that have been skipped
- ▶ Bytes Restored (MB): The amount of restored files in Megabytes
- ▶ Bytes Skipped (MB): The amount of skipped files in Megabytes
- ▶ Bytes Received (MB): The amount of restored files in Megabyte
- ▶ Avg.downl.speed: The average download speed
- ▶ Remaining time: The estimated remaining time
- ▶ Elapsed time: The elapsed time
- ▶ Compression: The average compression rate of the backed up data
- ▶ Size downloaded: The size of the downloaded data
- ▶ Total size: The total size of the selected data

7.4. Options

You can set different kind of settings by clicking “Options” in the "Navigation" panel.

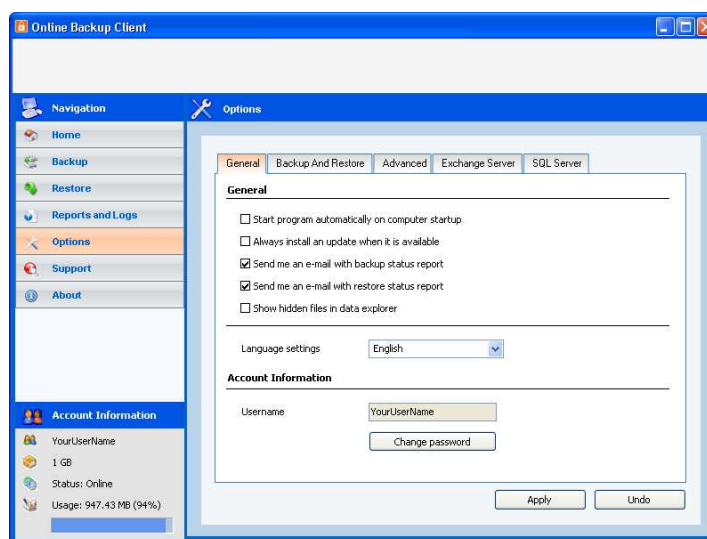


Figure 35: Options

7.4.1. General

In the “General”-tab, you can set general options of the Online Backup Client:

General

- ▶ You can select to let the program start when the computer starts and automatically install updates when available
- ▶ You can select to install a new update of the client software when available



Note: It is recommended to check this box, because then you will always have the latest version of the software.

- ▶ You can able or disable the sending of backup and restore reports by email
- ▶ You can select to show hidden files in the data explorer in the “Backup”-view (when selecting data to backup (hidden files are standard not included in a data selection)
- ▶ You can change the language of the application can be changed.

Account information

You can change your password for you backup account

Note: It might not be possible to change your password in the Online Backup client, since your Online Backup Provider can disable this option

Note: It is not possible to change the username or encryption key.

7.4.2. Backup and Restore

In the “Backup and Restore”-tab, you can set options that are specific for backing up and restoring with the Online Backup Client:

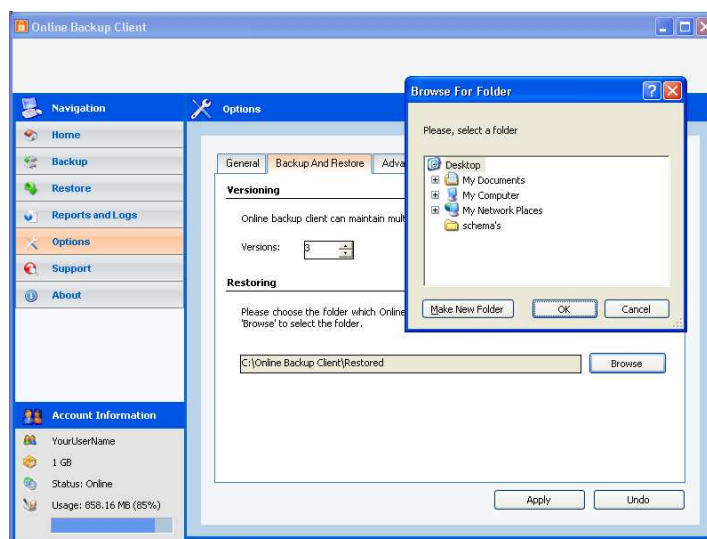


Figure 36: Default restore directory

Versioning

In this view the maximum number of versions of backed up files can be set. Default value is 3 versions.



Note: The original file is a version too. For example setting three versions makes a total of four versions

Restoring

In this view the default restore folder can be specified. This is the folder where data is restored by default when you don't choose a specified folder

7.4.3. Advanced

In the "Advanced"-tab, you can set advanced options of the Online Backup Client:

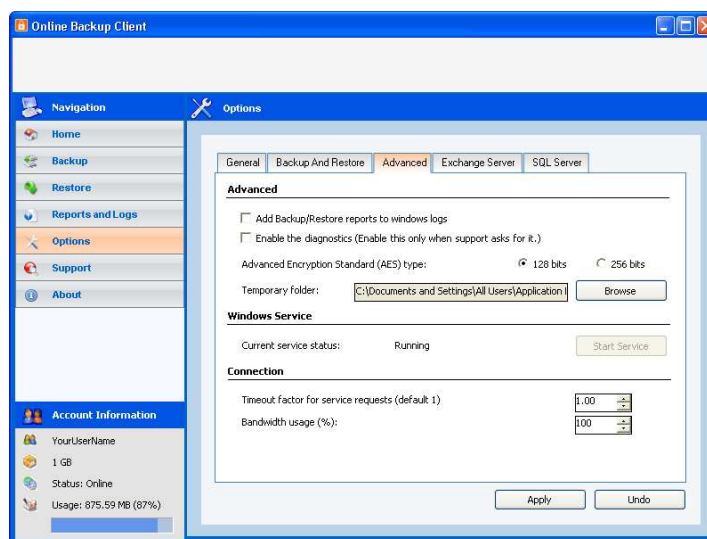


Figure 37: The advanced tab

Advanced

- ▶ You can choose to add Backup/Restore reports to windows logs (for the purpose of tracking errors in the backup or restore processes)
- ▶ Enable the diagnostics

Tip: Enable this option only when requested by the support department of your Online Backup Provider

- ▶ You can set the type of Encryption of the data that will be backed up: AES 128 bits or 256 bits encryption.
- ▶ You can select the folder where temporary files are stored before they are transferred to the Backup Server.

Note: Make sure there is enough disk space available to store the largest file to upload



Note: Make sure that this is an empty folder, because this folder is cleared after the backup

Windows Service

Current Service Status: Shows if the Online Backup Service is running. This service performs backups when the client is not running.

Connection

Timeout factor: This is a service based timeout interval that can be set depending on the speed and reliability of the internet connection. It is a multiplier of the default timeout interval of 10 seconds.

Bandwidth usage

This allows you to adjust the upload speed in percentage (%) of the available bandwidth between the Online Backup Client and the Backup Server.

7.4.4. Exchange Server

This tab is not always available and dependent of the client-license you have. Please see later in this manual for more information about how to backup Microsoft Exchange.

7.4.5. SQL Server

This tab is not always available and dependent of the client-license you have. Please see later in this manual for more information about how to backup a SQL server.

7.5. Reports and Logs

Click on “ Reports and Logs” in the "Navigation" panel for a chronological overview of important events.

7.5.1. Reports

The “Reports”-view shows a history of reports. You can view the status of the past backups and restores:

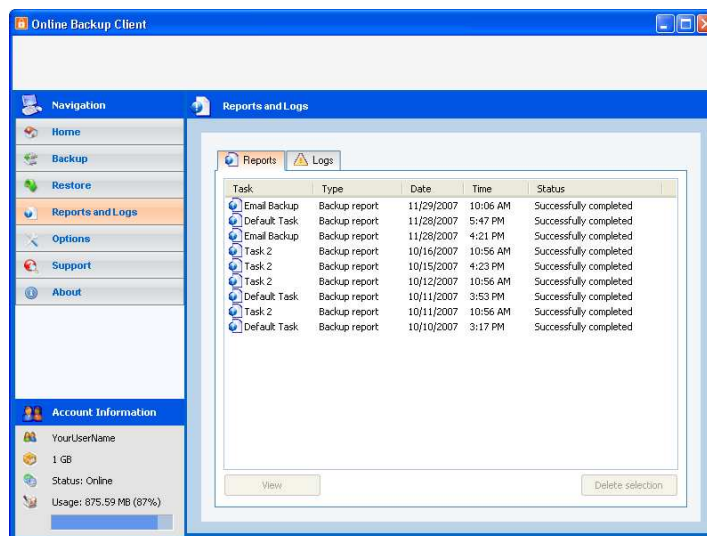


Figure 38: Report view

Double-clicking on a report will show report details.

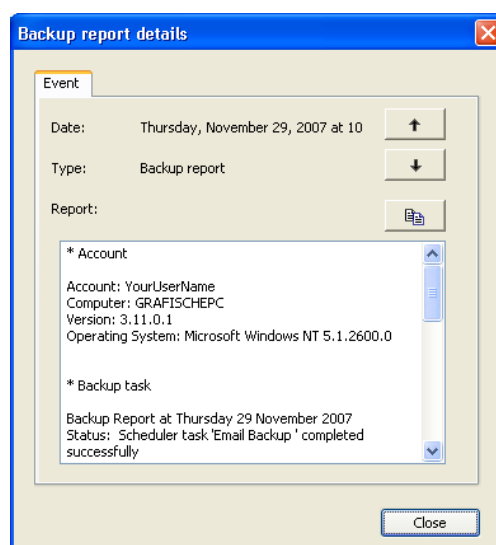


Figure 39: Report details

This report will also be sent to you be email.

7.5.2. Logs

The 'Logs' view shows a history of log files.

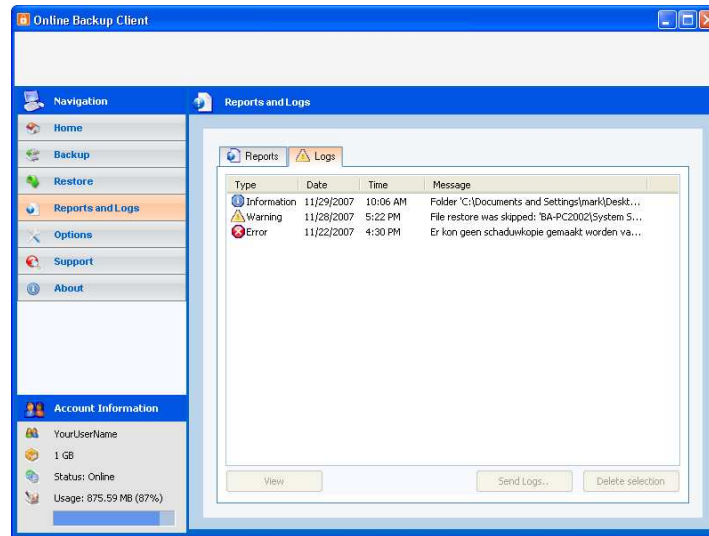


Figure 40: Log view

Three types of events can occur:

- ▶ Information: This is information on progress of the backup or restore procedure
- ▶ Warning: Non fatal errors occurred during backup or restore process.
- ▶ Error: A fatal error has occurred in the Online Backup Client.

Details of the log message can be viewed by clicking on [View]. This shows a dialog with detailed information of the message.

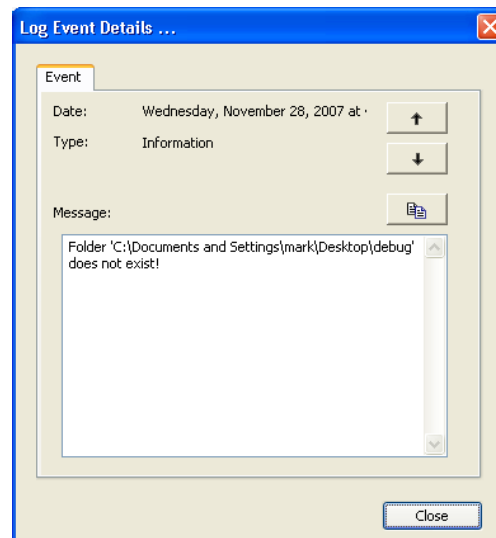


Figure 41: Log Event Details

Note: If the message is related to an action, you can click on [Start action]. This will start the associated action.



7.5.3. Cleaning Reports and Logs

In a few steps it is possible to clean the reports or logs list. In the list of reports or logs, you can make a selection (using ctrl and shift). To clear the list, click on the 'Delete Selection' button.

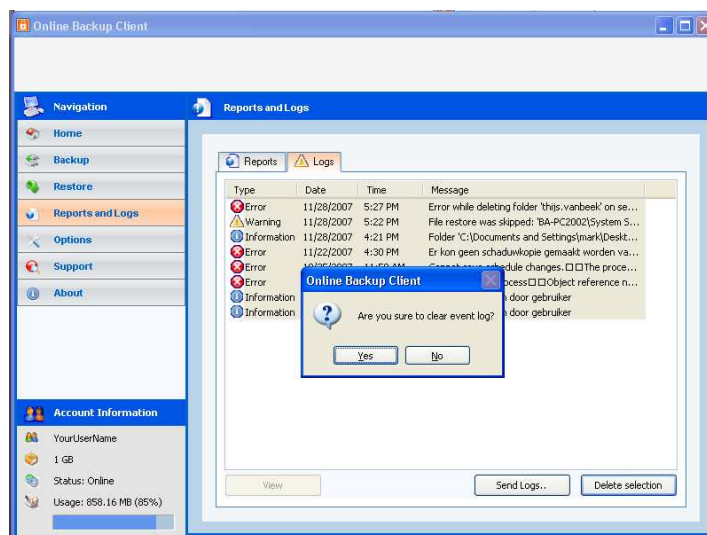


Figure 42: Deleting Reports and logs

7.6. Support

Clicking on "Support" in the "Navigation" panel will give contact details of your Online Backup Provider.

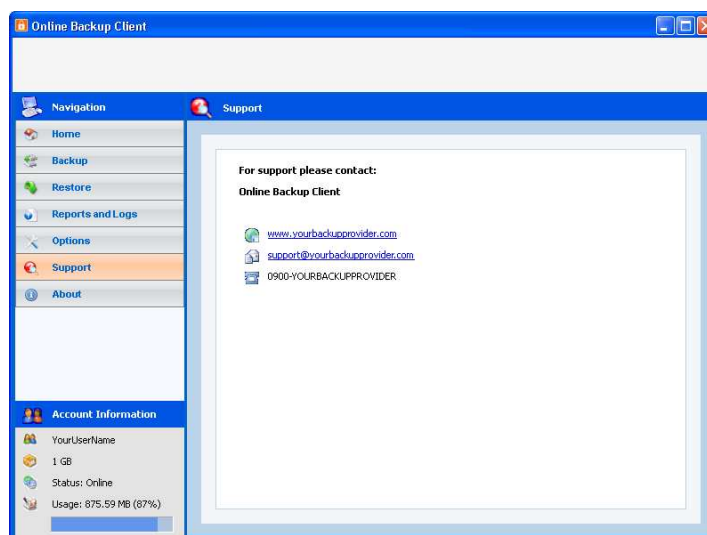


Figure 43: Support contact information



7.7. About

Clicking on “About” in the “Navigation” panel will give details on the version of the software and the license of the software.

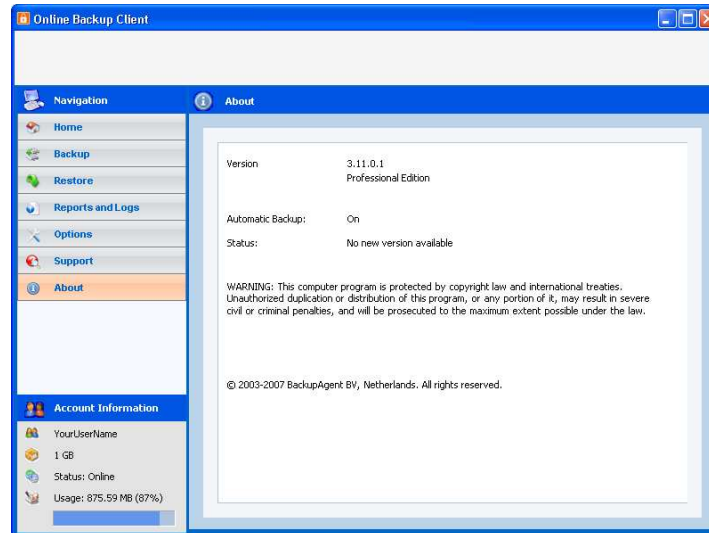


Figure 44: Online Backup Client about



8. Microsoft SQL Server 2000/2005

8.1. Introduction

By default, the Online Backup Client does not show the MS SQL Server in the Data-tree view panel. Backup of MS SQL Server can be activated by selecting 'Activate SQL Server Backup' in the "SQL-Server"-tab in the Options menu.

The Online Backup Client supports backup and restore of SQL Server 2000 and SQL Server 2005.

The location of the SQL Server the Online Backup Client should connect to can be set in the options panel. By default, this location is '127.0.0.1' (which is the local machine) for SQL Server 2000 and '[MACHINENAME][INSTANCENAME]' for SQL Server 2005.

The Online Backup Client can connect to the Backup Server using Integrated Security or by a user provided username/password combination.

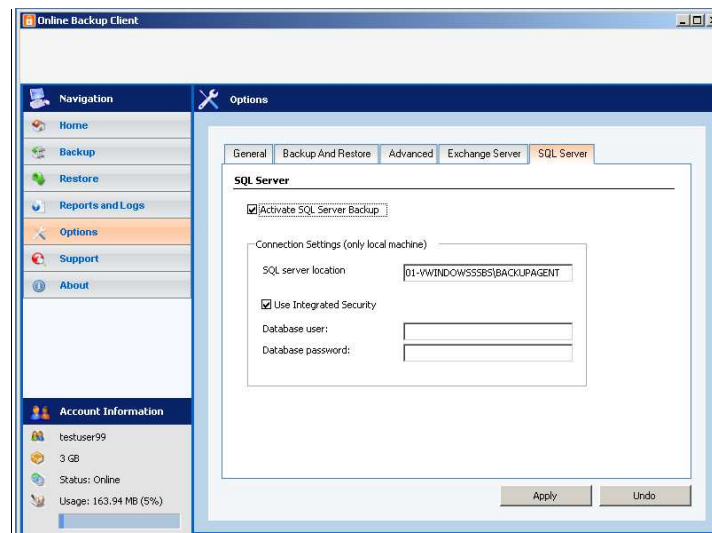


Figure 45: SQL Server tab

8.2. Backup

In order to create a backup of an MS SQL database, the database resource must be checked in the selection window of the Online Backup Client. When a connection to the SQL Server can be established, the MS SQL Server icon will be visible in the folder pane of the 'Data-tab' in the backup task.

Databases that can be backed up will be listed in the folder pane of the "Data"-tab in the backup task. Selected databases will be added to the backup task and will be backed up as a regular file without any further user action required.

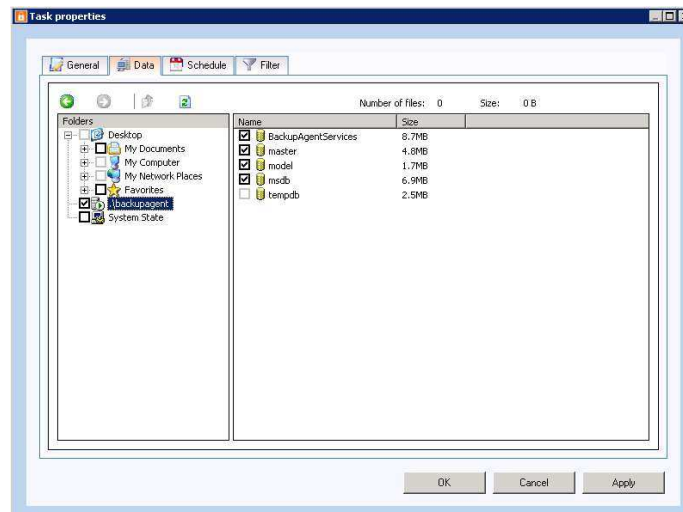


Figure 46: Select SQL database for backup

8.2.1. Backup requirements

- ▶ A connection to the SQL Server is created using Integrated Security or by a user provided username/password combination. In any case the Online Backup Client must be provided with sufficient rights to perform the SQL backup procedures.
- ▶ User permissions for MS SQL are described here:
<http://www.microsoft.com/technet/prodtechnol/sql/2000/maintain/sqlbackuprest.msp>. In order to create a backup of a database, the user that connects to the SQL Server must be assigned the sysadmin Server Role and the db_backupoperator and dbo_owner DB roles.

8.2.2. Further notes on backup procedures

- ▶ The Online Backup Client connects to the local MS SQL Server so only backups of local databases can be performed.
- ▶ The tempdb database cannot be backed up or restored. Do not select this database for backup.
- ▶ The Online Backup Client can perform 'full' and 'differential' backups on MSSQL Server. The backup method that will be used is chosen automatically.

8.3. Restore

Databases that are available for restore can be found in the "Restore"-view of the Online Backup Client, in the 'MS SQL Server'-folder of the computer that was used to create the backup.

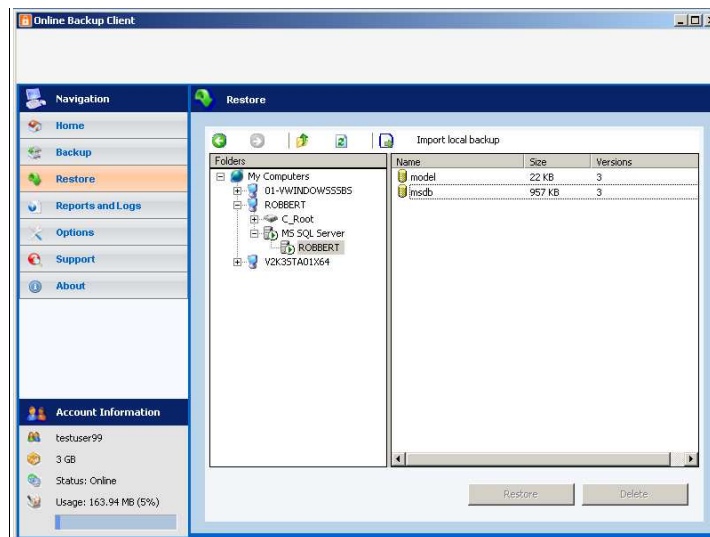


Figure 47: Select SQL database for restore

Inside the MS SQL Server folder is a folder that has the name of the SQL Server and contains the backed up databases which can be selected for restore.

When the restore procedure is started you are asked for a destination folder of the database files. Please note that this location will be the location where MS SQL Server will mount the restored database. The default location that is used by MS SQL Server to store database files is C:\Program Files\Microsoft SQL Server\MSSQL\Data.

The Online Backup Client will try and download the database that is to be restored and insert it into the local instance of MS SQL Server. If a database with the same name already exists on the computer, it will be overwritten. You can choose to create a copy or to overwrite the original database.

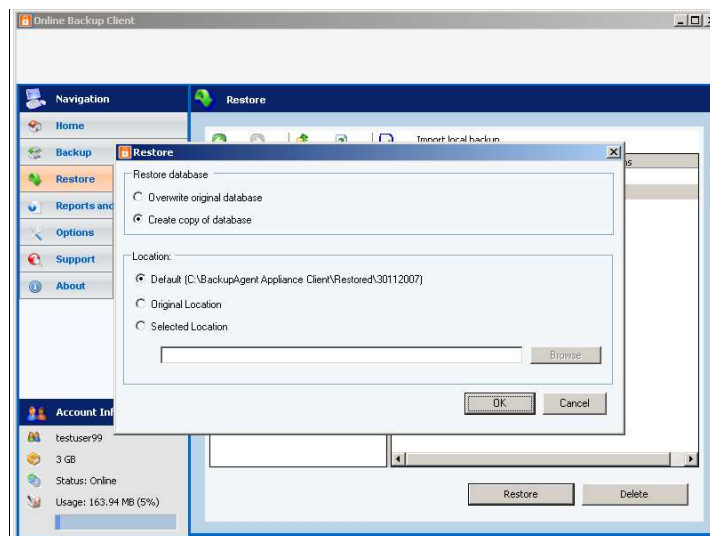


Figure 48: Select restore location



Tip: NEVER overwrite a database that is in production

Finalizing restore & mounting may require some time...

8.3.1. Restore requirements

- ▶ The Online Backup Client must be provided with correct permissions to perform the restore operation. According to Microsoft (<http://www.microsoft.com/technet/prodtechnol/sql/2000/maintain/sqlbackuprest.mspx>) the user that connects to the Server must have the sysadmin and dbcreator Server roles and db_owner DB role assigned to it.
- ▶ A restore of the master database can only be performed when the Server is in single user mode. SQL Server can be started in single user mode from the command line using the -m command line option: "`Program Files\Microsoft SQL Server\MSSQL\Binn\sqlservr`" -m.

8.3.2. Further notes on restore procedures

The Online Backup Client connects to the local MS SQL Server so only restores into the local computer can be performed.



9. Microsoft Exchange 2000/2003

9.1. Introduction

If Exchange Server is present on the computer on which the Online Backup Client is installed, the Online Backup Client supports backup and restore of Exchange 2000 and Exchange 2003. The Online Backup Client supports Exchange backup in three ways:

1. Through an ESE plugin for backing up Exchange mail stores
2. Through the folder-level backup option for backing up mailboxes separately
3. Through VSS by selecting the .edb- and .stm files on the file system

Note: ESE is the API from Exchange to let backup applications take a consistent and reliable backup.

9.2. Backup of Exchange using ESE plugin

To make a backup of Exchange mail stores using the Online Backup Client you can go to the "Options"-view and click on the "Exchange Server"-tab. Click on 'Activate Exchange backup' in the mail store section to activate this plugin:

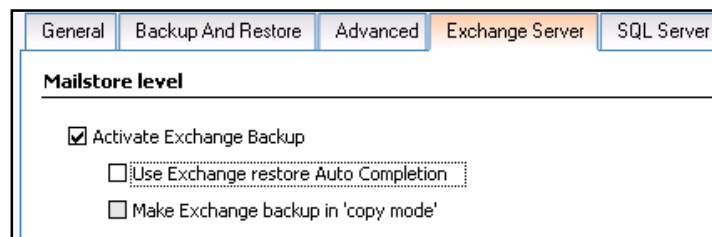


Figure 49: Activate ESE plugin

Additionally you can choose to change settings for backup and restore:

- ▶ Selecting the option 'Use Exchange restore Auto Completion' will let Online Backup Client to mount a restored mail store in Exchange, while deselecting this option will only provide the user with .edb-files and .stm files to complete the restore manually.
- ▶ 'Make Exchange backup in 'copy mode'' will prevent the Online Backup Client from truncating the log files after the first full backup, so other backup programs can still make differential backups.

When support for Backup and Restore for Exchange has been activated in the options panel, the "Microsoft Exchange Server" icon will be visible in the folder pane of the 'Data-tab' in the backup task. Below the "Microsoft Exchange Server" node it is possible to select complete Servers, Storage Groups and single Stores for backup. Items that are selected will be added to the current backup set.



Apart from the requirements listed below, performing a backup of an Exchange item is not different from doing backups of regular files and does not involve any further user actions.

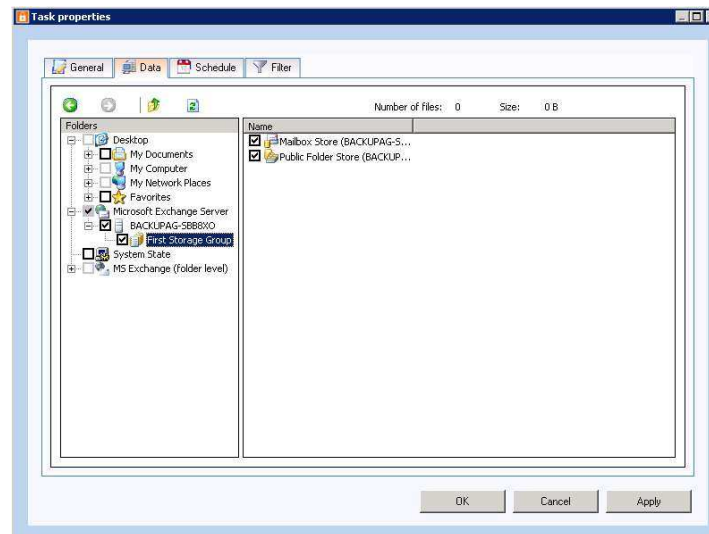


Figure 50: Select Exchange server

Note: For incremental backups, 'circular logging' on the Storage group must be disabled

9.2.1. Backup requirements

- ▶ Exchange must be installed and running on the local computer in order to perform backups.
- ▶ Important: an Exchange Store that is requested to be backed up must be mounted in order to be accessed. Dismounted Stores may appear in the folder-pane but cannot be backed up.
- ▶ The user that performs a backup must be assigned backup and restore privileges on the local machine (and of any remote server on which a backup is performed).
- ▶ Circular logging must be disabled.

9.2.2. Further notes on backup procedures

- ▶ Backups are always performed at Store level. For information about Exchange Folder level backup, see later in this manual.
- ▶ The Online Backup Client performs full or differential backups depending on what gives the optimal result with respect to network bandwidth usage and performance. However, since differential backups require a continuous series of log files, it is not possible to use third



party software when the Online Backup Client is used to schedule backups of Exchange. This also holds vice versa. Third party software can causes data lose, for example the software removes Exchange log files that are needed to make a successful backup of Exchange.

- ▶ The first time Exchange is backed up, a full backup will be performed. Depending on how large the Stores are considered, the backup may take a significant amount of time (up to one hour and over for Stores measuring GBs) apart from the time needed to upload the Stores to the remote Backup Servers.

9.2.3. Restore

Exchange Stores that can be restored are listed in the “restore”-view of the Online Backup Client in the 'MS Exchange folder'-folder of the computer that was used to create the backup. This folder holds sub folders for every Exchange Server that has been backed up from the local computer.

When the restore operation is started the selected Stores will be downloaded to the local machine and restored to the local instance of Exchange. If the 'Use Exchange restore Auto Completion' the requested stores will automatically be inserted into Exchange and mounted.

Note: This feature is only available for Exchange 2003. Alternatively, the Online Backup Client will stop immediately after downloading the Stores in order to allow the system administrator to perform a manual restore.

Restore operations on Microsoft Exchange can be sensitive to various system settings. Therefore, please consider the requirements and further notes listed below before initiating the restore process.

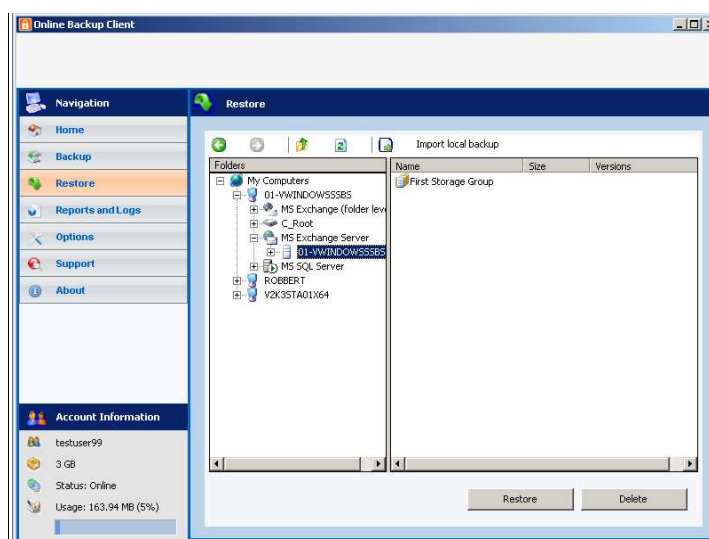


Figure 51: Select Exchange data for restore

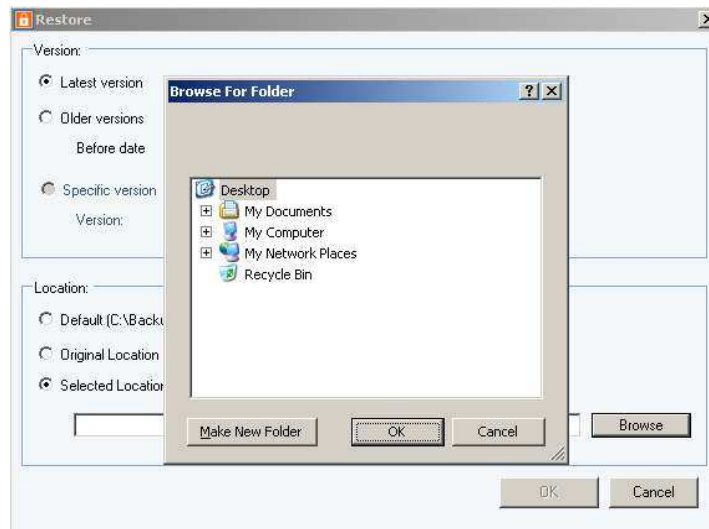


Figure 52: Select restore location

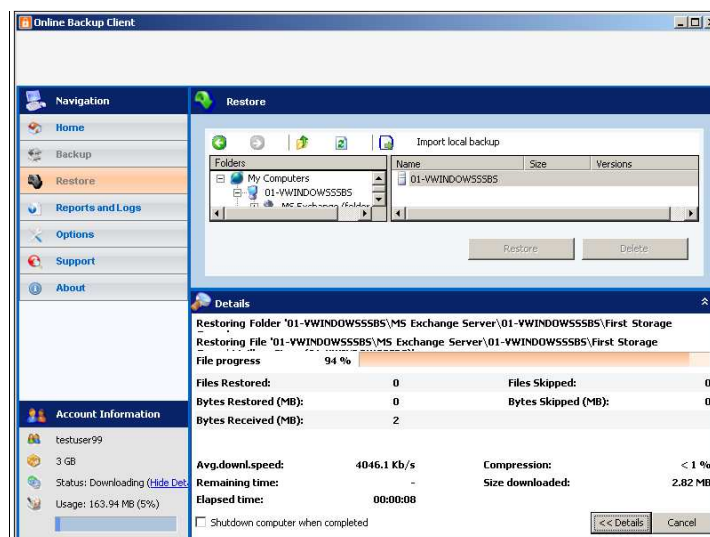


Figure 53: Restore Exchange Store

The restore process may require some time...

9.2.4. Restore requirements

- ▶ Although backups of Exchange Stores and restores cannot be performed remotely, stores will always be offered to the local instance of Exchange Server.
- ▶ Before an Exchange Store can be restored, assure that the following two conditions apply:
 - The Store must be dismounted.



- The Store must accept restore operations.

These operations can be done using the System Manager: select Start > Programs > Microsoft Exchange > System Manager. Then, in Administrative Groups, select the local server and expand the Stores list. Select the Store that needs to be restored, right-click the Store and select Dismount Store. Again, right-click the Store and select Properties. Within Properties, select the Database tab. Select 'This database can be overwritten by a restore'.

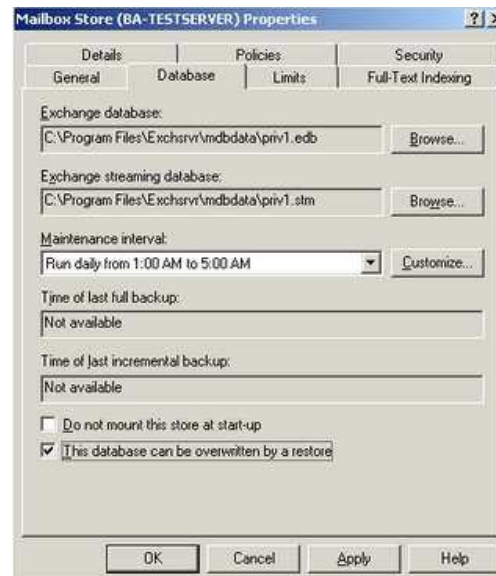


Figure 54: Exchange Restore requirement:
'This database can be overwritten by a restore'.

9.2.5. Further notes on restore procedures

- ▶ Restoring Exchange can be a complex operation and may result in loss of data. It is advised to be very careful when restoring Exchange Stores and only do so when no other method is available to retrieve lost data.
- ▶ It is possible that when Exchange needs to be restored, e.g. when the system has been fatally crashed, a discontinuity occurs between the series of log files that is present on the server and the series of files offered by the Online Backup Client restore. In this case:
 - Double check that the Store has been dismounted;
 - Copy the existing database and log files from the Exchange working directory to a safe Place (do not delete them before restore completed successfully);
 - Delete the log files in the Exchange working directory;
 - Double check that the Store accepts restores ('This database can be overwritten by a restore');



- Retry to restore the database using the Online Backup Client.

When problems persist:

- ▶ Try to perform the restore manually using the ESEUTIL.EXE utility provided by Microsoft.
- ▶ Useful information on Exchange restore processes is logged by Exchange and can be viewed using the Event Viewer.

9.3. Backup of Exchange on folder level

9.3.1. General

The folder level backup option in BackupAgent is a feature of the BackupAgent client to backup separate mailboxes and its subfolders. This option offers an alternative for backing up MS Exchange 2003 and makes small restores of parts of the Exchange mail stores possible.

Activating the folder level backup option is simple, however some requirements must be met and some security settings must be changed:

Additional requirements:

- ▶ MS Exchange 2003 Service pack 2 must be installed
- ▶ Windows 2003 must be installed
- ▶ Hotfix KB908072 for Exchange 2003 must be installed:
http://support.backupagent.com/index.php?_m=downloads&_a=viewdownload&downloadite mid=36&nav=0,26

Security settings:

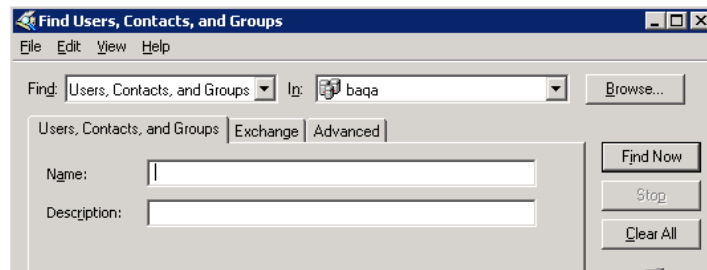
- ▶ The 'SystemMailbox'-user must not be hidden from the Exchange address list
- ▶ The local and/or domain administrator must have 'receive as' and 'send as' permission to the mailstore(s).

To change the SystemMailbox-user:

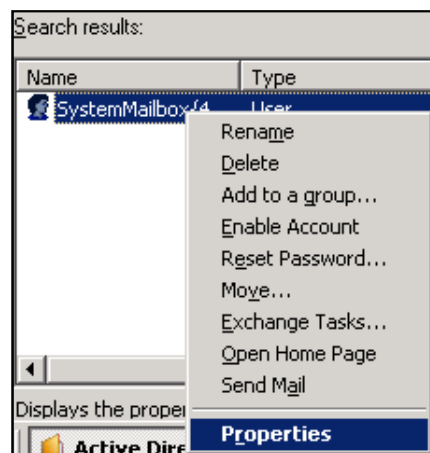
1. Start the Active Directory management application
2. On the parent node for all users, right-click and choose 'Find users...'



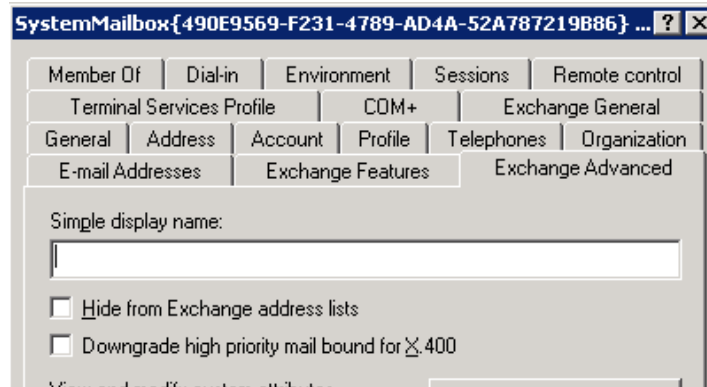
3. In the 'Find Users'-dialog, type 'SystemMailbox' in the 'Name' field and click 'Find...':



4. Select the user and open its properties



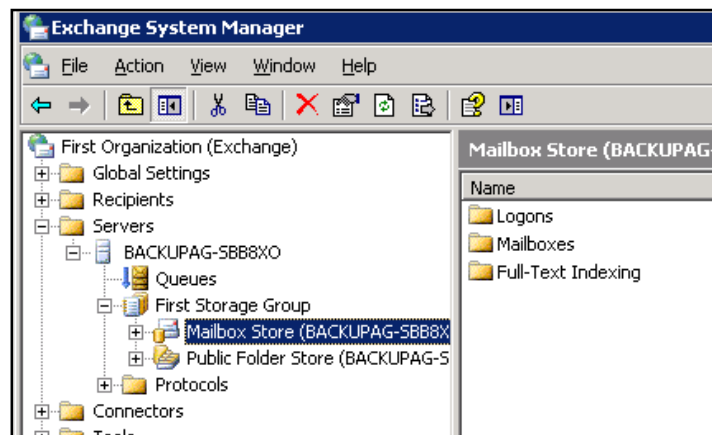
5. On the properties, click on the 'Exchange Advanced' tab



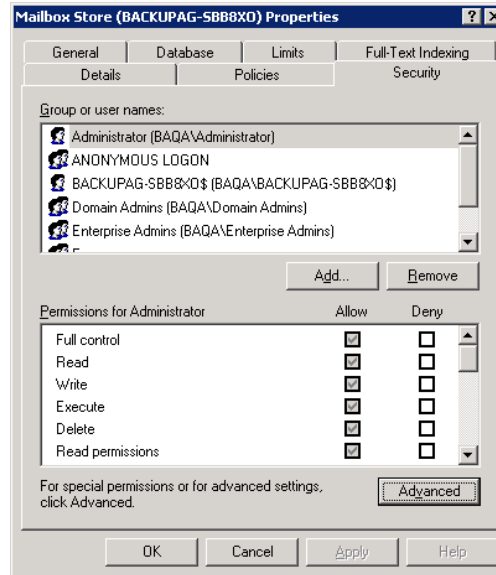
6. Make sure the 'Hide from Exchange address list' checkbox is unchecked
7. Click OK and close the application
8. (Re)start the Online Backup Client

To change the security settings for local administrator:

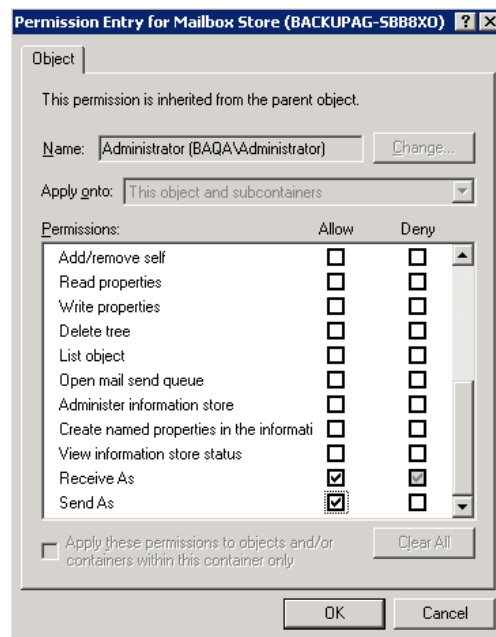
1. Start the MS Exchange System Manager
2. Browse to the mailstore node in the tree



3. Right-click on the node and choose properties
4. In the Properties dialog, click on the Security-tab



5. On the Security-tab, click on the Advanced-button
6. In the 'permission entries' list, select the local and/or domain administrator and click 'Edit...'



7. In the Permission Entry dialog browse through the list of permissions
8. Check the 'receive as' checkbox permission in the 'allow' column
9. Check the 'send as' checkbox permission in the 'allow' column
10. Click Ok and close the application



Permission entries:

Type	Name	Permission	Inherited From	Apply To
Allow	Administrator (BAQA...	Send As	<not inherited>	This object and subc...
Allow	Administrator (BAQA...	Receive As	<not inherited>	This object and subc...
Deny	Administrator (BAQA...	Receive As	Parent Object	This object and subc...

Now the type of permission for 'Send As' and 'Receive As' is set to 'Allow'

11. (Re)start the Online Backup Client

Note: If the Exchange Server is a Domain Controller, then the Domain Administrators must also have permission for 'Send As' and 'Receive As'.

9.3.2. Backup of Exchange on folder level

To make a backup of Exchange on folder level using the Online Backup Client you can go to the "Options"-view and click on the "Exchange Server"-tab.

- ▶ On the Exchange Server tab, check the 'Activate Exchange server backup on folder level' checkbox

General Backup And Restore Advanced **Exchange Server** SQL Server

Mailstore level

☐ Activate Exchange Backup

☒ Use Exchange restore Auto Completion

☐ Make Exchange backup in 'copy mode'

Folder level

☒ Activate Exchange Server backup on folder level

Figure 55: Activate Exchange Server on Folder Level

The option is now activated, so backups and restores of Exchange mailboxes is now possible.

When folder level backup is activated a new 'MS Exchange (folder level)' node is added to the selection tree of the data view of a backup task. This node can be collapsed and allows you to browse through and select all mailstores, mailboxes and subfolders. Selected items will be added to the backup task.

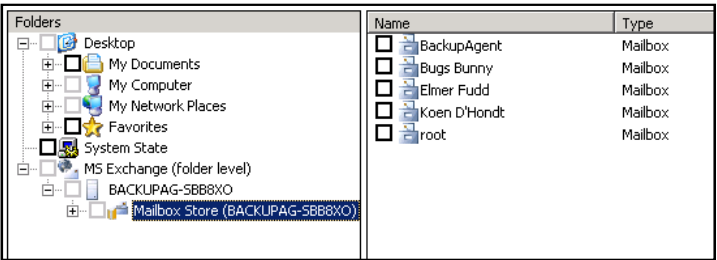


Figure 56: Overview of mailboxes in data selection dialog

Note: For ease of use and overview it is recommended to create a separate task for Exchange folder level backup. Do not mix this data with files to prevent confusion.

You are now ready to backup Exchange mailboxes. A backup of mailboxes works similar to the backup of files and folders. The most important difference during the backup of mailbox items takes place during the preparation phase of the backup. For each mailbox subfolder the following preparation process is executed:

A PST-file of the mailbox sub item (i.e. 'Contacts' or 'Inbox') is created by the 'Outlook service' of MS Exchange.

MS Exchange (folder level)	Deleted Items	Folder	10,999	16
BACKUPAG-SBB8XO	Drafts	Folder	0	0
Mailbox Store (BACKUPAG-SBB8XO)	Inbox	Folder	3,041	4
BackupAgent	Journal	Folder	0	0
Bugs Bunny	Junk E-mail	Folder	0	0
Elmer Fudd	Notes	Folder	0	0
Koen D'Hondt				

Figure 57: Overview of a folder level mailbox

- ▶ This PST file is saved in the temp-folder of the Online Backup Client
- ▶ The PST file is then binary compared with current PST files which are already uploaded to the Backup Server.
- ▶ In case of no earlier versions of the PST file the file is completely uploaded to the Backup Server. Like a normal file it is compressed and encrypted before it is uploaded.
- ▶ In case of an earlier version of the PST file all changes between the files are calculated and a binary patch is uploaded containing only the changes. (If nothing changed, nothing is uploaded)
- ▶ Additional metadata considering mailbox properties and settings are also uploaded to the Backup Server.

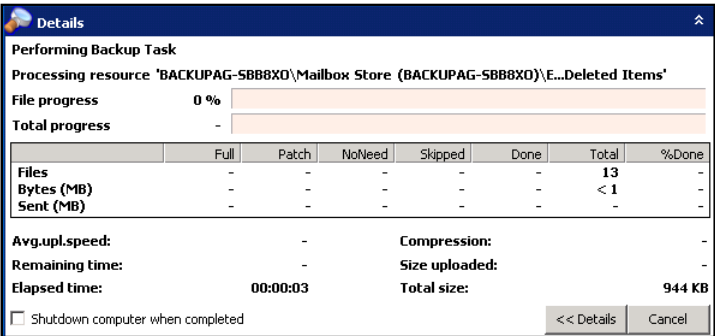


Figure 58: Progress during mailbox backup

This approach can require a comprehensive amount of available temporary space on a disk to process all PST files. Please make sure that the temp-folder of the Online Backup Client is set to a path with enough available temporary disk space.

9.3.3. Restore of Exchange on folder level

Once mailboxes are backed up on the Backup Server, restoring these mailboxes is possible on any Exchange server. You can browse for mailbox items in the 'Restore Data' view of the Online Backup Client.

To restore a mailbox or mailbox sub item:
Click on one or more of the nodes in the tree view or list view and then click the 'Restore' button

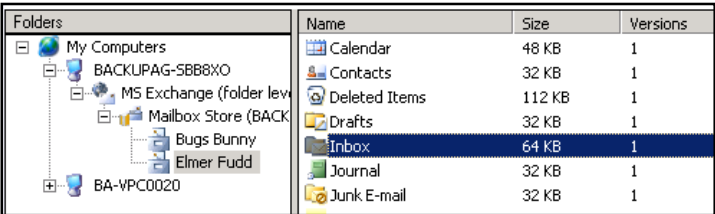


Figure 59: Version overview

You will prompted to either overwrite or create a copy of the items.

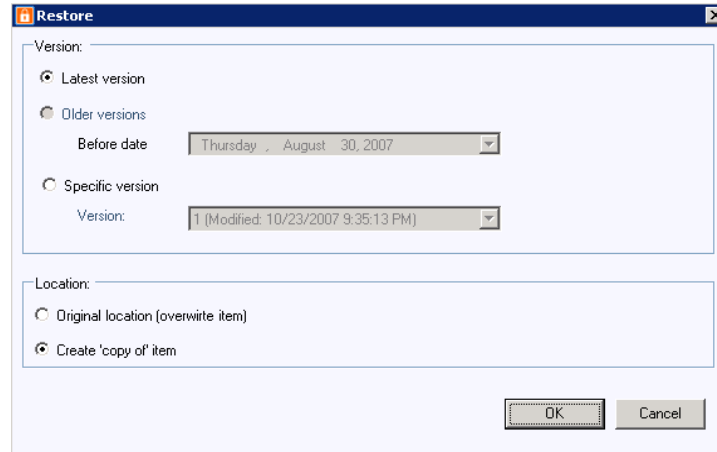


Figure 60: Select Restore location

Choosing to copy the items will result in an additional folder with a 'Copy of'-prefix (i.e. 'Copy of Inbox') in the user's mailbox.

The Online Backup Client will now restore the mailbox or a mailbox sub item:

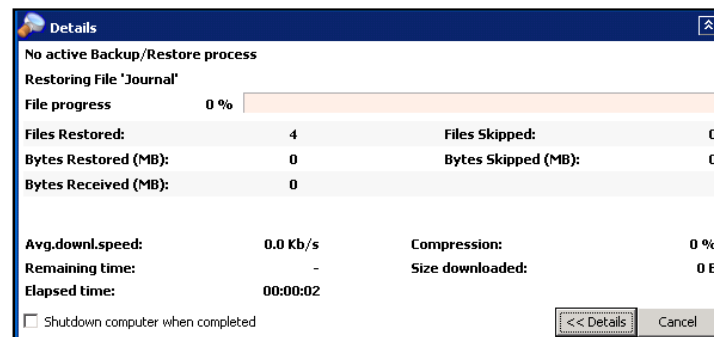


Figure 61: Progress during restore

Caution: Overwriting the items may cause data loss. It is strongly recommended to use this option only in case the original mailbox is empty or contains old data.

Caution: If you restore a 'Copy of' a subitem beware that this copy might be part of next backup if the complete mailbox is selected.

Note: For ease of use and overview it is recommended to create a separate task for Exchange folder level backup. Do not mix this data with files to prevent confusion.

Note: A restore of a single mail or attachment is not possible. In case a single mail is lost, please restore a copy of the subfolder (i.e. Inbox) it was located in. The mailbox user can then search



this copy for his missing mail, benefitting from all search options in his mail client.

Note: Please note that most 'lost' mails can be recovered using Exchange own retention functionality.

9.4. Backup of Exchange using VSS

Finally Online Backup Client supports VSS and this can force Exchange to write a consistent backup copy of the .edb-file and the .stm file to the shadow volume. Therefore selecting these files is a reliable way of making a daily full backup, which will be patched as a file by Online Backup Client to upload only the changes.

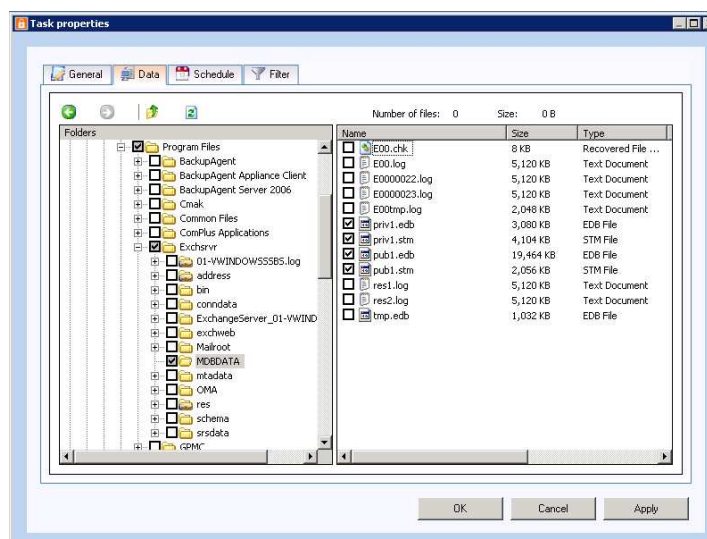


Figure 62: Backup Exchange using VSS



10. Windows System State

10.1. Backup

In the Folders pane of the 'Data-tab' of the Online Backup Client, a checkbox can be used to select the System State for backup. When the backup is started, the Online Backup will run ntbackup to perform the actual backup of the System State and then upload the backup file to the Backup Server.

Performing a backup of the System State should be a straightforward operation and involves no special user action.

10.2. Backup requirements

The Online Backup Client uses Window's ntbackup tool to generate a backup of the computers 'System State'. There are no further requirements to perform a System State backup.

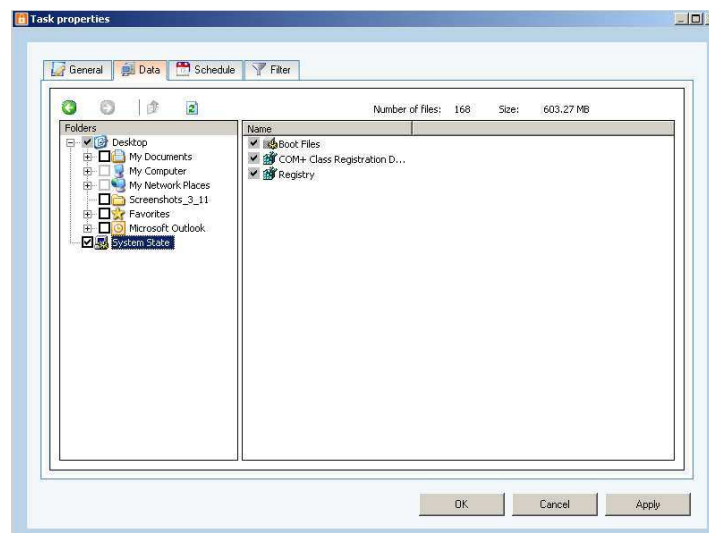


Figure 63: Selecting System State for backup.

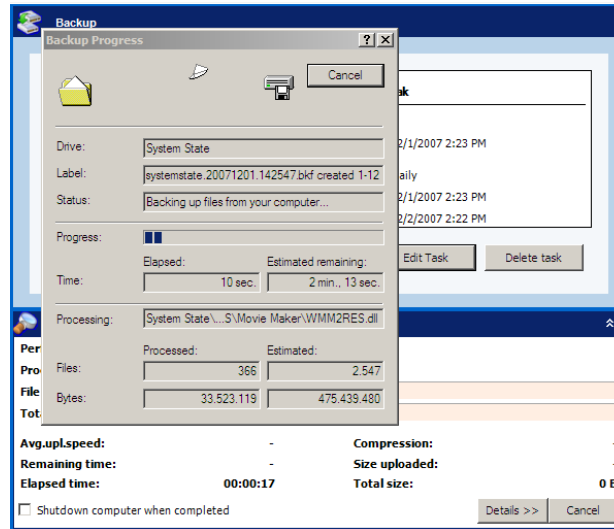


Figure 64: Actual backup of system state is performed by ntbackup utility.

10.3. Further notes on backup procedures

- ▶ Please note that pressing Cancel during ntbackup's backup procedure cancels the backup but will not report an error.
- ▶ Windows XP Home Edition does not support ntbackup by default. To use System State backup features of Online Backup Client please install the ntbackup program. The following URL will provide more information:
<http://www.windowsitpro.com/Article/ArticleID/24413/24413.html>

10.4. Restore

Restoring a System State involves three steps:

- ▶ Select the version of the System State that needs to be restored from the System State folder on the 'Restore' view of the Online Backup Client.
- ▶ Starting the restore will download the System State backup file to the selected local folder.
- ▶ After downloading the backup file, the restore can be completed manually using ntbackup.

* ntbackup can be started by selecting Start > Programs > Accessories > System Tools > Backup.

- ▶ Select the System State version that needs to be restored in the ntbackup tool.



- ▶ When the restore is started, the tool will most probably fail to connect to the backup media file because of an incorrect location.
- ▶ You are then offered the possibility to browse to the location where the Online Backup Client placed the restore file.
- ▶ Select the correct file and complete the restore using the ntbackup tool.

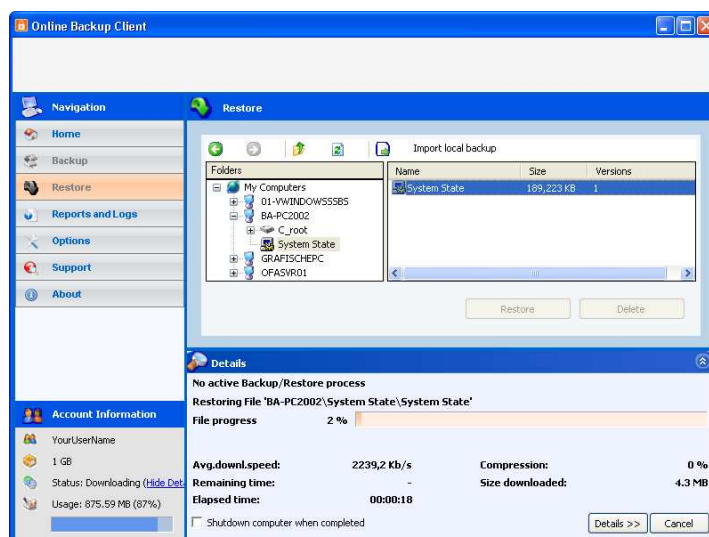


Figure 65: Restoring System State

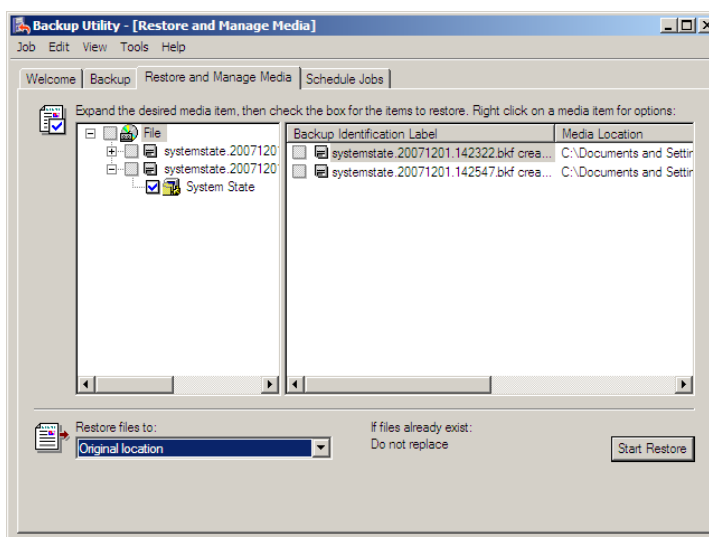


Figure 66: Restoring System State with ntbackup

10.5. Restore requirements

Restoring the System State is performed using Window's ntbackup tool and requires some basic user action as described above.