

Backup Help

Backup Version 2.1 by Taner Riffat

About the Author



Taner Riffat

Taner is an IT Manager with a .NET (VB.NET and C#) background and over two decades of software development experience with specialities in strategic planning for software, management communication, establishing procedures, controls and standards for the SDLC, managing and guiding software developers, maximising business potential using RAD/Agile methodologies, etc. His project experience is in Insurance, Banking, Payroll, Hospital Administration, Accounting Interfaces, and more recently, Document Management software.

For a more detailed profile about Taner, browse to: <http://www.linkedin.com/in/tanerriffat>

Taner would be grateful if you voted (please be generous) for this article at **The Code Project** website here: <http://www.codeproject.com/KB/vb/Multithreaded.aspx>.

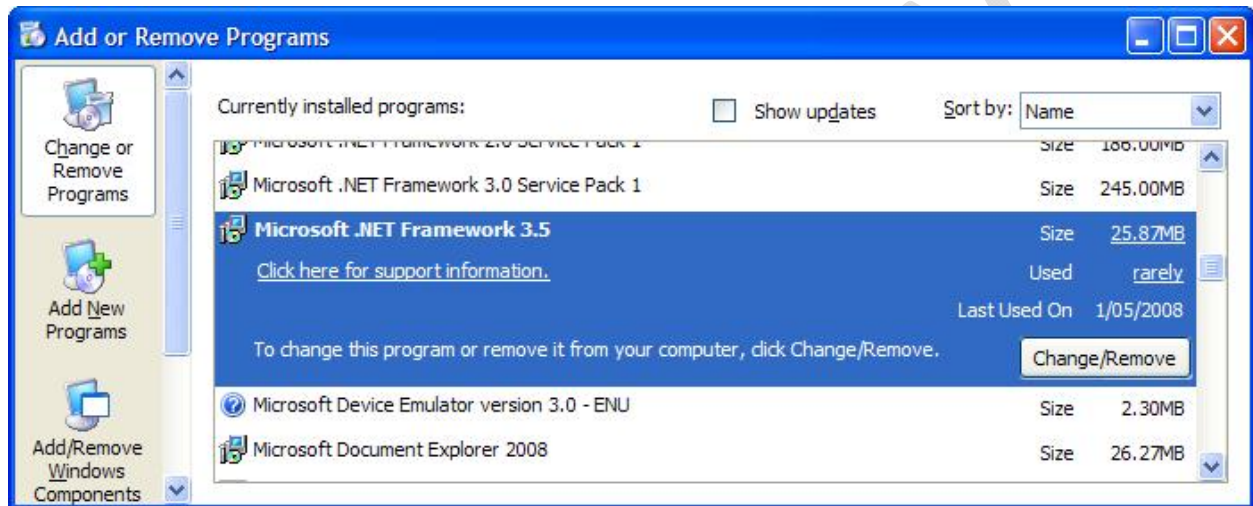
You may also contact the author, Taner Riffat, at: TanerRiffat@gmail.com.

System Requirements

The Backup utility has so far only been tested on Windows XP.

You may try it on Windows Vista and if it does not work then check for an update every now and then at <http://www.codeproject.com/KB/vb/Multithreaded.aspx>.

You will also need to install the **Microsoft .NET Framework 3.5** or higher, if it isn't already installed. Press the **Start button/Control Panel/Add Remove Programs** in Windows XP to see if it is installed:



If **Microsoft .NET Framework 3.5** does not appear then it can be downloaded from www.microsoft.com or by using Google and searching with this string "download framework 3.5".

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General Usage

You can use this utility to make regular backup's of your data quickly and easily. The best thing about it, is that it will only copy files that have changed, so if you are copying lots of data it will run quite fast after the initial backup, assuming not many new and/or big files have been added since the last backup.

The other best thing about this backup utility is that it will not stop copying just because it gets an error on a particular file. Instead, it writes the error message to a log file and then tries to copy any remaining files (and folders).

Please note that a particular file or folder may not copy for two main reasons. The first is long file/path names. There is an inherent limit in a file/path name of 255 characters for Windows XP and 260 characters for Windows Vista. This is an **age old problem** that so far has apparently been "too difficult" to solve by the authors of the operating system software, however, some rumours indicate that it will be solved eventually, perhaps very soon. In the meantime, please keep your file/path names less than 255 characters in length.

The second most common reason a file or folder may not copy (or be deleted if a mirror copy is used) relates to the security settings in the operating system. You need to ensure that your user code has full access to the folders and files you want to copy.

So always check the log file because it may not have copied a file you really need.

Performance

Backup has not really been designed to run faster than other software that copy files. However, Backup can be run in either **Windows Forms Mode** or **Batch Mode**. So, if you use Batch Mode, it should be faster as it does not need to initiate a separate thread to count files and folders.

Backup can also be defined as a **Windows Scheduled Task** when used in Batch Mode. As a Windows Scheduled Task can be set to run based on a schedule, you can set Backup to run at anytime while the computer is unattended (weekends or overnight, for example), This should help where duration and performance are a concern.

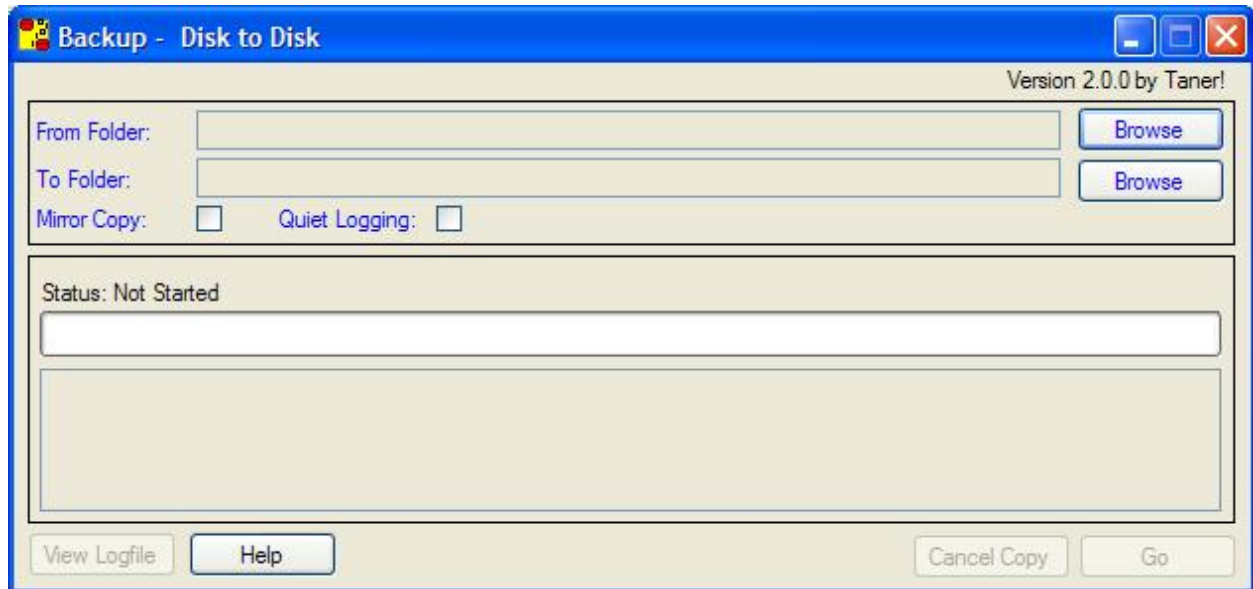
Also remember the first time you copy/backup a folder (or a whole drive) will take the longest, as every single file will need to be copied. Subsequent copying with Backup using the same folders will then be faster as only new or modified files will be copied.

Please read below for more information about running Backup in Windows Forms Mode or Batch Mode.

Running in Windows Forms Mode

Backup is started in windows forms mode in the usual way by pressing Start / All Programs / Backup / Backup from the Windows desktop.

In this mode a Windows Form will be displayed and you can select the **From Folder** and the **To Folder** and press **Go** to start:



Mirror Copy

Setting the **Mirror Copy** checkbox will ensure that the **To Folder** is identical to the **From Folder**.

The **Mirror Copy**, in this context, will perform the backup and then delete any files in the **To Folder** that do not exist in the **From Folder**, and in doing so will ensure the **From Folder** and **To Folder** have the same files and folders in them, so as to **mirror** each other.

WARNING

The **Mirror Copy** option defaults to being **off** (unchecked) as this is the **safest option**. You need to remember that setting **Mirror Copy** to **on** (checked) will **delete files** in the **To Folder** if those same files do not exist in the **From Folder**.

If you accidentally select the wrong folders you could end up deleting all of your data and possibly rendering your computer inoperable!! Only use Mirror Copy if you understand and are willing to accept the risks!!

Please read the examples below to see how a mirror copy works:

Example of how **Mirror Copy** works:

1. The **c:\myfiles** and **e:\myfiles** folders have the same four files:

c:\myfiles	e:\myfiles
file1	file1
file2	file2
file3	file3
file4	file4

2. You delete file3 from the **c:\myfiles** folder, so your folders now contain the following files:

c:\myfiles	e:\myfiles
file1	file1
file2	file2
file4	file3
	file4

If you then used **Backup** to copy from the **c:\myfiles** folder to the **e:\myfiles** folder, **without** the mirror copy option, **file3** remains in **e:\myfiles** so the result would be:

<u>FROM FOLDER</u>	<u>TO FOLDER</u>
c:\myfiles	e:\myfiles
file1	file1
file2	file2
file4	file3
	file4

Or, if you then used **Backup** to copy from the **c:\myfiles** folder to the **e:\myfiles** folder, **with** the mirror copy option, **file3** is deleted so the result would be:

<u>FROM FOLDER</u>	<u>TO FOLDER</u>
c:\myfiles	e:\myfiles
file1	file1
file2	file2
file4	file4

Example of how **Mirror Copy** works when you specify/select the wrong folder parameters, unintentionally:

You want to backup **c:\myfiles** to **e:\myfiles** using a mirror copy, So **c:\myfiles** should be the **From Folder** and **e:\myfiles** should be the **To Folder**, Like so:

FROM FOLDER

c:\myfiles

TO FOLDER

e:\myfiles

But instead, you select **e:\myfiles** as the **From Folder** and, even worse, you select **c:** as the **To Folder** (perhaps it's that hangover from last night!). **Your folder parameters are now incorrect.** Like so:

FROM FOLDER

e:\myfiles

TO FOLDER

c:

The folders you selected **before** you run **Backup** contain:

FROM FOLDER

e:\myfiles

file1

file2

file3

file4

TO FOLDER

c:

Every single file on the C Drive.

Including the operating system files.

After you run **Backup** using the **mirror option** with these incorrect parameters, this is what the folders (the whole C drive in this case) will contain.

FROM FOLDER

e:\myfiles

file1

file2

file3

file4

TO FOLDER

c:

c:\myfiles\file1

c:\myfiles\file2

c:\myfiles\file3

c:\myfiles\file4

Only the four files that were copied from the e:\myfiles folder will be on the C drive! Every other file on the C drive, including the operating system files, will have been deleted!

Be careful and be warned, using the **Mirror Copy option** will **delete files** in the **To Folder**, and **will delete your wanted data** if the folder parameters are incorrect. Use the mirror option and your own risk.

Quiet Logging

Setting the Quiet Logging option will create a log file with less messages i.e. only error messages will be logged.

By default, Quiet Logging is turned off so a message will be written to the log file for each file that is copied as well as any error messages.

Log Files

Each time a backup is run a log file is created in the application path usually at: C:\Program Files\Moneysoft\Backup.

The log file is created with the execution start date and time in this format:

YYMMDD-HHMMSS-Log.txt.

Example log files:

Logfile Name	Execution Date and Time
071215-110617-Log.txt	15th December 2007 at 11:06:17
071118-112458-Log.txt	18th November 2007 at 11:25:58
071117-061043-Log.txt	17th November 2007 at 06:10:43

Running in Batch Mode as a Scheduled Task

Backup can be setup to run in batch mode as a scheduled task by processing command line parameters.

In batch mode **Backup** does not display a windows form, which means **Backup** is invisible during execution. It can only be seen from the Windows Task Manager (by pressing the CTRL-ALT-DEL keys). To check the status of a **Backup** simply view the log file that is automatically created for each backup in the application folder (usually at **C:\Program Files\Moneysoft\Backup**).

Running in batch mode does not mean you can run **Backup** in a console (MS DOS) window. **Backup** is a Windows application. You could use the Windows **Start/Run** command if you want to run **Backup** in batch mode without using a scheduled task.

You can add as many scheduled tasks for **Backup** as you like if you want to have several different backups run at certain times. Use the Windows Control Panel and press the Scheduled Tasks icon to setup a scheduled task.

The syntax for the command line parameters is:

Backup <source path> <destination path> <mirror copy boolean> <quiet logging boolean>

<source path> = the "full path" of the source folder.

<destination path> = the "full path" of the destination folder.

<mirror copy boolean> = "true" to use the **Mirror Copy** option. Any other value or no value means "false".

<quiet logging boolean> = "true" to use the **Quiet Logging** option. Any other value or no value means "false".

EXAMPLES:

Backup c:\myfiles d:\myfiles

Backup c:\myfiles d:\myfiles true

Backup c:\myfiles d:\mybackup\myfiles true true

Backup "c:\program files" "e:\program files" false false

Backup "c:\program files" e:\myfolder false true

Notes:

- 1. When running in batch mode the <source path> and <destination path> must be the **full path name**.*
- 2. You must enclose the <source path> and <destination path> in double quotation marks when the path has one or more space characters.*
- 3. Bad command line parameters could result in a copy to an unwanted path. Consider this example:*

Backup "c:\my path" e:\my path

As quotation marks have not been used in the second parameter files from the "c:\my path" folder will be copied to a folder called "e:\my". The correct form is:

Backup "c:\my path" "e:\my path"

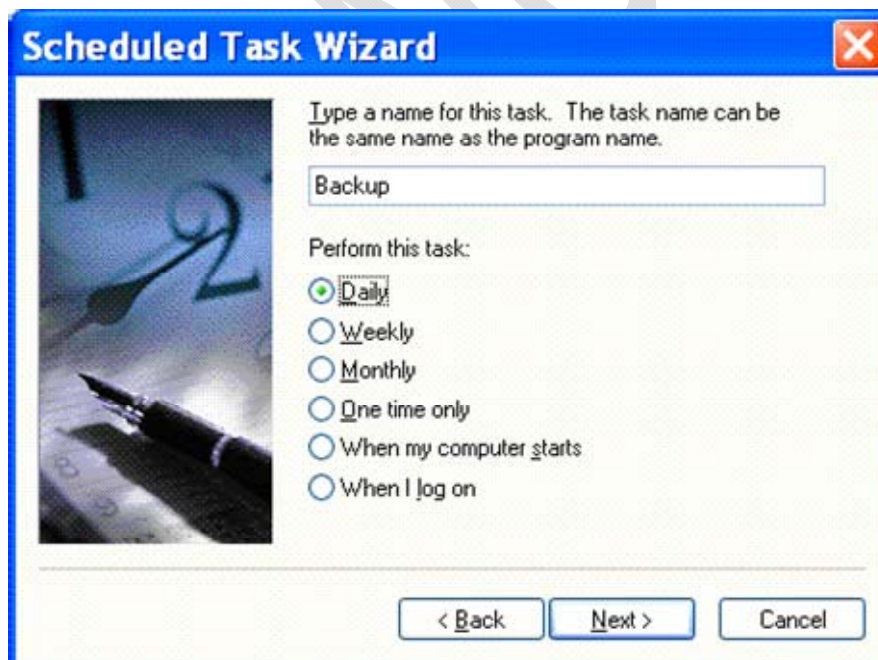
Creating a Scheduled Task for Backup

From the Windows Start menu access the Control Panel and double click the **Scheduled Tasks** icon. Look for the **Add Scheduled Task** icon and double click it to display the wizard.

Select **Backup** from the list (make sure you select the right one as shown below) and press the **Next** button.



Type the name of the task, this defaults to **Backup**. You could call it "my lunchtime backup" for example. Select when to perform the this task and press the **Next** button.



Set the start time and frequency and press the **Next** button.



Scheduled Task Wizard

Select the time and day you want this task to start.

Start time:
7:00 PM

Perform this task:
☒ Every Day
☐ Weekdays
☐ Every 1 days

Start date:
15/12/2007

< Back Next > Cancel

Set the user account for this task. *Note that this account must have a password set or the task will not run. A blank password will not work.*



Scheduled Task Wizard

Enter the name and password of a user. The task will run as if it were started by that user.

Enter the user name: COMPUTERNAME\User

Enter the password:

Confirm password:

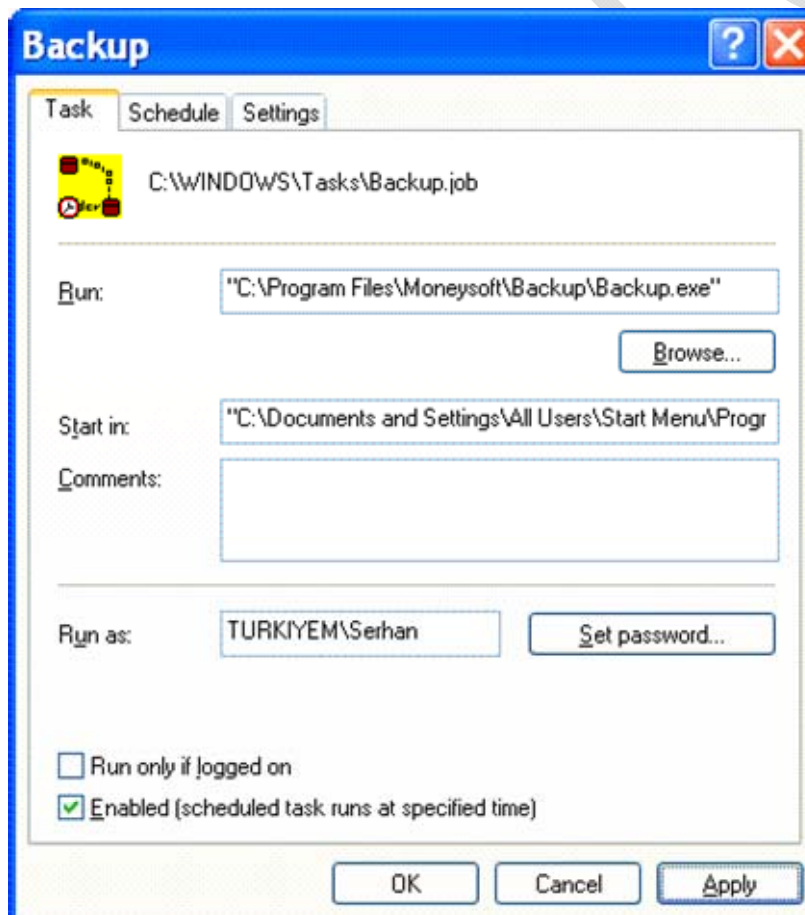
If a password is not entered, scheduled tasks might not run.

< Back Next > Cancel

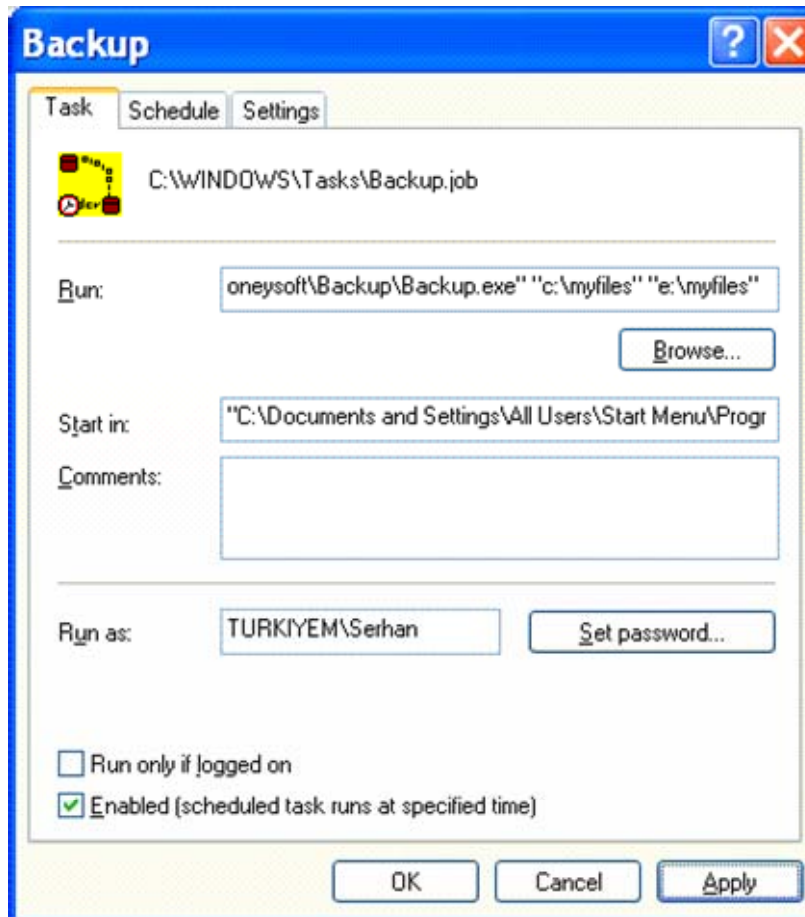
Select the **advanced properties** checkbox and press the **Finish** button.



To set the **Run** path browse to and select the **Backup** application executable file or type the full path as shown below.



Also enter the command line parameters making sure each parameter is encased in double quotation marks as shown below.



Here are two example strings:

"C:\Program Files\Moneysoft\Backup\Backup.exe" "c:\myfiles" "e:\myfiles"

"C:\Program Files\Moneysoft\Backup\Backup.exe" "c:\myfiles" "e:\myfiles" "true" "false"

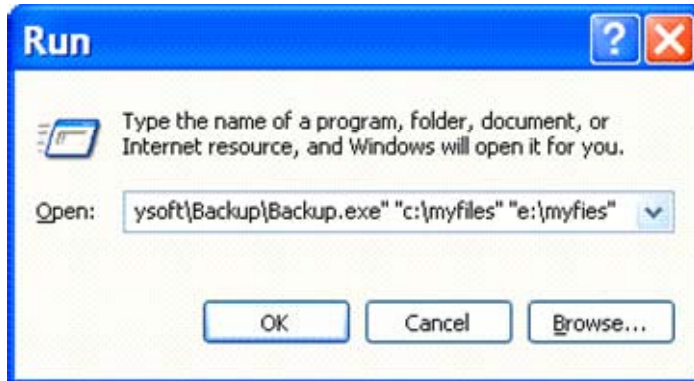
Press **Apply** then **OK**.

Repeat the above steps for as many backup tasks that you want.

Running Backup in batch mode using the Windows Run command

Backup can also be run in batch mode via the Windows Run command.

Just press Start / Run and browse to or enter the full path of the backup program and add the required command line parameters:



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