

Volume

1

SYNAMETRICS TECHNOLOGIES

A Division of IndusSoft Technologies, Inc

DeltaCopy User's Guide

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DeltaCopy User's Guide

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Introduction

DeltaCopy – An efficient backup and recovery tool

In general terms, DeltaCopy is a fast incremental backup and recovery software. For example if you have a 500 MB file that you backup every night, rather than copying the entire 500 MB DeltaCopy will only copy sections of the file that has actually changed. Therefore, the actual data transfer will only be a small fraction of the entire file.

In technical terms, DeltaCopy is a wrapper around the “rsync” algorithm, currently maintained by Wayne Davison. “rsync” is primarily designed for Linux/Unix based systems with ports available for many other platforms. For more details regarding “rsync”, visit <http://samba.anu.edu.au/rsync/>. Besides “rsync”, DeltaCopy also uses “Cygwin” (<http://cygwin.com>) libraries, which emulates a Unix environment for Windows binaries.

Features

Incremental Backup	Copies sections of the file that were actually modified rather than copying the entire file. This makes copying large files extremely fast.
Scheduler	DeltaCopy is fully integrated with Windows Scheduler, allowing users to schedule their backup tasks.
Email Notification	Email notifications can be sent to administrators when a backup task fails.
One-click Restore	Backed up files can be restored with a single mouse click.

Software Components

DeltaCopy is based on a client/server model where clients connect to a remote server and transfer files. The installer includes binaries for client as well as server.

DeltaCopy Server

There are two components of the server:

REMEMBER

 Runs as Windows Service

 DeltaS.exe is the console

to start and stop the
service

- Windows Service

- Server Console

Windows Service, just like any other service application on Microsoft Windows platform, runs in the background waiting for clients to connect.

Server Console on the other hand is a GUI application used to start/stop the service and modify configuration on the server.

DeltaCopy Client

The client piece of the software is responsible for initiating the backups. It is tightly integrated with Windows Scheduler allowing backup tasks to run based on a user-defined schedule.

System Requirements

Following requirements apply to both server and client.

- OS: Windows NT 4.0, XP, 2000, 2003 or above
- 64 MB Ram
- 6 MB hard drive (excluding the space required for backup)
- 100 MHz processor or better

Installation and Configuration

Installation is straightforward - download a copy of the Installation file from the website and run the installer. Follow the instructions on screen to install the file.

Files copied during installation

In order to use DeltaCopy you really do not need an installation program. Copying files from one machine where the binaries are already installed should also work just fine. Installation is provided for convenience purposes only. Following files are copied to your machine during installation

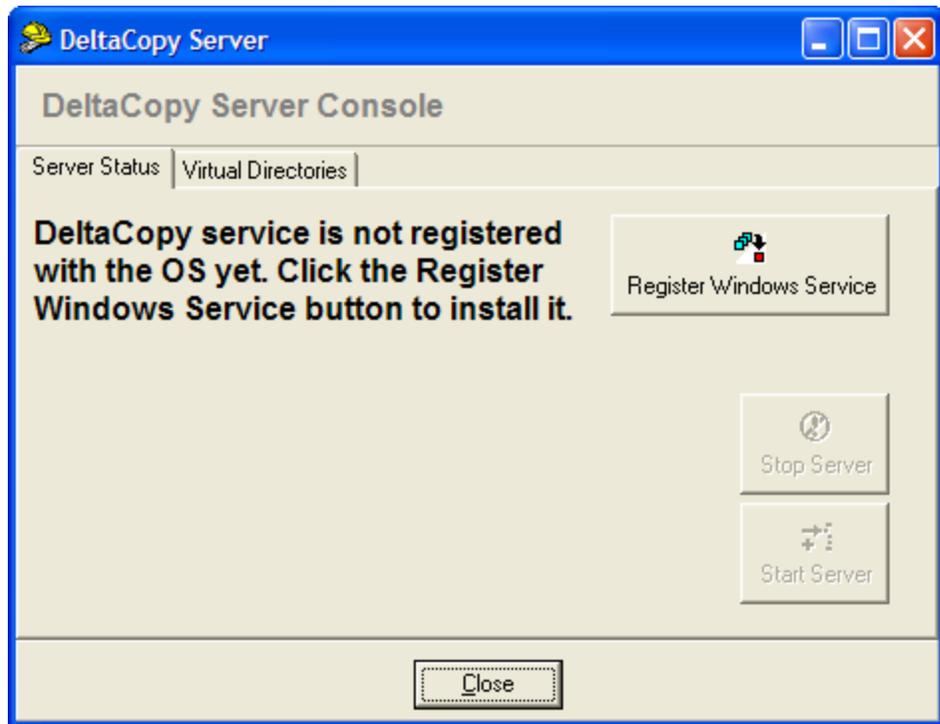
- DeltaC.exe – DeltaCopy Client program
- DeltaS.exe – DeltaCopy Server console program
- DCService.exe – DeltaCopy Service for Windows
- Rsync.exe – “Rsync” binary.
- Deltacd.conf – Default configuration file for Rsync
- Cygpopt-0.dll and cygwin1.dll – Required DLLs for Cygwin

No other files are copied to your machine besides the one specified above. If you decide to move the installation from one machine to another, these are the only files you need.

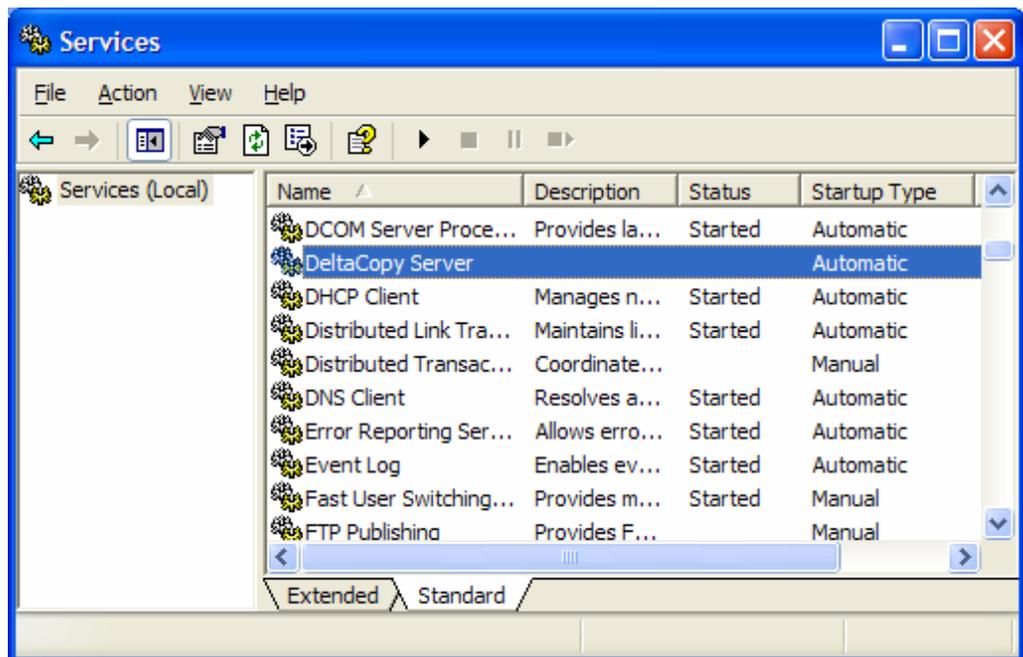
Running the Server Console

Before terminating, the installer process will start DeltaCopy Server Console window.

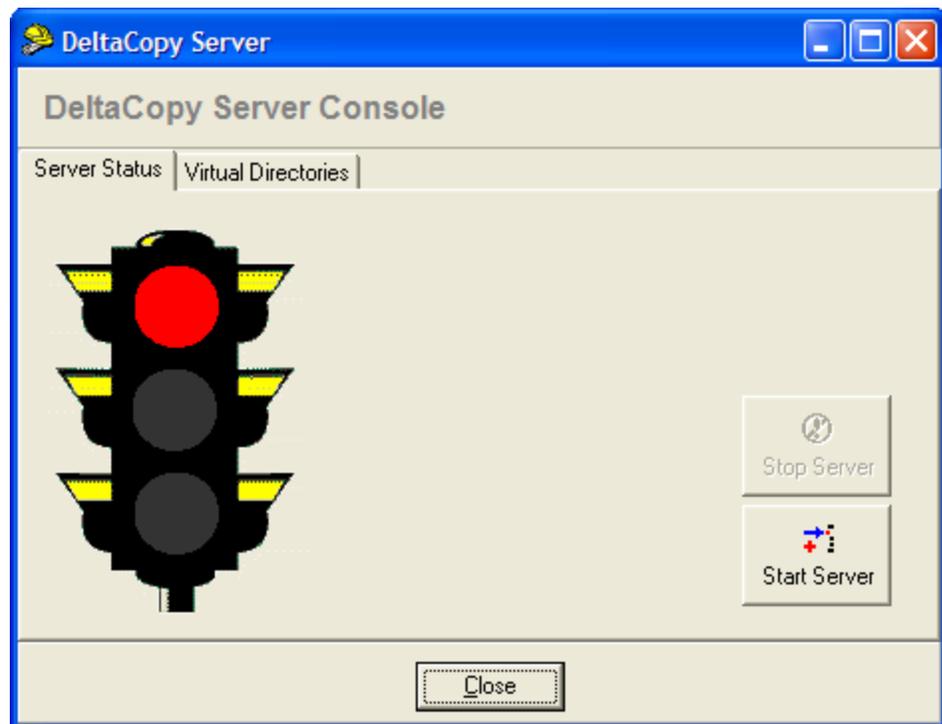
INSTALLATION AND CONFIGURATION



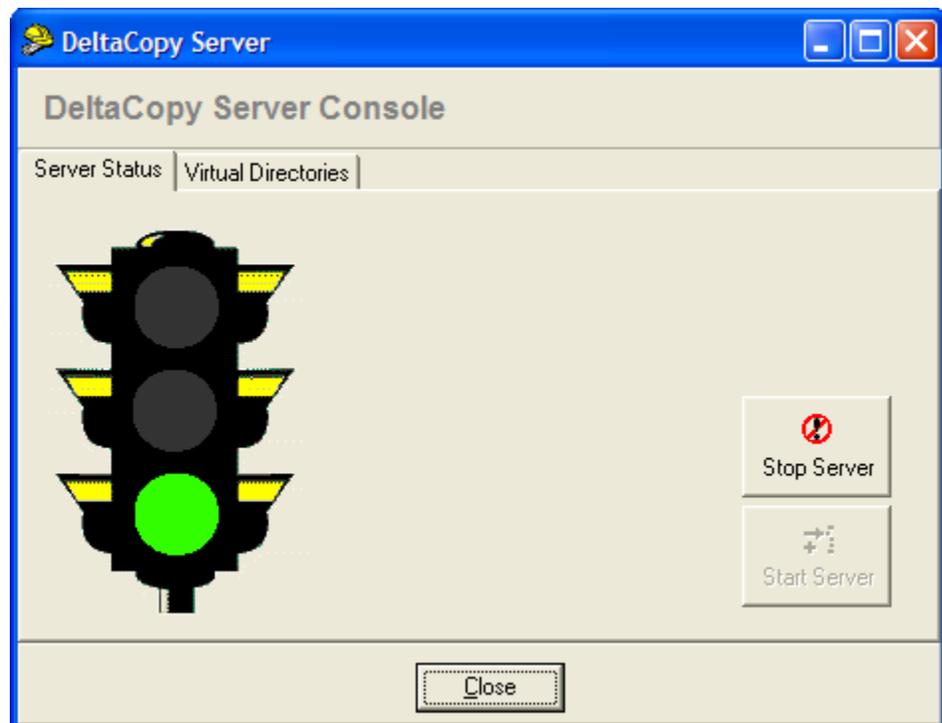
Click the “Register Windows Service” button to register DeltaCopy Service with Windows. Once the service is installed you can start/stop the service with from this console window or the Service Manager in Windows.



INSTALLATION AND CONFIGURATION

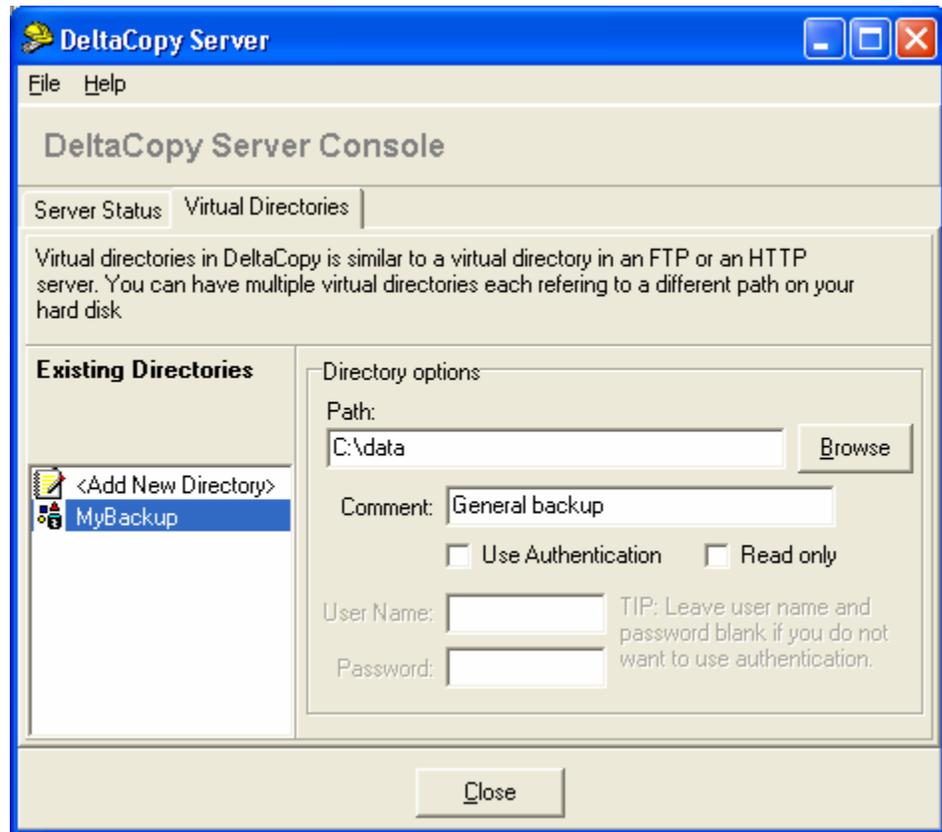


Click the “Start Server” button to start the service. If the service starts successfully, you should see a green light.



Managing Virtual Directories

Virtual directories provide a mapping between an actual physical path on your hard drive to an alias. When clients connect to your server, they only see the alias names, not the actual path.



***Advance Users:** Rsync offers some additional configuration parameters, which cannot be modified through GUI. Modify the `deltacd.conf` file to add other parameters.*

Add a new virtual directory

To add new virtual directories, double click “<Add New Directory>” link in the list box. Once you see your newly added alias in the list, specify the actual path for the alias.

The directory **MUST** exist on the machine in order for the file transfer to work.

Using Authentication

Using authentication is optional. If you decide to use authentication, specify a pair of user id and password. You will have to specify same user id and password in DeltaCopy client.

INSTALLATION AND CONFIGURATION

Note: Closing the Server Console Window does not affect the service. To start/stop service you must either click on the appropriate button or do it from Windows Service Manager.

Running the Server on Linux/Unix

It is possible to run the server application on Linux/Unix and other Unix like platforms like BSD and Apple OS X. Refer to <http://samba.anu.edu.au/rsync/> to get the binaries for other platforms.

TCP/IP ports

DeltaCopy server listens on TCP port 873. You might have to open this port up through your network firewall if going through the Internet.

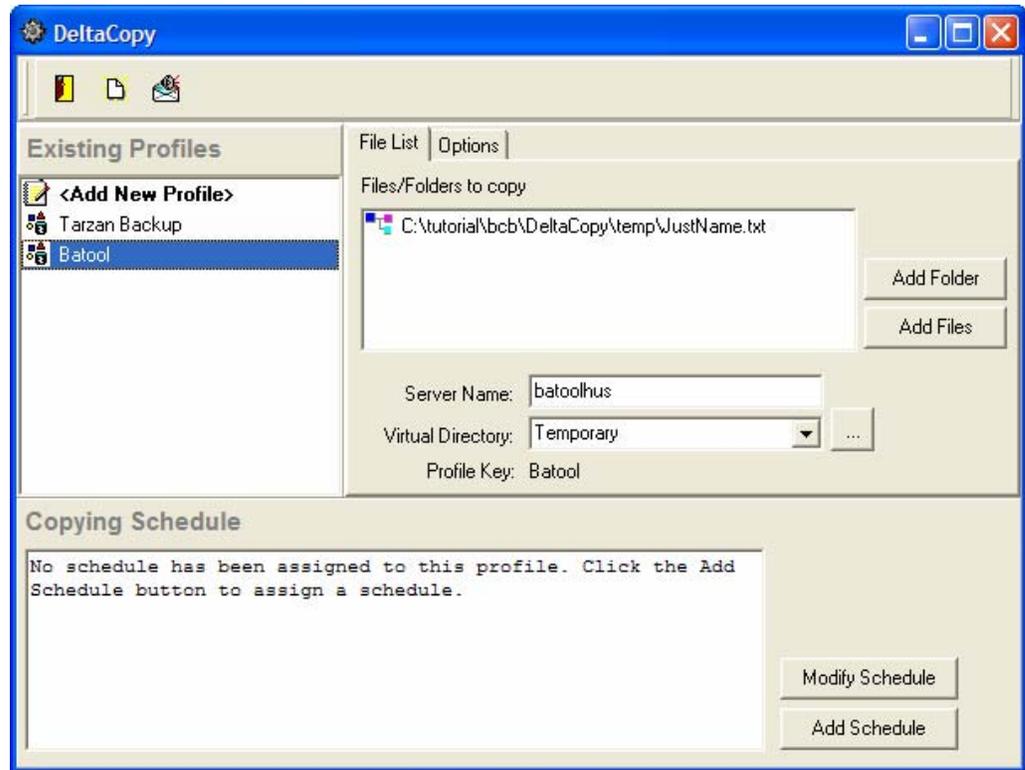
Running DeltaCopy Client

DeltaCopy Client is the main executable that is used to create, run and schedule backup tasks.

IMPORTANT

Run DeltaCopy Server on a machine before running the client .

To run the client chose the appropriate icon from the “Start” button or double click “DeltaC.exe”



Adding New Profile

Task in DeltaCopy are managed through profiles. A profile is a logical grouping of Files and Folders that you wish to backup/restore together.

Use one of the following methods to create a profile.

- Double click on “<Add New Profile>” entry in the list box
- Click the “Create new profile” button on the main toolbar.
- Click the right mouse button and select “Add Profile”

This brings up the new profile dialog box.



Important: Click the “Test Connection” button to verify the client can successfully connect to the server.

- | | |
|--------------------------|---|
| Profile Name | This is a friendly name for this profile. |
| Server Host | This refers to the host name or IP address of the machine running DeltaCopy server or an rsync daemon running on a Linux or Unix machine. Server listens on port 873. |
| Virtual Directory | This refers to the virtual directory alias you have created on the server. Click the but next to the combo box to fetch all available directory names |

Click the “Add Profile” button to add this profile.

Adding files to a profile

Follow the steps below to add files to a profile.

- Select the desired profile from list on the left
- Click “Add Folder” or “Add File” button on the right
- Or, drag files from Windows Explorer in the file list box

Where do the files go on the server?

When you run a task in DeltaCopy, files are copied from the client machine to the server machine. The physical path mapped for that virtual directory specifies the actual location on the server machine. Further directories are create on the server machine under the virtual directory root. These directories are specified by the value specified as “target path” on the client.

DeltaCopy client program create a default value for Target path, which can be modified by the user. The table shows some example of where the files will get copied

Example 1:

Physical file on client	C:\Program Files\Important Files\MyDoc.doc
Target Path set on client	Important Files
Virtual Directory on server	MyBackup
Physical path on server	D:\Backups\MyBackup

Assume input parameters are as specified in the above table. The actual location of the file on server will be:

D:\Backups\MyBackup\Important Files\MyDoc.doc

Example 2:

Physical directory on client	C:\Program Files\Important Files\
Target Path set on client	Important Files
Virtual Directory on server	MyBackup
Physical path on server	D:\Backups\MyBackup

Assume input parameters are as specified in the above table. The actual location of the file on server will be:

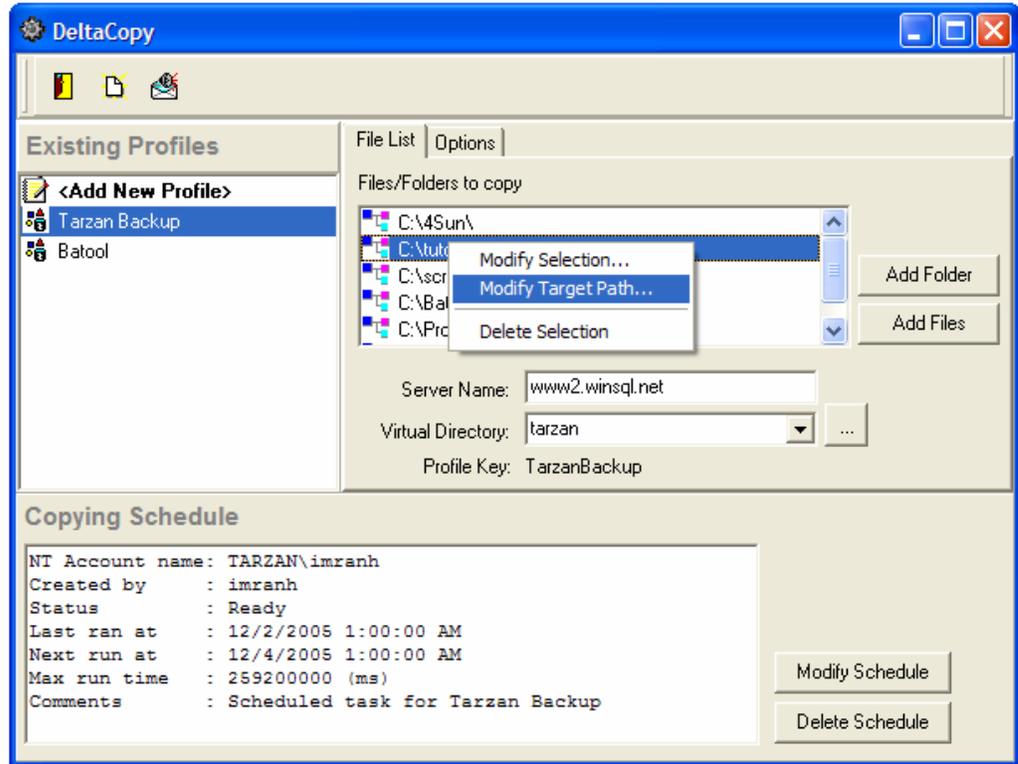
D:\Backups\MyBackup\Important Files

Change the value for Target Path

DeltaCopy creates a default value for the target path when you add a folder or file to a profile. Follow the steps below to change this default value.

INSTALLATION AND CONFIGURATION

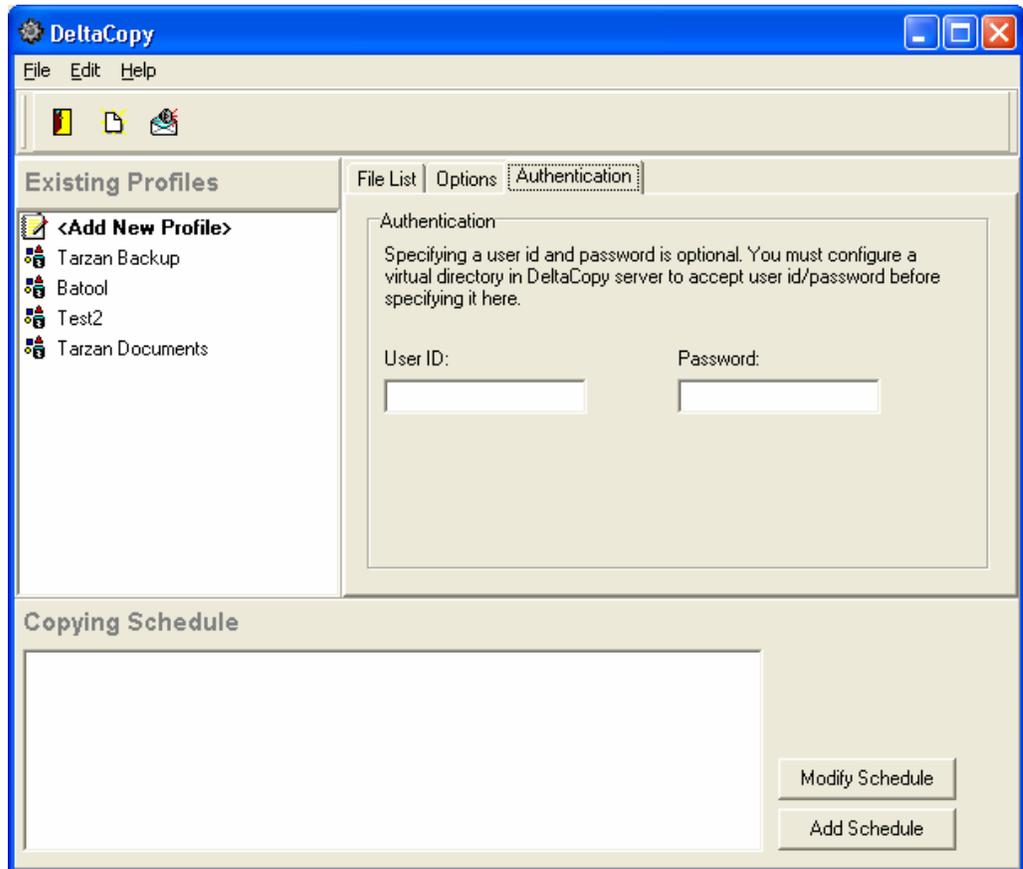
- Select the desired profile from the list box on left
- Select the path from list box on right
- Click the right mouse button and select “Modify target path”



Using Authentication

While setting up a Virtual Directory on DeltaCopy Server, you have an option of using authentication. The user id and password you specified for server configuration must be provided in the client as well.

Click the “Authentication” tab and specify the values for user id and password.



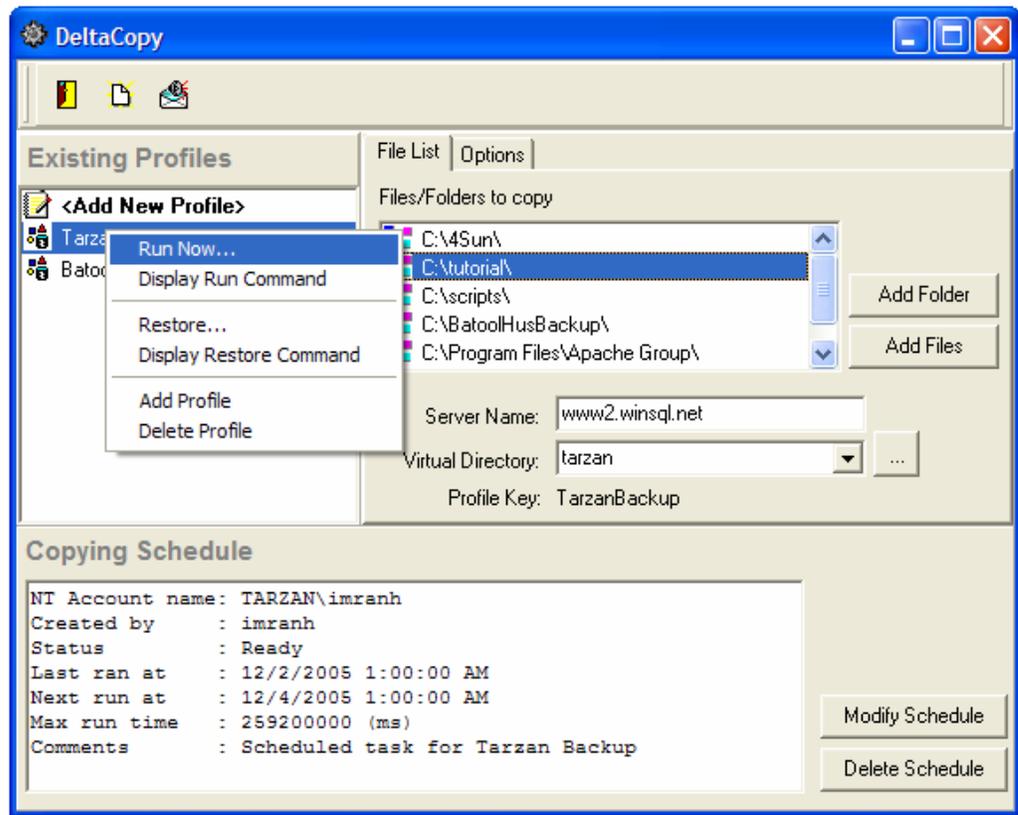
Running tasks

There are two ways to run a task associated with a profile

- Manually
- Through Windows Scheduler

Running manually

To run a task manually, select the desired profile, click the right mouse button and select "Run Now"



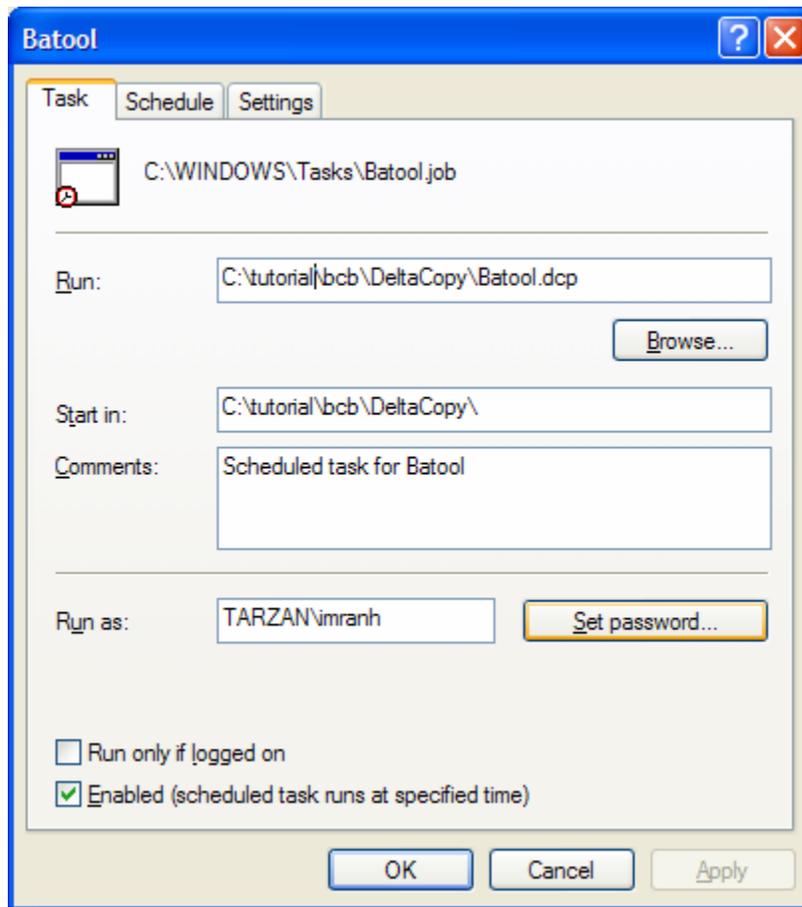
This will start the backup procedure and will display the status in the next window

Creating a Schedule

When you create a new schedule, in the background you actually create a new task in Windows Scheduler, which is tightly integrated with DeltaCopy.

Since DeltaCopy uses a service provided by the operating system to schedule tasks, the login account you use the create schedule must have enough permissions on the machine.

To create a new schedule, click the “Add Schedule” button, which brings up the Scheduler screen available.

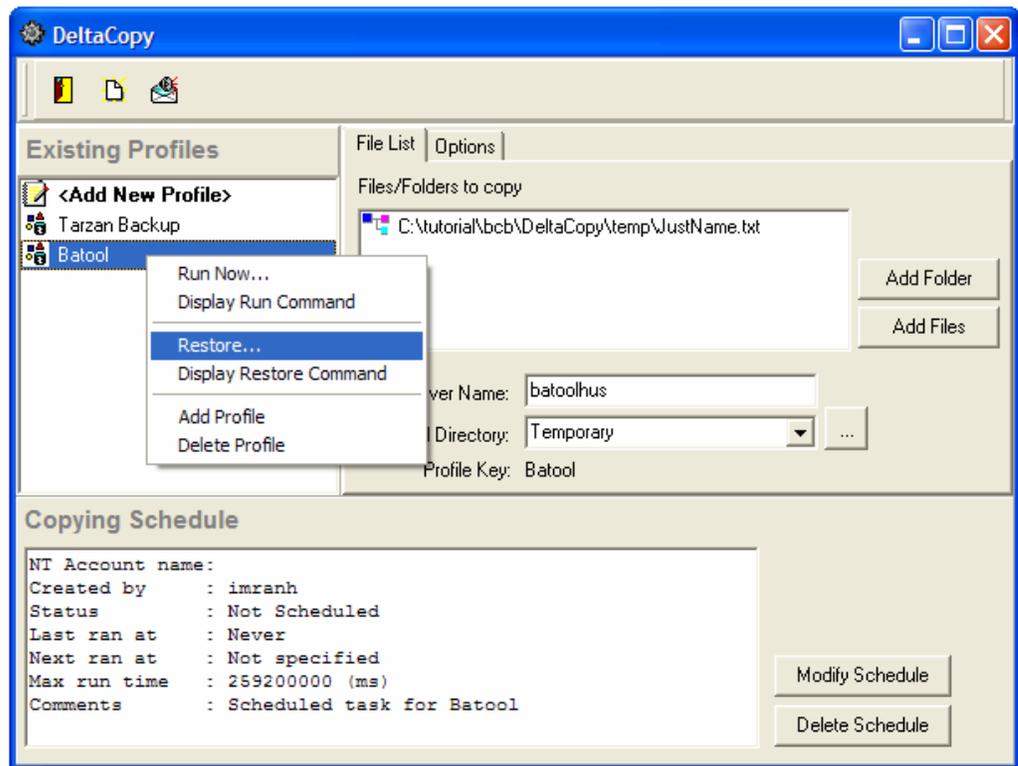


IMPORTANT: Note that the actual file specified in the Run field is not DeltaC.exe but the profile file with DCP as the file extension

Restoring Backup Files

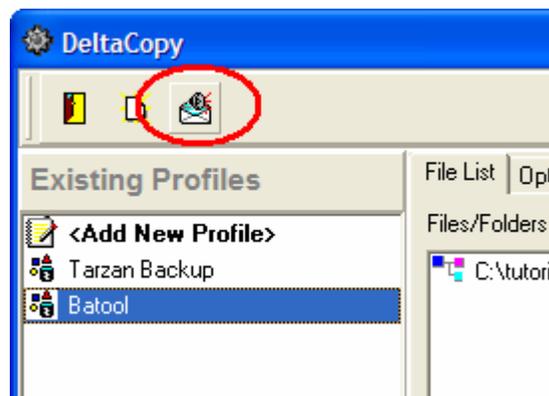
To restore backup files, select the desired profile, click the right mouse button and select “Restore”.

IMPORTANT: When files are restored the files on the client gets updated by the copy on the server. Incorrect usage may result in lost of data.

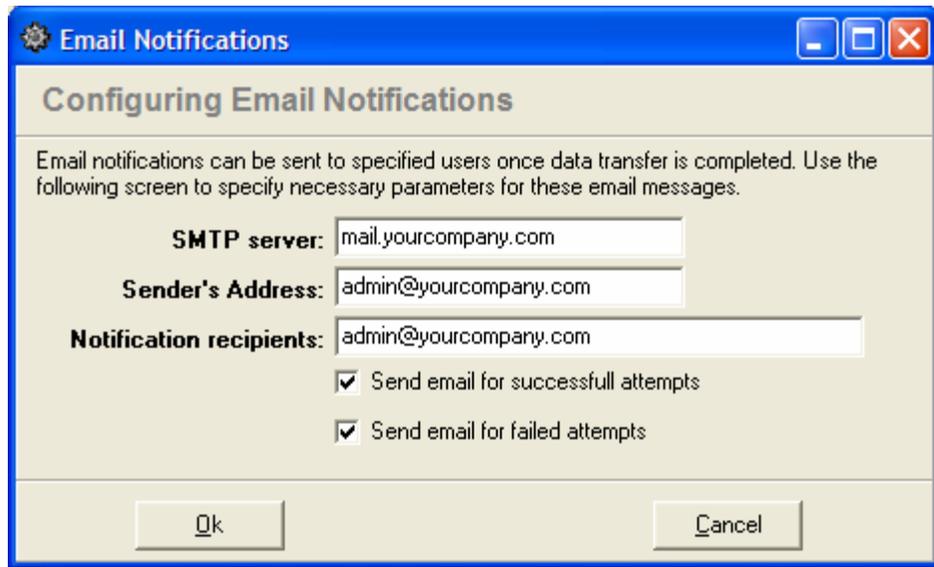


Email Notifications

DeltaCopy can optionally send email notifications when a scheduled task completes. Click the “Configure Email Notification” on the main tool box.



This brings up the following window.



SMTP Server – This is the host name or IP address of your company’s SMTP server.

Sender’s Address – Email address that is used as a sender

Recipients – Email address(es) of the recipients. Multiple addresses should be separated by a comma.

Email Relaying

The current version of DeltaCopy cannot submit user id and password to your email server. Therefore, either you need to configure your SMTP server so that it accepts relays from the machine running DeltaCopy or use the SMTP server that accepts messages for your domain.

Example – Let’s say your email address is myname@mycomp.com. The IP address of your email server (this server is configured to accept emails for “mycomp.com”) is 192.168.1.5. In this case your email server will not require a user id and password for inbound emails sent to it.

INSTALLATION AND CONFIGURATION