



# **GSCOPYPRO v.8.1**

## **Administrator's Manual**

GuruSquad

5442 Safe harbor Court

Fairfax, VA, 22032

USA

Email: [support@GuruSquad.com](mailto:support@GuruSquad.com)

Phone: +1 (703) 868 - 9252

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## Introduction

GSCopyPro is a powerful command-line directory replication command (utility). It was introduced as an alternative to Microsoft's Robocopy utility, which only supported 32-bit operating systems such as Vista, Windows 7 and Windows Server 2008.

GSCopyPro (GuruSquad Copy) moves far above and beyond the capabilities inherent to Robocopy, and it is more user friendly and easy to work with. It can send email alerts when the job is done, when we use the log, the admin can request only log errors and warnings if they wish so that the log does not log everything, resulting in a smaller footprint in terms of the disk space required. Destination folders will be time stamped with the same date as the source folder; otherwise, by default, it would display the date that it was copied on. Additionally, we can include and exclude folders and files, by pattern, in name, full name, or by relative path.

Please note that ONLY GSCOPYPRO comes with an open file agent that can copy files that are locked/ opened by other processes. This feature is supported in all Windows versions from Windows XP/ 2003 and up. Standard GSCopy does not have this capability.

GSCopyPro is compatible with all of the following operating systems; both 32-bit and 64-bit versions:

- Windows 2012R
- Windows 2012
- Windows 2008 R2
- Windows 2008
- Windows 2003
- Windows 8
- Windows 7
- Windows XP
- Windows Vista

Please note that Windows 2012 and Windows 2008R2 are only available as 64-bit systems and GSCopyPro works perfectly well with both of them.

The GSCopyPro utility can be very useful in copying/moving/or mirroring directories along with all of their files and subfolders, ACLs, and Attributes from one location to another (same server or different server). Additionally, you have the option to have the source (folder you are copying from to be mirrored exactly on the target (folder you are copying to).

One other feature very useful feature is the ability to replicate only the directory tree (structure) without files. This feature will, basically, copy only the exact directory structure (you can copy the ACLs as well using the /sec switch)

GSCOPYPRO offers different options to copy or move files. Refer to the reference below that explains all of these options.

## How it Works

GSCopyPro can be run directly from Windows command prompt (enter **cmd** in the **Windows Run/Search** area) or it can be scheduled as part of an automated process (**Scheduled Tasks**).

## System Requirements

GSCopyPro will only run on the following:

- Windows 2012R2
- Windows 2012
- Windows 2008 R2
- Windows 2008
- Windows 2003
- Windows 8
- Windows 7
- Windows XP
- Windows Vista

## Usage and Examples

### Simple Usage - :: GSCOPYPRO source destination options:

Source - :: Source Directory (drive:\path or \\server\share\path or \\192.168.0.5\share)

Destination - :: Destination Dir (drive:\path or \\server\share\path or \\192.168.0.5\share)

::

#### :: Copy Options:

::

**/COPYALL** :: Copy all files and folders from source to destination (Overwrite files and folders that exist in the destination).

If you want to copy security permissions "ACL", include /sec

**Example:** GSCOPYPRO c:\source c:\target /copyall /sec

**Note** - : /COPYALL will recopy all of the files from source to destination every time it is run.

If you want to copy only what has been changed, add the parameter /CH: (Please refer to the /CH: parameter below for more details).

**/MIR** :: Mirror the target to the source. Please note that if a file is deleted from the source, it will be deleted from the target.

If you want to copy security permissions "ACL" then include /sec

**Example:** GSCOPYPRO c:\source c:\target /mir /sec

**/MOVE** :: Move files and directories (delete from source after copying)

If you want to copy security permissions "ACL" then include /sec

**Example:** GSCOPYPRO c:\source c:\target /move /sec

**/DIR** :: Copy the directory tree structure only

**Note:** Subsequent runs will not overwrite folders or files in the destination; it will only add newly created directories from the source to the destination.

If you want to copy security permissions "ACL" then include /sec

**Example:** GSCOPYPRO c:\source c:\target /dir /sec

::

**:: Attributes:**

::

**/sec ::** Copy files and directories with security. Copies all of the NTFS security permissions, including inheritance blocking and advanced ACL settings.

**Example:** GSCOPYPRO c:\source c:\destination /mir /sec

**/FL ::** Copy locked and open files. In order for the open file copy to work properly, the source has to be on the local computer.

**Example:** GSCOPYPRO c:\source c:\destination /mir /fl

**/VSSONLY ::** Use shadow copying for all files

**Example:** GSCOPYPRO c:\source c:\destination /mir /vssonly

**/CH:L,T,A::** Copy only changed files (L-Length, T-LastWriteTime, A-Attributes)

**Example:** GSCOPYPRO c:\source c:\destination /copyall /ch:L (This will copy only files where the length has changed"

**/LOG:file ::** Output status to LOG file (rewrite if the file exists)

**Example:** GSCOPYPRO c:\source c:\destination /mir /log:c:\logfile.log (Subsequent runs will overwrite this file unless used with /logapp)

**/LOGAPP ::** For appending to the LOG file

**Example:** GSCOPYPRO c:\source c:\destination /mir /log:c:\logfile.log /logapp (Subsequent runs will append to the log file)

**/LOGLEN ::** Length file LOG in KB (sample: /LOGLEN:500)

**Example:** GSCOPYPRO c:\source c:\destination /mir /log:c:\logfile.log /loglen:500 (If the log file length reaches 500KB, the log file will overwrite itself.- This can be used in the event that you are performing a large backup job and are concerned that when the log is run it will fill up the drive that it resides on

**/LOGLEVEL:val** :: Sets the level of logging. 0 - means log-only errors, 1 - errors and warnings, 2 - errors, warnings, list command used, 3 - verbose

**Example:** GSCOPYPRO c:\source c:\destination /mir /log:c:\logfile.log /LOGLEVEL:1 (Log only errors and warnings)

**/DATE** :: Folders in the destination will have their timestamps copied from the source

**Example:** GSCOPYPRO c:\source c:\destination /copyall /date

**/XF:ext1,..** :: Exclude files by mask. Supports \* and ? wildcards

**Example:** GSCOPYPRO c:\source c:\destination /copyall /xf:\*.tmp,aa.log (This will copy all files except for files that end with a .tmp extension or are named aa.log)

**/IF:ext1,..** :: Include files by mask. Supports \* and ? wildcards

**Example:** GSCOPYPRO c:\source c:\destination /copyall /if:tmp\*.doc,log.log (This will only copy files named log.log and files whose names start from tmp and have a .doc extension. This option is not compatible with XF)

**/XD:dir1,..** :: Exclude directories from copying. Supports \* and ? wildcards

**Example:** GSCOPYPRO c:\source c:\destination /copyall /xd:temp,\*etc (This will not copy directories named temp or having .etc at the end of the directory name)

**/ID:dir1,..** :: Include directories from copying. Supports \* and ? wildcards. If there is a directory with a given name - it, and all its contents, will be copied. Parent folders will be also copied, but files wouldn't be copied in such a Parent folder if it itself is not a match to the id.

**Example:** GSCOPYPRO c:\source c:\destination /copyall /id:temp,\*etc (This will only copy directories named temp or having etc at the end of the directory name)

**Example:** GSCOPYPRO c:\source c:\destination /copyall /id:c:\source\folder1\folder2 (This will only copy folder2 contents, and preserve the folder tree, so the destination will contain folder1 with a single folder2 inside)"

**Note:** XD and ID, while going through the directory tree, compare each directory name to a given parameter. If there is no match, then compare the full path to a given parameter.

That allows to use both the absolute path and the relative path (For example: \*\abc\def) or a single folder name)

**/maxage:digit ::** Copy files which were last modified in digit days. Last modified timestamp is used. Difference in days is not taking into account difference in time; i.e., difference between 10/10 00:01 and 09/10 23:59 is 1 day (while actually is just 2 minutes). Don't apply to folders

**Example:** GSCOPYPRO c:\source c:\destination /copyall /maxage:8 (This will only copy files modified in the last 8 days)

**/minage:digit ::** Copy files which are **NOT** modified in digit days. Last modified timestamp is used. Difference in days is not taking into account difference in time; i.e., difference between 10/10 00:01 and 09/10 23:59 - is 1 day (while the actual difference is just 2 min). Don't apply to folders

**Example:** GSCOPYPRO c:\source c:\destination /copyall /minage:8 (This will only copy files which have not been modified in the last 8 days)

**/SMTP:** server port from, to secure login password -Send email when copying is done. Order of the parameters is important. Server, port, from, to - are mandatory parameters. secure, login, password - can be skipped. If they are skipped, then the unsecure protocol will be used and default credentials will be used. To specify use of SSL, enter 'secure' as secure parameter. If no SSL is needed, -enter 'unsecure' as the value of the secure parameter

**Example:** GSCOPYPRO c:\source c:\destination /copyall /smtp: smtp.gmail.com 587 someone@gmail.com myemail@hotmail.com secure someone@gmail.com qwerty (This will send an email using a gmail server from someone@gmail.com to myemail@hotmail.com using someone@gmail.com as the login and qwerty as password, using SSL)

**Example:** GSCOPYPRO c:\source c:\destination /copyall /smtp: smtp.gmail.com 587 someone@gmail.com myemail@hotmail.com (This will send an email using a gmail server from someone@gmail.com to myemail@hotmail.com, assuming that server doesn't require authentication)

**/SMTPLOG:** Similar to SMTP, but the log will be attached if it is less than 10 MB in size. See the "SMTP" option for more details.

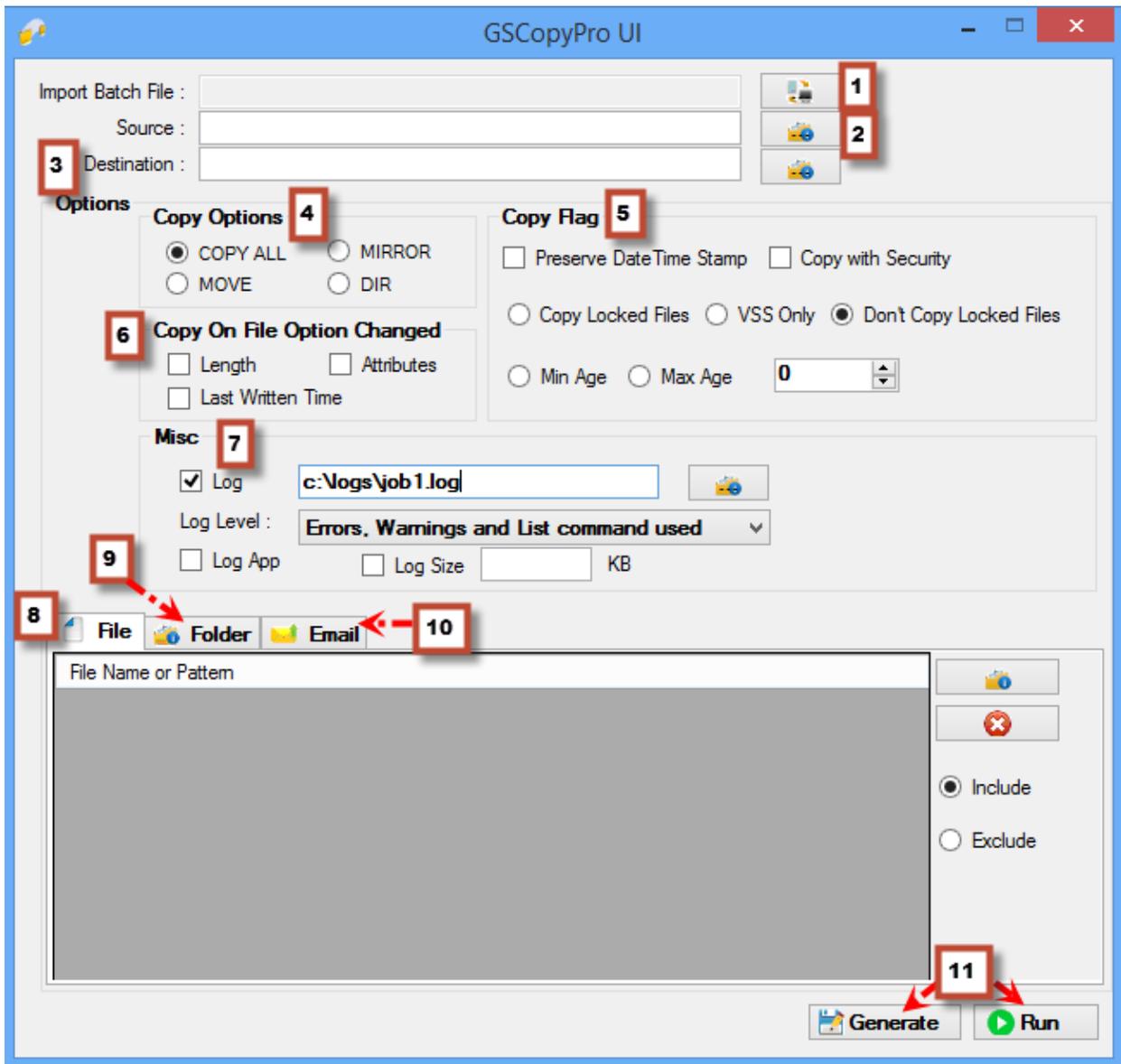
**Example:** GSCOPYPRO c:\source c:\destination /copyall /smtplog: smtp.gmail.com 587 someone@gmail.com myemail@hotmail.com (This will send an email using a gmail server from someone@gmail.com to myemail@hotmail.com, assuming that the server doesn't require authentication)

If you need to use paths that contain spaces - please enclose the path within "" (double quotes)

## GSCOPYPRO GUI (Graphical User Interface)

GSCOPYPRO version 8.1 introduced a new utility called (GSCOPYPROUI.exe) that can be used to automate all the scripting, it is a graphical user utility where an administrator can just fill in the user friendly windows form and either execute the job or have it generate a batch file so that it can be rerun at a later time.

Additionally, GSCOPYPROUI.exe offers the option to import commands from previously created batch files for quick modifications. Refer to the image below to get more familiar with the GSCOPYPROUI.exe and all the rich features it offers.



## GSCOPYPRO GUI (Graphical User Interface) Cont'd:

- 1) **Import Batch File:** In the event you have created batch files using GSCOPYPRO in the past, you have the option to import them back in to preload their settings.
- 2) **Source:** Type or browse to the path (folder) where you want to copy FROM.
- 3) **Destination:** Type or browse to the path (folder) where you want to copy TO.
- 4) **Copy Options:** There are several copy options that can be used, you must select one of them
  - a. **Copy All:** Copy all files and folders from source to destination (Overwrite files and folders that exist in the destination) unless you choose **Copy On File options** (6), then it will only copy the files that have changed only (deltas).
  - b. **Mirror:** Mirror the target to the source. Please note that if a file is deleted from the source, it will be deleted from the target.
  - c. **Move:** Move files and directories (delete from source after copying)
  - d. **DIR:** Copy the directory tree structure only
- 5) **Copy Flags:** You have several options to choose from when copying:
  - a. **Preserve Date Time Stamp:** Folders in the destination will have their timestamps copied from the source
  - b. **Copy with Security:** Copy files and directories with security. Copies all of the NTFS security permissions, including inheritance blocking and advanced ACL settings.
  - c. **Copy Locked Files:** There are three settings to choose from:
    - i. **Copy Locked Files:** Copy locked and open files. In order for the open file copy to work properly, the source has to be on the local computer.
    - ii. **VSS Only:** Use shadow copying for all files. This feature should only be used in scenarios where it is needed (copying hyper-v disks).
    - iii. **Don't Copy Locked Files:** This option will skip any locked or open files if it encounters any.
  - d. **Min and Max Age:** You have the option to choose one of the two, otherwise, set the value to 0.
    - i. **Min Age:** Copy files which have been modified X days ago or greater. Last modified timestamp is used.  
So for instance if Min Age is 8, this will only copy files that were last modified 8 days ago or more.
    - ii. **Max Age:** Copy files which have been modified X days ago or less. Last modified timestamp is used.  
So for instance if Max Age is 8, this will only copy files that were last modified 8 days ago or less.
- 6) **Copy On File Option Changed:** This section is only available if **Copy All** is selected. You can choose from these settings to be used as comparison parameters, if files in source and destination match based on the options selected, then these files will be skipped. So in other words, only deltas will be copied based on whichever options you choose. Note that if you select attributes, then only **attributes** differences will be replicated, the content of the files will not be recopied. However, if **Length** or/and **Last Write Time** is/are selected, then if the source files does

not match the destination in file size or write date, then source will be copied over to destination.

- 7) **Logs:** You can type or browse where you want the log file to be placed.

**Log Level:** Choose what option of logging you want, everything, or warning and errors, or errors only.

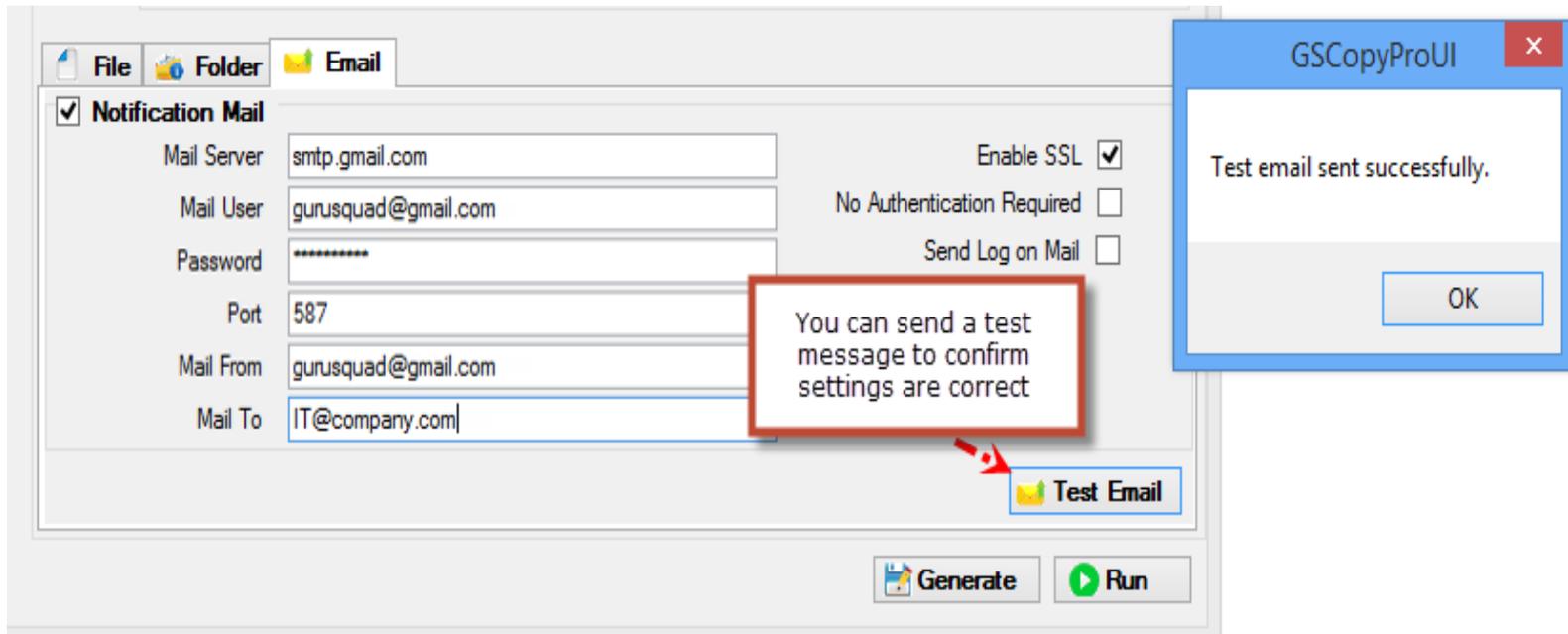
**Log App:** If log file already exists, then logging will just append to the file instead of overwriting it.

**Log Size:** If the log file length reaches XX KB, the log file will overwrite itself the next time the job is run.

- 8) **Files:** Exclude OR Include files, you can do it by mask (Supports \* and ? wildcards) or exact name. You can type in the file name or browse to it.

- 9) **Folders:** Exclude OR Include folders, you can do it by mask (Supports \* and ? wildcards) or exact name. Additionally, choose absolute path or relative path. You can type in the folder name\path or browse to it.

- 10) **Email:** You have the option to have GSCOPYPRO send an email notification once the job is complete. You have the option to include a log file only if the log file is less than 20MB, otherwise it will not send it. Please refer to image below for a sample configuration (using gmail to relay email in this example).



## Best Practices

This section covers best practices and provides answers to many of the common questions asked by our customers worldwide.

### How do I speed up the migration of my data?

Working with GSCOPYPRO to copy data from one location to another can take some time, depending on how much data is being copied, bandwidth (local network or across WAN links), and available resources on the system used.

If in the event there is a lot of data (hundreds of gigabytes or more with millions of files to process), then it is strongly advised that the initial copy command not include security (/SEC). Once the copying is fully complete, rerun the same command and use the security parameter (/SEC). This is mainly triggered to alleviate the pressure on the copying being done and speed up the process. Rerunning the command with /SEC will not result in the recopying of the data, and will be much more resilient in the process.

### GSCOPYPRO is not able to copy open files in the remote system. Why is that?

Copying open and locked files requires GSCOPYPRO to be running on the local machine, as it interacts with the VSS (shadow services) of the system where the locked files are located. If the locked files are on a different server or a machine, then GSCOPYPRO will not be able to leverage the VSS to copy that file.

### I would like to copy large files that can become locked by some other software. Can GSCOPYPRO do that?

Yes, you can have GSCOPYPRO use VSS even if a file is not locked so that if your other software needs to use these files it would not have a problem?

Use the parameter /VSSONLY so that every file is copied via shadow service so that if another program needs to use these files, it will not have any issues. Since it is using VSS to copy the files it will be quite slow due to VSS's involvement. This should only be used in the case that you specified. However, if you are going to be copying just normal data and want open and locked files to be copied, then use the /FL command instead of /VSSONLY.

### I would like to copy my data from one location to another but exclude any of the backup folders. Can this be accomplished?

Most definitely; you can use the /XD switch and exclude backup folders using:

```
GSCOPYPROPRPO c:\source c:\destination /mir /xd:backup
```

