

GoodSync Manual

To be used with GoodSync ver 7.8.2 and higher.

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Introduction

GoodSync synchronizes two or more folders with files, that is, GoodSync makes sure that folders and all files in them are the same by copying the new or updated files from the folder where they appeared to the folder where they are old or not present and by propagating deletions.

GoodSync can be used in these everyday scenarios:

- Synchronize notebook computer to desktop computer via local network.
- Keep user files in sync on work and home computer via USB key.
- Incrementally Backup all files from main hard drive to portable hard drive or another computer.

In this Section we discuss challenges that synchronization programs face and that GoodSync successfully addresses.

Backup vs Synchronization

- *Synchronization* ensures that two folders remain in sync while user may change files on both sides. This is achieved by copying changes that have been made on the left side to the right side and changes that have been made on the right side are copied to the left side.
- *Backup* is one-way synchronization, that is, the changes that have been made on the left side are

propagated to the right side but changes that have been made on the right side are not propagated to the left side.

- GoodSync One-Way Forced jobs enforce the backup scenario. One-Way Verified jobs actually make sure that no changes were made on the right (backup) side, as one does not expect backup side to change.

Why Synchronization Is Not Trivial

Synchronization task would appear to be trivial (compare file modification files and let the newer file win) if it was not for deletions that need to be propagated. If you delete file on one side, GoodSync will propagate this deletion to the other side of sync job by deleting this file on the other side. The sophistication of GoodSync algorithm allows us to propagate deletions correctly through multiple chained folders.

Another complication is that user may decide to replace newer version of the file with its older version. GoodSync can handle this situation correctly too, it will propagate the older file version, if it detects that user made such replacement.

Chained Synchronization

Chained syncing is a process when the contents of several folders (e.g., A, B, C and D) are synchronized by performing synchronization of pairs in sequence that results in propagation of changes (e.g., sync A and B, then B and C, then C and D results in changes in A propagating to folder B, then C, then D). GoodSync can perform Chained Syncing correctly.

You can use GoodSync chains to synchronize files between Computers that are not connected to each other.

For instance, you can synchronize files between Work and Home computer using USB disk as an intermediary:

- Insert USB Disk (or any portable disk) into Work Computer.
- Start GoodSync on Work Computer and Sync between Work folder and USB disk.
- Pull out USB disk from Work Computer and insert it into Home Computer.
- Start GoodSync on Home Computer and Sync between USB disk and Home folder.

Embedded Jobs

Several jobs can synchronize one folder to many other folders. In addition to that, you can have yet more jobs that synchronize sub-folders or super-folders of this folder. GoodSync will correctly record file changes in states of all folders in which the changes occurred.

For example, you can have a folder `C:\work\project` that contains project whose files change often. Folder `c:\work` contains other projects that are changes less often.

You have a job 'Project to Server' which synchronizes project files to an SFTP server once a day and from this server the files are synchronized by other members of the team.

You also have a job 'Work to PortHD' which synchronizes (backs up) all contents of the `C:\work files` folder to a portable hard drive once a week.

GoodSync will make sure that all changes performed by the 'Project to Server' job are visible to the 'Work to PortHD' job and vice versa.

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Using GoodSync

Synchronization Step By Step

Typical GoodSync user experience consists of these stages:

0. **Select Folders To Synchronize**
 - User selects left and right folders to synchronize.
 - Done only once when Job is setup.
1. **Comparative Analysis**
 - Happens when you click the Analyze buttons.
 - GoodSync computes the changes that must be made to make folders the same.
2. **Proposed Synchronization Actions Reviewed by User**
 - Results of Analysis are presented to you in a form of file/folder tree.
 - Left or Right Arrows point direction of file copy. Circle in the middle means No Copy.
 - Crossed Arrow means Propagate Deletion. For instance, Left to Right Crossed Arrow means that GoodSync detected deletion of file on the left side and it wants to propagate it to the right side.
 - Current effective direction is indicated by arrow or circle being green and thick.
 - Other possible directions are indicated by gray and disabled arrows or circle.
 - You can change direction of sync by clicking on the desired arrow.
3. **Synchronization**
 - Happens when you click Sync button.
 - File actions proposed in Analysis and possibly changed by user are applied to actual files.
 - After synchronization folders and all files in them become the same.

Jobs

Each synchronized pair of folders is memorized in a Job.

Job also has a set of options that control various aspects of synchronization process.

Each Job has a name that is requested when Job is created.

When you start GoodSync for the first time, initial nameless job is created for you automatically.

GoodSync memorizes list of Jobs and all their parameters per computer.

Jobs can be created, deleted, renamed, analyzed and synced. All job commands are in the Job menu.

- To create a new Job, select Job -> New.
- To switch between Jobs, click Job tab.
- Analyze, Sync, and Stop button are related to the current Job.
- To delete a Job, select Job -> Delete.

Synchronization Algorithm

This is a general outline of the synchronization algorithm (the actual algorithm is rather complex, it contains several important inventions and trade secrets that cannot be disclosed here):

- Compute difference between current file state and stored file state for the left folder,
- Compute difference between current file state and stored file state for the right folder,
- Propagate changes that appeared on the left to the right side,
- Propagate changes that appeared on the right to the left.
- If change happened to same file on both sides, declare a **Conflict**.

Backup Files Incrementally: One Way Sync

For GoodSync, backup is a regular synchronization that happens to one-way, as long as user does not manually change backup files which can cause conflicts. Only changed files and file deletions are propagated to backup folder. This is how you setup a backup:

- Create an empty backup destination folder. Backup destination folder must not be located on the same disk as source folder. It can be on removable disk (USB disk or portable hard drive) or another computer.
- Let GoodSync do the first backup by synchronizing backup source folder to backup destination folder.
- After that, whenever you want to backup, just sync backup source folder to backup destination folder.
- When you need to restore, backup destination folder contains exact copy of the backup source folder, as of

last backup.

- To make sure that backup always goes one way (from original folder to backup folder and never in the other direction), go into Jobs -> Options and select One Way Job Type.

Mini Window vs Main Window

Main Window contains the User Interface displayed to the user.

It contains:

- File Tree: this is where modified files and their sync directions are shown.
- Log Window (bottom of the screen): log of job actions.
- Job List pane (hidden by default): displays status of all jobs. To show, go to *View -> Job List*.
- Filters tab (hidden by default): displays Exclude/Include filter. To show, go to *View -> Filters*.

Mini-Window or Mini-Mode is super-compressed summary of what is going on in GoodSync.

- It shows only status of all running jobs.
- Click Mini Mode button to switch from Main Window to Mini Window.
- Click Maximize button in Mini Window to switch back to Main Window.

GoodSync File Tree Sample

Job Name	Total size of files shown on the left	Total number of files to be copied to the left	Total size of files in the folder	File size and last modification time
The Job	21,239	1 ⇄ 3	13,848	
Folder	21,239	5/30/2008 1:46:31 PM 1 ⇄ 3	13,848	5/30/2008 1:41:17 PM
file.txt	618	5/30/2008 1:44:20 PM ⇄	354	5/30/2008 1:35:04 PM

Callouts from the image:

- Folder arrows change direction for ALL items inside folder
- Click the arrow to change sync direction for the file
- Click the gray circle if you do not want to sync the file
- Green arrow shows the current copy direction

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Actions

Action is a file/folder operation that is:

- Recommended by GoodSync after Analysis is complete,
- Changed by User (that is, you), and finally
- Executed when you click the Sync button.

Each actions gets an icon in the center 3 columns of the tree.

See the next Chapter for the detailed list of actions' icons.

Copy File action

This is the most fundamental action of GoodSync.

It copies file from Left to Right or from Right to Left.

Copy of file deleted on the Left from Left to Right means that this file will be deleted on the Right.

Copy of file deleted on the Right from Right to Left means that this file will be deleted on the Left. That is, GoodSync "copy" of the deleted file simply propagates a deletion.

Copy Time action

If file has the same length on the left and right side of the sync but modification time is not the same then you can turn Copy File action offered by GoodSync into a *Copy Time* action. Copy Time action copies file modification time from Left to Right or from Right to Left, but not file contents.

A recommended way of applying it is to select View -> Other -> SameLength DiffTime. This will show you all files that have the same length but different modification time. If you think that these files are really the same, right-click any of the files and select Copy Time L to R or R to L. You can also right-click the folder and change Copy File into Copy Time for all eligible files in the folder.

Copy State action

If file is the same on the left and right side of the sync but the stored state of the file is not the same then GoodSync would recommend a special *Copy State* L to R or R to L action for such files.

The results of the *Analyze* step will inform you that *Copy State* will be done, if this is necessary.

You can change direction of Copy State action if you know which side is preferred.

You can see specific Copy State action using View -> Other -> Copy State L to R or R to L.

The following are the potential causes of the CopyState situation described above:

- You synchronized two folders using programs other than GoodSync.
- You copied files manually.
- You did Reset State in GoodSync.

No Copy action

This action GoodSync not to do anything for this pair of files. Analyze sets this action to a pair if files are the same on both sides.

Error action

The file or folder cannot be read, see status area for details.

Conflict action

If you changed the file on both sides of the synchronized folder pair then GoodSync cannot determine which version is preferred (because it does not know which set of changes should win and which should be dropped) and GoodSync then declares a *conflict*.

By default, conflict is a no-copy action. But you can change conflict into LeftToRight or RightToLeft Copy, thus declaring one side a winner.

Types of Conflicts

GoodSync may produce these types of conflicts:

- **Modified On Both Sides.**
Description: File was modified or deleted by user both on the left and right side.

Type: resolvable conflict, user may select sync direction.

- **Vertical Delete - Change Conflict.**

Description: User deleted folder on the left (right) and modified or deleted files in this folder on the right (left).

Type: resolvable conflict, user may select sync direction.

- **Case Conflict.**

Description: items (files or folders) on one side differ only by case.

Type: resolvable conflict, user may select sync direction so that only one spelling variant remains.

- **File vs Folder.**

Description: the same relative path leads to a file on one side and folder on another side.

Type: unresolvable conflict, user must rename or delete item on either side to fix this collision.

- **Expected Sync Direction Violated.**

Description: 1-way Verified job produces this conflict if file or deletion will be propagated Left or Right while user setup 1-way job to be Right to Left, or vice versa. Happens if destination side of 1-way backup job is modified.

Type: resolvable conflict, user may select sync direction.

Managing Time Shifts

FAT file system still used in Windows and some FTP servers have these problems:

- Local file modification time is stored, so moving between time zones makes your file modification shift.
- Modification time is stored with only 2 sec precision in FAT, so copying a file to FAT may give it a slightly different modification time. GoodSync ignores differences of +/- 2 sec in modification time.









GoodSync recognizes two types of Time Shifts:

- **Old-New Time Shift:** Current file modification time differs from stored modification time by whole number of hours for a considerable number of files. Corrected by storing new modification time on the next Sync.
- **Left-Right Time Shift:** File on the Left and Right have a whole hour difference in modification time for a considerable number of files. This time shift is turned into Copy Time action.


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Icon Descriptions


File Actions


-  System action: file will be copied to the **right** side.
-  User override: file will be copied to the **right** side.
-  System action: file will be deleted on the **right** side.
-  User override: file will be deleted from the **right** side.
-  System action: file will be copied to the **left** side.
-  User override: file will be copied to the **left** side.
-  System action: file will be deleted from the **left** side.
-  User override: file will be deleted from the **left** side.

Folder Actions


-  A folder will be created on the **right** side.


 A folder will be deleted on the **right** side.


 A folder will be created on the **left** side.


 A folder will be deleted on the **left** side.

Special Actions

 Copy time stamp but not the file itself from the left to the **right** side.


 Copy time stamp but not the file itself from the right to the **left** side.


 Copy internal GoodSync "file state" from the left to the **right** side.


 Copy internal GoodSync "file state" from the right to the **left** side.


Central Column


 Item is in sync.

 User set this item action to No Copy.


 Item is excluded. See the status column for exclude reason.


 Conflict. GoodSync can not decide how to sync this item, likely because item was modified on both sides. See the status column for details.


 Error. GoodSync can not sync this item. See the status column for explanation.


 Item is currently synchronizing.

Job Icons


 Job is not analyzed.


 Job is waiting to start.

 Job has been paused during analysis or sync.


 Job is being analyzed.

 Job analysis has been completed, GoodSync is now ready to synchronize.

 Specified job is in the process of being synchronized.

 Specified job has been synchronized.


 User attention is required after analysis or synchronization has been completed.

 Error starting a job.

Job Direction

 Two-way job.

 One-way "Left" to "Right" Job.

 One-way "Right" to "Left" Job.

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Advanced Topics

Portable Paths

Starting with ver 7.8.2. you can specify a *portable path* in the left or right sync folder like so:
=VolumeName:\folder1\folder2

Here VolumeName is volume label that you can set in volume properties in the Windows Explorer. If path is specified in the portable format, GoodSync will look for a volume named VolumeName in all portable (removable) drives attached to this computer. So if this volume gets a different drive letter next time you insert it, GoodSync will still be able to find it.

When you select a folder on a removable drive in the Browse dialog, GoodSync will offer to record path to this folder in the portable path format.

When you select a folder on GoodSync2Go folder from which you started GoodSync2Go, drive letter will be automatically replaced with %GSDISK%. So no matter what computer plug in your removable drive into and no matter what letter you drive gets, GoodSync2Go will find its sync folders, as they will be on %GSDISK% drive.

Environment Variables in Paths

You can use any Windows environment variable in folder paths, inserted like so: %VARIABLE%

Environment variable can be put in only by directly editing the folder path, not via Browse dialog.

Popular environment variables are:

%GSDISK% -- disk from which GoodSync.exe was started such as C: or F: .

Use this to refer to folders stored on GoodSync2Go volume, in Portable version.

%USERNAME% -- current window user name

%USERPROFILE% -- current user profile directory.

%COMPUTERNAME% -- windows name of this computer.

Also GoodSync substitutes these special variables:

%YYYY% -- current year.

%MM% -- current month, from 01 to 12.

%DD% -- current day of the month, from 01 to 31.

Case Sensitivity

Starting with ver 7.5.0 GoodSync uses case-sensitive file and folder names.

That is, for GoodSync Folder\File.txt is different from FOLDER\file.TXT.

Windows historically maintains a case-insensitive file system, that is, Folder\File.txt will be the same path as FoldeR\file.TXT. However, Windows preserves case, so if you rename File.txt to file.TXT, it sticks.

In the modern Internet centric world you often have to synchronize or exchange files with UNIX-based servers and Mac OS (now UNIX too) computers. Most FTP, SFTP and WebDAV implementations are case-sensitive. Also it would be nice to have all file and folder names spelled exactly the same, even on Windows.

So given these circumstances we made a decision to enforce case sensitivity in GoodSync.

Job Templates

Job Template is an incomplete Job, usually with right folder not set. It is used to save your favorite set of Job

options as a Template, so that other Jobs can be easily created from it.

To create a Template from a Job, go to this Jobs and select File -> Save as Template.

To create a new job from a saved template, select Job -> New.

In the New Job dialog, select From Template option. Then select the template from which Job should be created.

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Filters: Exclusions and Inclusions

By default GoodSync synchronizes all files and folders that are not hidden and not system.

Hidden and system files can be synchronized too, if option to do so is turned off.

Excluded Filter

You may want to exclude some files and folders from synchronization by using Exclusions mechanism.

For instance, object files *.OBJ and editor backup files *.BAK are usually excluded.

The easiest way to exclude the file or group of files is to perform Analyze and then right-click the file or folder and select one of the Exclusion commands:

- **Exclude '\FolderName\FileName' file or folder:**
Exclude only this file or folder, as specified by its complete path '\FolderName\FileName'.
- **Exclude All 'ItemName' files or folders:**
Exclude all files or folders (in any of subfolders) that are named 'ItemName'.
- **Exclude All '*.ext' files:**
Exclude all files that have extension 'ext', in all sub-folders.

Exclusion command adds a line to the list of exclusions in **Jobs -> Options -> Filters -> Excluded**.

This tab is the only place where you can modify or delete exclusions.

For details see this tab description in Job -> Options -> Filters.

Global exclusions that apply to all jobs can be set in **Tools -> Program Options -> Filters**.

Every line in the list is MS DOS wild card match string in which:

* means any sequence of characters except \

? means an arbitrary single character

\ separates folders

Lines that start with "size" allow exclusion of files by file size:

size<N

size>N

size=N

size!=N

size>=N

size<=N

size[S1,S2] means S1 <= size < S2

where N is a number, possibly with K (Kilo) or M (Mega) suffix.

No spaces is allowed in the "size" match line.

Examples:

size>=100 -- files contain 100 bytes or more

size<2K -- files that contain less than 2,048 (1K = 1024) bytes
size=3M -- files that contain exactly 3,145,728 bytes (1M = 1024 * 1024) bytes

Lines that start with "time" allow exclusion of files by modification date:

time<T
time>T
time=T
time!=T
time>=T
time<=T
time[T1,T2] means T1 <= time < T2.
where T is date in one of these formats:
YYYY/MM/DD -- year/month/day
-Nd -- N days ago
+Nd -- N days in the future

No spaces is allowed in the "time" match line.

Examples:

time>=2008/7/4 -- files modified at 00:00 on July 4, 2008 or later
time<-5d -- files modified 5 days ago or before that
time>=+7d -- files modified 7 days in the future or later

Special line allow exclusion of all subfolders:

<subfolder>

By default GoodSync excludes **hidden** and **system** files and folders, because these files are not user files and usually they are not worth backing up or syncing. If you want GoodSync to see these files, uncheck "Exclude Hidden Files" and "Exclude System Files" in Job -> Options -> Filters.

Included Filter

Included Filter includes only files and folders specified in it and it excludes everything else.
Included Filter is applied before the Excluded Filter.

Include Filter is set in **Jobs -> Options -> Filters -> Included**.

These are the popular Include filters and context menu items that add them:

* Include Only '\FolderName\FileName' file or folder.

Include only this file or folder, as specified by its complete path '\FolderName\FileName'.

You can select several files and folders (multi-select is done by clicking items while holding CTRL key) and then they all will be added to the Included list.

* Include Only '*.ext' files.

Include only files that have extension 'ext', in all sub-folders.

Note that if an *.ext line is present in the Include filter then all folders are included too, because GoodSync needs to look inside every folder to find files with the specified extension.

You can exclude folders included in this way by specifying the "Exclude Empty Folders" option.

Special "size" and "time" matches work in the Included filters too.

File modification times may be different on Left and Right, so the following rule is used:

Exclusion occurs if exclusion condition is satisfied on Left side OR on Right side.

Example: exclude filter 'time<-30d' is true for all files where 'left time < Now - 30d OR right time < -30d'.

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Commands and Keyboard Shortcuts

This describes GoodSync commands that can be started by clicking buttons and selecting menu items.

Job commands

Job -> New Alt+N

Create New Job. First job named "New Job" is created automatically when you start GoodSync for the first time.

Job -> Delete Alt+D

Delete this Job.

Job -> Rename... Alt+R

Rename this Job.

Job -> Clone... Alt+C

Clone this Job. That is, create a new job with a different name that is a copy of this job.

Job -> Swap Job Sides

Swap Left and Right folder in this Job.

Job -> Save as Template

Save this job as a template. Templates can be used when creating a New Job.

Analyze button or Job -> Analyze Alt+A F5

Analyze this Job. Show proposed changes.

Job -> Analyze All F6

Analyze all Jobs.

Sync button or Job -> Synchronize Alt+S F7

Synchronize this Job. Execute (commit) changes that Analyze has proposed.

Job -> Synchronize All F8

Synchronize all analyzed Jobs.

Job -> Analyze and Synchronize Alt+Y F9

Analyze and then Sync this job.

Job -> Analyze and Sync All F10

For all jobs: Analyze and then Sync each job.

Stop button or Job -> Stop Alt+T ESC

Stop analysis or synchronization of this Job. Also cancel ready-to-run status for other jobs. Sync can be continued after Stop.

Job -> Stop All

Stop analysis or synchronization for all jobs that are running.

Pause / Resume button

Pause / Resume analysis or synchronization of this Job.

Job -> List of Changes Alt+I

Show printable list of changes. Works after Analyze, when changes become available.

Job -> Open Left Log File Alt+L

Open log file for the Left folder of this job. Logs records all actions that all GoodSync jobs have done to this folder and its sub-folders.

Job -> Open Right Log File Alt+R

Open log file for the Right folder of this job. Logs records all actions that all GoodSync jobs have done to this folder and its sub-folders.

Job -> Options Alt+O

Show Options dialog for this Job.

Job -> Delete Previous Versions

Delete previous versions of files that GoodSync saves in `_gsdata_saved_` folder per "Save Previous Version of Deleted/Replaced File" option.

Job -> Reset State

Delete GoodSync state files on both sides of this Job. Causes GoodSync to forget state info. Do not use this command unless directed by Support.

Job -> Exit Alt+X Alt+F4

Exit GoodSync.

Job Selection

Click Tab Alt+1 to Alt+9

Select another job, make it current (referred to as This Job). Most commands in Job and Tree menu apply to the current job.

View/Hide Panels commands

View -> Job List

Show/Hide Job List pane. This pane shows time when the job last ran and current status of the job. Not shown by default.

View -> Filters

Show/Hide Filters pane. It shows all Exclude and Include filters for this Job. Not shown by default.

View -> Log

Show/Hide Log pane. It shows automatically scrolled log for this Job. Shown by default.

View -> Status Bar

Show/Hide Status Bar. Shown by default.

Tree View commands

All button or View -> All

Show All live files and folders, that is, items not deleted on both sides.

Changes button or View -> Changes Alt+G

Show Changes, that is, only files and folders that are different and to which Copy File command will be applied.

Conflicts button or View -> Conflicts Alt+F

Show Conflicts, that is, files that were changed on both sides of the Job.

Errors button or View -> Errors Alt+E

Show Errors that occurred during Analyze or Sync. Errors are not conflicts, they are usually originated by file system. Example: file is locked, cannot drill into folder.

Other -> Included or View -> Other -> Included

Show files and folders that are include in the Analyze. That is, not excluded by Exclude/Include filters.

Other -> Excluded or View -> Other -> Excluded

Show files and folders that are excluded by Exclude/Include filter.

Other -> New or View -> Other -> New

Show New files and folders. That is, files and folders that exist on one side and do not exist on the other side and copy action will copy them to this other side.

Other -> Overwrite or View -> Other -> Overwrite

Show files that will be Overwritten. That is, files that exist on both sides and copy action will copy file from one side to another.

Other -> Delete or View -> Other -> Delete

Show files and folder that will be Deleted. That is, files and folders that exist on one side and do not exist on the other side and copy action will delete them on this other side.

Other -> Left to Right or View -> Other -> Left to Right

Show files that will be copied from Left to Right by Copy File action.

Other -> Right to Left or View -> Other -> Right to Left

Show files that will be copied from Right to Left by Copy File action.

Other -> Copy Time L to R or View -> Other -> Copy Time L to R

Show files that whose modification time will be copied from Left to Right by Copy Time action.

Other -> Copy Time R to L or View -> Other -> Copy Time R to L

Show files that whose modification time will be copied from Right to Left by Copy Time action.

Other -> Copy State L to R or View -> Other -> Copy State L to R

Show files that whose state will be copied from Left to Right by Copy State action.

Other -> Copy State R to L or View -> Other -> Copy State R to L

Show files that whose state will be copied from Right to Left by Copy State action.

Other -> SameLength DiffTime or View -> Other -> SameLength DiffTime

Show files that exist on both sides, have the same length but different modification time. These are candidates for Copy Time action, if you believe that files are actually the same.

Tree Expand commands

These commands are available through keyboard shortcuts and are standard for Windows trees. Gray '+' means '+' key on the numeric side keyboard.

Gray +

Open one level of the tree. Focus must be on the node to open.

Gray -

Close one level of the tree. Focus must be on the node to close.

Gray *

Open all levels of the tree starting from here. Focus must be on the node to open.

Action commands

All Action commands are also available from file or folder context menu.

Action -> Open Left File

Open file on the Left.

Action -> Open Right File

Open file on the Right.

Action -> Delete Left File

Delete file on the Left.

Action -> Delete Right File

Delete file on the Right.

Action -> Delete Both Files

Delete file on the Left and on the Right.

Action -> Compare Left to Right

Compare file on the Left to file on the Right using compare diff-like program defined in Tools -> Program Options -> File Compare program.

Action -> Exclude '\...' File

Exclude this file from Analyze.

Action -> Exclude All '...' Files

Exclude all files that have the same name as this file, but maybe sit in other folders.

Action -> Exclude All '*.ext' Files

Exclude all files that have extension .ext, in all folders.

Action -> Include All '*.ext' Files

Include only files that have extension .ext, in all folders.

Action -> As Recommended

Set action to what was recommended by Analyze. Enabled only after you modified action proposed by Analyze.

Action -> Left to Right

Set action to Copy File Left to Right.

Action -> Right to Left

Set action to Copy File Right to Left.

Action -> Do Not Copy

Set action to No Copy.

Action -> Copy Time Left to Right

Set action to Copy Time Left to Right.

Action -> Copy Time Right to Left

Set action to Copy Time Right to Left.

Tools commands

Tools -> Program Options

Show Global Program Options dialog.

Tools -> Import from V4

Import jobs from GoodSync V4.

Tools -> Export Job List

Export job list (all jobs, or only jobs selected in Job List pane) to *.gsl file.

Tools -> Import Job List

Import jobs from *.gsl file. Imported jobs are added to the existing jobs.

Help commands

Help -> Manual

Show this Online Manual from www.goodsync.com.

Help -> FAQ

Show Online Frequently Asked Questions from www.goodsync.com.

Help -> Buy Pro

Buy GoodSync Pro version from www.goodsync.com.

Help -> Activate Pro

Activate GoodSync Pro after you purchased it. You will need Order ID and your name as it appears in the Order.

Help -> Create Support Ticket

Create ZIP file that contains job logs and other technical info. Attach this ZIP file to Support Ticket that you open in GoodSync Online Support System (GSSS) at support.goodsync.com.

Help -> Check for Updates

Check for new GoodSync version at www.goodsync.com. GoodSync also automatically checks for its new version upon start.

Help -> About...

Show About dialog with credits and version info.

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File Systems: Local and Remote

GoodSync can synchronize not only disk and net shares mounted on your computer. It can also synchronize with Remote File Systems (FS) accessible through these protocols: FTP, Secure FTP (SSH), WebDAV.

To select or change your sync folder, click Browse button on the left or right side of Sync. The Browse File System dialog appears.

File System Type appears in the left navigation pane of the Browse dialog. To change File System Type, click on different file systems on the left.

Then enter or edit your Remote Server Address in Address field (Remote FS only).

Then enter UserID, Password and maybe other connection data (Remote FS only).

Then click Go button to connect to the server and test whether the data you entered is correct.

If connection is successful, the Home Folder of UserID you used is shown and all folders above it.

Navigate to the folder to sync with in the folder tree.

If folder you want to sync with does not exist, create it:
navigate to its parent folder and click Make New Folder button.

Below we provide detailed description of Local and Remote File Systems that GoodSync supports.

My Computer / Windows File System

Disks mounted directly on this computer.

Naming convention used: Windows "disk letter + path", example: C:\folder1\folder2\file.ext

Since no authentication is required and disks are always connected, the folder tree is shown right away (clicking Go button is not needed).

Encrypt Files using Encrypting File System (Enterprise only)

You can encrypt and decrypt files using Windows Encrypting File System (EFS).

GoodSync will encrypt files on the side where **Encrypt Using EFS** option is specified.

GoodSync will decrypt files on the side where **Decrypt Using EFS** option is specified.

Note that EFS works only on NTFS volumes and not on FAT volumes.

EFS is not supported on Windows Vista Starter, Windows Vista Home Basic, and Windows Vista Home Premium, Windows XP Home. You must have at least Windows XP Pro or Windows Vista Pro.

Compress Files in NTFS (Enterprise only)

You can compress and uncompress files using Windows NTFS compression ability.

GoodSync will compress files on the side where **Compress in NTFS** option is specified.

GoodSync will uncompress files on the side where **Uncompress in NTFS** option is specified.

Palm and Other USB Mass Storage Devices

These days Palm, Treo and many devices may present themselves as a regular Windows File System using USB Mass Storage Devices interface. Most Palm OS devices produced in the last 3-4 years can do that.

So if you have a Palm or Treo phone or PDA, you can sync its files with Windows desktop using GoodSync.

Sync with Palm/Treo disk mounted to your Windows desktop, it will appear in My Computer tab.

Music and Media Players

You can also sync with Music and Media Players that show themselves as a Portable Disk using USB Mass Storage Devices interface. Such devices will also appear in My Computer tab.

My Network / Windows Net Shares

Net Shares (remotely mounted disk volumes) available through Microsoft networking.

Naming convention used: Windows UNC, example: \\share\disk\folder1\folder2\file.ext

List of available network shares is shown, then you can drill down to the sync folder.

Enter UserID and Password if your share is password-protected by UserID and Password that is different from UserID and Password of the Windows account you are logged in to.

You can mount shares both from Local Network (LAN) and from remote computers (WAN), see Synchronizing Via Network section below.

Note that once you logged in to Share, Windows will cache authentication data. So if authentication data changes on server, you must Logout and then Login to you account on the client to make Windows use new authentication data.

FTP

Remote FTP server.

Naming convention used: URL with ftp:// prefix, example: ftp://server.domain.com/folder1/folder2/file.ext

Extended naming convention adds port, auth data: ftp://userid:password@server.domain.com:port/folder/file

UserID and Password are usually required.

If you are connecting to public FTP archive, use UserID "anonymous" and Password "email@somewhere.com".

Passive vs Active mode.

By default GoodSync uses Passive FTP mode when connecting, because in this mode no data connections from server to client are required and these connections are not allowed by most firewalls. Check Active Mode box only if Passive mode connection times out and if you firewalls allow servers to initiate FTP data connection to the client.

Exact File Modification Time and MDTM command.

By default GoodSync gets file modification time from file listing. In this listing file modification time will be rounded to the nearest minute or even day and this may create fake changes.

If MDTM (GET) command is available, then GoodSync can get exact down-to-the-second file modification time, but Analyze will take more time.

If MDTM (SET) command is available, then GoodSync will use it to set correct file modification time on server.

UTF-8 file name encoding.

FTP is a byte protocol, so encoding non-ASCII (non-latin) characters can be done in several different way.

An original way to encode was ANSI encoding, where ASCII codes from 128 to 255 were used to encode accented characters. Apparently this could work in very limited circumstances where both client and server agree on the same meaning of ASCII codes from 128 to 255, which usually means that client and server are both language specific and they cater to the same language.

A better more modern way is to use UTF-8 encoding that can encode any UNICODE character. Unlike ANSI encoding, UTF-8 encoding does not depend on any off-the-books agreement between client and server.

Secure FTP (FTP over SSH)

Remote SSH server with SFTP capability.

Naming convention used: URL with sftp:// prefix, example: sftp://server.domain.com/folder1/folder2/file.ext

Extended naming convention adds port, auth data: sftp://userid:password@server.domain.com:port/folder/file
Works only with SSH-2 servers, not with SSH-1 servers.

Authentication data is always required, and it comes in two different varieties:

* UserID + Password.

Just like in FTP, UserID and Password are required to log in.

* UserID + Private Key File (+ Password).

Private Key File is a small (1-2 Kb) file that contains the "private key" part of the Public - Private Key Pair.

The Public Key is located on the server and only server administrator can put it there.

Private Key may additionally be protected by a password. Enter this password into the Browse dialog or use private key caching program such as Pageant.

You can also specify 'PuTTY Session' in GoodSync ver 7.7.0 or later.

Then GoodSync takes settings from PuTTY session you specified and applies to them all other settings the from Browse dialog.

This way you can specify SFTP proxy and more connection options.

Private Key format: we use PuTTY private key format that looks something like this:

```
PuTTY-User-Key-File-2: ssh-rsa
Encryption: aes256-cbc
Comment: [1024-bit rsa, First Last@computer, Wed Jun 04 2003 23:28:59]
Public-Lines: 4
encodedpublickeyencodedpublickeyencodedpublickeyencodedpublickey
encodedpublickeyencodedpublickeyencodedpublickeyencodedpublickey
encodedpublickeyencodedpublickeyencodedpublickeyencodedpublickey
encodedpub==
Private-Lines: 8
encodedprivatekeyencodedprivatekeyencodedprivatekeyencodedprivat
encodedprivatekeyencodedprivatekeyencodedprivatekeyencodedprivat
encodedprivatekeyencodedprivatekeyencodedprivatekeyencodedprivat
encodedprivatekeyencodedprivatekeyencodedprivatekeyencodedprivat
encodedprivatekeyencodedprivatekeyencodedprivatekeyencodedprivat
encodedprivatekeyencodedprivatekeyencodedprivatekeyencodedprivat
encodedprivatekeyencodedprivatekeyencodedprivatekeyencodedprivat
encodedprivatekeyxxxxx==
Private-MAC: abxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxb3a
```

We recommend to use SFTP over FTP whenever possible because:

- * SFTP encrypts UserID and Password it sends to server, so listener-in-between stealing of authentication data is not possible. FTP sends UserID and Password unencrypted.
- * SFTP encrypts all files that it transfers. FTP sends files as is, unencrypted.

PuTTY session.

GoodSync SFTP implementation is based on PuTTY code.

PuTTY has a plenty of connection options, especially for proxies.

You can use all these options by specifying PuTTY session name.

Please note that PuTTY itself does not have to be installed, GoodSync will just use PuTTY session settings from registry.

UTF-8 file name encoding.

SFTP is a byte protocol too, so encoding non-ASCII (non-latin) characters has the same issues as FTP.

In this option you can select ANSI or UTF-8 encoding.

UTF-8 encoding is recommended and is the default.

See FTP for more details.

WebDAV

Remote DAV server.

Naming convention used: URL with http:// prefix, example: http://server.domain.com/folder1/folder2/file.ext

Extended naming convention adds port, auth data: http://userid:password@server.domain.com:port/folder/file

UserID and Password are always required.

DAV is an upload-enabled extension of HTTP protocol. It means that some folders on the server may be HTTP only and some may allow DAV uploads.

If you are given only HTTP access to folder and no DAV access then you can see this folder in a browser, but you cannot see or modify it in GoodSync DAV.

Allow non-matching or expired SSL certificates. (Off by default)

If you use SSL to access DAV (HTTPS:// prefix in URL) then GoodSync will check SSL server certificate for expiration (must be not expired) and matching (common name in certificate must be the same as server name). You can use this option to turn off these checks.

Send Cookies to Server. (Off by default)

Check this option if you want our DAV client to send cookies to DAV server. Most servers do not need cookies, as they have authentication in every request.

Amazon S3

Amazon S3 server.

Naming convention used: URL with `http://s3.amazonaws.com` prefix, example:
`http://s3.amazonaws.com/bucket/folder/file.ext`

S3 is a variation of WebDAV protocol.

UserID and Password are always required.
Put AWS Access Key ID into User ID in Browse.
Put AWS Secret Access Key into Password in Browse.

Put your AWS Bucket Name into the top folder of the URL, like so:
`http://s3.amazonaws.com/bucket/folder/file.ext`

GoodSync and other S3 clients:

S3 does not have a notion of folders and files, they have buckets, keys and values. Therefore folders and files model has to be translated to buckets, keys and values model and different programs do it in a different way. So folders that GoodSync create may not be recognized by other S3 client programs, such as S3 Explorer and vice versa. Therefore you should create and use folders only with GoodSync and not other programs, until any definite standard for folder representation is established.

Access Control (empty by default)

Amazon S3 Access Control Policy, can be one of Canned Access Policies:
private (default), public-read, public-read-write, authenticated-read.
All uploaded files are uploaded with the specified policy.

Windows Mobile Phone and Pocket PC

Windows Mobile phones and Pocket PC devices.

Naming convention used: URL with `wm:` prefix, example: `wm:MyPhone\My RoboForm Data`

Device should be physically connected to the computer, usually it is plugged into USB port.
ActiveSync or Windows Mobile Device Center (WMDC) must be installed on the desktop.

Device is not required to have a partnership with desktop on which GoodSync runs.

So you can sync phone files with more than two desktops.

To sync with the phone that has no "relationship" with your desktop: when ActiveSync tells you to create a new relationship upon connecting your phone to the desktop, select Guest Relationship or just press Cancel.

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Job Options

Each Job has a set of options that modify the behavior of synchronization algorithm for this job.

General tab

Sync Direction

Synchronization direction can be one of the three choices below.

2-Way (default value)

Propagate changes from Left to Right and propagate changes from Right to Left.

1-Way Left to Right

Propagate changes only from Left to Right.

1-Way Right to Left

Propagate changes only from Right to Left.

There is also two modifiers that apply only to 1-way syncs:

Verified

If selected then GoodSync checks that files on destination side did not change and that changes occurred only on the source side of 1-way job. If a change on the destination side is found, it is declared to be a *conflict*.

Forced (default)

If selected then GoodSync will always observe the preferred sync direction, even if it results in older files from the source side overwriting the newer files on the destination side. We recommend not to use this option (use Verified instead), as it may result in a loss of newer files that you accidentally modify on the backup side.

Quick Backup Mode

If checked, do not scan the destination side of 1-way forced job for changes. Assume that the destination (backup) side of the job does not change. You should use this option if backup side of your job is slow (slow remote FTP server, for instance). You must change this remote folder only by using this GoodSync job only on this one computer, because GoodSync will be ignoring all destination side changes that were done outside of this job.

Read-Only Source Side

1-way Sync in which GoodSync does not write anything on the source side. All GoodSync files (`_gsdata_` folder, logs, state files) are written to `_gsdata_ Mirror` folder created in `C:\Documents And Settings\UserName\Application Data\GoodSync\Mirrors`. This option can be used only for folders that you have no write access to, or for folders that GoodSync never modifies.

Save Previous Versions of deleted/replaced files (checked by default)

If checked, then GoodSync saves a file just before Sync replaces or deletes this file. The file is saved to `_gsdata__saved_` folder on the side where the replacement/deletion is about to occur.

Only the most recent version of the file (the one just before the current version) is retained.

Note that `_gsdata_` is a hidden folder, so you must check Show Hidden Files option in Windows Explorer if you want to see contents of this folder.

Propagate Deletions (checked by default)

If checked, then deletion made by user on one side of the job is propagated to the other side of the job.

If not checked, then deletions are not propagated, only newer files are propagated.

Safe Copy using temporary files (checked by default)

If checked, then Sync does not copy source file directly to the destination file, as it would result in corruption of destination file if copy operation is aborted mid-way. Instead Sync copies source file to temporary file in destination folder and once copy operation is finished, temporary file is renamed to the destination file.

You may uncheck this option if you are doing 1-way backups and destination volume has small free space, so that keeping two copies of one big file may overflow it.

Copy ACL Security Attributes (un-checked by default)

If checked then copy Access Control List (ACL) of the file or folder when it is being copied by GoodSync. This option is available only on Windows NTFS file system (not on FAT), as only NTFS has ACL.

Check that files did not change between Analyze and Sync (un-checked by default)

If checked then verify that files did not change between Analyze and Sync both for Remote file systems and Local Windows file system.

If un-checked then perform this verification only for Local Windows file system.

Turning this option On slows down remote Syncs but guarantees better file integrity.

Estimate disk space required for Sync (checked by default)

If checked then Compute how much free disk space is needed to complete the Sync.

Keep it On for jobs that write to drives with limited free space.

Turn it Off for jobs that are unlikely to overflow disks, because free space is plentiful on both sides.

Copy Locked Files (checked by default)

If On then copy from locked files using Volume Shadow service.

If Off then return Cannot Copy Locked File error.

Available on Vista and XP but not on Windows 2000.

On 64-bit Windows XP and Vista you must use GoodSync 64-bit version for this to work.

GoodSync can copy only FROM locked file and never to LOCKED file.

GoodSync can copy only from locked file on local disk, never from a network-mounted locked file.

Reconnect folders automatically (checked by default)

If On then GoodSync tries to reconnect the folder when folder disconnect error is detected.

If Off then folder disconnect terminates Analyze or Sync.

Number of Reconnect Attempts (1 by default)

Number of Reconnect attempts to be made, before GoodSync gives up.

There is a 30 second wait before each reconnect attempt.

Successful file operation after Reconnect causes job to continue as if nothing happened.

N unsuccessful attempts to reconnect cause job termination.

File Copy Speed Limit in Kb/sec (0 by default)

If not zero, then limit file copy speed by the speed in Kb/sec specified in this option.

When average file copy speed in Sync exceeds the specified threshold, GoodSync suspends (sleeps) jobs for 1 second until the effective average speed falls below the limit.

Display Balloon messages

This option controls whether and when balloon (system tray) messages are displayed.

Never

Do not display balloon messages.

On Conflicts and Errors (default)

Display balloon messages only when Conflicts or Errors are detected during Analyze or Sync.

On Changes and Sync

Display balloon messages when Analyze detects Changes, Conflicts or Errors.

Filters tab

Excluded (empty by default)

Files and folders that match any line on this list, will be excluded from synchronization.

Wildcards '*' and '?' can be used here, just like in Windows command line.

Matching is done with the relative file/folder path, that is, path that starts at the sync folder.

Lines that start with '\' match complete folder paths relative to sync folder.

Lines not starting with '\' will match any file name, but only relative path will be matched.

Examples:

*.obj matched all files with .obj extension.

CVS matches all files and folder named CVS, anywhere in sync folders.

\\Folder*.obj matches all *.obj files located in folder Folder that appears only in root sync folders.

Folder*.obj matches all *.obj files located in folder Folder that appears in sync folders or their subfolders.

Included (empty by default)

If not empty then only files and folders whose names match one of the lines of this Included list and do not

match any lines of the Excluded list, are included in synchronization.

It is recommended for the set of inclusions and exclusions to be the same for all jobs that sync with one particular folder. Keeping them different is possible but it is likely to cause confusion as some jobs will not sync files that other jobs would sync.

Exclude Empty Folders (un-checked by default)

If checked then Exclude folders that are empty or that contain only empty folders. Folder are considered empty if they contain no files or if they contain only files that were Excluded by Filters.

Exclude Hidden Files and Folders (checked by default)

Exclude files and folders that have HIDDEN attribute.

Exclude System Files and Folders (checked by default)

Exclude files and folders that have SYSTEM attribute.

Auto tab

Analyze and Sync can be made to run automatically by using this tab.

Check Analyze box for Analyze only to run on a specified event.

Check Sync box for Sync to run on a specified event.

If you check Sync box then Analyze box is checked too, because Analyze must be run before Sync.

One or more events may be checked to cause automatic Analyze and/or Sync:

On GoodSync start

Analyze (and maybe Sync) this job when GoodSync starts.

On Folder Connect

Analyze (and maybe Sync) this job when both folders of the job become connected, after they were disconnected previously (that is, one of the folders must come from disconnected to connected state).

GoodSync checks every 5 minutes for status of left and right folders for a job with this option.

The following events speed up checking of status, as they are likely to cause folder connect or disconnect:

- * Insertion or Ejection of Portable Volume: detachable folders may connect or disconnect.
- * Network Connect or Disconnect: FTP, SFTP, DAV folders may connect or disconnect
- * Windows Mobile device (phone) Connect or Disconnect: Windows Mobile device connected or disconnected.

On Logoff

Analyze and then Sync this job just before Logoff from Windows.

Note that Windows may try to kill GoodSync on Logoff. Normally Windows sees that GoodSync is performing file operations and responds to messages and it would let GoodSync finish. However this cannot be guaranteed.

Periodically (On Timer)

Analyze (and maybe Sync) this job periodically, every HH hours and MM minutes.

Using Task Scheduler

Analyze (and maybe Sync) this job periodically, on a schedule set in Windows Task Scheduler.

Click Configure to call up Windows Task Scheduler and set schedule in it.

You must be able to create Windows Tasks (limited users may not be able to do it).

GoodSync will create Windows Task that would start GoodSync with command line that it tells it what to do.

You must enter Windows UserID and Password into the Task. This is what Windows documentation has to say about it: "For security reasons, Windows will not allow you to run a task under a user account with a blank password. Even though the Help page in Task Scheduler says a password isn't always required."

If your Windows account has no password, you must create one in order to use Task Scheduler.

Check GoodSync global log (in Applications Data\GoodSync) to see whether Windows in fact starts GoodSync if you can Scheduler problems.

On RoboForm Command

Analyze (and maybe Sync) this job when RoboForm calls for it.

To enable this option, in RoboForm select RoboForm -> Tools -> Sync RoboForm Data.

Option: No Sync if too many files changed (10% by default)

Automated Sync is not performed if more than the specified (in percent) fraction of files in the Job has changed. Unusually high number of changed files indicates that something may be wrong and manual intervention is required. Set to 100% to Sync no matter how big the changes are.

Option: Automatically Resolve Conflicts

When job is about to be Synced automatically, use this option to automatically resolve conflicts:

Do Not Copy (default value)

Leave Conflicts in unresolved (Do Not Copy) state.

Left to Right

Resolve to Left to Right propagation.

Right to Left

Resolve to Right to Left propagation.

Newer File Wins

File with the most recent modification date wins.

You must not use this option for backup jobs, use 1-way job instead.

Option: Pre Analyze Program (Enterprise Only)

If the option is not empty, then run the program specified in the option before Analyze.

The program can be .BAT file, .EXE file or any executable file.

The program receives one argument: the job name.

GoodSync waits for the program to finish before proceeding.

However, if program name is prefixed with "nowait: ", then GS does not wait.

Use this option to connect your folders (say, start VPN) or to otherwise prepare for Analyze.

Option: Post Analyze E-Mail or Program (Enterprise Only)

If the option is not empty and it contains '@', then send e-mail to the e-mail address specified in the option.

If the option is not empty and it does not contain '@', then

run the program specified in the option, after Analyze finishes but before Sync begins.

The program can be .BAT file, .EXE file or any executable file.

The program receives 6 arguments, each argument enclosed in " " if it may contain spaces:

- Job name

- Terminal error message. Not empty only if Analyze did not produce log due to terminal error.

- Log File Path. Log may not exist or be empty if terminal error occurred.

Non-terminal error messages are contained in this log file.

- Number of Changes,

- Number of Non-Terminal Errors,

- Number of Conflicts.

GoodSync waits for the program to finish before proceeding.

However, if program name is prefixed with "nowait: ", then GS does not wait.

Use this option to run the program that takes some special action after Analyze, such as reporting Cannot Connect errors.

Option: Post Sync E-Mail or Program (Enterprise Only)

If the option is not empty and it contains '@', then send e-mail to the e-mail address specified in the option.

If the option is not empty and it does not contain '@', then

run the program specified in the option, after Sync finishes.
The program can be .BAT file, .EXE file or any executable file.

The program receives 6 arguments, each argument enclosed in " " if it may contain spaces:

- Job name
- Terminal error message. Not empty only if Analyze did not produce log due to terminal error.
- Log File Path. Log may not exist or be empty if terminal error occurred.
Non-terminal error messages are contained in this log file.
- Number of Items synced OK,
- Number of Items synced with Errors,
- Number of Conflicts: remained unresolved after Analyze, were handled as No Copy.

GoodSync waits for the program to finish before proceeding.

However, if program name is prefixed with "nowait: ", then GS does not wait.

Use this option to run the program that takes some special action after Sync, such as notifying system administrator.

Option: Auto Clear on Sync or Analyze with no changes (un-checked by default)

If checked, then GoodSync automatically deletes the Changes tree after successful Sync or after Analyze that did not detect any changes.

Delete big Changes tree allows you to save memory. You will be able to see sync results, because they are stored on the tree, but you will be able to check sync log and see what has been done.

Auto Options work Only if GoodSync Runs

GoodSync must be already running for these Auto events to work:

- On Folder Connect
- Logoff
- Periodically (On Timer)

So you should turn on these global program options:

- Start GoodSync when Windows starts.
- Hide to System Tray when Main Window is closed.

Task Scheduler option does not require GoodSync to be running, because Windows Scheduler starts GoodSync based on the Windows Task that GoodSync creates when you enable this option.

Job Scheduling

Each event that has just occurred flags the job as ready-to-run.

Ready-to-run jobs are run from left to right, sequentially, until all ready-to-run jobs have been run.

If job is already in the ready-to-run state and another even occurs that wants to run the job then this 2nd event is ignored.

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Global Program Options

General tab

These global options apply to all jobs, to the entire GoodSync program.

They are called by **Tools -> Program Options** command or ALT+P.

Language (default: English)

Select user interface language for GoodSync.

You must restart GoodSync for the language change to become effective.

Supported languages are listed on the [Translations Page](#).

Show GoodSync icon in system tray (on by default)

If checked then: When GoodSync runs, it shows its icon in System Tray.

If not checked, then: GoodSync does not show anything in System tray when it runs.

Hide to System Tray when Main Window is closed (off by default)

If checked then: When you Close GoodSync, it will run in the background and it will show System Tray icon.

To access GoodSync, double-click GoodSync icon in System Tray (desktop lower right corner).

If not checked, then: When you close GoodSync, it unloads from memory.

Start GoodSync when Windows starts (off by default)

If checked then Windows starts GoodSync automatically when you log in to your Windows account.

Started this way, GoodSync shows only taskbar icon and no main window.

You can double-click the icon to call up the main GoodSync window.

Turn this option on if you run jobs automatically, that is, if you checked any boxed in Job Options -> Auto tab.

Reset all information messages to default

If checked then GoodSync resets no-show status of all warning messages that can be turned off.

Check for a new version daily (on by default)

If checked then GoodSync will contact www.goodsync.com daily to check whether the new version is available.

Create left/right Sync folders if they are not found (off by default)

If checked then GoodSync will create left/right sync folders if they are not present.

If not checked, then error message will be shown on Analyze if sync folders are not present.

Save log file (on by default)

If checked then GoodSync:

* Writes log file named FolderActions_<yyyy>_<mm>.log to _gsdata_ folder of the left and right sync folders.

* The log written is folder-specific, so all jobs that change one folder will write to the same log file.

* Writes global log of its non job-specific actions to file named GoodSync_<Year>_<Month>.log and located in folder C:\Documents And Settings\<User Name>\Application Data\GoodSync.

If not checked, then no log files are written.

Clean up logs monthly (on by default)

If checked, then keep log files for this month and for previous month and delete older log files.

If not checked, keep all log files.

Logging Level

Critical

Important non-error messages that must be seen.

Error

Errors that terminates a job, shown in red.

Information (default value)

Warnings or major action performed, includes sync actions.

Details

Details on actions performed, no need for most users to see.

Compare Files Using External Program (on by default)

If checked then call external file compare program when you select

Compare Left to Right from file context menu that is available after Analyze.

If one of the files is located on remote file system, it is downloaded first.

File Compare Program (empty by default)

Specifies path to the external file compare program used above.

This external program receives two arguments: path to left and right file.

If the program is not specified (blank field) then the default file compare program is used.

UNIX diff is the default file compare program.
It shows line difference for text files only.
If invoked on folders, it compares all files in the selected folder and its subfolders.
Byte comparison of all files can take a long time on slow file systems.

Proxy UserID and Password (empty by default)

If not empty, use these credentials as UserID and Password for Proxy specified in Internet Options.
GoodSync uses WinInet socket layer in WebDAV and Amazon S3 file systems.
So you can specify all connection options (including Proxy) in Internet Options accessible via Internet Explorer.
If proxy that you specified in Internet Options requires authentication, values you defined here will be used.
SFTP uses a different socket layer, so if you want to specify proxy for SFTP connection, you must use PuTTY session for this. See details in SFTP section.

Filters tab

In addition to job-specific Included and Excluded filter you can specify global (program-wide) filters in this tab.

The effective Excluded and Included filters used for the job are the sum of job-specific Excluded and Included filters and program-wide filters from this tab.

About tab

This tab show version and use information.

It also contains Check for Updates button that checks www.GoodSync.com for its most recent version.

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Command Line

GoodSync can be started from command line and everything that you can do from GUI can be done using command line options described here.

Command line call has this general format:
goodsync [<global-option>] <command> <command-options>

GoodSync Pro/Free can only start execution of existing jobs via command line, all other command line options (create, delete, modify job) are available in GoodSync Enterprise only.

Global Options

/help

Show help message that lists command line options.

/profile=<profile-folder>

Look for profile files jobs.tic (job list with options) and options.tic (global program options) in <profile-folder>. Path should be an absolute path on local computer.

/lf=<log-folder>

Write global log to <log-folder>. If not specified, write global log to profile folder. Path should be an absolute path on local computer.

/ll=N

Set log level to N (number from 1 to 3).

*** Run Mode Options ***

/min

Run minimized, only taskbar icon is visible.

/forcetray

Run minimized to tray, do not allow main window to show.

/miniwin

Start in mini window mode.

/forcemini

Start in mini window mode, do not allow main window to show.

/exit

GoodSync will exit upon completing the action requested in command line.

*** Global Program Options ***

/system-tray=yes|no

Show system tray icon. Default: yes.

/tray-on-close=yes|no

Closing GoodSync causes its minimization to system tray. Default: no.

/create-folder-if-notfound=yes|no

Create job sync folders if not found. Default: no.

/check-new-ver=yes|no

Check for New Version. Default: yes.

/cleanup-logs=yes|no

Remove log files older than one month, when starting. Default: yes.

/group-log-lines=yes|no

Group similar log lines. Default: yes.

/compare-prog=<ExeFilePath>

Use this program to compare two files diff style when user selects Compare from item context menu.

/save-global-options

Save global GoodSync options as changed by command line.

/proxy-userid=<userid>

UserID for Internet Options proxy.

/proxy-passwd=<password>

Password for Internet Options proxy.

Commands

analyze /all

Analyze all jobs.

analyze <job-list>

Analyze listed jobs, job names are separated by space.
Job names containing spaces must be enclosed in quotes like this: "Job Name"

sync /all

Synchronize all jobs.

sync <job-list>

Sync listed jobs, job names are separated by space.
Job names containing spaces must be enclosed in quotes like this: "Job Name"

job-tmp <job-name> [<job-options>]

Create a temporary job with specified job options and Analyze/Sync it.
This job is never added to the list of jobs and it exists only in memory during execution.

job <job-name> [<job-options>]

Create a new job or update an existing job with specified job options.

job-new <job-name> [<job-options>]

Create a job with specified job options.

job-update <job-name> [<job-options>]

Change specified options in the existing job.

job-delete <job-name>

Delete existing job.

Job Options

/analyze

Analyze Job after it has been created or updated.

/list-changes

Print List of changes detected by Analyze to the log.

/sync

Analyze and Sync Job after it has been created or updated.

/f1=<full-folder-path>

Left sync folder.

Full Folder Path should be in one of these formats:

C:\folder1\folder2\file.ext
\\share\disk\folder1\folder2\file.ext
ftp://server.domain.com:port/folder/file
sftp://server.domain.com:port/folder/file
http://server.domain.com:port/folder/file

Use quotes around paths with spaces.

/f2=<full-folder-path>

Right sync folder.

For Full Folder Path format see the above item.

/userd1=<user-id>

UserID for left sync folder.

/userd2=<user-id>

UserID for right sync folder.

/password1=<password>

Password for left sync folder.

/password2=<password>

Password for right sync folder.

/encrypt1=yes|no

Encrypt files in the left sync folder using EFS.

/encrypt2=yes|no

Encrypt files in the right sync folder using EFS.

/decrypt1=yes|no

Decrypt files in the left sync folder using EFS.

/decrypt2=yes|no

Decrypt files in the right sync folder using EFS.

/utf8-1=yes|no

UTF-8 encoding (No: ANSI) for left folder.

/utf8-2=yes|no

UTF-8 encoding (No: ANSI) for right folder.

/active1=yes|no

Active FTP mode (No: passive) for left folder.

/active2=yes|no

Active FTP mode (No: passive) for right folder.

/mdtm1=yes|no

Use MDTM command for left FTP folder.

/mdtm2=yes|no

Use MDTM command for right FTP folder.

/bad-certs1=yes|no

Allow bad certificates for left DAV folder.

/bad-certs2=yes|no

Allow bad certificates for right DAV folder.

/send-cookies1=yes|no

Send cookies for left DAV folder.

/send-cookies2=yes|no

Send cookies for right DAV folder.

/pk1=<folder-path>

SFTP private key file absolute path, for left sync folder.

/pk2=<folder-path>

SFTP private key file absolute path, for right sync folder.

/psession1=<session-name>

PuTTY session name for the left folder, SFTP connection.

/psession2=<session-name>

PuTTY session name for the right folder, SFTP connection.

***** General Options *****

/dir=2way | ltor,forced | ltor,verified | rtol,forced | rtol,verified

Job direction: 2-way, Left to Right (ltor), or Right to Left (rtol).

One Way Mode that appears after ltor or rtol can be: forced or verified.

/readonly-src=yes|no

Read-Only Source Side option. Can be turned on only in 1-way Forced job.

/quick-1way=yes|no

Quick Backup Mode. Can be turned on only in 1-way Forced job.

/deletions=yes|no

Propagate Deletions option.

/save-disposed-files=yes|no

Saved files overwritten or deleted by GoodSync to `_saved_` folder in `_gsdata_`.

/temp-dest-file=yes|no

Use temporary files when copying from source to destination, so that sudden interruption of copy does not result in corrupted file.

/copy-acl=yes|no

Copy ACL security attributes.

/check-file-stability=yes|no

Check Analyze-Sync File Stability on Remote File Systems option.

/est-req-space=yes|no

Estimate Required Free Space option.

/copy-locked=yes|no

Copy Locked Files using Shadow Copy Service on Windows XP, Windows Server 2003 and Vista.

/reconnect=yes|no

Automatically Reconnect when folders disconnect.

/reconnect-attempts=<number>

Number of Reconnect Attempts.

/case-sensitive=yes|no

Case Sensitive file and folder names.

/speed-limit=<number>

File Copy Speed Limit in Kb/sec.

/balloon-msg=none|errors|changes

Show Balloon option.

***** Filter Options *****

/exclude=<file-mask>

Exclude filter.

File Mask is a comma-separated list of patterns such as *.obj or \folder\file.

/include=<file-mask>

Include filter.

File Mask is a comma-separated list of patterns such as *.obj or \folder\file.

/exclude-empty=yes|no

Exclude Empty Folder option.

/exclude-hidden=yes|no

Exclude Hidden Files and Folders option.

/exclude-system=yes|no

Exclude System Files and Folders option.

***** Auto Options *****

/on-folder-connect=analyze|sync|no

Automatically Analyze/Sync on Folder Connect.

/on-start=analyze|sync|no

Automatically Analyze/Sync on Start of GoodSync.

/on-logout=sync|no

Automatically Sync on Logoff from Windows account.

/on-timer=analyze|sync|no

Automatically Analyze/Sync on Timer (every N minutes).

/timer-period=<NN>

Timer period in minutes for /on-timer option.

/on-roboform=analyze|sync|no

Automatically Analyze/Sync on RoboForm command.

/pre-analyze-action=<program-path>

Pre Analyze Program.

/post-analyze-action=<email-addr|program-path>

Post Analyze Email or Program.

/post-sync-action=<email-addr|program-path>

Post Sync Email or Program.

/autoresolve=no|left|right|newer

Auto-Resolve Conflicts option: No Copy, Left wins, Right wins, Newer wins.

/limit-changes=<NN>

No Sync If Too Many Files Changed option.

NN is a number from 0 to 100.

/autoclear=yes|no

Auto Clear option.

Installer Options and Activation of Enterprise Version

The options below are installer options, that is, they are specified for the installer GoodSync-Setup.exe, not for GoodSync.exe.

/orderid=1234567890

/username="John Smith"

If /orderid and /username options are specified then GoodSync Pro is automatically activated upon install using the specified OrderID and User Name. Note that this is online activation, so GoodSync.exe should be able to get to www.goodsync.com.

/proxy="Proxy User Name, Proxy Password"

If online connection on your computer requires password-protected proxy and you are using /orderid and /username options then specify Proxy User Name and Proxy Password using this option.

/S

Run installer silently, no input from user is requested.

Enterprise Activation

For those deploying GoodSync in an Enterprise environment, you can install and activate using the above mentioned parameters of OrderID and Company Name from the purchase. An example being:

```
GoodSync-Setup.exe /S /orderid=0123456789 /username="Company Name"
```

This will run the GoodSync installer silently, and attempt to activate the software using the OrderID and Company Name specified.

Post-Install Activation

Activation of GoodSync Pro or Enterprise can be performed after the product has already been installed. The following command will activate GoodSync license:

```
GoodSync.exe /install /orderid="xxxxxxxxxx" /username="XXXXXX XXXXXXXXXXXX"
```

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Policies

Policies are used by system administrator to enforce enterprise-wide rules that limit or change GoodSync behavior.

Policies are available in GoodSync Enterprise only.

To edit policies, use the GoodSync policy template:

- Select Start -> Run, type: gpedit.msc, press Enter.
- In the tree go to 'Local Computer Policy' -> 'Computer Configuration' -> 'Administrative Templates'.
- Right-click 'Administrative Templates', select 'Add/Remove templates' -> 'Add...',
- Browse for goodsync.adm in 'Program Files\Siber Systems', click 'Close'.
- The new sub-tree with GoodSync policies will appear under 'Administrative Templates'.
- To enable a policy, select this policy in Editor, right-click it, select Enabled.
- Policy will become effective after GoodSync restart.

These policies are available:

- ForceMiniMode: Start GoodSync in MiniMode and do not allow expanding it to the full size
- ForceTray: Start GoodSync in MiniMode and do not allow expanding it to the full size
- NoAutoUpdate: Disable AutoUpdate
- NoJobListEdit: Do not allow to add/delete/rename jobs
- NoJobEdit: Do not allow to change job paths or options

- NoProgramOptions: Do not allow to change program options
- NoJobOptions: Do not allow to change job options
- NoOptionsGeneral: Do not allow to change General job options
- NoOptionsFilters: Do not allow to change job filters
- NoOptionsAuto: Do not allow to change job auto options

- DisableFTP: Disable FTP file system support
- DisableSFTP: Disable SFTP file system support
- DisableDAV: Disable WebDAV file system support
- DisableS3: Disable Amazon S3 file system support
- DisableWinCE: Disable Windows Mobile devices support

Syncing Specific Applications

This section tells you how to setup syncing for popular applications.

RoboForm.

Latest versions of RoboForm have command RoboForm -> Tools -> Sync Data that setup sync job and start GoodSync automatically. If setting up manually, you should synchronize folder My RoboForm Data between two computers that you are syncing, or between computer and USB drive with RoboForm2Go. These computer-specific files will be excluded from sync: license.rfo, cache.rfo, mru.rfo. You may include file options.rfo, it contains RF options.

Outlook.

Synchronize file *Outlook.pst* that contains Outlook data.

Open Outlook application locks file Outlook.pst, not allowing GoodSync to sync it.

Outlook must be closed for this file to be unlocked.

If you sync your Windows Mobile phone or Pocket PC with desktop, then Outlook.pst file is locked while your phone is plugged in. Pull out your phone from the cradle for Outlook.pst to be unlocked.

Outlook.pst file location:

- * XP: *C:\Documents and Settings\User Name\Local Settings\Application Data\Microsoft\Outlook.*
- * Vista: *C:\Users\User Name\AppData\Local\Microsoft\Outlook.*

How to make Outlook store your Outlook.pst in the folder you like:

- * Move Outlook.pst from the standard folder to the folder where you want it to be.
- * Start Outlook -- it tells you that it cannot find Outlook.pst.
- * Outlook offers you to specify location of Outlook.pst. Select the folder where Outlook.pst is now.

Outlook Express.

Outlook Express (OE) stores its data in several files, located in OE data folder. To find where this folder is, open OE and go to *Tools -> Options -> Maintenance -> Store Folder*. It will show you where the data files are and you can change this location of the folder too. Sync the entire folder. Sync only when OE is closed, as OE may lock the files it uses.

Windows Mail (Vista Only).

Sync Windows Mail data folder. It is located at
C:\Users\User Name\AppData\Local\Microsoft\Windows Mail

Quickbooks.

Quickbooks (QB) stores all its data in one file that has format *CompanyName.QBW*. This is the file to sync. Quickbooks backup files have extension .QBB. We recommend to back up the QBW file using native QB Backup command and to sync the backup file too, for extra protection. Quickbooks locks the QBW when opened, so you must close QB before syncing. Even if you opened QBW file to only view it and not to modify it, QB will still modify this file. So you cannot use GoodSync for 2-way syncing of *.QBW files, you can do only 1-way backup.

ACT!

Act locks its data files and when you close ACT, they are still locked. This is because ACT! installs a SQL service that is active even when the ACT! application is not running. This service keeps ACT! data files locked. You should stop the MSSQL ACT! service temporarily to be able to sync these files: Go to Start/Control Panel/Administrative Tools/Services, locate the service named "MSSQL\$ACT7" (or something similar), stop it, do the synchronization, and then start the service again. Alternatively, you can permanently exclude ACT! files from synchronization.

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GoodSync2Go: Portable version

GoodSync2Go is a portable version of GoodSync that is:

- Installed on removable drive (USB key or Portable Hard Drive), not on computer.
- Runs from the removable drive on which it is installed.
- Stores list of jobs and other settings on the removable drive.
- Licensed per removable drive, no per-computer license is required.

Otherwise it does the same things as regular version.

Limitations of GoodSync2Go:

- Cannot run GoodSync2Go jobs from Windows Scheduler, because Scheduler is computer-specific.
- Cannot start GoodSync2Go when Windows starts, this is computer specific too.

GSYNC: pure Command Line version

GSYNC is a purely command line version of GoodSync that is only available in *GoodSync Enterprise*.

It does not present any GUI (Graphical User Interface) at all, so it is ideal for:

- calling from batch files,
- calling from other programs,
- calling from services such as Scheduler.

GSYNC accepts exactly the same command line arguments as GoodSync.exe except this:

/profile=<profile-folder-or-file>

Profile file or folder.

If file then read list of jobs from this file.

If folder then read list of jobs from file jobs.tic in this folder.

If not specified, read list of jobs from the standard location.

Path should be an absolute path on local computer.

/progress=yes|no

Show progress messages when downloading or uploading files.

Default: No.

/email-sync=

There is no such option in GSYNC because log is written to stdout and you can email it from there.

GSYNC runs all jobs specified in the command line sequentially, in the order in which jobs appear in Job List.

Return Codes for the last job that was run is returned:

0 - Normal completion: Analyze with No Change or Sync with Success.

1 - Analyze with Terminal Errors, error text written to stdout as last line.

2 - Sync with Terminal Errors, error text written to stdout as last line.
Negative - error when initiating GSYNC.

Non-terminal errors do not return error code, these errors are logged to log file.

Log file is written to stdout.

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GSCP: Command Line File System client

GSCP is a command line interface to GoodSync File Systems, similar to a classic command line FTP client.

Unlike an FTP client, GSCP can be used to script file operations in all File Systems that GoodSync supports: Windows, Win Mobile, FTP, SFTP, WebDAV, Amazon S3.

Its ideal application is programmatically running file/folder modification sequences using abstraction of GoodSync File Systems.

This is how to call GSCP:

gscp URL [userid] [password] [sftp-private-key]

where URL designates file system and server to connect to.

UserID and Password may be embedded in the URL or specified separately after the URL.

4th optional argument is path to SSH private key used in SFTP, then 3rd argument is this key passphrase.

GSCP call examples:

```
gscp \\netshare\volume\folder share-userid share-password
gscp wm://myphone/folder
gscp ftp://user:password@server.company.com
gscp ftp://server.company.com user password
gscp https://dav-server.storage-co.com userid mypass
gscp sftp://sftp.server.com userid passphrase c:\keys\ssh-private-key.ppk
```

The following commands are accepted by GSCP once it connects to the server:

Command	Argument(s)	What it does
quit		Exit program
ls		List the current remote directory
isf	file-name	Test whether the specified remote file exists
isd	dir-name	Test whether the specified remote dir exists
pwd		Print current remote directory
cd	dir-name	Change remote directory (no name means connect root)
pld		Print current local directory
lcd	dir-name	Change local directory
md	dir-name	Create remote directory
rm	file-name	Delete remote file
rmd	dir-name	Delete remote folder
rmrf	dir-name	Recursively delete remote files and folders
mv	file-name-1 file-name-2	Rename or move remote file/folder
put	file-name	Upload local file to remote folder
get	file-name	Download remote file to local folder
help		Show this list of available commands
info		Remote file system info

open	url	Connect to another file system
close		Disconnect from current file system

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Mounting Folder via Network: Tutorials

GoodSync synchronizes folders that are mounted on the computer on which GoodSync runs.

Mounting folder on a computer uses Windows machinery and other programs.

We provide tutorials that explain how to do it, even though the exact recipe of how to mount a drive via Network lies outside of scope of GoodSync manual.

Synchronization between Two Computers on the Local Area Network (LAN)

First you need to decide which computer is Client and which is Server.

Server computer must have Sharing turned on and folder to sync must be Shared on the Server.

Client computer must have GoodSync installed. Client computer mounts folder to share from Server.

Both computers must be sitting on the same Local Network (LAN).

Usually a bigger computer that is constantly connected to the network gets to be the Server and smaller computer that is not always connected gets to be the client.

If you are trying to synchronize a Desktop and a Laptop, we recommend you designate you Desktop to be the Server and your Laptop to be the Client.

1. Share Folder on Server Computer (done once per folder).

- Open folder to share in My Computer or in Windows Explorer.
- Right-click the folder and select Sharing and Security.
- Click "Share this folder on the network".
- Assign Share Name to your folder, this name will be what you see on the Client.
- Check box "Allow network users to change my files". GoodSync should be able to read and write files in the folder you share.
- Click OK and wait for Windows to set permissions on the folder.

1a. Share entire Disk on Server Computer (alternative to sharing individual folders).

You may want to share not just one folder, but the entire disk, in this case you do not have to go through folder sharing procedure for every folder you need to sync. Instead, please follow the steps described below.

- Go to My Computer or Windows Explorer and right-click Disk drive,
- Select Sharing and Security,
- Check Share This Folder.

2. Set or Get your Server Name (done once per server computer).

- On the Server computer, right-click My Computer and select Properties, then click Computer Name tab.
- Full Computer Name shows the Name of your Server computer.

- If this name is meaningless, change it to something you can recognize by clicking Change button. Usually computers are named after person who uses them or their location. Examples: Scott Laptop, Susie Dell.

3. Mount Shared Folder on the Client.

- Go to the Client computer where GoodSync is installed.
- Select Job -> New to create a New Job and name this job.
- Click left Browse button and select folder on the Client computer to sync with.
- Click right Browse button. This is where we will enter the shared folder that we mount from Server to the Client.
- Select My Network tab, it shows a list of computers visible on your network.
- Select the Server computer, open it and select the folder that you Shared on server.
- Click OK and you Job is ready to Analyze and Sync.
- If your computer is not immediately visible in My Network, you can type direct address of the Shared folder as \\ServerName\ShareName where ServerName is the name of your Server and ShareName is the name that you assigned to the shared folder.

Non-Secure Synchronization between Two Computers on the Internet

To synchronize two computers (Client and Server) over the Internet, a network disk can be mounted via Internet.

Please follow the instructions below to mount a network disc over Internet.

- Windows file sharing does not encrypt file contents in transit, nor does it encrypt disk sharing passwords that you use. So this method is not secure, as 3rd parties listening on your network can sniff out passwords and file contents.
- Share a disk on a Server computer: in Windows Explorer right-click drive, select Properties, go to Sharing tab, check Share This Folder on the Network.
- Make Server computer accept connections on port 139. If you have a software or hardware firewall, config this firewall to allow incoming connections on port 139.
- On a Client computer type this into Address bar of Windows Explorer: "\\111.222.333.444\Share". Here 111.222.333.444 is IP address of the Server Computer and Share is share name of the shared disk on the Server Computer. You should see the Server folder that you shared.
- Start GoodSync on Client Computer and type the same \\111.222.333.444\Share into the sync folder path.
- GoodSync is ready to sync.

Secure Synchronization between Two Computers on the Internet

In order to protect files *en route* while synchronizing between two computers (Client and Server), the communications channel needs to be encrypted. This is achieved by tunnelling disk mount through SSH (**Secure SHell**).

Please follow the instructions below to mount a network drive via SSH.

- Install a suitable SSH server on Server Computer or on a computer that sits on a local network with Server Computer. Using cheap Linux box with SSH as a gateway is an option.
- Install a suitable SSH client on Client Computer.
- Configure SSH client to tunnel connections from port 139 on Client Computer to port 139 on Server Computer, that is, to IP address of the Server as seen from the computer where SSH server runs.
- Establish an SSH connection from Client to Server.
- On a Client computer type this into Address bar of Windows Explorer: "\\127.0.0.1\Share". Here 127.0.0.1 is the address of localhost (that is, Client Computer). Windows Explorer connects to port 139 on Client Computer, SSH client tunnels this connection to the Server computer via SSH server.
- You cannot share other disks on Client Computer, as there is only one port 139 on the computer and it will be taken by disks you share locally. Non-trivial workarounds exist for this limitation.