



GS RichCopy 360

Standard version 7.5 and Enterprise version 8.5

Administrator's Manual

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If you encounter any problems or difficulties using our software, have suggestions, comments, or encountered any anomalies while using it, please contact us via support@gurusquad.com.

Welcome

Thank you for purchasing GS RichCopy 360 and welcome to our growing user community. We hope you'll find our software useful and timesaving in your Network and Cloud copy endeavors. We invite you to visit our website at gurusquad.com and to look at our Forum to learn more about GS RichCopy 360.

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Acronyms

The following table lists the different acronyms used in this manual.

ACRONYM	DEFINITION
ACL	Access Control List (NTFS Permissions)
AES	Advanced Encryption Standard
CLI	Command Line Interface
CSV	Comma-Separated Values
FIFO	First in First Out
FQDN	Fully Qualified Domain Name
GS	GuruSquad
GUI	Graphical User Interface
HIPAA	Health Insurance Portability and Accountability Act
IP	Internet Protocol
JPEG	Joint Photographic Expert Group
LAN	Local Area Network
NetBIOS	Network Basic Input/Output System
NTFS	New Technology File System
PIII	Pentium III
RAM	Random Access Memory
RTA	Remote Transfer Agent
SMB	Server Message Block
SMTP	Simple Mail Transfer Protocol
TCP	Transmission Control Protocol
UI	User Interface
VPN	Virtual Private Network
VSS	Volume Shadow Service
SOX	Sarbanes-Oxley Act
WAN	Wide Area Network

Introduction

GS RichCopy 360 is designed to work on Windows servers and workstations and is perceived as the industry leader for file and folder replication and synchronization in WAN and LAN environments. GS RichCopy 360 is available in two different versions, Standard and Enterprise. The Enterprise version includes all options offered in the Standard version and includes advanced options such as Bulk Job Create/Import, Block Level Replication, Real-time Replication, Compression, Encryption, and Replication over a TCP port. The latter option is recommended for replication across the internet, locked down firewall environments and many more options covered later in this manual.

GS RichCopy 360 Enterprise will work over VPN connections and across the internet. This current version has taken over 12 years to develop and is the ideal solution for high-volume server and workstation transactions over networks using LAN, WAN, and VPN connections and across the internet.

Benefits

The following are the benefits of GS RichCopy 360.

Easy to Understand and Use

Our patent-pending design is slick and easy, providing the best administration experience possible while using intelligent and sophisticated logic, and advanced methods under the hood.

GS RichCopy 360 is designed to minimize work by staff. The GS RichCopy 360 interface provides what you need and where you expect to find it. It offers advanced capabilities with minimal overhead configuration.

Robust Performance

GS RichCopy 360 offers advanced multi-threading technology utilizing 100% parallel computing techniques. It also offers a proprietary patent-pending technology that provides the most robust and powerful performance possible.

Affordable Value

GS RichCopy 360 provides functionality that is comparable, if not superior, to most other solutions. What is more, the total cost of ownership of GS RichCopy 360 is less than the initial cost of most other solutions. GS RichCopy 360 comes with free support from our highly trained support staff.

Key Features

GS RichCopy 360 is a job-based software and can be configured for multiple jobs per server or workstation to operate with the following features.

GS RichCopy 360 Enterprise

- Operates real-time.
- Provides byte-level file replication to save on bandwidth and file copy time.
- Uses compressed data during transmission, making transfers much more efficient and robust.
- Provides WebDAV support.
- Provides the option to replicate data across the internet with data being highly encrypted during transmission.

GS RichCopy 360 Enterprise and GS RichCopy 360 Standard

- Provides the capability to schedule jobs (e.g. Friday 11:00 pm) and create repeat intervals (e.g. every 30 Minutes, 1 hour, daily, weekly).
- On demand.
- Provides command line support. Jobs can be created, triggered, or stopped through the command line either locally from the same machine or passed remotely from another machine. This is useful to centrally manage all clients.
- Runs as a windows service or as a currently logged in user.
- Connect as a specific user to source/target machines, which can be useful in workgroup and multi-domain/forest environments.
- Provides long path and file name support.
- Sync Poisoning provides a safety net where data on the Remote Transfer Agent (RTA) server is backed up in the event it is about to get overwritten or deleted by its source job.
- Provides advanced multi-threading technology utilizing 100% parallel computing techniques. It also offers a proprietary patent-pending technology that provides the most robust and powerful performance possible.
- Copies open and locked files due to its full integration with Volume Shadow Service (VSS).
- Provides the option to replicate NTFS ACL security permissions, file and folder attributes, and date time stamps.
- Provides advanced file and folder inclusion and exclusion settings by pattern in name, full name, or explicit.
- Provides the capability for administrative permission override. If GS RichCopy 360 is attempting to copy from or to a folder where it does not have NTFS permissions, it can use the administrative override so it can get the needed access automatically. This is possible for as long as the source or destination is on a Windows operating system and the user account used has administrative privileges.
Note: There are no settings to turn this feature ON. It automatically works as soon as an NTFS permission is preventing reading access. However, this feature does not work if the destination or source where the NTFS permission is required is a NAS device because override functionality is only supported on Windows systems.
- Sends email notifications upon failure and success using the local SMTP server or any other email provider such as Gmail.
- Environment variable is fully supported throughout most fields in the application.
- Provides the option to have GS RichCopy 360 run as a normal user account where administrative access is not granted. By default, it is required to be an administrator on the machine where GS RichCopy 360 is installed. However, a user can turn off that requirement within the configuration screen so that normal users can operate and manage jobs on GS RichCopy 360.
Note: Some functionalities may not be available unless the jobs are configured to run as a service. Each job has its own unique configuration (Definition of Source and Target Folder) and its own settings.

Other Features

- Useful in copying, moving, or mirroring directories along with their files and subfolders, ACLs, and attributes from one location to another (same server or different server).

- Provides the option to have the source (folder you are copying from) to be mirrored exactly onto the target or destination (folder you are copying to).
- Provides the option to replicate only the directory tree (structure) without its files. This feature will basically copy only the exact directory structure of the source.

Comparison of Standard and Enterprise Versions

The following table displays the features of the Enterprise and the Standard versions of GS RichCopy 360 for comparison purposes.

FEATURES	GS RICHCOPY 360 ENTERPRISE	GS RICHCOPY 360 STANDARD
GUI or Command Line	✓	✓
Copy NTFS Security (ACLs)	✓	✓
Copy Open and Locked Files	✓	✓
Copy Only Modified Files	✓	✓
Copy File & Folder Attributes	✓	✓
Copy File & Folder Timestamp	✓	✓
Send Emails when Job is complete	✓	✓
Include Directories (Wildcard supported)	✓	✓
Exclude Directories (Wildcard supported)	✓	✓
Exclude Files (Wildcard supported)	✓	✓
Exclude Directories with Absolute Path	✓	✓
Copy Data Locally or Across the Network	✓	✓
Do Not Follow Conjunction Points	✓	✓
Attempt to Copy Files with CRC Errors	✓	✓
Copy Files Based on Last Modified Date Filter	✓	✓
Log Only Errors and Warnings	✓	✓
Long Path Name Support	✓	✓
Run as a Service	✓	✓
100% Multi-Threaded (Robust Performance)	✓	✓
Wizard Driven	✓	✓
Powerful Proprietary Scheduler	✓	✓

FEATURES	GS RICHCOPY 360 ENTERPRISE	GS RICHCOPY 360 STANDARD
Run Simultaneous Jobs at Once	✓	✓
Run as Normal User	✓	✓
Permission Override	✓	✓
Connect As (Impersonation)	✓	✓
Auto Update Feature	✓	✓
Bandwidth Throttling	✓	✓
Checksum Hash Compare	✓	✓
SOX and HIPAA Compliant	✓	✓
All Jobs are logged to for tracking	✓	✓
Copy to AWS S3	✓	✓
Copy to OneDrive (Business\Personal)	✓	✓
Copy to SharePoint	✓	✓
Copy to FTP\SFTP\FTPS\WebDAV	✓	✓
Copy to Azure Blob Storage	✓	✓
Copy to Dropbox	✓	✓
Copy from\to OneDrive (Business\Personal)	✓	✗
Copy from\to SharePoint	✓	✗
Copy from\to AWS S3	✓	✗
Copy from\to FTP\SFTP\FTPS\WebDAV	✓	✗
Copy from\to Azure Blob Storage	✓	✗
Copy from\to Dropbox	✓	✗
Copy from\to Box.com	✓	✗
Copy from\to S3 Compatible Storage	✓	✗
Copy from\to Azure Files	✓	✗
Copy from\to Google Drive	✓	✗
Copy from\to Citrix ShareFile	✓	✗
Copy from Any to Any	✓	✗

FEATURES	GS RICHCOPY 360 ENTERPRISE	GS RICHCOPY 360 STANDARD
Optimized for WAN and Internet Replication	✓	✗
Copy Files & Folders Across the Internet	✓	✗
Byte Level Replication (Delta Change in a File)	✓	✗
Compress Data Before Sending	✓	✗
WebDAV Support	✓	✗
AES 128 and AES 256 Encryption Support	✓	✗
Synchronize Data Real-Time	✓	✗
Import 1000s of Jobs from CSV	✓	✗

Licensing

The GS RichCopy 360 follows a perpetual licensing model. A perpetual licensing model allows the customer to install and use the software indefinitely. GS RichCopy 360 is licensed per machine, requiring that the user purchases a license for each client computer and device on which the software is installed. Other licensing options are available such as volume, site, and enterprise licensing.

If 10 or more licenses are purchased, they can be upgraded to portable licenses. In that case, having 10 installed machine licenses, it is permitted to move one installation from one machine to another, then the administrator can unregister it from the old machine and move it to the new machine.

For this feature, the user must buy 10 Enterprise licenses or 20 Standard licenses.

Note: Licensing models such as volume, site, and enterprise can be discussed and arranged with sales prior to purchasing GS RichCopy 360.

Installation

System Requirements

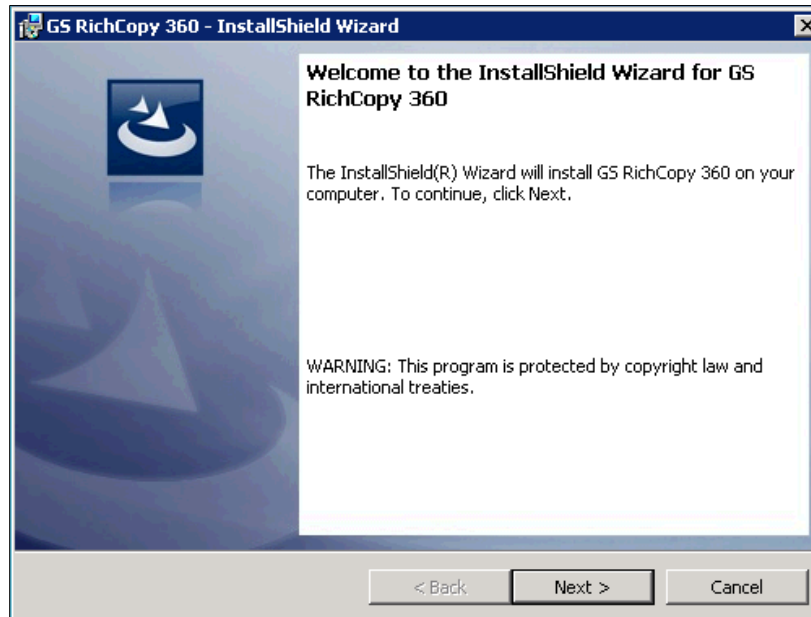
GS RichCopy 360 requires admin privileges when installing and using GS RichCopy 360. It also requires the following:

REQUIREMENT	SPECIFICATION
Operating system	<p>32-bit or 64-bit of any of the following:</p> <ul style="list-style-type: none"> • Windows Server 2022 • Windows Server 2019 • Windows Server 2016 • Windows Server 2012R2 • Windows Server 2012 • Windows Server 2008 R2 • Windows Server 2008 • Windows Server 2003 • Windows 11 • Windows 10 • Windows 8.1 • Windows 8 • Windows 7 • Windows XP • Windows Vista
Processor	Pentium III (PIII) equivalent or higher
RAM	2GB
Storage	40MB
	<p>Note: It is recommended to have more than 40MB disk space to meet logging requirements in case logs are stored on the same drive partition.</p>
Software	<p>Microsoft .NET Framework 4.5</p> <p>Note: Installing GS RichCopy 360 will not proceed if this framework is not installed.</p>
Installer	GS RichCopy 360 Setup.exe
License	<p>Once installed, GS RichCopy 360 will run in trial mode, copying a maximum of 5 files from every folder. When the trial period expires, it will ask for a valid serial key that you need to enter to automatically switch to a full version. Uninstalling or reinstalling are unnecessary. For more information, refer to Registering GS RichCopy 360. For licensing details, refer to Licensing.</p>

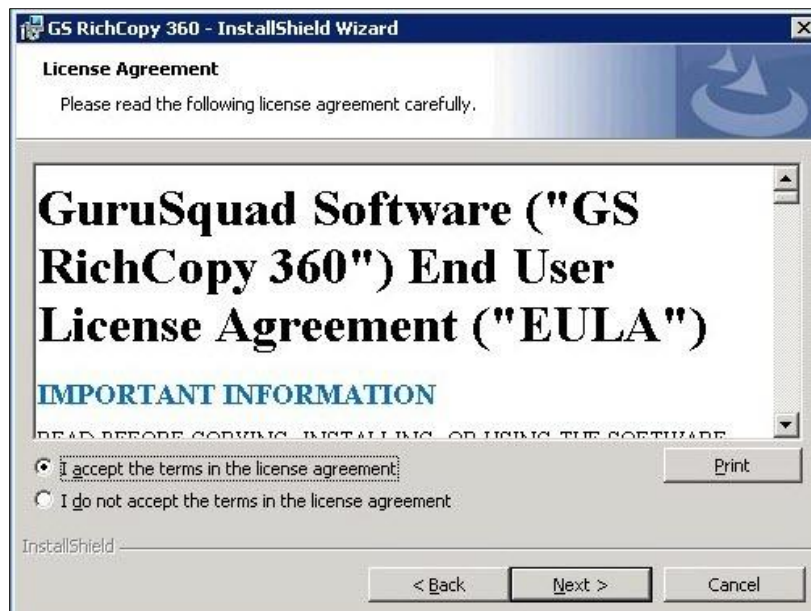
Installing GS RichCopy 360

Before installing GS RichCopy 360, log on to the server or workstation as a user with full admin privileges. To install GS RichCopy 360, follow these steps:

1. Double-click the installer. The following window is displayed.

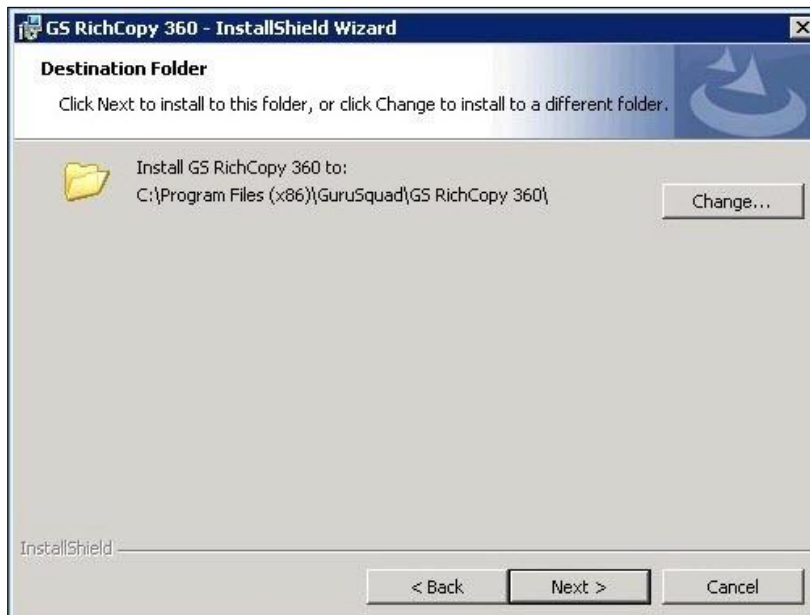


2. Select **Next**. The License Agreement screen is displayed.



3. Select **I accept the terms in the license agreement**, and then select **Next**.

The Destination Folder screen is displayed.

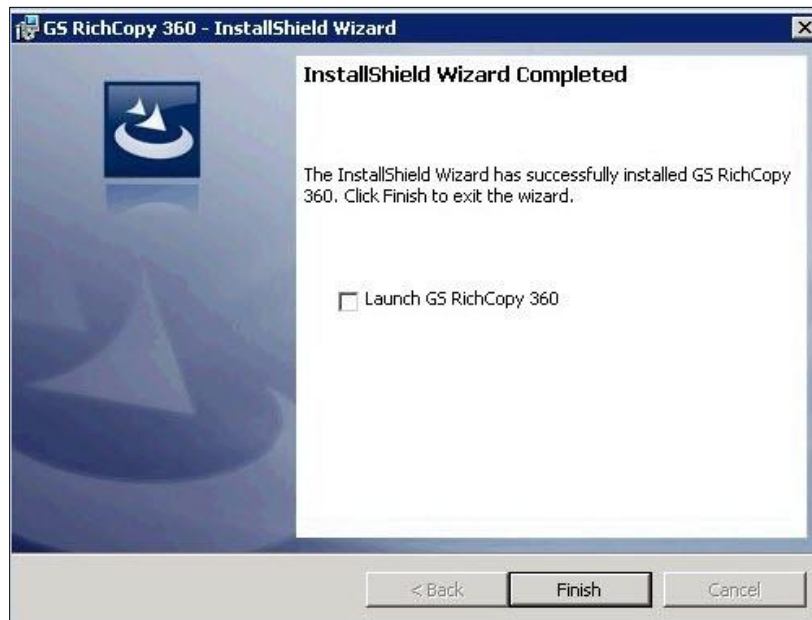


4. Select **Change** if you want to install GS RichCopy 360 in a different folder, or **Next** to continue without changing the destination folder. The Ready to Install the Program screen is displayed.



5. Select **Install** to proceed with the installation.

When the installation is complete, the following screen is displayed.



6. Select **Finish** to close the window.

Registering GS RichCopy 360

To register a newly installed GS RichCopy 360, you need the following:

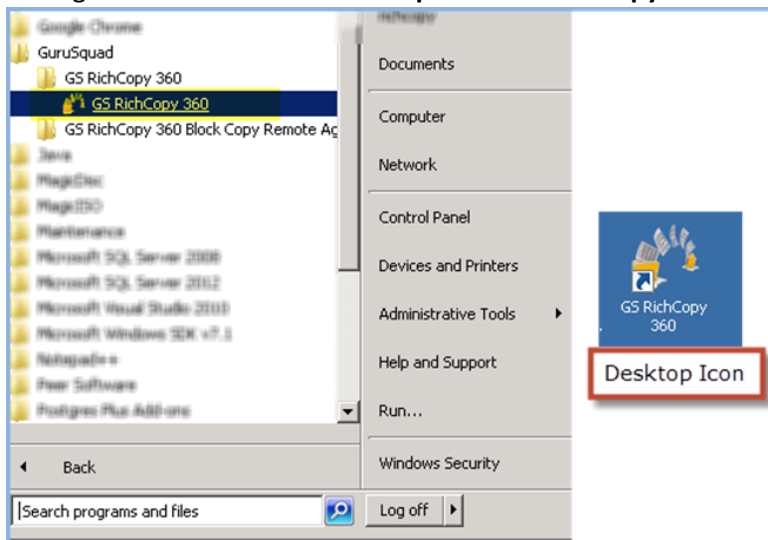
- Product serial key
- Email address

The email address is used for further correspondence and support, and to check for license authenticity.

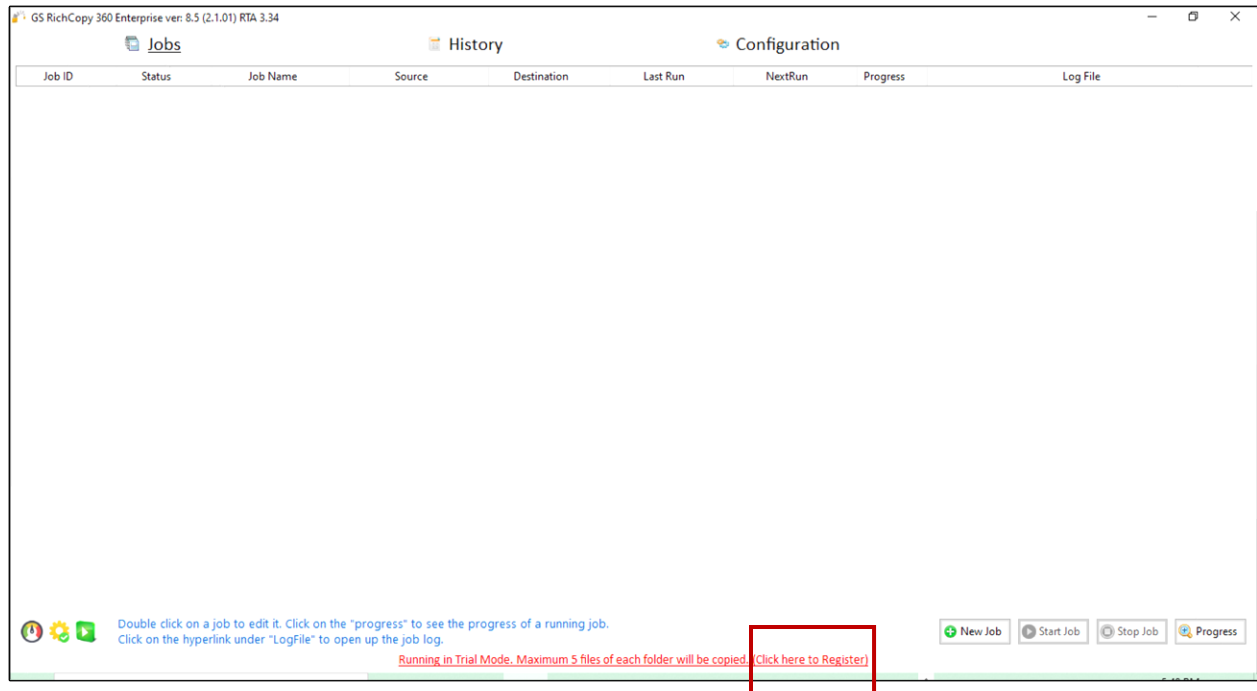
Note: The serial key will work only for the version issued (i.e. Standard or Enterprise).

To register GS RichCopy 360, follow these steps:

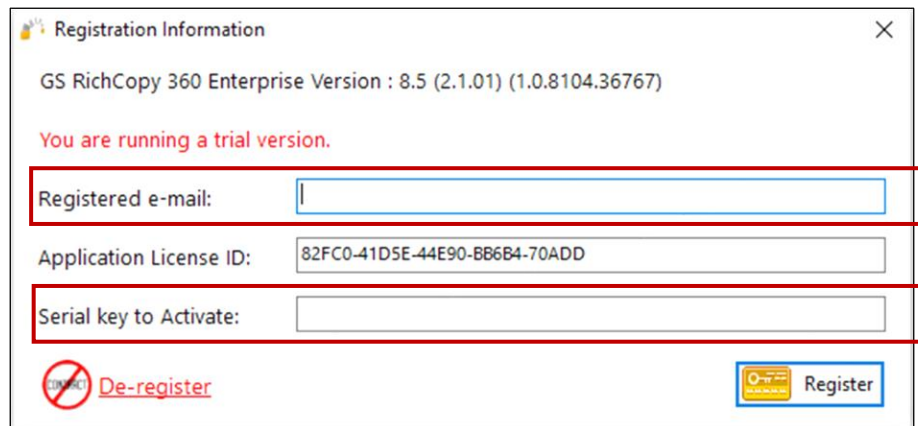
1. Open GS RichCopy 360 by double-clicking the GS RichCopy 360 icon either from the desktop or through the **Start Menu → GuruSquad → GS RichCopy 360**.



- The main GS RichCopy 360 window is displayed. The default screen is the **Jobs** section. At the bottom of the window, select **Click here to register**.



- Enter your **registered email**, the provided **serial key**, and select the **Register** button.

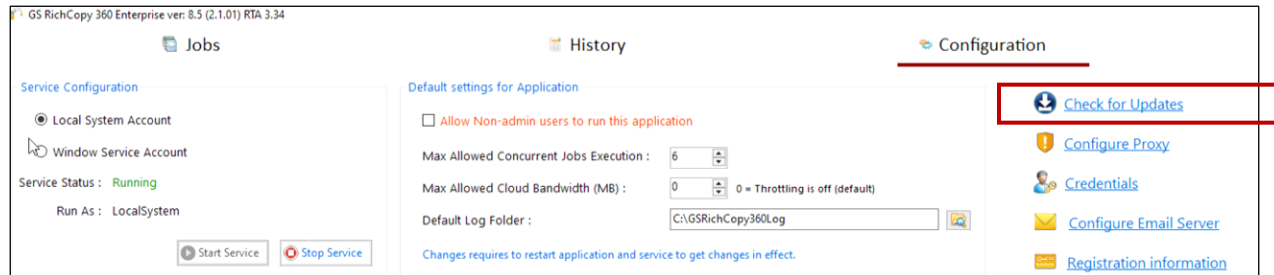


Once the Registration process has been started, GS RichCopy 360 will initiate a connection to the GuruSquad activation servers and activate your copy.

Note: If your machine does not have internet connectivity, open a support ticket by phone or by email. For contact details, refer to Frequently Asked Questions (FAQs) offline activation code can be generated based on the Application License ID.

Upgrading GS RichCopy 360

To upgrade to the latest build of the current version, click **Check for Updates** in the **Configuration** section or download the latest package from [GuruSquad.com](https://www.gurusquad.com). The upgrade will automatically update the software and the database to the new version.



Configuration

GS RichCopy 360 requires minimal configuration and is ready to work straight out-of-the-box. IT administrators also have the option to configure various components such as the following:

- [Running GS RichCopy 360 as a Windows Service](#)
- [Creating Connect As Accounts](#)
- [Setting Email Account](#) Configuration
- [Setting the Maximum Allowed Concurrent Jobs Execution](#)
- [Backing up and Restoring the GS RichCopy 360 Database](#)
- [Allowing non-admin users to use GS RichCopy 360](#)

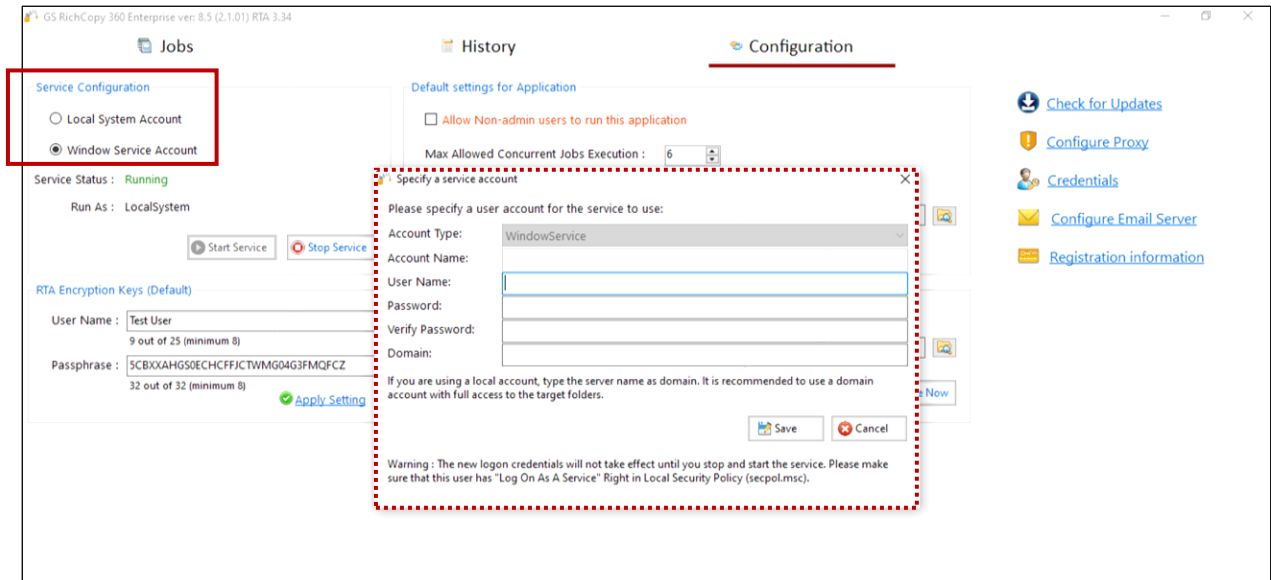
All these settings are configurable in the **Configuration** section.

Running GS RichCopy 360 as a Windows Service

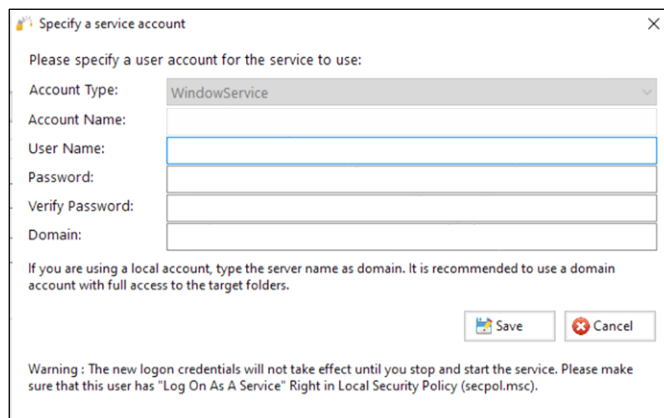
By default, GS RichCopy 360 will install a service called **GS RichCopy 360 Service**. The service will be in an executable state running under the Local System Account. In the Service Configuration section, you can change it to run under a different user account. This user account can be a local user or a domain user. Preferably, the service account is a domain account that has access to both source and target locations. The account must have admin privileges to be able to copy, open, and lock files. It also must have *Log on as a service* permission if you are running on a Windows 2008 R2 or a later operating system. For more information, refer to [Assigning Log On as a Service](#).

To run GS RichCopy 360 as a Windows service, follow these steps:

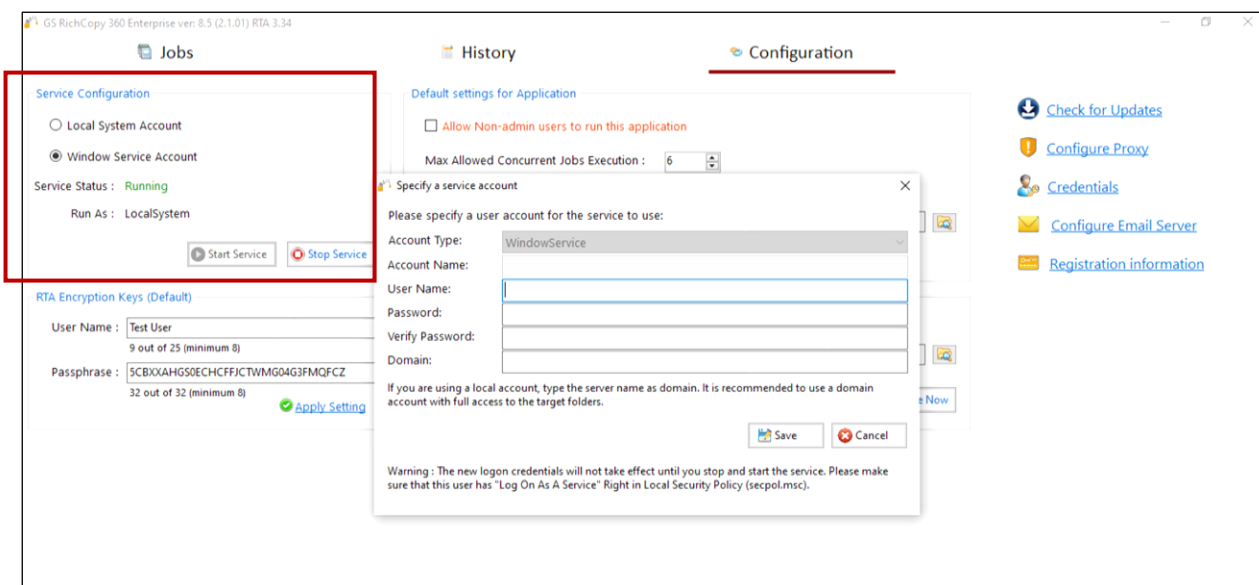
1. In the GS RichCopy 360 window, select the **Configuration** section.
2. In the Service Configuration area, select the **Windows Service Account**. The **Specify a service account** pop-up will display.



3. Enter the service account details and select **Save**.



Note: If you set different credentials or switch back to running under the Local System Account, it is necessary to stop and start the service for the changes to take effect. Use the **Stop Service** and **Start Service** buttons for this purpose.



Note: If you have any running jobs configured to run under the service account, those jobs will be terminated, and they will need to be restarted.

Creating Connect As Accounts

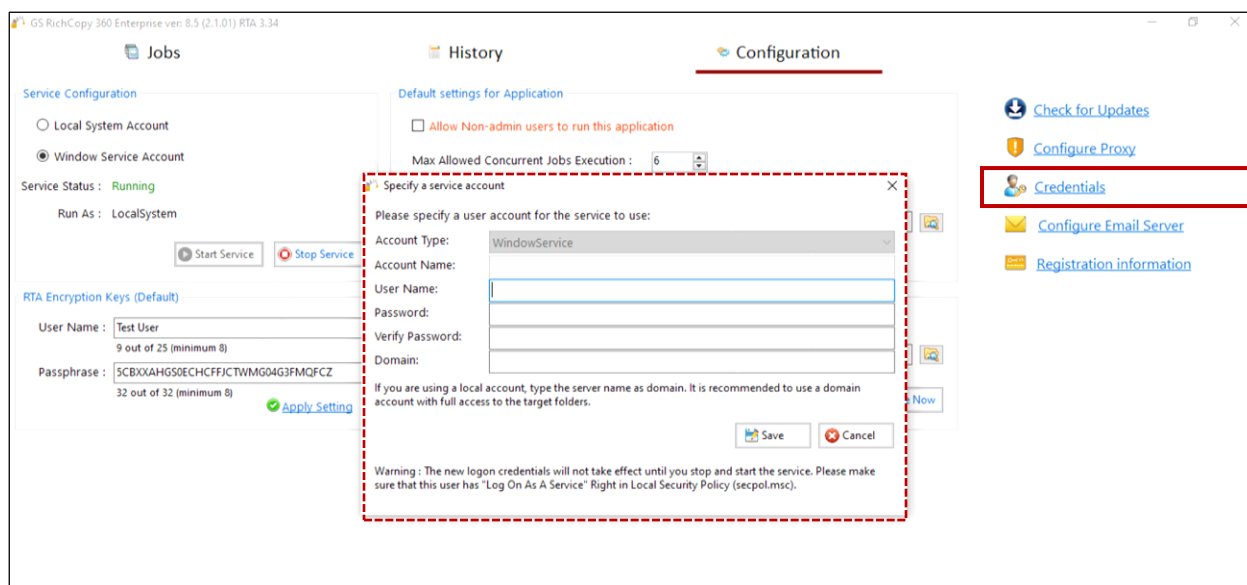
GS RichCopy 360 offers the option to run jobs as a logged in user or as a service account. If the service account and logged in user do not have access rights to connect to the source and destination, GS RichCopy 360 provides another option to specify accounts and save them in the GS RichCopy 360 database. These accounts can then be used to Connect As those users who have the necessary permissions for the source and destination when a job is created. For information on creating a job, refer to [Managing and Creating Jobs](#).

Connect As also has the option to configure WebDAV accounts, which can be used to connect TO and FROM WebDAV sites.

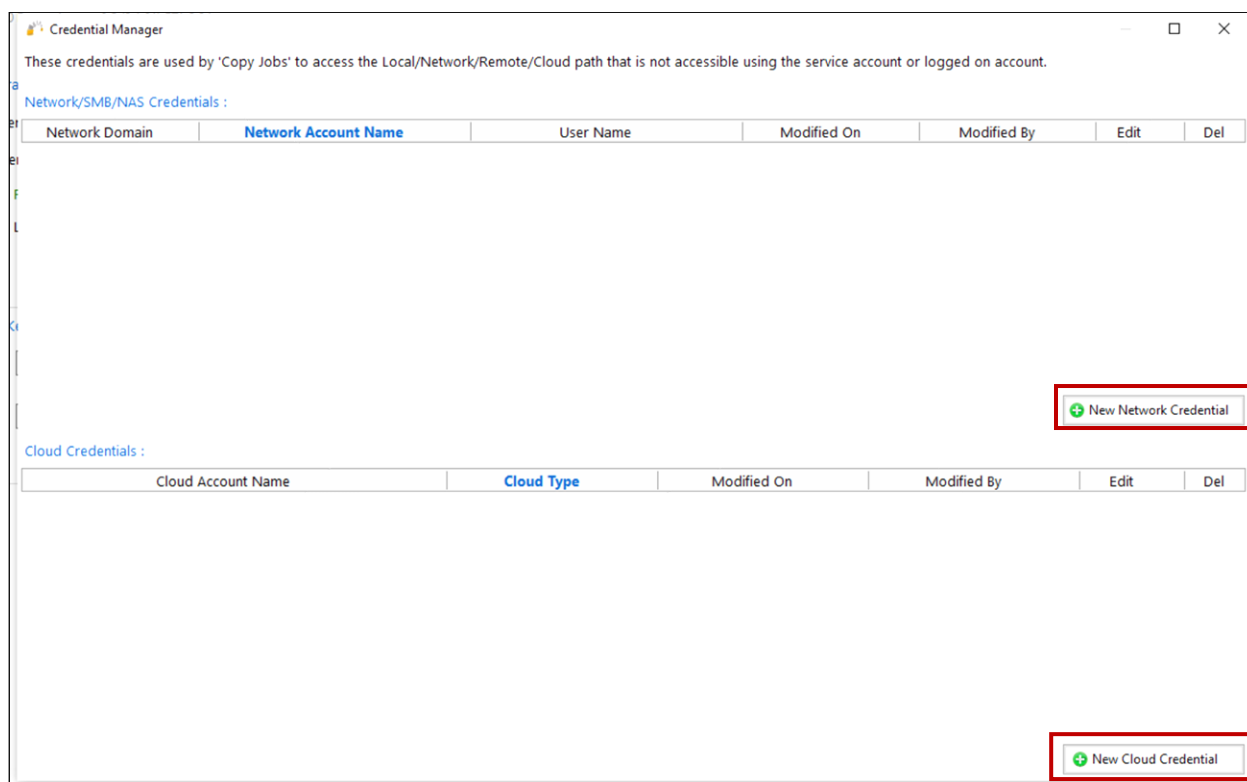
Note: Passwords are fully encrypted for each *service* and *Connect As* account, and the credentials are saved in GS RichCopy 360.

To create a Connect As account, follow these steps:

1. In the GS RichCopy 360 window, select the **Configuration** section.
2. Select the **Credentials** link from the right-side of the screen.



3. From the Credentials Manager, select the **New Network Credential** button or the **New Cloud Credential** button, depending on which type of credential you want to add. See the [Adding a Network Credential](#) and the [Adding a Cloud Credential](#) for additional information.



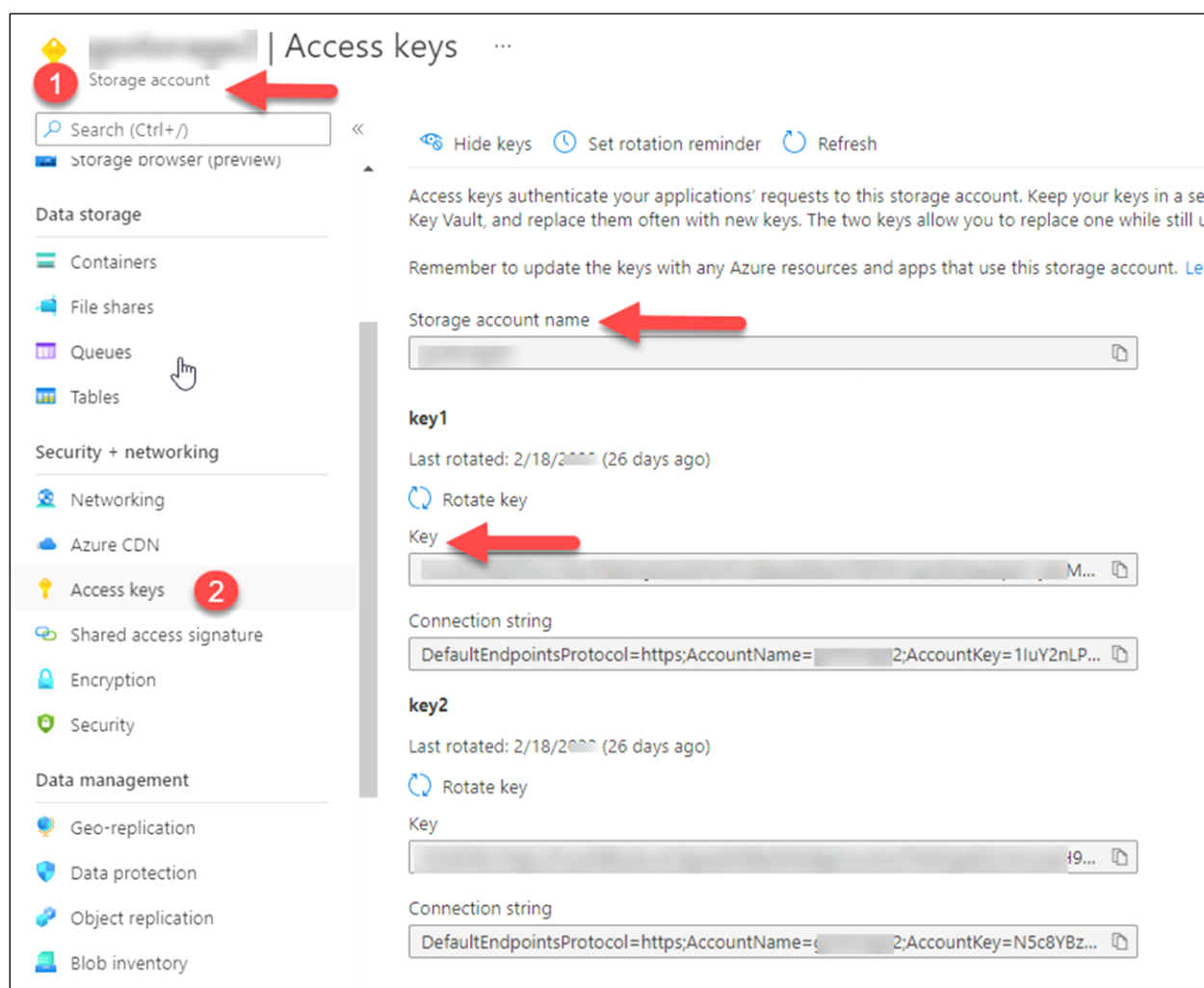
Note: Windows requires the WebDAV Client Feature to be installed to work with Azure Files.

Note: Passwords are fully encrypted, and the credentials are saved in the GS RichCopy 360 database.

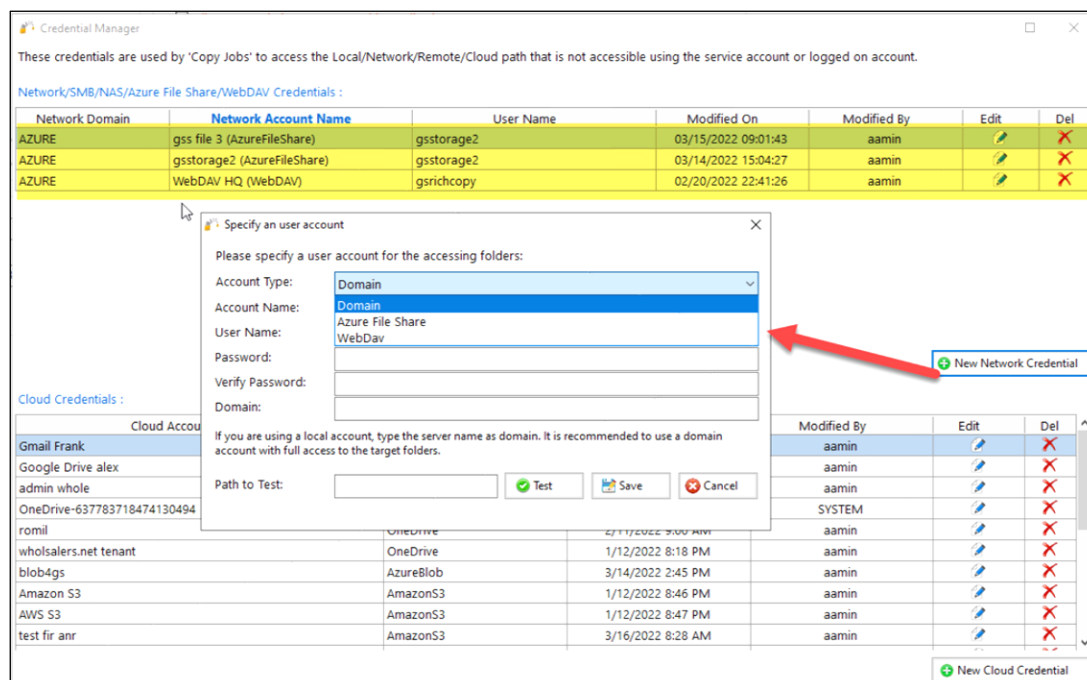
Adding a Network Credential

Use the **New Network Credential** button to add network credentials for the following network connections.

- Network File Shares – This is normally used for Windows file shares, NAS devices, etc.
- Azure Files – Connect to Azure Files using a domain user account but only if Azure Files is domain joined to Active Directory or use Access Keys from the storage account as shown in the image below.



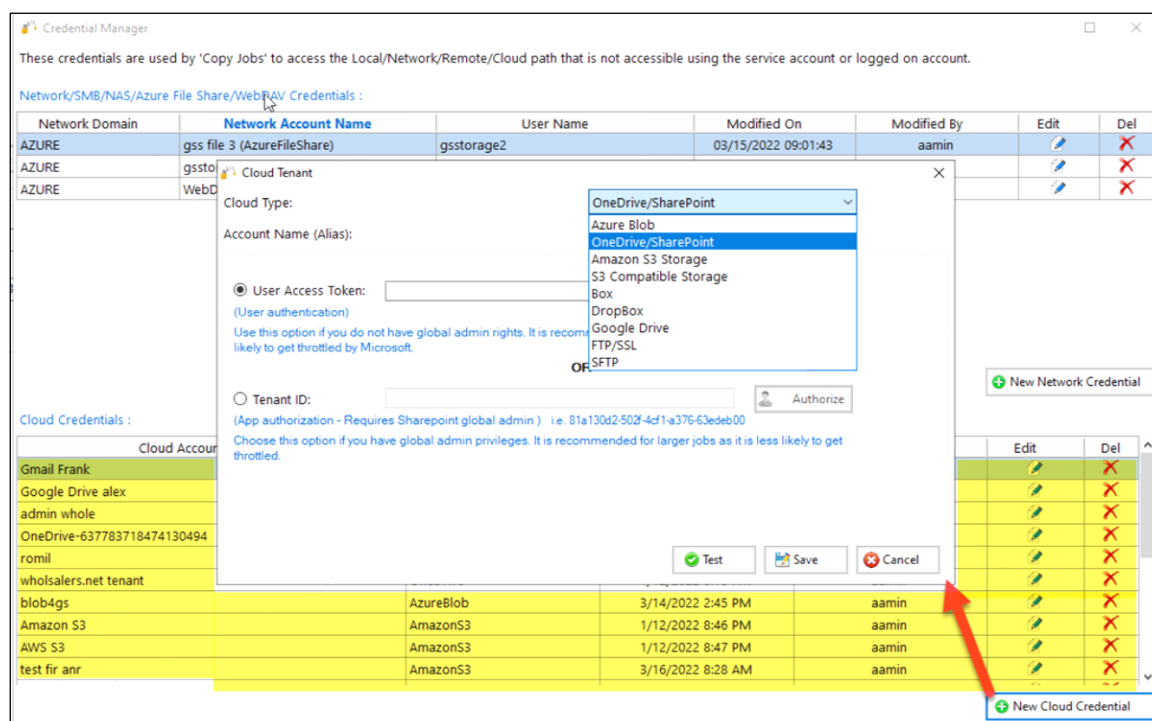
Windows requires the WebDAV Client feature to be installed for the Azure Files functionality to work correctly. See an image of a sample Network Configuration below.



Adding a Cloud Credential

Use this button to add and maintain specific cloud accounts, currently available in GS RichCopy 360. Note that new providers are periodically being added to the list.

Each cloud provider needs its credentials and must also be provisioned on the cloud provider side prior to connecting via our GS RichCopy 360.



Note: S3 Compatible Storage uses S3 standards to connect to other providers. The following items are required: secret key, password key, and an S3 endpoint.

Note: If an S3 endpoint does not work, append a star next to the S3 Endpoint as in the example below. (This is required for just a few S3 endpoints).

Cloud Tenant

Cloud Type: S3 Compatible Storage

Account Name (Alias): FileBase

Secret Key ID: *****852

Secret Password: *****

Server Url: *https://s3.filebase.com

example:
<https://s3.us-west-1.wasabisys.com>,
<https://s3.eu-central-003.backblazeb2.com>,
<https://nyc3.digitaloceanspaces.com>,
<https://us-east-1.linodeobjects.com>

Test Save Cancel

Managing Credentials

To manage existing credentials in GS RichCopy 360, complete the following steps:

1. Go to the **Configuration** section.
2. Select the **Credentials** link, located on the right-side of the screen.
3. Select the **Pencil** icon next to the credential that you want to edit or the **large Red X** if you want to delete it. Note that Network credentials are located at the top of the Credential table and the Cloud credentials are located at the bottom of the Credential table.

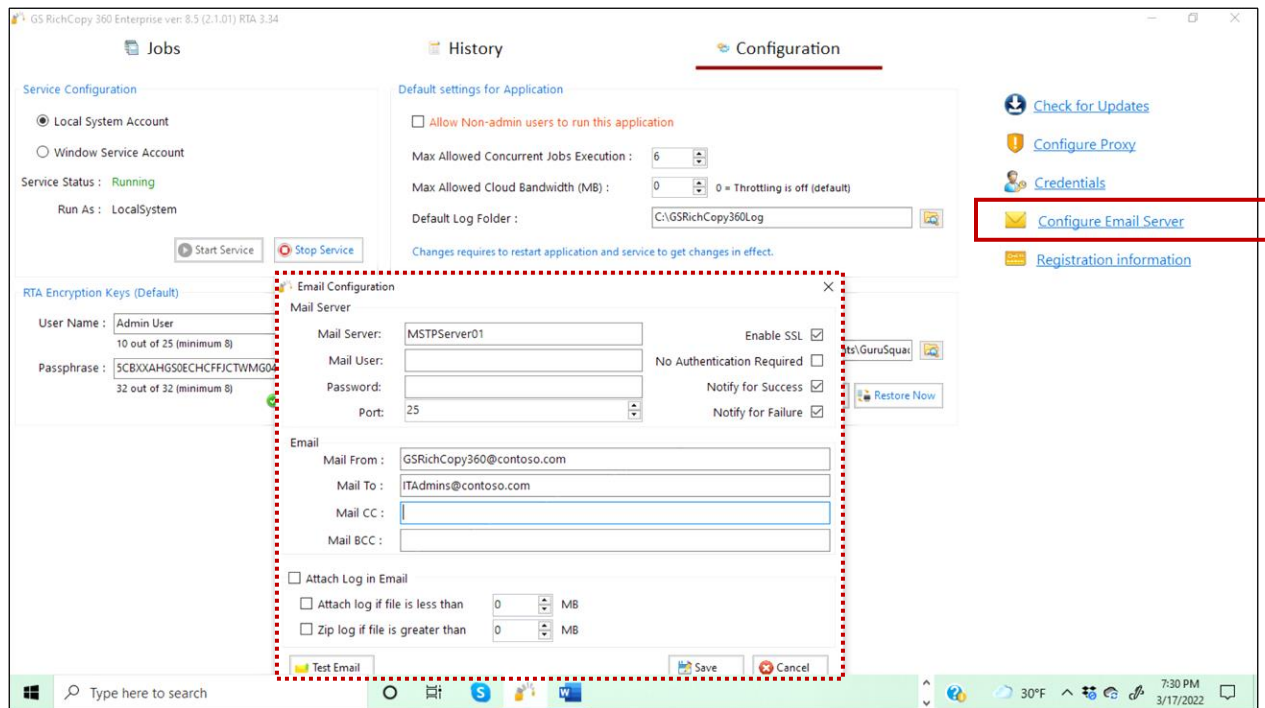
Setting Email Account Configuration

GS RichCopy 360 offers the option to send email notifications once a job completes to alert the user whether the job succeeded or failed. To access the email configuration settings, select **Configure Email Server** from the Configuration section.

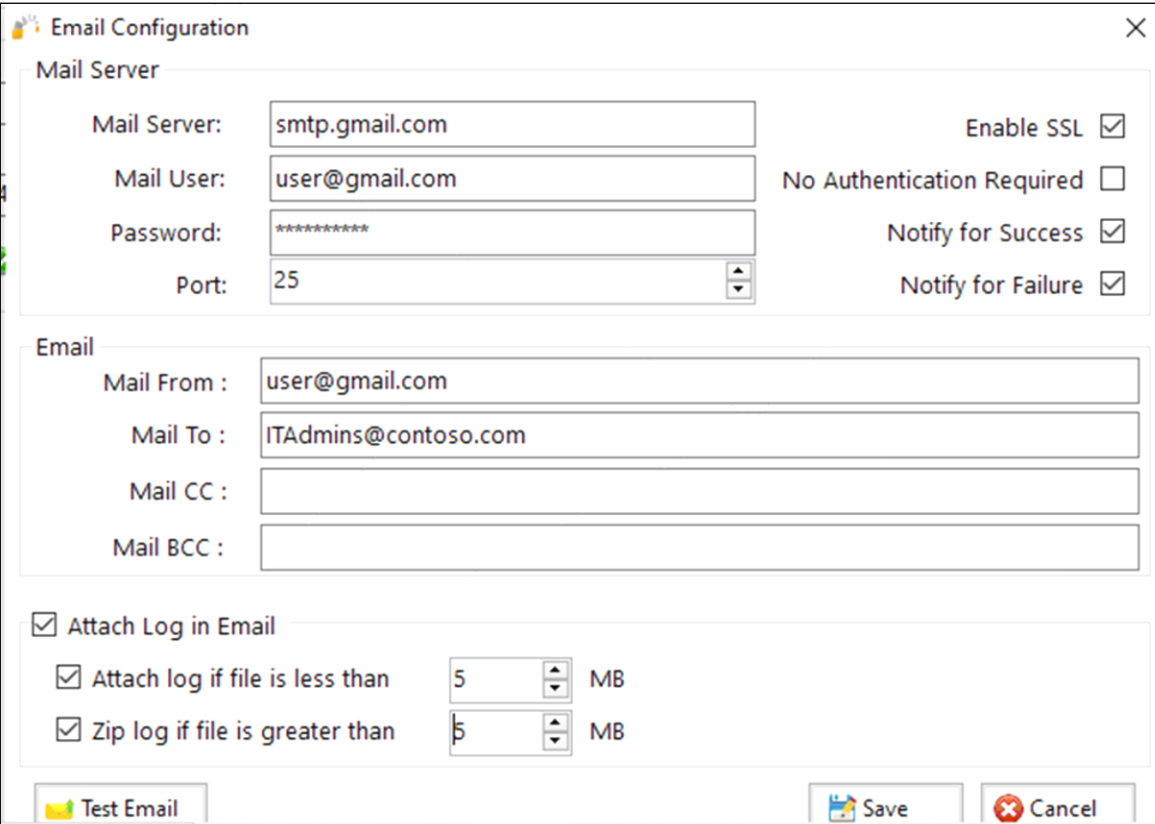
GS RichCopy 360 can use any SMTP server, local, or cloud servers such as Gmail, Hotmail, or Yahoo. Below are two different examples of the configuration.

Note: These settings are inherited on every configured job; the user may also customize recipients for each job.

The following image shows sample settings for an open SMTP Server that requires no authentication.



Note: Make sure your non-authenticated SMTP servers can accept relay requests from the machine or machines hosting GS RichCopy 360 if you select this feature. The image below shows sample settings for use with a Gmail.



Email Configuration

Mail Server

Mail Server: Enable SSL ☒

Mail User: No Authentication Required ☐

Password: Notify for Success ☒

Port: Notify for Failure ☒

Email

Mail From :

Mail To :

Mail CC :

Mail BCC :

☒ Attach Log in Email

☒ Attach log if file is less than MB

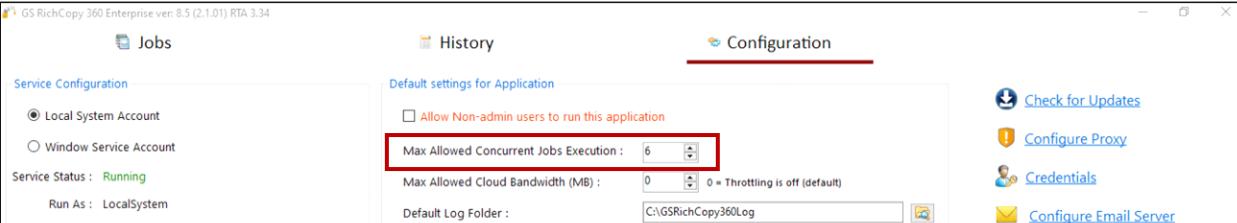
☒ Zip log if file is greater than MB

Note: Environment variables are supported in the From, To, CC, and BCC fields. For more information refer to [Example Section K: Environment Variables](#).

Setting the Maximum Allowed Concurrent Jobs Execution

GS RichCopy 360 can run multiple jobs at the same time. However, running many jobs simultaneously can impact performance and may be difficult to manage. We recommend setting a maximum concurrent job limit.

To set the maximum number of jobs that can run simultaneously, select a number in the **Max Allowed Concurrent Jobs Execution** field. The default value is 6.



GS RichCopy 360 Enterprise ver: 8.5 (2.1.01) RTA 3.34

Configuration

Service Configuration

☒ Local System Account

☐ Window Service Account

Service Status: Running

Run As: LocalSystem

Default settings for Application

☐ Allow Non-admin users to run this application

Max Allowed Concurrent Jobs Execution :

Max Allowed Cloud Bandwidth (MB) : 0 = Throttling is off (default)

Default Log Folder :

[Check for Updates](#)

[Configure Proxy](#)

[Credentials](#)

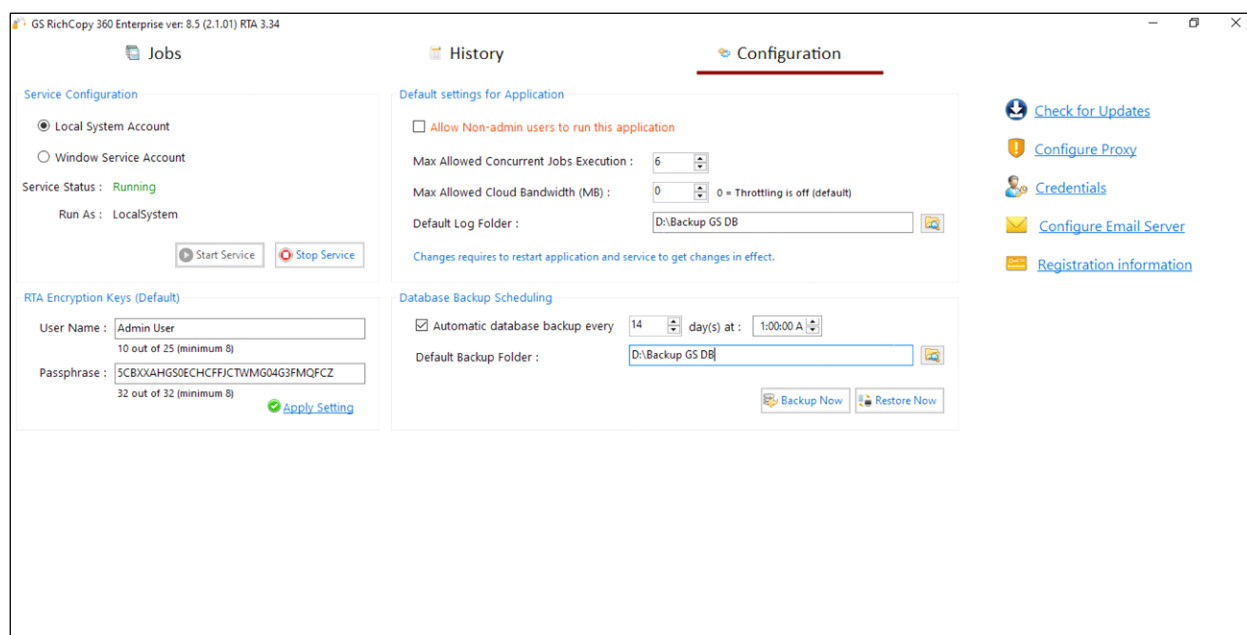
[Configure Email Server](#)

If there are more jobs than the maximum allowed that are trying to run, they will be queued until other jobs are either completed or terminated.

Example: If the maximum allowed concurrent job execution is set to 6, and 8 jobs are trying to run simultaneously, GS RichCopy 360 will allow only 6 jobs to run and the remaining 2 will be queued until 2 of the 6 jobs complete or stop.

Backing up and Restoring the GS RichCopy 360 Database

GS RichCopy 360 saves entire configuration settings, including job definitions, to a single database stored locally on the machine. The database file is called **GSRichCopy360.sdf** and its default location is the **C:\GSRICHCOPY360DB** folder.



Creating a backup

GS RichCopy 360 offers the option to have the database backed up regularly at a specific schedule. By default, this option is not enabled. The database can also be backed-up on-demand by selecting the **Backup Now** button. To set a backup schedule, follow these steps:

1. At the Database Backup Scheduling section, select the **Automatic Database Backup** check box.
2. Select the number of days and the specific time.
Note: If you do not make changes often to the database, it is recommended you space out the number of days to minimize the number of backup files.
3. Select a database **Backup Folder**.
Note: It is highly recommended that the backup location be stored in a different location from where the GS RichCopy 360 currently resides.

Restoring the database

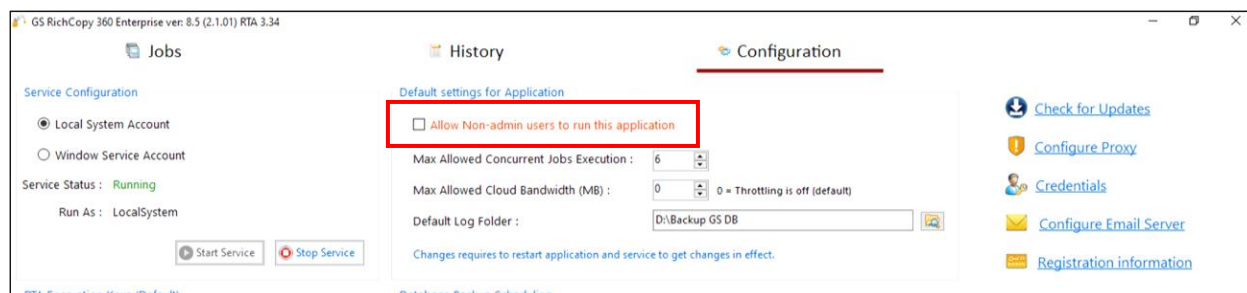
Restoring the database will overwrite everything stored in the current database. To restore the database, select the **Restore Now** button.

WARNING: Restoring the database will overwrite everything (e.g. job definitions, configurations) stored in the current database. The GS RichCopy 360 service must be stopped prior to restoring the database.

Once the database is restored, the GS RichCopy 360 user interface and service must be restarted to reload and reflect the new configurations.

Allowing non-admin users to use GS RichCopy 360

By default, only users with local administrator privileges or those who belong to the local administrator group can run GS RichCopy 360. However, GS RichCopy 360 provides the **Allow Non-admin users to run this application** option to allow non-admin users to use the application.



If this option is selected, users who are not part of the administrator group can open the application and create, delete, modify, and run jobs.

Note: Some features, such as copying open and locked files or copying NTFS permissions, require elevated privileges. Non-admin users would not be able to use these features. However, they can still use these features if they run the jobs as a service, which means it is running under an elevated privileged account.

Managing and Creating Jobs

GS RichCopy 360 offers a simple yet intuitive design that makes it easy to manage and create jobs. All the options are available in a single viewer pane so that any options can be easily selected. Moreover, our job setup wizard can walk the user through the most commonly used options.

To manage and create jobs, select the **Jobs** section in the GS RichCopy 360 window.

Jobs								
Job Id	Status	Job Name	Source	Destination	Last Run	Next Run	Progress	Log File

Jobs Section Overview

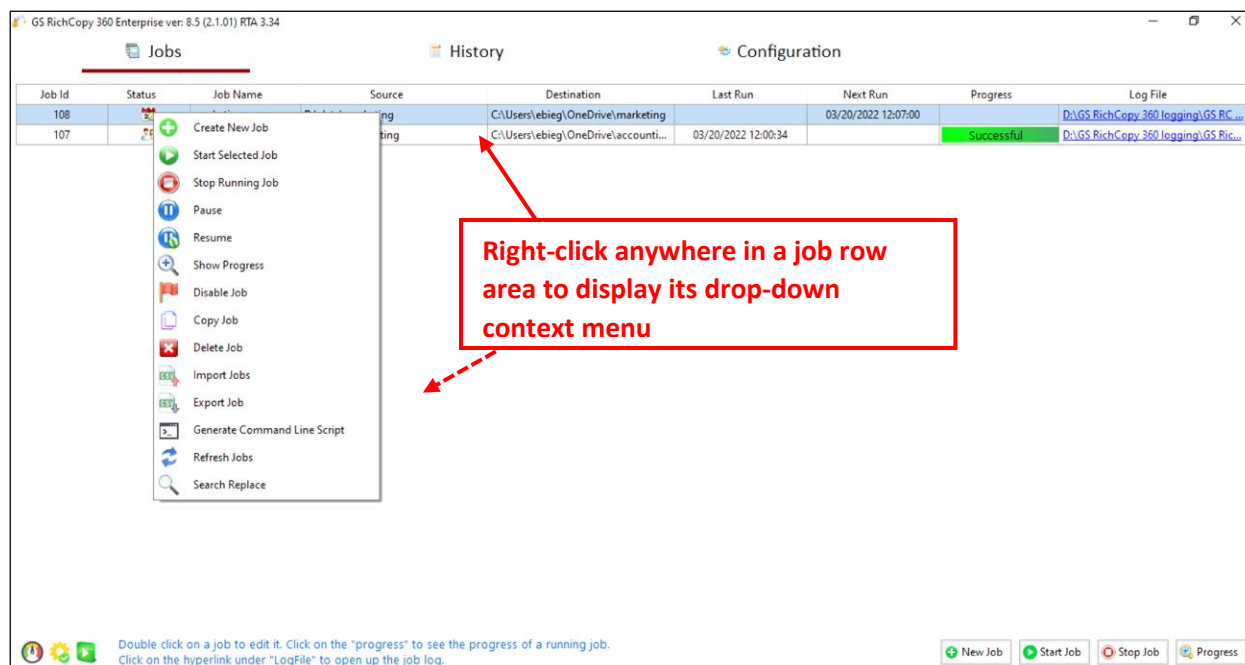
After selecting the **Jobs** section, the window displays a list of all the defined jobs along with their status (running, completed, queued up) and other configured settings for each job, such as email notification settings.

Job Id	Status	Job Name	Source	Destination	Last Run	Next Run	Progress	Log File
108	Success	marketing copy	D:\data\marketing	C:\Users\ebieg\OneDrive\marketing	03/20/2022 12:07:00			D:\GS RichCopy 360 logging\GS RC...
107	Success	accounting	D:\data\accounting	C:\Users\ebieg\OneDrive\accounti...	03/20/2022 12:00:34		Successful	D:\GS RichCopy 360 logging\GS Ric...

Double click on a job to edit it. Click on the "progress" to see the progress of a running job. Click on the hyperlink under "LogFile" to open up the job log.

New Job Start Job Stop Job Progress

To highlight a job, select the specific job and right-click to choose an option from the drop-down menu to control the job. You may right-click the job to initiate the same actions in addition to copying an existing job.



Tip: To duplicate an existing job, right-click the job you want to duplicate and select **Copy Job** from the drop-down menu. This will create an exact copy of the job but in a disabled state. The new copy will have the same name as the original job but will be preceded with **Copy of** in the job name.

Job Status Legend

The status of each job is shown in the **Status** column of the user interface. Users can easily identify the status of a job by looking at the presented icon corresponding to a specific job. Below are the available icons and their corresponding descriptions.

Legend	Description
	Job is scheduled to run as a service. Application does not need to be open to run.
	Job is scheduled to run as a user. Application must be open to run
	Job will need to be run manually.
	Job is disabled
	Job was scheduled to run and completed. No future re-runs scheduled.
	The job is running in simulation mode (what if). This legend would show next to any of the other legends when simulation option is selected.

Job Progress Indicators

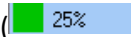
Because jobs run independently of one another, each job is presented with its own progress bar. The progress bars display a job's current state, or its recent completion result in the event it is no longer running.

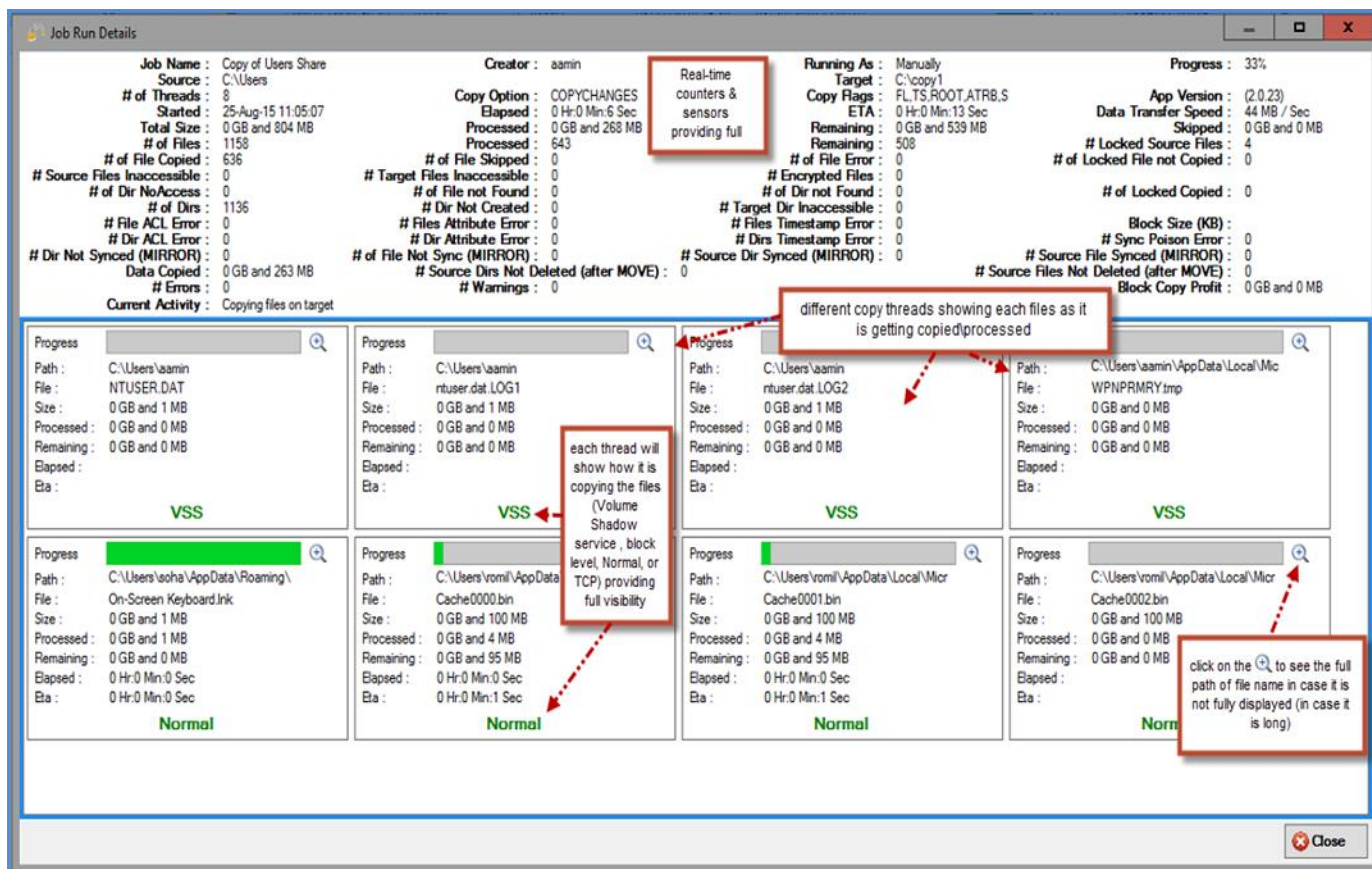
As the progress bar runs, it will show **green** if it does not encounter errors (25%). If it encounters a warning, it will change to **orange**, then turns **red** if it encounters any errors. This is useful if there are

multiple jobs running and an administrator is performing a quick check on the status of the jobs. If the job indicators all show green, it is an indication that everything is running without error.

STATE	DESCRIPTION
Running	Job is gathering all the information to start the job operation. The gathering process is fully multi-threaded.
Stopped	The job has been terminated by the user or by some other intervention (Service stopped, etc.).
Error	Job experienced a problem. This could mean it completed with errors or it did not fully complete (i.e. target is full; source or target is down).
Queued	Job is waiting in line for its turn to run. Check Max Allowed Concurrent Job Execution in the event it reached its limit at the current state.
Completed/ Successful	Job has completed successfully with no errors to report.
Progress %	As the job runs, the percentage of the progress is displayed showing the overall progress of the job. Click it to see the full details regarding its progress. Users can see the detailed progress for individual jobs by clicking the Progress button at the bottom part of the window.

Job Run Details Screen

When a job is shown in a running state in the main Jobs window, users can select the progress bar ( 25%) next to a running job or click the **Progress** button at the bottom-right of the Jobs window to see the full details of a job's progress. If a job is set to multi-thread (highly recommended), each copy thread and its progress will be shown as well.



Job Run Details

Job Name: Copy of Users Share
Source: C:\Users
of Threads: 8
Started: 25-Aug-15 11:05:07
Total Size: 0 GB and 804 MB
of Files: 1158
of File Copied: 636
Source Files Inaccessible: 0
of Dir NoAccess: 0
of Dirs: 1136
File ACL Error: 0
Dir ACL Error: 0
Dir Not Synced (MIRROR): 0
Data Copied: 0 GB and 263 MB
Errors: 0
Current Activity: Copying files on target


Creator: aamin
Copy Option: COPYCHANGES
Elapsed: 0 Hr:0 Min:6 Sec
Processed: 0 GB and 268 MB
of File Skipped: 0
Target Files Inaccessible: 0
of File not Found: 0
Dir Not Created: 0
Files Attribute Error: 0
Dir Attribute Error: 0
of File Not Sync (MIRROR): 0
Source Dirs Not Deleted (after MOVE): 0
Warnings: 0

Running As: Manually
Target: C:\copy1
Copy Flags: FLTS.ROOT.ATTRB.S
ETA: 0 Hr:0 Min:13 Sec
Remaining: 0 GB and 539 MB
Remaining: 508
of File Error: 0
Encrypted Files: 0
of Dir not Found: 0
Target Dir Inaccessible: 0
Files Timestamp Error: 0
Dirs Timestamp Error: 0
Source Dir Synced (MIRROR): 0

Progress: 33%
App Version: (2.0.23)
Data Transfer Speed: 44 MB / Sec
Skipped: 0 GB and 0 MB
Locked Source Files: 4
of Locked File not Copied: 0
of Locked Copied: 0
Block Size (KB): 0
Sync Poison Error: 0
Source File Synced (MIRROR): 0
Source Files Not Deleted (after MOVE): 0
Block Copy Profit: 0 GB and 0 MB

different copy threads showing each files as it is getting copied/processed

each thread will show how it is copying the files (Volume Shadow service, block level, Normal, or TCP) providing full visibility

click on the  to see the full path of file name in case it is not fully displayed (in case it is long)

Progress
 Path: C:\Users\saamin
 File: NTUSER.DAT
 Size: 0 GB and 1 MB
 Processed: 0 GB and 0 MB
 Remaining: 0 GB and 0 MB
 Elapsed: 0 GB and 0 MB
 Eta: 0 GB and 0 MB
VSS

Progress
 Path: C:\Users\saamin
 File: ntuser.dat.LOG1
 Size: 0 GB and 1 MB
 Processed: 0 GB and 0 MB
 Remaining: 0 GB and 0 MB
 Elapsed: 0 GB and 0 MB
 Eta: 0 GB and 0 MB
VSS

Progress
 Path: C:\Users\saamin
 File: ntuser.dat.LOG2
 Size: 0 GB and 1 MB
 Processed: 0 GB and 0 MB
 Remaining: 0 GB and 0 MB
 Elapsed: 0 GB and 0 MB
 Eta: 0 GB and 0 MB
VSS

Progress
 Path: C:\Users\saamin\AppData\Local\Mic
 File: WPNPRMY.tmp
 Size: 0 GB and 0 MB
 Processed: 0 GB and 0 MB
 Remaining: 0 GB and 0 MB
 Elapsed: 0 GB and 0 MB
 Eta: 0 GB and 0 MB
VSS

Progress
 Path: C:\Users\saamin\AppData\Roaming\
 File: On-Screen Keyboard.lnk
 Size: 0 GB and 1 MB
 Processed: 0 GB and 0 MB
 Remaining: 0 GB and 0 MB
 Elapsed: 0 Hr:0 Min:0 Sec
 Eta: 0 Hr:0 Min:0 Sec
Normal

Progress
 Path: C:\Users\saamin\AppData
 File: Cache0000.bin
 Size: 0 GB and 100 MB
 Processed: 0 GB and 4 MB
 Remaining: 0 GB and 95 MB
 Elapsed: 0 Hr:0 Min:0 Sec
 Eta: 0 Hr:0 Min:1 Sec
Normal

Progress
 Path: C:\Users\saamin\AppData\Local\Micr
 File: Cache0001.bin
 Size: 0 GB and 100 MB
 Processed: 0 GB and 4 MB
 Remaining: 0 GB and 95 MB
 Elapsed: 0 Hr:0 Min:0 Sec
 Eta: 0 Hr:0 Min:1 Sec
Normal

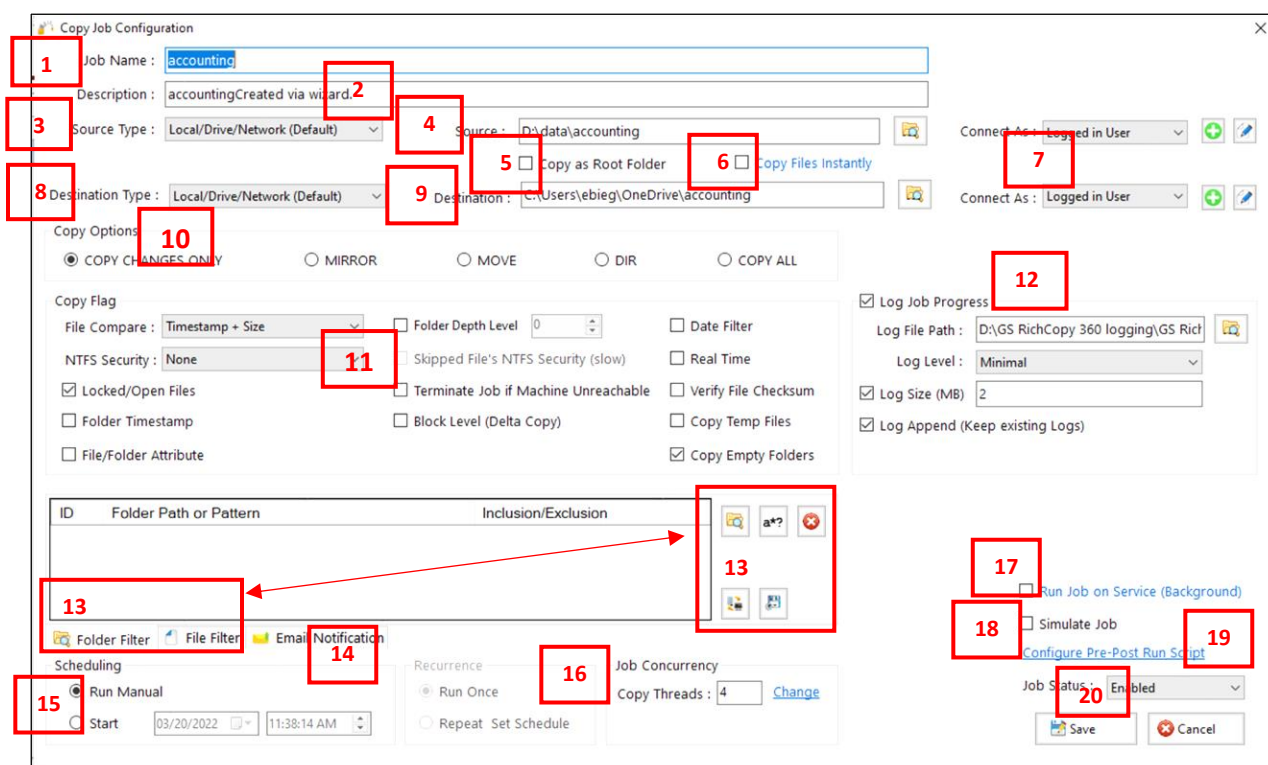
Progress
 Path: C:\Users\saamin\AppData\Local\Micr
 File: Cache0002.bin
 Size: 0 GB and 100 MB
 Processed: 0 GB and 0 MB
 Remaining: 0 GB and 0 MB
 Elapsed: 0 GB and 0 MB
 Eta: 0 GB and 0 MB
Normal

Copy Job Configuration Window

GS RichCopy 360 offers a single view pane, the Copy Job Configuration window, when viewing an existing job, modifying an existing job, or creating a new job without the job wizard (for advanced users). The window is very rich in terms of features and options, while being simple and intuitive.

You can access the **Copy Job Configuration** window in two different ways:

- Double-clicking on an existing job or selecting the edit button (✎) corresponding to that specific job.
- Creating a job using a blank job's details. This option is selected using the Job Schedule Wizard. For more information, refer to [Error! Reference source not found.](#) Using the Job Schedule Wizard.



The following section describes the items displayed in the Copy Job Configuration window.

1 – Job Name

The Job Name is used to identify the job. The name must be unique and descriptive, such as Accounting Data or Copy Email Archive, so that other users or administrators can understand the purpose of the job. Job names are referenced in the Job Status section and in email notifications (if turned on).

2 – Description

The Description field is available to enter a meaningful description for a job as it may be helpful to determine the purpose of a job in a situation where there may be two similarly named jobs.

3 – Source Type

The available source types vary between the Enterprise and the Standard version of the GS RichCopy 360 application.

Enterprise Version

The available source types in the GS RichCopy 360 *Enterprise* version consist of the following choices:

- Local Drive/Network (Default)
- Azure File Share
- WebDAV
- Azure Blob
- OneDrive/SharePoint
- Amazon S3 Storage
- S3 compatible Storage
- Box
- Dropbox
- Google Drive
- FTP/SSL
- SFTP

For more information on working with cloud sources see [Example Section E - Copying to the Cloud](#)

Standard Version

The available source types in the GS RichCopy 360 Standard version are local and network drives including FTP/SFTP, and file shares hosted on Windows or NAS devices.

4 – Source

This is the path of the folder from where you want to copy. The source will always point to a folder and not to a file.

If your source is a cloud source, you will need to create a *Connect As* account prior to specifying the source in this field.

Note: The Path variable is supported in this field. For more information, refer to [Example Section K - Environment Variables](#)




5 – Copy as Root Folder

If the **Copy as Root Folder** option is selected, it will create the source root folder and its contents in the destination folder. If this is not selected, it will copy only the contents of the root folder to the destination.




6 – Copy Files Instantly

If you enable this option, GS RichCopy 360 will start the replication or movement before it calculates the total amount of data being replicated or moved. The progress percentage bar will automatically adjust upwards or downwards until the total calculation is complete. We recommend this option if the source has more than 500,000 files and folders or the source has high latency. Disabling this option may slow the start of the replication or movement but will provide a more accurate percentage from the beginning.

7 – “Connect As” for Source and Destination

Source :  Connect As : Logged in User  

☐ Copy as Root Folder ☐ [Copy Files Instantly](#)


Destination :  Connect As : Logged in User  

This is the area where account information can be provided to assist with connecting to the specified selection in the Source and Destination fields.

The Enterprise version of GS RichCopy 360 allows for login information to be specified for various cloud providers. While the Standard version allows for login information for local and network drives including FTP/SFTP, and file shares hosted on Windows or NAS devices.

Note that the **Connect As** screens will vary based on the Source and Destination type selected. For additional information on *Connect As* accounts, refer to [Creating Connect As Accounts](#)

When the Source or Destination is a Local or a Network account, the following screen will be displayed:

 Specify an user account ✕

Please specify a user account for the accessing folders:

Account Type: Domain

Account Name:




User Name:

Password:

Verify Password:

Domain:

If you are using a local account, type the server name as domain. It is recommended to use a domain account with full access to the target folders.

Path to Test:   

When the Source or Destination is a cloud tenant, such as Amazon S3 Storage, the following screen will be displayed:

The screenshot shows a dialog box titled "Cloud Tenant" with a close button (X) in the top right corner. The "Cloud Type:" dropdown menu is set to "Amazon S3 Storage". Below it is a text input field for "Account Name (Alias)". Further down are two more text input fields: "Secret Account Name:" and "Secret Password:". At the bottom right, there are three buttons: "Test" (with a green checkmark icon), "Save" (with a floppy disk icon), and "Cancel" (with a red X icon).

When the Source or Destination is OneDrive/SharePoint, the following screen will be displayed:

The screenshot shows a dialog box titled "Cloud Tenant" with a close button (X) in the top right corner. The "Cloud Type:" dropdown menu is set to "OneDrive/SharePoint". Below it is a text input field for "Account Name (Alias)". There are two authentication options. The first option is "User Access Token:" with a radio button selected. It includes a text input field, a "Click on Authenticate" button, and an "Authenticate" button with a user icon. Below this is a blue note: "Use this option if you do not have global admin rights. It is recommended for small to medium sized jobs as it is likely to get throttled by Microsoft." The second option is "Tenant ID:" with a radio button. It includes a text input field and an "Authorize" button with a user icon. Below this is a blue note: "(App authorization - Requires Sharepoint global admin) i.e. 81a130d2-502f-4cf1-a376-63edeb00 Choose this option if you have global admin privileges. It is recommended for larger jobs as it is less likely to get throttled." At the bottom right, there are three buttons: "Test" (with a green checkmark icon), "Save" (with a floppy disk icon), and "Cancel" (with a red X icon).

8 – Destination Type

The available destination types vary between the Enterprise and Standard version of the GS RichCopy 360 application.

Enterprise Version

The Enterprise version of GS RichCopy 360 supports the following destination types:

- Local Drive/Network (Default)
- TCP/RTA — The user can specify a specific port (by default it uses TCP 8008) to transmit data. This option requires a few additional configuration settings, in addition to the installation of a light RTA (Remote Transfer Agent) on the destination computer.
- Azure File Share
- WebDAV
- Azure Blob
- OneDrive/SharePoint
- Amazon S3 Storage
- S3 compatible Storage
- Box
- Dropbox
- Google Drive
- FTP/SSL
- SFTP

Standard Version

There are two ways to copy data in the Standard version of GS RichCopy 360:

- **Normal** — uses SMB to copy data, such as that on \\192.168.0.11\, share, or a local drive, such as D:\target.
- **Cloud** — Use this option when you will be copying to a cloud destination. You will also need to configure the *Connect As* area with the associated account credentials. Note that more cloud providers are in the enterprise version.

The destination is the path of the folder where you want to copy to. This folder will be created if it does not already exist. If the user is using the TCP option of copying data, a job serial number is presented instead of a destination path prompt. For more information, refer to [Creating a TCP Copy Job – Enterprise Only](#)

Note: The Path variable is supported in this field. For more information refer to [Example Section K: Environment Variables](#).

If the user is using the TCP option of copying data, a job serial number is presented instead of a destination path prompt. For more information refer to [Creating a TCP Copy Job – Enterprise Only](#).

9 – Destination

The destination is the path of the folder where you want to copy to. This folder will be created if it does not already exist. If the user is using the TCP option of copying data, a job serial number is presented instead of a destination path prompt. For more information, refer to [Jobs are created as Enabled by](#)

default. This means they can be run on demand or as scheduled jobs. Jobs that are set to disabled will **NOT** run on demand or as scheduled.

If a job is duplicated or copied, the duplicated job will be set to **Disabled** by default.

Jobs			
Job Id	Status	Job Name	Source
107		accounting	D:\data\
111		accounting docs	C:\Users
113		Copy of accountin...	C:\Users
114		Copy of marketing ...	D:\data\
108		marketing copy	D:\data\
110		marketing image fil...	C:\Users

History Section


The History section is accessed from the main menu of the GS RichCopy 360 application. It contains a listing of all previously ran jobs. There is also an option to purge, or delete, all jobs from the history section.

For more information see Example Section H - History Section

History										
History ID	Job Id	Job Name	Start At	Finish At	Run By	Status	Error	Warning	Job Summary	Mail Status
8444	109	marketing images - Deleted	03/26/2022 18:46:02	03/26/2022 18:46:19		Successful			Job Created by : on 26-...	Not attempted
8443	110	marketing image files	03/26/2022 18:46:00	03/26/2022 18:46:17		Successful			Job Created by : on 26-...	Not attempted
8442	107	accounting	03/21/2022 18:54:52	03/21/2022 18:54:55		Successful			Job Created by : on 20-...	Fail
8441	107	accounting	03/21/2022 18:52:16	03/21/2022 18:52:18		Successful			Job Created by : on 20-...	Fail
8440	108	marketing copy	03/20/2022 12:07:00	03/20/2022 12:07:17		Successful			Job Created by : on 20-...	Fail
8439	107	accounting	03/20/2022 12:00:34	03/20/2022 12:00:51		Successful			Leaf Folders to Process : 0Fol...	Fail

Example Section A – Creating a Job Using the Job Schedule Wizard

GS RichCopy 360 offers a simple job schedule wizard. The wizard walks administrators through the most used settings with a full summary of the selected options displayed at the end for confirmation.

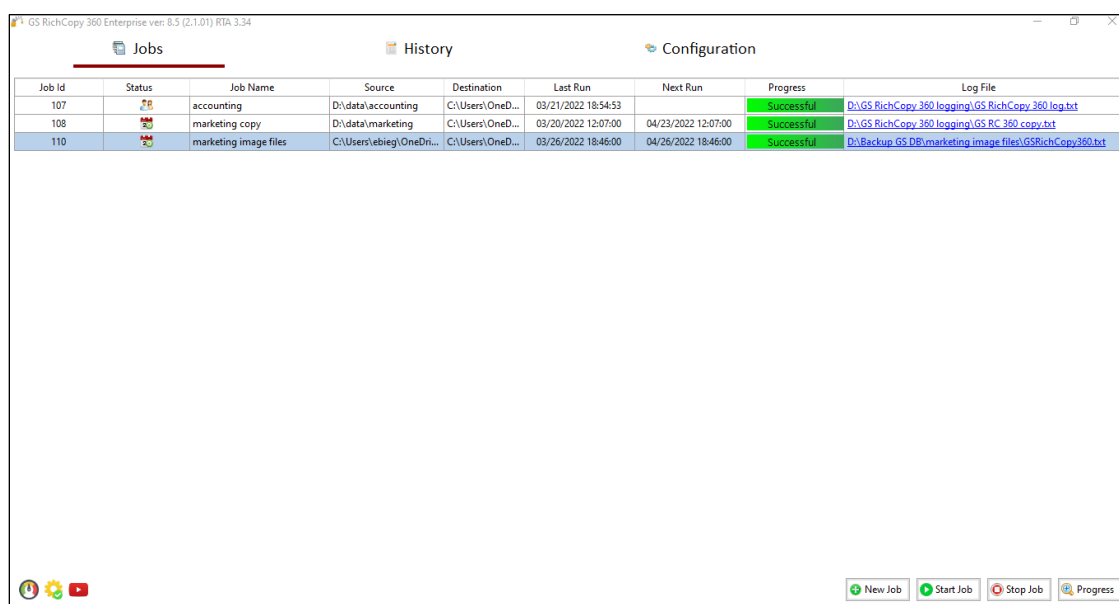
While most of the available options are self-explanatory, help tool tips are displayed next to each setting to further clarify its role, purpose, and how it impacts the job if selected. Tool tips are represented by the question mark icon .

Also, expert users have the option to skip the wizard and jump directly to the detailed job screen and create the job that way.

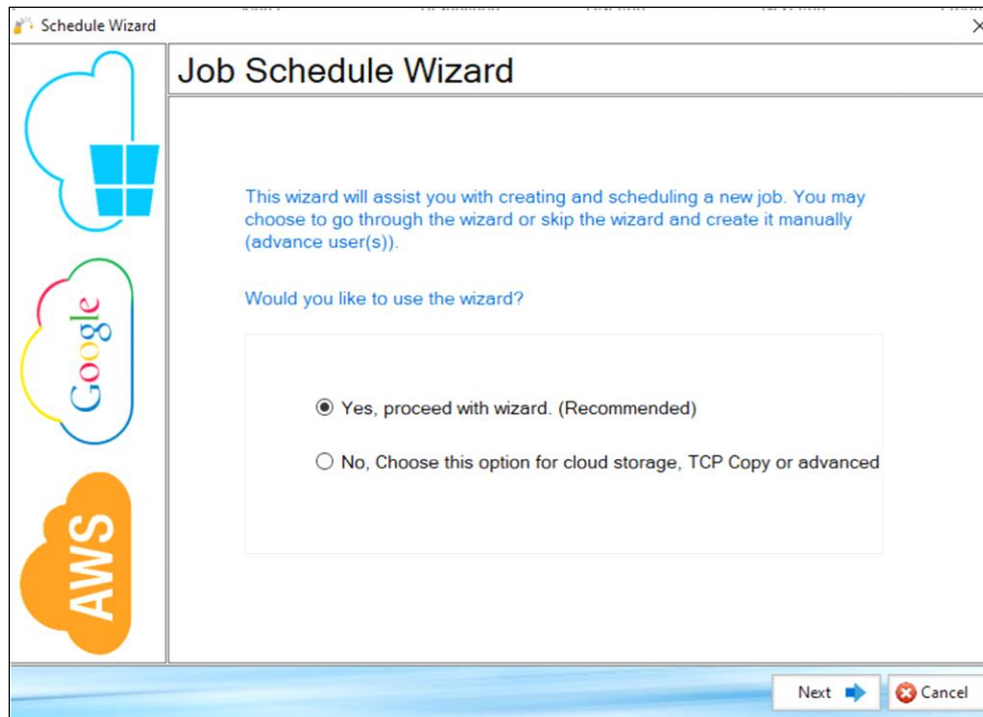
Note: Once a job is created (whether through the wizard or the detailed job's screen), it can always be modified later if the need arises.

To create a job using the Job Schedule Wizard, follow these steps:

1. In the GS RichCopy 360 window, select the **Jobs** section, and then select the **New Job** button to launch the Schedule Wizard.



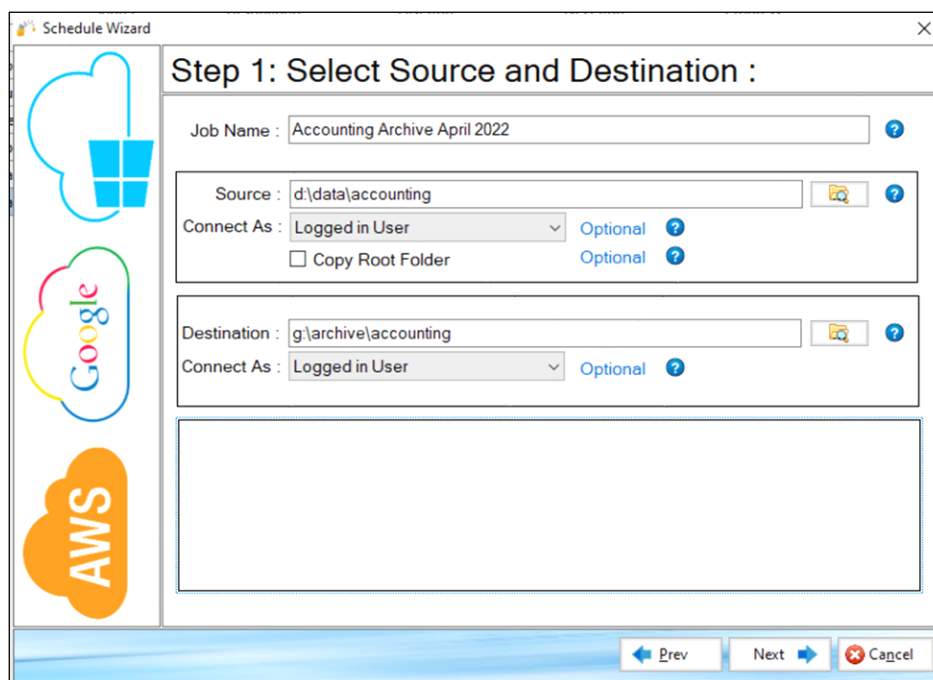
2. Allow the **Yes, proceed with wizard** option.



3. Select **Next**.

Proceed using the job Schedule Wizard, advanced users have the option to skip the wizard.

4. Enter a unique **Job Name**.



5. Select **Next**.
6. Specify **Source** and **Destination** settings.

Schedule Wizard

Step 1: Select Source and Destination :

Job Name : Accounting Archive April 2022

Source : d:\data\accounting

Connect As : Logged in User

☐ Copy Root Folder

Destination : g:\archive\accounting

Connect As : Logged in User

Prev Next Cancel

7. Select **Next**.
8. Select one option from the **Copy Options** section.

Schedule Wizard

Step 2: Set Copy Options :

Copy Options :

- ☒ Copy changed file(s) and folder(s) from source to destination.
- ☐ Mirror file(s) and folder(s) from the source to destination.
- ☐ Move file(s) from source to destination.
- ☐ Copy only the directory structure.
- ☐ Copy all file(s) and folder(s) from source to destination.

Copy Features:

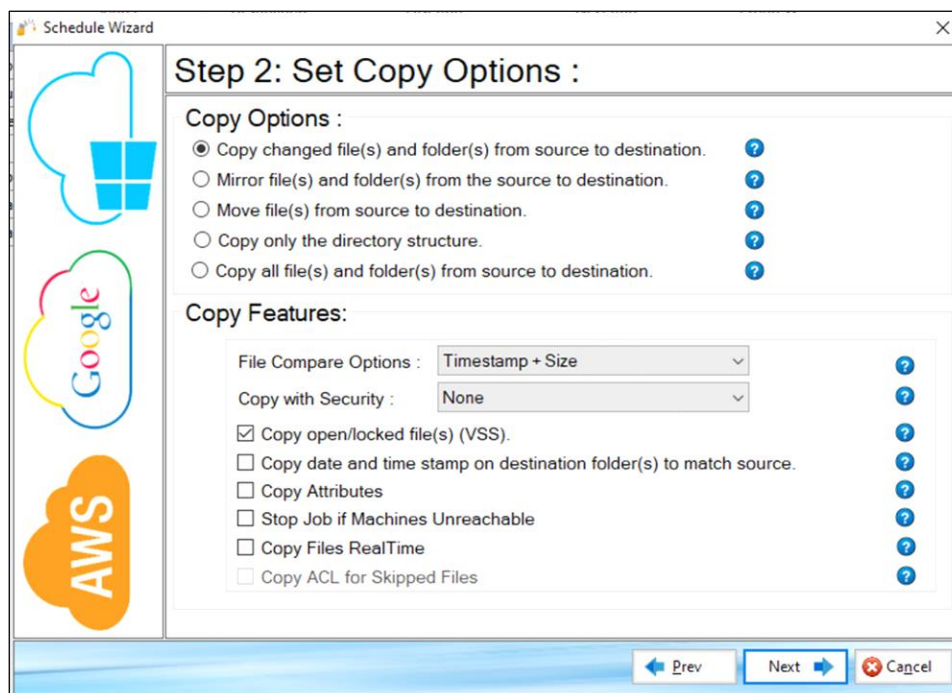
File Compare Options : Timestamp + Size

Copy with Security : None

- ☒ Copy open/locked file(s) (VSS).
- ☐ Copy date and time stamp on destination folder(s) to match source.
- ☐ Copy Attributes
- ☐ Stop Job if Machines Unreachable
- ☐ Copy Files RealTime
- ☐ Copy ACL for Skipped Files

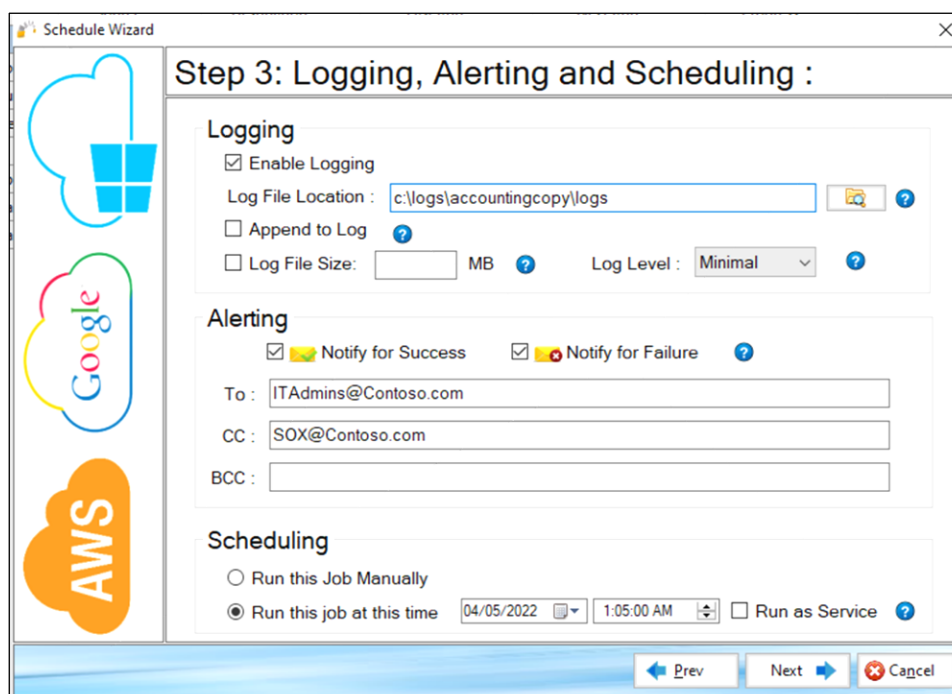
Prev Next Cancel

9. Configure the **Copy Features** section.

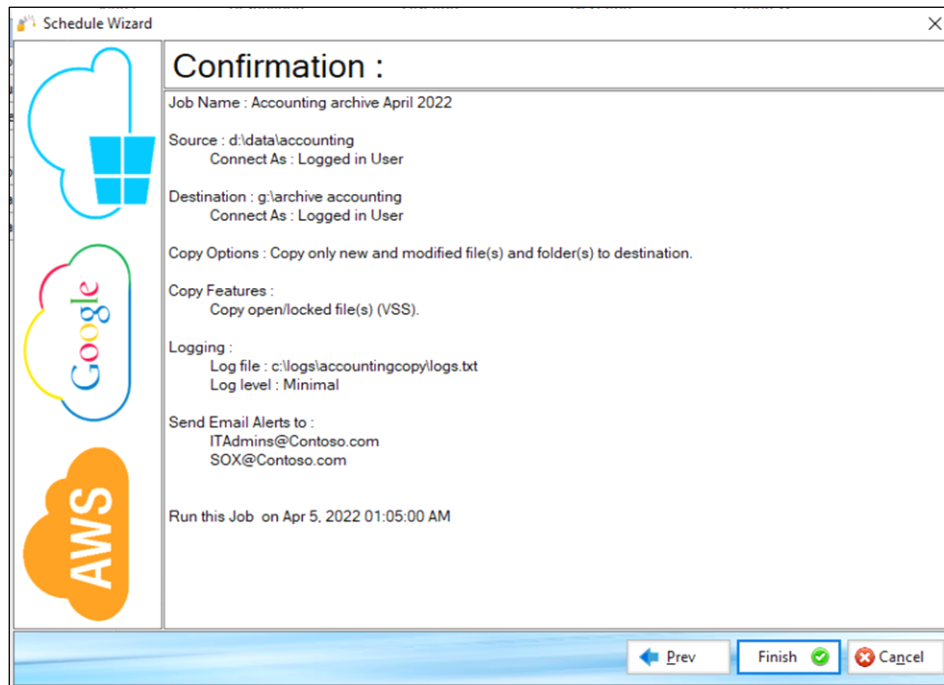


10. Select **Next**.

11. Configure the **Logging**, **Alerting**, and **Scheduling** settings.



12. Select **Next**.



13. Review the job details in the *Confirmation* screen and select **Finish**. Use the **Prev** button to return to a previous screen if you need to make any changes.

The newly created job will be placed in the **Jobs** section of the main menu.

Example Section B – Creating TCP Copy Job – Enterprise Only.

When the destination is a cloud location, you will need to provide the appropriate account information in the *Connect As* section. For additional information refer to [Example Section E - Copying to the Cloud](#).

Note: The Path variable is supported in this field. For more information, refer to [Example Section K – Environment Variables](#).

10 – Copy Options

The following are the copy options that you can use:

- **Copy Changes Only**—copies only files and folders that are new or modified from the source to destination (Deltas only). This option will not delete files from the destination if they do not match in the source. If the destination has the same files, those files will be skipped.
- **Mirror**—mirrors the destination to the source.
Note: If a file is deleted from the source, it will be also be deleted from the target.
- **Move**—moves files and directories (delete from source after copying).
- **DIR**—copies only the directory tree structure.
- **Copy All**—copies all files and folders from source to destination (i.e. overwrite files and folders that match in the destination). This option will overwrite any duplicates of those in the source.

11 – Copy Flag

The following are the available copy options which can be selected:

- **File Compare**—sets the file comparison element to compare whether a file in the source and destination match or if it needs to be overwritten in the destination. The following are the options:
 - **Timestamp + Size** — the comparison uses the last-modified timestamp and the file size. If both, the modified timestamp and file size match, the file will be skipped. If one of the two options returns a mismatch, the source file is copied to the destination.
 - **Modified Timestamp**—comparison is determined by the last-modified time stamp.
 - **File Size** — comparison is determined by the file size
 - **Skip if Destination is Newer** — if the destination file is newer, it will not be overwritten.
 - **Copy Only Newly Created Files** — only newly created files will be copied to the destination.
- **NTFS Security**—copies all NTFS security permissions, including inheritance blocking and advanced ACL settings. If the destination file or folder matches the source except for the NTFS security settings, only the security settings will be replicated over, and it will not trigger a retransmission of the entire file or folder.
Example: If a Word document exists in both source and destination but the permissions are different, GS RichCopy 360 would detect that the files are identical, and it would just replicate the permissions to the destination so that they are completely the same.
 - **None (default)**—No NTFS comparison activity in the copy process.
 - **Folder Only (recommended)**—If the destination folder matches the source except for the NTFS security settings, only the security settings will be replicated over, a retransmission

of the entire folder will not occur. Ensure that NTFS permissions set on the folders in the destination match permissions set in the source as electing this option may increase the duration of the job while it compares the NTFS permission between folders.

- **Files and Folders**—If the destination files and folders match the source except for the NTFS security settings, only the security settings will be replicated over, a retransmission of files and folders will not occur.

Ensure that NTFS permissions set on the files and folders in the destination match permissions set in the source. While setting NTFS permissions on a file is not a recommended practice, this option is available and triggering it may increase the duration of the job while it compares the NTFS permission of every file.

Note that this option must be selected if you also want to enable the **Skipped File's NTFS Security (slow)** copy flag.

The screenshot shows the 'Copy Flag' configuration window. It includes several settings: 'File Compare' is set to 'Timestamp + Size'; 'Folder Depth Level' is set to 0; 'NTFS Security' is set to 'Files and Folders' and is highlighted with a red rectangle; and 'Skipped File's NTFS Security (slow)' is unchecked. There are also checkboxes for 'Locked/Open Files' and 'Terminate Job if Meeting Threshold' at the bottom.

- **Locked/Open Files**—if checked, this option copies locked and open files through VSS (Volume Shadow Service) integration. For the open file copy to work properly, the source has to be on the local computer since GS RichCopy 360 will work seamlessly with VSS to copy the locked or open files.
Note: there may be a locked/open file limitation in some cloud storage environments as those may be imposed by a cloud provider as part of their available feature set/platform.
- **Folder Timestamp**—if this option is selected, the last modified date will be preserved.
Note: there may be a folder timestamp limitation in some cloud storage environments as those may be imposed by a cloud provider as part of their available feature set/platform.
- **File/Folder attribute**—when selected, file and folder attributes will be synchronized from source to the destination. If the destination file or folder matches the source except for the attributes, only the attribute settings will be copied over, and a retransmission of the entire file will not occur.
Note: there may be a folder attribute limitation in some cloud storage environments as those may be imposed by a cloud provider as part of their available feature set/platform.

- **Folder Depth Level**—by default, GS RichCopy 360 copies all folders from the source to destination. Enabling this option instructs GS RichCopy 360 to copy a certain folder depth to the destination. System administrators may enable this option and choose the level of folder depth. Once the checkbox for this option is selected, the depth level counter will be enabled to allow for a selection.

Example: If the Dir Depth Level option is enabled and set at 2 as shown in the image below, GS RichCopy 360 will just copy a folder depth of 2 to the destination.

SOURCE**DESTINATION**

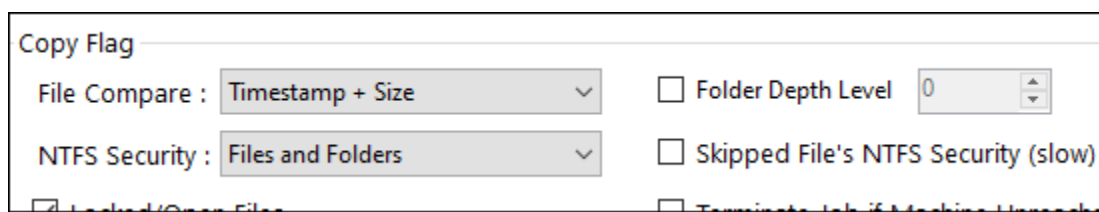
E:\DOCS\doc01\paper01\

.\DOCS\doc01

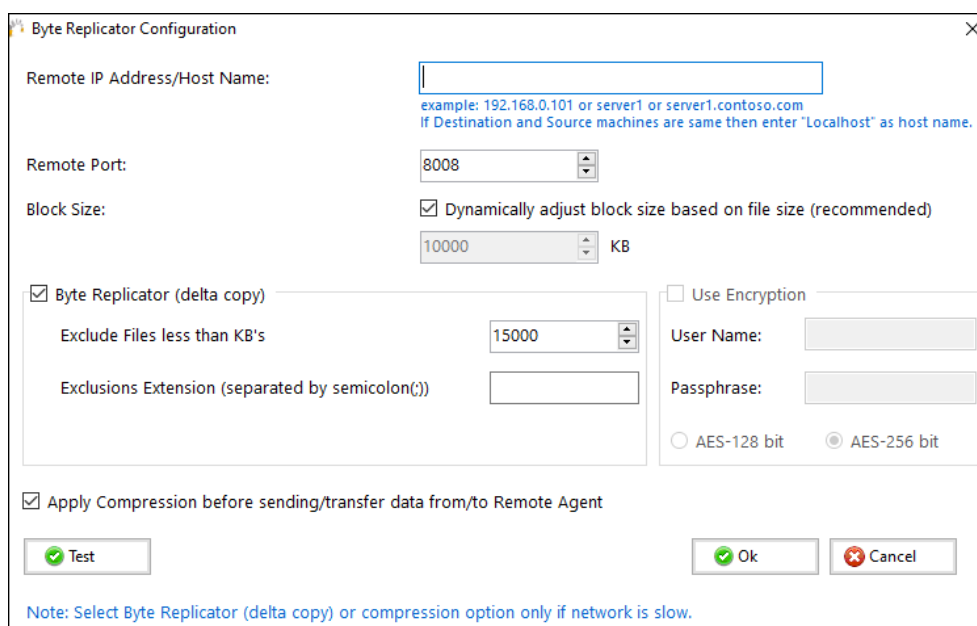
E:\DOCS\doc02\paper02\

.\DOCS\doc02

Skipped Files NTFS Security (Slow) – For this option to be selectable, the NTFS Security copy flag of **Files and Folders** must first be selected. Otherwise, this option will appear as grayed-out.



- **Terminate Job if Machine Unreachable**—highly useful in the event the source or destination machines are unreliable. If this option is selected, GS RichCopy 360 will continue to attempt to copy files instead of timing out. This option can be useful when copying across high latency links or over strained or unreliable WAN connections.
- **Block Level (Delta Copy)**—select this option to enable or disable byte-level replication.



Byte Replicator Configuration

Remote IP Address/Host Name:
example: 192.168.0.101 or server1 or server1.contoso.com
 If Destination and Source machines are same then enter "Localhost" as host name.

Remote Port:

Block Size: ☒ Dynamically adjust block size based on file size (recommended)
 KB

☒ Byte Replicator (delta copy)

Exclude Files less than KB's:

Exclusions Extension (separated by semicolon(;))

☐ Use Encryption

User Name:

Passphrase:

☐ AES-128 bit ☒ AES-256 bit

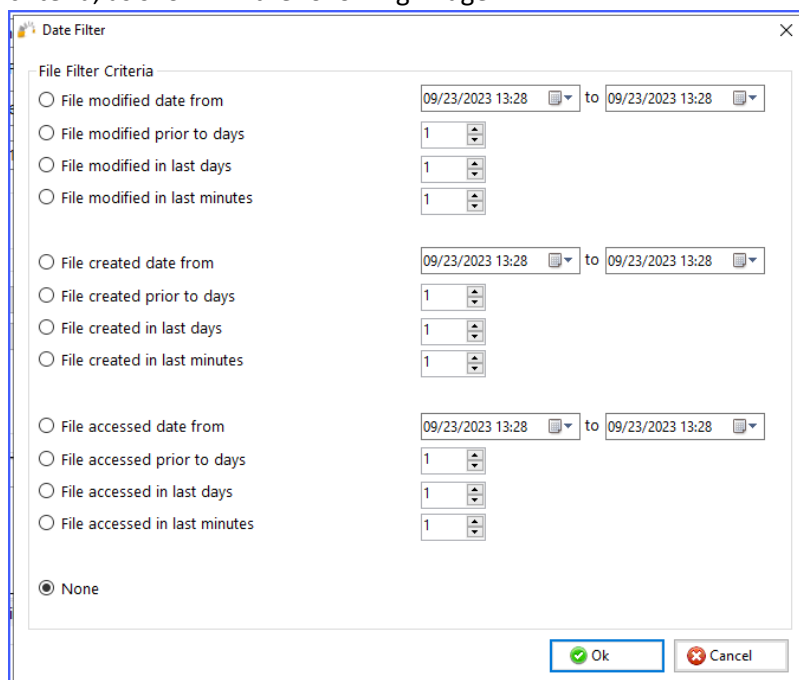
☒ Apply Compression before sending/transfer data from/to Remote Agent

Note: Select Byte Replicator (delta copy) or compression option only if network is slow.

Byte level replication allows to only transfer the changed data in a file when synchronizing, instead of the entire file. This is useful in saving bandwidth especially when dealing with large file sizes.

Note: This option is available only in GS RichCopy 360 Enterprise.

- **Date Filter**—provides the option to copy or move files whose last modified, created, or accessed date are before or within the specified number of days. A date range can also be set as a date filter. Files not matching the date criteria will be excluded. Date filters will not be applied to folders. Once this feature is selected, the user is presented with different options to set the filter date criteria, as shown in the following image.



Date Filter

File Filter Criteria

☐ File modified date from to

☐ File modified prior to days

☐ File modified in last days

☐ File modified in last minutes

☐ File created date from to

☐ File created prior to days

☐ File created in last days

☐ File created in last minutes

☐ File accessed date from to

☐ File accessed prior to days

☐ File accessed in last days

☐ File accessed in last minutes

☒ None

- **Real-time**—if this option is selected, the job will monitor changes to files in real-time and use these changes as triggers for file synchronization. If selected, the user will be presented with a configure option to monitor files ACL and attribute changes. Additionally, there is an option to exclude or include specific file extensions to be used in real-time replication. Note that this option is only available in GS RichCopy 360 Enterprise edition.
- **Verify File Checksum**—select option to verify source file checksum with target file checksum. When this option is selected, a checksum compare is done for every file that is copied. Should there be a checksum mismatch between source file and destination file, then an error is raised in the job log and the job would continue but raise a failed status.
- **Copy Temp Files**—if this option is selected, GS RichCopy 360 skips temporary files by default. System administrators may enable this option to copy temporary files if they deem it is necessary. The following files are deemed as temporary files by Microsoft. Usually, there is no need to copy them:
 - **desktop.ini**—a hidden file used to store information about the arrangement of a Windows folder. Essentially, if the layout or settings for a folder are changed, a desktop.ini file is automatically generated to save those changes.
 - **thumbs.db files**—the hidden file thumbs.db is a database file containing a small JPEG representing each of the thumbnails in a folder. Thumbs.db files are required by Windows to display a thumbnail for each icon. They are created automatically in the same directory as the thumbnails being viewed.
 - **Temp files**—several files may appear on the drive; these files will be in various directories beginning with a tilde character (~) and ending with a (.tmp) extension. These may be temporary files created by Windows that remain on the drive due to an irregular exit from a Windows session.

12 – Logging

The following options are available for the purpose of fine tuning the job log file creation process.

- **Log Job Progress**—job progress is placed in a log file, and this is where you specify the location of the log file.
 - **Log File path**—type a path or browse to the folder where you want the log file to be placed.
- Note:** The Path variable is supported in this field. For more information, refer to [Example Section K: Environment Variables](#).
- **Log Level**—there are 3 types of log levels:
 - **Practical**
 - **Minimal**
 - **Verbose**—lists files that were skipped and copied to their own logs in the same folder containing the log.
- **Log Size (MB)**—if a number is specified (in MB), and once the log file size reaches that limit, the job will start logging to a new file. However, the job will continue to run. This option is useful to avoid large log files.
- **Log Append (Keep existing logs)**—if a log file already exists, logging will just append to the file instead of overwriting it.

Note: If a path is not specified, it will default to c:\gsrichcopy360logs\jobname\gsrichcopy360.log

13A – Folder Inclusion and Exclusion

Depending on the copy job, it is not uncommon to exclude specific subfolders or files from the copy job or the opposite when you want to copy specific folders or files and exclude everything else. The sections below explain the inclusion and exclusion of folders and files. It is important to note that folders and files have their sections, but they behave similarly.

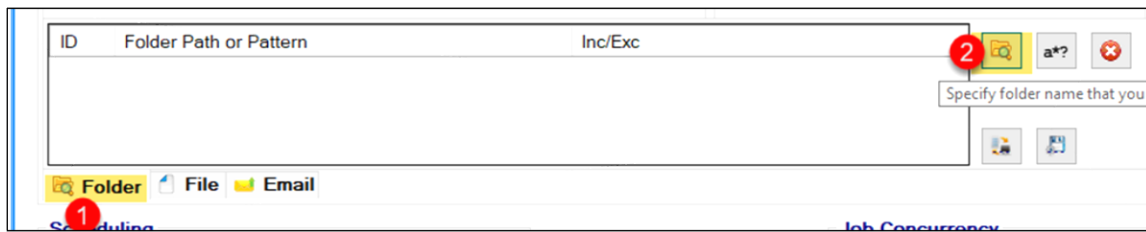
Note: Filters on files and folders are not available in Mirror jobs going to the cloud.

Example procedure based on absolute path

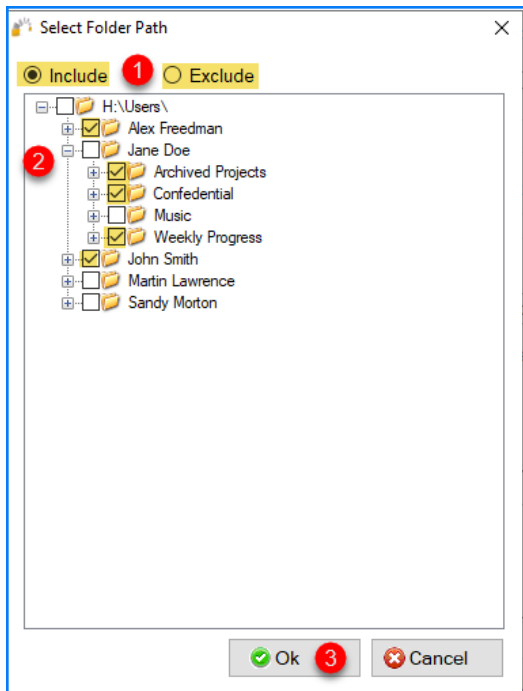
Example procedure based on absolute path

If you have a set folder that you know that you want to be excluded or included, follow the procedure below.

- 1) Click on the **Folder** tab, then click on the eclipse button highlighted below to select the folder you want to include\exclude

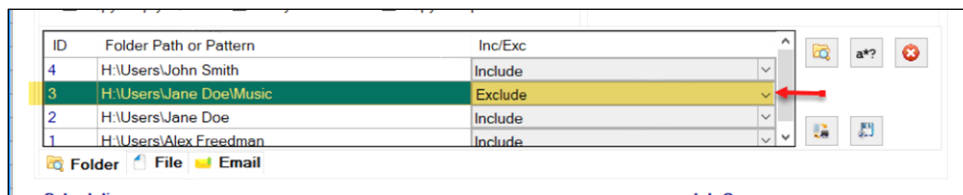


- 2) Choose whether you want to include or exclude folders and then select those folders. The selected folders do not need to be in the same level. You could include\exclude folders in one level and drill down to other folders and include\exclude them.



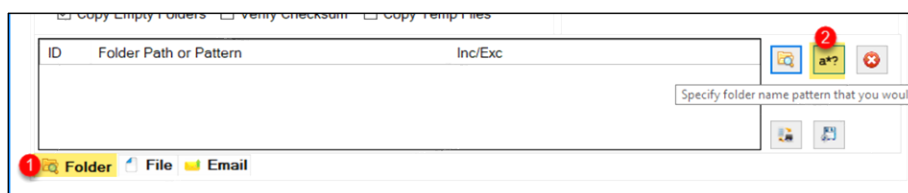
Example procedure based on wildcard, name, and pattern

In most scenarios, you would either want to include or exclude. However, there are times where you may want to include some folder but exclude some subfolders. Don't worry; it's possible. You can select all the folders you want to include and exclude and click OK. Then set the ones you want to exclude as per the example screen below:



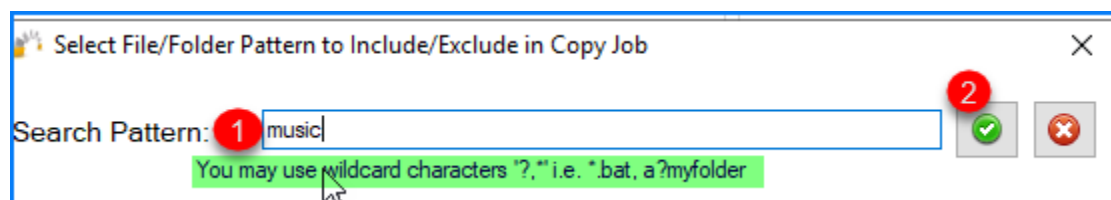
If you wanted to include or exclude folders based on a set criterion such as naming or pattern, you can accomplish this by doing the following:

- 1) Select the pattern\name\wildcard eclipse button.



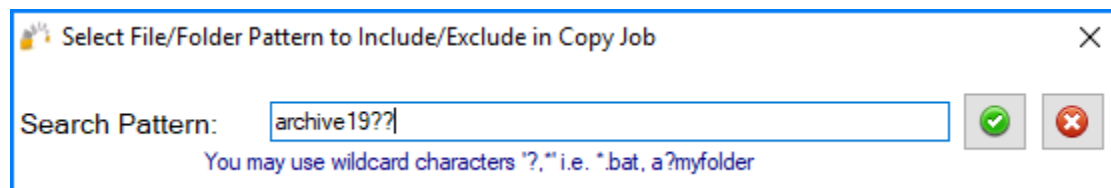
- 2) Type the name, pattern, or wildcard as per below. There are several scenarios:

- a. Specify an Exact match: In the scenario below, we are stating that any folders named “Music” would match.



This would copy any folders with the exact name **music** and not copy the folder named **My Music** or **Music Files**.

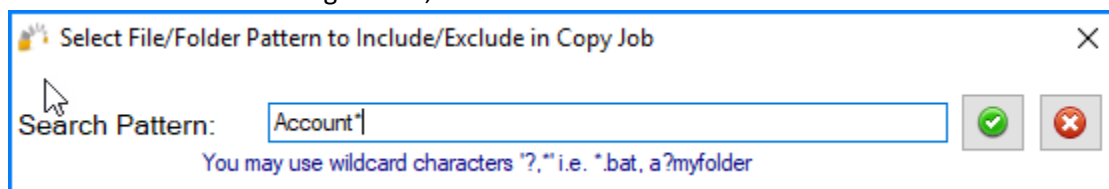
- b. Pattern: In this scenario, we specify the condition to start with “archive19” and end with two characters, such as archive1988 or archive19xx. (Using the ? means any ONE character. Putting ?? means any TWO characters. In the example below, we stated “archive19??”



This would copy any folders that begin with archive19 and end with two characters. So it would copy **archive1999**, **archive19AA** . but It would not copy a folder named **Data**

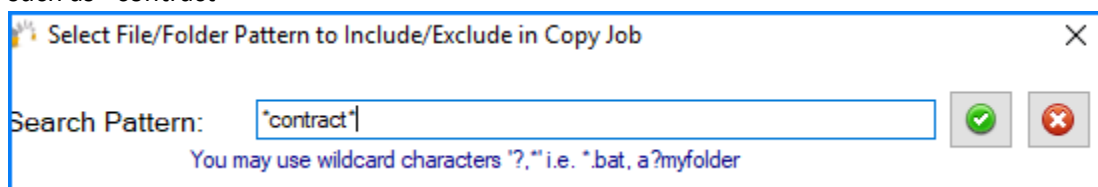
Archive or **Archive Files**

- c. Wildcard: In this scenario, we are specifying the condition to be any folder that begins with “Account”. Putting an asterisk means a wildcard. As long as the folder starts with Account and has something after it, it would be a match.



This scenario would copy folders that begin with Account and has something after it, such as Account Folders, Accounting, and account. It would not copy ABC Account.

- d. Wildcard beginning and end: If we wanted anything that contained a word (does not have to be in the beginning, then you could put an asterisk before and after the word such as *contract*

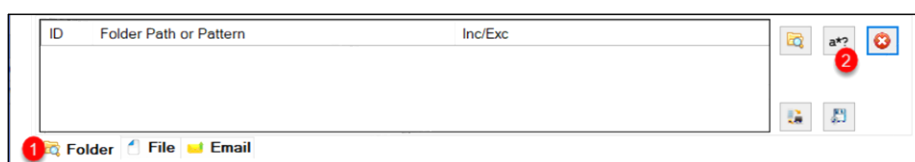


This scenario would copy folders that contain the word Account and has something before it or after it, such as **Account Folders**, **Accounting**, **Account**, and **ABC account Files**.

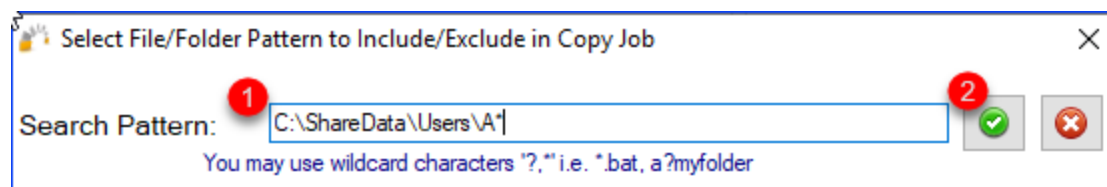
Example procedure based on path and wildcard

There is a scenario where you want to include only folders from a specific folder starting with a particular letter or string. A typical scenario that we often see is when an administrator wants to copy users home drives but wants to do it in batches. For instance, copy only home drives for users that begin with the letter ‘A’. Below is an example of this scenario

- 1) Select the pattern\name\wildcard eclipse button.



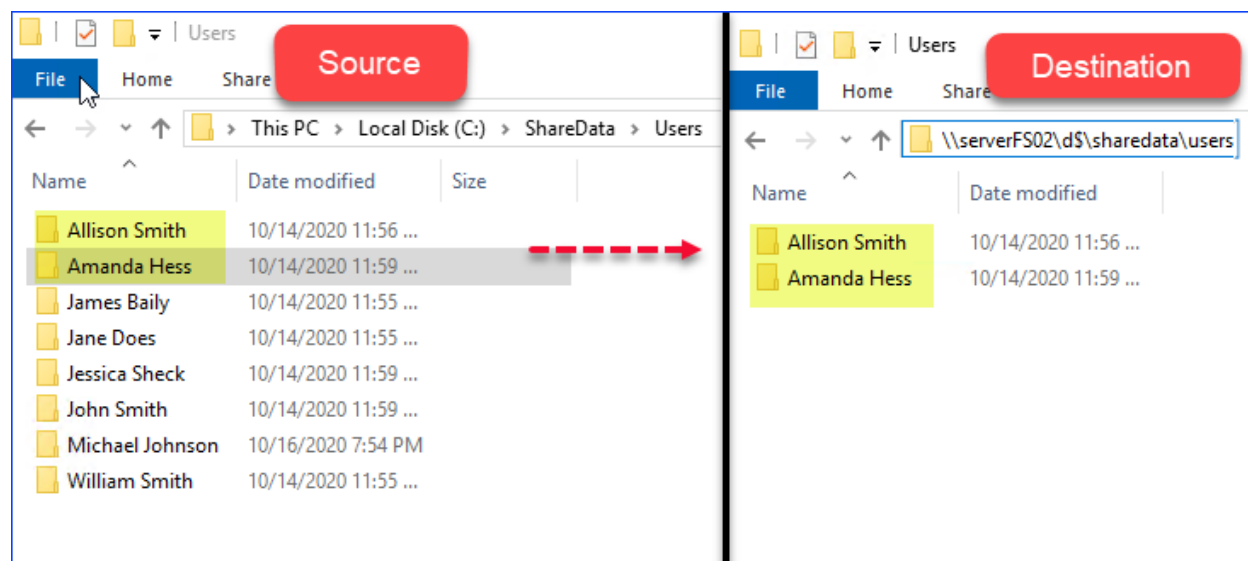
- 2) Type the path along with to the folder you want to copy from, then append the letter or matching string followed by an asterisk. In our example, it is C:\ShareData\Users\A*



3) The folder filter should look similar to the figure below, once it is saved

ID	Folder Path or Pattern	Inc/Exc
1	C:\ShareData\Users\A*	Include

If you save and run this job, the job would only copy folders from the Users folder beginning with the letter 'A' (it is not case sensitive in Windows shares). Below is a good example of the outcome, assuming we have a source with several users starting with different alphabets and what folders would get copied.



In the example above, only two folders were copied (**Allison Smith** and **Amanda Hess**) because they matched the criteria of starting with the letter 'A' and are in the same path c:\ShareData\users.

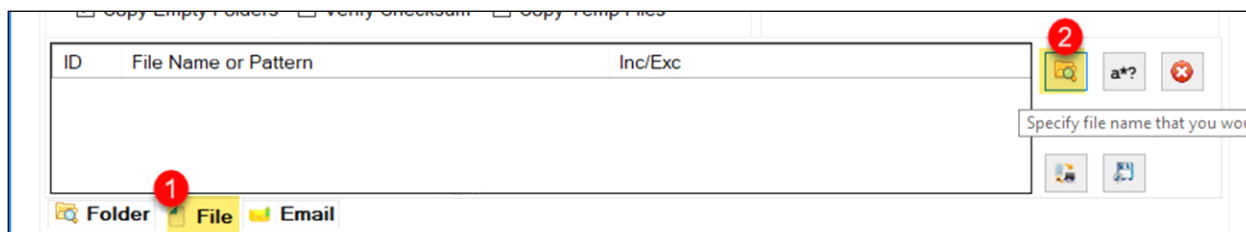
13B – File Exclusion and Inclusion

There are multiple ways to include\exclude files, and we will discuss them individually.

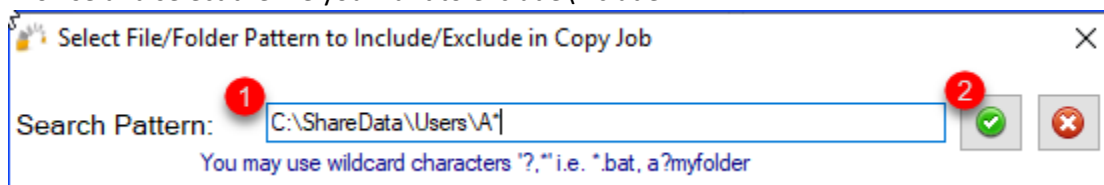
Example procedure based on absolute path

If you set a file that you know that you want to exclude or include, follow the steps below:

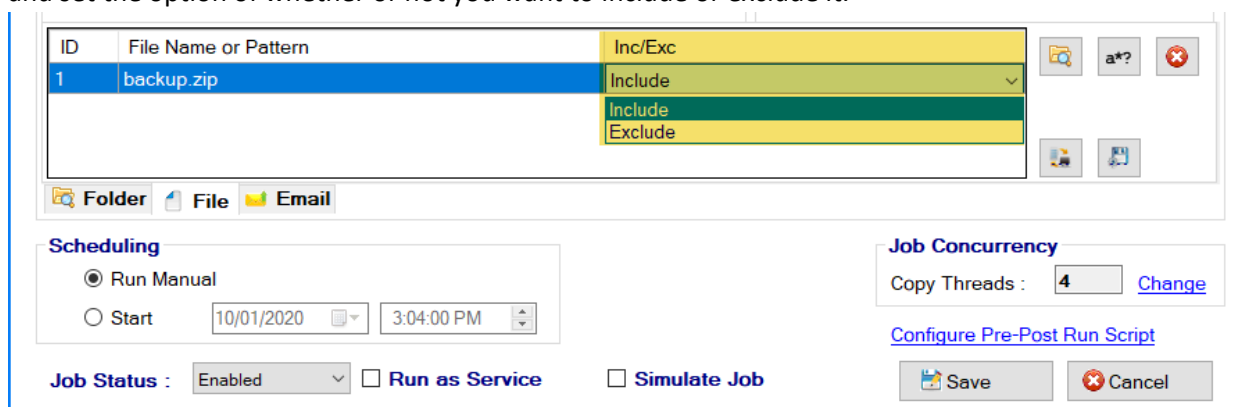
- 1) Select the **File** tab, then select the **file/folder search** button highlighted below to select the file you want to include\exclude



- 2) Browse and select the file you want to exclude\include.



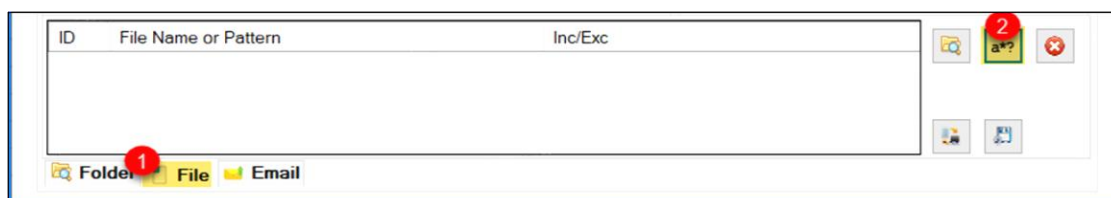
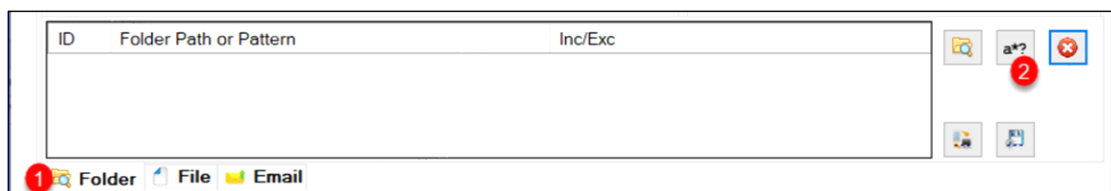
and set the option of whether or not you want to include or exclude it.



Example procedure based on wildcard, name, and pattern

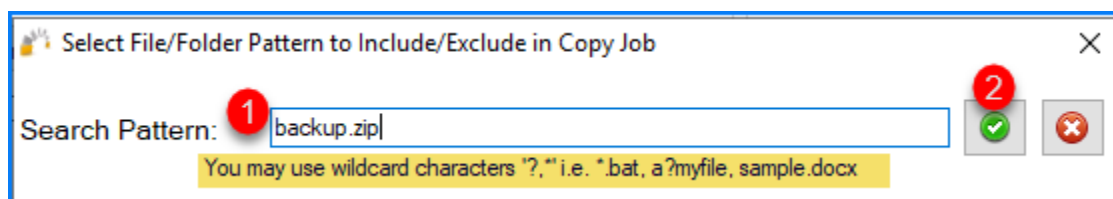
If you want to include or exclude files based on a set criterion such as name or pattern, you can accomplish this by doing the following:

- 1) Select the pattern\name\wildcard eclipse button.



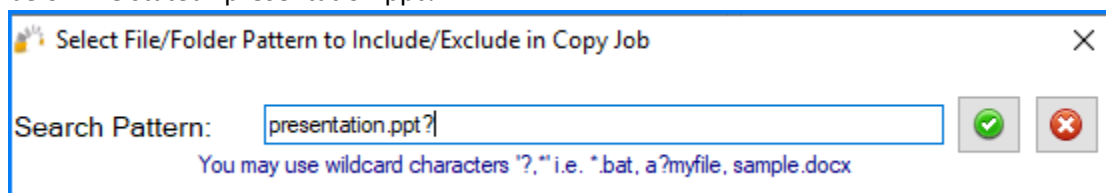
- 2) Type the name, pattern, or wildcard as per below. There are several scenarios:

- a. Specify an Exact match: In the scenario below, we are stating that any files named “backup.zip” would match.



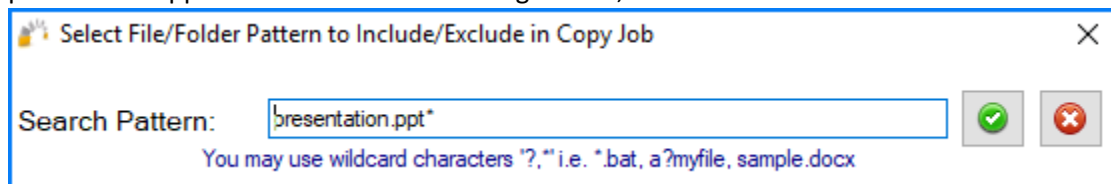
This would copy any files that have the exact name **backup.zip**. Would not copy the folder named **My Backup.zip** or **Backup.zipx**.

- b. Pattern: In this scenario, we specify the condition to start with “presentation.ppt” and end with one character such as presentation.pptx or presentation.pptz. (Using the ? means any ONE character. Putting ?? means any TWO characters. In the example below we stated “presentation.ppt?”



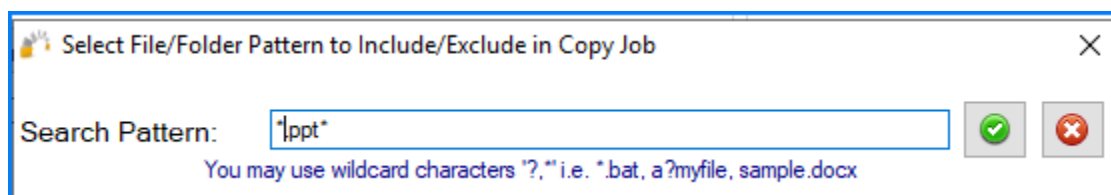
This would copy any files that begin with presentation.ppt and end with an extra character. So it would copy **presentation.pptx**, **presentation.pptz**. It would not copy a folder named **presentation.ppt** or **My presentation.pptx**

- c. Wildcard: In this scenario, we specify the condition to be any files that begin with “presentation.ppt.” Putting an asterisk means a wildcard. As long as the files start with presentation.ppt and could have something after it, it would be a match.



This scenario would copy files that begin with presentation.ppt and could have something after it, such as presentation.ppt, presentation.pptx, and presentation.pptx Final version. It would not copy My Presentation.pptx.

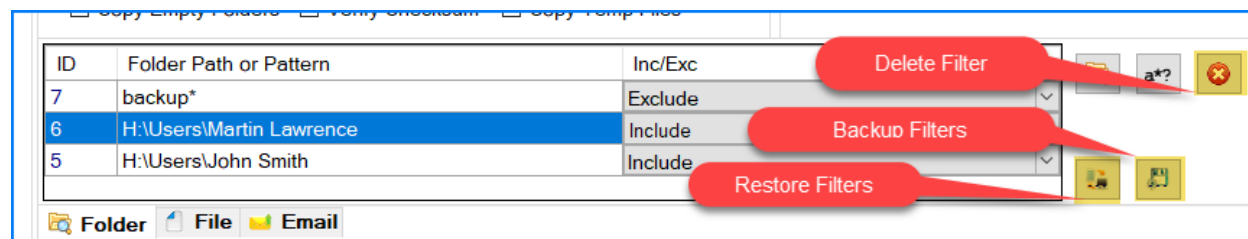
- d. Wildcard beginning and end: This is a common example of a requirement to copy all PowerPoint presentations. In this case, we would specify *.ppt*.



This scenario would copy all files that have the extension ppt and pptx, ...etc. This would copy My presentation.ppt, My presentation.pptx, and Final Deck.ppt.

13C – Backup, Restore, and Delete Filters

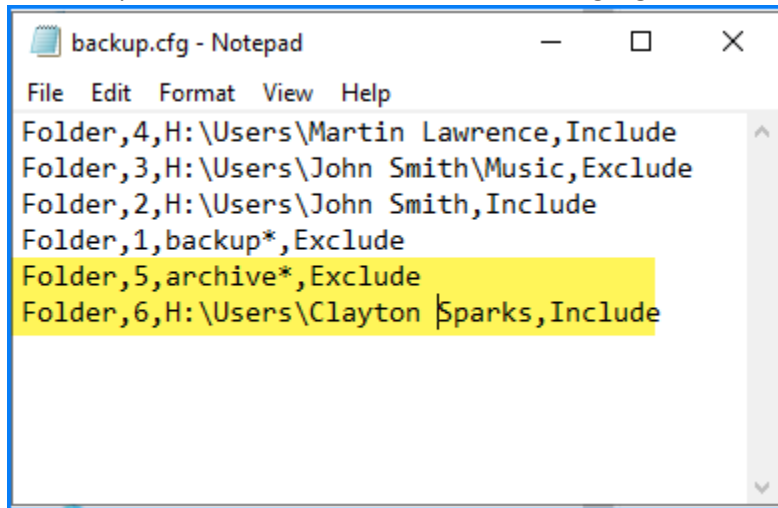
As you create the include and exclude filters, you may want to back them up to reuse for another job (or you can copy the job for simplicity) or to edit them. You can do so by using the export/import filters button, as displayed on the screen below. You can also delete a filter by selecting the filter you want to delete and click on the button.



You can export the backup of filters and modify them in a notepad-type application and restore them.

Note: The restore would overwrite the existing filters. Just follow the same pattern as the job filter and change the index number to a number that is not used. Then restore them using the restore feature. See

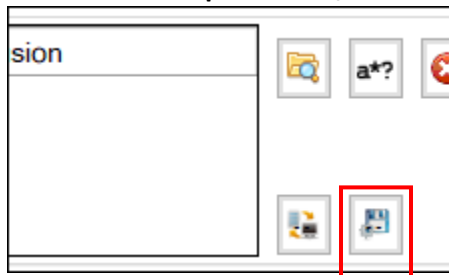
the example below where we added the filters highlighted in Yellow.



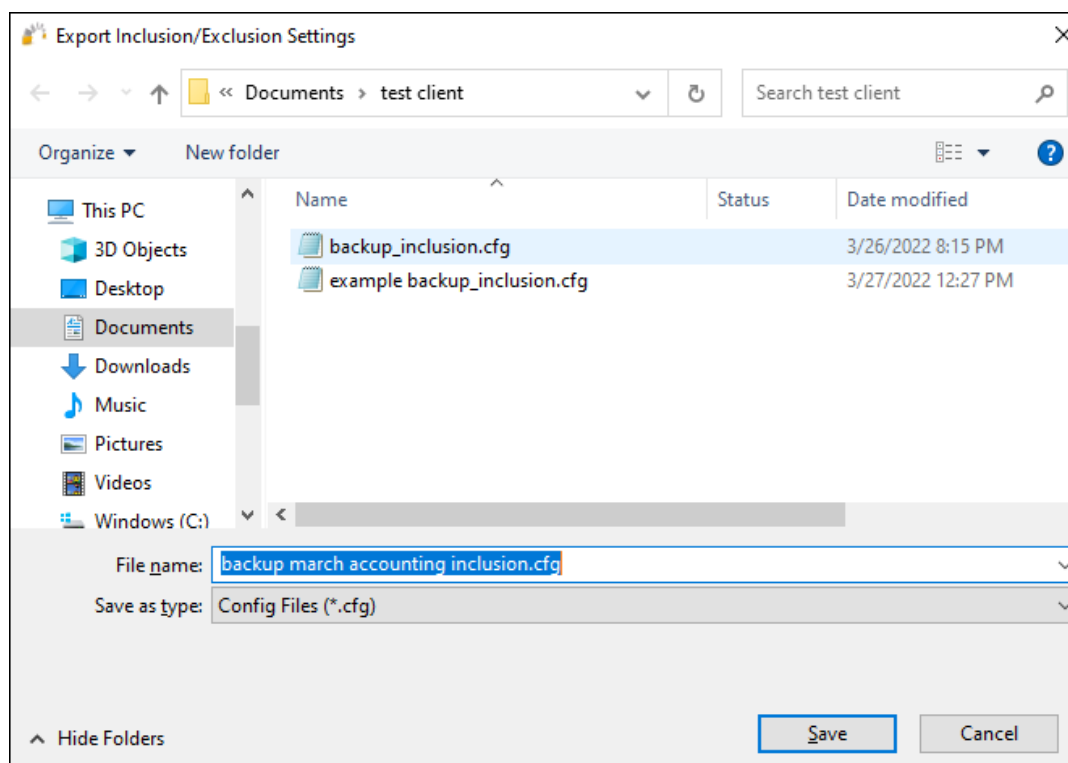
Backup filter procedure

Follow the procedure below to backup any created file or folder filters associated with this job:

- 1) Select the **Backup Inclusion/Exclusion Settings** button.



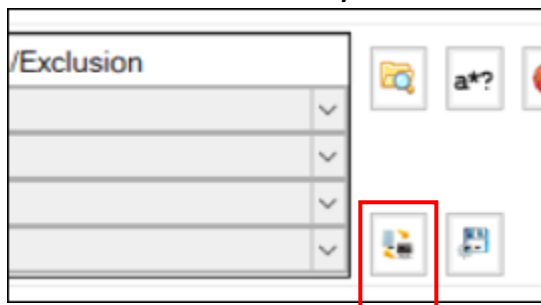
- 2) Type in a meaningful name for the filter and select Save.



Restore filter procedure

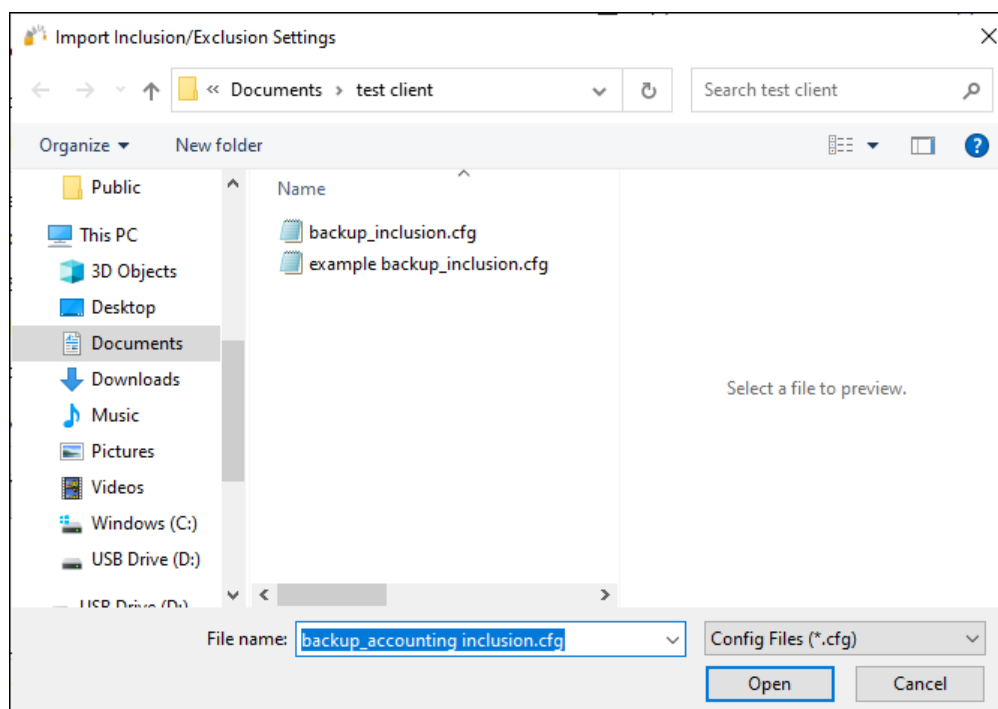
Follow the procedure below to restore any created file or folder filters associated with this job.

- 1) Select the **Restore Inclusion/Exclusion Settings** button.



Browse over to the folder location when you previously saved your GS RichCopy 360 job filters.

- 2) Select the filter that you want to apply to the current job.



14 – Email Tab

Allows you to overwrite the initial email recipients initially created in the Email Configuration Server selection in the Configuration section. For more information see [Configuring Notification Email](#).

ID	File Name or Pattern	Inc
4	test screen 1.PNG	Inc
3	*.txt	Inc
2	*.bat	Inc
1	config.ini	Inc

Folder Filter File Filter **Email Notification**

If you need to specify new email job recipients for a given job, follow the procedure below.

Procedure to Modify Email Recipients

- 1) Select a job from the main **Jobs** section. You can double-click on the job name. The *Copy Job Configuration* screen will display,
- 2) Select the **Email Notification** tab.
- 3) Enter an email address for any new recipient in the available section (To, CC, and/or BCC).
- 4) If you want to view or change the default email server settings, you can select the **Configure Email Server** link shown in this area of the screen.
- 5) Select **Save** on the *Copy Job Configuration* screen to finalize your changes.

<input checked="" type="checkbox"/> Notify for Success	<input type="checkbox"/> Notify for Failure	<input type="checkbox"/> Attach Log in Email
To : DPatel@gmail.com		<input type="checkbox"/> Attach log if file is less than 0 MB
CC : JMendez@contoso.com		<input type="checkbox"/> Zip log if file is greater than 0 MB
BCC : SJohansson@contoso.com		Configure Email Server
Folder Filter File Filter Email Notification		

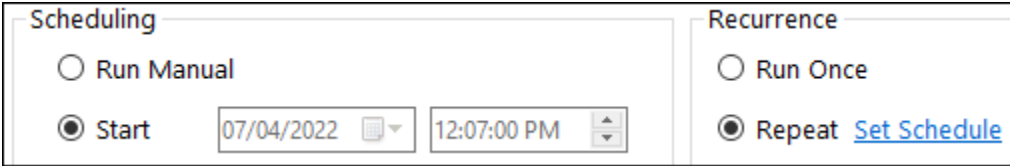
15 – Scheduling

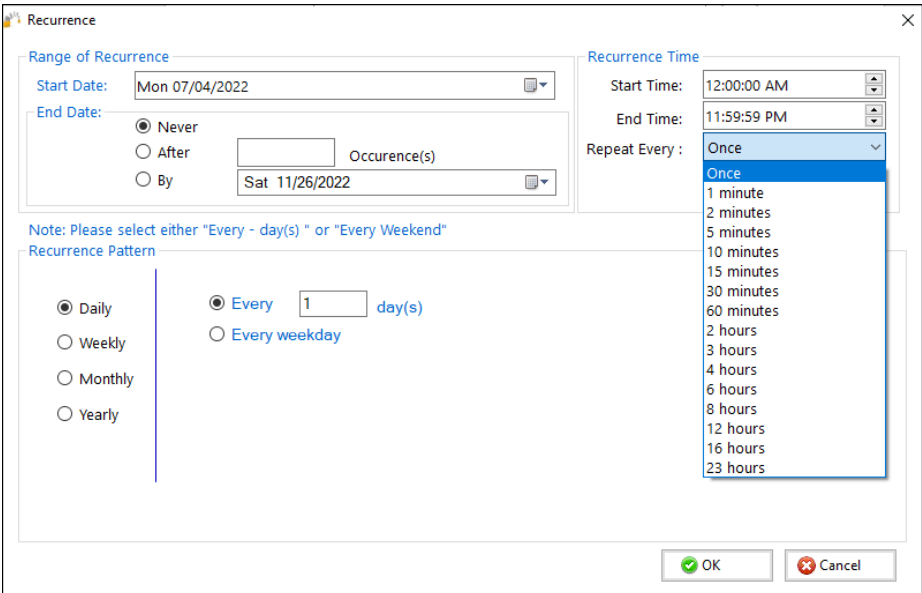
Jobs can be run manually or scheduled in advance to run at a later time. This becomes useful when coupled with the option to run as a service as jobs can then run without any user intervention. It uses the set it and forget it approach. You may select the following options:

- **Run Manual**—indicates that this job can only be started manually by the user.
- **Start** (at a set date and time)—indicates that the job is a one-time event or runs according to a set schedule. The scheduling options vary from daily, day of the week, monthly, yearly, and so forth.

Jobs can be set to run according to the following options:

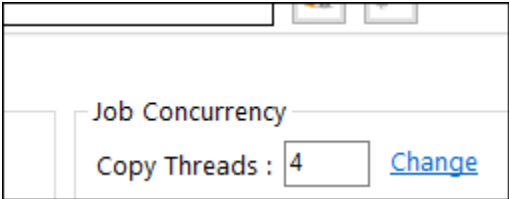
- **Run Once**—runs the job only once.
- **Repeat**—sets the job to run more than once according to a recurring schedule. When you want to run a job on a repeating schedule, select the **Set Schedule** link to open the *Recurrence* screen. In the Recurrence Time section of the window, there are two important things to note about **Start Time** and **End Time**:
 - If a job takes longer to complete and overlaps the next interval, the job will continue to run, and the scheduler will schedule the next interval when the job completes given that the job completes before the End Time.
 - End jobs are allowed to start before the End Time is reached. Jobs will not be stopped if they are already running, and the End Time is reached.

○ 



16 – Job concurrency

By default, GS RichCopy 360 uses 4 simultaneous copy threads, which means 4 files can be copied at the same time.

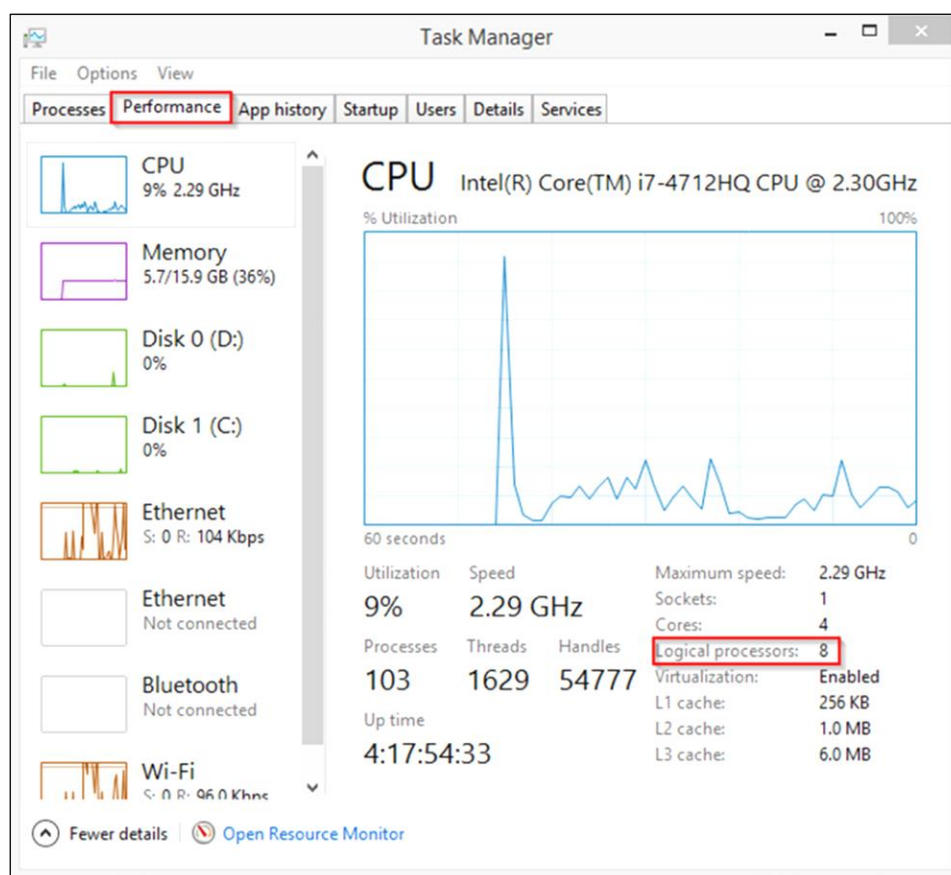


System administrators can change the number of threads. This should be changed based on the following recommendations

- The number of threads should be no more than double the available logical cores on the system. (Ideally, the same as the logical cores but up to fewer than double the number of cores).
- The more threads used; the more resources are consumed on the system. If this job is running on a production machine, reducing the thread count may be best to lower resource and memory consumption.
- While a system may have a lot of computing resources (CPU and RAM), storage and network also must be taken into consideration. To avoid OS or network congestion or a bottleneck, it is wise to have a lower number of threads. This can happen when on a system with a basic storage subsystem or if the destination is across a WAN connection that is highly congested. GS RichCopy 360 is a true multi-threaded system. Each thread runs on a dedicated core for as long as the number of threads equals the number of logical cores.

Note: This option has more important technical details.

The **Task Manager** is a good way to find out the number of available logical cores.



Note: Increasing the number of logical cores to more than double what the system has available can cause CPU contention and can reduce performance. Furthermore, increasing the number of threads by double does not mean the job time is cut in half.

17 – Run as Service

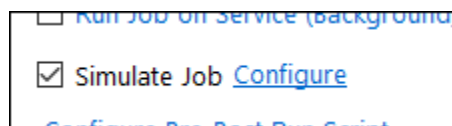
If the **Run as Service** checkbox is selected, the job will run as a service using the service credential specified in the main Configuration section (default is Local System Account). If the option is not selected, GS RichCopy 360 will utilize the session of the logged-on user running the application.

The following are the advantages to running a job under a service account:

- The jobs will not terminate due to a user logging off or closing the GS RichCopy application.
- A service account can run as the Local System Account, which is an account that has full access to every file and folder on the system (in most scenarios). For example, a machine that has locked down permissions may have issues copying folders and files as the user credentials used may not have sufficient access rights.
- Using a service account running as a Local System Account may provide better results. It is worth noting that jobs must be set to run at a scheduled time to be configured to run using a service account. A scheduled job can always be triggered to start manually which is in fact running the job as a service.

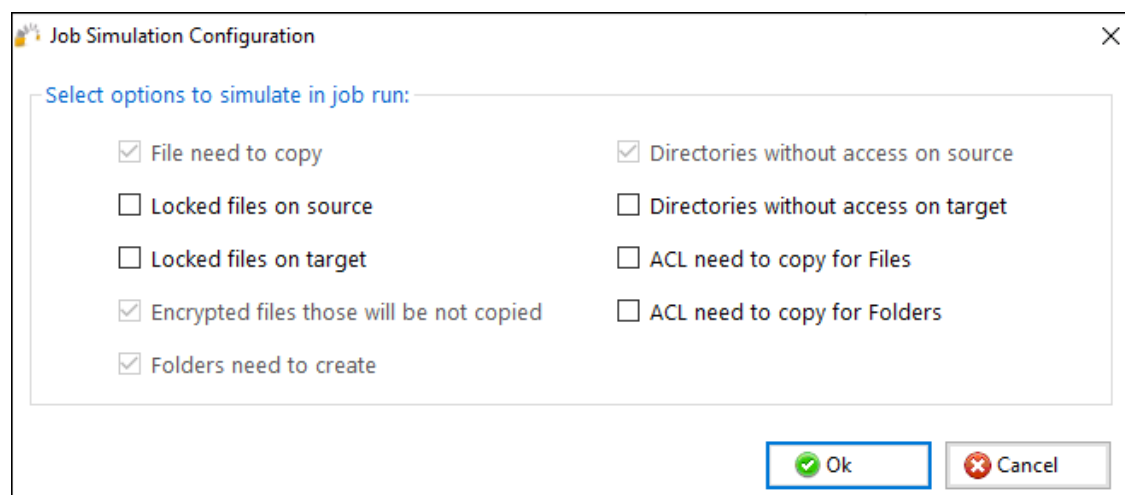
18 – Simulate Job

This option allows administrators to understand what exactly happens when the job starts through detailed logs without a real copy. This option has the configuration shown in the following image. There are four options greyed out and five that can be chosen.



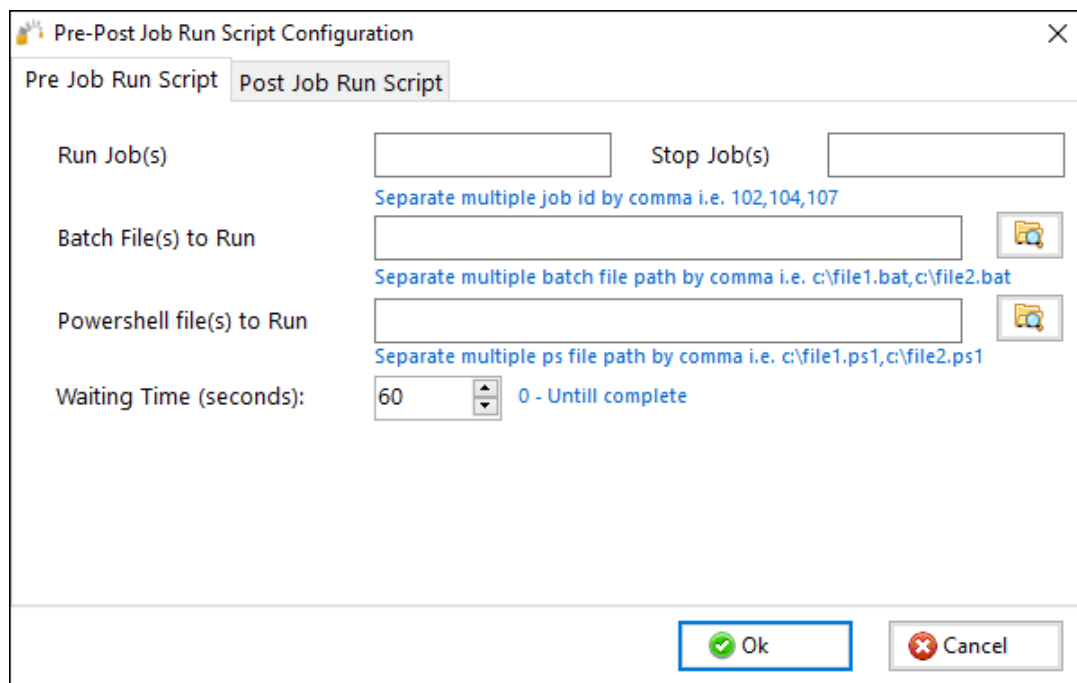
After you select the **Simulate Job** checkbox, the *Configure* link will be shown, from which you can select additional job configuration options.

Be aware that the grayed-out selections are already preselected and cannot be unselected.



19 – Configure Pre-Post Run Script

Selecting this option displays the *Pre-Post Job Run Script Configuration* window. The options displayed in this window run as a service.



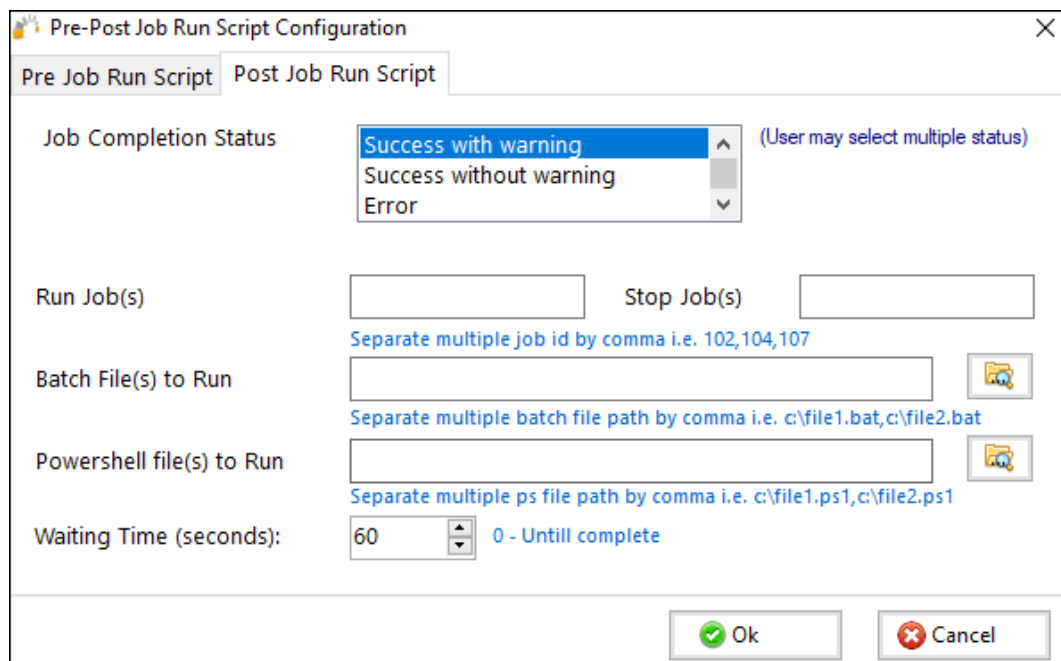
The image shows a screenshot of the 'Pre-Post Job Run Script Configuration' window. It has two tabs: 'Pre Job Run Script' and 'Post Job Run Script'. The 'Post Job Run Script' tab is selected. The window contains the following fields and options:

- Run Job(s)**: A text input field.
- Stop Job(s)**: A text input field.
- Batch File(s) to Run**: A text input field with a folder icon button to its right. Below the field is a blue text hint: 'Separate multiple batch file path by comma i.e. c:\file1.bat,c:\file2.bat'.
- Powershell file(s) to Run**: A text input field with a folder icon button to its right. Below the field is a blue text hint: 'Separate multiple ps file path by comma i.e. c:\file1.ps1,c:\file2.ps1'.
- Waiting Time (seconds):**: A spinner box set to '60'. To its right is a blue text hint: '0 - Untill complete'.

At the bottom right of the window are two buttons: 'Ok' (with a green checkmark icon) and 'Cancel' (with a red X icon).

Pre-Job Run Scripts

- **Run Job(s)**—option to set up the job(s) ID to run.
- **Stop Job(s)**—option to set up the job(s) ID to stop.
- **Batch File(s) to Run)**—option to select one or more batch files needed to run before the selected job(s).
- **PowerShell Files(s) to Run** option to select one or more PowerShell files needed to run before the selected job(s).
- **Waiting Time (Seconds)**—instructs the job to wait for X seconds before it runs after the pre-tasks are triggered.



The dialog box is titled "Pre-Post Job Run Script Configuration" and has two tabs: "Pre Job Run Script" and "Post Job Run Script". The "Post Job Run Script" tab is active.

Job Completion Status: A list box with three options: "Success with warning" (selected), "Success without warning", and "Error". A note to the right says "(User may select multiple status)".

Run Job(s): A text input field.

Stop Job(s): A text input field.

Batch File(s) to Run: A text input field with a folder icon button to its right. A note below says "Separate multiple batch file path by comma i.e. c:\file1.bat,c:\file2.bat".

Powershell file(s) to Run: A text input field with a folder icon button to its right. A note below says "Separate multiple ps file path by comma i.e. c:\file1.ps1,c:\file2.ps1".

Waiting Time (seconds): A spinner box set to "60" and a checkbox labeled "0 - Untill complete".

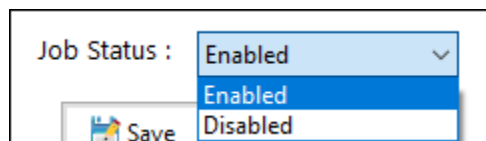
At the bottom right are "Ok" and "Cancel" buttons.

Post Job Run Scripts

- **Job Completion Status**—illustrates the job's behavior. The user has the option to set up the conditions under which the post job runs will run. The user can select multiple conditions. If the selected condition matches the job's end result, the post conditions are triggered.
 - **Successful with warning**—shows that the job completed and shows the warning if it exists.
 - **Success without warning**—shows that the job completed and does not show the warning even if it exists.
 - **Error**—shows that there has been an error.
 - **Abort**—shows that the job aborted for some reason.
- **Run Job(s)**—option to set up the job(s) ID to run.
- **Stop Job(s)**—option to set up the job(s) ID to stop.
- **Batch File(s) to Run**— option to select one or more batch files needed to run after the selected job(s).
- **PowerShell Files(s) to Run**— option to select one or more PowerShell files needed to run after the selected job(s).
- **Waiting Time (seconds)**—instructs the job to wait for X seconds after it triggers the pre-tasks.

20 - Job Status

Jobs are created as **Enabled** by default. This means they can be run on demand or as scheduled jobs. Jobs that are set to disabled will NOT run on demand or as scheduled.



The image shows a "Job Status" dropdown menu. The current selection is "Enabled". The dropdown list is open, showing "Enabled" and "Disabled" as options. A "Save" button with a floppy disk icon is visible to the left of the dropdown.

If a job is duplicated or copied, the duplicated job will be set to **Disabled** by default.

Jobs			
Job Id	Status	Job Name	Source
107		accounting	D:\data\
111		accounting docs	C:\Users
113		Copy of accountin...	C:\Users
114		Copy of marketing ...	D:\data\
108		marketing copy	D:\data\
110		marketing image fil...	C:\Users

Disabled copy job

History Section


The History section is accessed from the main menu of the GS RichCopy 360 application. It contains a listing of all previously ran jobs. There is also an option to purge, or delete, all jobs from the history section.

For more information see [Example Section H - History Section](#)

GS RichCopy 360 Enterprise ver: 8.5 (2.1.01) RFA 3.34										
Jobs			History			Configuration				
History ID	Job Id	Job Name	Start At	Finish At	Run By	Status	Error	Warning	Job Summary	Mail Status
8444	109	marketing images - Deleted	03/26/2022 18:46:02	03/26/2022 18:46:19		Successful			Job Created by : on 26-...	Not attempted
8443	110	marketing image files	03/26/2022 18:46:00	03/26/2022 18:46:17		Successful			Job Created by : on 26-...	Not attempted
8442	107	accounting	03/21/2022 18:54:52	03/21/2022 18:54:55		Successful			Job Created by : on 20-...	Fail
8441	107	accounting	03/21/2022 18:52:16	03/21/2022 18:52:18		Successful			Job Created by : on 20-...	Fail
8440	108	marketing copy	03/20/2022 12:07:00	03/20/2022 12:07:17		Successful			Job Created by : on 20-...	Fail
8439	107	accounting	03/20/2022 12:00:34	03/20/2022 12:00:51		Successful			Leaf Folders to Process : 0Fol...	Fail

Example Section A – Creating a Job Using the Job Schedule Wizard

GS RichCopy 360 offers a simple job schedule wizard. The wizard walks administrators through the most used settings with a full summary of the selected options displayed at the end for confirmation.

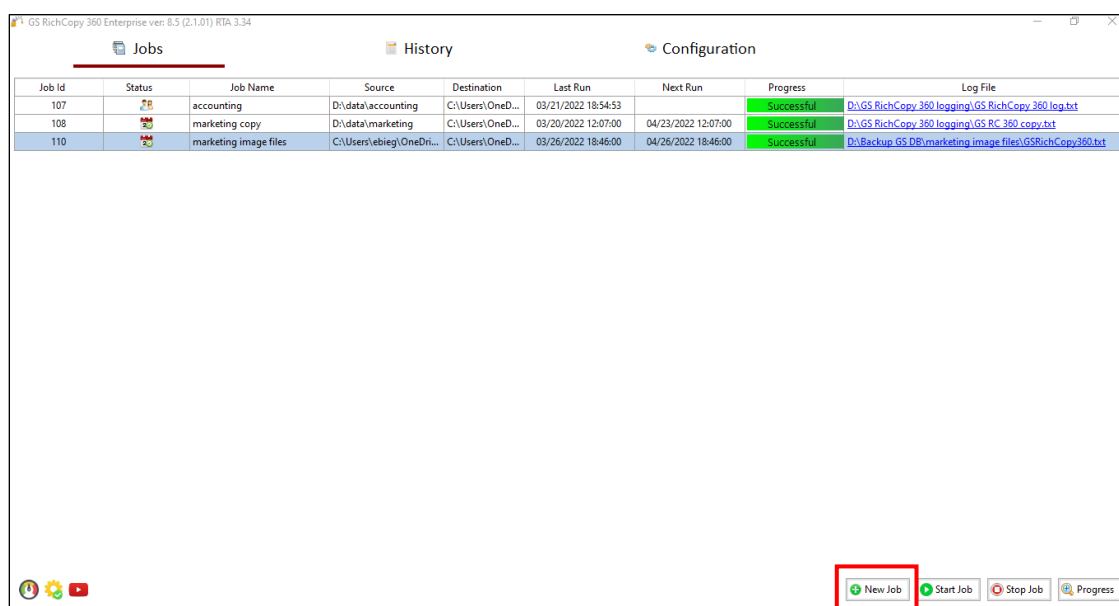
While most of the available options are self-explanatory, help tool tips are displayed next to each setting to further clarify its role, purpose, and how it impacts the job if selected. Tool tips are represented by the question mark icon .

Also, expert users have the option to skip the wizard and jump directly to the detailed job screen and create the job that way.

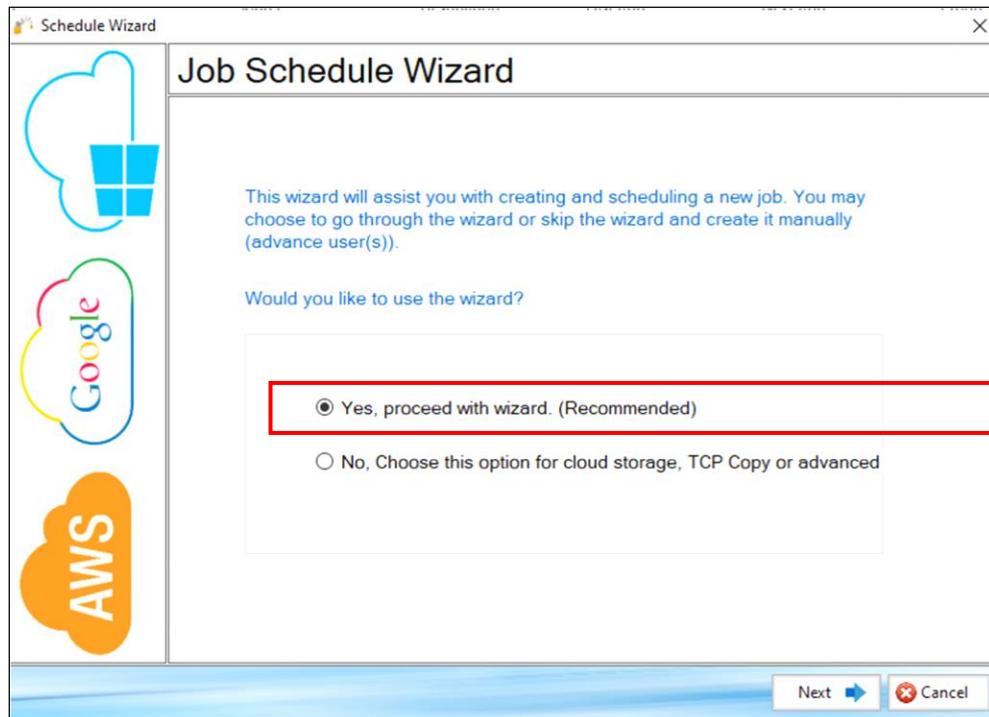
Note: Once a job is created (whether through the wizard or the detailed job's screen), it can always be modified later if the need arises.

To create a job using the Job Schedule Wizard, follow these steps:

14. In the GS RichCopy 360 window, select the **Jobs** section, and then select the **New Job** button to launch the Schedule Wizard.



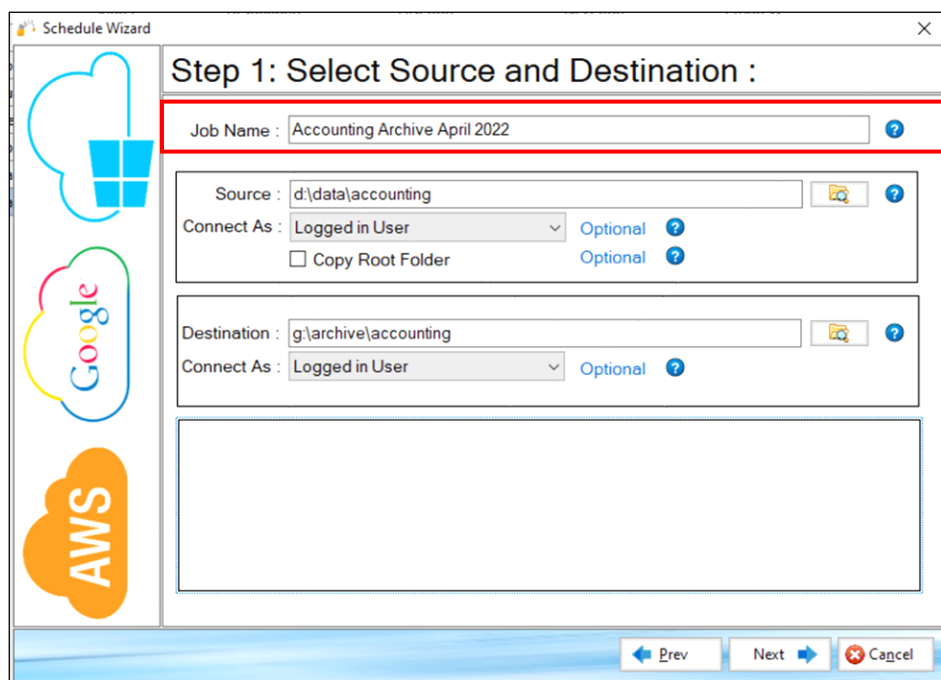
15. Allow the **Yes, proceed with wizard** option.



16. Select **Next**.

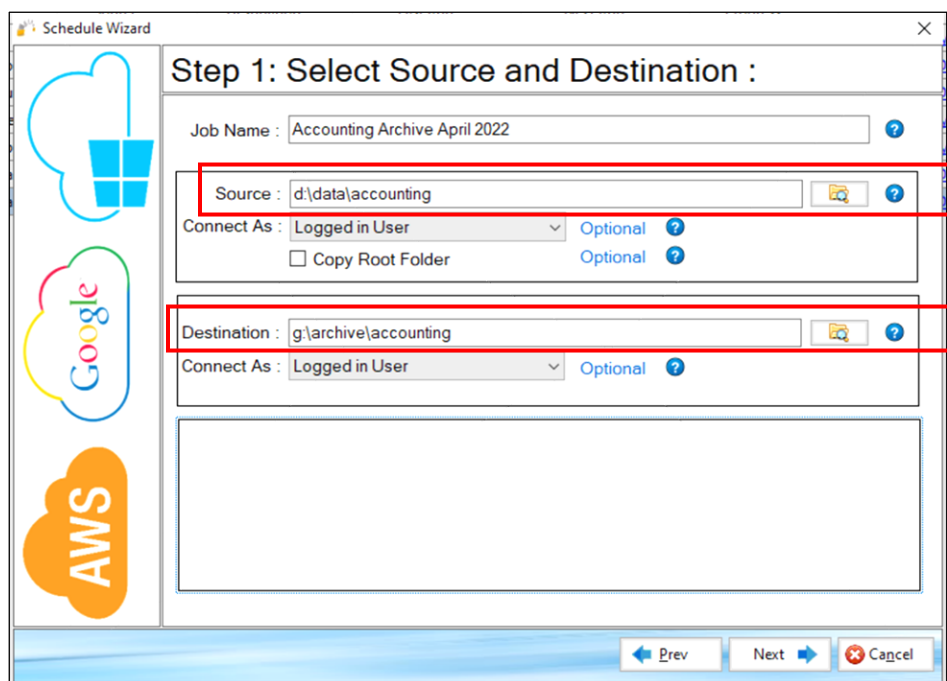
Proceed using the job Schedule Wizard, advanced users have the option to skip the wizard.

17. Enter a unique **Job Name**.



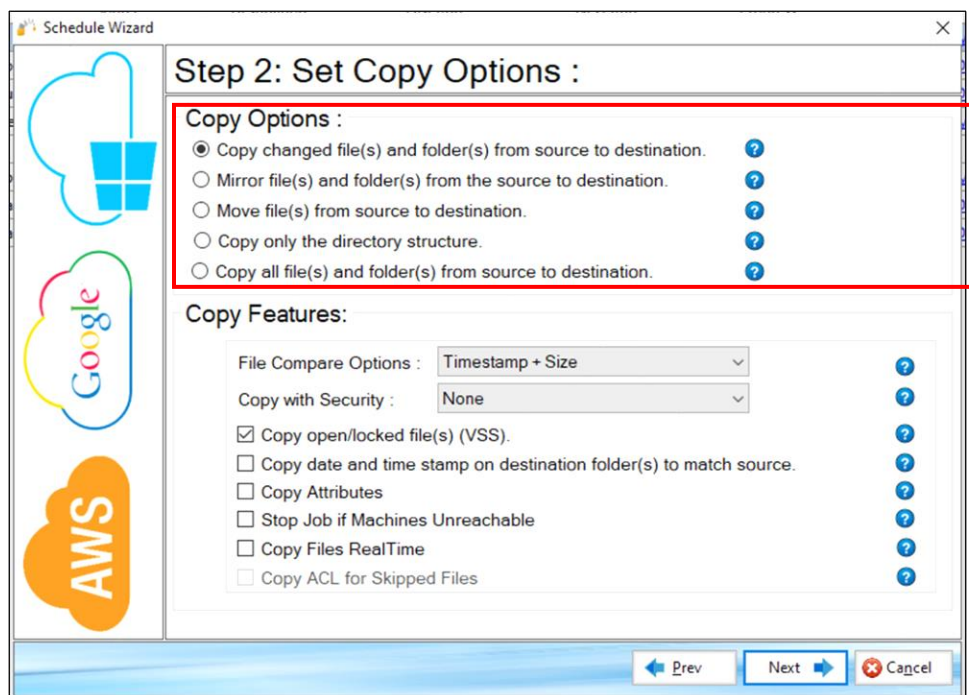
18. Select **Next**.

19. Specify **Source** and **Destination** settings.

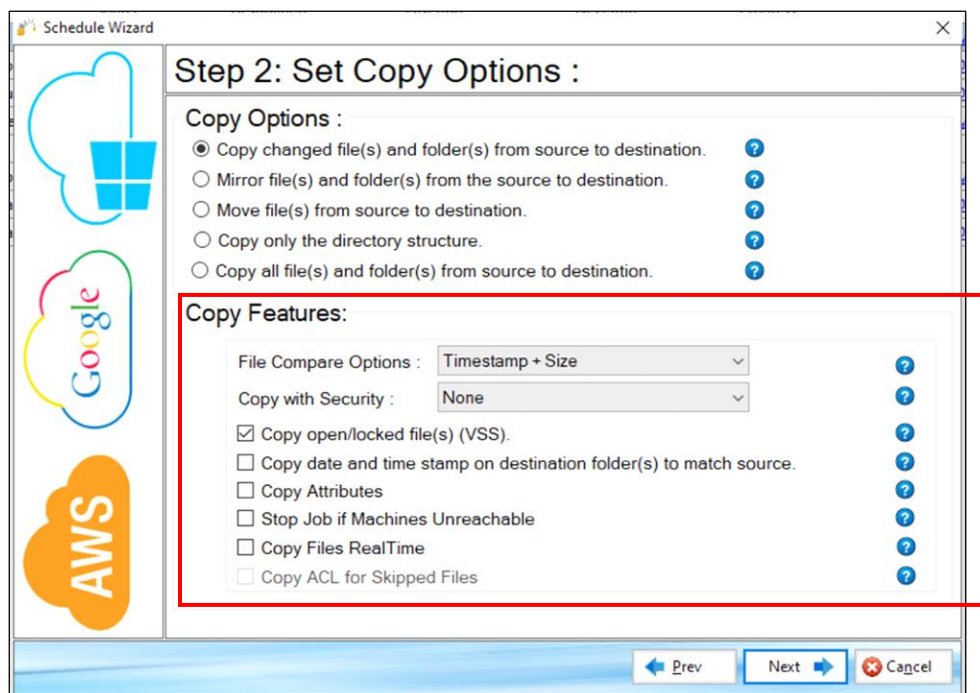


20. Select **Next**.

21. Select one option from the **Copy Options** section.

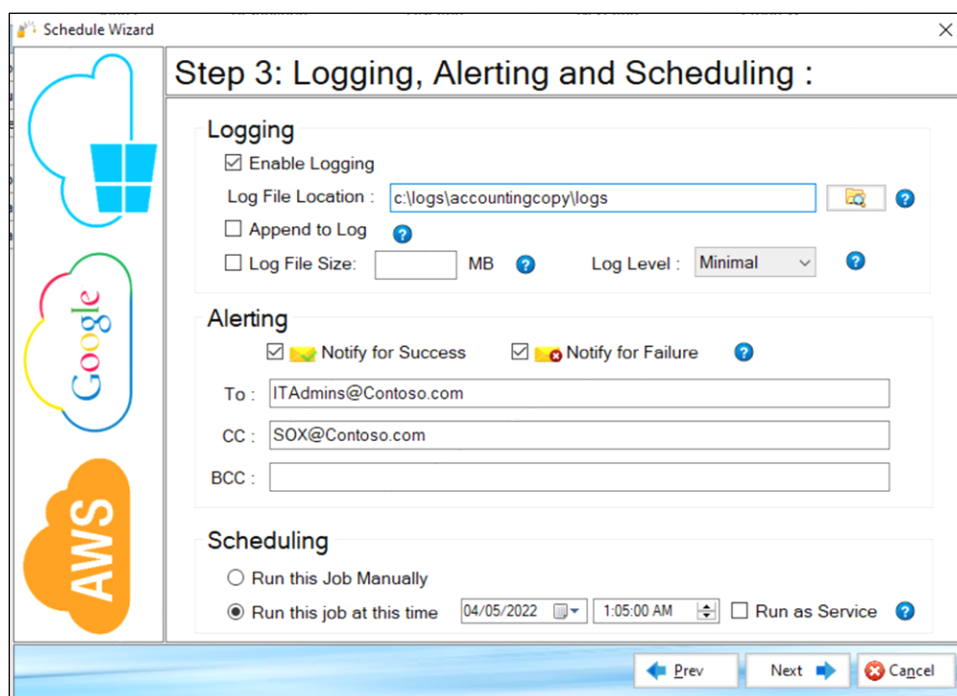


22. Configure the **Copy Features** section.

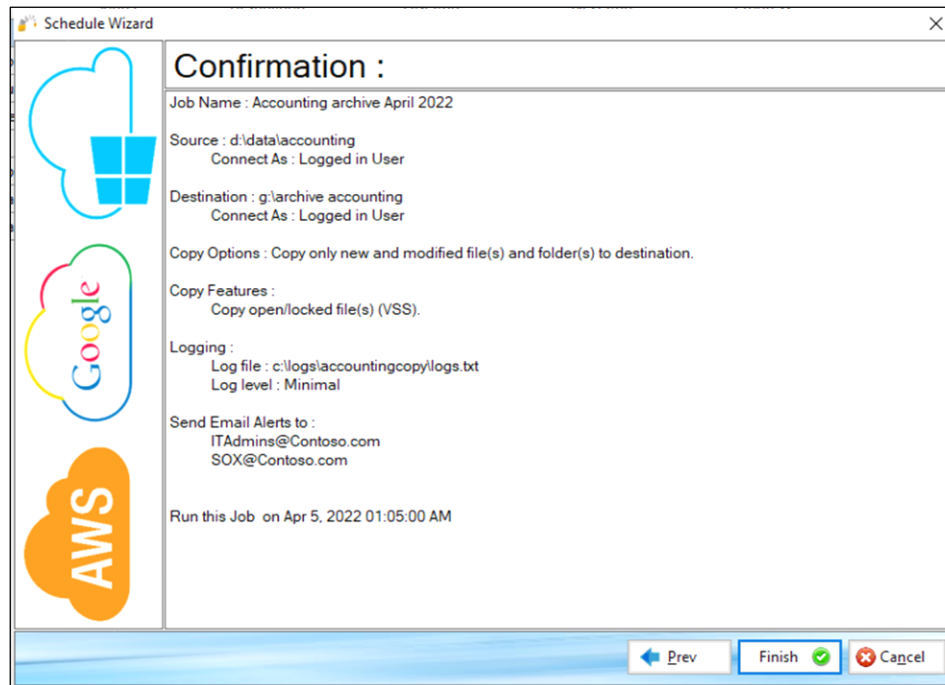


23. Select **Next**.

24. Configure the **Logging**, **Alerting**, and **Scheduling** settings.



25. Select **Next**.



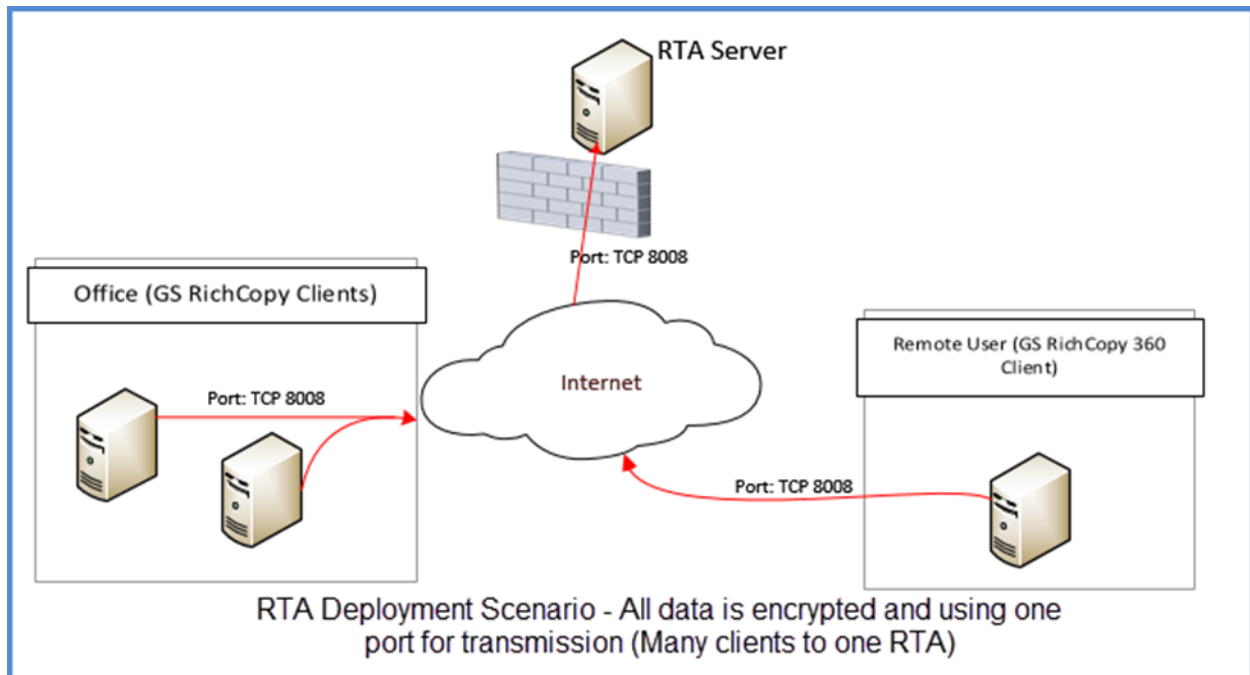
26. Review the job details in the *Confirmation* screen and select **Finish**. Use the **Prev** button to return to a previous screen if you need to make any changes.

The newly created job will be placed in the **Jobs** section of the main menu.

Example Section B – Creating a TCP Copy Job – Enterprise Only

A TCP copy job offers many advantages. It requires only one single port between source and destination to transmit the data to be copied. It also provides additional features that are not available in the normal copy method such as encryption and file compression during data transfer.

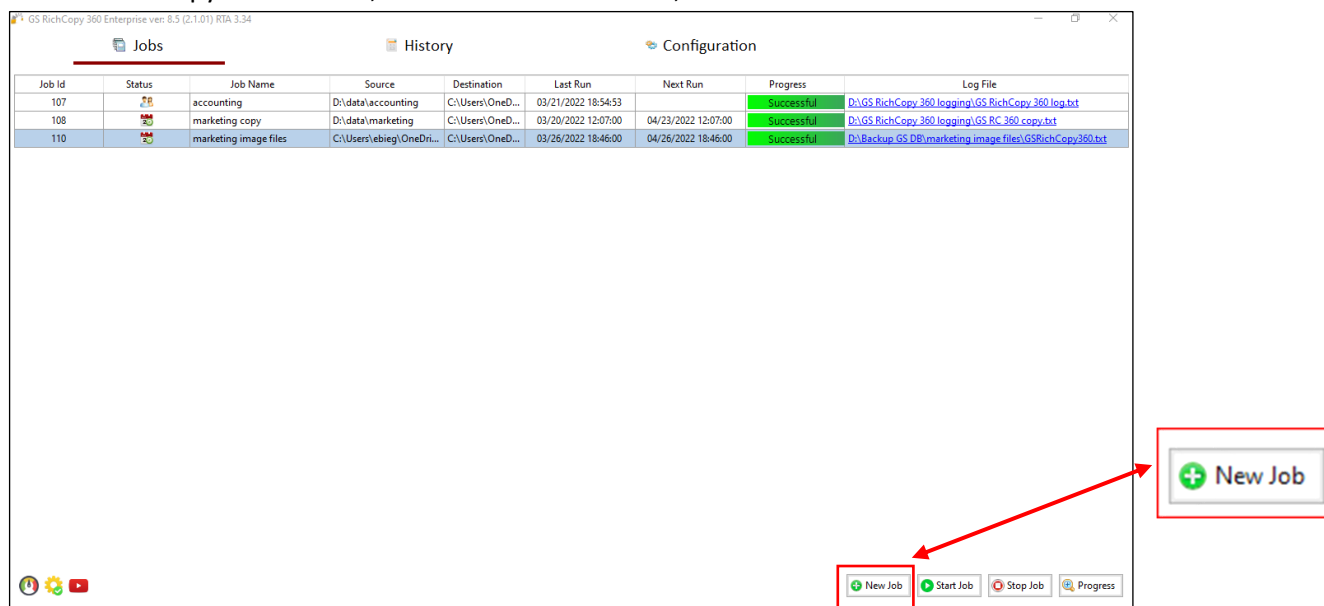
Minimal configuration is required on the client side (source machine) and on the recipient machine (destination). The recipient machine must have the Remote Transfer Agent (RTA) installed to receive the data as it is transmitted.



To create a TCP Copy Job, follow these steps:

Client/Source Configuration

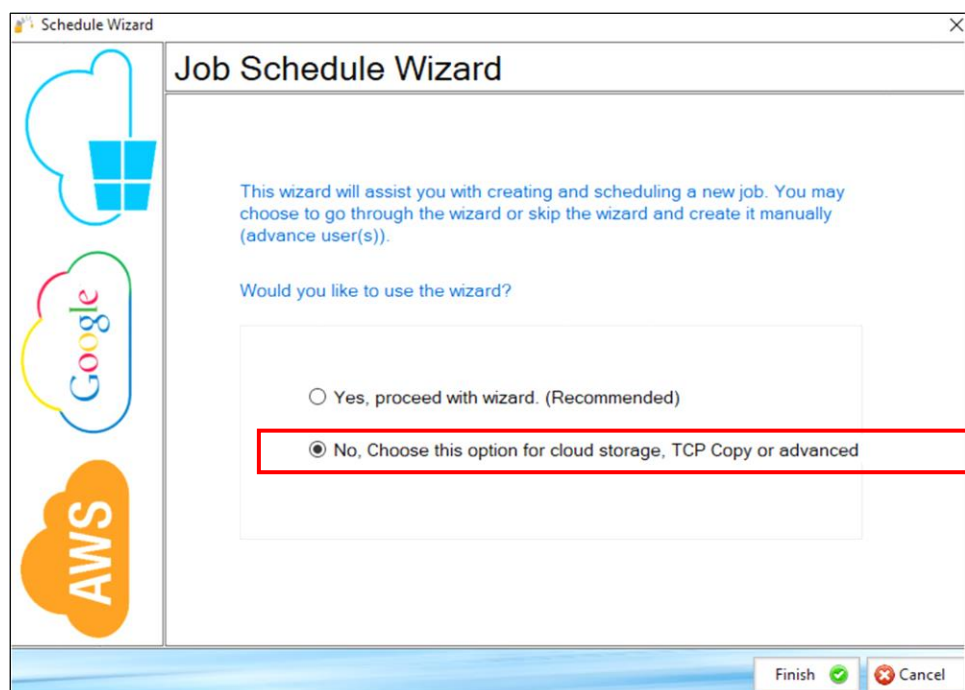
1. In the GS RichCopy 360 window, select the **Jobs** selection, and select **New Job**.



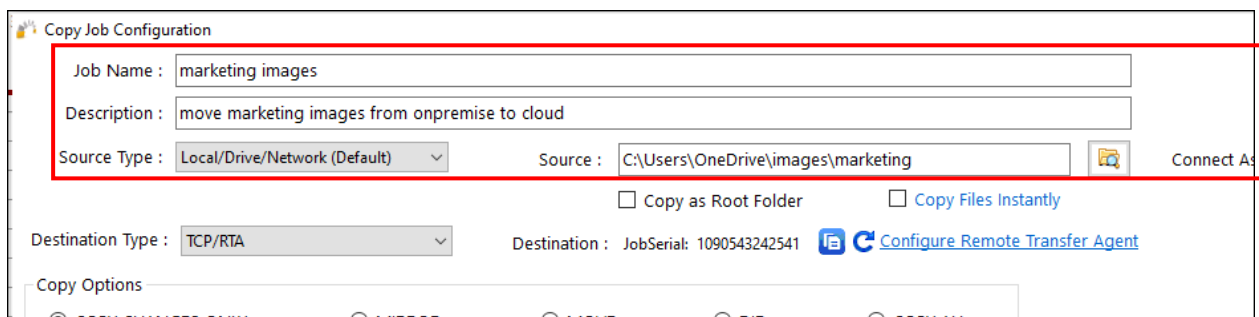
The *Job Schedule Wizard* will display.

2. Select **No, Choose this option for cloud storage, TCP Copy or advanced**, and then select **Finish**.

This will bypass the wizard and open the *Copy Job Configuration* window where a TCP copy job can be configured.



3. Enter the details for **Job Name**, **Description**, **Source**, and the rest of the options as desired except for Destination.

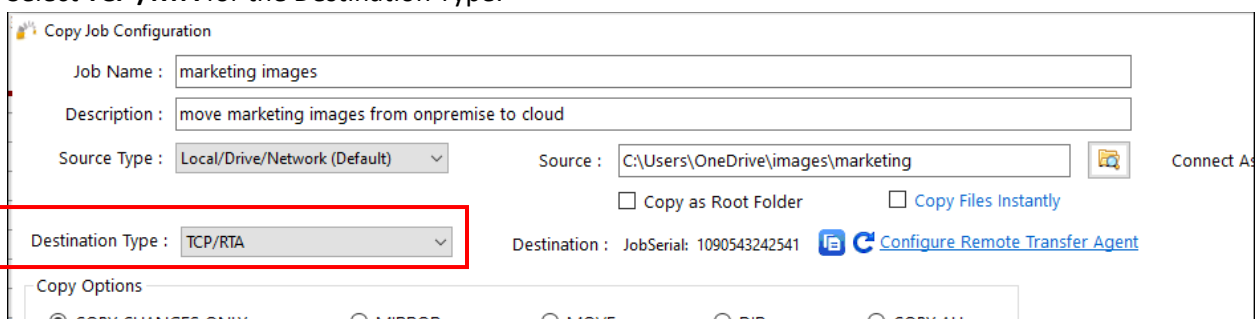


The screenshot shows the 'Copy Job Configuration' window. A red rectangle highlights the top section containing the following fields:

- Job Name: marketing images
- Description: move marketing images from onpremise to cloud
- Source Type: Local/Drive/Network (Default)
- Source: C:\Users\OneDrive\images\marketing
- Buttons: Connect As, Copy as Root Folder, Copy Files Instantly

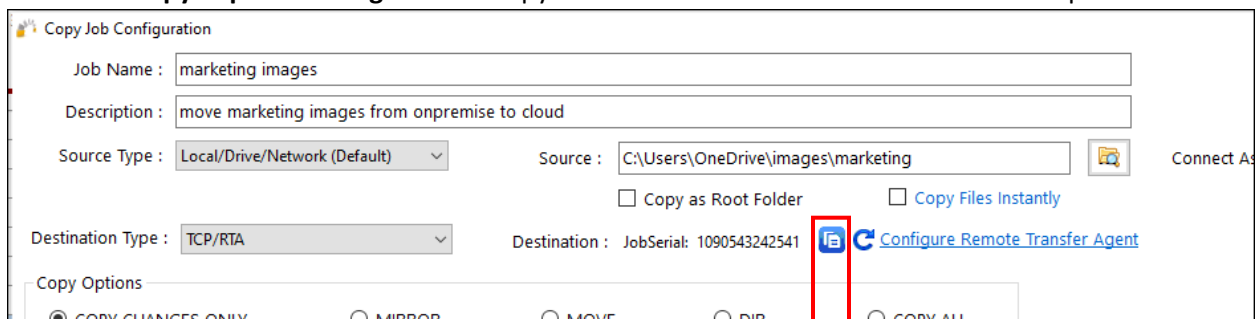
Below the highlighted section, the Destination Type is set to TCP/RTA, and the Destination is JobSerial: 1090543242541. The Copy Options section at the bottom shows radio buttons for COPY CHANGES ONLY, MIRROR, MOVE, DIR, and COPY ALL.

4. Select **TCP /RTA** for the Destination Type.



The screenshot shows the 'Copy Job Configuration' window. A red rectangle highlights the 'Destination Type' dropdown menu, which is currently set to 'TCP/RTA'. The other fields and options remain the same as in the previous screenshot.

5. Select the **Copy Clipboard** image icon to copy the Job Serial number into the Windows clipboard.



The screenshot shows the 'Copy Job Configuration' window. A red rectangle highlights the 'Copy Clipboard' icon, which is a small square icon with a clipboard symbol. This icon is located next to the JobSerial number '1090543242541' in the Destination field.

6. Select the **Configure Remote Transfer Agent** link to open and configure the *Remote Transfer Agent Client Configuration* window.

Note: The Job Serial is a unique number that is randomly created on the source per job. The administrator will provide the job serial number on the target machine (RTA) as the administrator creates the destination of the job.

Note: The Job Serial number can be set by an administrator if required. This can be done from the command line. All manually set Serial Jobs must be prefixed by 99999 and should be a total of 13 numbers. This can be useful in scenarios where an administrator wants to automate job creation on the client and the RTA server. For more information, refer to [Example Section J – Command Line \(CLI\) Support](#).

7. Make your selections in the *Remote Agent Client Configuration* window. Note that a remote IP address or host name must be provided. For additional information see the section below.

Remote Agent Client Configuration Window

This section provides additional information about each field in the *Remote Agent Client Configuration* window.

Refer to these items for additional information about the specific fields:

(1) **Remote IP Address/Host Name**—refers to the recipient server (destination server) where data is sent when the RTA agent is installed. This could be the IP address of the destination server, short name (NetBIOS), or FQDN name for as long as the source machine is connected to the RTA machine.

(2) **Remote Port**—by default, GS RichCopy 360 uses TCP 8008 for its communication needs. This port is configurable. If changed, it is important to change it on the RTA agent as well. For information, refer to [Destination Configuration](#).

(3) **Block Size**—GS RichCopy 360 transmits the files in chunks when using the TCP method. It is highly recommended to leave it set to the dynamic option (“Dynamically adjust block size...”) as this will determine the best chunk size. However, this option can be changed if needed. The default setting is 10MB and the accepted range is between 50KB and 25MB.

(4) **Byte Replicator**—Byte Level allows you to transfer just the changed data in a file when synchronizing, instead of the entire file. This is useful in saving bandwidth especially when dealing with large file sizes. If this option is selected, there are two additional parameters that can be configured:

- **Exclude Files Less than KB's**—files that are smaller than the specified size will not go through byte level comparisons. Instead, they will be copied fully in the event the source and target mismatch. This size should be greater than the Block Size value.
- **Exclusion Extension**—administrators may decide not to have files of certain extensions going through a block level comparison for various reasons. If so, set those extensions and separate them with a semicolon if more than one extension is needed.

(5) **Use Encryption**—encryption in GS RichCopy 360 is very easy to use. A Username and a Passphrase are required. The combinations will need to be retyped in the RTA agent of the destination computer, at a later stage. GS RichCopy 360 supports AES 128 and AES 258. Encryption adds very little to the overhead when using modern CPUs that support the AES instruction set.

(6) **Apply Compression before sending data to RTA agent**—another advantage of using the TCP method is the option to compress data before transmission. GS RichCopy 360 uses high and robust levels of compression, which is one of the most trusted, reliable, and robust compression algorithms defined to date.

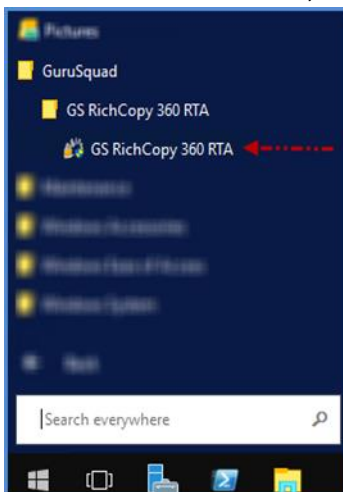
(7) **Test**—if the RTA is installed on the recipient (receiving) machine, the test button can confirm if it can establish a communication. If it reports that it is failing, it is likely to be a firewall port issue, or that the RTA agent service is not started on the recipient machine.

8. Select **OK** to save your selections.

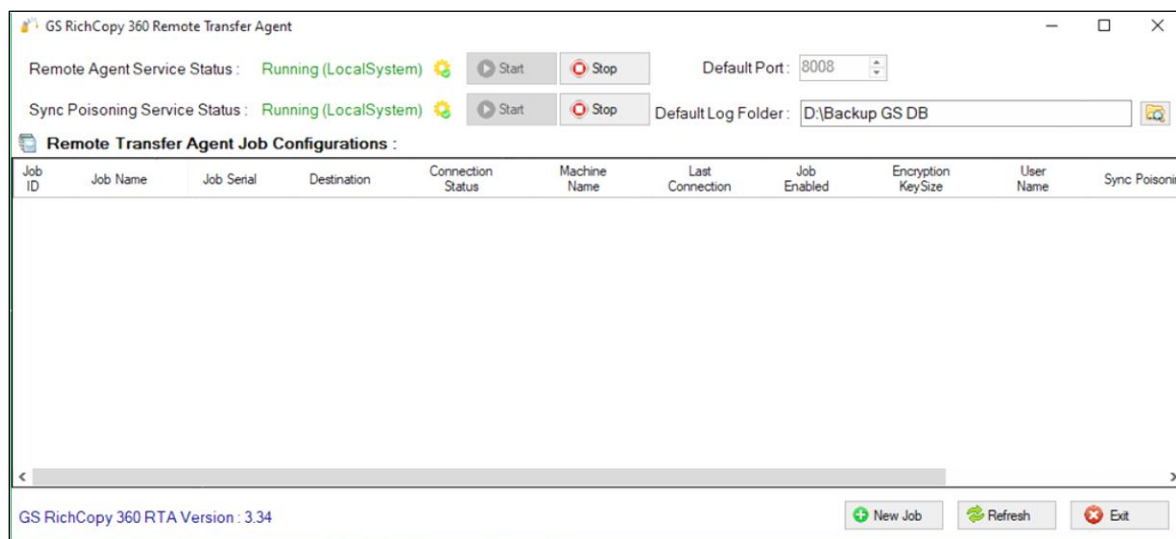
Once a TCP job is configured on the client side (source machine), similar configurations need to take place on the RTA (destination machine). The RTA agent must first be installed on the destination machine before it can be configured. If the RTA is not yet installed, refer to [Installing RTA](#). If the RTA is already installed on the destination machine, follow the steps in the next section to complete the TCP job configuration.

Destination Configuration

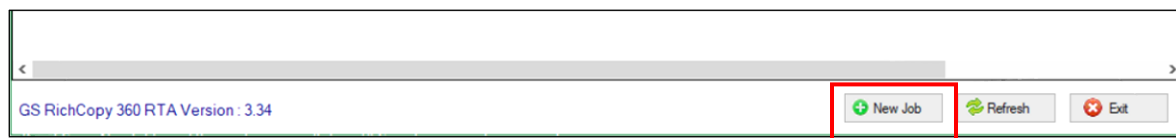
1. On the destination server, launch the RTA management application.



The *GS RichCopy 360 Remote Transfer Agent* window will display. For more information on the sections displayed in this window, refer to [Configuring and Managing the RTA](#)



2. Select the **New Job** button from the *GS RichCopy 360 Remote Transfer Agent* window.



The RTA Job Configuration window is displayed.

The screenshot shows the 'RTA Job Configuration' dialog box. It contains the following fields and controls, each with a red box and a number indicating a key item:

- 1**: Job Name field containing 'User Share from Fileserve01'.
- 2**: Description field containing 'User Share Replication from Fileserve01'.
- 3**: Job Serial field containing '1005010020503'.
- 4**: Destination field containing 'd:\data\users'.
- 5**: Encryption checkbox, which is checked.
- 6**: Sync Poisoning checkbox, which is unchecked.
- 7**: Job Enabled checkbox, which is checked.

Other visible fields include: User Name (XA3F5765), Passphrase (ABCYHS12), Backup Location, Max Size (GB), and buttons for Save and Cancel. The text 'RTA Configuration Screen' is at the bottom.

Enter the necessary information for the following items:

1. **Job Name**—the name of the job that is used to identify it. The name must be unique. It is highly recommended to use a descriptive name such as Accounting Data or Copy Email Archive so that other users and administrators can understand the purpose of the job.
2. **Description**—describes the job.
3. **Job Serial**—must match the Job Serial number presented on the client side (source machine).
4. **Destination**—the path (folder) where you want to copy to.
Note: This is relative to the destination machine and not the source machine. Also, the Path variable is supported in this field. For more information refer to [Example Section K: Environment Variables](#).
5. **Encryption**—if encryption is set in the source job, the username and passphrase must be provided to match what is configured in the source job.
6. **Sync Poisoning**—provides a safety net where data on the RTA server is backed up in the event it is about to get overwritten or deleted by its source job. Sync Poisoning works in a very simple way. Should a file get deleted or overwritten by a newer file coming from the source job, this file is moved over to the specified backup folder.
 - **Backup Location**— is where files and folders in the destination location are moved should that version of the file get deleted or overwritten by a newer file coming from the source job. The same directory structure is mirrored in the backup location so that files can quickly be identified.

- **Max Size (GB)**—files are purged from the “backup location” when this threshold is reached. The deletion process will use FIFO as its deletion criteria.

Note: The Path variable is supported in this field. For more information, refer to [Example Section K: Environment Variables](#).

7. **Job Enabled**—enables the RTA server to accept incoming connections for this specific job based on its serial number. If the job is not enabled, any connections associated with this job will be rejected

Select **Save** to save the configuration.

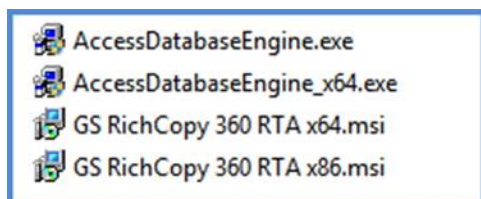
The job is now ready to execute from the client screen.

Note: The **Destination** column in the **Jobs** section will show a serial number of a TCP/RTA job once it has been configured.

Example Section C – Remote Transfer Agent (RTA) – Enterprise Only

Installing RTA

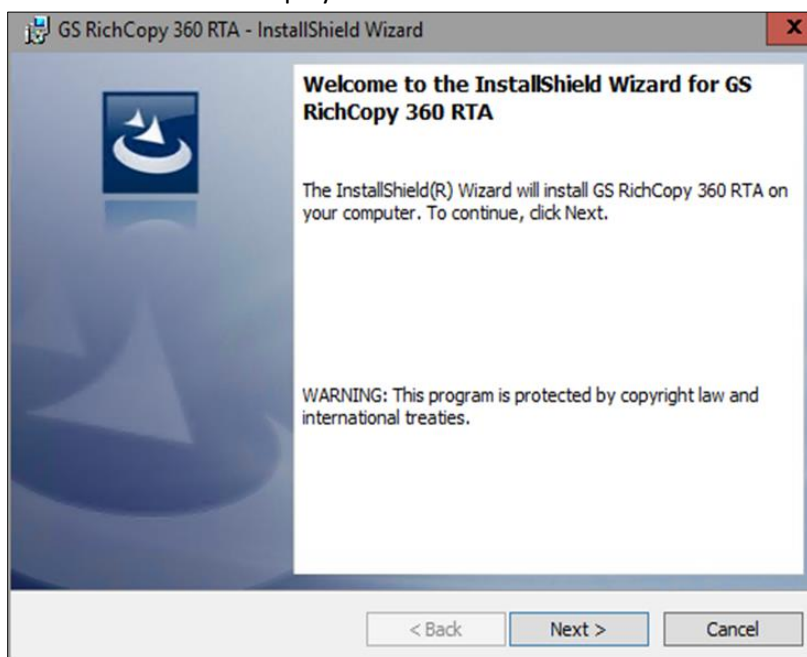
The RTA comes with its own standalone installation package. There are installation packages for 32-bit and 64-bit machines, GS RichCopy 360 RTA x86.msi and GS RichCopy 360 RTA x64.msi as shown in the following image.



Note: Access Database Engine is a prerequisite for RTA to function properly. It will be installed silently if needed. It needs to be in the same folder as the RTA MSI installation package to get installed.

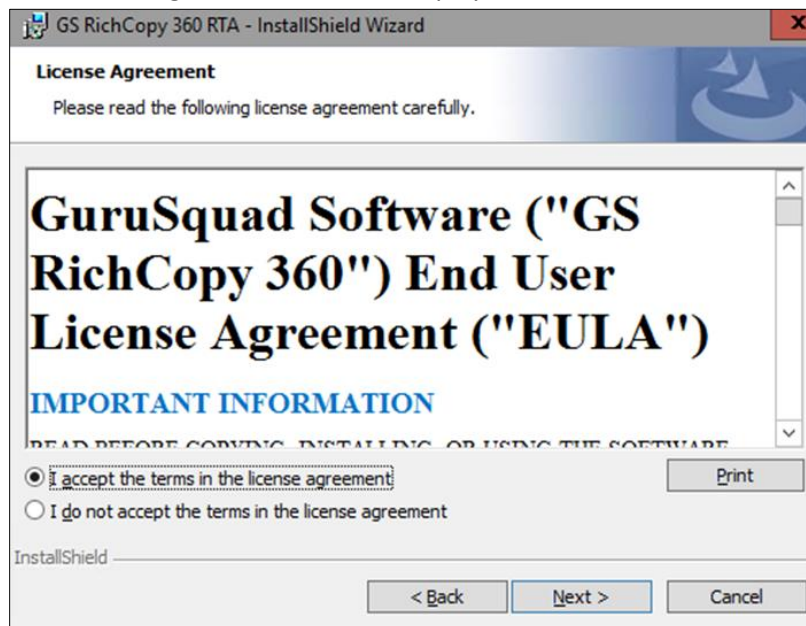
To install RTA, follow these steps:

1. Double-click the MSI installation package for your OS platform (x86 for 32-bit or x64 for 64-bit). The Welcome window is displayed.



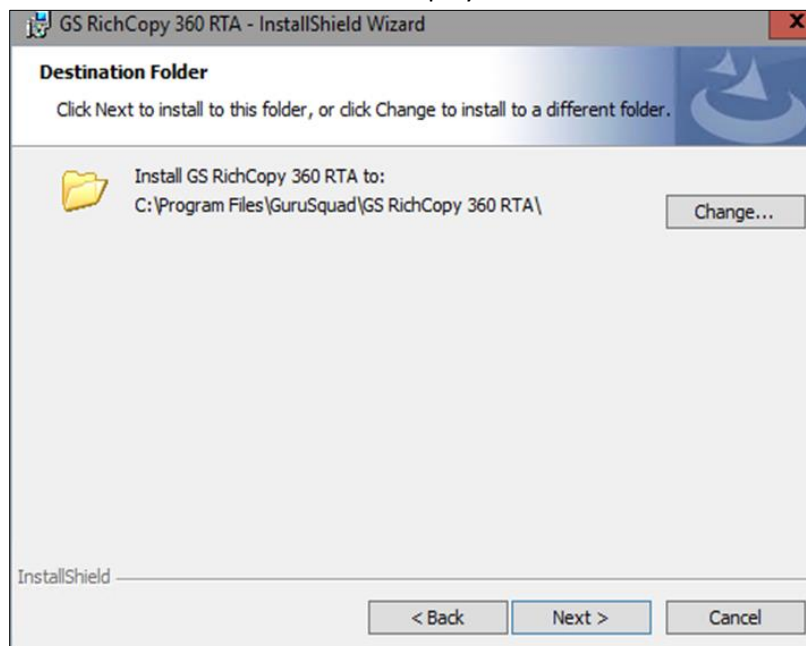
2. Select **Next**.

The License Agreement screen is displayed.



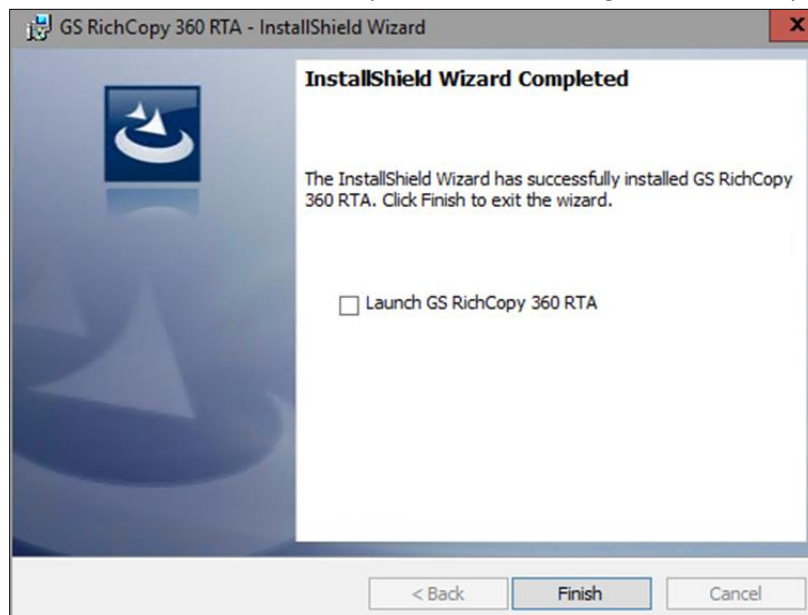
3. Review the **End User License Agreement (EULA)**.
4. Select **I accept the terms in the license agreement**, and then select **Next**.

The Destination Folder screen is displayed.



5. Change the path location if needed, and then select **Next** twice to start the installation.

When the installation has completed, the following screen will display.

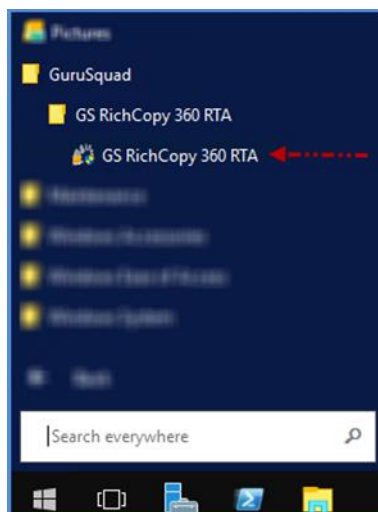


6. Select **Finish** to complete the installation. GS RichCopy 360 RTA is now installed on your system.

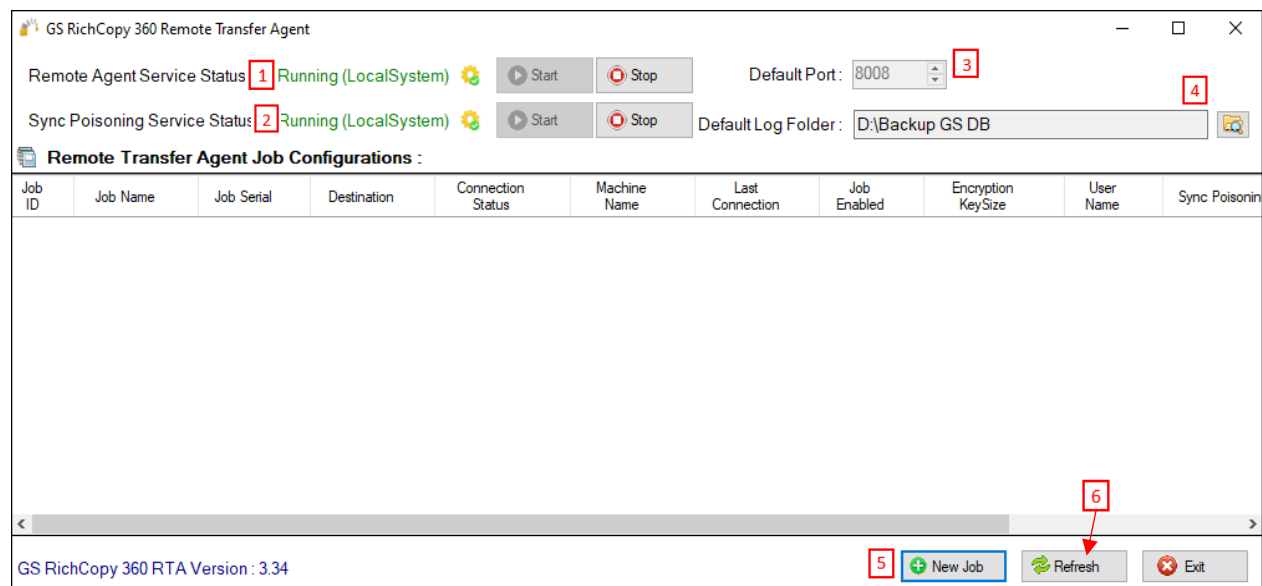
Configuring and Managing the RTA

Once the RTA is installed on the target machine (destination machine), there are some minimal configurations that could be changed. However, upon a successful installation, it should work out-of-the box. This section provides information on the available options on the RTA screen.

There is a single management interface for RTA, which can be launched from the **Start** menu.



The RTA management screen provides a single viewer pane showing all current job activities in addition to overall configurations. The user should examine the different settings to get more familiar with it.

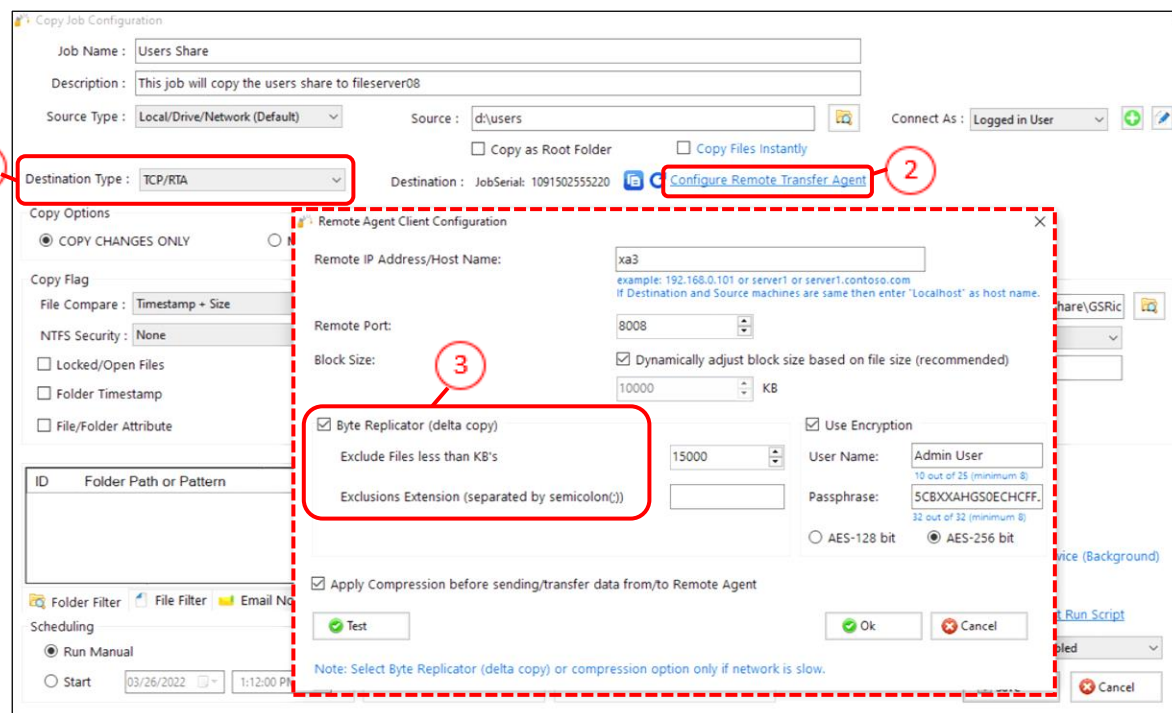


- (1) **Remote Agent Service Status**—RTA runs as a service. The service will either show as running or stopped and will also show the account it is running under. By default, it uses the local system account, which has full access rights to all local drives. The account can be changed through `services.msc`. The service is called **GS RichCopy 360 Enterprise RTA Service**. The *Stop* and *Start* buttons change the status of the service. Stopping the service terminates all current jobs and stops the server from accepting any new connections.
- (2) **Sync Poisoning Service Status**—the service oversees keeping defined Sync Poisoning locations in various jobs below their assigned threshold. Note that by default, it runs under the context of the local system. Should there be a need to use a different account, the account credentials need to be changed in `services.msc` for the service named **GS RichCopy 360 Enterprise Sync Poisoning Service**. Like the RTA service, the *Start* and *Stop* buttons change the status of the Sync Poisoning service.
- (3) **Port**—the RTA service uses port TCP 8008 by default. If there is a need to use a different port, this number can be changed and applied by clicking the **Save** link. Recycling of the RTA service is going to be required for the newly defined port to be used.
- (4) **Default Log Folder** —displays the current log folder and allows you to change its location.
- (5) **New Job** —TCP jobs require to be setup on the RTA server (receiving end). Clicking this button displays a new *TCP job configuration* screen.
- (6) **Refresh**—refreshes the current job activity screen. By default, the job activity screen refreshes every 15 seconds, but the administrator has the option to refresh as needed.

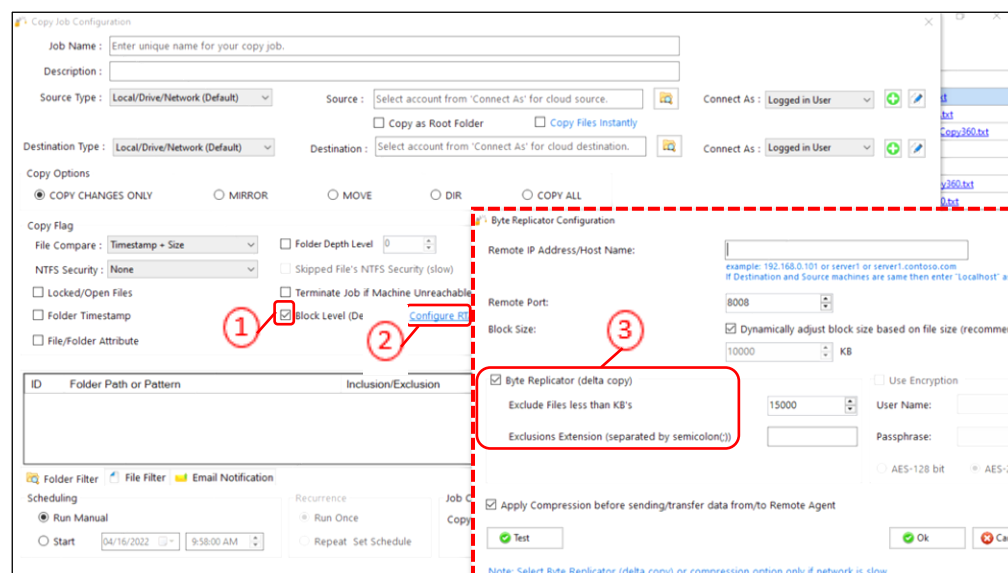
Example Section D – Byte Level Replication – Enterprise Only

Byte level replication allows you to transfer just the changed data in a file when synchronizing, instead of the entire file. This is useful in saving bandwidth especially when dealing with large files. Byte level replication is available in both TCP copy and non-TCP copy. However, in TCP jobs, it must be enabled from the RTA configuration screen while in non-TCP jobs, it is configured from the main screen.

TCP job



Non-TCP job



Note: Byte Level Replication requires the installation of RTA on the target (destination) machine even if the job is set as a non-TCP job. There are no configuration settings required on the RTA side once the RTA agent is installed. For more information, refer to [Installing RTA](#).

One added feature when using Byte Level Replication is that the application of permissions, date, time stamp, and attributes is offloaded to the RTA agent on the target machine. This could cut down the time taken to apply them by as much as 90%. There are no additional requirements needed to turn this feature on as it automatically works as soon as Byte Level Replication is enabled and configured.

In TCP jobs, the RTA configuration on the client side inherits the settings of the TCP job when it comes to hostname, port, block size, and compression. In non-TCP jobs, however, Byte Level Replication requires that the settings are set. For more information on these settings, refer to [Client/Source Configuration](#).

Note: Encryption is not available in non-TCP jobs, which is why the encryption option is grayed-out in the *Byte Replicator Configuration* window. Encryption with Byte Level Replication, however, is available when using TCP jobs.

Sync Poisoning Protection – Enterprise Only

Replication is a powerful tool, and it is also non-discriminatory. If a series of files becomes corrupt or a user incorrectly alters a file on the source drive, those unwanted changes will be replicated to the copy location as well, unless the replication is handled by GS RichCopy 360 Enterprise. Whenever a file is modified at the source, GS RichCopy 360 Enterprise offers the Sync Poisoning feature to back up the copied original at the destination target drive location to another location before replicating the newly altered file. This ensures that you always have a prior version of every adulterated file and can go back to the unchanged file when using this functionality. GS RichCopy 360 Enterprise ensures that the availability and integrity of your files is always preserved.

Note that Sync Poisoning is defined and configured on a job-by-job basis. Each job has a configurable threshold where a quota can be set and is monitored real-time, so the backup disk never runs out of space.

Sync Poisoning is available only in TCP Jobs and is configured from the RTA server. For more information, refer to [Destination Configuration](#).

Example Section E – Copying to the Cloud

GS RichCopy 360 Standard offer the option to copy to several different cloud providers. However, GS RichCopy 360 Enterprise can copy from and to a wider selection of cloud providers. Please note that we are continuously adding other cloud providers.

Cloud providers currently supported are:

Microsoft Cloud

OneDrive/SharePoint Online

- a. User Authentication
- b. App Authentication

Azure File Share *(Available in Enterprise Only)*

Azure Blob Storage

Dropbox Cloud

Amazon S3 Cloud

Box.com – Cloud *(Available in Enterprise Only)*

S3 Compatible Storage - Cloud *(Available in Enterprise Only)*

Google Drive Cloud *(Available in Enterprise Only)*

Note: It is important to note that some of the cloud providers could use significant bandwidth which could slow down other services and users. GS RichCopy 360 offers a throttling feature to limit the bandwidth consumption when copying to any of the cloud providers. Please refer to [Cloud Bandwidth Throttling](#).

Microsoft Cloud

Whether you are copying to OneDrive Personal, OneDrive Business, or SharePoint Online, they all have the same requirements and follow the same process. As a result, they are all covered in one section.

Note that Azure Blob Storage uses a different process and is described in its own section.

OneDrive / SharePoint Online

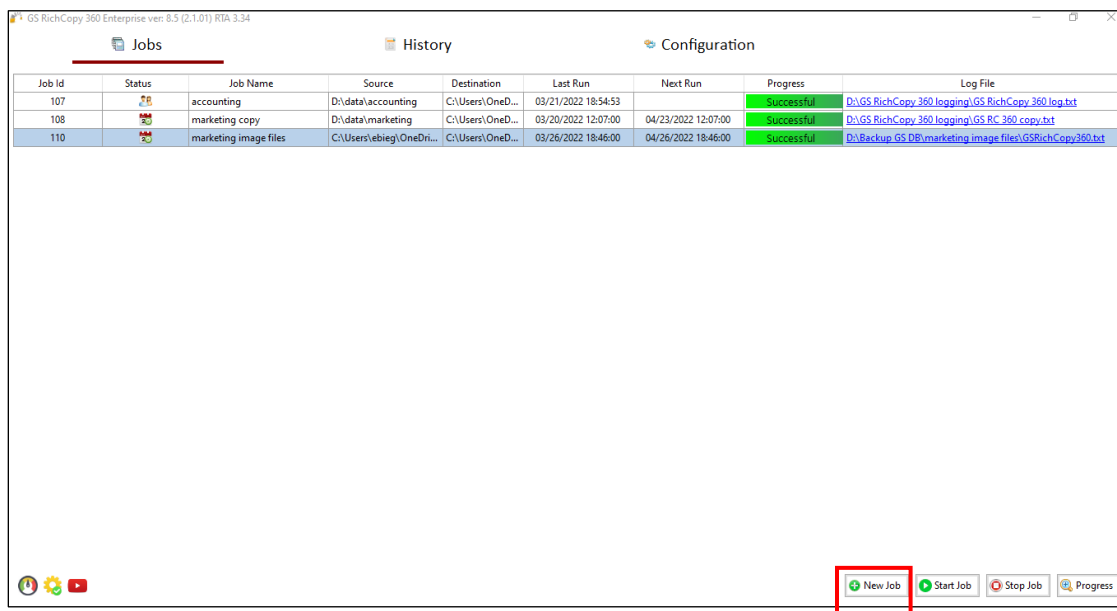
There are two ways to connect to OneDrive and SharePoint Online. You must understand the difference and the impact on throughput for each method we will discuss in further detail.

Microsoft Office 365 made it possible to copy data to its resources (OneDrive Personal, Business, and SharePoint Online) using one of two different methods:

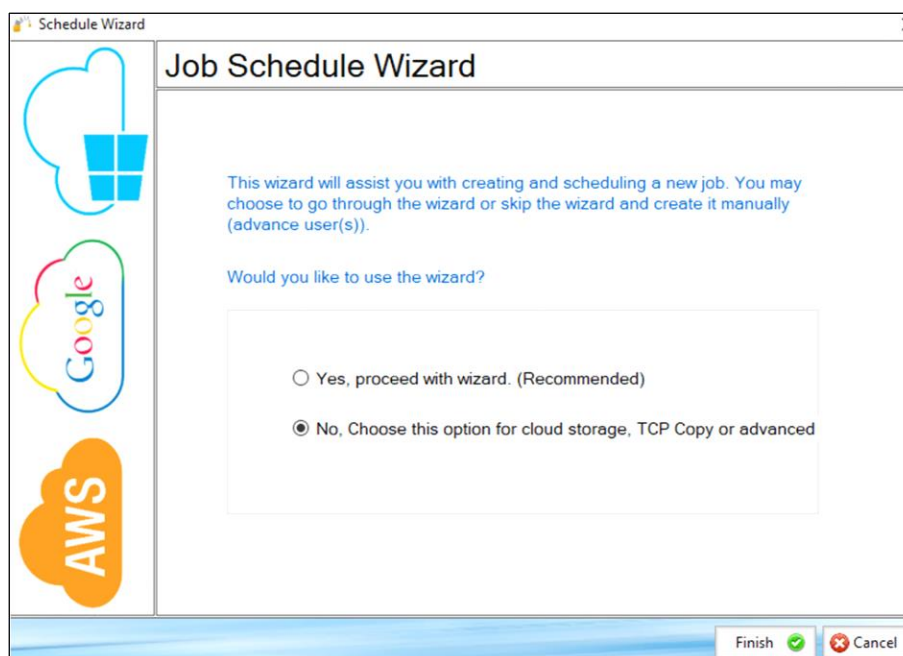
- a) **User Authentication:** User authentication is a step that requires the user to enter a username and password. This process is straight forward but intended for smaller sized copy jobs as Microsoft Office 365 throttles traffic using user-based authentication, especially if they are experiencing a massive workload at the time of copying. Therefore, it is recommended to copy more extensive data during the weekend and after hours. However, Larger data migration jobs should use App Authentication as Microsoft Office 365 treats jobs using App Authorization as background migration jobs with a much higher threshold in terms of throttling limits. With that said, Microsoft Office 365 still recommends that larger jobs to be processed after business hours and on weekends where possible as the threshold could be lowered at times when Office 365 resources are under workload stress.

To configure a job using User Mode Authentication:

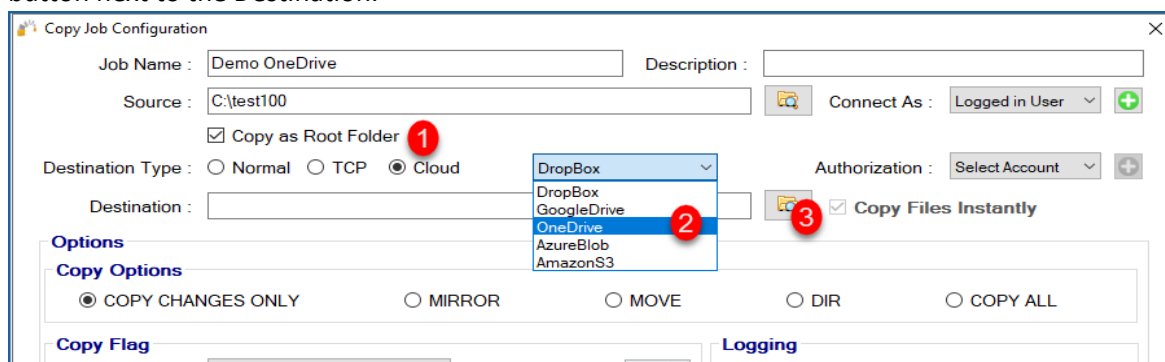
- 1) Select the **New Job** button from the **Jobs** section.



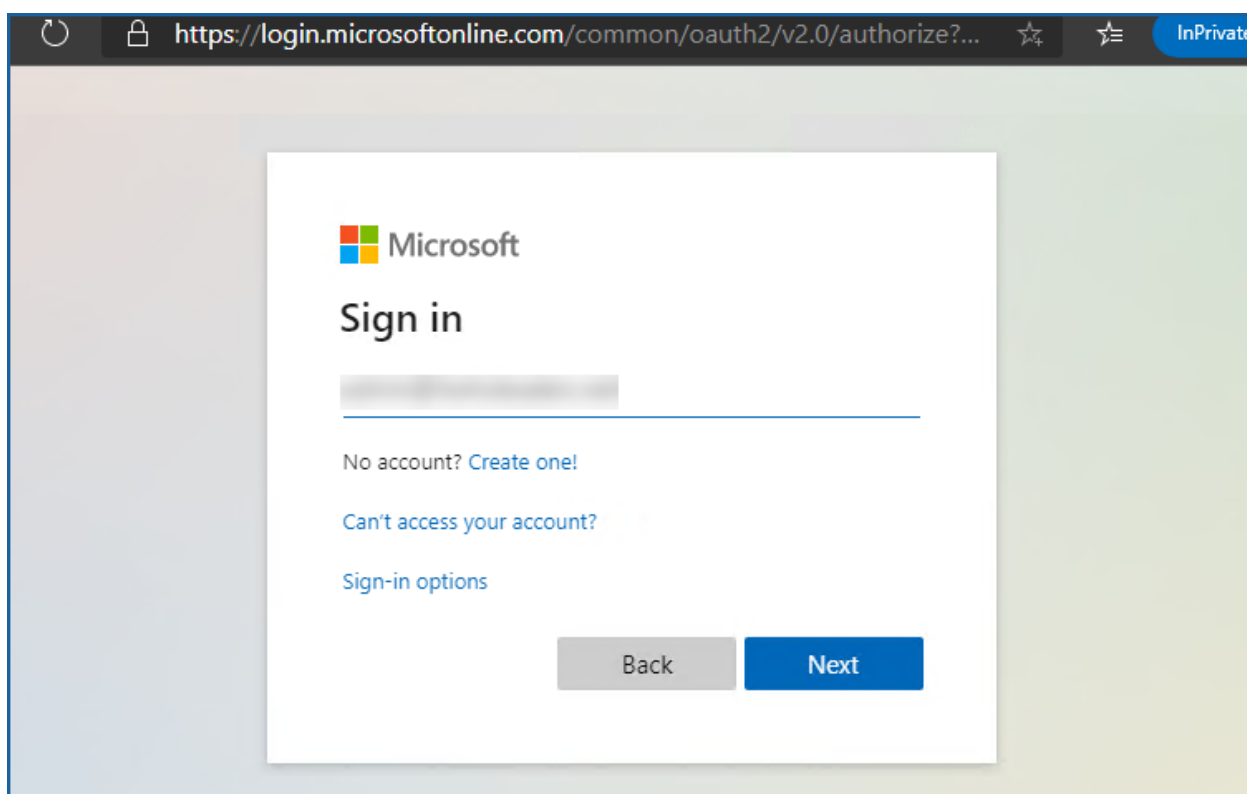
- 2) Select **No**, Choose the option for cloud storage, TCP Copy or advanced.



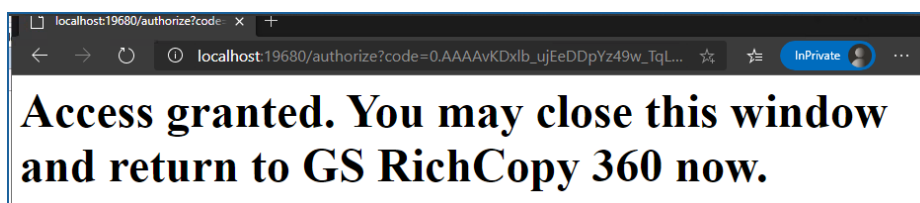
- 3) Fill out the required fields (job name, source) and then select Cloud and choose OneDrive (this covers OneDrive Personal, OneDrive Business, and SharePoint Online). Then click on the browse button next to the Destination.



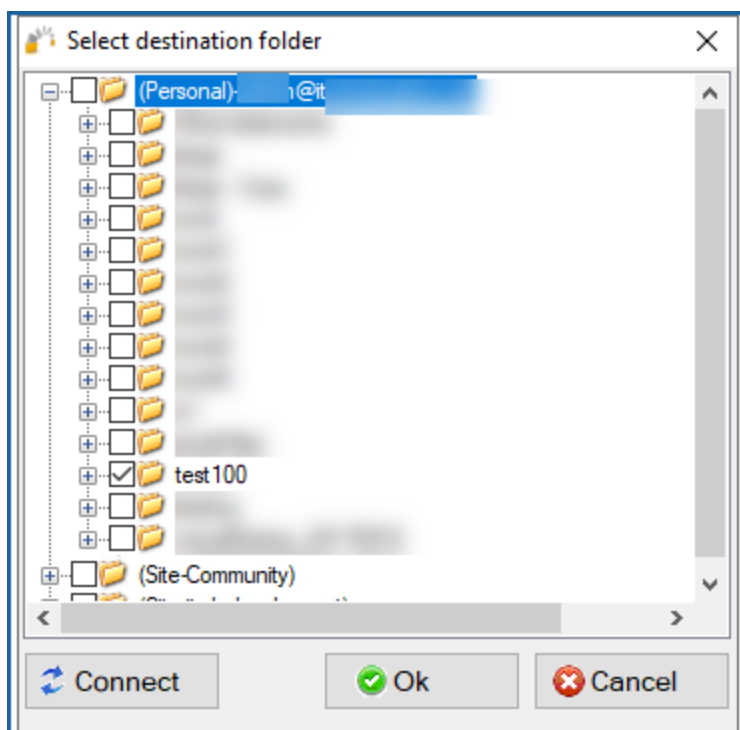
- 4) The default browser should open and prompt for a username (email format) and password. Provide the credentials and click Next (if it prompts you to stay signed in, you can choose yes or no; it does not impact our process).



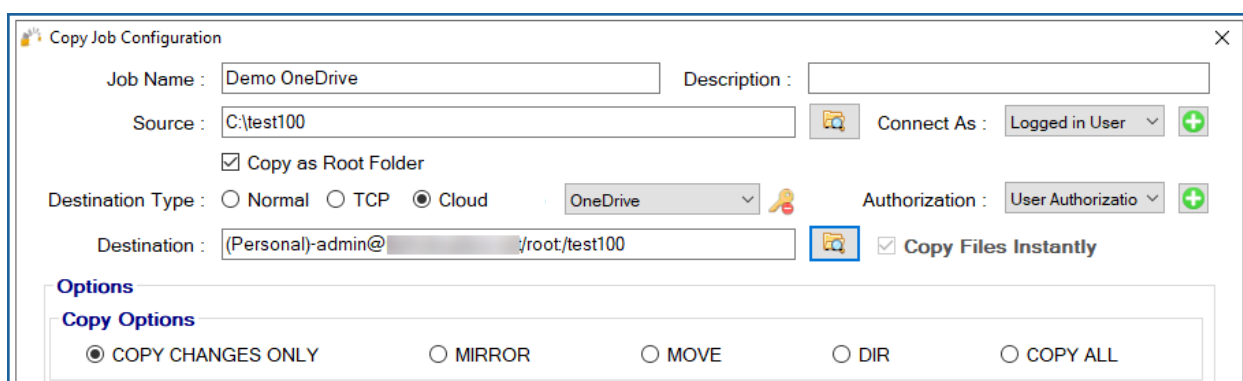
- 5) After completing the authentication steps, the browser should notify you that GS RichCopy 360 access has been granted and that it is safe to close that window. You can close that window now and go back to the application.



- 6) You should see a list of folders; you can expand the folders to drill down. Select the folder where you want to place your data and click **OK**. **Note:** Depending on your access, you may see a list of many folders.



- 7) The destination field should be automatically populated, reflecting the path selected.



- 8) You can now create the rest of the job by choosing the copy options you want as you would in a normal job.

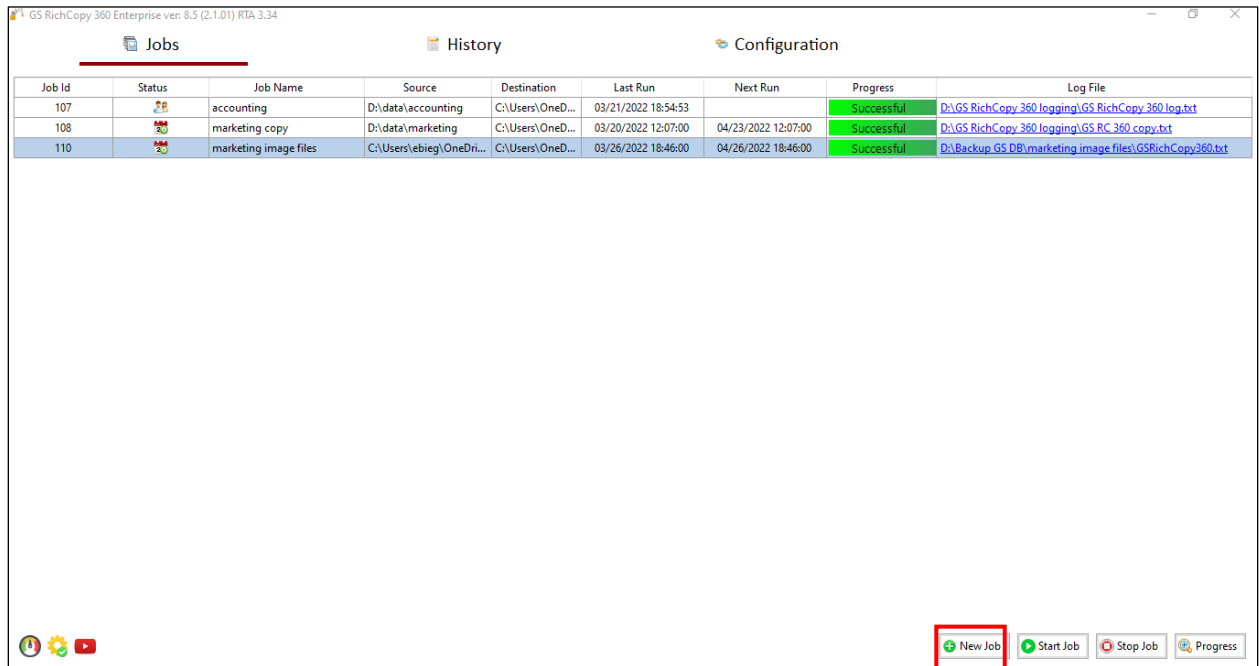
Note: The credentials are stored in an encrypted format, resulting in jobs that can run uninterrupted, in addition to running as a service. You do not need to provide credentials for this job again unless the job is idle for over 8 to 12 months.

- b) **App Authentication:** As indicated earlier in the previous section, App Authentication is highly recommended and used in large migrations as Microsoft Office 365 does not throttle it as much as it throttles User Authentication.

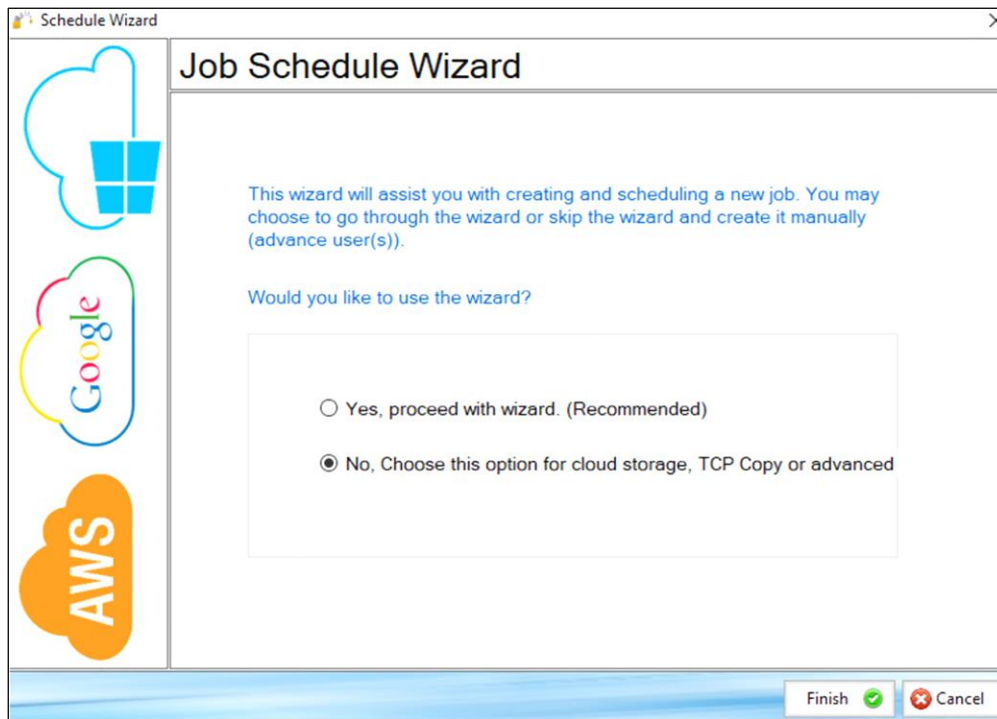
To use App Authorization, the user credentials used must have a Global Admin Role. Follow the steps below to configure a job:

To configure a job using User Mode Authentication:


- 1) Select the **New Job** button from the **Jobs** section



- 2) Select **No**, Choose the option for cloud storage, TCP Copy or advanced to skip the wizard.



- 3) Fill out the required fields (job name, source) and then select Cloud and choose OneDrive (this covers OneDrive Personal, OneDrive Business, and SharePoint Online).

Then click on the Plus sign button next to Authorization . Once clicked, a new window will pop-up prompting for a few fields as per the screen below:

der

Cloud | OneDrive

Authorization : User Authorizatio

☒ Copy Files Instantly

Cloud Tenant

Cloud Type: OneDrive

Account Name (Alias):

Please specify a tenant for the app authorization:

Tenant ID: i.e. 81a130d2-502f-4cf1-a376-63edeb00

Admin Consent : This button authorize GS RichCopy 360 application to copy data to cloud repository on behalf of admin user without sign-in from user. To enable application authorization, Clicking on 'Admin Consent' button will open an url in browser to get admin consent. On successful completion, It will redirect to a url where you can find tenant id. You need to mention that tenant id in this form as Tenant ID.

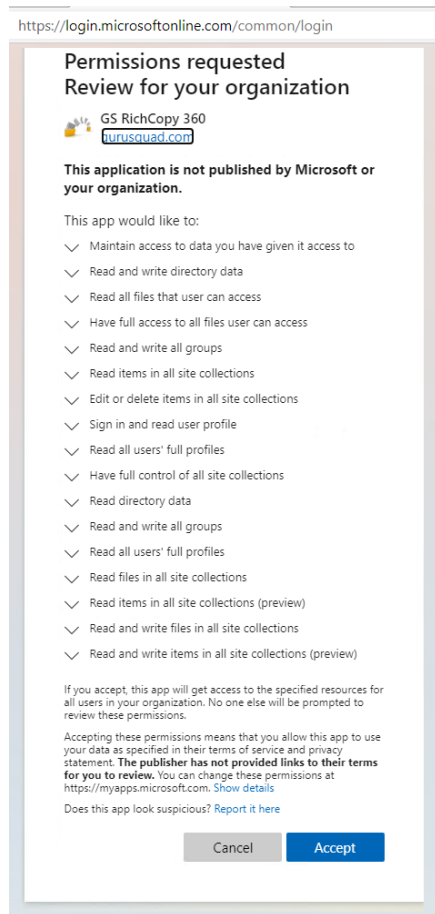
Save Cancel

Account Name	Cloud Type	Modified By	Edit	Del
--------------	------------	-------------	------	-----

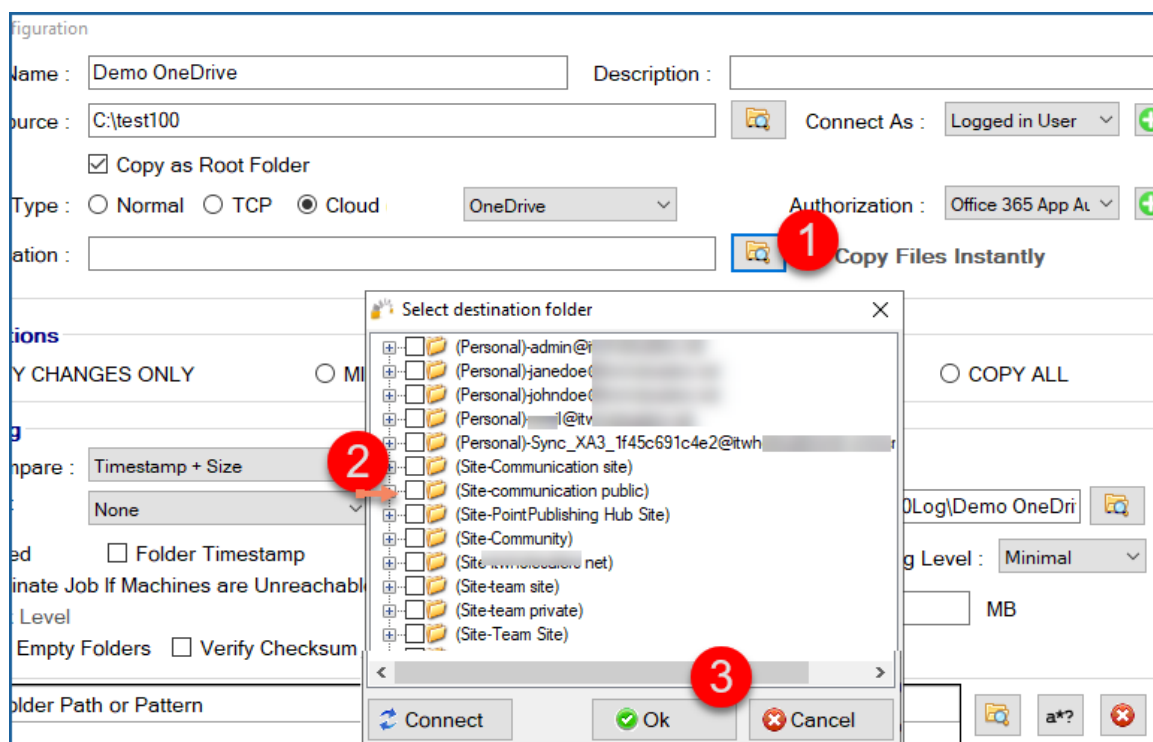
- Account Name: This is just an Alias\label.



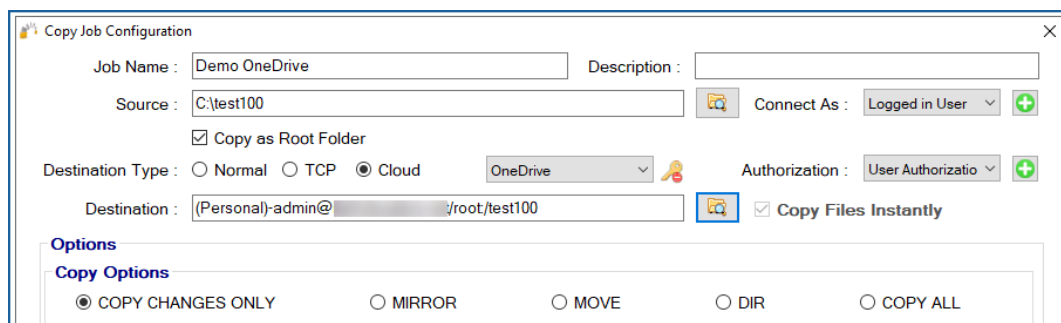
- Clicking on this button initiates the authorization request to allow the application to access OneDrive\SharePoint resources. A web browser will pop out prompting for username and password (global admin role is required). Once logged in, it will request permission to grant GS RichCopy 360 the access required.



- Once the access has been granted, a confirmation screen will be displayed.
 - Click on Save .
- 4) Now that access has been granted, click on the browse button next to the destination, and it should enumerate all the available folders to which you have access. Select the folder you want to copy the data to and click on OK.



- 5) Once you have selected your destination folder and click on Ok, you should see the path populated in the destination field as below:



- 6) You can now create the rest of the job by choosing the copy options you want as you would in a normal job.

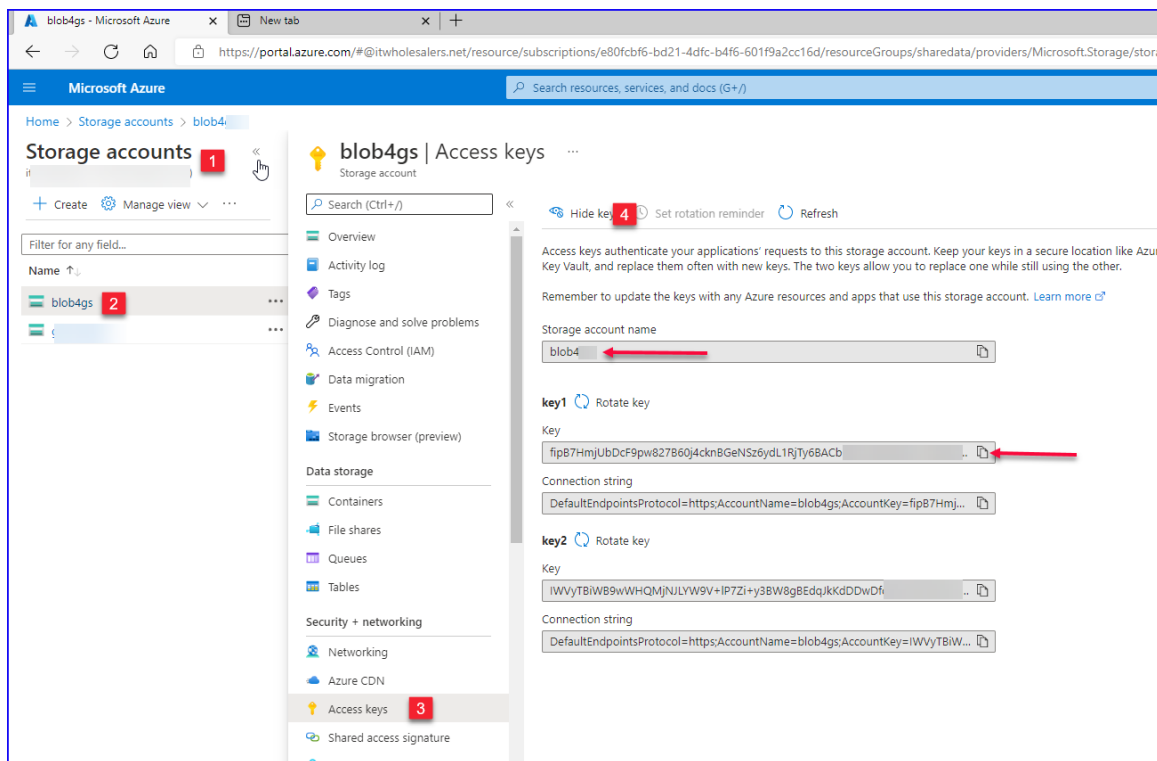
Note: The credentials are stored in an encrypted format. This means that jobs could run uninterrupted as well as run as a service. You do not have to provide credentials for this job again unless the job is idle for 8 to 12 months.

Azure File Share - Cloud

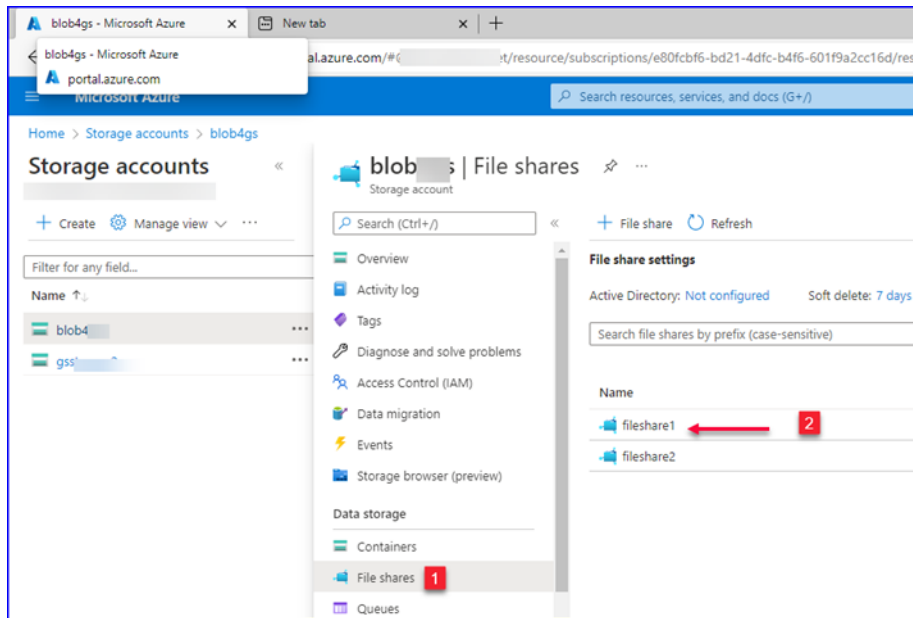
Connecting to Azure File Share can be done by either the Storage Account Key or Active Directory (assuming the Azure File Share is joined to an Active Directory Domain.) The example below shows how to connect using a Storage Account Key.

Follow these simple steps to copy to Azure File Share (for enterprise clients, you could do the same steps to copy from Azure File Share).

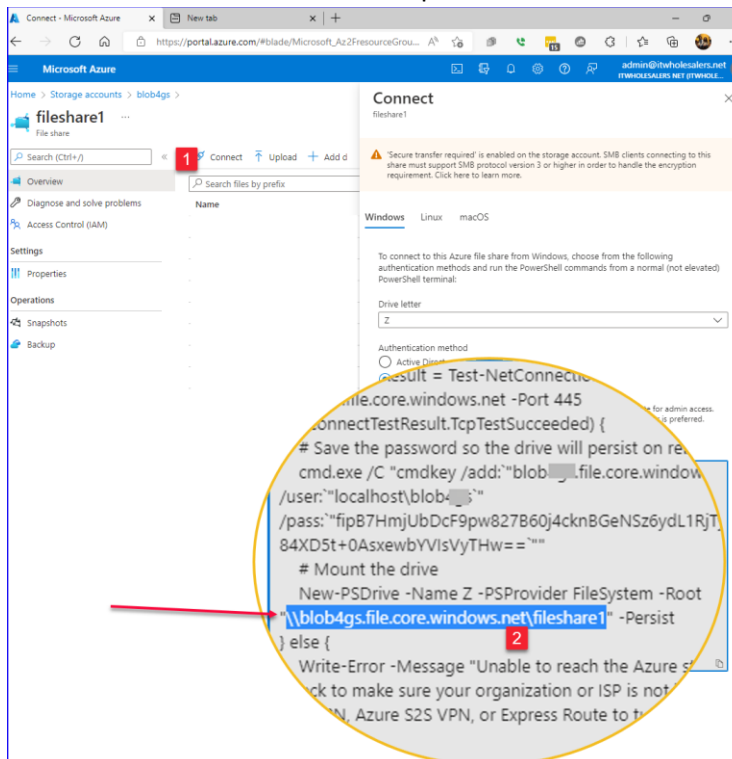
- 1) First, ensure the Azure File Share is created on the Azure Portal and get the Storage Account Name and Key (key1 or key2 can be used).



- a. Once logged into the Azure Portal, click on storage accounts (Step 1)
 - b. Click on the Storage Account that we are copying to (Step 2)
 - c. Click on Access Keys (Step 3)
 - d. Copy the Storage Account Name and Key1 (to a temporary location as they will be needed later during the job configuration process in GS RichCopy 360).
- 2) Create an Azure File Share if it is not already created and select it.

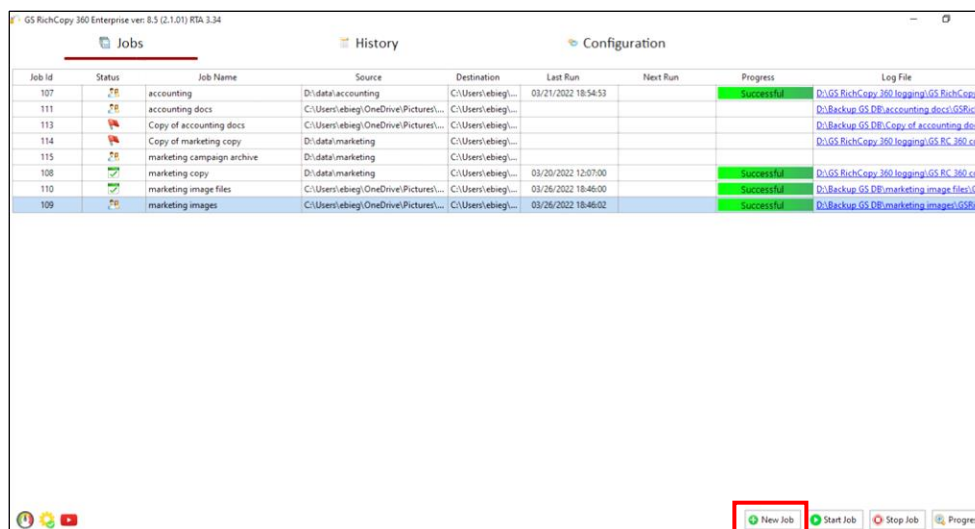


- a. Click on Files Shares (Step 1)
 - b. Click on the file share which will be used as the destination (Step 2)
- 3) Click on **Connect** and find the UNC path referenced to connect to the selected Azure File Share

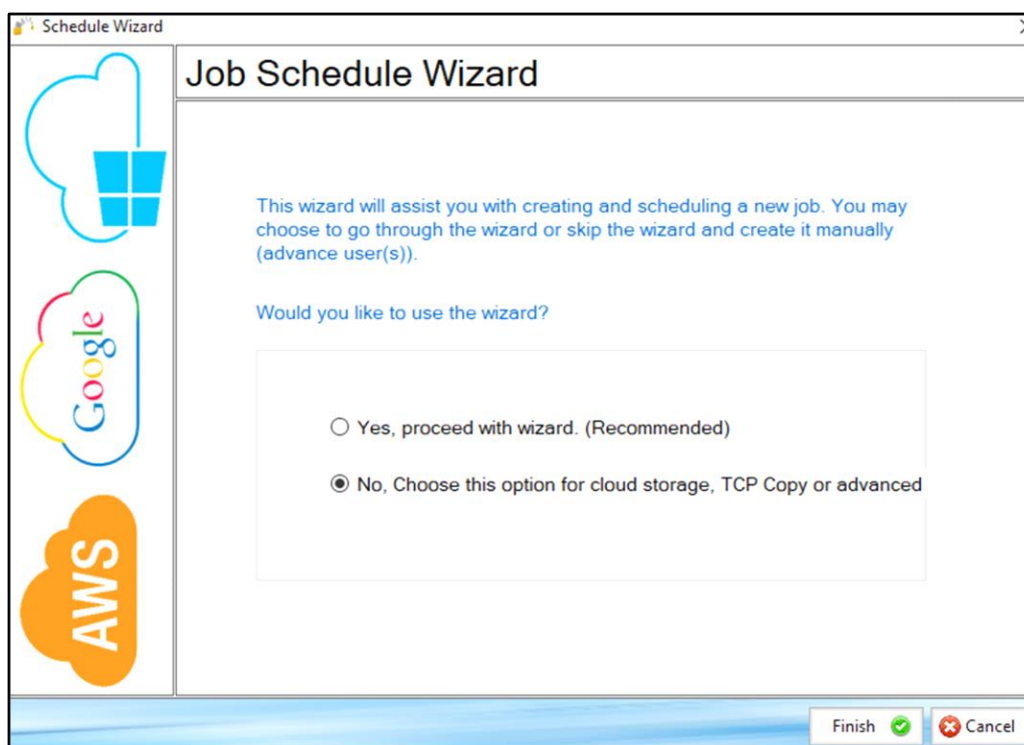


- a. Click on Connect (Step 1)
- b. Copy the path that displays the path to the Azure File Share (Step 2)
 \\StorageAccount.file.core.windows.net\FileShareName

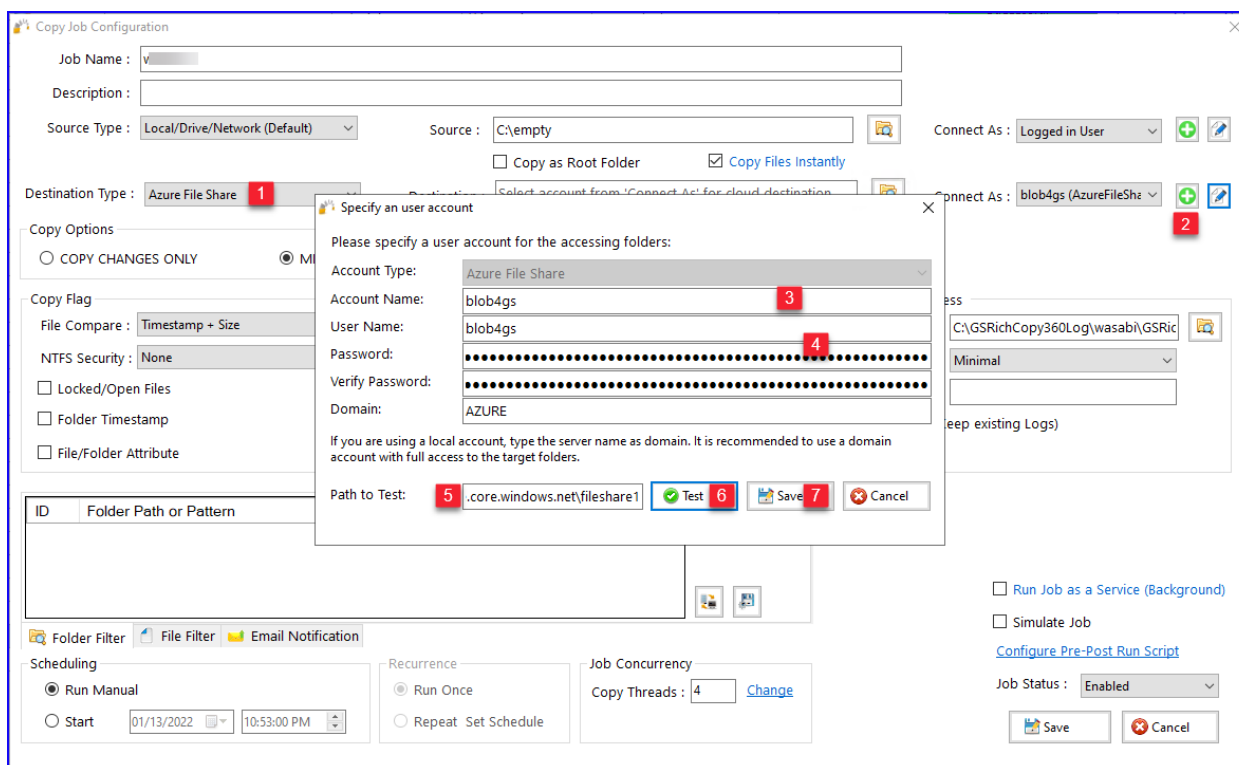
- 4) Now that we have collected all the needed details to connect to the Azure File Share. Let's create the job. Select the **New Job** button from the **Jobs** section.



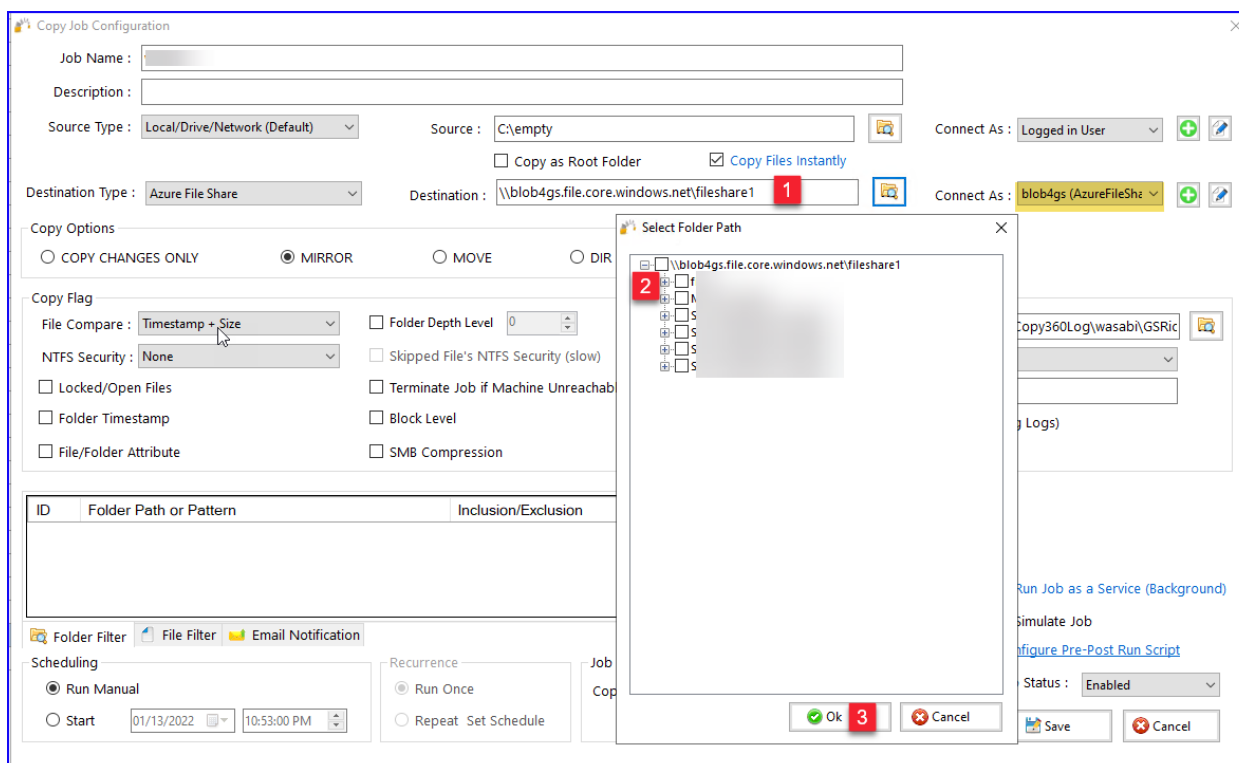
- 5) **No**, Choose the option for cloud storage, TCP Copy or advanced to skip the wizard.



- 6) Select the Destination Type to be Azure File Share (Step 1).



- a. Click on the + sign to add the Azure File Share account to connect with (Step 2).
 - b. Give the account an alias name (label) (Step 3)
 - c. Provide the Storage Account Name and Key1 and verify it (Step 4)
 - d. Type the path to the Azure File Share and click test (Step 5 and 6) to confirm the connection is successful– This is optional
 - e. Save the Job (Step 7)
- 7) Type Azure File Share path in the destination. You can click on the browse button to display the available destination folders. Check the box next to the folder to be set as the destination and select Ok.



- 8) You can now create the rest of the job by choosing the copy options you want as you would in a normal job.

Note: The credentials are stored in an encrypted format. This means that you can run uninterrupted as well as run as a service. You do not have to provide credentials for this job again unless you change the key that is being used or the job does not run for a long time which may be longer than the validation period of the token.

Microsoft Azure Blob Storage

Copying to Azure Blob Storage is straight forward. However, it is essential to note that Azure Blob Storage is known to use network bandwidth excessively. Fortunately, GS RichCopy offers the option the throttle the bandwidth being used to copy to cloud providers. Make sure to visit that section to [Cloud Bandwidth Throttling](#).

To configure a job to copy to Azure Blob Storage, you will need the following from the Access Keys for that storage account:

- 1) Storage Account Name
- 2) One of the two keys.

Here is a screenshot of where you can obtain them from the Azure Portal for reference.

Microsoft Azure

Home > sharedata > blob4gs **1**

blob4gs | Access keys

Storage account

Search (Ctrl+ /)

- Overview
- Activity log
- Tags
- Diagnose and solve problems
- Access Control (IAM)
- Data transfer
- Events
- Storage Explorer (preview)
- Settings
 - Access keys **2****
 - CORS
 - Configuration
 - Encryption
 - Shared access signature
 - Firewalls and virtual networks

Use access keys to authenticate your applications when making requests to this Azure storage account. Store your access keys so that you can maintain connections using one key while regenerating the other.

When you regenerate your access keys, you must update any Azure resources and applications that access this storage account.

Storage account name
blob4gs

Hide keys

key1 ↻

Key
cRXZC2TjLG61ohRmzxvpc86xW9+2j4xpp22UfUmetCCaP8olZO3nhEITktXFrBzLmCzBvAWtCvOrjYfYbucmKA=

Connection string
DefaultEndpointsProtocol=https;AccountName=blob4gs;AccountKey=cRXZC2TjLG61ohRmzxvpc86xW9+2j4xpp22UfUmetCCaP8olZO3nhEITktXFrBzLmCzBvAWtCvOrjYfYbucmKA=

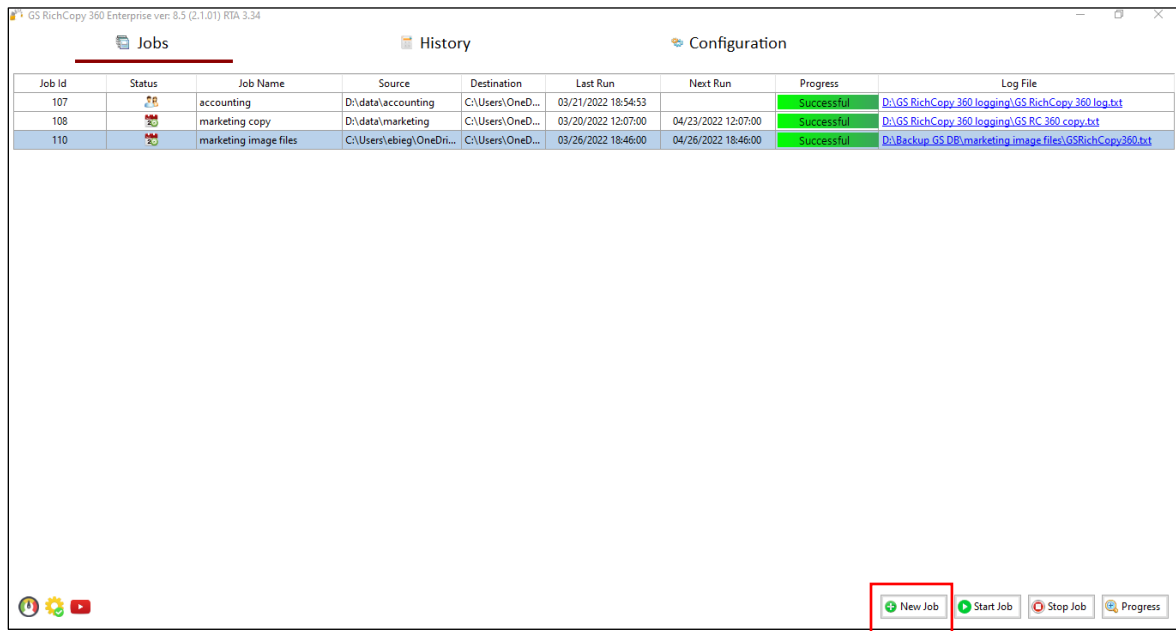
key2 ↻

Key
IWVvyTBiWB9wWHQMjNJLYW9V+IP7Zi+y3BW8gBEdqJkKdDDwDfqm7q/81foOyCKattG

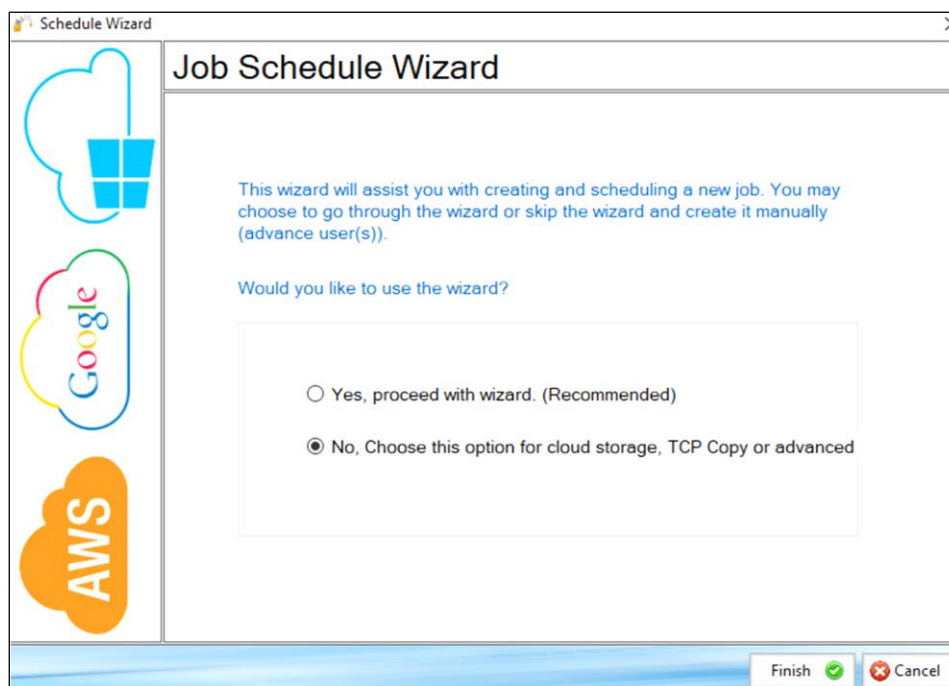
Connection string
DefaultEndpointsProtocol=https;AccountName=blob4gs;AccountKey=IWVvyTBiWB9wWHQMjNJLYW9V+IP7Zi+y3BW8gBEdqJkKdDDwDfqm7q/81foOyCKattG

Creating a job to copy to Azure Blob Storage:

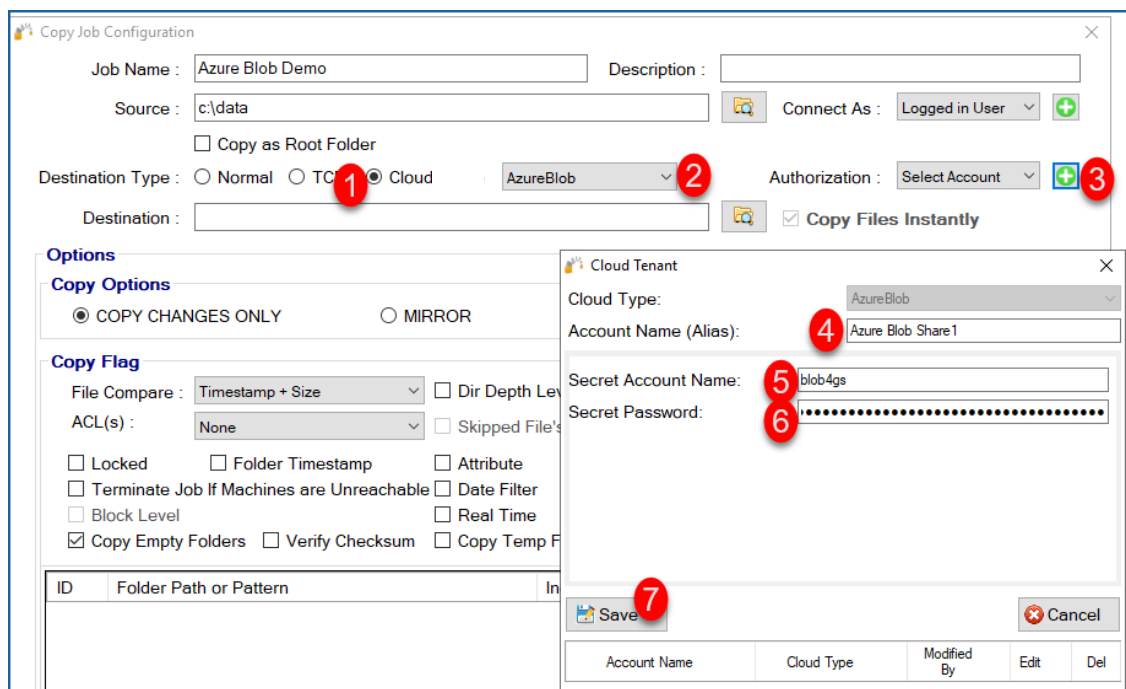
- 1) Select **New Job** button from the **Jobs** section.



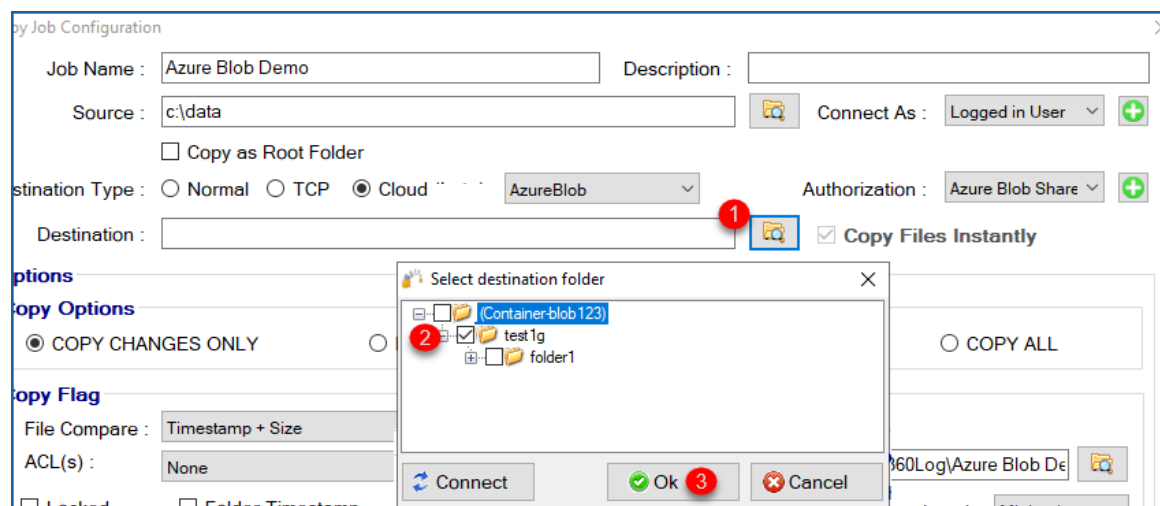
- 2) Select **No, Choose this option for cloud storage, TCP Copy or advanced** to skip the wizard.



- 3) Fill out the required fields (job name, source), select Cloud, choose AzureBlob, click on the Plus Sign next to the Authorization, follow the steps below and click Save.



- Then click on the browse button next to the Destination. A list of folders will be displayed. Click on the check box where you want to copy the data to and click **Ok**.



- You can now proceed with creating the rest of the job by choosing the copy options you want as you would in a normal job.

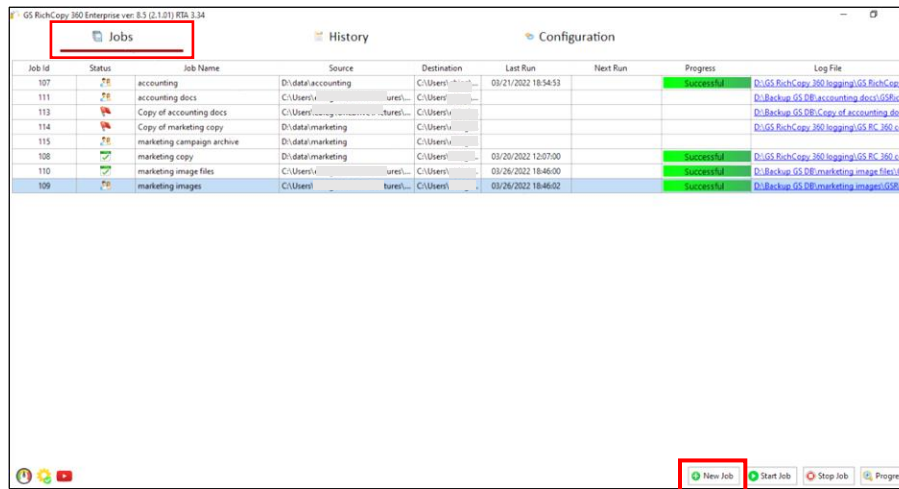
Note: The credentials are stored in an encrypted format. This means that jobs could run

uninterrupted as well as run as a service. You do not have to provide credentials for this job again unless you change the key that is being used.

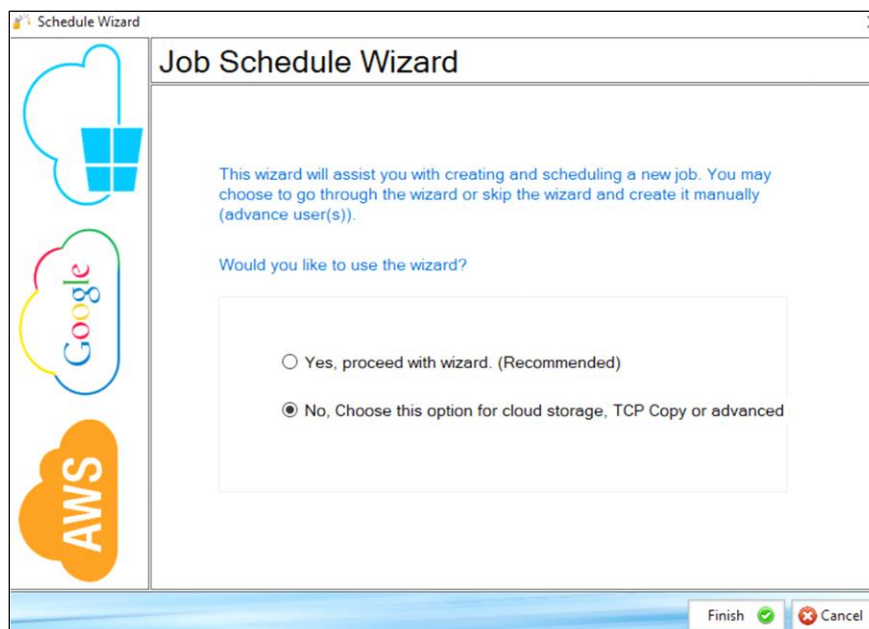
DropBox Cloud

Follow these simple steps to copy to DrobBox Personal/Business Cloud.

- 1) Select **New Job** button from the **Jobs** section.



- 2) Select **No, Choose the option for cloud storage, TCP Copy or advanced** to skip the wizard.



- 3) Fill out the required fields (job name, source) and then select Cloud and choose DropBox. Then click on the browse button next to the Destination.

Copy Job Configuration

Job Name : Description :

Source : Connect As :

☐ Copy as Root Folder

Destination Type : ☐ Normal ☐ TCP ☒ Cloud

Authorization :

Destination :

☒ Copy Files Instantly

Options

Copy Options

☒ COPY CHANGES ONLY ☐ MIRROR ☐ MOVE ☐ DIR ☐ COPY ALL

Copy Flag

File Compare : ☐ Dir Depth Level

ACL(s) : ☐ Skipped File's ACL (slow)

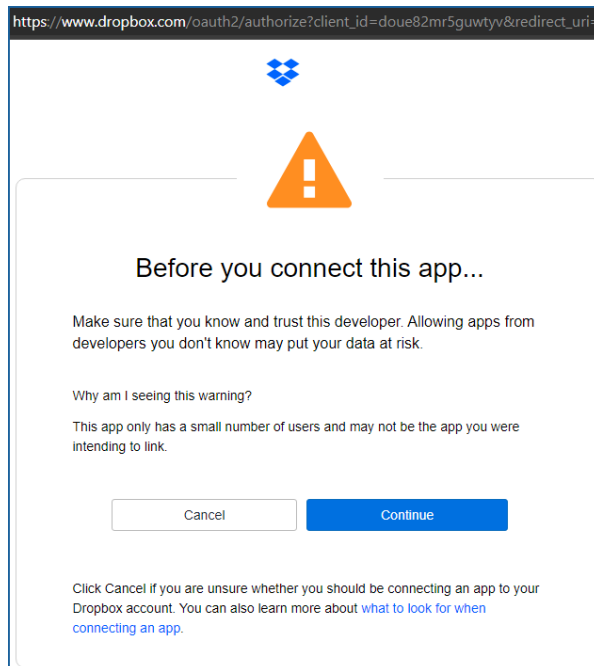
☐ Locked ☐ Folder Timestamp ☐ Attribute

Logging

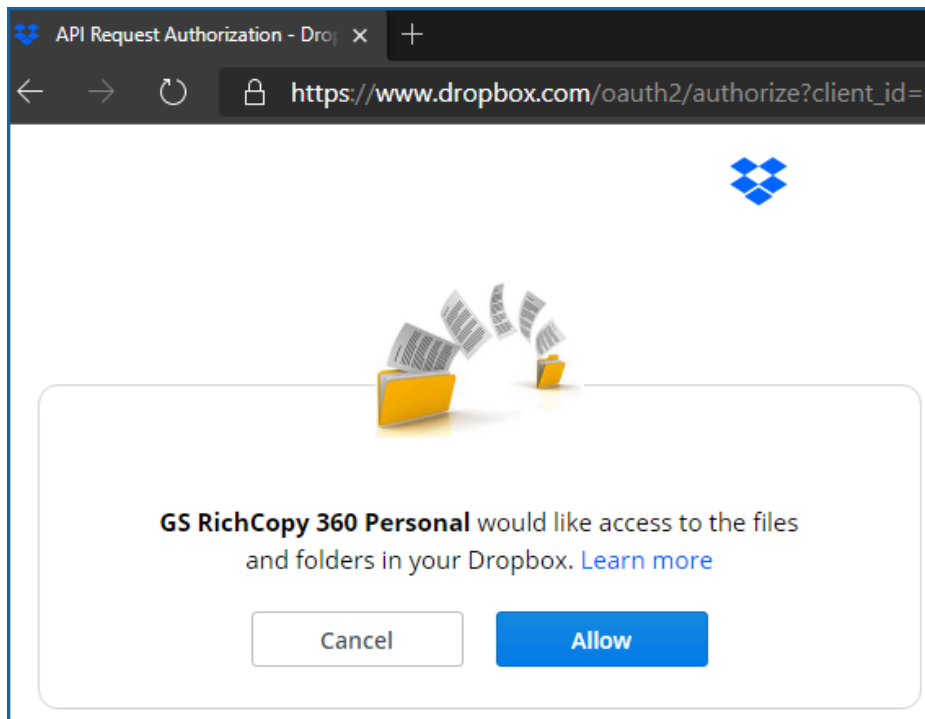
☒ Log

☐ Log Append

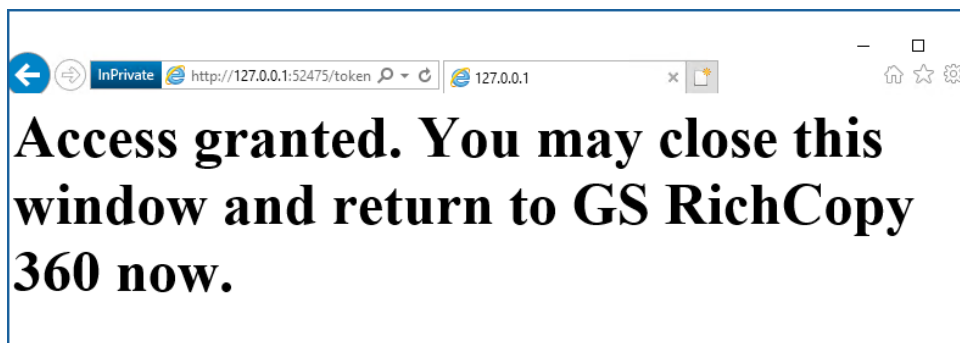
- 4) A browser window should open and prompt you for your DropBox credentials. Provide them and logon.
- 5) A warning prompt will ask you to confirm access of GS RichCopy 360 to the DropBox resource. Click **Continue**.



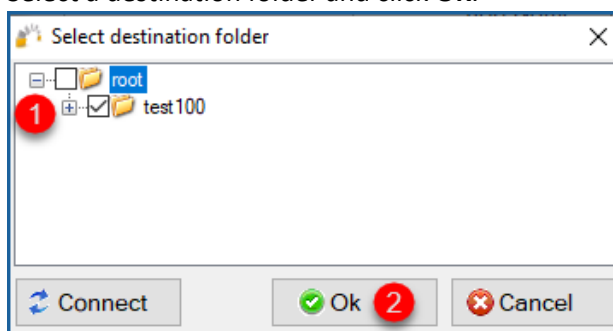
- 6) Another window may request that GS RichCopy 360 be granted access to your files and folders. Click **Allow** to continue.



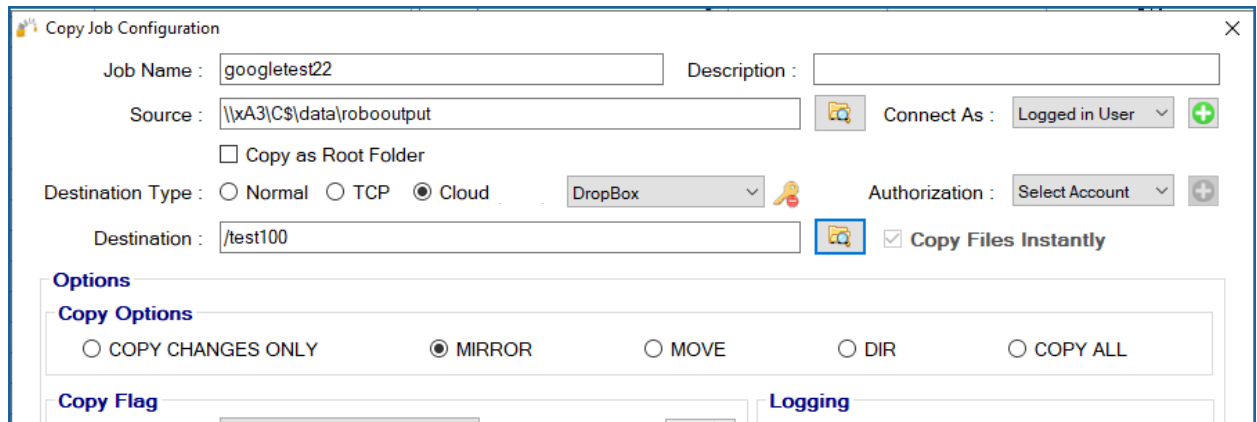
- 7) A confirmation screen confirming that GS RichCopy 360 has been granted the access it needs to enumerate and connect to your account. Close that window and go back to the job configuration screen to select a destination folder.



- 8) Select a destination folder and click **OK**.



- 9) Your destination path should now auto-populate with the folder you selected to copy to.



The screenshot shows the 'Copy Job Configuration' dialog box. It has a title bar with a close button. The main area contains several fields and options:

- Job Name :** googletest22
- Description :** (empty)
- Source :** \\xA3\C\$\data\robooutput
- Connect As :** Logged in User (with a green plus icon)
- ☐ Copy as Root Folder
- Destination Type :** ☐ Normal ☐ TCP ☒ Cloud
- DropBox :** (dropdown menu)
- Authorization :** Select Account (with a plus icon)
- Destination :** /test100
- ☒ Copy Files Instantly

Below these fields is an **Options** section with a **Copy Options** sub-section containing five radio buttons: ☐ COPY CHANGES ONLY, ☒ MIRROR, ☐ MOVE, ☐ DIR, and ☐ COPY ALL. At the bottom, there are two tabs: **Copy Flag** and **Logging**.

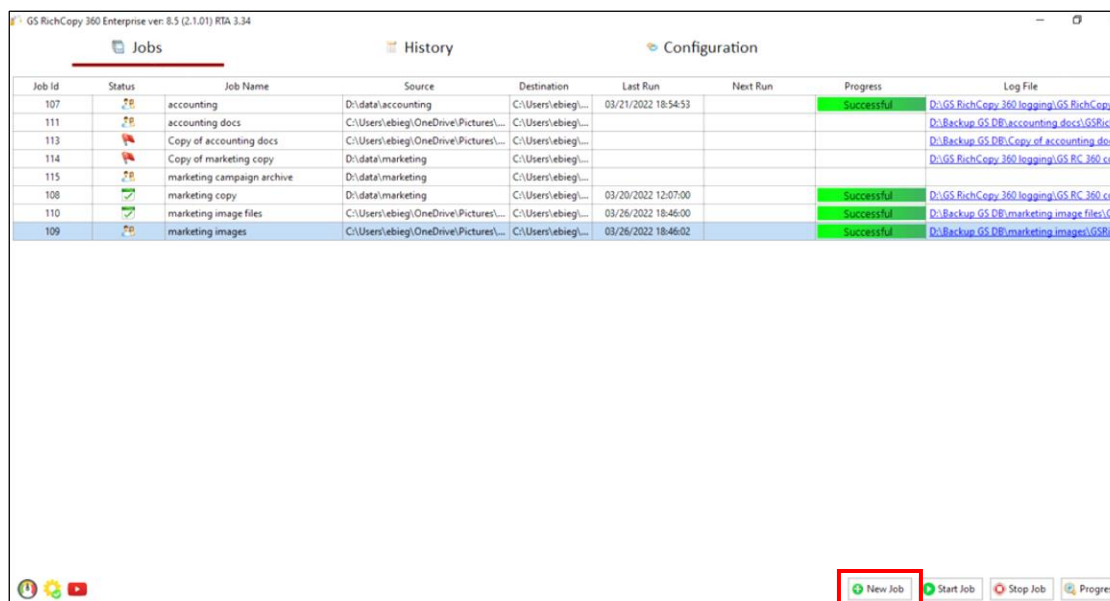
- 10) You can now create the rest of the job by choosing the copy options as you would in a normal job.

Note: The credentials are stored in an encrypted format. This means that jobs can run uninterrupted and run as a service. You do not have to provide credentials for this job again unless the job is idle for 8 to 12 months.

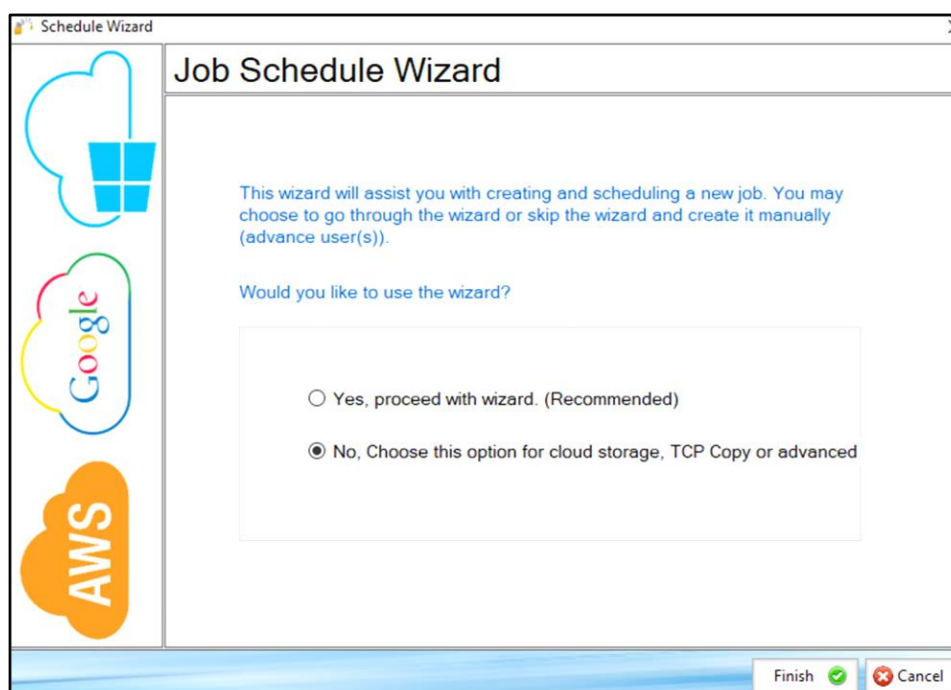
Box.com - Cloud

Follow these simple steps to copy to Box.com (for enterprise clients, you could the same steps to copy from Box.com).

1. Select the **New Job** button from the **Jobs** section

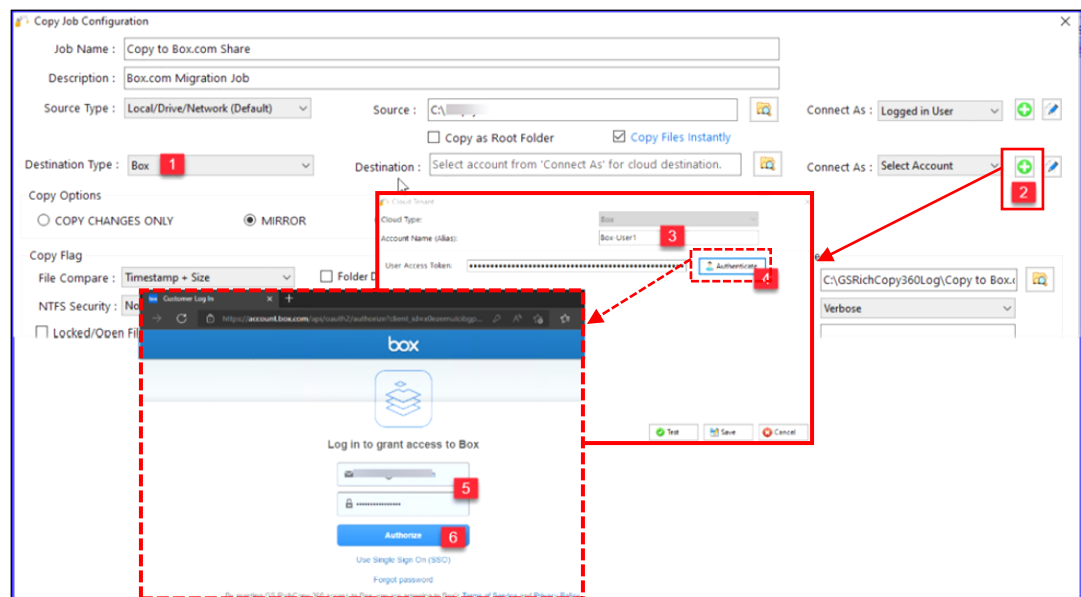


2. Select **No**, Choose the option for cloud storage, TCP Copy or advanced to skip the wizard.

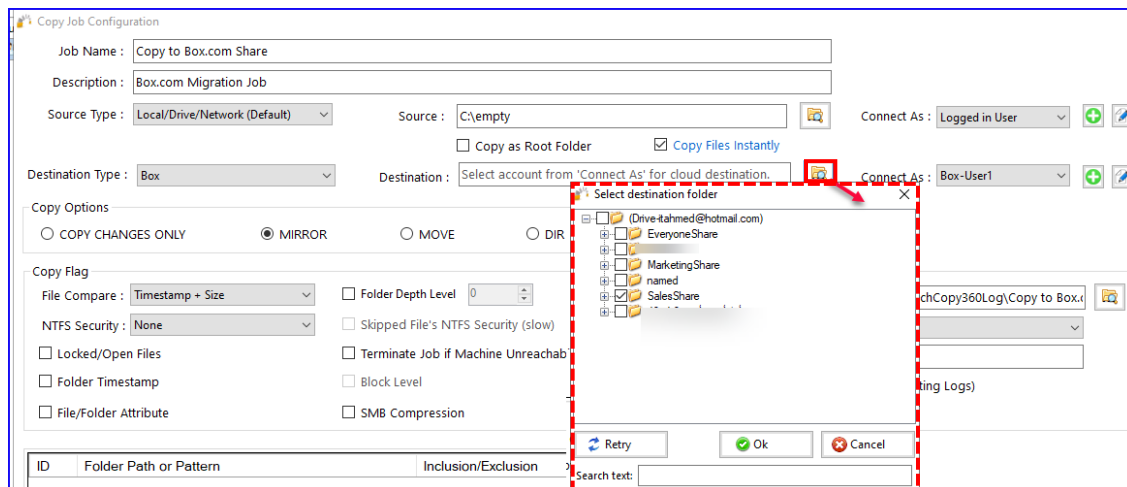


3. Select the Destination Type to be **Box** (Step 1).
 - a. Click on the + sign to add the Box account to connect with (Step 2).
 - b. Give the account an alias name (a label) (Step 3)
 - c. Click on **Authenticate** (Step 4)

- d. Login with the Box user credentials to be used (Step 5)
- e. Click on **Authorize** (Step 6) and follow the prompts to grant the access needed
- f. Click on **Save** to save the credentials.



4. Click on the browse button to display the available destination folders. Select the checkbox next to the folder to be set as the destination and select Ok.



5. You can now create the rest of the job by choosing the copy options you want as you would in a normal job.

Note: The credentials are stored in an encrypted format. This means that jobs can run uninterrupted as well as run as a service. You do not have to provide credentials for this job again unless you change the key that is being used or the job does not run for a long time which may be longer than the validation period of the token.

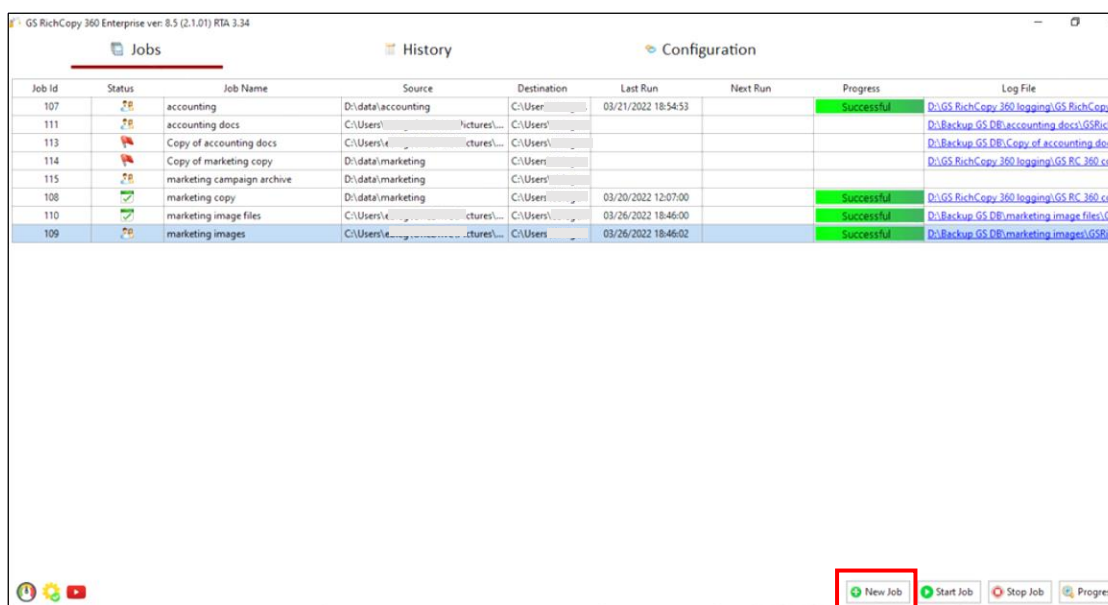
Amazon S3 Cloud

Copying to the Amazon S3 account requires the Access Key and the Secret Access Key for either the root account or an IAM user with proper rights and API access to the S3 bucket.

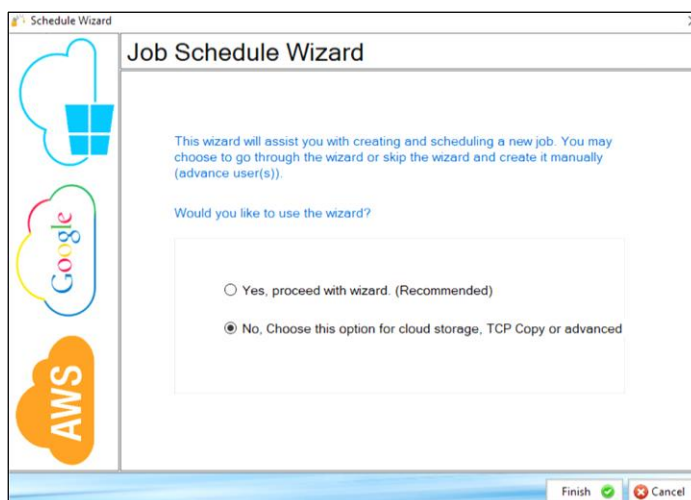
Note: it is very important to note that Amazon S3 is known to use network bandwidth excessively. Fortunately, GS RichCopy offers the option to throttle the bandwidth being used to copy to cloud providers. Make sure to visit that section to [Cloud Bandwidth Throttling](#).

Steps for creating a job to copy to Amazon S3:

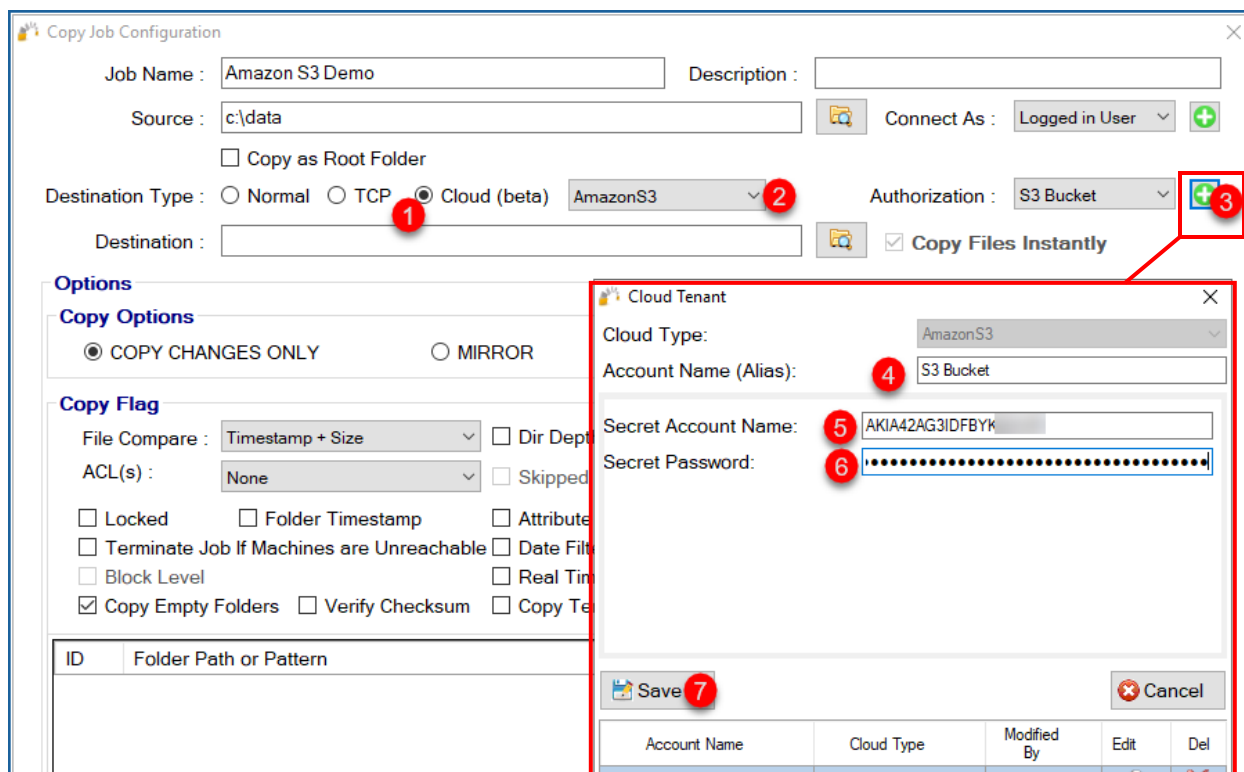
- 1) Select the **New Job** button from the **Jobs** section.



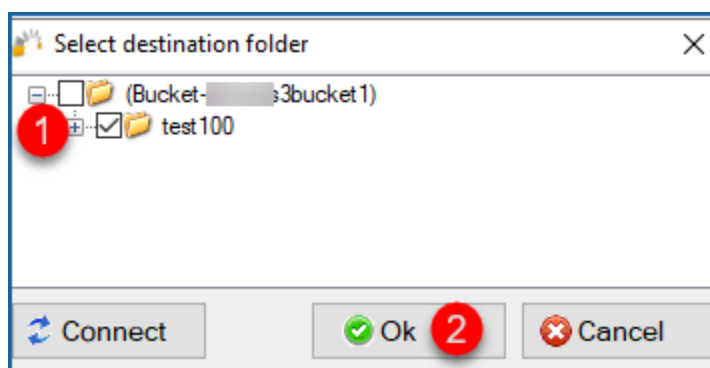
- 2) Select **No**, Choose the option for cloud storage, TCP Copy or advanced to skip the wizard.



- 3) Fill out the required fields (job name, source) and then select Cloud and choose Amazon S3. Then click on the Plus sign next to Authorization to add the credentials.



- 4) Click on the browse button next to Destination and select your destination folder and click **OK**.



- 5) Your destination path should auto-populate with the folder you selected to copy to.

The screenshot shows the 'Copy Job Configuration' dialog box. It has a title bar with a close button. The main area contains several fields and options:

- Job Name:** Amazon S3
- Description:** (empty field)
- Source:** c:\data
- Connect As:** Logged in User (with a green plus icon)
- ☐ Copy as Root Folder
- Destination Type:** ☐ Normal ☐ TCP ☒ Cloud
- Destination:** (Bucket: s3bucket1)/roottest100
- Authorization:** s3: /bucket1 (with a green plus icon)
- ☒ Copy Files Instantly
- Options** section:
 - Copy Options:** ☒ COPY CHANGES ONLY ☐ MIRROR ☐ MOVE ☐ DIR ☐ COPY ALL
 - Copy Flag:** File Compare: Timestamp + Size ☐ Dir Depth Level: 0
 - Logging:** ☒ Log

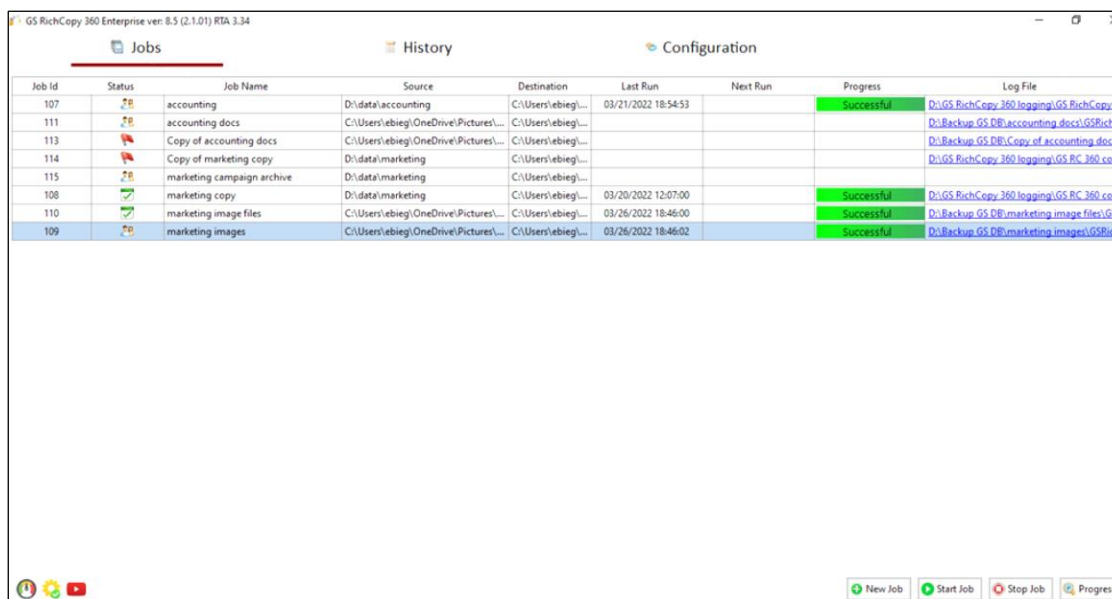
- 6) You can now create the rest of the job by choosing the copy options as you would in a normal job.

Note: The credentials are stored in an encrypted format, allowing jobs to run uninterrupted as well as run as a service. You do not have to provide credentials for this job again unless you change the key that is being used.

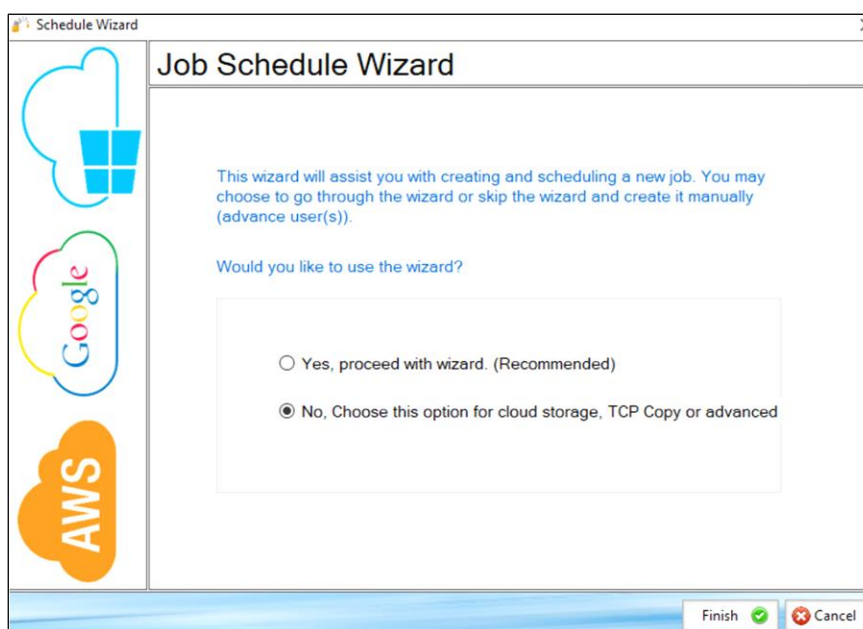
S3 Compatible Storage - Cloud

Follow these simple steps to copy to any S3 Compatible storage providers (Clients with GS RichCopy 360 Enterprise can also copy from any S3 Compatible storage providers).

- 1) Select the **New Job** button from the **Jobs** section.

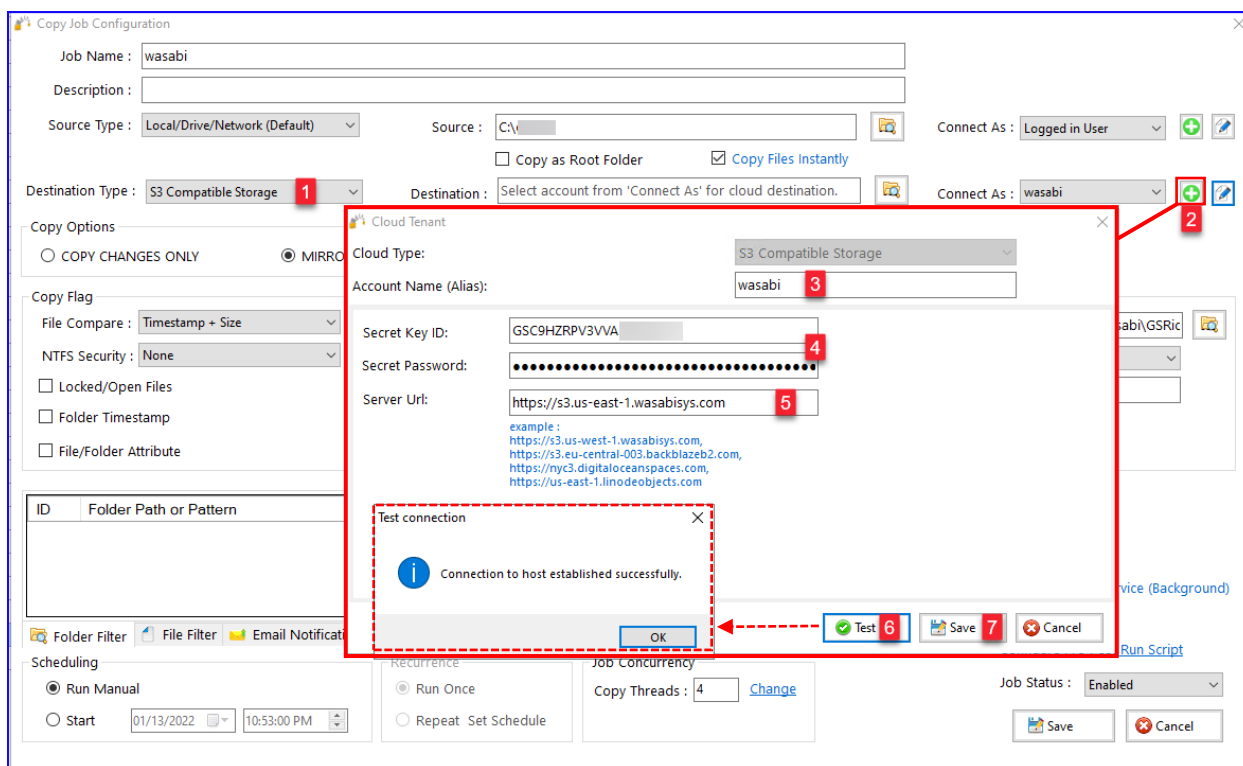


- 2) Select **No**, Choose the option for cloud storage, TCP Copy or advanced to skip the wizard.

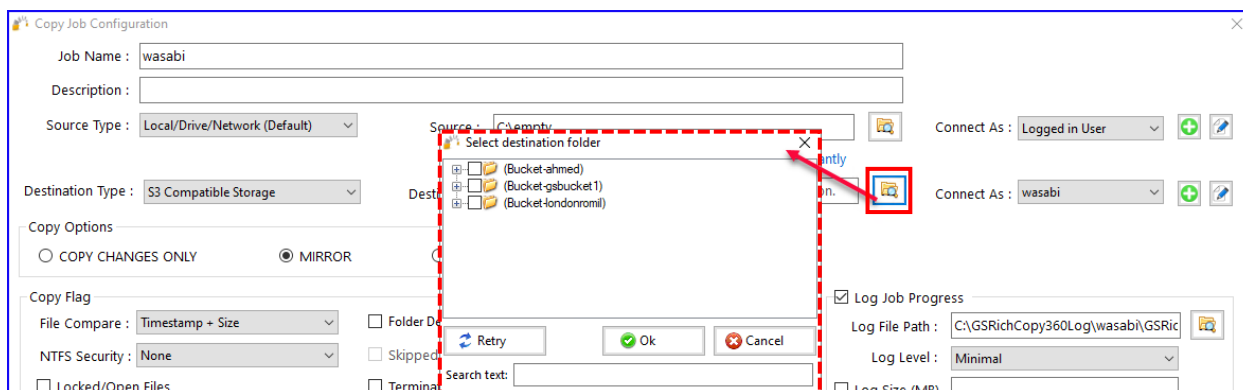


- 3) Place holder. Select the Destination type to be **S3 Compatible Storage** (Step 1).
 - a. Click on the + sign to add the S3 Compatible Storage account to connect with (Step 2).
 - b. Give the account an alias name (label) (Step 3)
 - c. Provide the Secret Key ID and Secret Password (Step 4)
 - d. Specify the S3 Endpoint. This is provided by the S3 Storage Provider (Step 5)

- e. Click on Test to test the credentials and confirm the connection is successful (Step 6)
This is optional.
- f. Click on Save to save the credentials.



- 4) Click on the browse button to display the available destination folders. Check the box next to the folder to be set as the destination and select **Ok**.



- 5) Placeholder. You can now create the rest of the job by choosing the copy options you want as you would in a normal job

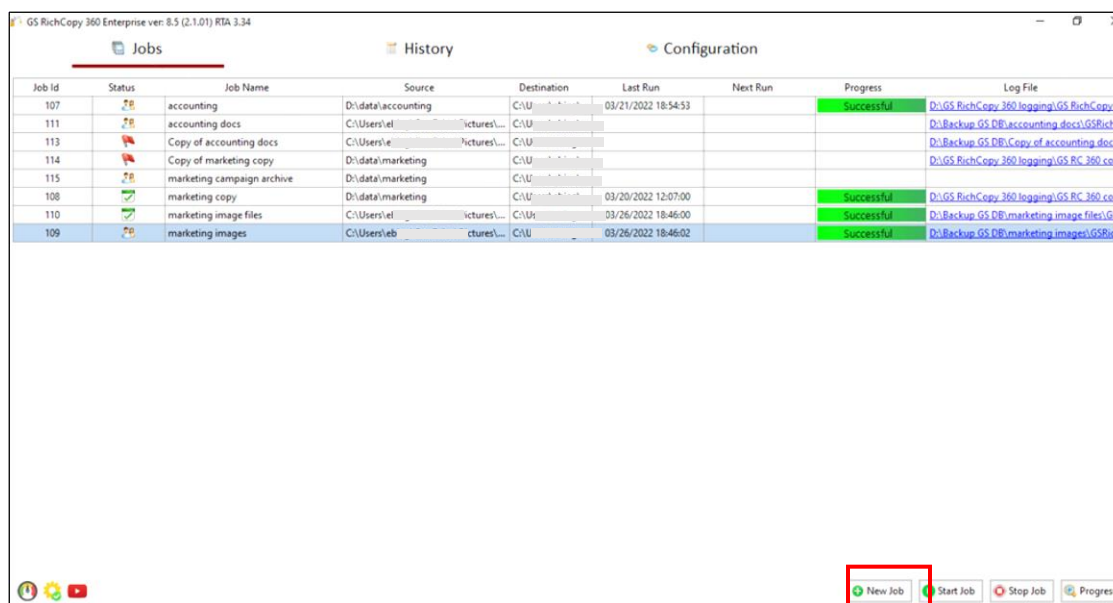
Note: The credentials are stored in an encrypted format. This means that jobs will run uninterrupted as well as run as a service. You do not have to provide credentials for this job

again unless you change the key that is being used or the job does not run for a long time which may be longer than the validation period of the token.

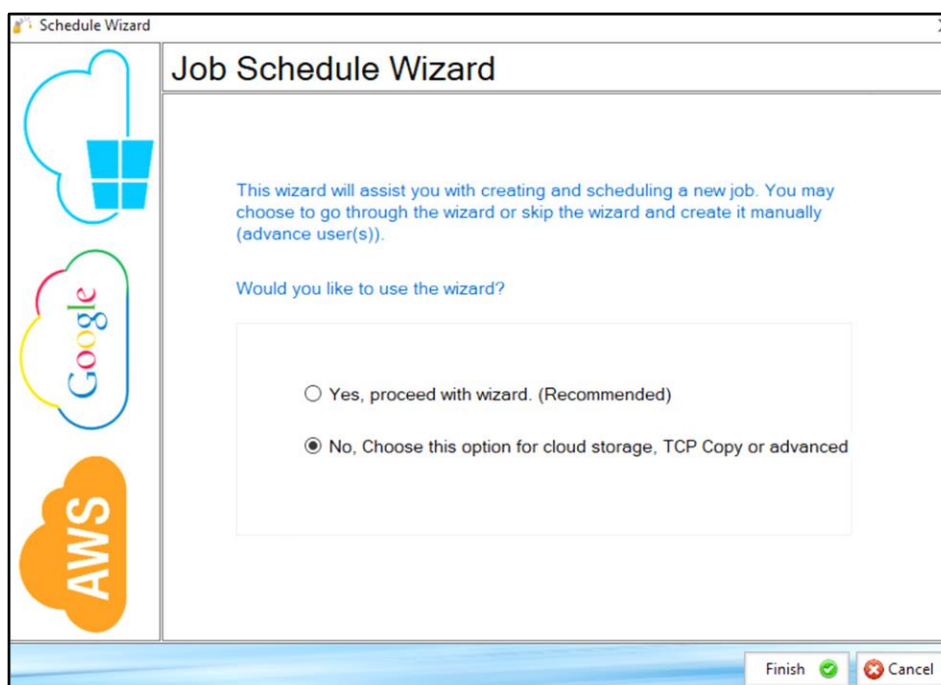
Google Drive Cloud

Follow these simple steps to copy to Google Drive Personal\ Business Cloud.

- 1) Select the **New Job** button from the **Jobs** section.



- 2) Select **No**, Choose the option for cloud storage, TCP Copy or advanced to skip the wizard.



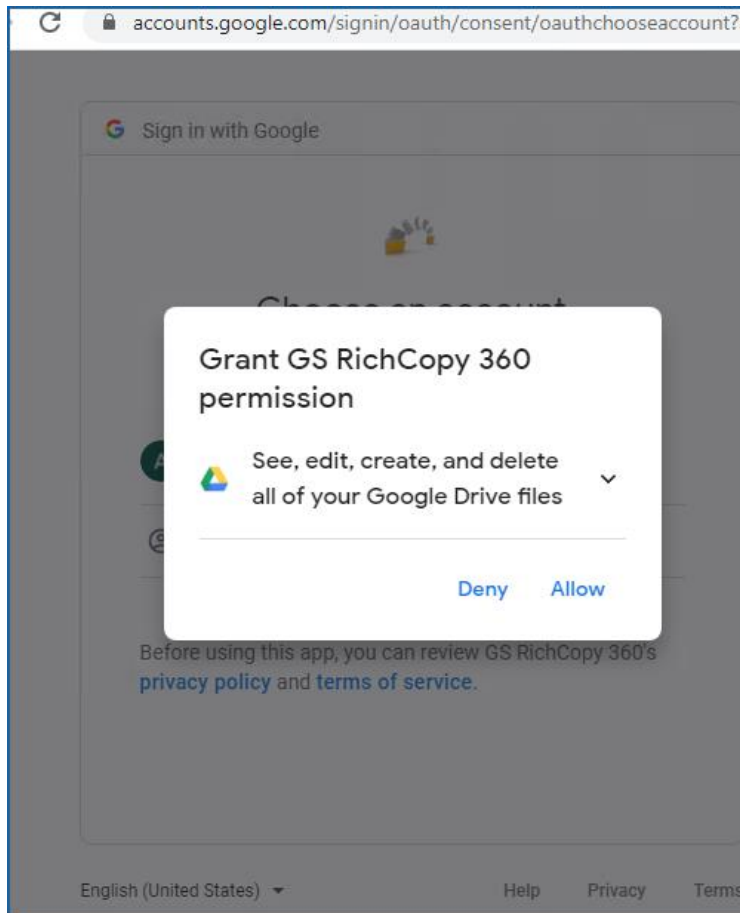
- 3) Fill out the required fields (job name, source) and then select **Cloud** and choose **GoogleDrive**. Then click on the browse button next to the Destination.

The screenshot shows the 'Copy Job Configuration' window. It has fields for 'Job Name' (containing 'Google Drive Demo') and 'Description'. The 'Source' is set to 'c:\data'. There is a 'Connect As' dropdown set to 'Logged in User'. Below the source, there is a checkbox for 'Copy as Root Folder'. The 'Destination Type' section has three radio buttons: 'Normal', 'TCP', and 'Cloud' (which is selected and marked with a red circle 1). To the right of the 'Cloud' radio button is a dropdown menu set to 'GoogleDrive' (marked with a red circle 2). To the right of that is an 'Authorization' dropdown set to 'Select Account'. Below these, there is a 'Destination' field and a 'Browse' button (marked with a red circle 3). To the right of the 'Destination' field is a checkbox for 'Copy Files Instantly'. At the bottom, there is an 'Options' section with 'Copy Options' expanded, showing radio buttons for 'COPY CHANGES ONLY', 'MIRROR', 'MOVE', 'DIR', and 'COPY ALL'.

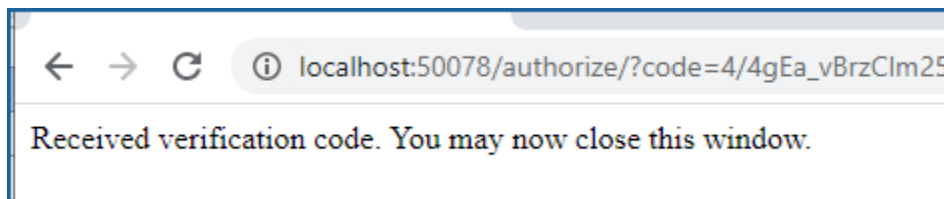
- 4) A browser window should open and prompt you for your DropBox credentials. Provide them and logon.

The screenshot shows a web browser window with the URL 'accounts.google.com/o/oauth2/v2/auth/identifier?access_type=offline&...'. The page is a Google sign-in screen. It has the Google logo and the text 'Sign in with Google'. Below that is a large 'Sign in' heading followed by 'to continue to GS RichCopy 360'. There is a text input field for 'Email or phone'. Below the input field is a link for 'Forgot email?'. Further down, there is a paragraph of text: 'Before using this app, you can review GS RichCopy 360's [privacy policy](#) and [terms of service](#).' At the bottom right of the main content area is a blue 'Next' button. At the very bottom of the page, there is a footer with 'English (United States)' and links for 'Help', 'Privacy', and 'Terms'.

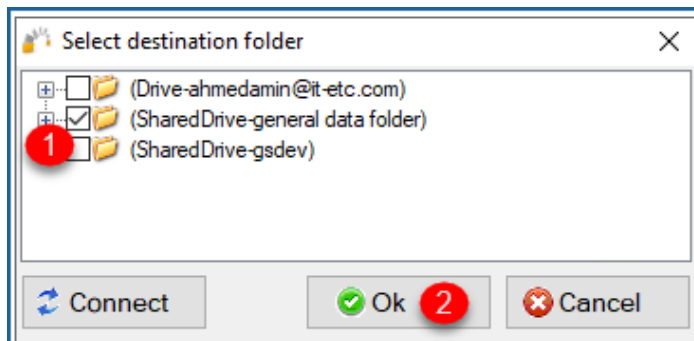
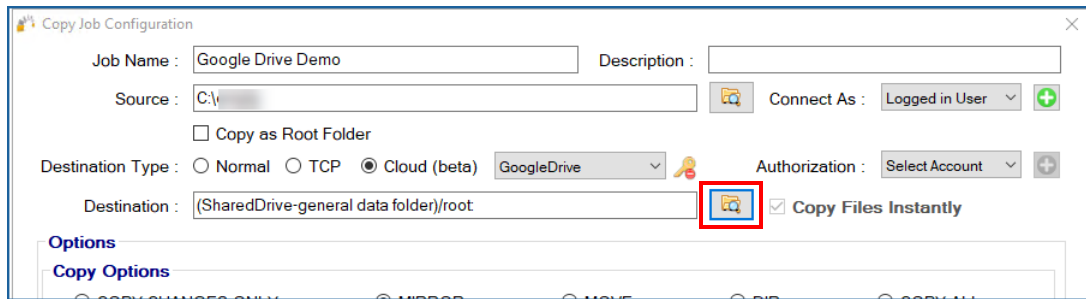
- 5) Click on **Allow** for GS RichCopy 360 to proceed forward with this process.



- 6) You should get confirmation that access to the application has been verified. At this point you can close that window and go back to select the destination folder.



- 7) Select the Browse button next to Destination field, select the folder that you want to copy to and click Ok.



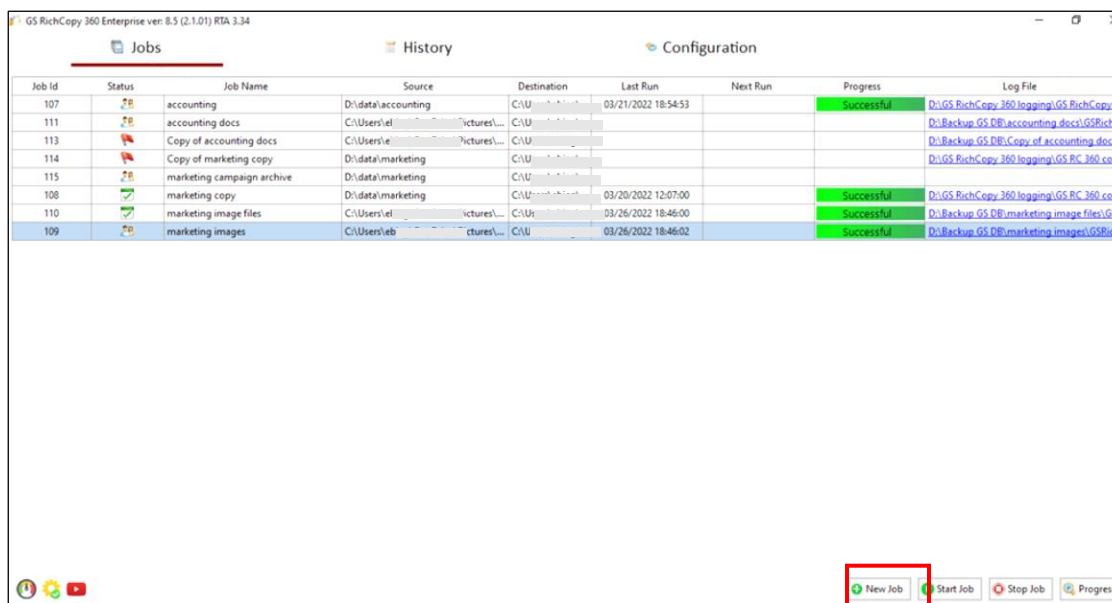
- 8) Your destination path should now auto-populate with the folder you selected.
- 9) You can now create the rest of the job by choosing the copy options you want as you would in a normal job.

Note: The credentials are stored in an encrypted format, allowing jobs to run uninterrupted as well as run as a service. You do not have to provide credentials for this job again unless you need to change the key that is being used.

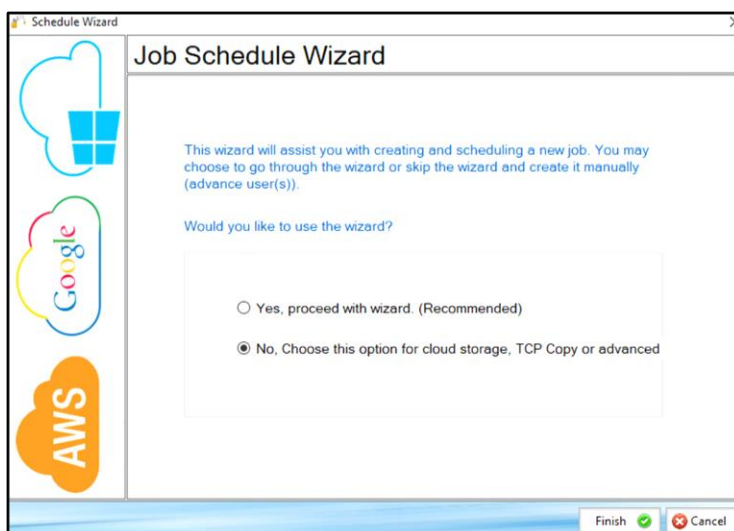
Copy Files to Nasuni

Migrating data to Nasuni filers can be optimized using the advanced destination options in GS RichCopy 360 Enterprise. Follow the instructions below to copy files to Nasuni

1. Select the **New Job** button from the **Jobs** section.

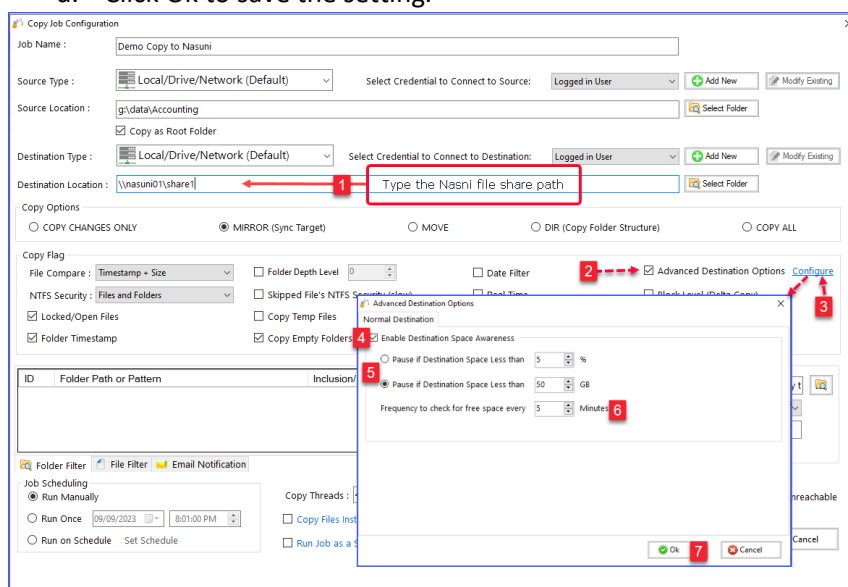


2. Select **No**, Choose the option for cloud storage, TCP Copy or advanced to skip the wizard.



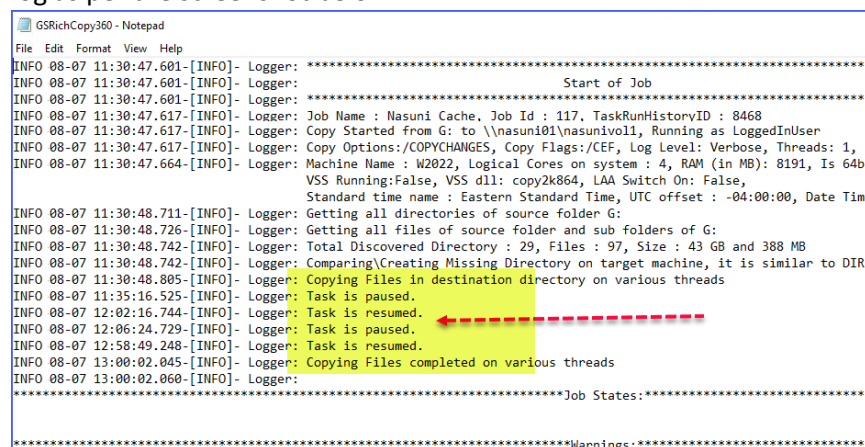
3. Fill in the required details and specify the Nasuni file share path in the destination field and select the Advanced Destination Options to enable the cache awareness option as per the screenshot below. To make GS RichCopy 360 Enterprise aware of Nasuni filer cache:
 - a. Enable the options and set the threshold.

- b. Select the metric of the threshold and set the threshold number. Threshold can be monitored by percentage of available free space or by size in gigabytes.
- c. Then set the frequency to check the free space in minutes.
- d. Click Ok to save the setting.



4. The job can now be saved and run to start the migration to Nasuni.

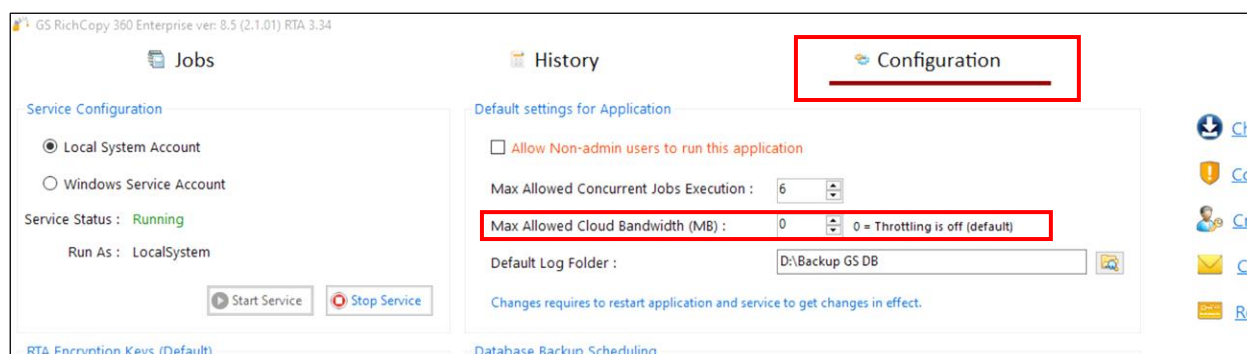
Note: given that the advanced destination option is now set to monitor Nasuni cache free space, once the cache is full, the job will pause and periodically check Nasuni filer's cache free space. Once the cache is freed up again (Nasuni completed the snapshot), then the job should resume automatically. This will continue until the job is finished. The job log should show every time the job pauses and resumes in the log as per the screenshot below.



Example Section F – Throttling Cloud Network Bandwidth

Copying data across to different cloud providers can be very taxing on network bandwidth. Fortunately, GS RichCopy 360 made it possible to throttle network bandwidth used for all jobs copying to the cloud.

To throttle bandwidth, Select the **Configuration** section and set the maximum limit that can be used. Note that cloud jobs running as a service would not adhere to that limit until the GS RichCopy 360 service is restarted. Logged in user jobs take effect immediately. Value of 0 means throttling is disabled.



It is **important** to point out the following best practices when throttling cloud jobs:

- 1) Throttling cloud jobs applies to all cloud jobs. You cannot throttle one job and un-throttle another.
- 2) Cloud jobs running as a service and jobs that are running under logged in user are calculated separately. This means that if you set the throttle to 20MBps, then cloud jobs running as a service can only use a 20MBps pool and cloud jobs running as logged in user also have a separate 20MBps pool.
- 3) Normal and TCP copy jobs are not affected by bandwidth throttling.
- 4) GS RichCopy 360 sends data in 5MB chunks. When setting a limit of bandwidth, you should consider how many threads are used in all the cloud jobs that are running in parallel and account for 5MB for each thread. For instance, if you have a total of 2 cloud jobs and each job is running 3 threads, then you would calculate it as such:

$$2 \text{ (jobs)} \times 3 \text{ (threads)} \times 5\text{MB (chunk)} = 30\text{MBPS}$$

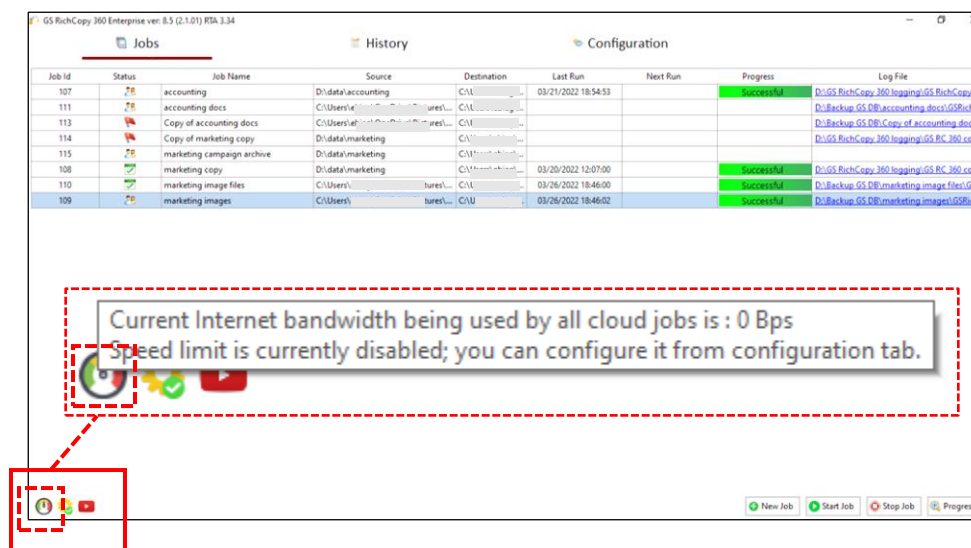
Note this is MBPS (Mega Bytes per second). To convert it to mbps (mega bit per second), you need to multiply it by 8. So 30MBps = 240mbps.

This is only a recommendation to keep jobs running smoothly. If the recommended network speed is higher than the available bandwidth to be allotted, you can lower the limit and jobs will still run. GS RichCopy 360 will manage the threads; however, it is not recommended to use the entire bandwidth. It is also crucial to consider throttling cloud jobs if the network link is shared with other

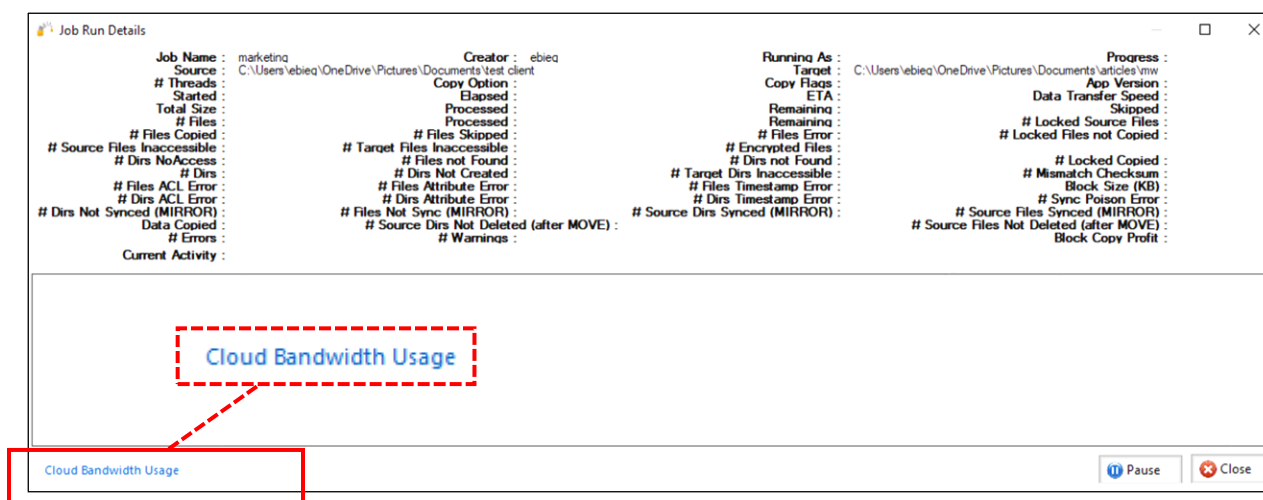
users or services that rely on that link.

You can monitor bandwidth usage in two different places:

- 1) The speed gauge in the bottom of the jobs screen. Just hover your mouse on top of it and it will display how much cloud jobs are consuming.



- 2) The other way to monitor cloud job bandwidth is to select the **cloud bandwidth usage** link found at the bottom of the *Job Run Details* screen.



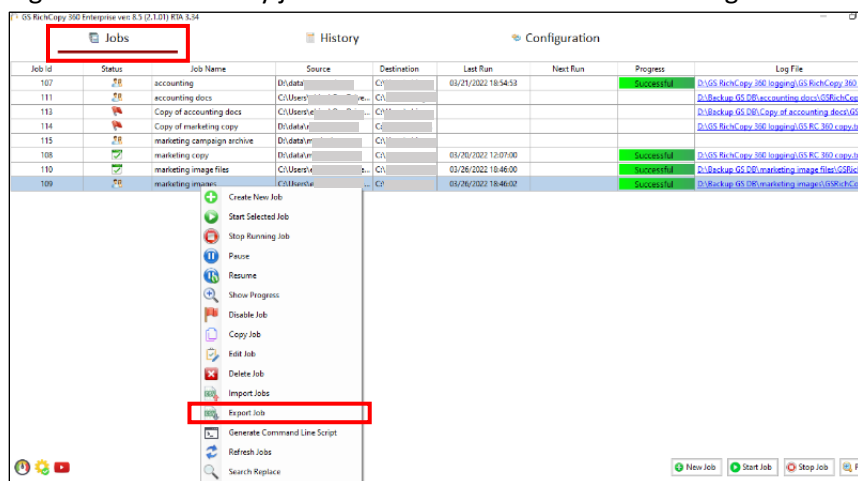
To access the *Job Run Details* screen

1. Select the **Progress** button at the bottom of the **Jobs** section, or
2. Right-click on a job in the **Jobs** section and select **Show Progress**

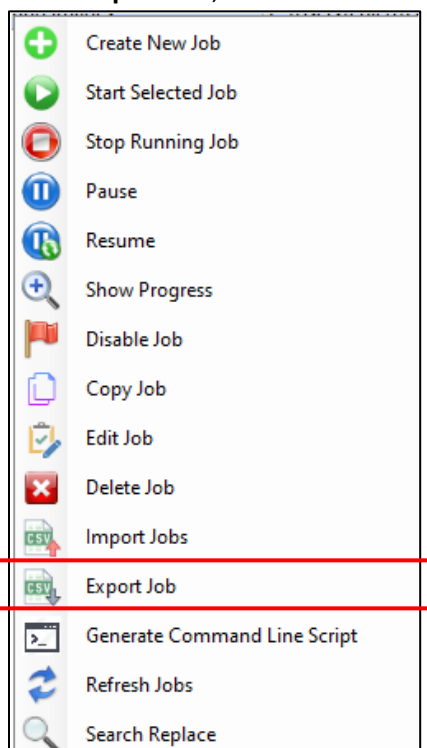
Example Section G – Exporting and Importing batch jobs from CSV – Enterprise Only

Using GS RichCopy 360 Enterprise, system administrators can import thousands of jobs with just a few clicks. To import jobs, follow these steps:

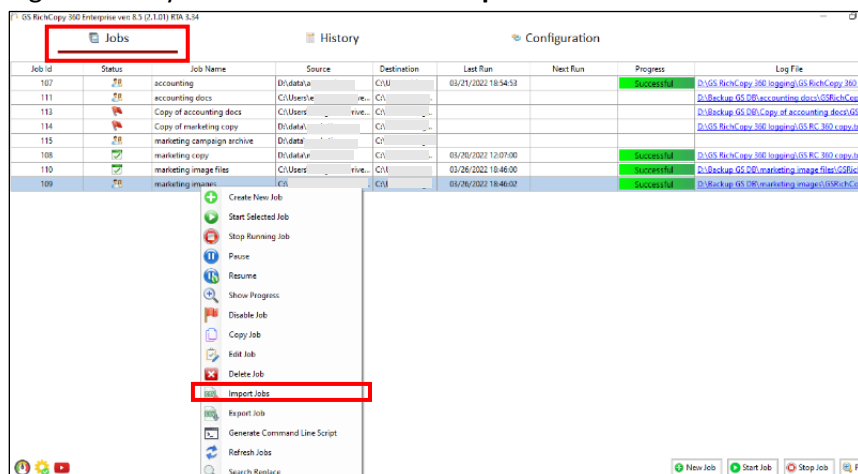
1. On the main **Jobs** section, create a dummy job that would act as a template for the jobs you want to import. The idea is to make all the necessary selections such as type of job (copy changes, mirror, directory structure), inclusion/exclusion filters, whether to run once, run at a specific time, repeat intervals and so forth.
2. Save the job.
3. Right-click the dummy job in the **Jobs** screen to invoke the right-click menu.



4. Select **Export Job**, and then save the exported CSV file.



5. Open the CSV file in a spreadsheet program such as MS Excel.
6. Copy and duplicate the dummy job. Each row will be imported as a job. Each job must contain a different job name. Ensure the source and destination are as needed and save the file (as a CSV file).
7. Go back to the **Jobs** screen of the GS RichCopy 360 Enterprise.
8. Right-click anywhere and then select **Import Jobs**.



9. From the Import screen, do the following:
 - a. Select **Browse** to go to the file.
 - b. Select **Validate** to validate that the jobs are not duplicated, and all the set values in the CSV are as expected. Once the validation runs through, any green rows are valid jobs; any red rows are rows with errors. If there are any errors, the errors can be seen scrolling to the right under the error column.
 - c. Select **Import** to start importing the jobs. Note that Jobs with errors will be skipped.

When the import is completed, a confirmation screen will be displayed. Go to the **Jobs** screen to view all the imported jobs.

Example Section H – History Section

The History section displays a listing of all jobs that are running or have already run.

History ID	Job Id	Job Name	Start At	Finish At	Run By	Status	Error	Warning	Job Summary	Mail Status
8444	109	marketing images - Deleted	03/26/2022 18:46:02	03/26/2022 18:46:19	...	Successful			Job Created by : ... on 26-...	Not attempted
8443	110	marketing image files	03/26/2022 18:46:00	03/26/2022 18:46:17	...	Successful			Job Created by : ... on 26-...	Not attempted
8442	107	accounting	03/21/2022 18:54:52	03/21/2022 18:54:55	...	Successful			Job Created by : ... on 20-...	Fail
8441	107	accounting	03/21/2022 18:52:16	03/21/2022 18:52:18	...	Successful			Job Created by : ... on 20-...	Fail
8440	108	marketing copy	03/20/2022 12:07:00	03/20/2022 12:07:17	...	Successful			Job Created by : ... on 20-...	Fail
8439	107	accounting	03/20/2022 12:00:34	03/20/2022 12:00:51	...	Successful			Leaf Folders to Process : 0Fol...	Fail

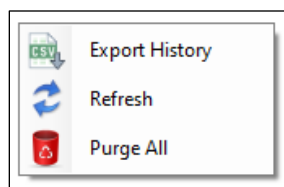
History Section Column Items

- **History ID** will have a different number each time a job is run.
- **Job ID** (in the event of an error, the Job ID can be used when contacting technical support for assistance)
- **Job Name** displays the user-assigned job name
- **Start At** and **Finish At** schedules (if the job is completed)
- **RunBy**, shows the username that the job ran under
- **Status** (In Progress, Successful, Stopped, or Failed)
- **Error** and **Warning** if the job encountered them
- **Job Summary**, hovering over this field will display the content of that job's log.
- **Mail Status** lists email delivery status within the GS RichCopy 360 application environment. Status options can be "successful", "failed", or "not attempted". If the email was "not attempted", it means that this functionality was not configured for the specific job. As a result, an email delivery was never attempted.

Note: Placing the mouse on a field will display the full text contained in the field.

Right-click Menu Functionality

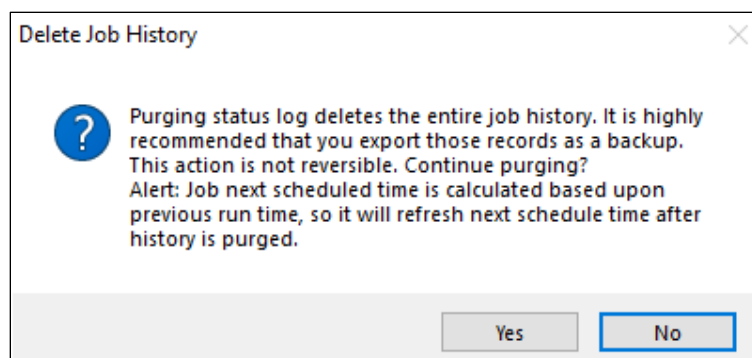
Right-clicking anywhere in the **History** section will display a right-click menu with additional functionality: Export History, Refresh, and Purge All.



Export History – exports table items to a .csv file and may automatically launch a spreadsheet.

Refresh – Updates all items in the History table to the latest information.

Purge All – Deletes all jobs in the History section. It is recommended that you export the job history prior to performing this procedure. Since this procedure is not reversible, an alert window will display asking you to confirm the operation.



Example Section I – Working with WebDAV – Enterprise Only

Many cloud businesses and organizations use WebDAV to access remote storage due to the higher security level and ease of accessing data. GS RichCopy 360 Enterprise offers the ability to copy data ‘from’ and ‘to’ using WebDAV.

Use the **Connect As** feature in the Job Configuration window to specify your WebDAV credentials and to select them. Specify the WebDAV URL in the **Destination** field, as shown in the following image.

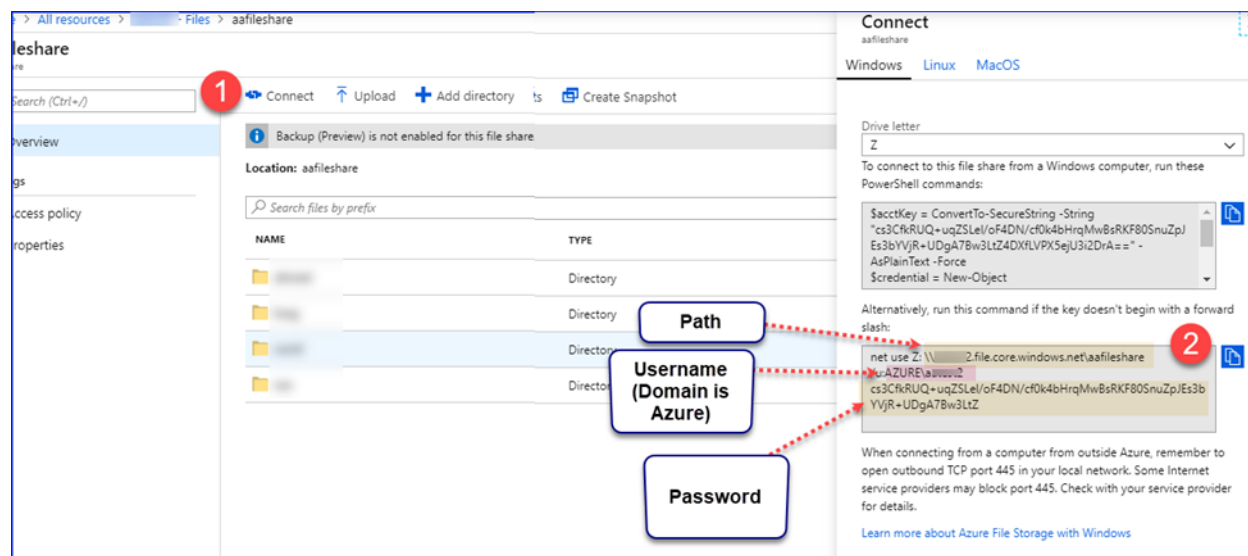
The screenshot shows the 'Copy Job Configuration' window. Key elements include:

- Job Name:** WebDav
- Description:** Accounting Archive for first quartr of 2022
- Source Type:** Local/Drive/Network (Default)
- Source:** E:\DataSource
- Destination Type:** WebDAV (highlighted with red circle 1)
- Destination:** http://gurusquadxyz.com (highlighted with red circle 2)
- Connect As:** Gurusquadxyz (WebD... (highlighted with red circle 3)
- Copy Options:**
 - COPY CHANGES ONLY** (selected)
 - Copy Flag:** Timestamp + Size
 - NTFS Security:** Files and Folders
 - Copy Options:** Locked/Open Files, Folder Timestamp, File/Folder Attribute, Folder Dependency, Skipped Files, Terminate, Block Level, SMB Com...
- Specify an user account** (dashed red box):
 - Account Type:** WebDav
 - Account Name:** Gurusquadabc
 - User Name:** Gurusquad
 - Password:** [masked]
 - Verify Password:** [masked]
 - Domain:** [blank]
 - Path to Test:** [blank]
 - Buttons:** Test, Save, Cancel
- Scheduling:**
 - Run Manual:** Start (selected), 04/26/2022, 6:46:00 PM
 - Recurrence:** Run Once (selected)
 - Job Concurrency:** Copy Threads: 4
- Job Status:** Enabled
- Buttons:** Save, Cancel

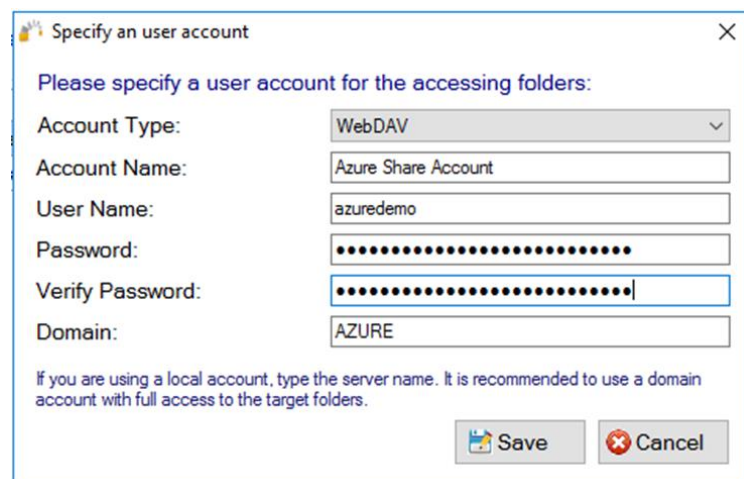
Some WebDAV providers may require you to leave the Domain blank, while others may require a domain entry.

Accessing Azure Files

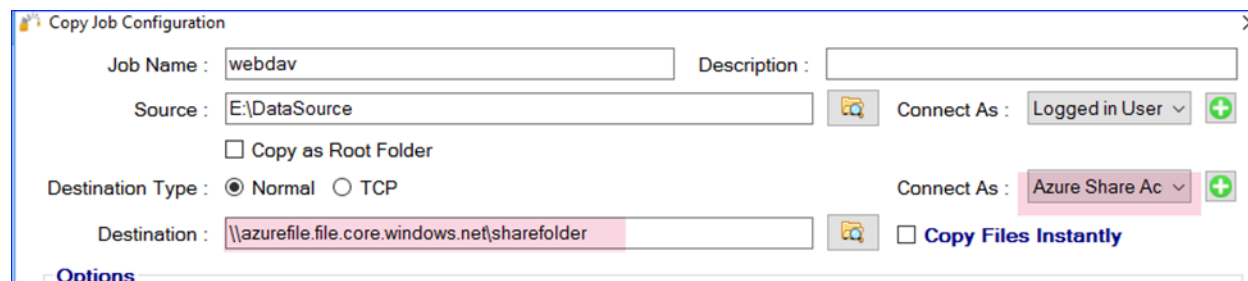
If you are using Azure Files, check the following settings as an example to access Azure Files using WebDAV.



Configure the following settings in the GS RichCopy 360 Client.



Configure the destination or source in the Job Configuration.



Note: WebDAV for Azure uses a UNC path instead of https as Azure supports SMBv3, where a UNC path can and should be used.

“Path to Test” Functionality

Utilize the **Path to Test** functionality to pre-test the validity of your WebDav credentials and avoid unnecessary errors and delays in completing your copy job. To utilize this feature, enter the path in the provided field and then select the **Test** button.

Specify an user account

Please specify a user account for the accessing folders:

Account Type: WebDav

Account Name: Gurusquadsma

User Name: Gurusquad

Password: ●●●●●●●●

Verify Password: ●●●●●●●●

Domain:

If you are using a local account, type the server name as domain. It is recommended to use a domain account with full access to the target folders.

Path to Test:

Example Section J – Command Line (CLI) Support

Both GS RichCopy 360 Standard and Enterprise offer command line (CLI) support. This is very useful for administrators who are looking to automate job management and creation from the command line.

The command line offers the ability to manage GS RichCopy 360 clients installed locally and ones that are installed on remote machines. This provides administrators the option to mass-configure or manage clients from one central computer.

The next sections cover the different command line options and where they are used along with easy-to-follow examples. A section will discuss the Generate Command Line Script, which provides a full syntax from a pre-defined job so that administrators can save time and effort in terms of figuring out the right syntax to use.

Note: The CLI fully supports environment variables. For more information, refer to [Example Section K: Environment Variables](#).

Refer to the following sections for more information:

- [GS RichCopy 360 Client](#)—covers how to manage clients using CLI. There are two CLI commands that can be used:
 - **GSRicCopy360.exe**—used to set actions such as creating, deleting, enabling, and disabling jobs. It is also utilized for specifying cloud source and destination parameters.
 - **GSAPI.exe**—used to retrieve information about jobs defined in GS RichCopy 360 Client. It can report on the job running status, job history, and list of jobs defined.
- [GS RichCopy 360 RTA – Enterprise Only](#)—covers how to manage RTA servers using CLI.

Note: GSAPI is available only in GS RichCopy 360 Enterprise.

GS RichCopy 360 Client

The GS RichCopy 360 client CLI is used to manage installed clients locally and on remote machines.

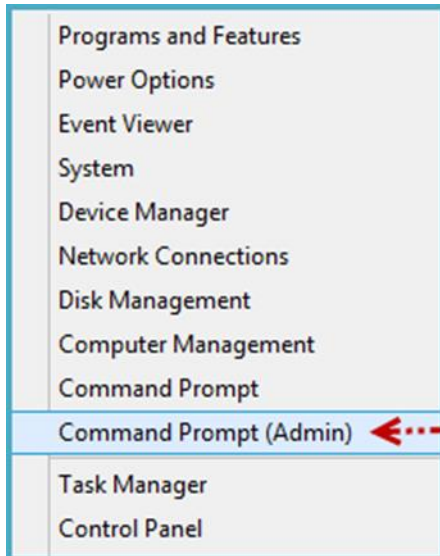
[GSRichCopy360.exe](#)

GSRichCopy360.exe is used to set actions such as creating, deleting, enabling, and disabling jobs.

Access

To access the CLI version of GS RichCopy 360, follow these steps:

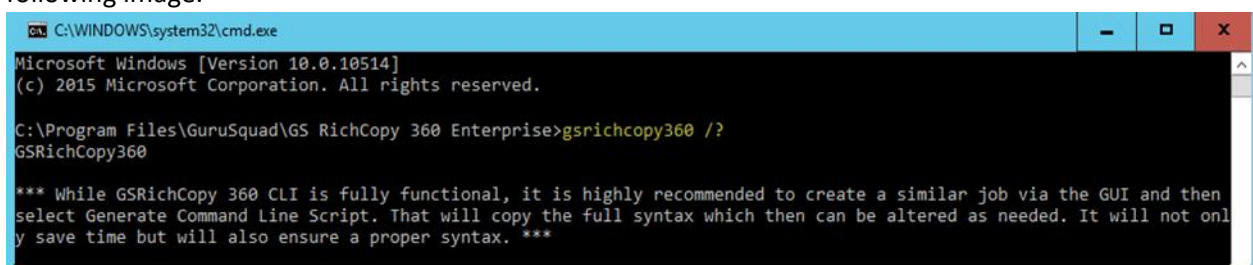
1. Run the command prompt as an administrator by right clicking the **Start** menu and then selecting **Command Prompt (Admin)**, as shown in the following image.



Note: If there is a requirement where users without administrative privileges need the ability to run GS RichCopy 360 CLI, refer to [Enable Remote Management and Remove Admin Privilege Restriction](#) for more information.

2. When the Command Prompt window opens, navigate to the GS RichCopy 360 folder. By default, it is installed in one of the following:
 - Enterprise version—**C:\Program Files\GuruSquad\GS RichCopy 360 Enterprise**
 - Standard version—**C:\Program Files\GuruSquad\GS RichCopy 360**
3. To list all the available parameters in the command line, type the following line:
gsrichcopy360 /?

All the available commands and optional parameters are displayed on screen as shown in the following image.



An administrator can create a template job in the GS RichCopy 360 GUI and generate a command line script for that job. This would simplify the need of having to find out the right syntax and save on time spent to script the job through the CLI.

This is most useful when the intent is to write a script for job creation. It is extremely easy to generate a command line script from the GUI. All that is required after the “dummy job” is created with all of its options (copy options, scheduling, include/exclude filters, and so forth) is to right-click the job and select **Generate Command Line Script**. This copies the full syntax to the clipboard, which can later be pasted to Notepad, allowing the CLI to be changed or executed.

Syntax

```
GSRichCopy360.exe [Action Command] [Required Parameters] [Options]
```

Action Commands

There are several action commands that can be issued through the CLI.

COMMAND	DESCRIPTION
enablejob	Enables an existing job.
disablejob	Disables an existing job.
runexistingjob	Runs an existing job that has already been created.
deleteexistingjob	Deletes an existing job.
stopexistingjob	Stops an existing job that is currently running.
createjob	Creates a new job.
createandrunjob	Creates a new job and runs it.

Note: Different commands will have parameters that are required or are optional. Review the examples provided in this manual to learn when and how to use each command and parameter. Also, jobs must be configured to run as a service in order to be set to run from the CLI.

The commands **EnableJob**, **DisableJob**, **RunExistingJob**, **DeleteExistingJob**, and **StopExistingJob** all require information about the job. Jobs can be referenced by its Job ID (JobID) or Job Name (JobName). The syntax would look something similar to these examples:

- `Enablejob jobname:"Account Job"`
- `DeleteExistingJob jobid:115`

The commands **CreateJob** and **CreateAndRunJob** require several optional and required parameters. Refer to the next section for information on the available parameters.

Note: Using the **Generate Command Line Script** feature from the GUI would save administrators from having to assemble a job creation command. However, it is strongly advised to get familiar with the different options so that once a job is generated from the GUI, it can be modified as required.

Administrators can set the Job Serial number through the command line. All manually set Job Serial numbers must be prefixed by 99999 and should be 13 numbers long. This can be useful in scenarios where the administrator wants to automate job creation on the client and the RTA server. For more information,

type **gsrichcopy360 /?** at the command prompt from the GS RichCopy 360 Enterprise folder or review Example 7 in the [Examples](#) section.

Parameters

PARAMETER

<deletejobwhencomplete>

<"jobdescription:<jobdescription>">

"source:<source folder path>"

"destination:<destination folder path>"

<"sourceusername:username<sourcepassword:password>> | <sourcerunasuser:<account name connect as configured in app>">

SourceUserName:domain\username
[user@domain.com](#)

<"destinationusername:username<destinationpassword:password>> |
<destinationrunasuser:<account name connect as configured in app>">

DestinationUserName:domain\username
[user@domain.com](#)

<preservecredentials>

INFORMATION

Default is false. This is used only with createjob and createandrunjob action commands.

For cloud destination and source parameters see the CLI help system by running **gsrichcopy360.exe /help** or **gsrichcopy360.exe /?** From the gs richcopy 360 Enterprise folder.

If sourcepassword is not passed with sourceusername, it will be prompted and will not be stored in the database for future use.

Note: This option cannot be associated with recurring jobs.

or For cloud destinationusername and sourceusername parameters see the CLI help system by running **gsrichcopy360.exe /help** or **gsrichcopy360.exe /?** From the gs richcopy 360 Enterprise folder.

If destinationpassword is not passed with destinationusername, it will be prompted and will not be stored in the database for future use.

Note: This option cannot be associated with recurring jobs.

Default is Off. It will be used with sourceusername, destinationusername,

PARAMETER**INFORMATION**

and if user has not selected to prompt for password.

<fileexc:<Comma separated values>>

<fileinc:<Comma separated values>>

<folderexc:<Comma separated values>>

<filderinc:<Comma separated values>>

<jobinactive>

Default is Active/Enabled.

<runonservice>

Default is Off.

Note: This parameter must be used with createandrunjob, and jobs that are scheduled.

<copyasroot>

Default is Off.

<instantcopy>

Default is Off.

<copylockedfile>

Default is Off.

<copyattributes>

Default is Off.

<preservedatetimestamp>

Default is Off.

<stopifmachineunreachable>

Default is Off.

<copyacl:FileFolder|File">

Default is Off.

<copyaclforskippedfiles>

This may be used only if CopyAcl is FileFolder.

<COPYALL|MIRROR|MOVE|DIR|COPYCHANGES>

<"filecompareoption:COPY ONLY NEWLY
CREATED FILES|SKIP IF DESTINATION IS
NEWER|TIMESTAMP + SIZE|FILE
SIZE|MODIFIED TIMESTAMP">

Default is TIMESTAMP + SIZE.

<"taskconcurrency:<1-256>">

Task Concurrency must be in the range of 1-256. Default value is 4.

<"folderdepth:<folder depth to scan>">

Default is 0. Folder depth must be in the range of 1-99.

<userealtime <realtimeonacl>
<realtimeonattribute>

Note: userealtime is only available in GS RichCopy 360 Enterprise.

PARAMETER**INFORMATION**

"realtimeincext|realtimeexext:<comma separated extension>"

<"datefilterfromdate:<dd-MMM-yyyy HH:mm>" "datefiltertodate:<dd-MMM-yyyy HH:mm>" |
"datefilterlastdays|datefilterpriordays |datefilterlastmins:value must be 1-10000">

Default Log is Off.

<logenabled
"loglevel:All|Error(Default)|Diagnostic
" "logpath:<log file path>"
logappend(Default is off)
logsize:<logsize>

Log File Size must be in the range of 1-50000 MB. Default value is 5000 MB.

<mailactive mailto:<mail address>
mailcc:<mail address> mailbcc:<mail address>

Default is Off.

"recurrencescheduled:RunOnSchedule|RunOnce"

"startdatetime:<dd-MMM-yyyy HH:mm>"

"recurstartdate:<dd-MMM-yyyy>"

"recurstarttime:<HH:mm:ss>"

"recurendtime:<HH:mm:ss>"

These recurrence settings are applicable only if recurrencescheduled is set to RunOnSchedule.

<TerminateCondition:<ENDAFTEROCCURENCE|ENDBYDATE>
<terminateconditionvalue:<numeric with ENDAFTEROCCURENCE|date with ENDBYDATE>>

"recurinterval:<it should be in Once, 2 minutes, 5 minutes, 10 minutes, 15 minutes, 30 minutes, 60 minutes, 4 hours, 8 hours, 12 hours, 16 hours, 23 hours. Default is 2 minutes.>"

"recurpattern:DAILY|WEEKLY|MONYHLY|YEARLY"

"recurevery:1"

"monthno:MonthNo must be in range 0-11."

"monthdayno:MonthDayNo must be in range 0-30."

"weekno:WeekNo must be in range 0-

PARAMETER**INFORMATION**

4." "weekdayno:<WeekDayNo must be in range 0-6.>"

<usebyterepliator
extensiontoexclude:<comma separated
extensions>
excludefilesizeinkb:<ExcludeFileSizeinK
B must be in range of 0-1000000 KB.
Default is 15000 KB. It must be greater
than MinBlockSizeKB.>>

User can pass multiple comma-separated entries.

Usetcpcopy

RTA Configuration if TCP Copy or Block Copy is selected.

Note: TCP and Block copy are available only in GS RichCopy 360 Enterprise.

<"jobserial:<jobserial prefixed with 99999 and should be 13 character long numeric value.>">

If value is not passed for jobserial and TCP Copy is selected, jobserial will be calculated internally.

"ipaddress:<RTA IpAddress>"

"port:<RTA Port must be in range of 1-65535. Default is 8008.>"

"minblocksizekb:<MinBlockSizeKB must be in range of 50-25000 KB. Default is 10000 KB.>"

<usecompression>

Default is Off

"<useencryption username:<minimum 8
character length> passphrase:<minimum 8
character length>
encryptionkeytype:<AES-128|AES-
256(Default)>>"

Encryption may be used with only usetcpcopy parameter. Default encryption is Off.

Examples

Example 1: This command will copy changes only from "c:\source" to "\\server\share" with several copy flags:

```
GSRichCopy360.exe createjob "jobname:Test Job" "source:c:\source"
"destination:\\server\share" "taskconcurrency:4" runonservice DIR
"copyacl:Folder" "filecompareoption:File Size"
"recurrencescheduled:RunOnce" "startdatetime:13-Feb-2016 19:30"
```

Example 2: This command will mirror "c:\source" to "\\server\share" and send an email to multiple recipients. The job is scheduled to run once at 19:30 of that day (7:30PM in military time):

```

GSRichCopy360.exe createjob "jobname:Test Job" "jobdescription:Mirror
Job" "source:c:\source" "destination:\\server\share" copyasroot
"taskconcurrency:4" runonservice MIRROR "copyacl:Folder"
"filecompareoption:File Size" logenabled "loglevel:Error"
"logpath:c:\logs\testjob.log" mailactive
"mailto:user1@company.com,user2@company.com"
"mailcc:user3@company.com" "mailbcc:user4@company.com"
"recurrencescheduled:RunOnce" "startdatetime:19:30"

```

Example 3: This command will move data from “c:\source” to “\\server\share” and will run every day and repeat every 5 minutes:

```

GSRichCopy360.exe createjob "jobname:Test Job" "jobdescription:Mirror
Job" "source:c:\source" "destination:\\server\share" copyasroot
"taskconcurrency:4" runonservice MOVE "copyacl:Folder"
"filecompareoption:File Size" "recurrencescheduled:RunOnSchedule"
"startdatetime:12-Feb-2016 19:30" "recurstartdate:12-Feb-2016"
"recurstarttime:00:00:00" "recurendtime:23:59:59" "recurinterval:5
minutes" "recurpattern:DAILY" "recurevery:1"

```

Example 4: This command will create and run DIR command from “c:\source” to “\\server\share” using a specified username and will prompt for password then will delete the job once it is completed:

```

GSRichCopy360.exe createandrunjob "jobname:Test Job"
"jobdescription:Mirror Job" "source:c:\source"
"destination:\\server\share" destinationusername:corp\admin1
"taskconcurrency:4" runonservice DIR "copyacl:Folder"
"filecompareoption:File Size" "recurrencescheduled:RunOnce"
"startdatetime:13-Feb-2016 19:30" deletejobwhencomplete

```

Example 5: This command will enable a job on a remote machine:

```

GSRichCopy360.exe serviceip:192.168.0.10 enablejob jobid:115

```

Example 6: This command will create a TCP copy job using AES256 encryption and compression and will repeat every Monday:

```

GSRichCopy360.exe createjob "jobname:Test Job" "jobdescription:Mirror
Job" "source:c:\source" "taskconcurrency:4" runonservice DIR
"copyacl:Folder" "filecompareoption:File Size"
"recurrencescheduled:RunOnSchedule" "startdatetime:13-Feb-2016
19:30" "recurstartdate:13-Feb-2016" "recurstarttime:00:00:00"
"recurendtime:23:59:59" "recurinterval:Once" "recurpattern:WEEKLY"
"recurevery:1" "WeekDayNo:1" usetcpcopy "ipaddress:192.168.0.200"
"port:8008" "minblocksizekb:10000" usecompression useencryption
"username:DC4ZE2QOQP" "passphrase:OLMECAE4P31P3MZZ1B1UQJXDF1EFYUNR"
"encryptionkeytype:AES-256"

```

Example 7: This command will create a TCP copy job and set the Job Serial number to 9999912345678:


```

GSRichCopy360.exe      createjob      "jobname:Accounting      Archive"
"source:c:\source"    copyasroot    "taskconcurrency:4"    runonservice
COPYCHANGES          copylockedfile          copyattributes
"filecompareoption:Timestamp + Size" logenabled "loglevel:Error"
"logpath:c:\logs\accounting.log"          mailactive
"mailto:itahmed@hotmail.com"      "recurrencescheduled:RunOnSchedule"
"startdatetime:16-Feb-2016    21:49"    "recurstartdate:15-Feb-2016"
"recurstarttime:07:00:00" "recurendtime:10:59:59" "recurinterval:5
minutes"      "recurpattern:DAILY"      "recurevery:1"      usetcpcopy
"ipaddress:rtaserv01.acme.com" "port:8008" "minblocksizekb:10000"
jobserial:9999912345678

```

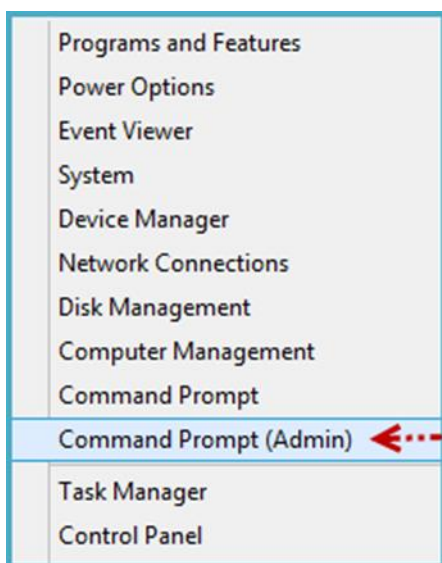
GSAPI.exe

GSAPI is used to retrieve information about jobs defined in GS RichCopy 360 Clients. It can report on job running status, job history, and provide a list of defined jobs.

Access

To access GSAPI .exe, follow these steps:

1. Run the command prompt as an administrator by right-clicking the **Start** menu and then selecting **Command Prompt (Admin)**, as shown in the following image.



2. When the Command Prompt window opens, navigate to the GS RichCopy 360 Enterprise folder:
C:\Program Files\GuruSquad\GS RichCopy 360 Enterprise

3. To list all the available parameters in the command line, type the following line:

GSAPI.exe /?

All the available commands and optional parameters are displayed on screen as shown in the following image.

```

C:\WINDOWS\system32\cmd.exe
C:\Program Files\GuruSquad\GS RichCopy 360 Enterprise>GSAPI.exe /?
Usage:
GSAPI [-serviceip:<localhost is default> -serviceport:<8889 is default>] -<getjoblist|getjobstatus|getjobhistory>
id:job#>|<jobname:name of job>] [-ft]|-json [-list:int]

```

Syntax

GSAPI.exe [Action Command] [Options]

Action Commands

There are several action commands that can be issued through the CLI.

COMMAND	DESCRIPTION
Getjoblist	Provides a list of all existing jobs.
Getjobstatus	Provides status of an existing job (running, stopped, and so forth).
Getjobhistory	Provides details of the job's history.

Note: Different commands will have parameters that are required or are optional. Review the examples provided in this manual to learn when and how to use each command and parameter. Also, jobs must be configured to run as a service in order to be set to run from the CLI.

If `GSAPI.exe` is not used with any optional parameters, it will report on all jobs. However, it can also be narrowed down to a specific job using the parameters `-JobName` and `-JobID` at which point it would report information relating to the specified job.

`Getjobhistory` can make use of one more optional parameters, `-list`. `Getjobhistory`, by default, reports back the entire history when reporting on a specific job. Using `-list`, however, returns only the latest job history details for a specified job.

Results of `GSAPI.exe` will be displayed in a tabular format. The administrator may pass the parameter `-json`, which displays results in JSON format.

Examples

Example 1:

```
GSAPI.exe -getjobhistory -jobname:"Accounting Data Archive"
```

Example 2:

```
GSAPI.exe -getjobstatus -json -jobid:103
```

Example 3:

```
GSAPI.exe -getjoblist -json
```

Example 4:

```
GSAPI.exe -getjobstatus -ft -jobid:103
```

Example 5:

```
GSAPI.exe - getjobhistory -jobname:"Accounting Data Archive" -list:5
```

Example 6:

```
GSAPI.exe - getjobhistory -jobid:"105" -list:5
```

Example 7:

```
GSAPI.exe - getjobhistory -jobid:"105"
```

Enable Remote Management and Remove Admin Privilege Restriction

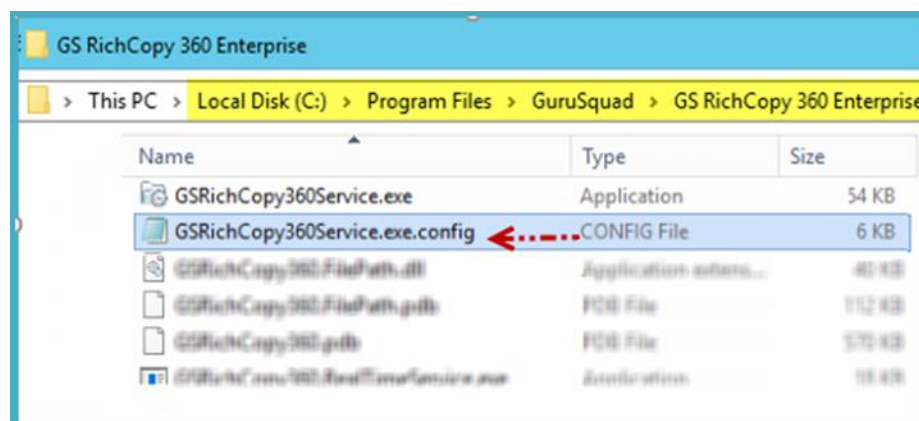
By default, the CLI commands (`GSRichCopy360.exe` and `GSAPI.exe`) will execute on the local machine they are run on. However, GS RichCopy 360 extends the option to issue commands to a remote machine. To do so, the command should include the argument: `serviceip:<IP Address or hostname>`. By default, it would use the port TCP 8889. If the default port is changed on the client, the argument `serviceport:<portnumber>` should be used.

Here is an example that would enable a job on a remote machine to further clarify:

```
GSRichCopy360.exe ServiceIP:192.168.0.10 enablejob jobid:115  
GSAPI.exe -ServiceIP:192.168.0.10 -getjobhistory
```

By default, GS RichCopy 360 clients:

- Only allow the CLI from the local machine itself by default. If a client needs to be managed from another machine, a config file must be edited on the client that allows its management to specify the allowed IP addresses. Completing the following steps grants another machine remote CLI access:
 - 1) Go to `C:\Program Files\GuruSquad\GS RichCopy 360 Enterprise`.
 - 2) Open the `GSRichCopy360Service.exe.config` file with Notepad.



3) Add the IP addresses in the key named **AllowedIpAddress** as shown in the following image.

```
<add key="AllowedIpAddress" value="127.0.0.1,192.168.0.5"/><!-- Allowed from RichCLI-->
```

Note: IP addresses must be separated by commas. Do not leave this section blank as it would then be set up to accept commands from any IP address.

4) Save the GSRichCopy360Service.exe.config file.

5) Restart the GS RichCopy 360 Service.

- Only users with admin privileges can use the GS RichCopy 360 command line by default. If there are users that need to use the GS RichCopy 360 CLI without administrative privileges, the config file must be edited to remove the administrative privileges restriction.

1) Go to C:\Program Files\GuruSquad\GS RichCopy 360 Enterprise.

2) Open the GSRichCopy360Service.exe.config file with Notepad.

3) Set the value of the key **IsOnlyAdminAllowedfromCLI** to **false** as shown in the following image.

```
<add key="IsOnlyAdminAllowedfromCLI" value="true"/> <!-- Allowed from RichCLI-->
```

4) Save the GSRichCopy360Service.exe.config file.

5) Restart the GS RichCopy 360 Service.

GS RichCopy 360 RTA – Enterprise Only

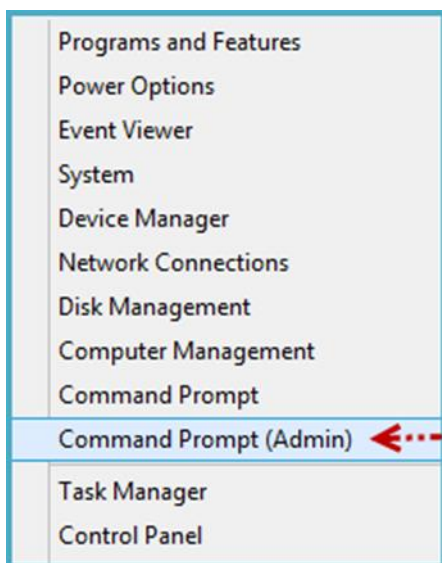
The RTA comes with its own command line (CLI) support that can be triggered directly from the RTA server or from a remote machine that has an installation of an RTA server. It uses the GSRichCopy360.TransferAgent.exe command.

GSRichCopy360.TransferAgent.exe

Access

To access the CLI version of RTA, follow these steps:

- Run the command prompt as an administrator by right-clicking the **Start** menu and then selecting **Command Prompt (Admin)**, as shown in the following image.



Note: If there is a requirement where users without administrative privileges need the ability to run GS RichCopy 360 CLI, refer to [Enable RTA Remote Management and Remove Admin Privileges Restriction](#) for more information.

2. When the Command Prompt window opens, navigate to the GS RichCopy 360 RTA folder. By default, it is installed in **C:\Program Files\GuruSquad\GS RichCopy 360 RTA**.
3. To list all the available parameters in the command line, type the following line:
GSRichCopy360.TransferAgent.exe /?

All the available commands and optional parameters are displayed on screen as shown in the following image.

```

C:\Program Files\GuruSquad\GS RichCopy 360 RTA>GSRichCopy360.TransferAgent.exe /?
GSRichCopy360.TransferAgent.exe

*** While GSTAPI is fully functional, it is highly recommended to create a similar job via the GUI and then select Generate Command Line Script.
ed. It will not only save time but will also ensure a proper syntax. ***

GSRichCopy360.TransferAgent.exe createjob|deleteexistingjob|enablejob|disablejob|resetjobserial

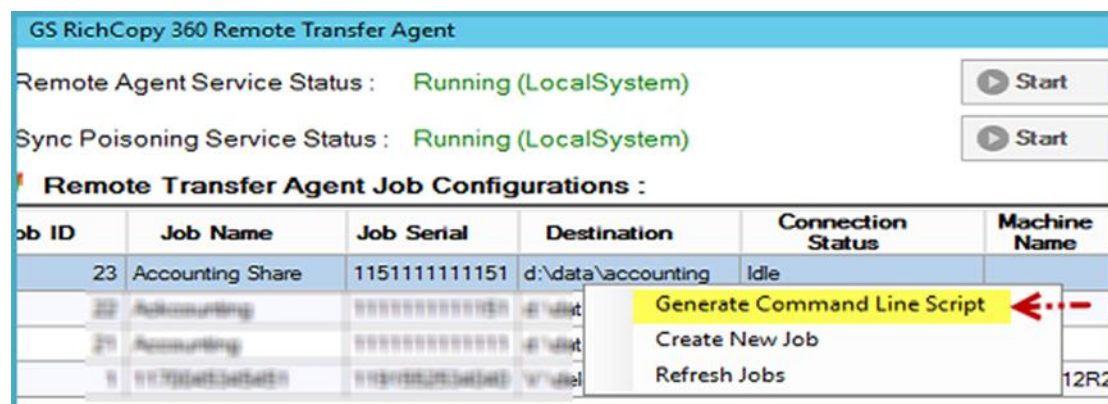
serviceip:<IpAddress/HostName> --This is GS RichCopy 360 RTA Service IPAddress/HostName. (Optional) If not specified, will connect to localhost.

serviceport:<port> --This is GS RichCopy 360 RTA Service port number to communicate. Default is 8008. (if not specified, will assume 8008).

<jobid:<jobid> --It will be used only with deleteexistingjob|enablejob|disablejob|resetjobserial
  
```

An administrator can create a template RTA job in the GS RichCopy 360 RTA GUI and generate a command line script for that job. This would simplify the need of having to find out the right syntax and save on time spent to script the job through the CLI.

This is most useful when the intent is to write a script for the RTA job creation process. It is extremely easy to generate a command line script from the GUI. All that is required after the “dummy RTA job” is created with all its options (Job Name, Description, Job Serial, and so forth) is to right-click the job and select **Generate Command Line Script**.



This copies the full syntax to the clipboard, which can later be pasted to Notepad, allowing the CLI to be changed or executed.

Syntax

```
GSRichCopy360.TransferAgent.exe [Action Command] [Required Parameters]
[Options]
```

Action Commands

There are several action commands that can be issued through the CLI.

Command	Description
enablejob	Enables an existing RTA job.
disablejob	Disables an existing RTA job.
deleteexistingjob	Deletes existing RTA job.
resetjobserial	Replaces jobserial with another one.
resetclient	Allows a different client to use this job.
createjob	Creates a new RTA job.

Note: Different commands will have parameters that are required or are optional. Review the examples provided in this manual to learn when and how to use each command and parameter. Also, jobs must be configured to run as a service in order to be set to run from the CLI.

The commands **EnableJob**, **DisableJob**, **DeleteExistingJob**, and **ResetClient** share the same mandatory parameters that are associated with the specific job. Jobs can be referenced by Job ID (JobID) or Job Name (JobName). The syntax would look something similar to this:

- `GSRichCopy360.TransferAgent.exe Enablejob jobname:"Account Job"`
- `GSRichCopy360.TransferAgent.exe DeleteExistingJob jobid:115`

The optional parameters that can be used are Jobname, JobSerial, and JobId.

Note: Only one parameter can be used.

The `ResetJobSerial` command requires one more additional parameter, which is `NewJobSerial`. Refer to the following example for the proper syntax:

```

GSRichCopy360.TransferAgent.exe          jobserial:1234567890123
newjobserial:1122334455667

```

In the example, the old jobserial “1234567890123” is replaced with a new jobserial of “1122334455667”.

The CreateJob command has several mandatory and optional parameters. Refer to the next section to learn more about the available parameters.

Note: Using the **Generate Command Line Script** feature from the GUI would save administrators from having to assemble a job creation command. However, it is strongly advised to get familiar with the different options so that once a job is generated from the GUI, it can be modified as required.

Parameters

PARAMETER	INFORMATION
"jobname:<jobname>"	Required
"jobdescription:<jobdescription>"	Required
"destination:<destination folder path>"	Required
"jobserial:<jobserial>"	Required
<jobdisabled>	Optional
	Default is Active/Enabled.
"<useencryption username:<minimum 8 character length> passphrase:<minimum 8 character length> (Optional)	Optional
encryptionkeytype:<AES-128 AES-256 (Default)>>"	Optional
"<usesyncpoison backuppath:<backuppath> backupsizes:<1-99999 GB>>"	Optional

Examples

Example 1: This command creates an RTA job.

```

GSRichCopy360.TransferAgent.exe          createjob          "jobname:test"
"jobdescription:test"                    "destination:c:\destination"
"jobserial:2034241500223"                useencryption        "username:dsfdsfsdfsdf"
"passphrase:dsfdsfsdfsdfsdf" "encryptionkeytype:AES-256" usesyncpoison
"backuppath:c:\destination11" "backupsizes:111"

```

Example 2: This command will create an RTA job with the name Accounting, the following as destination “d:\data\accounting”, a JobSerial value of “1234567890123”, and Sync Poisoning value of 5GB:

```

GSRichCopy360.TransferAgent.exe          createjob          "jobname:Accounting"
"jobdescription:Accounting Server"        "destination:d:\data\accounting"
"jobserial:1234567890123"                useencryption        "username:ABCDEFGH"

```



```
"passphrase:12345678" "encryptionkeytype:AES-256" usesyncpoison
"backuppath:e:\sync\accounting" "backupsize:5"
```

Example 3: This command will enable an existing RTA job with the name Accounting:

```
GSRichCopy360.TransferAgent.exe enablejob jobname:"accounting"
```

Another example using the JobSerial parameter:

```
GSRichCopy360.TransferAgent.exe enablejob jobserial:1234567890123
```

Example 4: This command will change JobSerial value from 1234567890123 to 111111111111 for an existing RTA job:

```
GSRichCopy360.TransferAgent.exe resetjobserial
jobserial:1234567890123 newjobserial:111111111111
```

Another example using the JobName parameter:

```
GSRichCopy360.TransferAgent.exe resetjobserial jobname:"accounting"
newjobserial:111111111111
```

Example 5: This command will reset an existing RTA job so that it can be used by another GS RichCopy 360 client:

```
GSRichCopy360.TransferAgent.exe resetclient jobserial:1234567890123
```

Another example using the JobName parameter:

```
GSRichCopy360.TransferAgent.exe resetclient jobname:"accounting"
```

Example 6: This command will delete an existing RTA job:

```
GSRichCopy360.TransferAgent.exe deleteexistingjob
jobserial:1234567890123
```

Example 7: This command will create an RTA job from a remote machine:

```
GSRichCopy360.TransferAgent.exe serviceip:192.168.0.5 createjob
"jobname:Accounting" "jobdescription:Accounting Server"
"destination:d:\data\accounting" "jobserial:111111111111"
useencryption "username:ABCDEFGH" "passphrase:12345678"
"encryptionkeytype:AES-256" usesyncpoison
"backuppath:e:\sync\accounting" "backupsize:5"
```

Enable RTA Remote Management and Remove Admin Privileges Restriction

By default, the RTA CLI command (GSRichCopy360.TransferAgent.exe) will execute on the local machine that it is run on. However, GS RichCopy 360 RTA extends the option to issue commands to a remote machine. To do so, the command should include the argument: `serviceip:<IP Address or hostname>`. By default, it would use the port TCP 8008. If the default port is changed on the client, the argument `serviceport:<portnumber>` should be used.

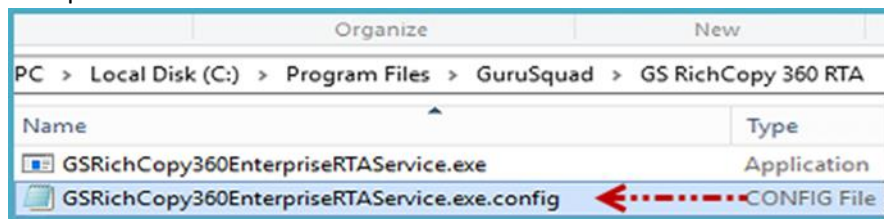
Here is an example that would enable a job on a remote machine to further clarify:


```
GSRichCopy360.TransferAgent.exe    serviceip:192.168.0.10    enablejob
jobid:115
```

By default, GS RichCopy 360 RTA:

- Only allow the CLI from the local machine itself by default. If a client needs to be managed from another machine, a config file must be edited on the client that allows its management to specify the allowed IP addresses. Completing the following steps grants another machine remote CLI access:

- Go to C:\Program Files\GuruSquad\GS RichCopy 360 RTA.
- Open the GSRichCopy360EnterpriseRTAService.exe.config file with Notepad.



- Add the IP addresses in the key named **AllowedIpAddress** as shown in the following image.

```
<add key="AllowedIpAddress" value="127.0.0.1,192.168.0.5"/><!-- Allowed from RichCLI-->
```

Note: IP addresses must be separated by commas. Do not leave this section blank as it would then be setup to accept commands from any IP address.

- Save the GSRichCopy360EnterpriseRTAService.exe.config file.
- Restart the GS RichCopy 360 Enterprise RTA Service.

- Only users with admin privileges can use the GS RichCopy 360 command line by default. If there are users that need to use the GS RichCopy 360 CLI without administrative privileges, the config file must be edited to remove the administrative privileges restriction.

- Go to C:\Program Files\GuruSquad\GS RichCopy 360 RTA.
- Open the GSRichCopy360EnterpriseRTAService.exe.config file with Notepad.
- Set the value of the key **IsOnlyAdminAllowedfromCLI** to **false** as shown in the following image.

```
<add key="IsOnlyAdminAllowedfromCLI" value="true"/> <!-- Allowed from RichCLI-->
```

- Save the GSRichCopy360EnterpriseRTAService.exe.config file.
- Restart the GS RichCopy 360 Enterprise RTA Service.

Example Section K – Environment Variables

GS RichCopy 360 (Standard and Enterprise) support environment variables in the GUI and the command line interface (CLI). Environment variables support is not limited to paths only; it is fully supported in the following areas:

- Source and Destination
- Log location
- Folder and File (Inclusion/Exclusion) filters
- Mail fields (from, to, CC, and BCC)
- Destination path and Sync Poisoning path on RTA server (Enterprise only)

All Windows environment variables can be used to include system and user-defined variables. They can be inserted like these: **%VARIABLE%** or **^VARIABLE^**

Note: It is recommended to use the **^VARIABLE^** format if using the CLI.

To find out about the environment variables defined in a Windows system, open the Command Prompt window, and then enter **SET**.

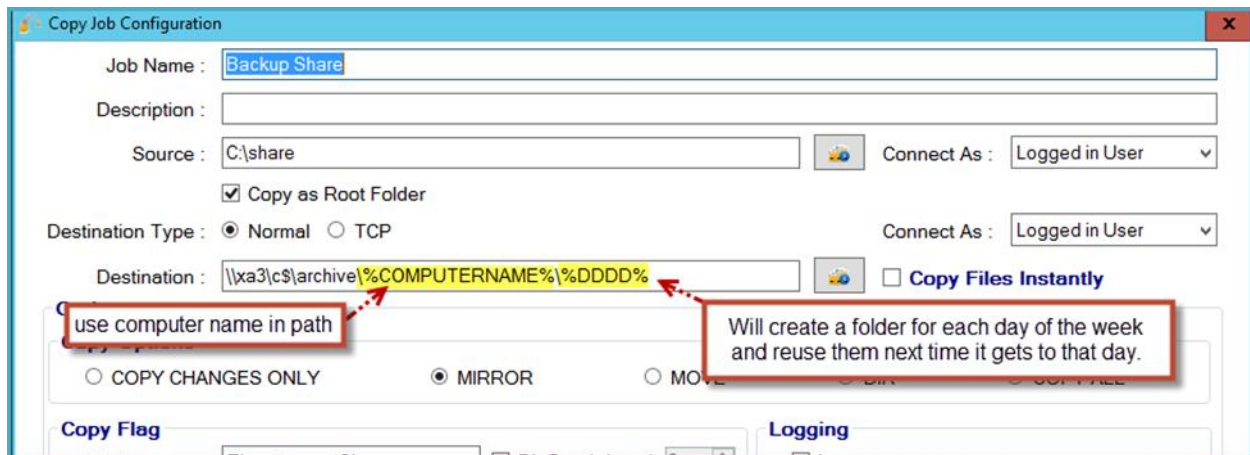
The following are some popular environment variables:

- **%USERNAME%**—current Windows username.
- **%USERPROFILE%**—current user profile directory.
- **%COMPUTERNAME%**—the Windows name of this computer.

GS RichCopy 360 also provides another set of variables that can be used in creating dynamic archives for yearly, monthly, weekly, and daily backups or based on date:

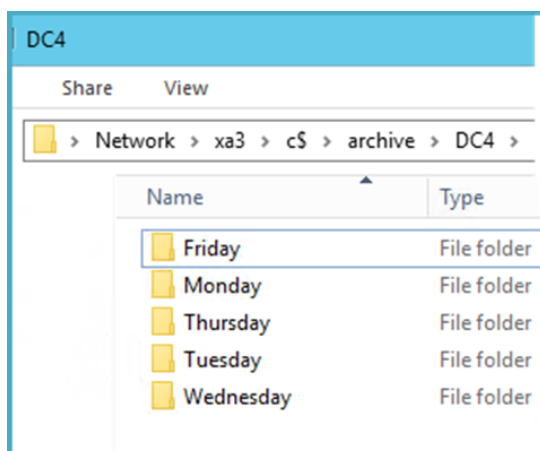
VARIABLE	DESCRIPTION
%GSRICH%	App Startup path
%YYYY%	YEAR 4 Digit 2016
%YY%	YEAR 2 Digit 16
%MM%	MONTH 2 DIGIT 02 (case-sensitive)
%MMM%	MONTH Feb
%MMMM%	MONTH February
%DD%	Day 26
%DDD%	Day Fri
%DDDD%	Day Friday
%DOW%	Day of Week 5
%hh%	Hour 05 in 12 hour format (case-sensitive)
%HH%	Hour 17 in 24 hour format (case-sensitive)
%mm%	Minute (case-sensitive)
%SS%	Seconds
%TT%	AM/PM
%MS%	Milliseconds
%WOM%	Week of Month

Here is a good example of using GS RichCopy 360 special variables:

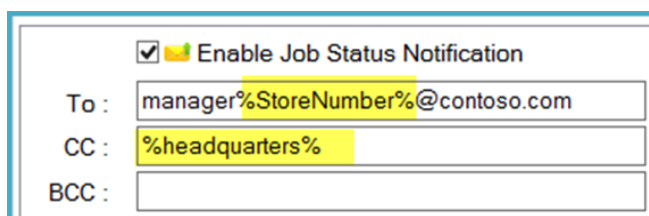


Assuming the job above is scheduled to run only on weekdays, it would create this folder structure in the destination folder.

Note: DC4 is the name of the computer used in this example.



Another good example of using environment variables is in the To, CC, and BCC fields in an email. Variables can be appended to an email address or act as a full email address if desired. In the image below, %StoreNumber% would be an environment variable that is pre-defined by the system administrator. If the value for instance was 12, the email would have been sent to manager12@contoso.com. Similarly, if the %headquarters% is translated to a value of management@contoso.com, an email is sent to this address. For more information, refer to the following image:



Frequently Asked Questions (FAQs)

This section discusses the frequently asked questions typically received by our support and sales staff. We have compiled this list and are continually updating it to provide you with the best support information available.

If you do not find your question or need assistance, feel free to contact us by email or by phone and we will gladly work with you:

- Email: support@gurusquad.com
- Phone: +1 703 868-9252

Assigning Log On as a Service

Question: When we specify a username and password to use for our GS RichCopy 360 server, the service fails to start. This account is already an administrator. How can we start the service?

Answer: In Windows 2008 R2 and later, when specifying a username and password for GS RichCopy Service to use (main Configuration section) if the service fails and cannot start, the user should set Log on as a service privilege. This can be accomplished in two different methods.

Method 1

1. Go to the **Start** menu and then type **services.msc** as shown in the following image.

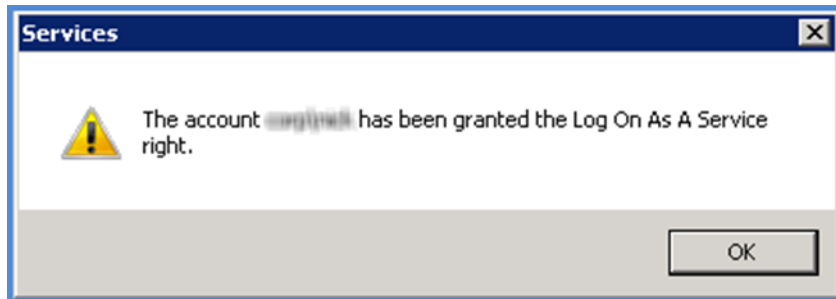


2. Locate the **GS RichCopy 360 Service** and then double-click it.

Group Update Service (gupdate)	Large (M...)	Manual	Local System
Group Policy Client	The serv...	Started	Automatic
GS RichCopy 360 Backup Copy Service	GS RichCo...	Started	Automatic
GS RichCopy 360 Service	This servic...	Started	Automatic
Health Key and Certificate Management	Provides K...	Manual	Local System
Human Interface Device Access	Enables ge...	Manual	Local System
IEE and AuthIP (Interfacing Modules)	The IEEE...	Started	Automatic
Interactive Services Detection	Enables us...	Manual	Local System
Internet Connection Sharing (ICS)	Provides n...	Disabled	Local System

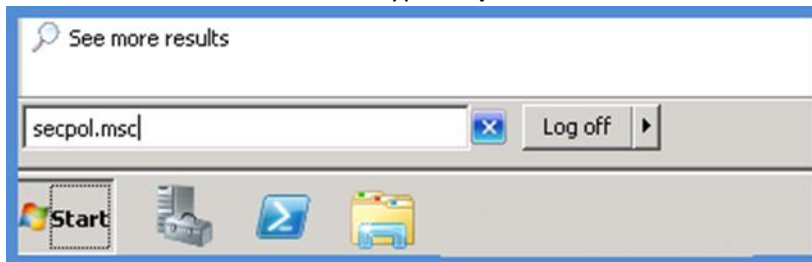
3. Select the **Log On** tab, and then select **This account**.
4. Enter the username and password for the user you want GS RichCopy 360 Service to use.
5. Select **Ok**

These steps automatically grant the username you specified with Log on as a service rights. You should receive a notification that the right to log on as a service has been granted. Make sure to stop and then start the service for the change to take effect.

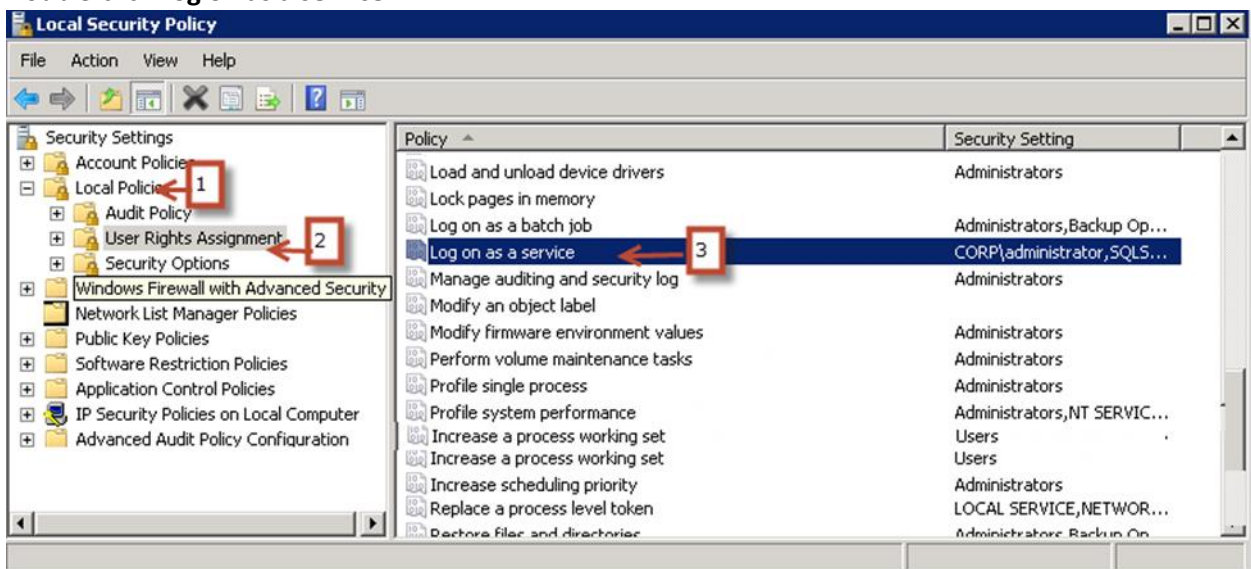


Method 2

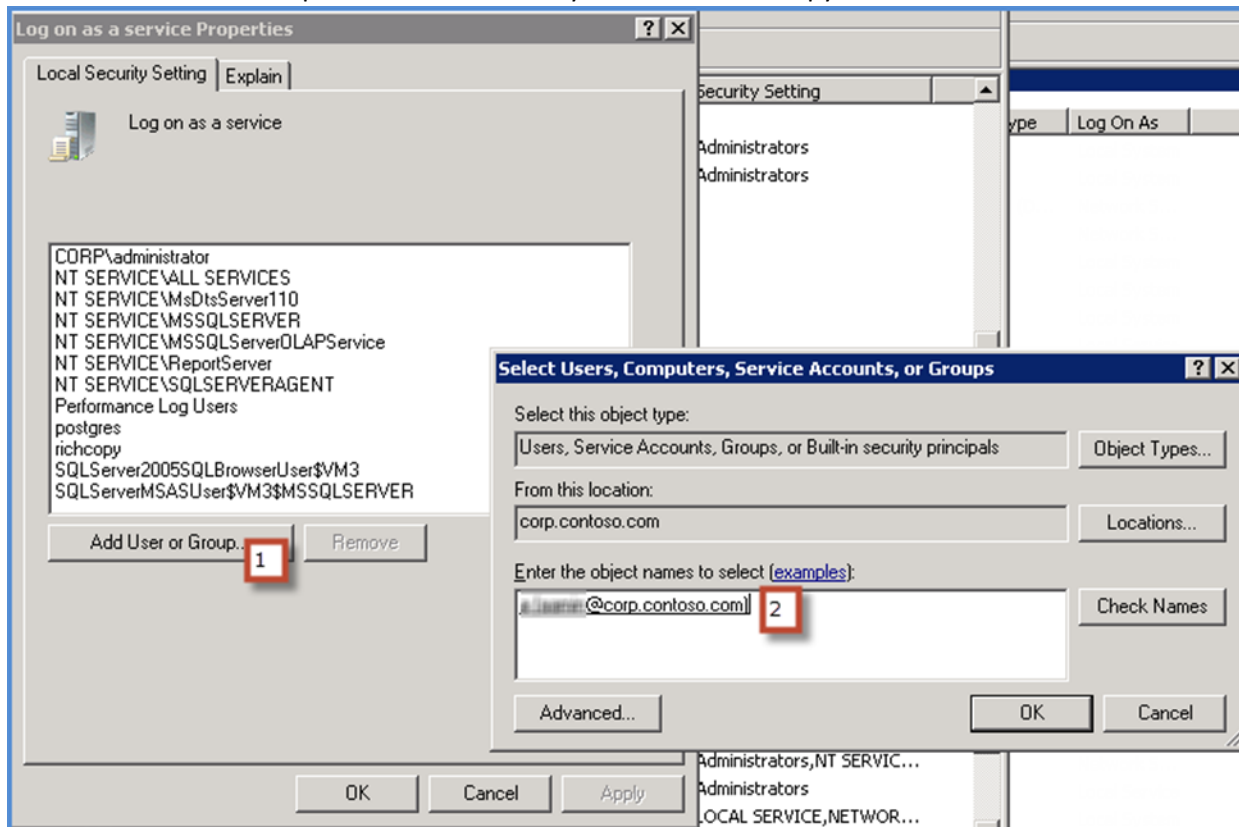
1. Go to the **Start** menu and then type **secpol.msc** as shown in the following image.



2. Select **Local Policies** → **User Rights Assignment**.
3. Double-click **Log on as a service**.



4. Select **Add User or Group**.
5. Enter the username and password for the user you want GS RichCopy 360 Service to use.



6. Select **OK** on all windows.

These steps grant the username you specified with Log on as service rights. Make sure to stop and then start the GS RichCopy 360 service for the change to take effect.

Cannot See Mapped Drives

Issue: It says you need to restart after applying the registry key, but from our testing, a restart was not needed.

Answer: Check out the following two options that you can follow to see the mapped drives.

Option A

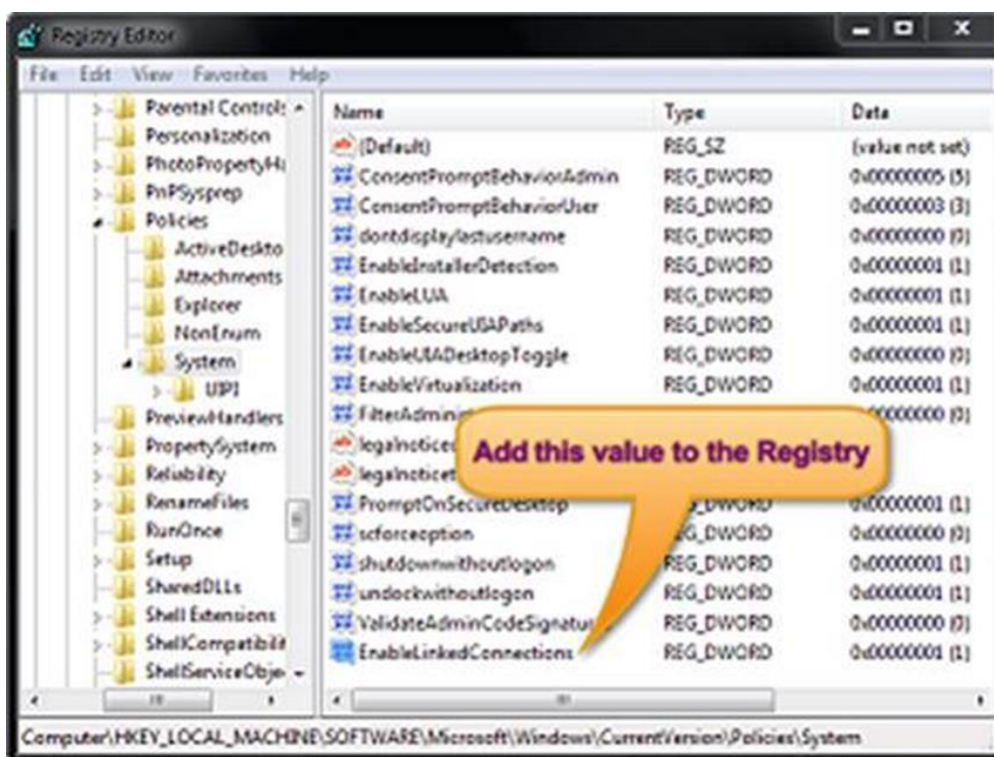
There is a way to force Windows to automatically make the network drives available to both the standard and administrator accounts. To do this, follow these steps:

1. Run the **Registry Editor** (`regedit.exe`) and then locate the following key:

HKEY_LOCAL_MACHINE/SOFTWARE/Microsoft/Windows/CurrentVersion/Policies/System

2. Create a new DWORD entry with the following details:

- Name: **EnableLinkedConnections**
- Value: **1**



CAUTION: If you are not very experienced with Registry Editor, please be extra careful. It is a powerful tool that can do a lot of damage to your system if used carelessly.

- After you've added the EnableLinkedConnections value to the registry, restart the computer. The network drives you create should become available to the elevated applications, as well.

Note that this is a limitation in Windows. The following is an article from the Microsoft website that discusses it in more detail: <https://support.microsoft.com/en-us/help/3035277/mapped-drives-are-not-available-from-an-elevated-prompt-when-uac-is-co>.

Option B

Follow the instructions below to map a network drive.

