



Quick Start Guide for Windows

CloudBacko Corporation 6 January 2025

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Table of Contents

1	Ove	rview		1
	1.1	What is	this software?	1
	1.2	System	Architecture	2
	1.3	Mobile	Backup Server (MBS)	3
	1.4	Two-Fa	actor Authentication	6
2	Req	uiremei	nts for CloudBacko app	8
	2.1	Backup	Software Version Requirement	8
	2.2	Networl	k Connection	8
	2.3	Android	and iOS Version Requirement	8
3	Req	uiremei	nts for CloudBacko Pro on Windows	9
	3.1	Hardwa	are Requirements	9
	3.2	Suppor	ted Platforms	9
	3.3	Antiviru	s Exclusion Requirement	9
	3.4	Upgrad	e VMware Tools Requirement	9
	3.5	Internet	t Connection	9
	3.6	SMTP S	Server	9
	3.7	Firewal	l Settings	10
	3.8	Suppor	ted Applications	10
	3.9	Java He	eap Size	10
	3.10	Two-Fa	actor Authentication Requirements	11
	3.11	Mobile	Device Requirements	11
	3.12	Date, T	ime, and Time zone for 2FA (TOTP only)	11
	3.13		ons	
		Enhand	ced Network Drive Support	12
	3.14	Best Pr	actices and Recommendations	13
		3.14.1	Periodic Backup Schedule	13
		3.14.2	Set up of both Periodic and Continuous Backup Schedule	13
		3.14.3	Periodic Backup Schedule vs. Continuous Backup Schedule	14
4	Get	Started	with CloudBacko Pro	15
5	Ope	nDirect	Restore	16
	5.1	What is	OpenDirect Restore?	16
	5.2	How do	es OpenDirect Restore work?	16
	5.3	Benefits	s of using OpenDirect Restore	17
	5.4	Require	ements	18
		5.4.1 S	upported Backup Modules	18

		5.4.2 License Requirements	18
		5.4.3 Backup Quota Storage	18
		5.4.4 Windows Operating System	18
		5.4.5 Temporary Directory Requirement	18
		5.4.6 Available Spare Drive Letter	18
		5.4.7 Network Requirements	18
		5.4.8 Other Dependencies	19
		5.4.9 Permissions	19
6	Dov	vnload and Install CloudBacko Pro	20
	6.1	Download CloudBacko Pro	20
	6.2	Install CloudBacko Pro	21
	6.3	CloudBacko Pro Services	25
	6.4	Mobile Backup Server (MBS) Health Check and CloudBacko app connection Check	27
7	Sta	rt CloudBacko Pro	29
	7.1	Launch CloudBacko Pro without 2FA	
		7.1.1 Initial launch skipping two-factor authentication and mobile backup featu	ıres
		setup	
		7.1.2 Subsequent logins without 2FA but with password lock	31
		7.1.3 Subsequent logins without 2FA and password lock	32
	7.2	Launch CloudBacko Pro with 2FA using Android or iOS mobile device	33
		7.2.1 Initial launch setting up two-factor authentication and mobile backup fea 33	tures
		7.2.2 Subsequent logins with 2FA	44
		7.2.3 Subsequent logins with 2FA and password lock	47
	7.3	Trial Mode	48
8	Clo	udBacko Pro Overview	50
	8.1	Language	51
	8.2	About	51
	8.3	Backup	52
	8.4	Backup Sets	53
		8.4.1 Backup Set Settings	56
		8.4.1.1 General	56
		8.4.1.2 Source	59
		8.4.1.3 Backup Schedule	70
		8.4.1.4 Continuous Backup	76
		8.4.1.5 Destination	78
		8.4.1.6 Deduplication	ี่ 83

	8.4.1.7 Retention Policy	86
	8.4.1.8 Command Line Tool	92
	8.4.1.9 Reminder	98
	8.4.1.10 Bandwidth Control	101
	8.4.1.11 Others	104
8.5	Report	112
	8.5.1 Backup	113
	8.5.2 Restore	117
	8.5.3 Usage	118
	8.5.4 Purchase	120
8.6	Restore	121
8.7	Settings	122
	8.7.1 Proxy	123
	8.7.2 Email Report	124
	8.7.3 Windows Event Log	128
	8.7.4 Software Update	129
	8.7.5 License	133
	8.7.6 Authentication	139
	8.7.7 Mobile Backup	151
8.8	Utilities	164
	8.8.1 Data Integrity Check	165
	8.8.1.1 Data Integrity Check Completd with Errors	176
	8.8.1.2 Data Integrity Check Result	177
	8.8.1.3 Test Mode Confirmation	178
	8.8.2 Space Freeing Up	180
	8.8.3 Ex/Import Settings	183
	8.8.4 Delete Backup Data	187
	8.8.5 Decrypt Backup Data	192
8.9	Buy	193
	8.9.1 Credit Card	195
	8.9.2 TT (Telegraphic Transfer)	202
8.10	Social Media Icons	208
8.11	Online Help	209
8.12	System Tray	210
	8.12.1 Open	211
	8.12.2 Backup	
	8.12.3 Backup and Logoff	212
	8 12 4 Backup and Restart	

	8.12.5	Backup and Shutdown	213
	8.12.6	Backup and Standby	213
	8.12.7	Backup and Hibernate	213
	8.12.8	Help	213
	8.12.9	Stop Running Backup	214
	8.12.10	D Exit	215
9	Create a Ba	ackup Set	216
10	Overview o	on Backup Process	227
	10.1 Periodi	ic Data Integrity Check (PDIC) Process	228
	10.2 Backup	Set Index Handling Process	230
	10.2.1	Start Backup Job	230
	10.2.2	Completed Backup Job	231
	10.3 Data V	alidation Check Process	232
11	Run Backu	ıp Jobs	233
12	Restore Da	ıta	236
	12.1 Restor	e Method	236
	12.1.1	Traditional Restore	236
	12.1.2	OpenDirect Restore	244
	12.2 Restor	e Filter	249
13	Mobile Bac	kup and Restore to Cloud	254
	13.1 Create	a File Backup Set	255
	13.2 Run a	Backup Job	258
	13.3 Restor	e Data	258
	13.3.1	Original Location	259
	13.3.2	Alternate Location	260
14	Contact Clo	oudBacko	262
	Technical As	ssistance	262
Αp	pendix		263
	Appendix A:	Uninstall CloudBacko Pro	263
	Appendix B:	Example Scenarios for Restore Filter	266
	Appendix C:	Batch Files	274
	RunCE	3.bat	275
	ListBac	ckupSet.bat	284
	RunBa	ckupSet.bat	285
	ListBad	ckupJob.bat	290
	Restor	e hat	294

	Decrypt.bat	303
	RunDataIntegrityCheck.bat	310
Appe	ndix D: Example Scenarios for the Reminder for Windows Logoff, Restart, a Shutdown	
	Windows Log Off	315
	Windows Restart	316
	Windows Shutdown	317
	Scenario 1 (Windows Log Off + Enabled Locking Workstation)	318
	Scenario 2 (Windows Log Off + Unselected Locking Workstation)	319
	Scenario 3 (Windows Restart + Enabled Locking Workstation)	320
	Scenario 4 (Windows Restart + Unselected Locking Workstation)	321
	Scenario 5 (Windows Shutdown + Enabled Locking Workstation)	322
	Scenario 6 (Windows Shutdown + Unselected Locking Workstation)	323
Appe	ndix E: Example Scenarios for the Reminder for completed Tolerance Perio	d 324
Appe	ndix F: How to Manage Network Drives which are not set in Windows	325
	Select All	326
	Select Only	328
	Deselect All	330
	Edit Credential	332
	Delete	334
	ndix G: Example Registration of Time-base One-time Password (TOTP) Authenticator app in CloudBacko app	336
	ndix H: How to apply a license key to a CloudBacko Pro installation with an expired trial license?	341
Appe	ndix I: Where to find the CloudBacko Pro purchase license key?	344
• •	ndix J: Different Date, Time, and Time zone with CloudBacko Pro machine a	and 346

1 Overview

1.1 What is this software?

CloudBacko brings you specialized client backup software, namely CloudBacko Pro, to provide a comprehensive backup solution for protecting the following applications, databases and Windows System:

- File
- Cloud File
- Microsoft 365 Exchange Online Mailbox
- Windows System
- Microsoft Exchange Server EDB, Individual Mailboxes and DAG
- Microsoft SQL Server
- MariaDB
- MySQL
- Oracle Database
- Windows System State
- Hyper-V
- VMware
- Tibero Database Server

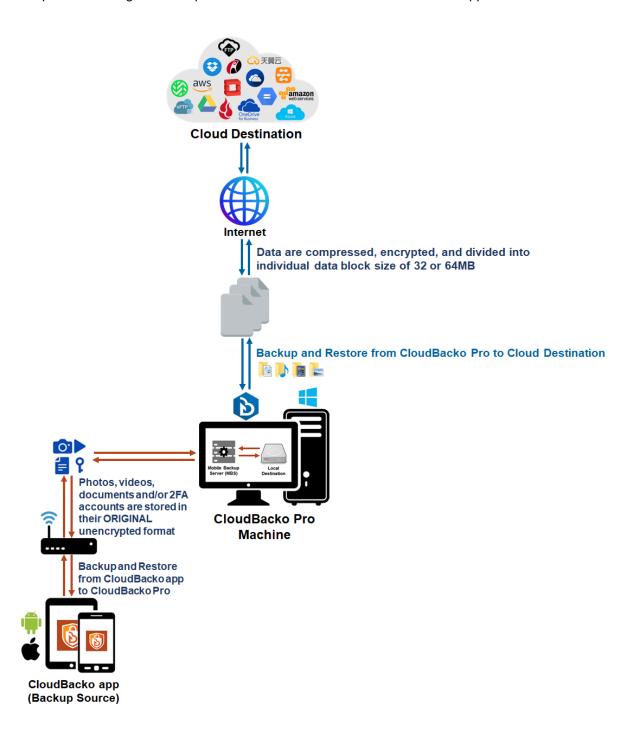
It also supports a wide variety of backup destinations, which are the following:

- Local hard drive / USB drive / Network share
- 1&1 IONOS
- Alibaba Cloud (Aliyun)
- Amazon S3
- S3-Compatible Cloud Storage
- BackBlaze B2
- CenturyLink
- CTYun
- DreamHost's DreamObjects
- Dropbox
- IBM Cloud Object Storage
- Google Cloud Storage

- Google Drive
- Microsoft Azure
- Microsoft OneDrive
- Microsoft OneDrive for Business
- OpenStack
- Rackspace Cloud File
- S3ForMe
- Scality
- Wasabi
- Zadara
- FTP
- SFTP

1.2 System Architecture

Below is the system architecture diagram illustrating the major elements involved in the backup process among the backup machine CloudBacko Pro and CloudBacko app.



1.3 Mobile Backup Server (MBS)

The Mobile Backup Server (MBS) will be utilized to handle mobile backup and restore of CloudBacko app. It is an integral part of CloudBacko Pro, which is located in the "mbs" folder inside the CloudBacko Pro folder.

System Diagram

The Mobile Backup Server (MBS) will be activated automatically when a mobile device installed with the CloudBacko app is successfully registered for mobile backup with CloudBacko Pro. Afterwards, it will be automatically restarted whenever the CloudBacko pro services is restarted or when the CloudBacko Pro machine is rebooted or powered on. The MBS will be deactivated when all mobile devices have deregistered from the mobile backup settings and the CloudBacko Pro services is restarted.

The MBS will use the following port ranges for the request of CloudBacko app:

TCP Port: 50000 to 50099

UDP Port: 50200 to 50299

Protocol: Http

The default TCP and UDP ports are **50000** and **50200**, if these ports are already in use by other applications or services, then the MBS will automatically acquire another port.

The actual TCP and UDP port can be seen on the CloudBacko Pro when pairing a mobile device for mobile backup.



Please scan the QR code to get the below Mobile App from App Store. Once installed the Mobile App, launch it and scan the same QR code to complete the device registration.



Mobile Backup (Add new device for backup without migration)



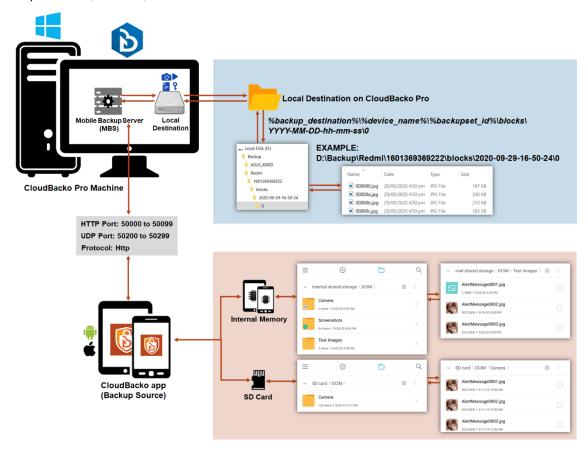




Prerequisites

- Please use the latest Mobile App version
- Please make sure below 2 ports are not blocked by any Firewall settings TCP Port: 50000
 UDP Port: 50200

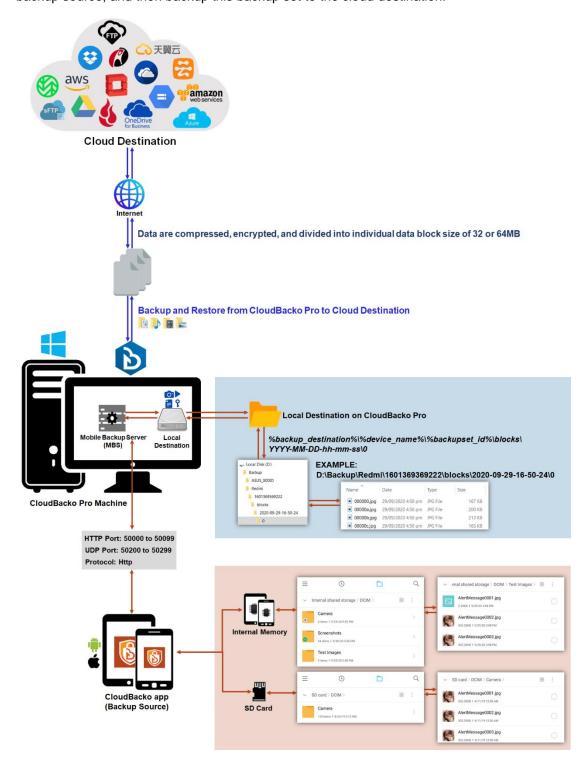
Photos, videos, documents and 2FA accounts are stored either in the mobile device's internal memory or SD Card. These are selected as backup source using the CloudBacko app and will be backed up to the local destination of a CloudBacko machine, that can be a Hard Drive, Flash Drive, and/or Network Drive in their ORIGINAL format unencrypted. For Android, photos and videos will retain all EXIF. While for iOS, photos and videos will retain most of the EXIF including capture date, location, and lens.



If storage of photos, videos, documents and 2FA accounts to a cloud destination is required, then this can be done using CloudBacko Pro to perform a secondary backup and restore of the photos, videos, documents and 2FA accounts on the local drive to the cloud.

To backup and restore photos, videos, documents and 2FA accounts from CloudBacko app to CloudBacko Pro and cloud, is a two-step process.

- **1**st: Backup of photos, videos, documents and/or 2FA accounts from CloudBacko app to CloudBacko Pro local destination.
- **2**nd: Create a File backup set using CloudBacko Pro, using the local backup destination as the backup source, and then backup this backup set to the cloud destination.

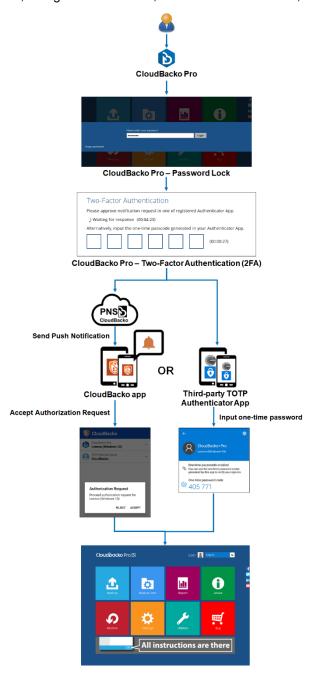


1.4 Two-Factor Authentication

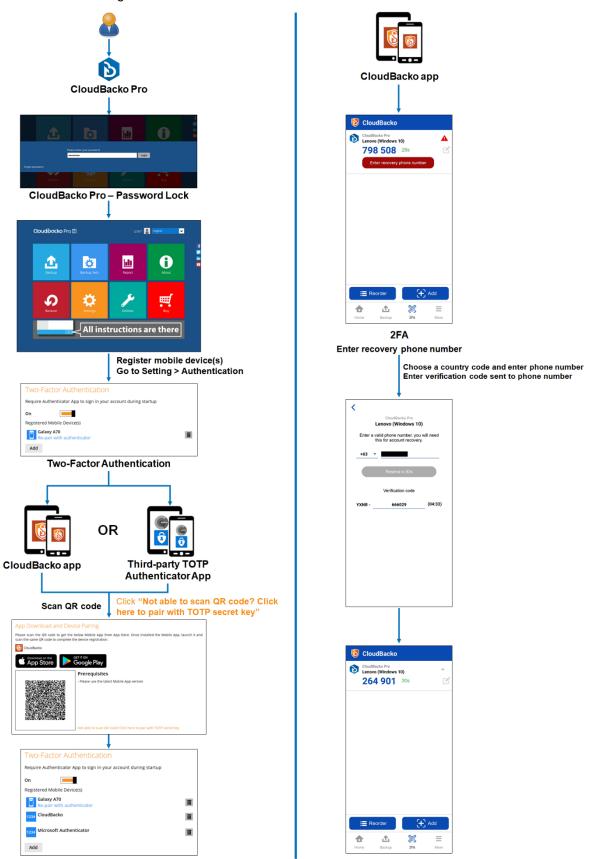
The two-factor authentication implemented on CloudBacko Pro include support for TOTP (Time-based One-time Password) and Push notification authentication using the CloudBacko app to provide additional security for the user login process.

Upon initial login, you will have an option to setup your two-factor authentication feature. You may skip the setup and do it later. If you continue the setup of two-factor authentication, it will be automatically enabled for future CloudBacko sign in process. If you like, you may register your CloudBacko Pro with multiple mobile devices for two-factor authentication.

For log ins with two-factor authentication enabled CloudBacko Pro, the 2FA method will depend on the authenticator app registered. You will either accept the login request via push notification in the CloudBacko app or enter a one-time password generated in the third-party authenticator app such as Authy, Duo, Google Authenticator, Microsoft Authenticator, LastPass etc.



This illustrates the registration of mobile devices for Two-Factor Authentication.



2 Requirements for CloudBacko app

2.1 Backup Software Version Requirement

- Download and install the latest version of CloudBacko Pro.
- Download and install the latest version of CloudBacko app from the Play Store for Android mobile devices and from the App Store for iOS mobile devices.

2.2 Network Connection

Ensure that CloudBacko app is connected to the same local WiFi network with CloudBacko Pro. Failure to do so will prevent the CloudBacko app from performing backup/restore.

2.3 Android and iOS Version Requirement

- For Android device, Android version must be Android 8 or above.
- For Apple device, iOS version must be 12.0 or above.

3 Requirements for CloudBacko Pro on Windows

3.1 Hardware Requirements

Refer to the link below for details of the minimum and recommended requirements for installing CloudBacko Pro.

CloudBacko Pro: Hardware Requirement

3.2 Supported Platforms

Refer to the following link for details of the operating systems supported by CloudBacko Pro.

CloudBacko Pro: Supported Operating Systems

3.3 Antivirus Exclusion Requirement

To optimize performance of CloudBacko Pro on Windows, and to avoid conflict with your antivirus software, refer to the following CloudBacko Wiki article the list of processes and directory paths that should be added to all antivirus software white-list / exclusion list:

CloudBacko Pro: Exclusion of CloudBacko in your Antivirus software

NOTE

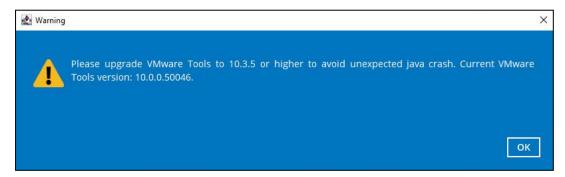
The bJW.exe process is automatically added to Windows Defender exclusion list for Windows 10 and 2016 / 2019 during installation.

For mobile backups, the mobile backup destination must also be added to all antivirus software white-list / exclusion list.

3.4 Upgrade VMware Tools Requirement

To avoid unexpected java crash, if the Windows machine is a guest VM hosted on a VMware Host then it is highly recommended that the VMware tools version installed on the guest VM must be 10.0.5 or above.

Below is the warning message that will be displayed if the version of the VMware Tools is less than 10.0.5.



3.5 Internet Connection

CloudBacko Pro machine must have a fixed internet connection

3.6 SMTP Server

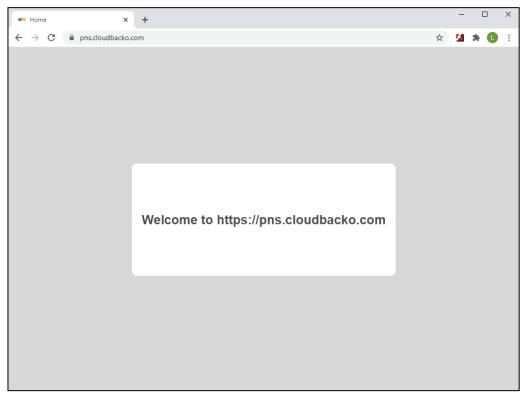
- CloudBacko Pro supports SMTP server using TLS v1.0, v1.1, or v1.2
- CloudBacko Pro supports SMTP server with or without authentication.

3.7 Firewall Settings

Make sure that your firewall settings allow network traffic through the following domain and/or ports:

- For CloudBacko Pro to function correctly, firewall settings must allow outbound connections to *.cloudbacko.com via port 80 and 443.
- For mobile backup inbound / outbound network traffic must be allowed through the following default ports: HTTP port: 50000 and UDP port: 50200.
 - The actual ports used may be different, please refer to Chapter 1.3: Mobile Backup Server (MBS) for more details.
- For CloudBacko app 2FA push notifications, firewall settings must allow outbound connection to pns.cloudbacko.com via port 80 and 443. Failure to do this will prevent you from using Push Notification feature for two-factor authentication.

To check if the firewall is correctly configured, go to a browser, and enter **pns.cloudbacko.com**, there should be a welcome message to https://pns.cloudbacko.com. Below is a sample screenshot.



3.8 Supported Applications

Refer to the link below for the details of the applications supported by CloudBacko Pro.

CloudBacko Pro: Supported Applications

3.9 Java Heap Size

The default maximum Java heap size setting is 2048M. This value is usually sufficient for most types of backups, however for backup sets with large number of files and/or very large files the value may need to be increased.

Refer to the link below for the details on how to increase Java Heap Size for CloudBacko Pro.

CloudBacko Pro: How to increase Java Heap Size

3.10 Two-Factor Authentication Requirements

Please refer to the <u>CloudBacko App v1 User Guide for Android and iOS – Chapter 2.4</u> for details of the minimum and recommended requirements for using Two-Factor Authentication on CloudBacko app.

3.11 Mobile Device Requirements

Refer to the <u>CloudBacko App v1 User Guide for Android and iOS – Chapter 2.5</u> for details of the minimum and recommended requirements for installing the CloudBacko app.

3.12 Date, Time, and Time zone for 2FA (TOTP only)

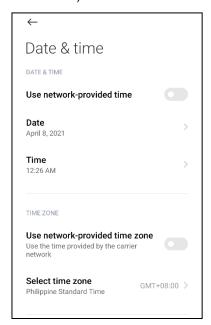
Make sure to check the date, time, and time zone are synced between the CloudBacko Pro machine and mobile device installed with CloudBacko app before pairing the device for 2FA (TOTP only) to avoid unsuccessful pairing of devices and/or TOTP authentication failures. This also applies to third-party TOTP Authenticators.

To check the date, time, and time zone, follow the instructions below. For a different date, time, and time zone and how to change it, refer to <u>Appendix J: Different Date, Time, and Time zone with CloudBacko Pro machine and mobile device</u>.

Same Date, Time, and Time zone with CloudBacko Pro machine and mobile device

1. Check the date, time, and time zone in mobile device.

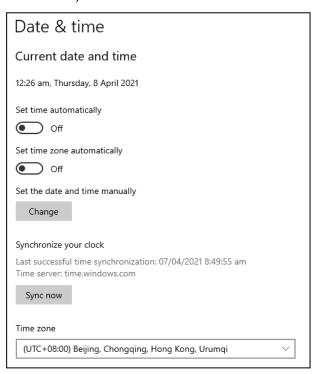
Example: Time zone settings of a mobile device used in the Philippines (time zone GMT+08:00).





2. Check the date, time, and time zone in CloudBacko Pro machine.

Example: Time zone setting of a Windows machine used in the Philippines (time zone GMT+08:00).



3.13 Limitations

Enhanced Network Drive Support

- For network drives which have not been already setup or mapped in Windows.
- Temporary folder location is not supported with individual login credentials but can still be setup separately using existing Windows User Authentication login.
- Not supported on "Restore Raw file" and "Restore to local computer" options.
- Not supported for mobile backup destinations.

3.14 Best Practices and Recommendations

3.14.1 Periodic Backup Schedule

The periodic backup schedule should be reviewed regularly to ensure the interval is sufficient to handle the data volume on the machine. Over time, data usage pattern may change on a production server, i.e. the number of new files created, the number of files which are updated/delete, new users may be added etc.

When using periodic backup schedules with small backup intervals such as backup every 1 minute, 2 minutes, 3 minutes etc. although the increased backup frequently does ensure that changes to files are captured regularly which allows greater flexibility in recovery to a point in time.

Consider the following key points to efficiently handle backup sets with periodic backup schedule.

- Hardware to achieve optimal performance, compatible hardware requirements is a must. Ensure you have the backup machine's appropriate hardware specifications to accommodate frequency of backups,
 - o so that the data is always backed up within the periodic backup interval
 - so that the backup frequency does not affect the performance of the production server
- Network make sure to have enough network bandwidth to accommodate the volume of data within the backup interval.
- Storage ensure you have enough storage quota allocated based on the amount of new data and changed data you will backup.
- Retention Policy also make sure to take into account the retention policy settings and retention area storage management which can grow because of the changes in the backup data for each backup job.

3.14.2 Set up of both Periodic and Continuous Backup Schedule

On a Windows platform, although it is possible to setup both <u>Periodic</u> backup schedule and <u>Continuous</u> backup schedules on File backup sets, it is recommended to only use one schedule as only one schedule backup job can run at any one time.

For example, a backup job is started by the Periodic backup schedule and is running, if a Continuous backup is scheduled to run, the backup job will be skipped and vice versa.



3.14.3 Periodic Backup Schedule vs. Continuous Backup Schedule

The following table shows the comparison between a periodic and continuous backup schedule.

Features	Periodic Backup Schedule	Continuous Backup Schedule
Will run whether or not a change on the backup source is made		×
Run Retention Policy after backup	V	×
Exclude system files from the backup	×	~
Only apply to files smaller than (MB) size	×	~
Exclude Filter	×	~
Supported on all operating systems (i.e. Windows, MacOS, Linux, and FreeBSD)	~	Only supported on Windows operating system
Supports all backup set types	V	Only supports File Backup Sets

4 Get Started with CloudBacko Pro

This quick start guide will walk you through the following six (6) major parts to get you started with using CloudBacko Pro.

Download and Install

Download and install CloudBacko Pro on your Windows machine

Launch the App

Launch CloudBacko Pro

Setup 2FA and/or Mobile Backup

Register mobile device for 2FA and/or mobile backup (optional)

Create a Backup Set

Create a backup set according to your preferences

Run Backup Jobs

Run backup jobs to back up data

Restore Data

Restore backed up data to your system

5 OpenDirect Restore

5.1 What is OpenDirect Restore?

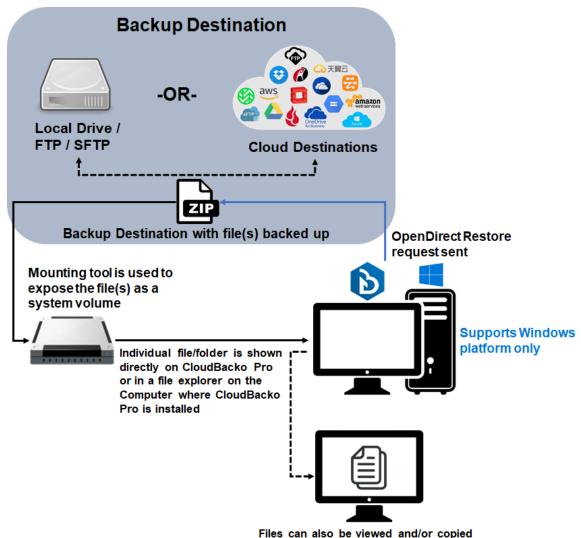
OpenDirect restore is an additional restore options for restoring files from a Windows File backup set. The OpenDirect restore method makes use of the granular restore technology to make selective restore of individual files from a large compressed or image file, for example zip, RAR, ISO files, without the need to restore the compressed or image file first, to give you a fast and convenient file restore solution.

During the OpenDirect restore process, the file(s)/folders can be viewed and/or copied from the Windows File Explorer on the Windows machine you are performing the restore. OpenDirect restore is only supported on File backup sets created and backed up using CloudBacko Pro on Windows platform with OpenDirect restore feature enabled.

IMPORTANT

OpenDirect / Granular Restore is included in basic CloudBacko License.

5.2 How does OpenDirect Restore work?





5.3 Benefits of using OpenDirect Restore

Comparison between OpenDirect File Restore and Traditional File Restore

OpenDirect Restore			
	Introduction		
OpenDirect restore allows you to quickly access individual files from a large compressed or image file by viewing and/or copying files from the file explorer on the Windows you are performing the restore, without having to fully restore the whole compressed or image file first.			
	Pros		
Restore of Entire Compressed File Not Required	As opposed to the traditional restore where you have to restore the entire compressed or image file first before you can access any individual file in it, OpenDirect restore allows you to view and download individual files from a compressed or image file, without having to restore compressed file or image file first.		
Ability to Restore Selected Files	When restoring a large compressed or image file, sometimes, you may only need to restore individual file(s) out of the entire file, therefore, OpenDirect restore gives you the flexibility to restore selective file(s) quickly, so it saves you time and effort to achieve your restore goal.		
Cons			
No Encryption and Compression	To ensure optimal restore performance, the backup of the files in an OpenDirect file backup set will NOT be encrypted and compressed, therefore, you may have to take these factors in consideration when selecting this restore option.		

Traditional Restore			
	Introduction		
The traditional restore method restores the entire compressed file or image file. Backed up data can only be accessed when complete restore is performed.			
Pros			
Backup with Compression and Encryption	Compression and encrypted before being uploaded to the backup destination		
Cons			
Slower Recovery As the entire compressed or image file must be restored before you can access any individual files, restore time could be long if the file size is large			

5.4 Requirements

5.4.1 Supported Backup Modules

OpenDirect restore is only supported on File backup sets created and backed up using CloudBacko Pro on Windows platform with OpenDirect restore feature enabled.

5.4.2 License Requirements

OpenDirect is included in basic CloudBacko License.

5.4.3 Backup Quota Storage

As compression is not enabled for OpenDirect file backup sets, to optimize restore performance the storage quota required will be higher than non-OpenDirect file backup sets. Contact your backup service provider for details.

5.4.4 Windows Operating System

CloudBacko Pro must be installed on a 32 bit or 64-bit Windows Operating System as libraries for OpenDirect only supports Windows platform.

Windows 2008 R2 SP1 or above	Windows 2012	Windows 2012 R2
Windows 2016	Windows 7 SP1 or above	Windows 8
Windows 8.1	Windows 10	Windows 2019

5.4.5 Temporary Directory Requirement

The temporary directory folder should have at least the same available size as the compressed file to be restored and should be located on a local drive to ensure optimal performance.

5.4.6 Available Spare Drive Letter

One spare drive letter must be available on the Windows machine for the OpenDirect restore process, as the compressed file or image is mounted on Windows as a logical drive. CloudBacko Pro will automatically take the next available drive letter in alphabetical order for the compressed or image file.

NOTE

- 1. The Windows drive letters A, B, and C are not used by OpenDirect restore.
- The OpenDirect restore assigned drive letter(s) will be released once you exit from CloudBacko Pro UI.

5.4.7 Network Requirements

Recommended minimum network speed is at least 100Mbps download speed.

The network bandwidth requirements will increase in proportion to the size of the compressed file/image and or the incremental delta chain length to ensure optimal performance. Working with limited network bandwidth may severely affect the granular restore performance.

You can use an online network speed test website (e.g. <u>www.speedtest.net</u>) to get an idea of the actual bandwidth of the machine.

5.4.8 Other Dependencies

The following dependencies are restore related and therefore they will be checked by CloudBacko Pro only when an OpenDirect restore is performed. Absence of these elements will not affect the backup job but would cause the restore to fail.

- Microsoft Visual C++ 2015 Redistributable (x86) / (x64)
 https://www.microsoft.com/en-us/download/details.aspx?id=48145
- Update for Universal C Runtime in Windows https://support.microsoft.com/en-us/help/2999226/update-for-universal-c-runtime-in-windows
- For Windows 7 and Windows Server 2008 R2 only

Microsoft Security Advisory 3033929 https://www.microsoft.com/en-sg/download/details.aspx?id=46078

5.4.9 Permissions

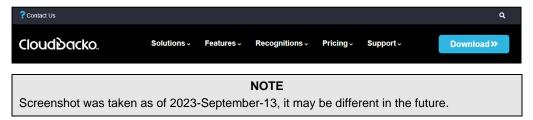
The Windows login account used for installation and operation of the CloudBacko Pro client machine requires Administrator privileges.



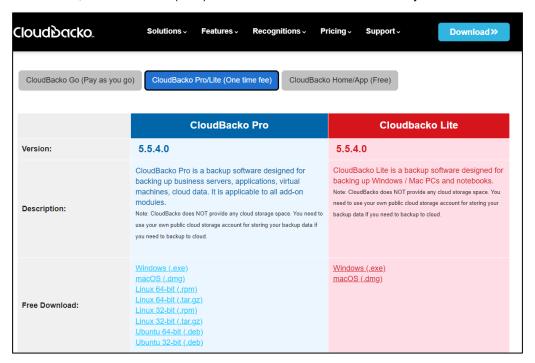
6 Download and Install CloudBacko Pro

6.1 Download CloudBacko Pro

1. In a web browser, go to the CloudBacko website and click Download.



2. Click CloudBacko Pro/Lite (One time fee). In the Free Download section, you may choose the installer by operating system and click on their links to start the download. In this case, click Windows (.exe). This will download the installer to your machine.



6.2 Install CloudBacko Pro

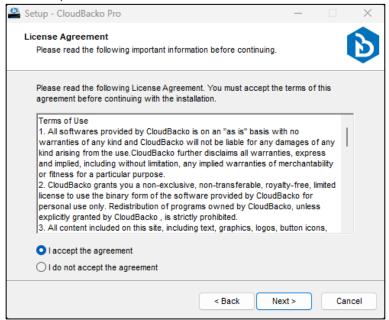
1. Double-click the icon of the CloudBacko installation package file you have downloaded.



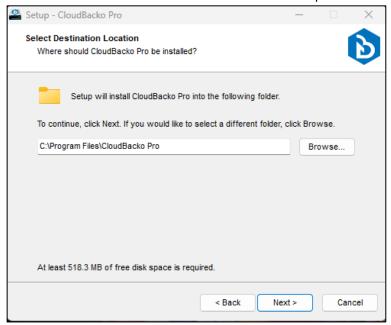
2. CloudBacko Pro Setup Wizard will be displayed. Click the Next button to proceed.



3. Tick "I accept the agreement" after reading the license agreement then click the Next button to proceed.



4. Click the **Browse** button to choose a path. The default path is *C:\Program Files\CloudBacko Pro*. Then click the **Next** button to proceed.

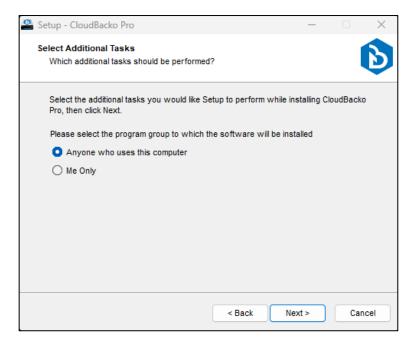


- 5. Select the program group to which the CloudBacko Pro will be installed. The default setting is "Anyone who uses this computer". The following are the difference between the two settings:
 - Anyone who uses this computer the CloudBacko Pro System Tray icon will be available to all Windows user and backup notifications will be displayed on the Windows System Tray. For more information please refer to Chapter 8.12: System Tray.
 - Me only the CloudBacko Pro Tray icon will not be available and backup notifications will not be displayed on the Windows System Tray.

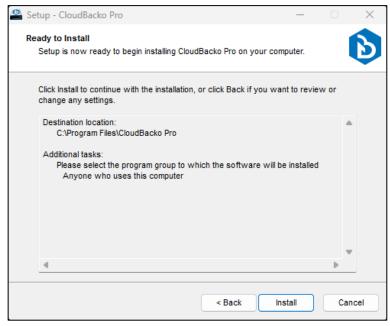
NOTE

Once the program group setting has been chosen and the installation completed, if you need to change the setting, this will require an uninstallation and re-installation of the application.

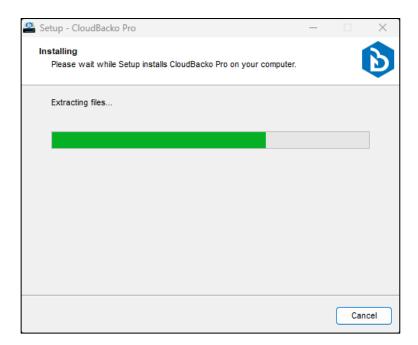
Then, click the **Next** button to proceed.



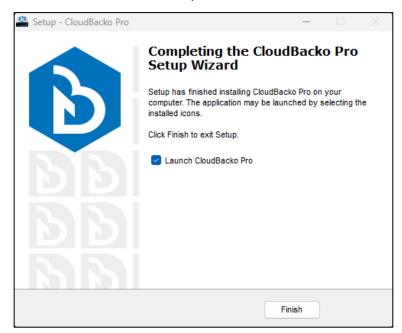
6. Click the Install button to start the installation.



7. The component files will be downloaded first during installation



Click the **Finish** button to complete the installation.



6.3 CloudBacko Pro Services

The CloudBacko Pro Services is a key component which regulates and controls several important functions on CloudBacko.

Function	Description
Scheduled Backups	Ensures that backup job which are setup to run at a certain date and time are started.
Regular License Checks	Perform daily license checks to update the status of the license key.
Email Reports	Ensures backup error / warning report, missed backup report, and report, and storage alert report are sent to the customer according to the report settings.
Continuous Backups (Windows platform only)	Ensures that Continuous backups are run according to the backup interval.
Reminder (Windows platform only)	Ensures that a reminder popup is displayed when the last time a backup was run exceeded the tolerance period.
Mobile Backup Server (MBS)	Ensure that registered mobile devices can perform backups to CloudBacko Pro.
	The MBS will be activated when a mobile device is registered for mobile backup on CloudBacko Pro.
	The MBS will be deactivated when all mobile devices have been deregistered from the mobile backup settings and the CloudBacko Pro services is restarted.

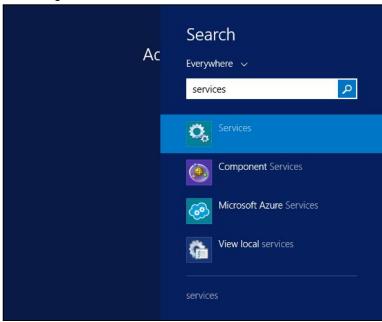
Therefore, it is very important to ensure the CloudBacko Pro Services is running after,

- a new CloudBacko installation
- a CloudBacko software update
- when the machine rebooted
- the machine is powered on
- the machine wakes up from hibernation or standby mode

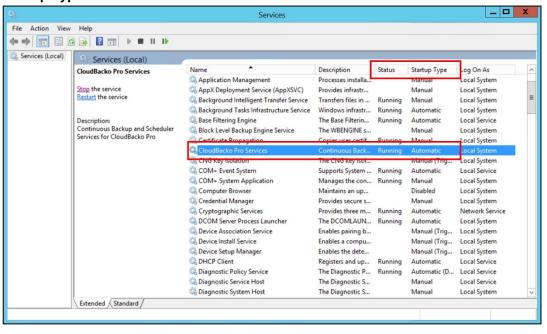
Otherwise, all of the functions above will stop working.

This option is used to kick automated or scheduled backup jobs.

1. To start, go to start menu and search for Services.



2. Look for **CloudBacko Pro Services** on the list. The status should be "Running", and the **Startup Type** should be "Automatic".

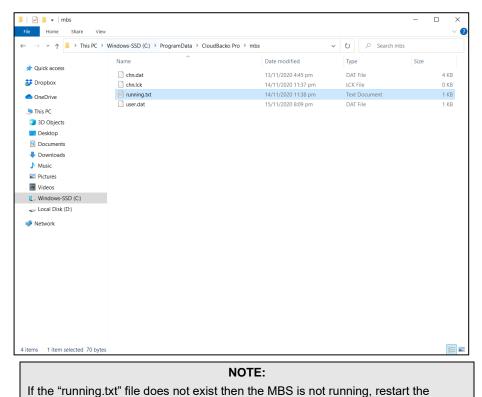




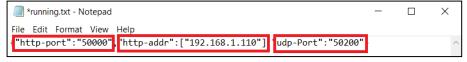
6.4 Mobile Backup Server (MBS) Health Check and CloudBacko app connection Check

Before starting a backup on your mobile device, check the following first:

1. Check IP address, HTTP port, and UDP port in the "running.txt" file. Go to C:\Program Data\CloudBacko Pro\mbs.



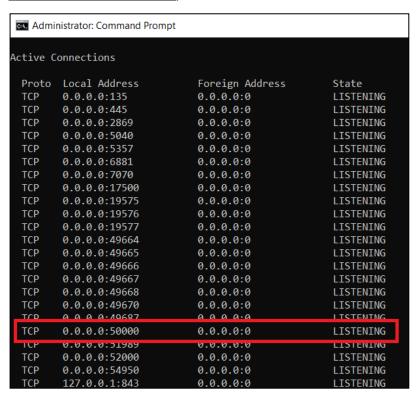
After opening the file, it will show the HTTP port, IP address, and UDP port which are in actual use by the MBS.



2. Open a command prompt and check if the IP address captured in the running.txt is the correct IP address of the machine where CloudBacko Pro is installed.

CloudBacko Pro services

To verify the actual HTTP port used by MBS, type the command
 C:\>netstat -an|more



- 4. Make sure that your firewall setting allows network traffic through the following HTTP and UDP ports to ensure that the communication between your machine and mobile device is successful, otherwise mobile backup and restore will not work.
- To perform a health check on the MBS. Open a browser on the CloudBacko Pro machine and type the IP address, followed by HTTP port.

For example: If the HTTP port used is 50000, http://192.168.110:50000 you should get the following result, which shows "Running" status. Which mean the MBS is running.

In the CloudBacko Pro machine



To run a connection test between the mobile device and machine open a browser in your mobile device and type the IP address, followed by HTTP port.

For example: If the HTTP port used is 50000, http://192.168.110:50000 you should get the following result, which shows "Running" status. Which means the CloudBacko app can successfully connect to the MBS and both backup and restore can proceed on the mobile device.

In the mobile device



7 Start CloudBacko Pro

Several scenarios will be encountered during log in. Log in steps for the different scenarios will be discussed in this chapter.

- Launch CloudBacko Pro without 2FA
- Launch CloudBacko Pro with 2FA

7.1 Launch CloudBacko Pro without 2FA

To launch to CloudBacko Pro without two-factor authentication follow the steps below:

- Initial launch skipping two-factor authentication and mobile backup features setup
- Subsequent logins without 2FA but with password lock
- Subsequent logins without 2FA and password lock

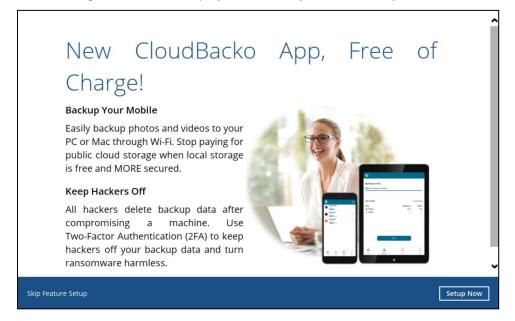
7.1.1 Initial launch skipping two-factor authentication and mobile backup features setup

When launching CloudBacko Pro for the first time and skipping the two-factor authentication and mobile backup features setup, please follow the steps below:

1. A shortcut icon of CloudBacko Pro will be available on your desktop after installation. Double click the icon to launch the application.



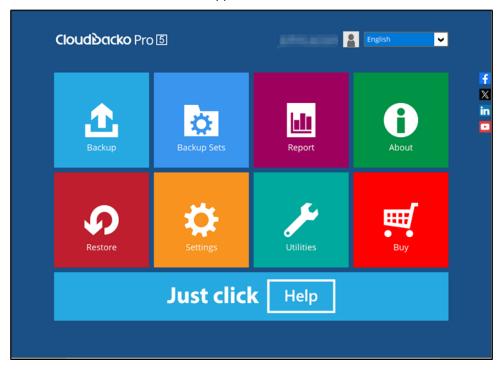
2. The following screen will be displayed. Click **Skip Feature Setup**.



3. Click **Yes** in the pop-up message that will be displayed.



4. CloudBacko Pro main screen will appear.





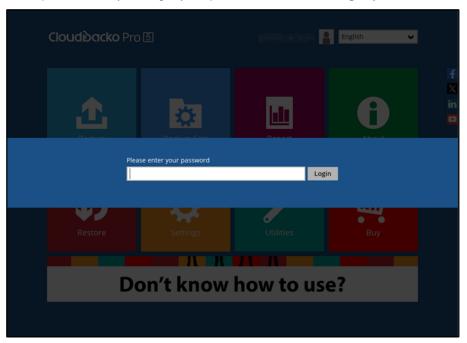
7.1.2 Subsequent logins without 2FA but with password lock

For subsequent log ins to CloudBacko Pro without two-factor authentication, please follow the steps below:

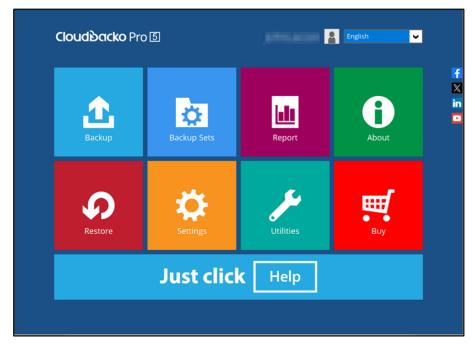
1. A shortcut icon of CloudBacko Pro will be available on your desktop after installation. Double click the icon to launch the application.



2. Enter password. If you forgot your password, click the Forgot password link.



3. CloudBacko Pro main screen will appear.





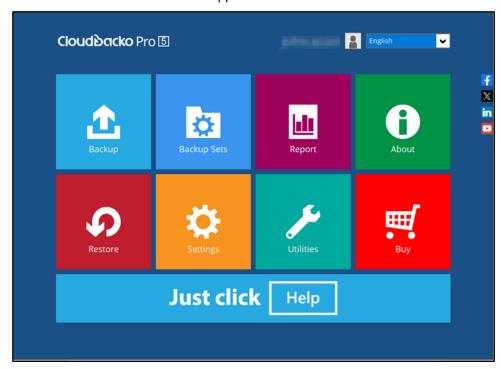
7.1.3 Subsequent logins without 2FA and password lock

For subsequent log ins to CloudBacko Pro without two-factor authentication and password lock, please follow the steps below:

1. A shortcut icon of CloudBacko Pro will be available on your desktop after installation. Double click the icon to launch the application.



2. CloudBacko Pro main screen will appear.





7.2 Launch CloudBacko Pro with 2FA using Android or iOS mobile device

There are two types of authenticator that can be used for 2FA:

CloudBacko app Authenticator

- Supports two types of authentication:
 - Push Notification
 - TOTP
- Ocan be configured to support two 2FA modes:
 - Push Notification and TOTP (default mode) or,
 - TOTP only

Third-party TOTP Authenticator

(e.g. Authy, Duo, Google)

To launch CloudBacko Pro with two-factor authentication follow the steps below:

- Initial launch setting up two-factor authentication and mobile backup features
- Subsequent logins with 2FA
- Subsequent logins with 2FA and password lock

7.2.1 Initial launch setting up two-factor authentication and mobile backup features

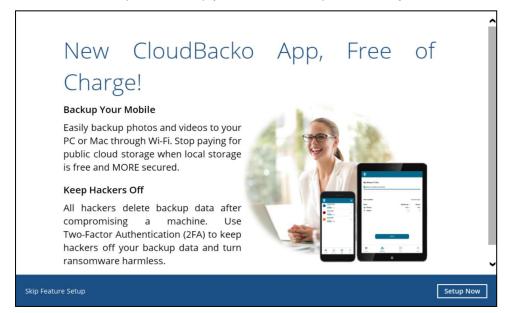
When launching CloudBacko Pro for the first time and setting up the two-factor authentication feature, please follow the steps below:

1. A shortcut icon of CloudBacko Pro will be available on your desktop after installation. Double click the icon to launch the application.





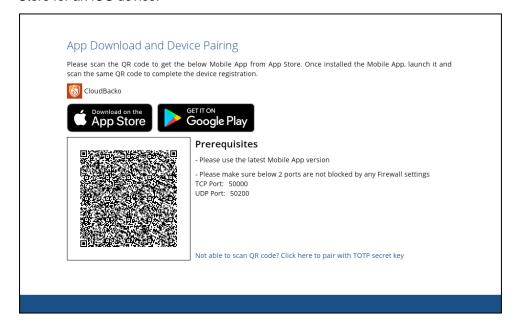
2. You will have the option to set up your mobile backup. Click **Setup Now**.



If you do not want to set up the mobile feature, click the **Skip Feature Setup** link. Click **Yes** in the pop-up message that will be displayed. Otherwise, click **No** to continue with the set-up of mobile feature.



Download the CloudBacko app from Google Play for an Android device and from App Store for an iOS device.



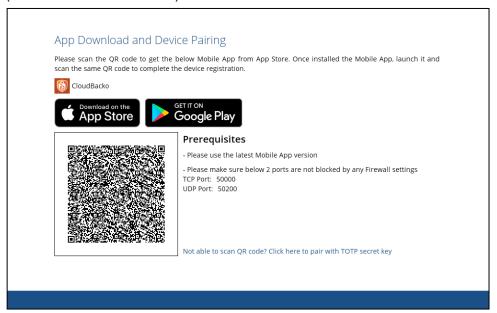
- 4. CloudBacko app supports two types of authentication method:
 - Push Notification
 - ▶ TOTP

CloudBacko app can be configured to support two 2FA modes:

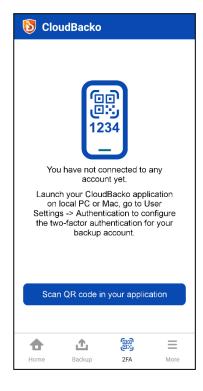
- Push Notification and TOTP (default mode) or,
- TOTP only

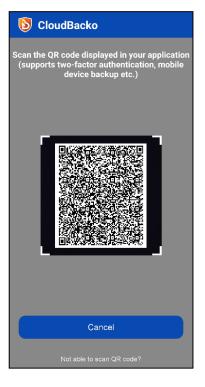
Push Notification and TOTP

a. Scan the QR code to complete the device registration for two-factor authentication (Push Notification and TOTP) feature.

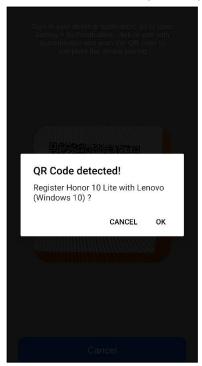


b. In the CloudBacko app, go to **2FA**. Tap the Scan QR code in your application link to scan the QR Code on the CloudBacko Pro.

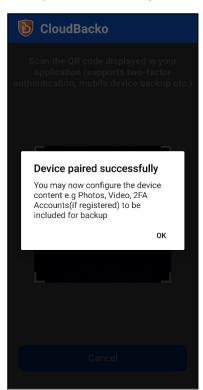


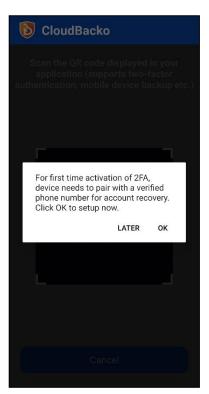


c. QR Code is detected, tap **OK** to proceed.

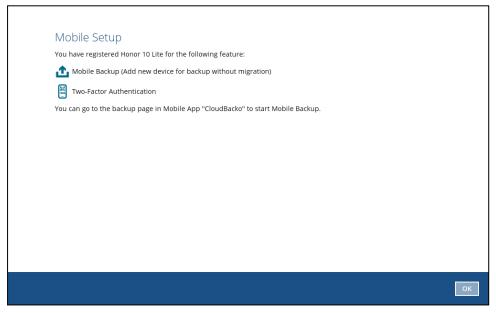


Device paired successfully.





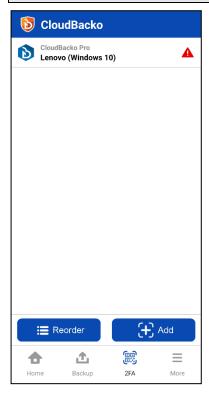
d. Once the registration is successful, the following screen will be displayed. You have now registered your device for two-factor authentication then click **OK**.



e. In the CloudBacko app, go to 2FA to enter the phone number for account recovery. Tap Enter recovery phone number.

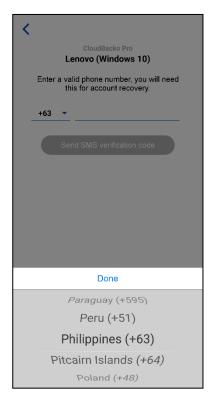
NOTE

Although push notification and TOTP will still work if the recovery phone number registration is not completed, it is still strongly recommended to complete step e as you will not be able to access the CloudBacko Pro if you lose your mobile device which also means loss of access to backup data.



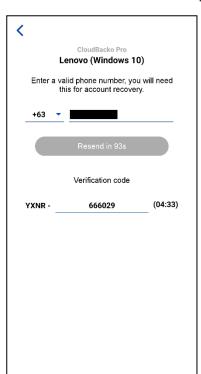


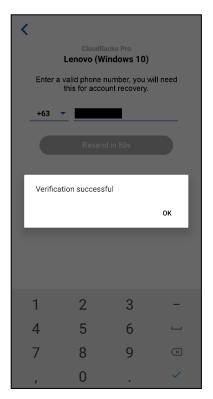
Select your country code and enter your phone number then click **Send SMS verification code**.



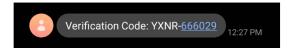


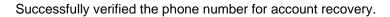
Enter the verification code sent to your mobile device.

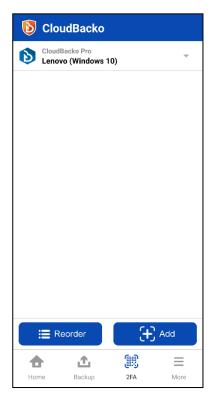


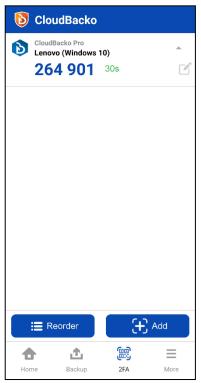


Sample verification code.





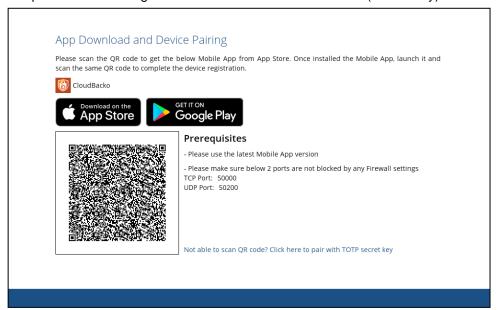




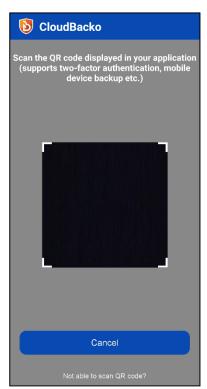


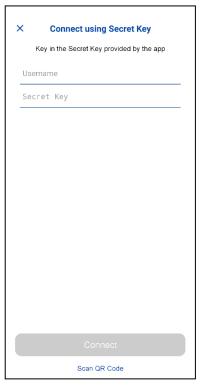
TOTP only

 a. Click Not able to scan QR code? Click here to pair with TOTP secret key link to complete the device registration for two-factor authentication (TOTP only) feature.



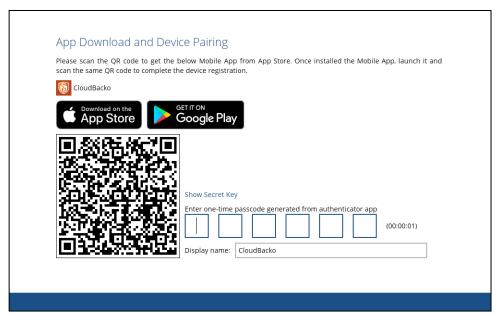
b. In the CloudBacko app, go to **2FA**. Tap the Not able to scan QR code? link.



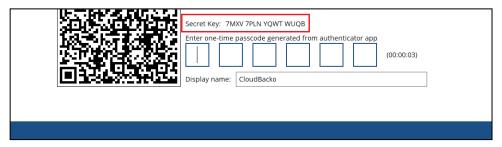




To see the secret key, click the **Show Secret Key** link to display the 16-digit secret key. And enter the display name.



Once Show Secret Key is clicked, it will be displayed.



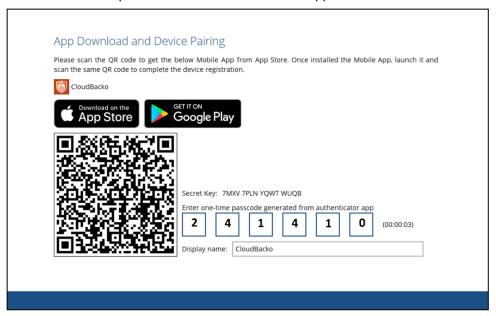
c. Enter the Username and Secret Key from CloudBacko Pro then tap **Connect** then **OK**.



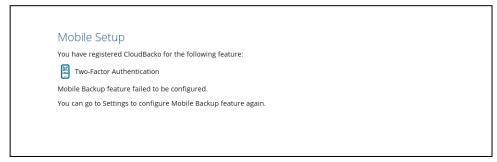




Enter the one-time passcode from the CloudBacko app.

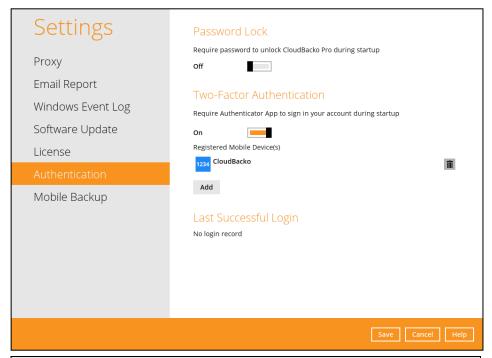


d. Once the registration is successful, the following screen will be displayed. You have now registered your device for two-factor authentication then click **OK**.





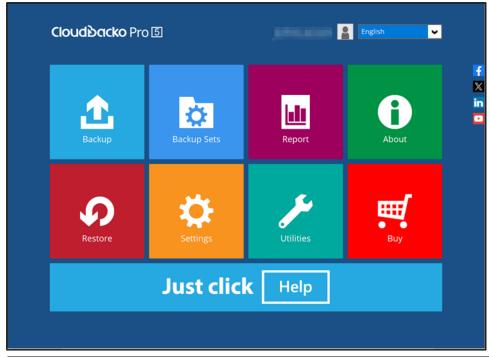
The device will now be available under **Settings** > **Authentication** > **Two-Factor Authentication**.



NOTE

In case device pairing takes a while, session timeout message will be displayed. Just click \mathbf{OK} to resume with the device pairing.

5. After successful login, the following screen will appear.



NOTE

- ➢ Please refer to the <u>CloudBacko App v1 User Guide for Android and iOS Appendix A: Troubleshooting Login</u> if you are experiencing problems logging into CloudBacko Pro with Two-Factor Authentication using the CloudBacko app.
- For instructions on how to register a device using third-party TOTP authenticator please refer to Appendix G.

7.2.2 Subsequent logins with 2FA

For subsequent logins to CloudBacko Pro with two-factor authentication, please follow the steps below:

A shortcut icon of CloudBacko Pro will be available on your desktop after installation.
 Double click the icon to launch the application.

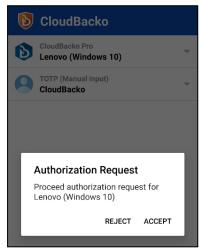


- 2. One of the two authentication methods will be displayed to continue with the login:
 - Push Notification and TOTP when using CloudBacko app or,
 - ► TOTP only
 - ▶ If CloudBacko app was configured to use Push Notification and TOTP then there are two 2FA modes that can be used:
 - Push Notification (default)

Push notification is the default 2FA mode. Accept the login request on the CloudBacko app to complete the login.



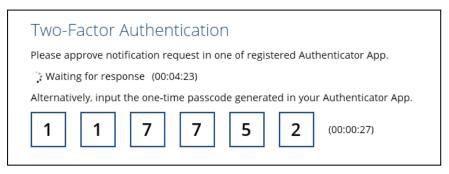
Example of the login request sent to CloudBacko app.



www.cloudbacko.com

TOTP

However, if push notification is not working or you prefer to use one-time password, click the Authenticate with one-time password link, then input the one-time password generated from CloudBacko app to complete the login.



Example of the one-time password generated from CloudBacko app to complete the login.



TOTP only

Enter the one-time password that is generated by the Authenticator App to proceed with login.



Example of the one-time password that is generated in the third-party Authenticator App, Microsoft Authenticator.



3. After successful login, the following screen will appear.



NOTE

Please refer to the <u>CloudBacko App v1 User Guide for Android and iOS – Appendix A:</u> <u>Troubleshooting Login</u> if you are experiencing problems logging into CloudBacko Pro with Two-Factor Authentication with CloudBacko app.



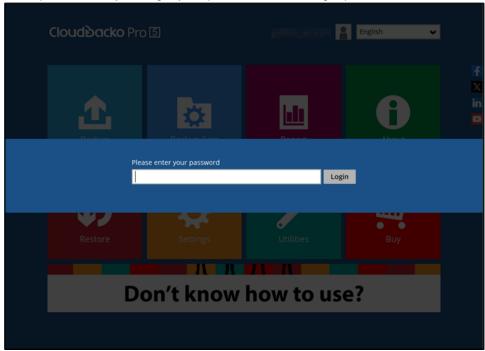
7.2.3 Subsequent logins with 2FA and password lock

For subsequent logins to CloudBacko Pro with two-factor authentication and password lock, please follow the steps below:

1. A shortcut icon of CloudBacko Pro will be available on your desktop after installation. Double click the icon to launch the application.



2. Enter password. If you forgot your password, click Forgot password link.

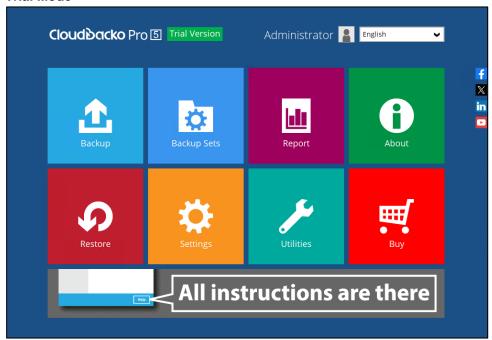


3. Follow the instructions in Chapter 7.2.2 to finish logging in with 2FA.

7.3 Trial Mode

When CloudBacko Pro is downloaded and installed on a machine, these are some key points to consider:

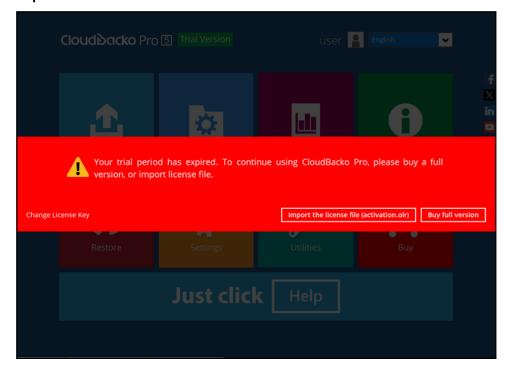
Trial Mode



CloudBacko Pro will start in trial mode. Trial mode will expire after 30 days.

- If you want to purchase a license key, please see these chapters:
 - 1. Ch. 8.9 Buy
 - 2. Ch. 8.9.1 Credit Card
 - 3. Ch. 8.9.2 TT (Telegraphic Transfer)
- An existing license key may be applied even if CloudBacko Pro is still in trial. Please see this chapter, <u>Ch. 8.7.5 License</u>.

Expired Trial Mode

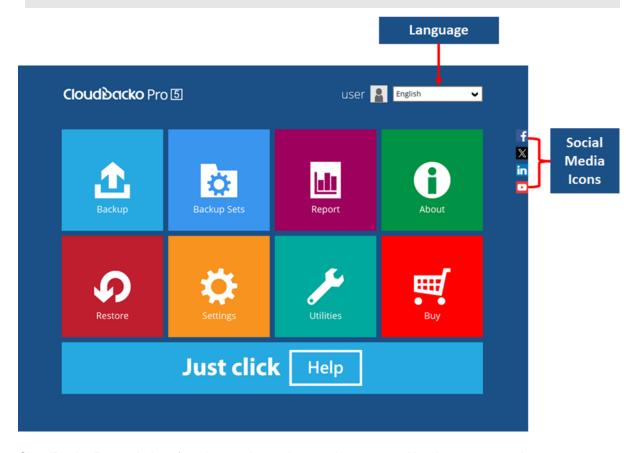


If you want to apply license key after Trial mode has expired, please check <u>Appendix</u> <u>H: How to apply a license key to a CloudBacko Pro installation with an expired trial license?</u>

CloudBacko License Key

If you want to find your purchased CloudBacko Pro license key, please check Appendix I: Where to find the CloudBacko Pro purchase license key?

8 CloudBacko Pro Overview



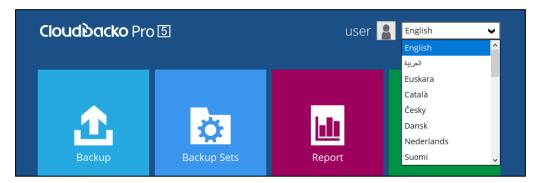
CloudBacko Pro main interface has 11 icons that can be accessed by the user, namely:

- Language
- About
- Backup
- Backup Sets
- Report
- Restore
- Settings
- <u>Utilities</u>
- Buy
- Social Media Icons
- Online Help



8.1 Language

This option is used to change the language of the CloudBacko Pro interface.



Once the language is set, it will reflect on the CloudBacko Pro interface right away.

8.2 About

This **About** module displays the product version and system information of the machine where the CloudBacko Pro is installed.



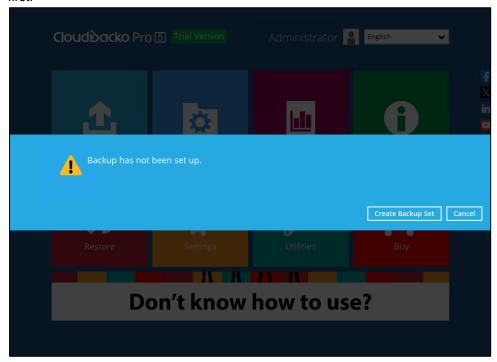


8.3 Backup

This feature is used to run your backup set(s).



When using CloudBacko Pro for the first time, you will be asked to create a new backup set first.



For instructions on how to start a backup, refer to Chapter 11 Run Backup Jobs.

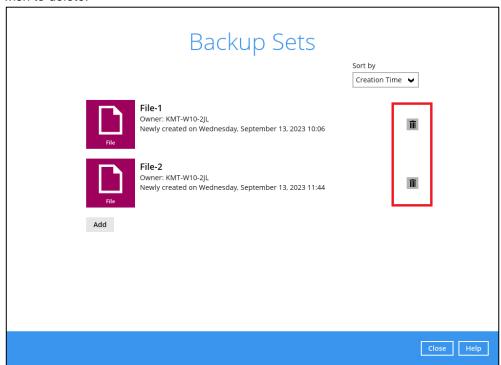
8.4 Backup Sets

A backup set is a place where your files and/or folders to be backed-up are defined. This feature allows user to select files individually or entirely in a selected folder to back up.



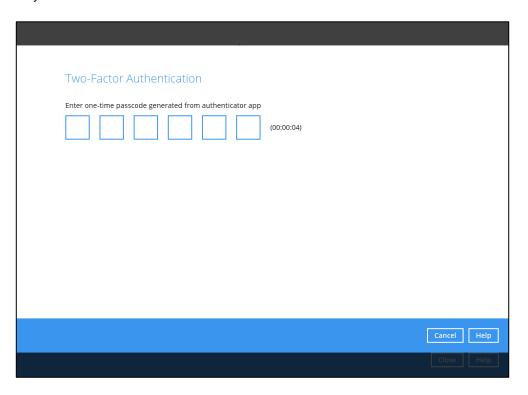
For instructions on how to create a backup set, refer to <u>Chapter 9 Create a Backup Set</u>
To delete a backup set, follow the instructions below.

1. In the Backup Sets page, click on the delete icon on the right side of the backup set you wish to delete.

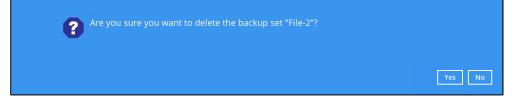




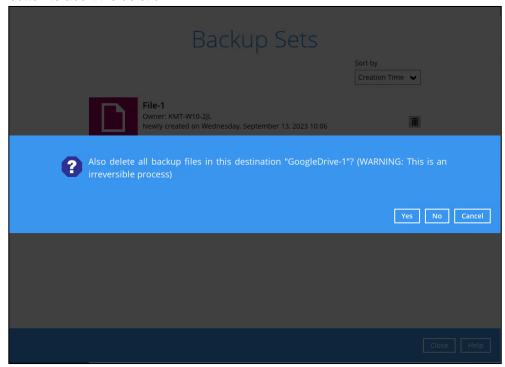
If you have 2FA active, you will be required to a submit a One-Time Password as shown on your device.



2. Upon clicking on the icon, you will be presented with a warning message. Click on **Yes** to delete the Backup Set.

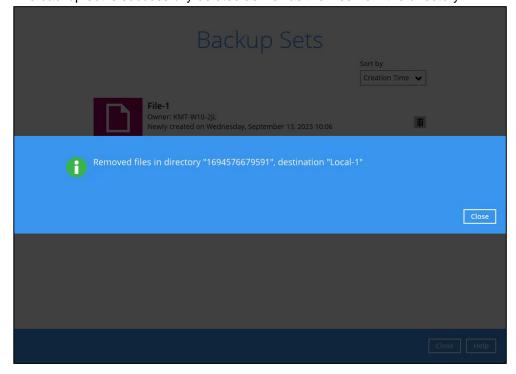


 If Yes is selected, it will also display another alert message confirming the deletion of all backup files in the destination. Click the Yes button to proceed. Otherwise, click the No button to abort the deletion.



WARNING!
This is an irreversible process

4. The backup set is successfully deleted as well as the files from the directory.



8.4.1 Backup Set Settings

Below is the list of configurable settings under a Backup Set:

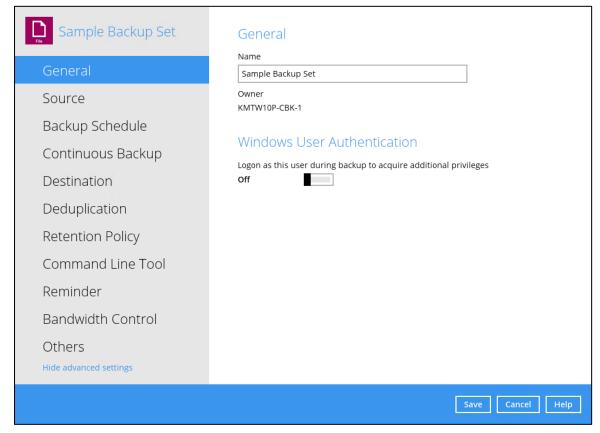
- General
- Source
- Backup Schedule
- Continuous Backup
- Destination

Show advanced settings

- Deduplication
- Retention Policy
- Command Line Tool
- Reminder
- Bandwidth Control
- Others

8.4.1.1 **General**

This feature allows the user to modify the current name of the backup set and windows user authentication.



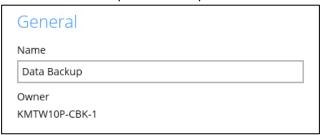
Backup Set Name

To modify the name of a backup set, follow the steps below:

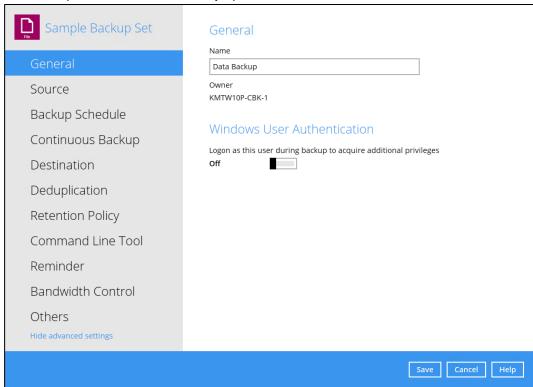
1. In the **Name** field, enter a new backup set name.



2. In this example, we are going to change Sample Backup Set to "Data Backup". Click the **Save** button to save the updated backup set name.



3. The backup set name is successfully updated.



NOTE

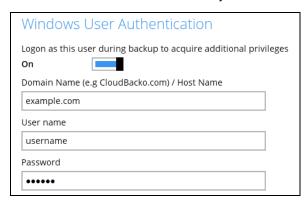
In assigning a backup set name, make sure that it does not have an identical name.



Windows User Authentication

To successfully perform backup and restore operations, CloudBacko Pro requires both read and write permission to all the files/folders selected in the backup source.

The Windows User Authentication login credentials are used by CloudBacko Pro to ensure it has sufficient permission to access files and/or folders selected in the Backup Source, the temporary folder location, and the backup destination if it is a network drive accessible from backup machine via LAN, especially when running scheduled backup jobs, as the default Windows account used by the CloudBacko Pro Services is a local system account which does not have access to network resources.





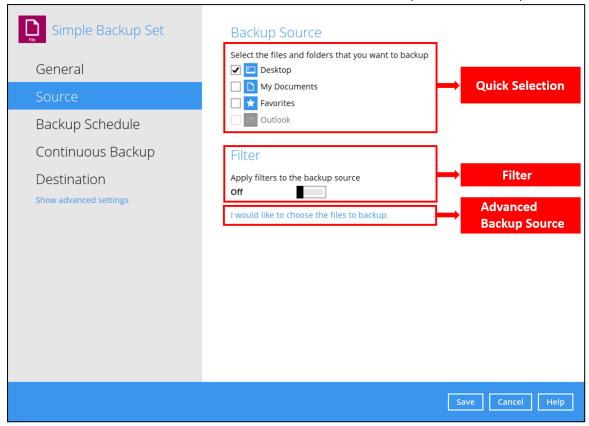
- If files and/or folders selected are located on network drive(s), the login credentials for the Windows
 User Authentication must have permission to access network resources, (e.g. an administrator
 account).
- If the machine is a file server shared by multiple users, then the CloudBacko Pro will require login credentials with read/write permissions to access all the selected files and/or folders in the backup source (e.g. an administrator account).
- For CloudBacko Pro installed on Microsoft Windows version 8, 8.1, 10 and 11, using the Microsoft account for Windows User Authentication is supported, e.g. username@outlook.com.

Some users prefer to use a pin to login to Windows, this cannot be used for the Windows User Authentication. The pin can only be used for logging in to Windows and is not applicable for the Windows User Authentication. The password of the account must be provided instead of the pin to access files and/or folders in the backup source.

Field	Description
Domain Name	The domain or host name of the machine.
Username	Login username used by the CloudBacko Pro to access files and/or folders selected in the backup source.
Password	Login password used by the CloudBacko Pro to access files and/or folders selected in the backup source.

8.4.1.2 Source

This feature allows the user to select files and/or folders in the backup source to back up.

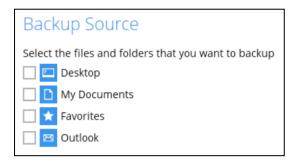


There are three (3) ways to select files and/or folders to back up:

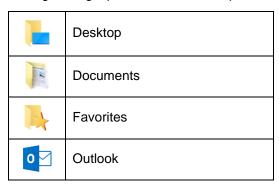
Option	Description
Quick Selection	This allows the user to back up files and/or folders in the selected backup source entirely.
Filter	This allows the user to select or exclude files and/or folders from the backup job.
Advanced Backup Source	This allows the user to select files and/or folders individually to back up.

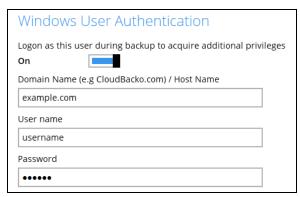
Option 1: Quick Selection

This option allows the user to quickly select a backup source to be backed up. For our example below, we assume the account name is username.



If any of the following backup source is selected and the <u>Backup Schedule</u> is enabled, the Windows User Authentication will prompt the user to enter the login password. To select a backup source without entering the login password, the backup schedule must be disabled.





NOTE

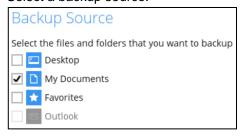
During the creation of backup set, if this type of backup source (Quick Selection) is selected and the Schedule is set to "on", the Windows User Authentication screen will be displayed. You will need to enter the login password, otherwise, the creation of backup set will not continue.

To know the locations of the folder(s) that will be backed up for each selected backup source, refer to the following table:

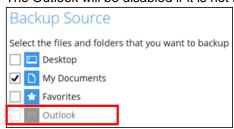
Backup So	urce	Description
Desktop		If Desktop is selected, all files and/or folders in the following location will be backed up: **WuserProfile***\Desktop**
Documents	1 m	If Documents is selected, all files and/or folders located in the following location will be backed up: **WuserProfile**\Documents* If the Follow Link is enabled, all files and/or folders located in the following locations will also be backed up: **WuserProfile**\Music** **WuserProfile**\Pictures* **WuserProfile**\Videos* Note: The Follow link is enabled by default.
Favorites	1	If Favorites is selected, all files and/or folders located in the following location will be backed up: **WuserProfile**\Favorites**
Outlook	0 🗹	If Outlook is selected, all files and/or folders located in the following location will be backed up: %UserProfile%\AppData\Local\Microsoft\Outlook

To select files and/or folders to back up using the Quick Selection option, follow the steps below:

1. Select a backup source.



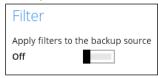
2. The Outlook will be disabled if it is not installed on the machine.



3. Click the **Save** button to store the selected backup source.

Option 2: Filter

The Filter Backup Source is an alternative way to select a backup source which does not require Windows User Authentication login password even if the backup schedule is enabled unless the filter backup source is located on a network drive.



The following options in the filter backup source does not require Windows User Authentication login password:

All hard disk drives



Specific folder



To select files and/or folders to back up using the Filter Backup Source, follow the steps below:

1. Swipe the lever to the right to turn on the filter setting.



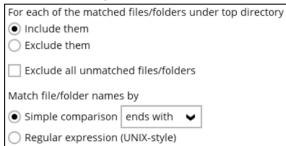
2. Click the **Add** button to create filter.



3. Assign a desired name to the backup filter.



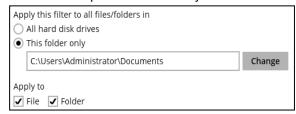
4. Select from the options below.



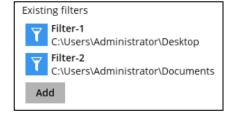
5. In this example, all files and/or folders that end with the letter 'X' will be included to the backup job. You can add multiple patterns here.



6. Select whether you would like to apply the filter to all files and/or folders in all hard disk drives or to a specific folder only. If 'This folder only' is selected, click the **Change** button to select the specific folder that you would like to apply the filter to.



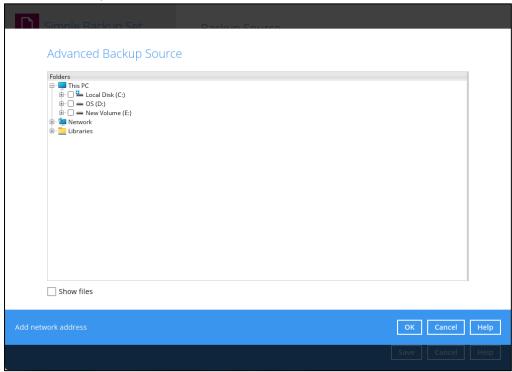
- Click the **OK** button to save the created filter, then click the **Save** button to save the settings. Once you run a backup, all files and/or folders that match the applied filter will be backed up.
- 8. Multiple backup filters can be created by clicking the **Add** button.





Option 3: Advanced Backup Source

The Advanced Backup Source is another way to select a backup source which does not require Windows User Authentication login password even if the backup schedule is enabled unless the advanced backup source is located on a network drive.



The following table shows the list of options in the Advanced Backup Source which require and does not require Windows User Authentication login password:

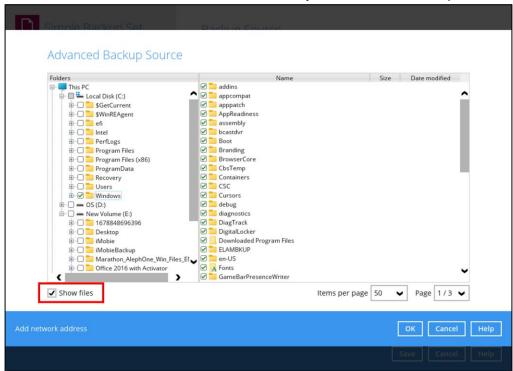
Local Disk	Does not require Windows User Authentication login password.
Network drive	Requires Windows User Authentication login password. For network drive/s, you will need to enter the login credentials which has permission to access network resources in order to back up selected files and/or folders.
	Does not require Windows User Authentication login password. Note: This type of backup source may not be supported on other versions of Windows.
Libraries	This feature is not supported on: Windows 11 Windows 10 Windows 8.1 Windows 8 Windows Server 2022 Windows Server 2019 and Windows Server 2012 R2 Supported on: Windows 7 Windows Server 2016

To select files and/or folders using the Advanced Backup Source, follow the steps below:

1. In the Source window, select 'I would like to choose the files to backup'.

I would like to choose the files to backup

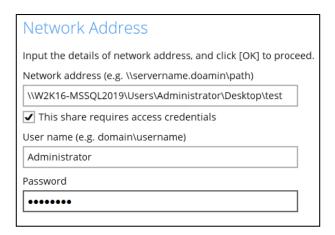
- 2. There are two (2) ways to select files and/or folders, one is when the files and/or folders are located in the local machine and another way is when the files and/or folders are located in the network.
 - i. In the Advanced Backup Source window, select 'Show files' to display the files inside each folder, then select the files and/or folders that you would like to back up



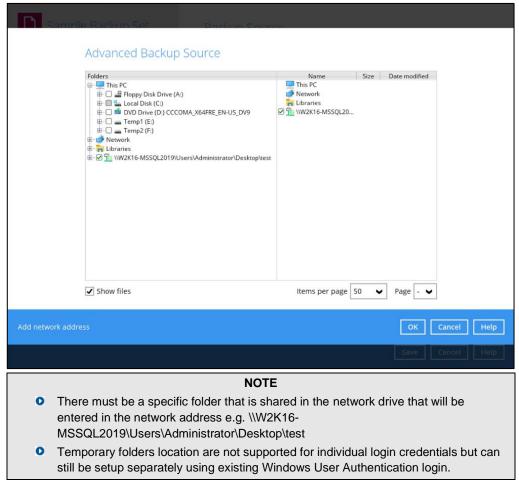
ii. If the files and/or folders are located in a network drive, click the 'Add network address' link. Enter the network address.



If access credentials are required to access the network, then check the "This share requires access credentials' checkbox. The checkbox will only be enabled once the network address is entered. Enter the Username and Password of the network drive and click the **OK** button.



By default all the files inside the folder in the network drive is selected for backup. But there is still an option to deselect files that you do not want to be included in the backup.



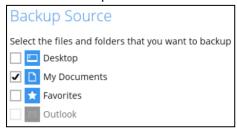
3. Click the **OK** button to save the selection, then click the **Save** button to store settings.

In selecting files and/or folders to back up, the three (3) options can be used simultaneously. For more details, please refer to the example scenarios below:

Scenario 1 (Quick Selection + Filter)

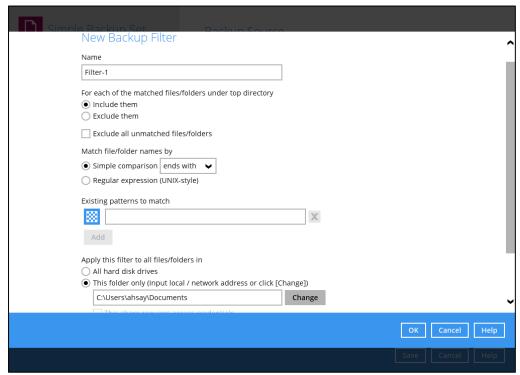
You can use the quick selection option and apply filter to the selected backup source at the same time. To use this type of combination, follow the steps below:

1. Choose a backup source.



2. Create a filter which will be applied to the backup source.





3. Click the **OK** button to save the created filter, then click the **Save** button to save the settings.



Scenario 2 (Quick Selection + Advanced Backup Source)

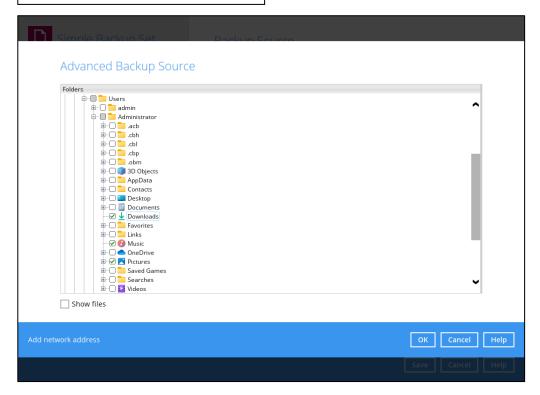
You can use the quick selection option and select files and/or folders in the advanced backup source at the same time. To use this type of combination, follow the steps below:

1. Choose a backup source.



2. In the source window, click "I would like to choose the files to backup" and select the files and/or folders that you would like to back up.

I would like to choose the files to backup



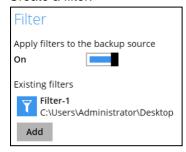
3. Click the **OK** button to save the selection, then click the **Save** button to save the settings.



Scenario 3 (Filter + Advanced Backup Source)

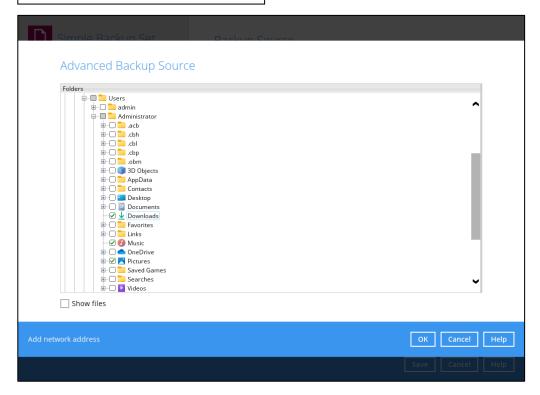
You can use the filter backup source and select files and/or folders in the advanced backup source at the same time. To use this type of combination, follow the steps below:

1. Create a filter.



2. In the source window, click "I would like to choose the files to backup" and select the files and/or folders that you would like to back up.

I would like to choose the files to backup

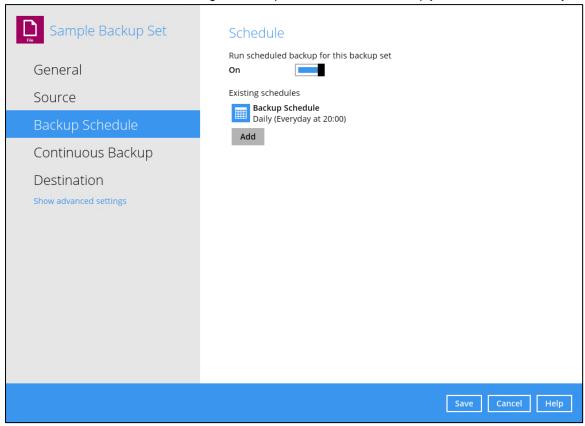


3. Click the **OK** button to save the selection, then click the **Save** button to save the settings.



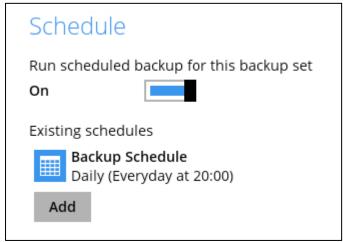
8.4.1.3 Backup Schedule

This feature allows the user to assign a backup schedule for the backup job to run automatically.



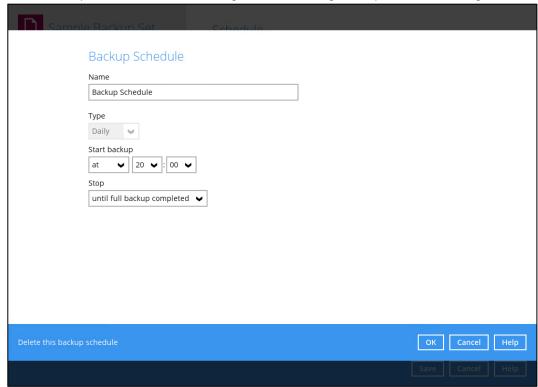
To configure a backup schedule, follow the steps below:

1. Select an existing backup schedule to modify or click the **Add** button to create a new one.

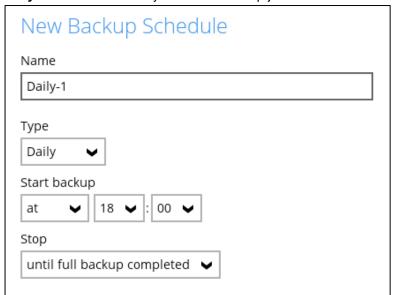




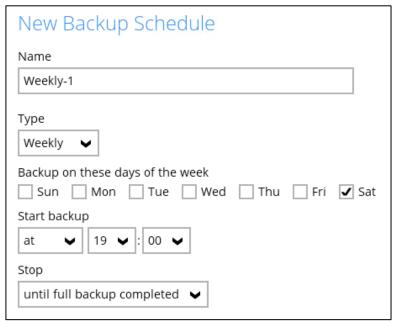
2. In the Backup Schedule window, configure the following backup schedule settings.



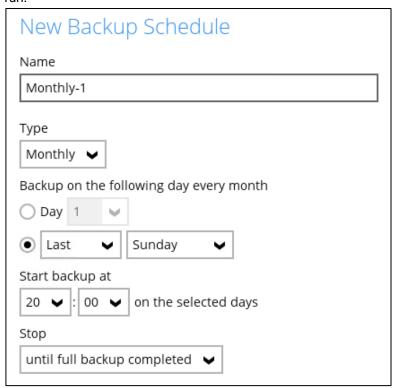
- Name the name of the backup schedule.
- Type the type of backup schedule. There are four (4) different types of backup schedule: Daily, Weekly, Monthly and Custom.
 - Daily the time of the day when the backup job will run.

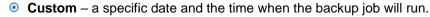


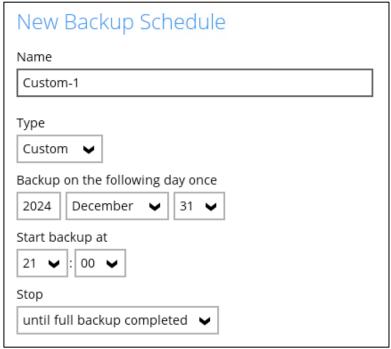
 Weekly – the day of the week and the time of the day when the backup job will run.



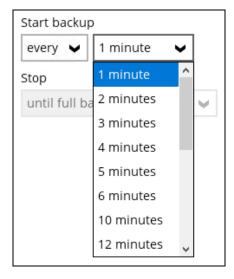
Monthly – the day of the month and the time of the day when the backup job will

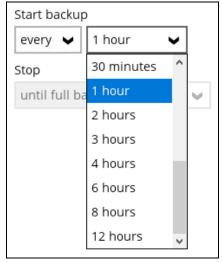






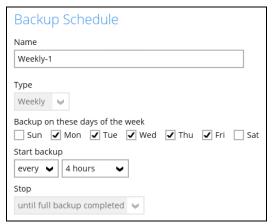
- Start backup the start time of the backup job.
 - at this option will start a backup job at a specific time.
 - every this option will start a backup job in intervals of minutes or hours.







Here is an example of backup set that has a periodic and normal backup schedule.



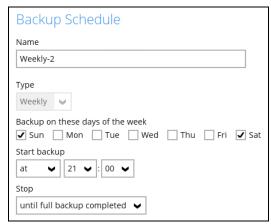


Figure 1.1

Figure 1.2

Figure 1.1 - Periodic schedule every 4 hours Monday - Friday during business hours

Figure 1.2 – Normal schedule run at 21:00 or 9:00 PM on Saturday & Sunday during weekend non-business hours

- Stop the stop time of the backup job. This only applies to schedules with start backup
 "at" and is not supported for periodic backup schedule (start backup "every")
 - until full backup completed this option will stop a backup job once it is complete. This is the configured stop time of the backup job by default.
 - after (defined no. of hrs.) this option will stop a backup job after a certain number of hours regardless of whether the backup job has completed or not. This can range from 1 to 24 hrs.

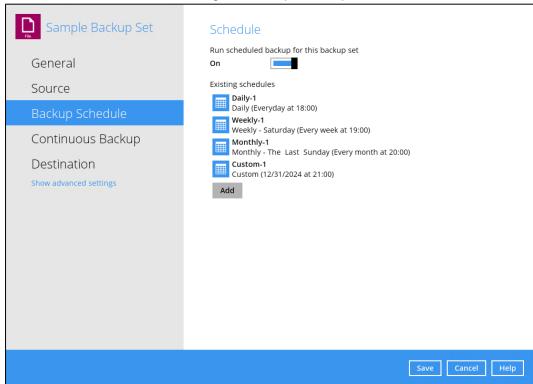
The number of hours must be enough to complete a backup of all files in the backup set. For small files in a backup, if the number of hours is not enough to back up all files, then the outstanding files will be backed up in the next backup job. However, if the backup set contains large files, this may result in partially backed up files.

For example, if a backup has 100GB file size which will take approximately 15 hours to complete on your environment, but you set the "stop" after 10 hours, the file will be partially backed up and cannot be restored. The next backup will upload the files from scratch again. The partially backed up data will have to be removed by running the data integrity check.

As a general rule, it is recommended to review this setting regularly as the data size on the backup machine may grow over time.

Click the **OK** button to save the configured backup schedule settings.

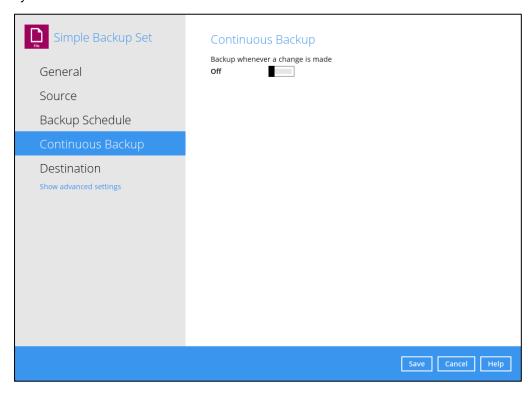
3. Click the Save button to save settings and multiple backup schedules can be created.





8.4.1.4 Continuous Backup

This feature provides backup for selective data whenever a change is made. This feature is disabled by default.



To enable the continuous backup, follow the steps below:

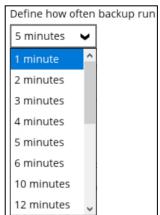
1. Swipe the lever to the right to turn on the continuous backup setting.

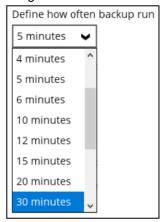


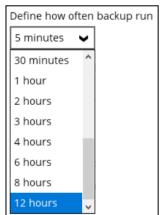
2. It is recommended to select this option to avoid backing up files that are marked as system files.



3. Define how often the continuous backup job will run. The backup time interval can be set from 1 minute to 12 hours. Default setting is 5 minutes.

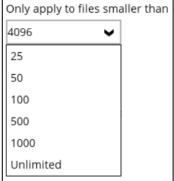






4. This applies the continuous backup on small regular update files. The file size can range from 25MB to unlimited MB.





NOTE

For large file size, the continuous backup may not run with a short time interval. You may need to adjust the continuous backup time interval (in step 3).

5. This allows the user to create an exclude filter to exclude files and/or folders from the backup job. Click the **Add** button to create an exclude filter.

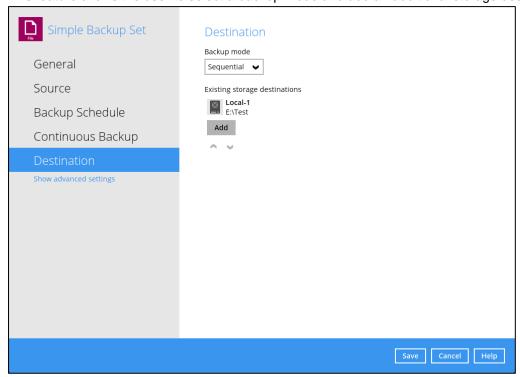


6. If an exclude filter is created, click the **OK** button to save the created exclude filter, then click the **Save** button to save the configured continuous backup settings.

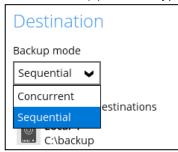


8.4.1.5 Destination

This feature allows the user to select a backup mode and add an additional storage destination.



There are two (2) different types of backup mode:



Backup mode	Description
Sequential	This is the configured backup mode by default. This backup mode will run a backup job to each backup destination one by one.
Concurrent	This backup mode will run a backup job to all backup destinations simultaneously.

Comparison between Sequential and Concurrent Backup mode

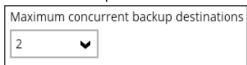
Backup mode	Pros	Cons
Sequential	Takes less resources in the local machine (e.g. memory, CPU, bandwidth, etc.) to complete a backup job.	Backup job is slower than in concurrent mode since the backup job will upload the backup data to the selected backup destinations one at a time.
Concurrent	Backup job is faster than in Sequential mode.	Requires more resources in the local machine (e.g. memory, CPU, bandwidth, etc.) to complete a backup job.
	Maximum number of concurrent backup destinations can be configured.	

To modify the Backup mode, follow the steps below:

- 1. Go to Backup Sets, then choose a backup set.
- 2. Select the **Destination** tab in the backup set settings.
- 3. Click the drop-down button to select a backup mode.



4. If "Concurrent" is selected, click the drop-down button to select the no. of maximum concurrent backup destinations.



5. Click the **Save** button to save the selected backup mode.

Starting with version 5.7, a new type of destination is introduced in the form of immutable storage destination. This prevents backup data that is saved in immutable destination from being deleted or overwritten.

Only the following destinations supports immutable storage:

- Amazon S3
- AWS S3 Compatible Cloud Storage
- Backblaze
- Google Cloud Storage
- Microsoft Azure
- Wasabi

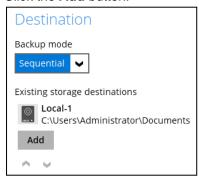
An "Immutable" checkbox is provided to be able to create an immutable storage destination.

These are the requirements to be able to setup an immutable storage destination:

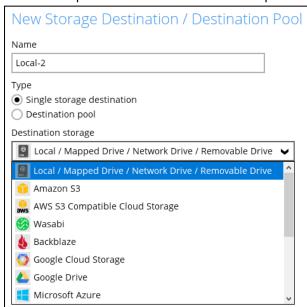
- The user account must have a device registered for 2FA.
- The user account of the storage destination must not be setup with delete permission.

To add a new storage destination, follow the steps below:

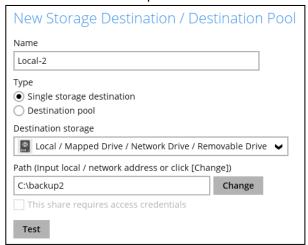
1. Click the Add button.

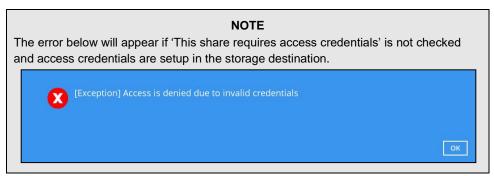


2. Click the drop-down button to select a backup destination.

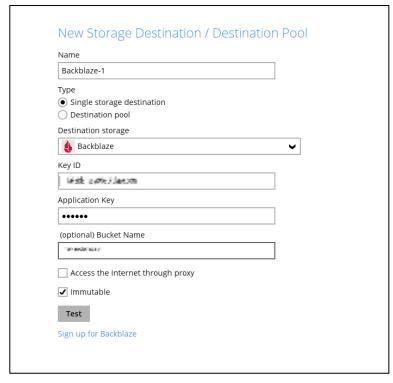


If the Local / Mapped Drive / Removable Drive is selected, click the Change button to select
a new storage destination or input the local or network address. Check 'This share requires
access credentials' if required then click the Test button to validate access to it.

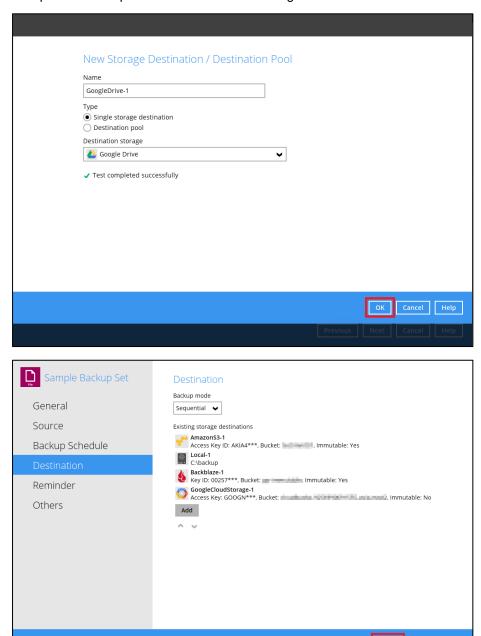




If you want to create an immutable storage destination, select one of the supported destinations, then provide the needed information. Check 'Immutable', then click the **Test** button to validate access to it.



4. Click the **OK** button to save the added storage destination, then click the **Save** button to store the updated backup mode and the added storage destination.



NOTE

The immutable status of a destination is included in the details, it indicates whether Yes or No if the particular destination is setup as an immutable storage destination.

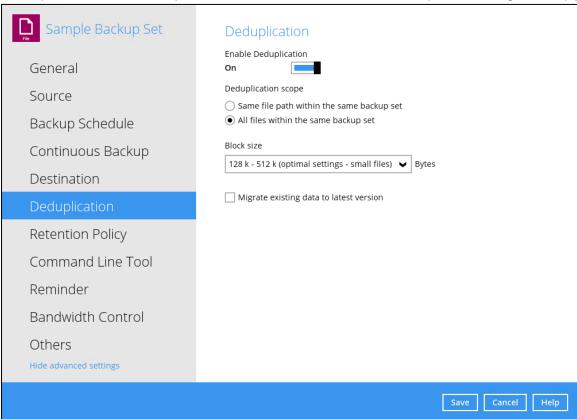


8.4.1.6 Deduplication

Starting with CloudBacko Pro v5.0.0.0 or above, the In-File Delta feature (i.e., Incremental, Differential and Full) will be replaced with Deduplication. This feature is **On (enabled)** by default.

When this feature is **On (enabled)** for the backup set, a checksum verification of each backup file which was split into several blocks of varying size will be performed to compare its content and identify which block is duplicated, thus will perform deduplication of data.

When this feature is **Off (disabled)** for the backup set, a checksum verification of each backup file will not be performed, thus the duplicated data will NOT be removed or deduplicated during a backup job.

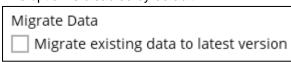


There are two (2) types of Deduplication scope:

Deduplication scope	Description
Same file path within the same backup set	This type of Deduplication will deduplicate data under the same path during a backup job.
All files within the same backup set	This type of Deduplication will deduplicate data under the same backup set during a backup job. This option is only applicable for Meter Licenseand will be charged per storage size used.

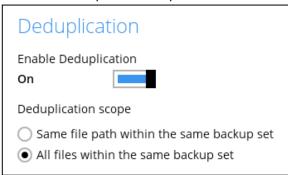
Migrate Data

When this option is enabled, the existing data will be migrated to the latest version during a backup job. This option is disabled by default.



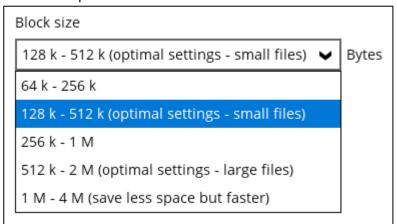
To configure the Deduplication settings, follow the steps below:

1. Select the Deduplication scope.



Click the drop-down button to select the block size that will be used for the deduplicated data.

The optimal setting is good for frequently changed source data, as this is the smallest block deduplication will use to compare and determine if the data is new and should be uploaded or discarded as duplicate. The larger the deduplication block size, the less efficient it would be but faster as there are less blocks of data to create. Frequent changes to this setting is not advisable since all data may need to be reuploaded because the previous block size and new block size are now different.





3. Tick the checkbox if you want the existing data to be migrated to the latest version during a backup job.

Migrate existing data to latest version

4. Click the **Save** button to store the modified Deduplication settings.

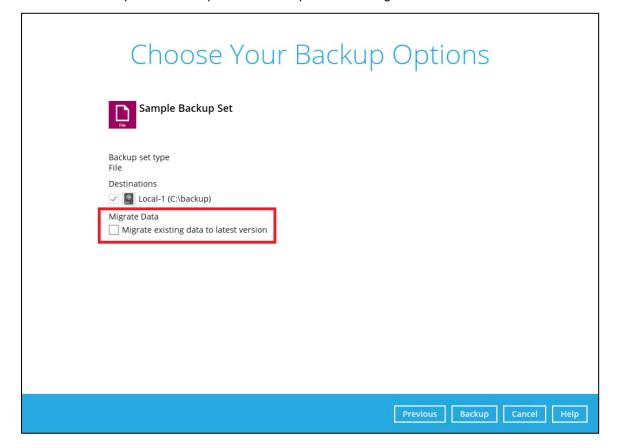
NOTE

In case the Deduplication setting is **Off (disabled)** for the backup set, the Migrate Data option will not be displayed.

Run Backup Job

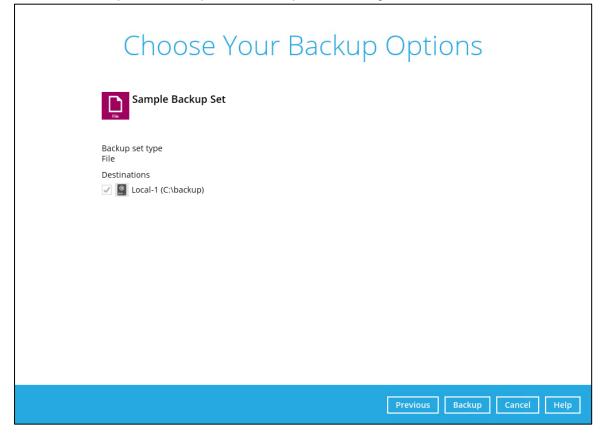
When the Deduplication feature is enabled for the backup set, a **Migrate Data** option will be available in the advanced backup options which can be configured before starting a backup job.

Below is an example of a backup set with Deduplication setting enabled.





Below is an example of a backup set with Deduplication setting disabled.



8.4.1.7 Retention Policy

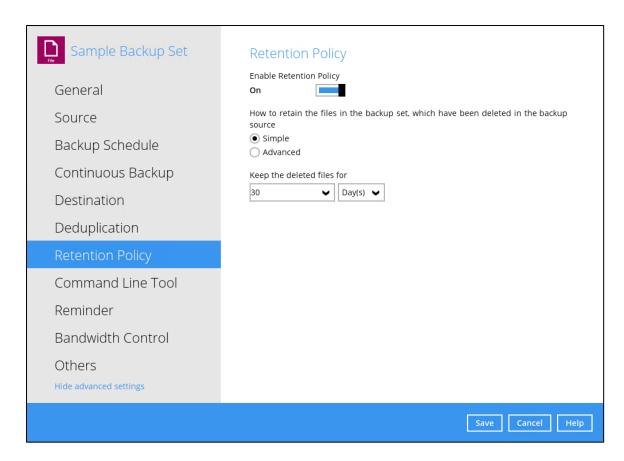
When CloudBacko Pro identifies files and/or folders that are deleted, updated, or with updated permission/attributes during a backup job, these files and/or folders will then be moved from the Data Area to the Retention Area.

Data Area is the place where backed up files and/or folders are stored.

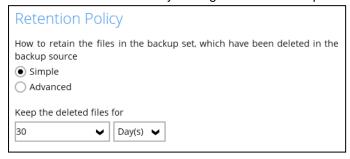
While the **Retention Area** is the place used as a temporary destination to store these files (deleted, updated, or with updated permission/attributes during a backup job). Files and/or folders in the Retention Area can still be restored.

The **Retention Policy** is used to control how long these files remain in the Retention Area when they are removed which can be specified in the number of days, weeks, months, or backup jobs. Retained data within all backup destinations (e.g. local drive, SFTP/FTP, and cloud storage) are cleared by the retention policy job.

The Retention Policy job will be run whenever a backup job is performed as long as this is enabled for the backup set. It will also be run when Space Freeing Up is performed. For further information on Space Freeing Up, refer to Ch. 8.8.2 Space Freeing Up.



The default Retention Policy setting for a File Backup Set is 30 days.



NOTE

There is a trade-off between the retention policy and backup destination storage usage. The higher the retention policy setting, the more storage is used, which translates into higher storage costs.

There are two (2) types of Retention Policy:

Туре	Description
Simple	A simple Retention Policy is a basic policy where the retained files (in the Retention Area) are removed automatically after the user specifies the number of days or backup jobs.
Advanced	An advanced Retention Policy defines a more advanced and flexible policy where the retained files (in the Retention Area) are removed automatically after a combination of user defined policy.

Comparison between Simple and Advanced Retention Policy

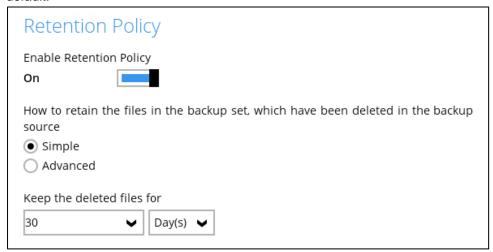
Туре	Simple	Advanced
Backup Jobs	Can keep the deleted files for specified number of backup job(s)	Not applicable
Days	Can keep the deleted files for specified number of day(s)	Can keep the deleted files for specified number of backup day(s)
Туре	Not applicable	DailyWeeklyMonthlyQuarterlyYearlyCustom
User-defined name	Not applicable	Applicable

WARNING

When files and/or folders in the Retention Area exceed the Retention Policy setting, they are permanently removed from the backup set and cannot be restored.

To configure a **Simple Retention Policy**, follow the steps below:

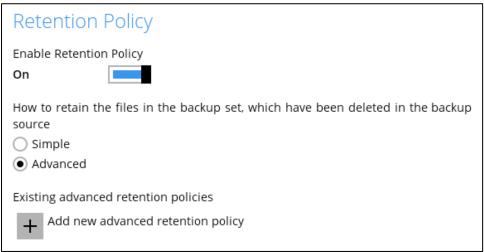
- 1. Go to Backup Sets, then select a backup set.
- 2. Click the Retention Policy tab in the Backup Set Settings.
- 3. Slide the switch to the right to turn on **Enable Retention Policy**.
- 4. Select **Simple** from the options, then click the drop-down button to define the number of day(s) or job(s) how long the deleted files will be retained. This is configured as thirty (30) days by default.



5. Click the **Save** button to save the configured Retention Policy settings.

To configure an **Advanced Retention Policy**, follow the steps below:

- 1. Go to Backup Sets, then select a backup set.
- 2. Click the Retention Policy tab in the Backup Set Settings.
- 3. Slide the switch to the right to turn on **Enable Retention Policy**.
- 4. Select **Advanced** from the options, then click the [+] button to create.



5. Assign a desired name to the Retention Policy



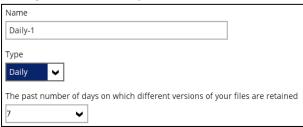
6. Click the drop-down button to display the Retention Type, then select one.



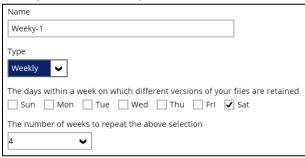
7. Click the drop-down button to specify the period on which the deleted files will be kept in the backup set.

For further details about how to configure an advanced Retention Policy for each type (i.e., Daily, Weekly, Monthly, Quarterly, Yearly), refer to the examples below:

• Example no. 1: To keep the retention files for the last seven (7) days:



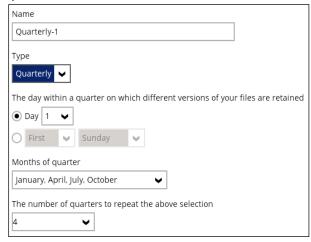
• Example no. 2: To keep the retention files for the last four (4) Saturdays:



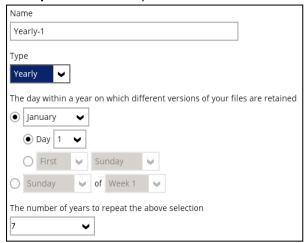
• **Example no. 3**: To keep the retention files for the 1st day of each month for the last three (3) months:



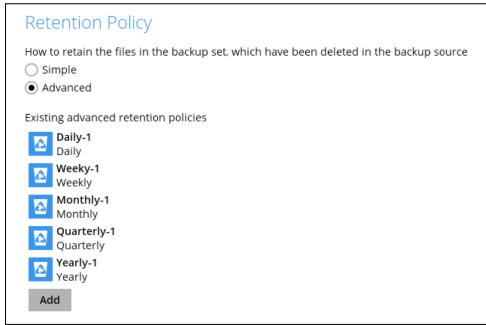
• **Example no. 4**: To keep the retention files for the 1st day of each quarter for the last four (4) quarters:



• **Example no. 5**: To keep the retention files for the 1st day of each year for the last seven (7) years:



Multiple Advanced Retention Policy can be created.

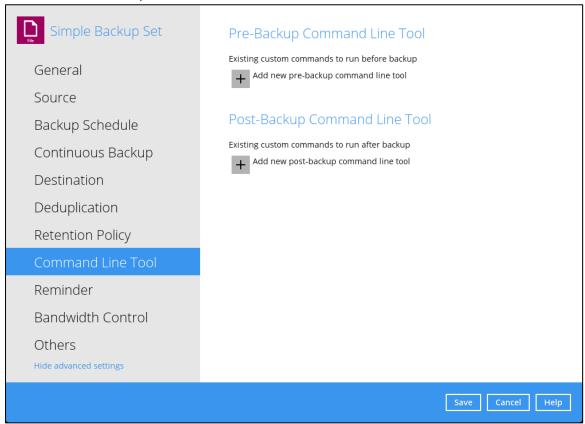




8.4.1.8 Command Line Tool

This feature allows the user to configure a pre-backup or post backup command which can be; an operating system level command, a script or batch file, or third-party utilities to run before and/or after a backup job.

e.g. Connecting to a network drive and disconnecting a network drive, stopping a third-party database (not officially supported by CloudBacko Pro) to perform a cold backup, and restarting a third-party database after a backup.



Requirements and Best Practices

Error and Exception Handling

Each pre-backup command or batch file should have an error and exception handling. If a pre-backup command contains an error, although an unhandled error may not hinder the backup job process, and the backup job is successful, it will result to a status indicating completed backup with warning(s).

For more details about backup report status, please refer to <u>Report</u> in **Chapter 8.5 CloudBacko Pro Overview**.

Command or Batch File Compatibility

Make sure that each command (pre-backup and post-backup) are tested thoroughly before including them to the backup job.



Scheduled Backup

If the scheduled backup job is set to stop after x no. of hours, make sure that the duration of the running backup job will not be affected. You may need to adjust the number of hours in the backup schedule configuration. Please refer to <u>Backup Schedule</u> for more details.

Pre-backup Command Limitation

A reboot or shutdown must not be used in the pre-backup command. Otherwise, the machine will shut down immediately that will result to a status indicating "Backup not yet finished".

Post-backup Command Recommendation

It is recommended to include a timeout for a post-backup command to shut down the machine. This is to ensure that the CloudBacko Pro has enough time to complete the backup process.

There are three (3) fields in the command line tool:

Field	Description	
Name	The user-defined name of the pre-backup or post-backup command.	
Working Directory	The location in the local machine which the pre-backup or post-backup command will run at, or the location of the command or created batch file.	
Command	The pre-backup or post-backup command which can be defined as a native command or batch file.	

Pre-backup Command Line Tool

A pre-backup command is used to execute an action or process before the start of a backup job. To create a pre-backup command, follow the steps below:

1. Click the add + button to add a new pre-backup command line too.



Complete the following details:

Name

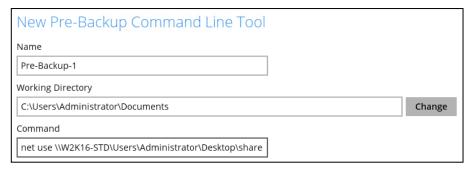
Assign a desired name to the pre-backup command.

Working Directory

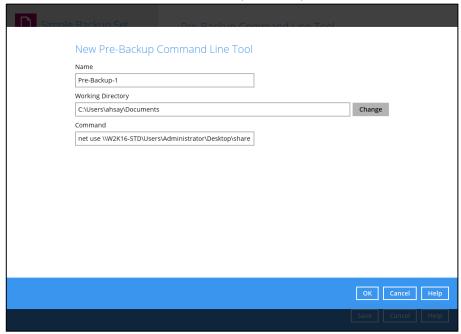
Click the **Change** button to locate the working directory of the command.

Command

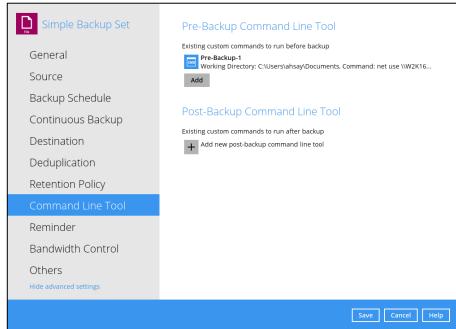
Input a command to be run before a backup job. In this example, the pre-backup command will connect to a network drive before the backup process.



3. Click the **OK** button to save the created pre-backup command.

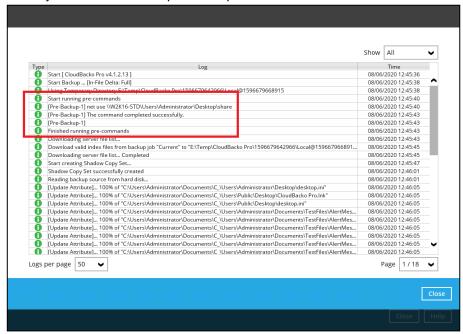


4. Click the **Save** button to save the settings.





5. Once the backup job is complete, click the button to display the backup report log where you can check if the pre-backup command is successful.



Post-backup Command Line Tool

A post-backup command is used to execute an action or process after a backup job. To create a post-backup command, follow the steps below:

1. Click the add + button to add a new post-backup command line too.



- 2. Complete the following details:
 - Name

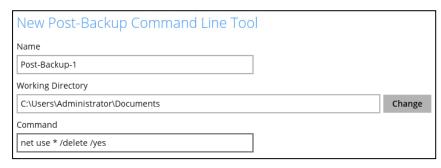
Assign a desired name to the post-backup command.

Working Directory

Click the **Change** button to locate the working directory of the command.

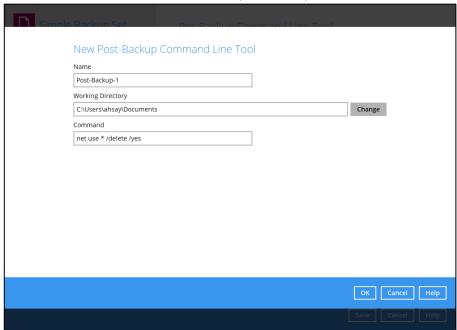
Command

Input a command to be run after a backup job. In this example, the post-backup command will display the list of the directories.

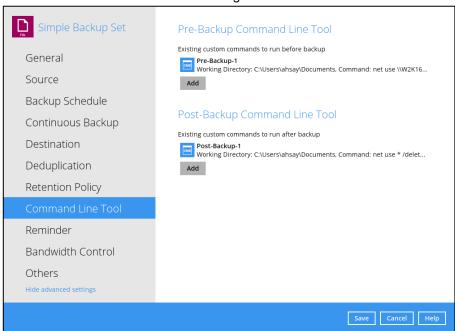




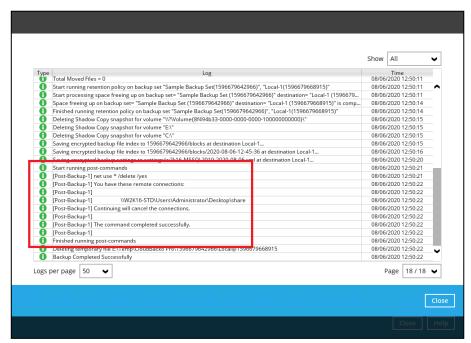
3. Click the **OK** button to save the created post-backup command.



4. Click the **Save** button to save the settings.



5. Once the backup job is complete, click the button to display the backup report log where you can check if the post-backup command is successful.



8.4.1.9 **Reminder**

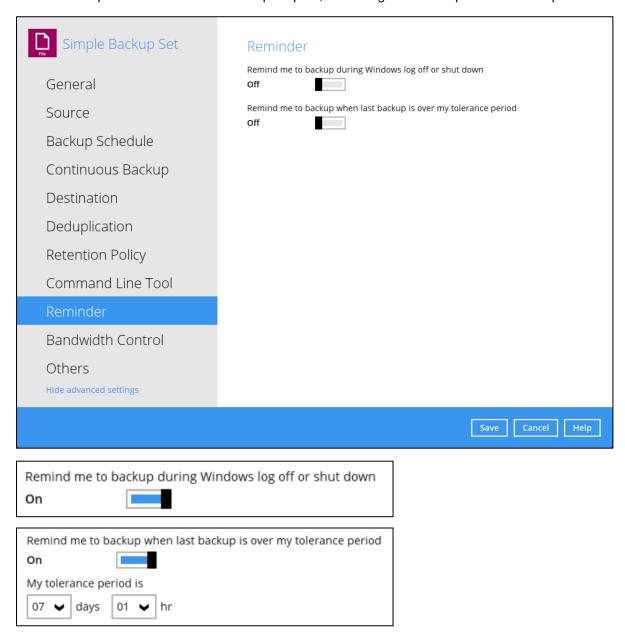
This reminder is designed for users who do not have a regular backup schedules setup. It allows CloudBacko Pro users to setup two types of reminder. Both reminders are disabled by default.

Remind me to backup during Windows log off or shutdown

When this reminder setting is enabled, a backup confirmation menu will be prompted, requesting for backup before the user logs out the system or before shutting down Windows.

Remind me to backup when last backup is over my tolerance period

If the time between the last backup to the current time elapsed is over the tolerance period, a backup confirmation menu will be prompted, reminding the user to perform a backup.



Remind me to backup during Windows log off or shutdown

To enable the Reminder setting during Windows log off, or shutdown, follow the steps below:

- 1. Go to Backup Sets, then select a backup set.
- 2. Choose the Reminder tab in the backup set settings.
- 3. Swipe the lever to the right to turn on the reminder.



4. Click the **Save** button to save settings.

NOTES

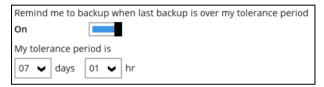
- This feature is not supported on Windows 7 (and older), and Windows Server 2008 (and older).Due to limitation on Windows which the Shutdown screen overrides the backup prompt, feature is removed on Windows 8/Windows Server 2012 or above.
- The dialog box will only appear if there is a backup set with enabled Reminder setting.
- The dialog box will only be displayed for four (4) seconds.
- If there are multiple backup sets displayed, you cannot select one (1) backup set to back up. It is recommended to only enable the Reminder setting for the backup sets that you regularly back up.

For more detailed examples of the reminder feature, please refer to <u>Appendix D: Example Scenarios for the Reminder for Windows Logoff, Restart, and Shutdown.</u>

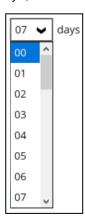
Remind me to backup when last backup is over my tolerance period

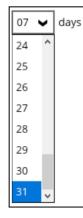
To enable the Reminder setting when the last backup is over the tolerance period, follow the steps below:

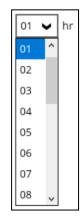
- 1. Go to Backup Sets, then select a backup set.
- 2. Choose the Reminder tab in the backup set settings.
- 3. Swipe the lever to the right to turn on the reminder.

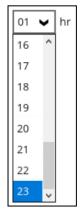


4. Set the tolerance period. Default is 7 days and 1 hour. Range for the day is between 1 to 31 days, for the hour, it is 1 to 23 hours.









5. Click the **Save** button to save settings.

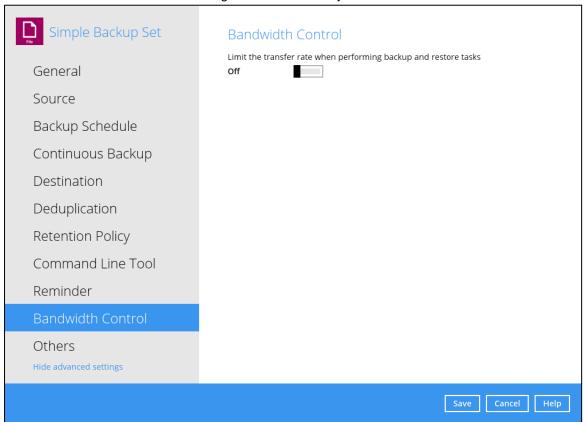
NOTE

- This reminder will appear upon login to Windows.
- For more detailed examples of the reminder feature, please refer to <u>Appendix E: Example Scenarios for the Reminder for completed Tolerance Period</u>.



8.4.1.10 Bandwidth Control

This feature allows the user to limit the amount of bandwidth used by backup traffic between specified times. This bandwidth control is configured as disabled by default.



There are two (2) types of bandwidth control:

Bandwidth Control Type	Description
Independent	Each backup and restore has its assigned bandwidth.
Share	All backup and restore operations are sharing the same assigned bandwidth.

NOTE Share mode does not support performing backup job on multiple destinations concurrently.

To enable the bandwidth control setting, follow the steps below:

1. Slide the lever to the right to turn on the bandwidth control.



2. Select a bandwidth control mode.

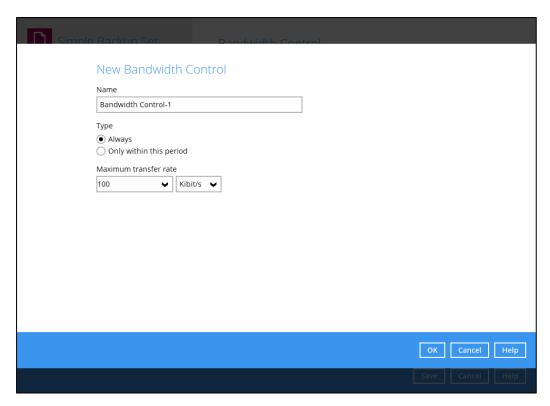


3. Click the Add button to create a modified bandwidth control.

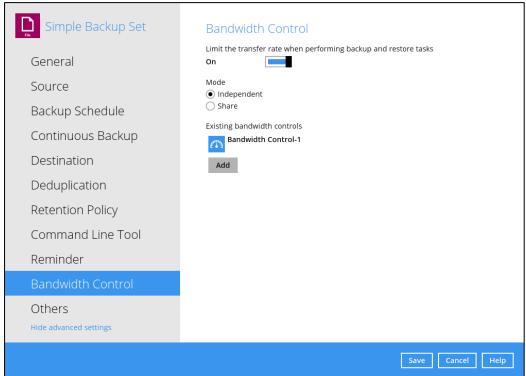


- 4. Complete the following fields then click the **OK** button to save the new bandwidth control.
 - Name
 - Type
 - Maximum transfer rate

Field	Description
Name	The name of the bandwidth control set.
Туре	The type of enforced bandwidth control period.
Maximum transfer rate	The maximum bandwidth used.



5. Click the **Save** button to store settings.



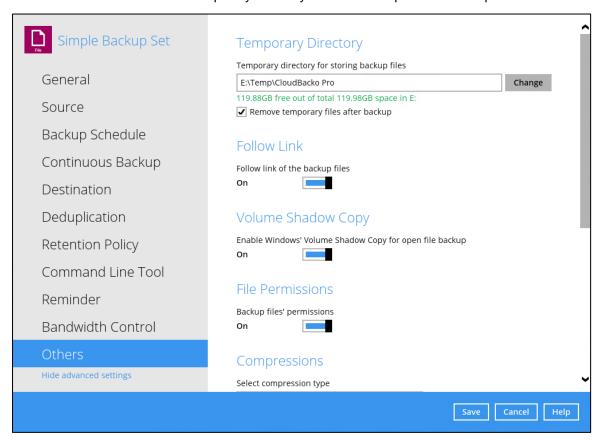
8.4.1.11 Others

Below is the list of other configurable options under the backup set settings:

- Temporary Directory
- Follow Link
- Volume Shadow Copy
- File Permissions
- Compressions
- Encryption
- Recycle Bin
- Restore Drill

Temporary Directory

The CloudBacko Pro uses the temporary directory for both backup and restore operations.



For a **backup job**, it is used to temporarily store backup set index files. An updated set of index files is generated after each backup. The index files are synchronized to each individual backup destination at the end of each backup job.

For a **restore job**, it is used to temporarily store temporary restore files.



NOTE

For best practice, the temporary directory should be located on a local drive for optimal backup and restore performance.

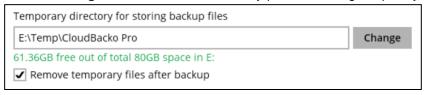
And should not be located on:

- System drive, as the System drive is used by Windows and other applications. There will be frequent disk I/O activity which may affect both backup and restore performance.
- A network drive, as it could affect both backup and restore performance.

It is recommended to select the 'Remove temporary files after backup' option on the backup set to keep the temporary drive clear.

To change the temporary directory, follow the steps below:

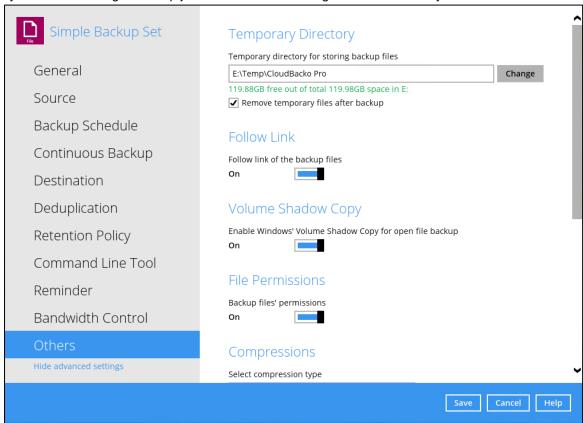
Click the Change button to select a directory path for storing temporary data.



2. Click the **Save** button to store settings.

Follow Link

This feature allows the user to enable or disable the follow link which defines the NTFS junction or symbolic link during a backup job. This feature is configured as enabled by default.

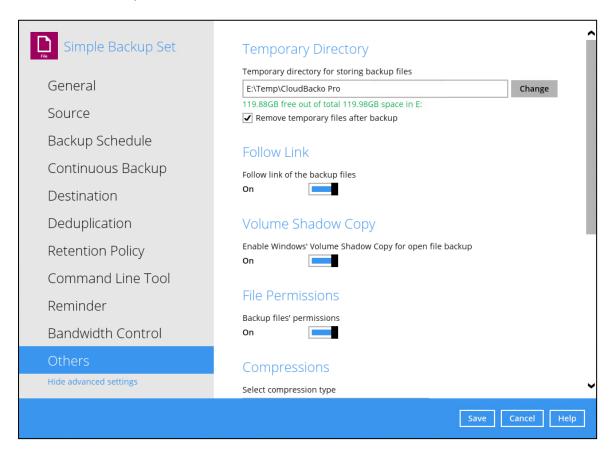


NOTE

The Follow Link feature is only applicable for File Backup Sets.

Volume Shadow Copy

This feature allows the CloudBacko Pro to use the Windows Volume Shadow Copy service to create a snapshot of the selected files and/or folders on the local drive(s) of the machine, so that the CloudBacko Pro can continue to back up files even if they are opened and/or have been updated by the user. This feature is enabled by default.



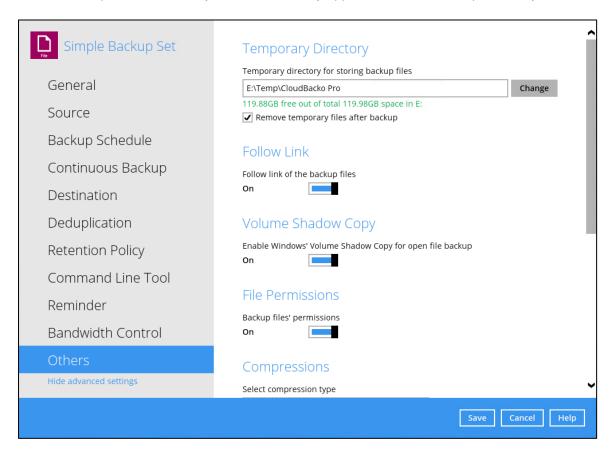
WARNING

Volume Shadow Copy does not support open file backups on network drives.



File Permission

This option defines whether to back up operating system file permission of the data selected as backup source. This option is enabled by default. Note: only applicable for File Backup Sets only.

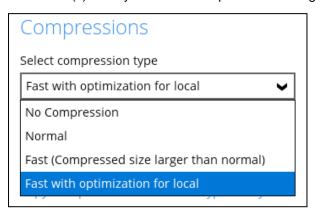


- 1. Slide the lever to the right to turn on the File Permissions option. Otherwise, slide to the left to turn it off.
- 2. Click the Save button to save the settings.

NOTE
Applicable for File Backup Sets only

Compressions

This feature is used to enable compression of data during a backup job. When the compression is enabled, the CloudBacko Pro will compress all the files before it is backed up to the backup destination(s). Newly created backup sets are configured to use **Fast with optimization for local**.



These are the four (4) compression types:

- No Compression file will not be compressed before backup.
- Normal compression is comparable to gzip Normal compression ratio.
- Fast (Compressed size larger than normal) compression will be faster but with less compression and lower CPU usage compared to Normal.
- Fast with optimization for local uses Snappy compression library when backing up to local destination only, otherwise setting will default to gzip if backing up to other destinations. Has the lowest CPU usage, very high speed and reasonable compression but compressed file size may be larger than Fast.

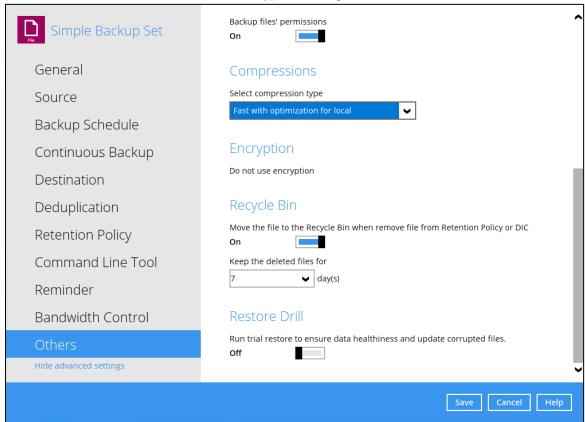
NOTE

The compression type can be changed anytime even after a backup job. The modified compression type will be applied on the next run of a backup.



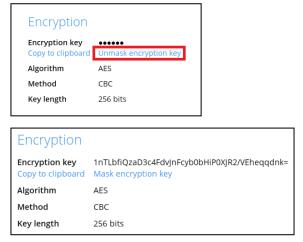
Encryption

This feature allows the user to view the encryption settings.



To view the encryption key of the backup set, follow the steps below:

1. Click **Unmask encryption key** to display the encryption key of the backup set.



2. Click Copy to clipboard to copy the encryption key of the backup set.



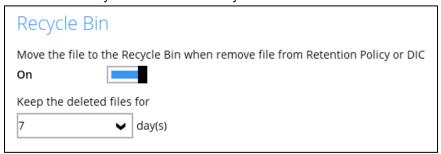
Recycle Bin

The Recycle Bin is for protection of the BAK (block) files stored in the Backup Set's destination. It allows the user to set the number of days BAK files that were deleted due to Retention Policy or Data Integrity Check will be kept in the Recycle Bin as added protection.

This is how the Recycle Bin will treat deleted data:

- Data in the Recycle Bin will consume Quota.
- It does not move the data in another location within the storage, instead the index tracks xxxxxx.bak files and its remaining time in the Recycle Bin.
- If the index is reverted to a previous timestamp, the settings of the Recycle Bin in the reverted index will be followed.
- Recoverability of data is not affected when the Recycle Bin is alternately enabled or disabled.
 - When enabled, it will only check if the data inside the Recycle Bin is still within the set number of days. Once it is beyond the set number of days it will only be deleted when the following operations are run: Backup, Space Freeing Up, Data Integrity Check and Delete Backup Data.
 - When disabled, it will not automatically delete the data inside the Recycle Bin.
 It will remain in the Recycle Bin even if it is beyond the set number of days. It will only be deleted when the following operations are run: Backup, Space Freeing Up, Data Integrity Check and Delete Backup Data.
- Once the Recycle Bin is disabled, deleted files will be removed immediately and will not be moved in the Recycle Bin.
- The setting applies to all destinations for the backup set.
- Viewing Recycle Bin contents is not available.
- Recycle Bin cleanup is done at the start of the backup job process.

This is enabled by default set with 7 days.



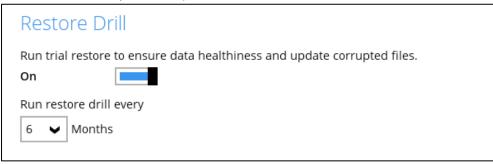
To set the number of days, follow the steps below:

- 1. Go to Backup Sets, then select a backup set.
- 2. Click the **Others** tab in the backup set settings.
- 3. Under Recycle Bin, select the number of days or you can enter it manually.



Restore Drill

The Restore Drill feature is used to run a trial restore to detect any corrupted data with backed up data. It ensures that backup data is always in a restorable state, alerting users regarding any corrupted data in the backup. For backup data that has been corrupted, a new backup job either via schedule or manually run is required to fix the issue.



To configure Restore Drill, follow the steps below:

- 1. Go to **Backup Sets**, then select a Backup Set.
- 2. Click the Others tab, then search for Restore Drill.
- 3. After turning it on, select the desired frequency you wish Restore Drill jobs should run. The options for these are:
 - a. 6 months
 - b. 12 months
 - c. 24 months
- 4. Click **Save** to apply the settings.

In order to receive an email report after a restore drill job was run, ensure that you have set up your email in Settings > Email Report. For more information on how to do this, please refer to Ch. 8.7.2 Email Report. The report received will depend on this setting.

Here is a sample of the restore drill report.

```
from: Immarial accomplanation of Management date: 09/13/2023 11:01 AM to: pdate in the summary of your restore drill job "2023-09-13-10-12-53".

Here is the summary of your restore drill job "2023-09-13-10-12-53".

Backup Set: File-1
Destination: GoogleDrive-1
Backup Job: 2023-09-13-10-07-28
Job Status: OK
Restore Drill Duration: 09/13/2023 10:12:53 CST - 09/13/2023 10:14:56 CST
Total Data Size: 771.73 M (4064)
Restored Data Size: 771.73 M (4064)
Invalid Data: 0
Unverifiable Data: 0
Have a nice day!
- CloudBacko Team

Please don't reply to this auto-generated email report. If you prefer not to receive this report anymore, you can turn it off in the Settings > Email Report section of your CloudBacko Pro software.
```

NOTE

If there are several restore drill jobs that are run, it will all be displayed in this email. If the email report setting was changed, all the previous restore drill job reports that were not sent will be sent according to the new email report setting.

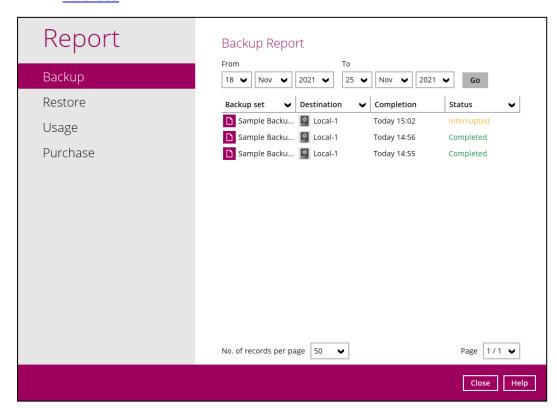
8.5 Report

This feature allows user to run and view backup and restore reports.



There are four (4) options available for this feature, namely:

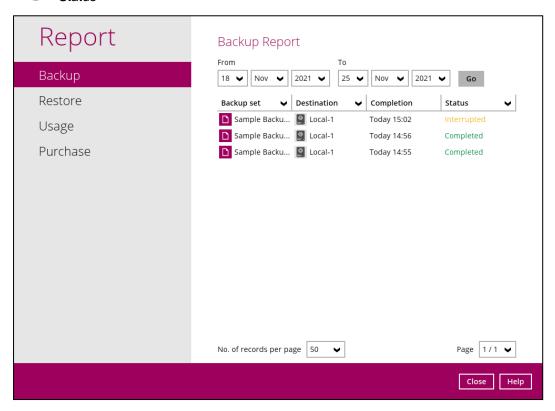
- Backup
- Restore
- Usage
- Purchase



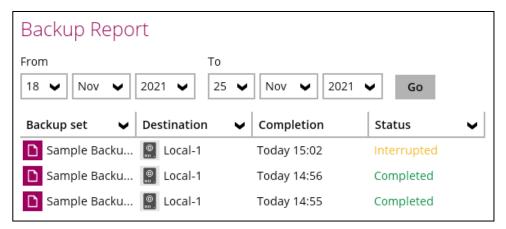
8.5.1 Backup

This option is used to run and view **backup reports**. There are four (4) filters that can be applied on this feature, namely:

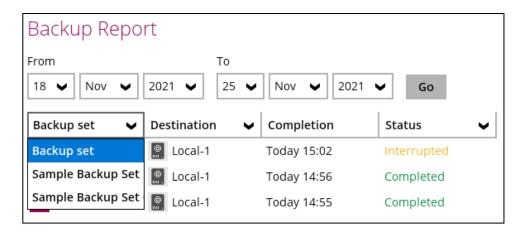
- Date range
- Backup set
- Destination
- Status



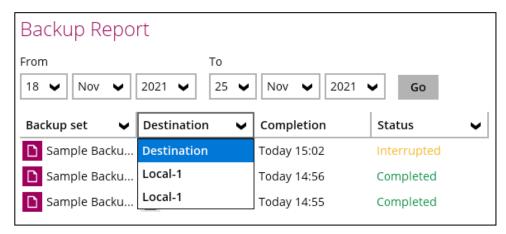
By setting the Date range, you will see the list of all backup report(s) within that period.



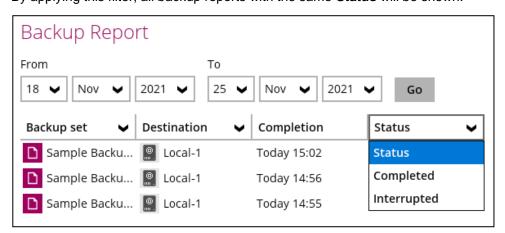
You can view the backup report(s) of a specific backup set by using the **Backup set** filter.



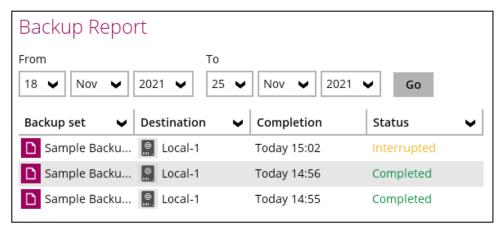
If you want to see the backup report(s) in your selected storage location, use the **Destination** filter.



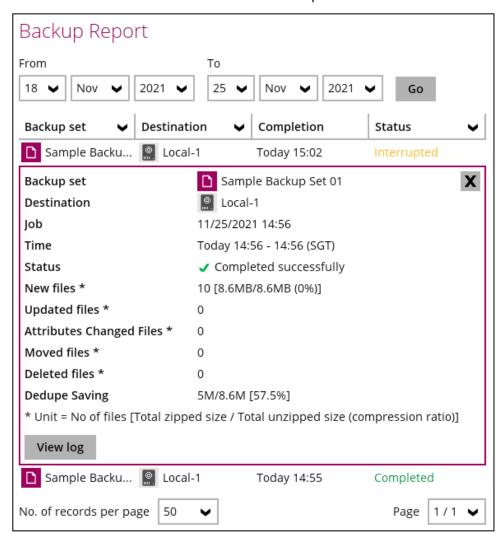
By applying this filter, all backup reports with the same **Status** will be shown.



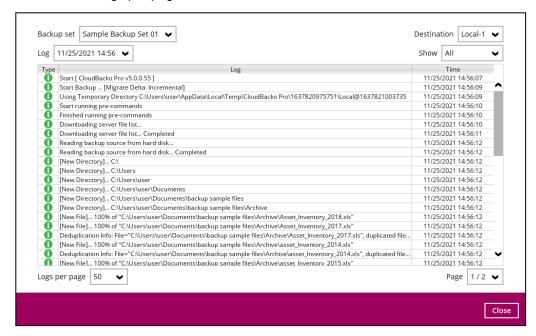
In order to see a backup report in detail, select a backup set.



Click View log to see the event log during a backup.

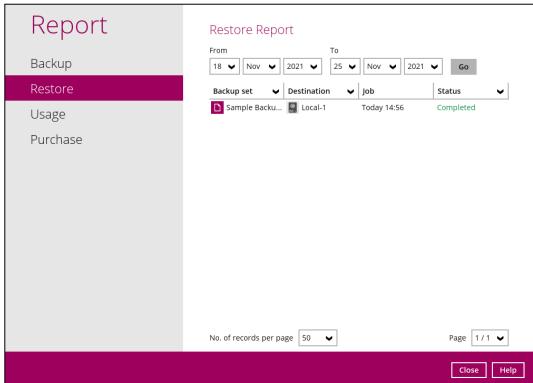


2. **Backup set**, **time**, **destination**, and **status** can be filtered here. You can also choose to view the number of logs per page.



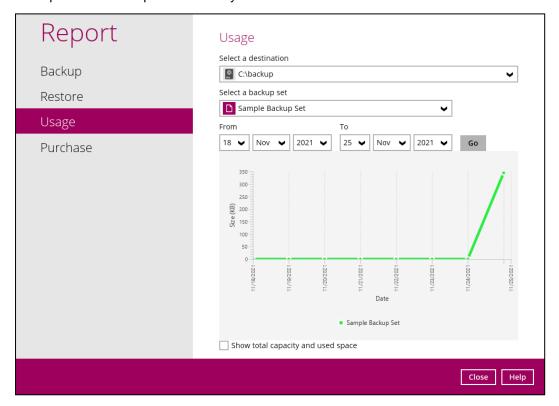
8.5.2 Restore

This feature is used for viewing restore report(s). You can also apply filter on **time**, **backup set**, **destination**, and **status** here.



8.5.3 Usage

This allows the user to view the storage and usage information in a graphical view for each backup set and backup destination by date.



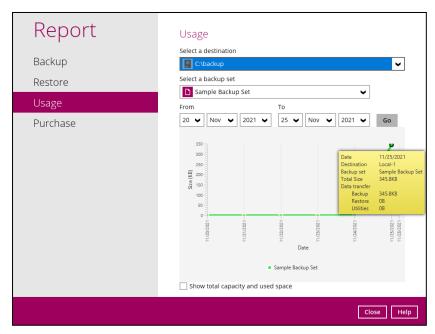
Storage Statistics

Total Size: Displays the total amount of backed up data on the backup destination.

The storage statistics of a backup set is updated every time the following functions are run:

- 1. Backup job
- 2. Periodic Data Integrity Check (PDIC)
- 3. Data Integrity Check (DIC)
- 4. Space Freeing Up
- 5. Delete Backup Data

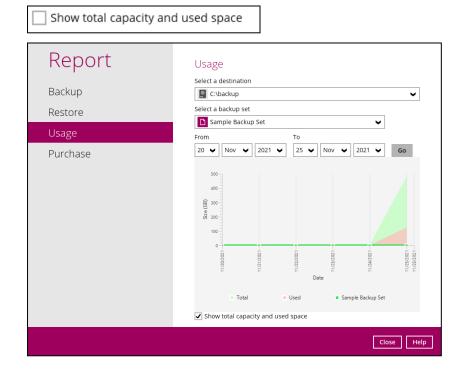
Example: The data transfer statistics will pop up when mouse pointer moves over a specific date.



Data Transfer Statistics

- Backup: displays the amount of data transferred to the backup destination for backups.
- Restore: displays the amount of data transferred from the backup destination for restores.
- Utilities: displays the amount of data transferred from the backup destination, when a Data Integrity Check (DIC) is run with the "Run Cyclic Redundancy Check (CRC) during data integrity check" option selected.

To check the total capacity and used space, tick the checkbox.





8.5.4 Purchase

This feature is used for viewing purchase report(s) for license key and/or modules purchased based on the license key which is currently applied on CloudBacko Pro.

You can select a purchase date and search for a specific report.

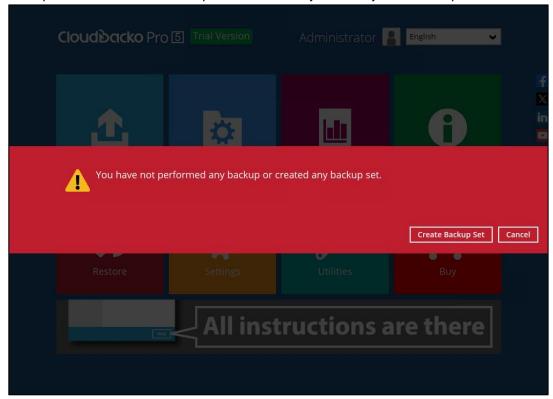


8.6 Restore

This feature is used to copy the backed-up file(s) from the backup destination and restore it to its original location or new location.



If using CloudBacko Pro for the first time, you will be asked to create a backup set and run a backup first. A restore cannot be performed unless you already run a backup.



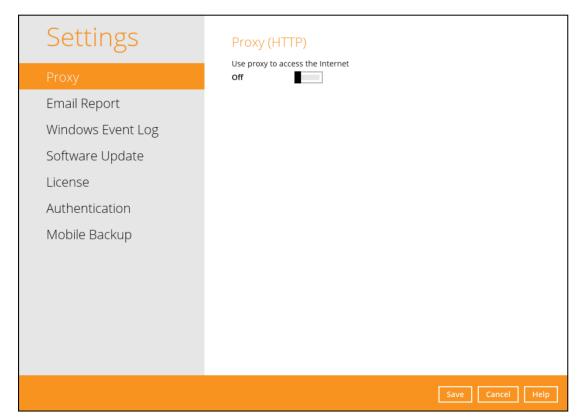
For instructions on how to do a restore, refer to <a>Chapter 12 Restore Data.

8.7 Settings

Settings consist of seven (7) sub modules:

- Proxy
- Email Report
- Windows Event Log
- Software Update
- <u>License</u>
- Authentication
- Mobile Backup





8.7.1 Proxy

To enable the Proxy Settings, follow the instructions below.



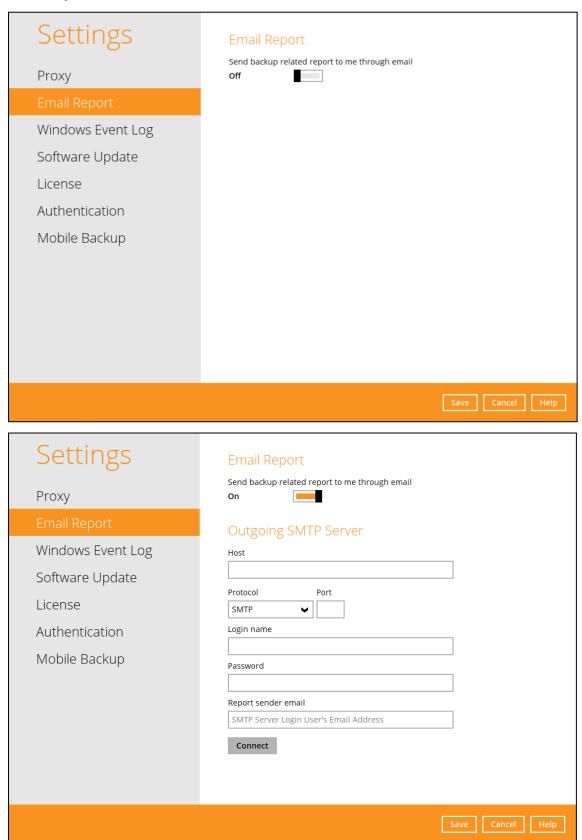
- 1. Complete the following fields:
 - ⊚ IP address
 - ⊚ Port
 - ⊚ Login ID
 - Password
- 2. Click the **Test Connection** button to validate the connection.
- 3. Click the Save button to store the settings.

Save Cancel Help



8.7.2 Email Report

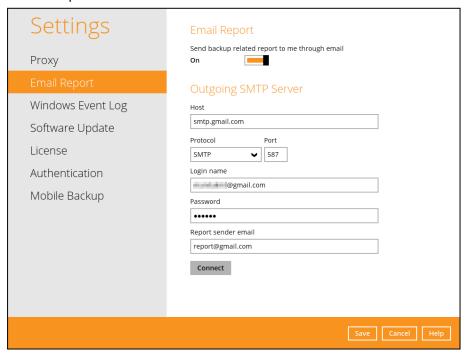
The email report will send notifications for backup errors or warnings, missed backup reports, and storage alert.



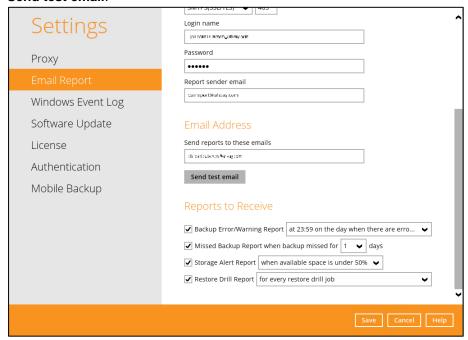


To enable the Email Report feature, follow the instructions below:

- Complete the following fields then click the Connect button to validate the connection.
 - Host
 - Protocol
 - Port
 - Login name
 - Password
 - Report sender email

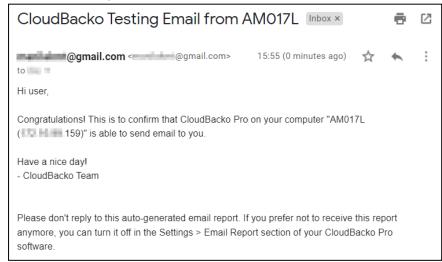


If succesfully connected, the email address where the reports will be sent should be displayed as well as the list of reports to be received. Enter a valid email then click **Send test email**.





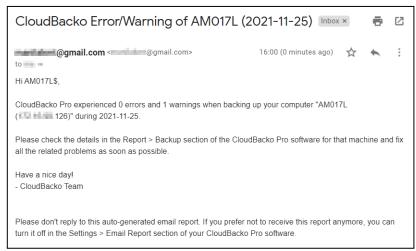
Below is the sample screenshot of the test email.



- Select the reports you want to receive by ticking the checkboxes then click the Save button to store the settings.
 - Backup Error/Warning Report
 - at 23.59 on the day when there are error or warning
 - at 23:59 everyday, when there are no error or warning
 - Missed Backup Report when backup missed for a specific number of days
 - Number of days: from 1 to 30
 - Storage Alert Report
 - When available space is under 50%
 - When available space is under 40%
 - When available space is under 30%
 - When available space is under 20%
 - When available space is under 10%
 - Restore Drill Report
 - For every Restore Drill Job
 - For every Restore Drill Job with corrupted data found

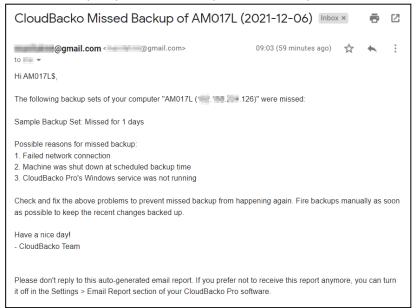
These are sample reports:

Backup Error/Warning Report

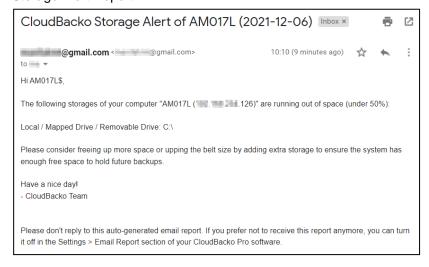




Missed Backup Report when backup missed for a specific number of days



Storage Alert Report



Restore Drill Report

```
| Intervals | Inte
```

8.7.3 Windows Event Log

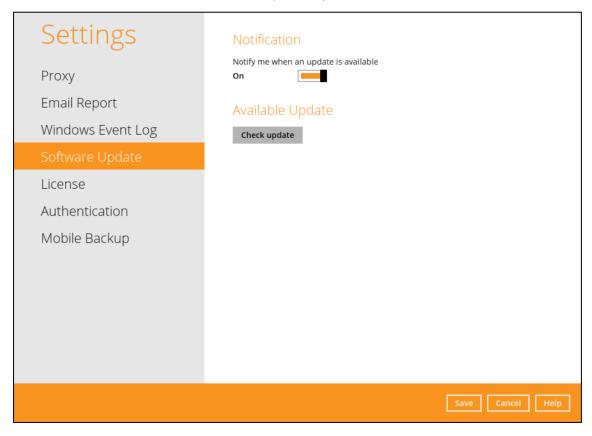
When this feature is on, all CloudBacko Pro system log information will be written under **Applications and Services Logs**. User may access them through **Windows event viewer** in the local machine. **Note**: This feature is only applicable for Windows OS.





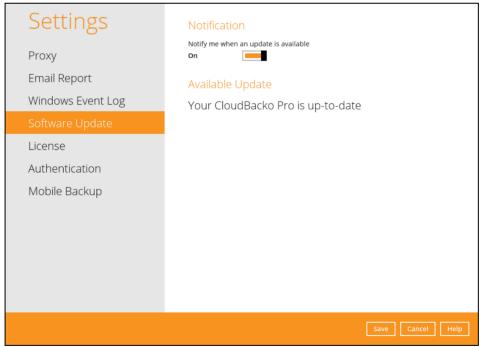
8.7.4 Software Update

The Software Update module allows the user to enable the notifications when an update is available and check if there is an available update. By default, the notification is enabled.

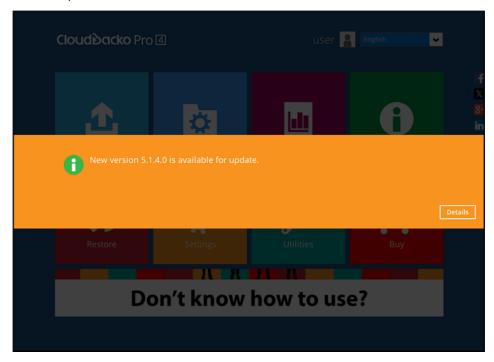


To check for the available Update, follow the instructions below:

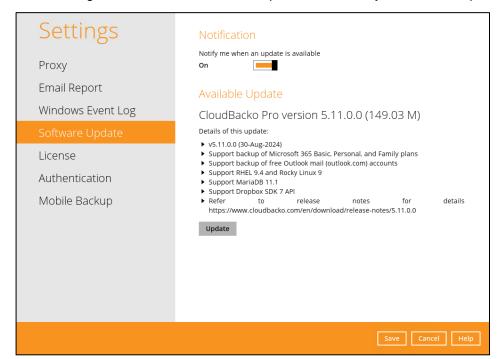
- 1. Click the **Check update** button.
- 2. If there is no available update, it will display this message, "Your CloudBacko Pro is up-to-date".



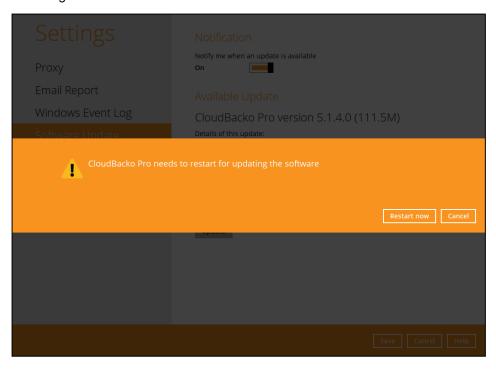
 However, if there is an available update, upon launching the CloudBacko Pro, an alert message will prompt that there is an available version for update. Click the **Details** button to proceed.



4. Upon clicking the Details button, it redirects the users to the Software Update module under Settings. It shows the details of the update. Click the **Update** button to proceed



It will show the download progress of the latest patch. Once download is completed, it
will prompt an alert message that the CloudBacko Pro needs to restart to update the
software. Click the **Restart now** to proceed. Otherwise click the **Cancel** button to abort
restarting.



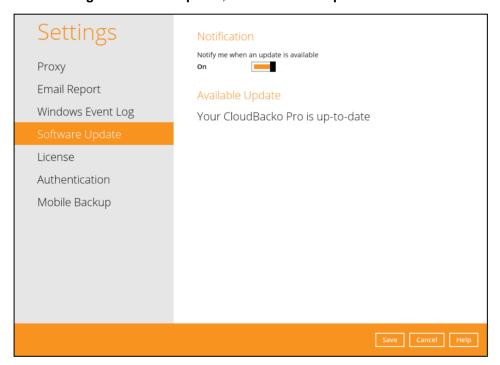
The CloudBacko Pro should launch automatically. To check if the update is successful,
 Go to the **About** module



OR



Go to Settings > Software Update, click the Check update button



8.7.5 License

The License module allows the customer to apply trial or full license key. These are the following fields displayed:

License Key

Displays the current license key. It could be a trial or full license key.

Change License Key

This feature allows the customer to apply a full license key.

Mode

Displays the mode of the license key either Online or Offline license. Online license key requires a fixed internet connection.

Version

Displays the version of the installed CloudBacko whether it is trial or full version. For trial license, it will indicate the number of days before the trial expires.

Buy full version (Displays in trial version only)

This feature allows the customer to buy the full version of the CloudBacko Pro.

Modules (Displays in trial version only)

These are the following modules enabled for CloudBacko Pro.

- CloudBacko Pro software
- Cloud File Backup Module
- IBM Lotus Domino Backup Module
- IBM Notes Backup Module
- Microsoft Exchange Server Backup Module
- Microsoft SQL Server Backup Module

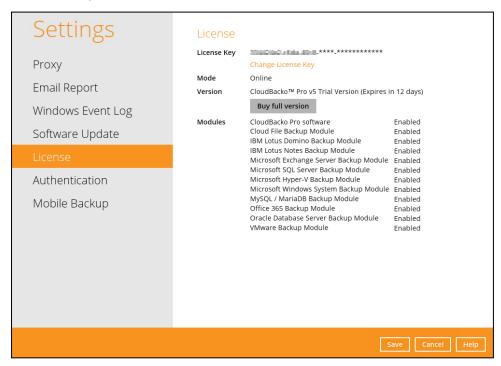
- Microsoft Hyper-V Backup Module
- Microsoft Windows System Backup Module
- MySQL / MariaDB Backup Module
- Microsoft 365 Backup Module
- Oracle Database Server Backup Module
- VMware Backup Module
- Installations (Displays in full version only)
 - Item these are the software and modules allowed for CloudBacko Pro.
 - CloudBacko Pro software
 - Cloud File Backup Module
 - IBM Lotus Domino Backup Module
 - IBM Notes Backup Module
 - Microsoft Exchange Server Backup Module
 - Microsoft SQL Server Backup Module
 - PostgreSQL Backup Module

- Microsoft Hyper-V Backup Module
- Microsoft Windows System Backup Module
- MySQL / MariaDB Backup Module
- Microsoft 365 Backup Module
- Oracle Database Server Backup Module
- VMware Backup Module
- Allowed displays the allowed number for each module for CloudBacko Pro.



 Used (This computer) – displays the total number of used software or add on modules on all computers. The number in brackets refers to the used software or add on modules on the current computer.

This is a sample screenshot for a trial version of CloudBacko Pro.



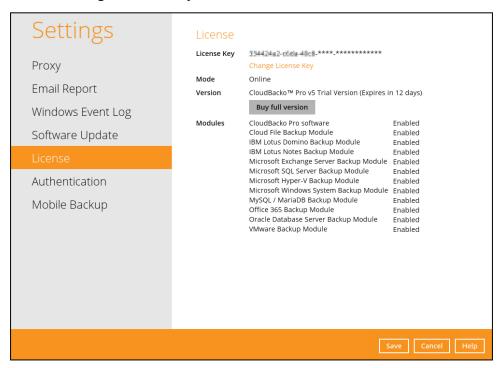
This is a sample screenshot for a full version of CloudBacko Pro.



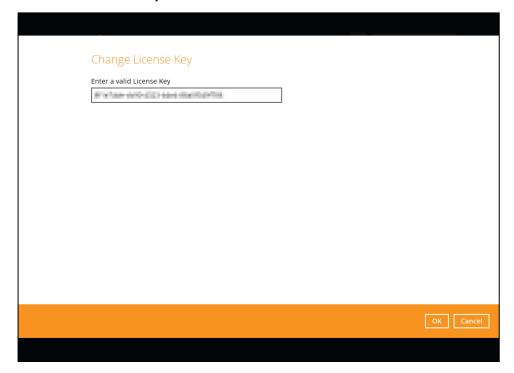


To apply a license key, follow the instructions below:

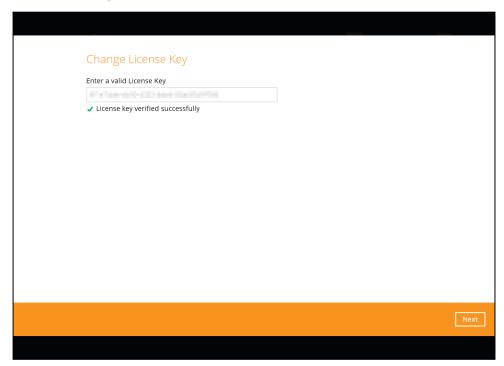
1. Click the Change License Key.



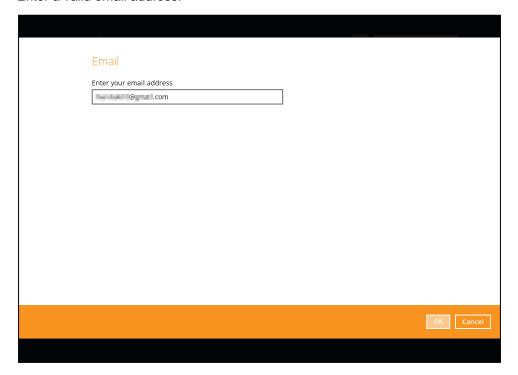
2. Enter a valid license key then click the **OK** button.



3. Once license key is verified, click the **Next** button.

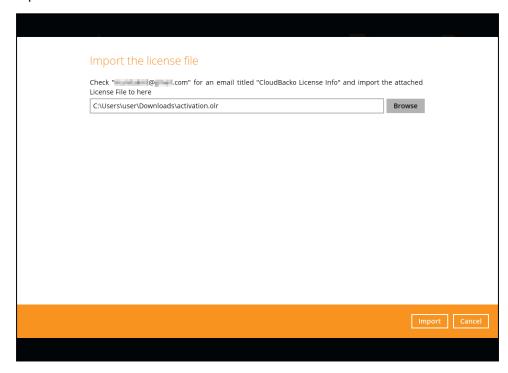


4. Enter a valid email address.





5. Click **Browse** to search for the **activation.olr** sent thru email. Click the **Import** button to process the activation.

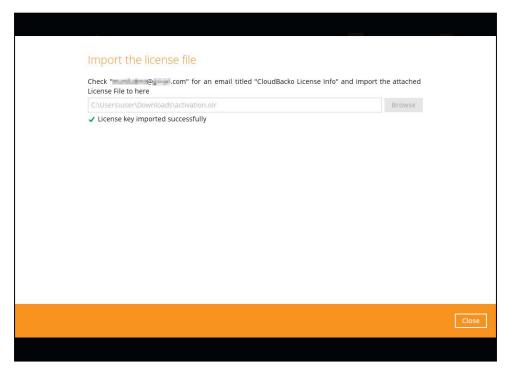


Here is an example of the email sent with activation.olr attached.

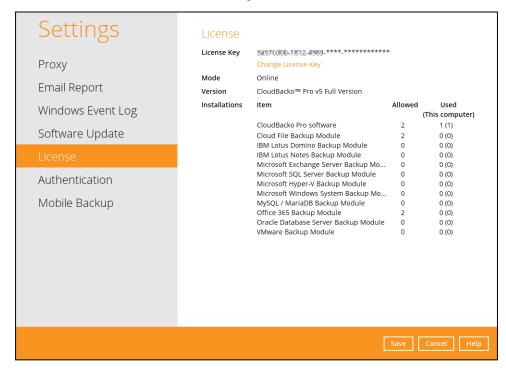




6. Click the Close button to return to the main screen.



Click the Save button to store the settings.



8.7.6 Authentication

You can use the Authentication function to:

- Enable or disable the "Password Lock". Change the password of the "Password Lock".
- Enable or disable the "<u>Two-Factor Authentication</u>".
- Add or remove one or more device(s) registered for Two-Factor Authentication (2FA).

NOTE

Please refer to the <u>CloudBacko App v1 User Guide for Android and iOS</u> for the detailed step-by-step procedure.

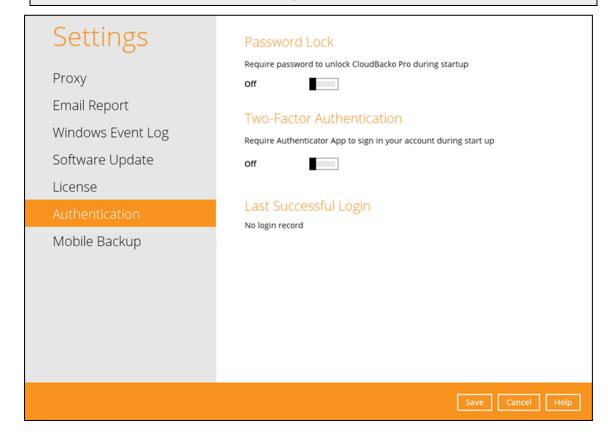
Re-pair with authenticator.

This is used once migration is completed to re-pair with authenticator to enable the signin using push notification feature and disable the one in the original device.

 View details of the "<u>Last Successful Login</u>" for Password Lock and Two-Factor Authentication (2FA).

NOTE

- If both the "Password Lock" and Two-Factor Authentication are enabled, users will be prompted to enter the "Password Lock" first before the Two-Factor Authentication (2FA).
- For Two-Factor Authentication (2FA), you can register your mobile device on both CloudBacko app and a third-party authenticator app (e.g. Authy, Duo, Google Authenticator, Microsoft Authenticator, and LastPass Authenticator).

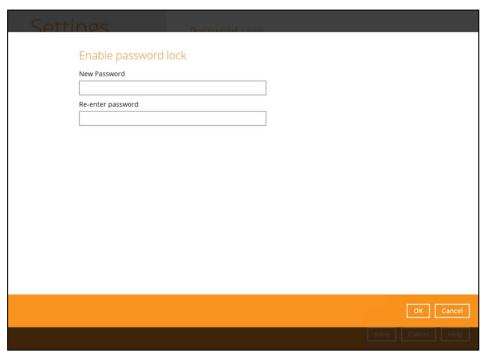




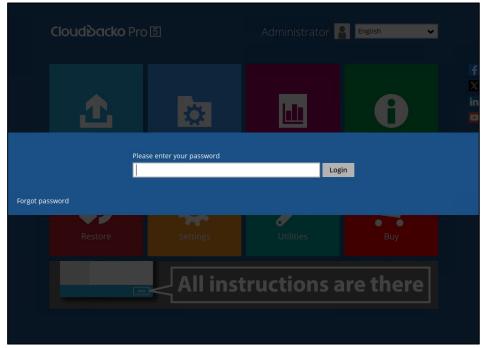
Password Lock

To enable the Password Lock feature, follow the instructions below:

- 1. Swipe the lever to the right to turn it on.
- 2. Enter the new password and re-enter it for authentication purposes.



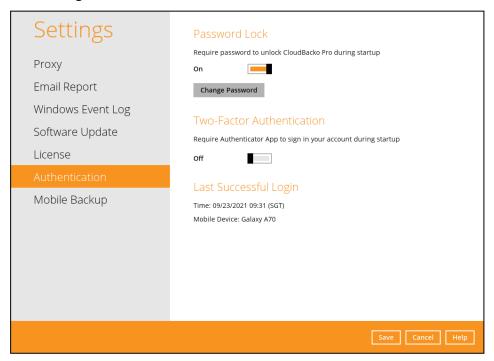
- 3. Click **OK** then click **Save** button to store the settings.
- 4. Upon launching the CloudBacko Pro, it is required to enter the password to login.



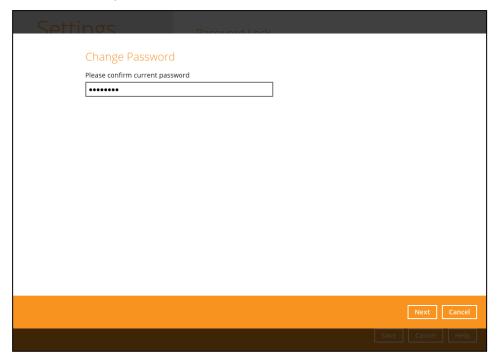


To change the password, follow the instructions below:

1. Click Change Password.

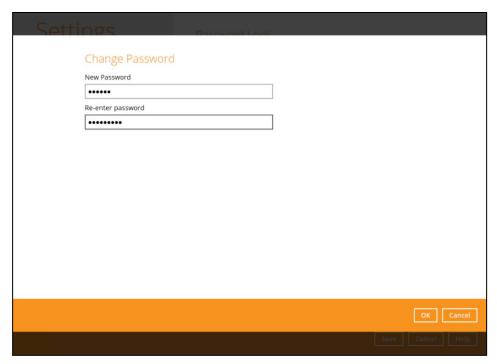


2. Enter the current password then click Next.

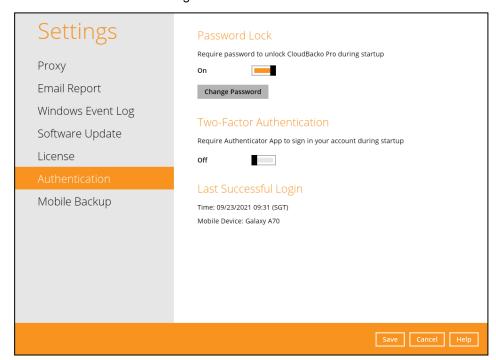




3. Enter the new password and re-enter it for authentication purposes. Click **OK** to return to the main screen.



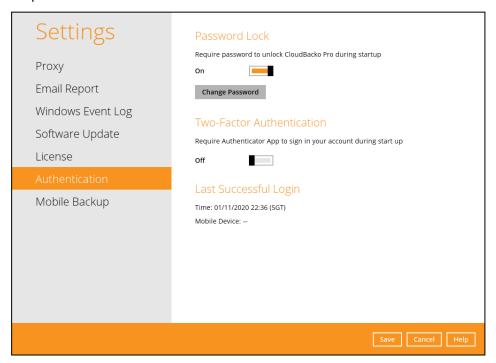
4. Click **Save** to store the settings.



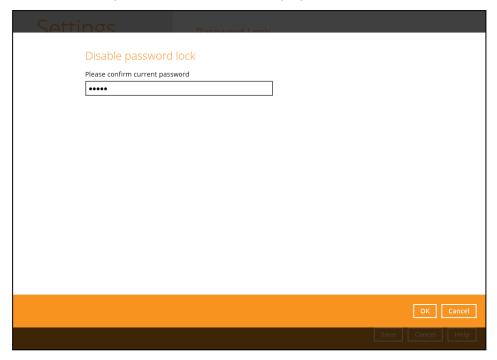


To disable the Password Lock feature, follow the instructions below:

1. Swipe the lever to the left to turn it off.



2. Enter the current password for authentication purposes.



3. Click **OK** then click **Save** button to store the settings.



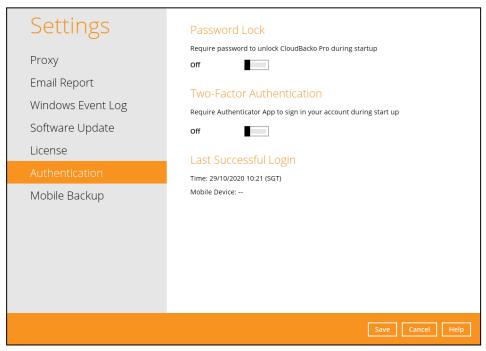
Two-Factor Authentication

To enable the two-factor authentication feature and add a mobile device, follow the instructions below:

NOTE

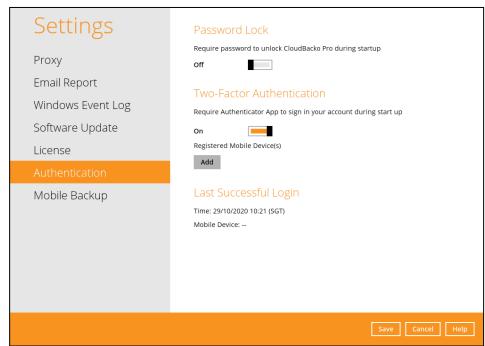
The CloudBacko app or a third-party authenticator apps is needed for 2FA.

1. Go to Settings > Authentication > Two-Factor Authentication.



2. Swipe lever to the right to turn it on. Click Add.

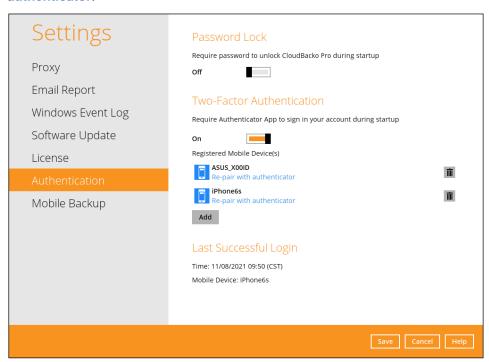
For the detailed step-by-step procedure on how to add a mobile device, please refer to CloudBacko App v1 User Guide for Android and iOS.





To re-pair the authenticator, follow the instructions below:

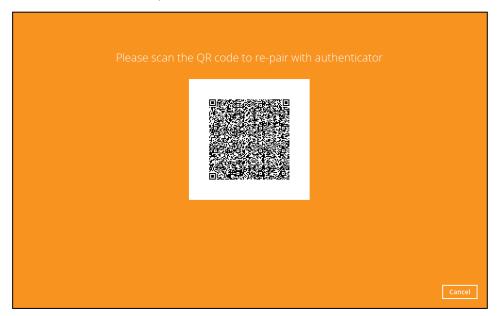
1. Go to Settings > Authentication > Two-Factor Authentication. Click Re-pair with authenticator.



2. In the CloudBacko app, go to 2FA then tap Re-pair with backup user account.



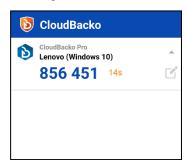
3. Scan the QR Code to re-pair with authenticator.



4. QR Code is detected, tap **OK** to proceed.

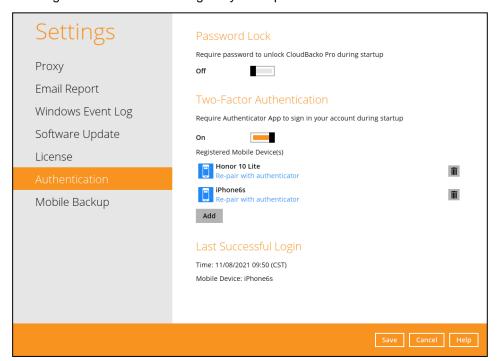


5. The migrated 2FA account has been successfully re-paired.





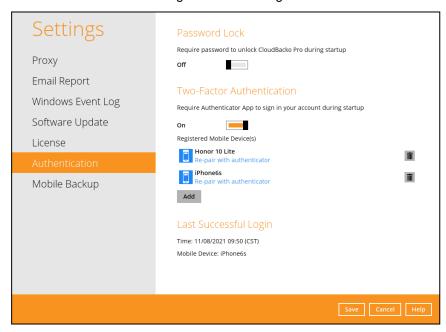
6. The original device will be changed by the replacement device.



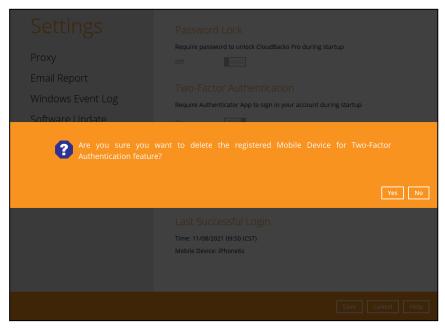


To remove a mobile device, follow the instructions below:

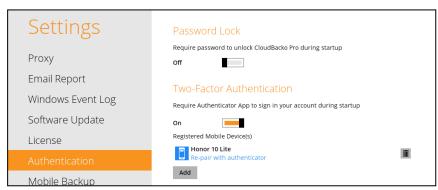
1. Click the in button on the right side of the registered mobile device.



2. A confirmation message will appear, click **Yes** to proceed. Otherwise, click **No**.



3. Mobile device is successfully removed.



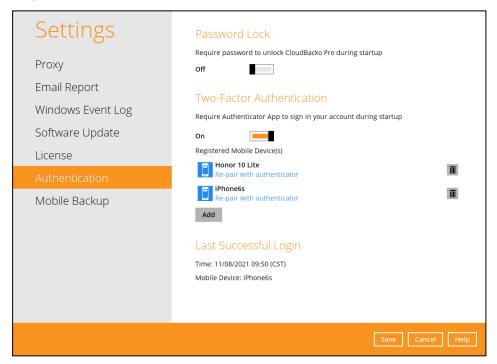


To disable the two-factor authentication feature, follow the instructions below:

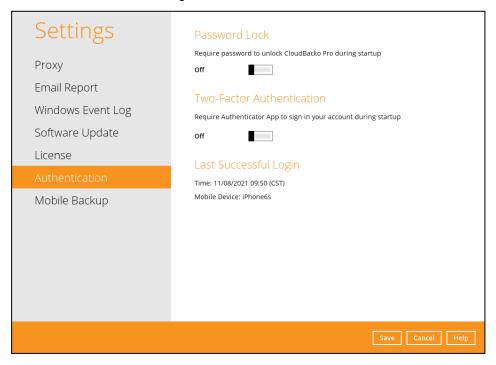
NOTE

Sliding the switch to right hand side will only turn off the two-factor authentication but it will not automatically delete the registered mobile device(s) for Two-Factor Authentication. If you need to delete the registered mobile device(s), this must be done manually first before disabling Two-Factor Authentication

1. Swipe the lever to the left to turn it off.



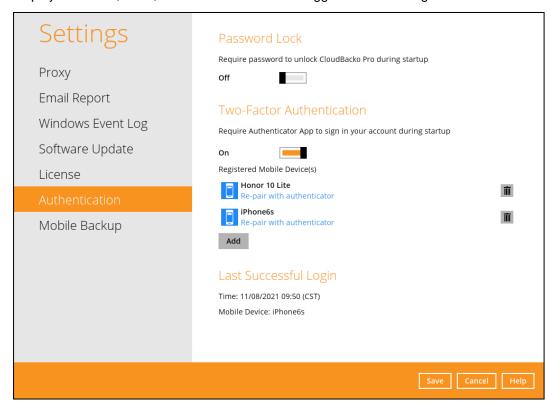
2. Click Save to save the settings.



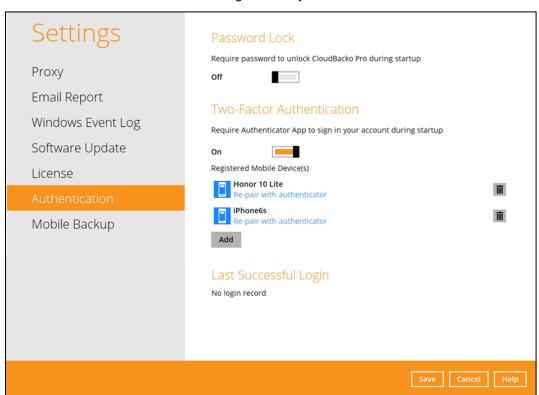


Last Successful Login

Displays the Date, Time, Time zone the user last logged in and the registered mobile device.



Below is the screenshot if there is no login record yet.



8.7.7 Mobile Backup

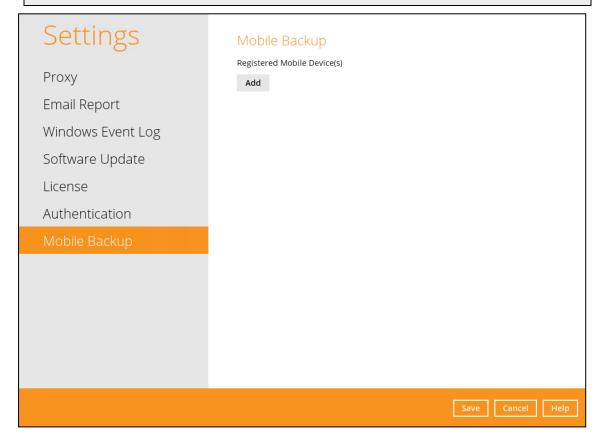
You can use the Mobile Backup function to:

- Add one or more device(s) registered for Mobile Backup.
- View backed up photos, videos and documents saved in the mobile backup destination.
- Change your mobile backup destination to:
 - new location in the same local machine
 - new machine
- Remove one or more device(s) registered for Mobile Backup.

NOTE

For the restore of photos, videos, documents and 2FA accounts to an alternate mobile device, the other mobile device must be registered first for mobile backup on CloudBacko Pro.

- Restore to a different mobile device on the same operating system.
- Restore to a different mobile device on another operating system, i.e., Android to iOS or iOS to Android.

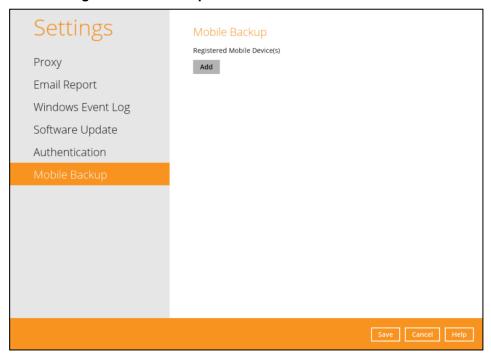




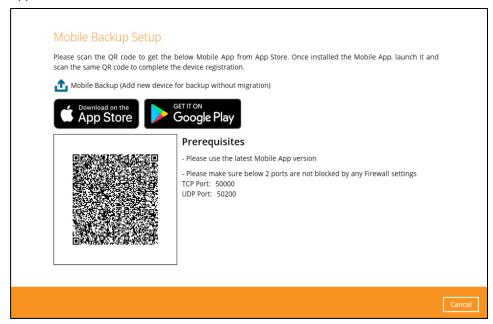
Add one or more device(s) registered for Mobile Backup

To add a mobile device, follow the instructions below:

1. Go to Settings > Mobile Backup and click Add.



2. Download the CloudBacko app from Google Play Store for an Android device and from App Store for an iOS device, then scan the QR code.



3. In the CloudBacko app, go to **BACKUP.** Tap the **Activate and start backup** link to scan the QR Code on the CloudBacko Pro.

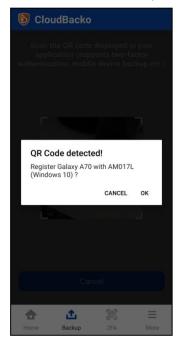




4. Scan the QR Code which can be found in CloudBacko Pro. Otherwise, tap **Cancel** to return to previous screen.



5. QR Code is detected, tap **OK** to proceed. Otherwise, tap **Cancel**.

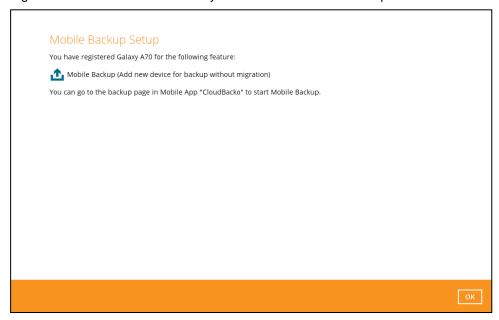


6. Mobile backup registration is successful. Tap **OK** to proceed.

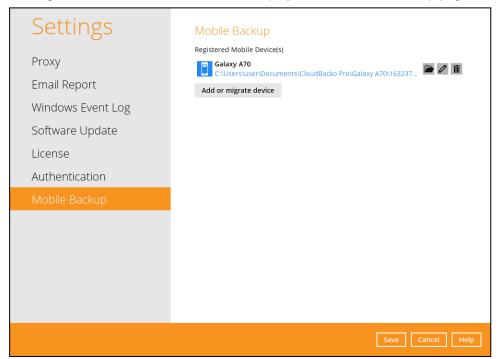




7. The Mobile backup registration is successful in CloudBacko Pro. In this example, the registered mobile device is "Galaxy A70". Click **OK** to return to previous screen.



The registered mobile device will now be displayed in the Mobile Backup page.

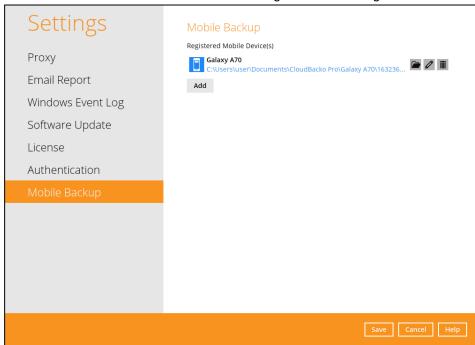




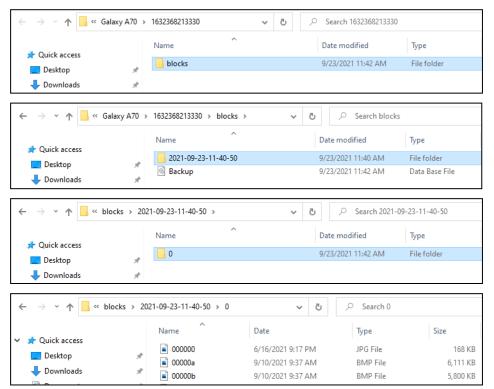
View backed up photos and videos saved in the mobile backup destination

To view backed up photos, videos and documents saved in the mobile backup destination, follow the instructions below:

1. Click the **link** or the **Browse** icon on the right side of the registered mobile device.



2. A new window will be displayed. Double-click the **blocks** folder, then double-click the folder named with the "YYYY-MM-DD-hh-mm-ss" format which is the date and time of the backup. This contains the folders where the photos, videos and documents are saved.



3. Once done, click the X button to exit.



Change mobile backup destination location to new location in the same machine

These are scenarios upon changing the mobile backup destination to a new location in the same local machine:

Move to a new location in the same machine with enabled Free up space.

If Free up space is enabled on the CloudBacko Mobile app, it is required to copy the previously backed-up photos, videos, documents and 2FA accounts to the new location to prevent missing data upon restore.

In case the previously backed-up photos, videos, documents and 2FA accounts were not copied to the new location, even though the backup will re-upload all the photos, videos, documents and 2FA accounts again from the mobile device, this will not include the photos, videos, documents and 2FA accounts removed by the Free up space feature.

Move to a new location in the same machine with disabled Free up space.

If Free up space is disabled on the CloudBacko Mobile app, there are two (2) options available, copy the previously backed-up photos, videos, documents and 2FA accounts to the new location or continue to back up in the new location.

In case the previously backed-up photos, videos, documents and 2FA accounts were not copied to the new location, the backup will re-upload all the photos, videos, documents and 2FA accounts again from the mobile device.

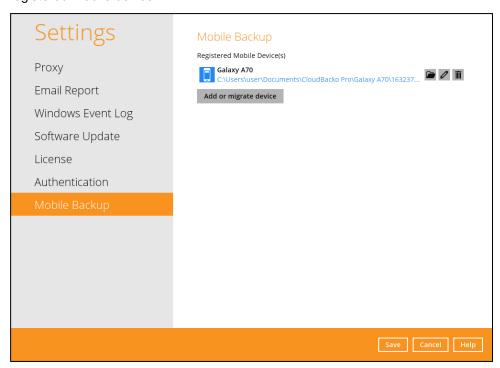
To change the mobile backup destination to another drive or folder on the CloudBacko machine, follow the instructions below:

- From the old location, secure a copy of the previously backed-up photos, videos, documents and 2FA accounts. Skip this step if Free up space is disabled and proceed to Step 2.
- 2. Launch CloudBacko Pro.



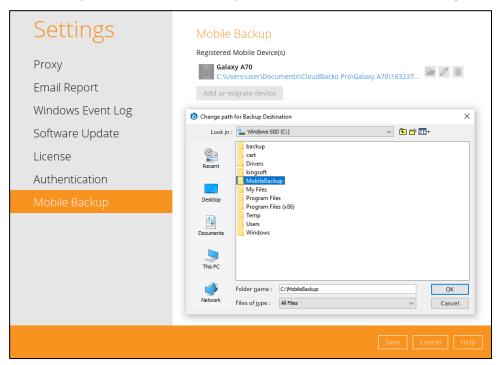


3. Go to **Settings** > **Mobile Backup**. Click the **Edit** icon on the right side of the registered mobile device.

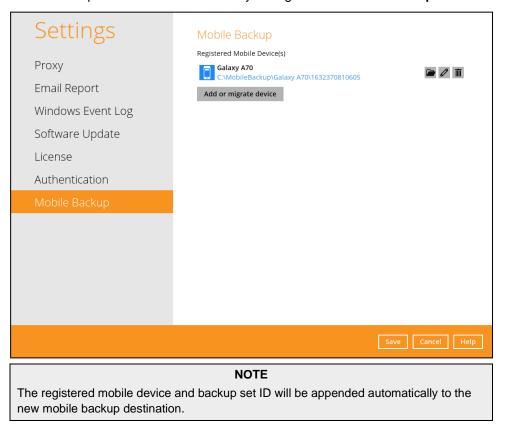


4. **Change path for Backup Destination** screen will be displayed. Select a new mobile backup destination then click **OK**.

In this example, the new mobile backup destination will be **C:\MobileBackup**.



Click Save to store the change made. Otherwise, click Cancel.
 Mobile backup destination is successfully changed to C:\MobileBackup.



6. Copy the previously backed-up photos, videos, documents and 2FA accounts from the original location to the new mobile backup destination.



Change mobile backup destination location to new machine

Move to a new machine with enabled or disabled Free up space due to upgrade.

If the machine needs upgrading, the previously backed-up photos, videos, documents and 2FA accounts are still available. Also note that if Free up space is enabled on the CloudBacko Mobile app, it is required to copy the previously backed-up photos, videos, documents and 2FA accounts to the new machine to prevent missing data upon restore.

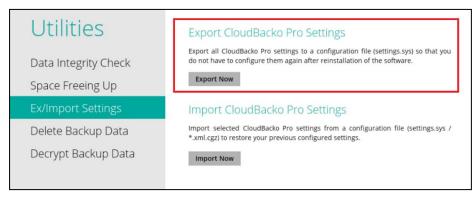
Even if Free up space is disabled, it is recommended to copy the previously backed-up photos, videos, documents and 2FA accounts to the new machine otherwise the photos, videos, documents and 2FA accounts on the mobile device will be backed-up again from scratch.

NOTE

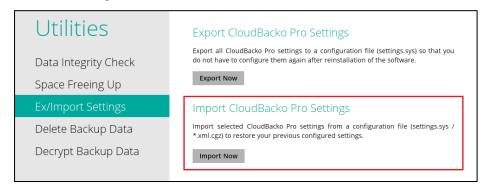
If the machine is lost/stolen, changing the mobile destination is not supported as it is required to reregister your mobile devices on CloudBacko Pro and perform backup of photos, videos, documents and 2FA accounts again.

To change the mobile backup destination to a new machine, follow the instructions below:

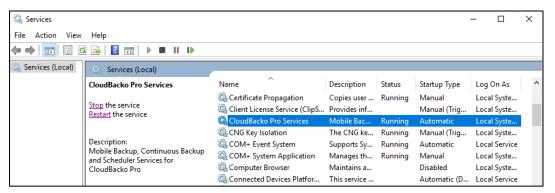
- 1. From the old machine,
 - secure a copy of the previously backed-up photos, videos, documents and 2FA accounts.
 - save a copy of the configuration file by going to Utilities > Ex/Import Setting then click Export Now. Select the destination where the file will be saved.



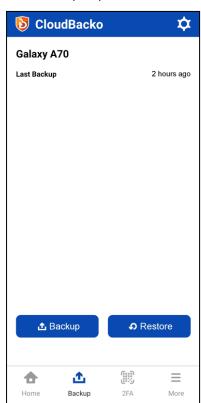
- 2. On the new machine, install CloudBacko Pro.
- 3. Apply the CloudBacko license to the new installation.
- Copy the configuration file (settings.sys) from the old machine to the new machine. Import
 it by going to **Utilities** > **Ex/Import Setting** then click **Import Now**. Select the destination
 where the configuration file was saved.



- 5. If the mobile backup destination needs to be updated, please follow the steps on <a href="https://how.to.change.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile.nobile
- 6. Copy the previously backed-up photos, videos, documents and 2FA accounts from the old machine to the new mobile destination.
- 7. Restart the **CloudBacko Pro Services** on the newly installed CloudBacko Pro to restart the MBS.



8. Start backup of photos, videos, documents and 2FA accounts.

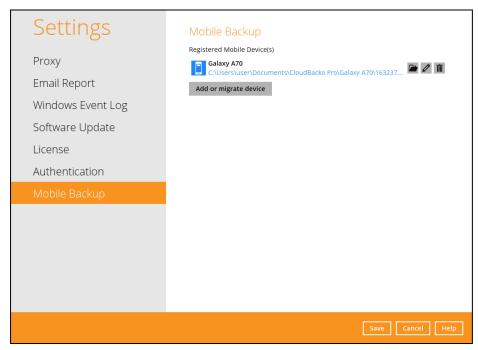




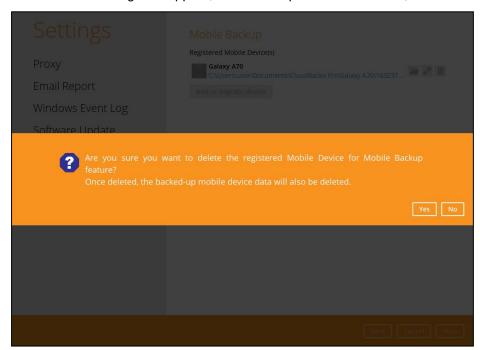
Remove one or more device(s) registered for Mobile Backup.

To remove a mobile device, follow the instructions below:

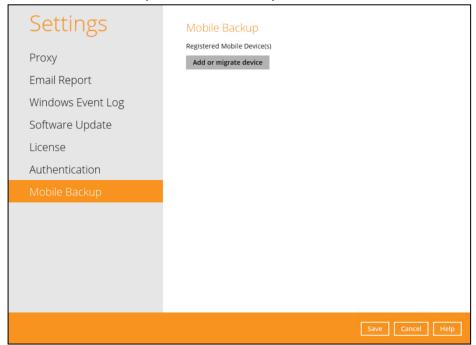
1. Click **Delete** icon on the right side of the registered mobile device.



2. A confirmation message will appear, click Yes to proceed. Otherwise, click No.



3. Mobile device is successfully removed along with any photos, videos, documents and 2FA accounts backed up in the mobile backup destination.



8.8 Utilities

This feature allows user to perform **quality check** of the index file and backed-up data, **free up storage space**, **delete**, and **decrypt** backed-up data.



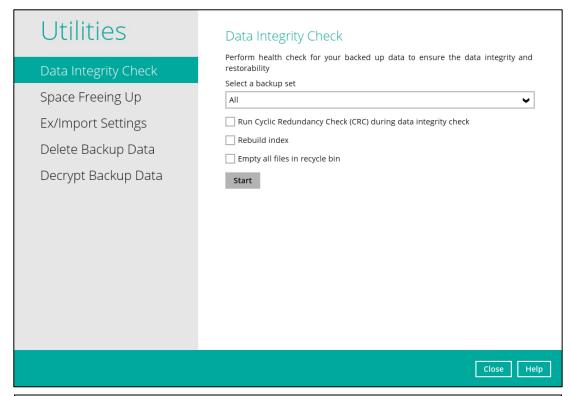
There are five (5) options available for this feature:

- Data Integrity Check
- Space Freeing Up
- Ex/Import Settings
- Delete Backup Data
- Decrypt Backup Data

8.8.1 Data Integrity Check

The Data Integrity Check (DIC) is used to identify the data in the backup set that has indexrelated issues, remove any corrupted file(s) from the backup destination(s) to ensure the integrity of the backup data and its restorability, and update the storage statistics.

For an efficient management of overall storage size of the backup destination(s), the data integrity check job will perform check for the backup destination(s) to remove old index files that are more than ninety (90) days old in the backup job folder(s).



NOTE

- Data Integrity Check CANNOT fix or repair files that are already corrupted.
- 2. Data Integrity Check can only be started if there is NO active backup or restore job(s) running on the backup set selected for the DIC job. As the backup, restore and data Integrity check are using the same index for read and write operations. Otherwise, an error message will be displayed in the post-DIC to indicate the data integrity check is completed with error(s) and that the data integrity check had skipped a backup set with an active backup job.

Run Cyclic Redundancy Check (CRC)

When this option is enabled, the DIC will perform check on the integrity of the files on the backup destination(s) against the checksum file generated at the time of the backup job. If there is a discrepancy, this indicates that the files on the backup destination(s) are corrupted.

These corrupted files will be removed from the backup destination(s). If these files still exist on the client machine on the next backup job, the CloudBacko Pro will upload the latest copy. However, if the corrupted files are in retention area, they will not be backed up again as the source file has already been deleted from the client machine.

The time required to complete a data integrity check depends on the number of factors such as:

- number of files and/or folders in the backup set(s)
- bandwidth available on the client computer
- hardware specifications of the client computer such as, the disk I/O and CPU performance

NOTE

- For user(s) with metered internet connection, additional data charges may be incurred
 if the Cyclic Redundancy Check (CRC) is enabled. As CRC data involves downloading
 the data from the backup destination(s) to the client machine in order to perform this
 check.
- 2. To find out how much data is downloaded from the backup destination(s) for the CRC check, please refer the value for Utilities in the <u>Data Transfer Statistics</u> on <u>Ch. 7.5.3</u>.

Rebuild Index

When this option is enabled, the data integrity check will start rebuilding corrupted index and/or broken data blocks if there are any.

Empty all files in recycle bin

When this option is enabled, all the files in the Recycle Bin will be deleted.



There are four (4) options in performing the Data Integrity Check:

Option 1 Run Cyclic Redundancy Check (CRC) during data integrity check Rebuild index Empty all files in recycle bin Start	For checking of index and data.
Option 2 Run Cyclic Redundancy Check (CRC) during data integrity check Rebuild index Empty all files in recycle bin Start	For checking of index and integrity of files against the checksum file generated at the time of the backup job.
Option 3 ☐ Run Cyclic Redundancy Check (CRC) during data integrity check ☑ Rebuild index ☐ Empty all files in recycle bin Start	For checking and rebuilding of index.
Option 4 ✓ Run Cyclic Redundancy Check (CRC) during data integrity check ✓ Rebuild index ☐ Empty all files in recycle bin Start	For checking of index, integrity of files against the checksum file generated at the time of the backup job and rebuilding of index.

The following diagrams show the detailed process of the Data Integrity Check (DIC) in four (4) modes:

Option 1

Disabled Run Cyclic Redundancy Check (CRC) and Rebuild index (Default mode)

Option 2

Enabled Run Cyclic Redundancy Check (CRC) and Disabled Rebuild index

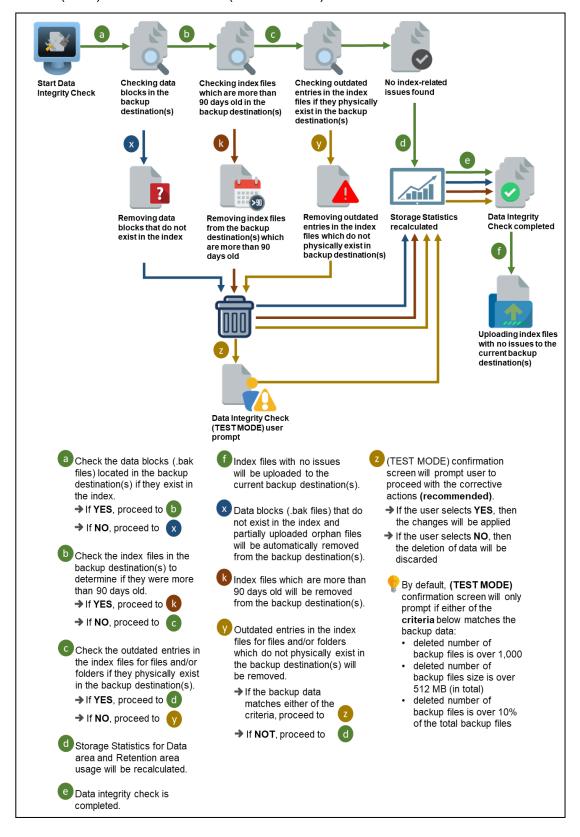
Option 3

Disabled Run Cyclic Redundancy Check (CRC) and Enabled Rebuild index

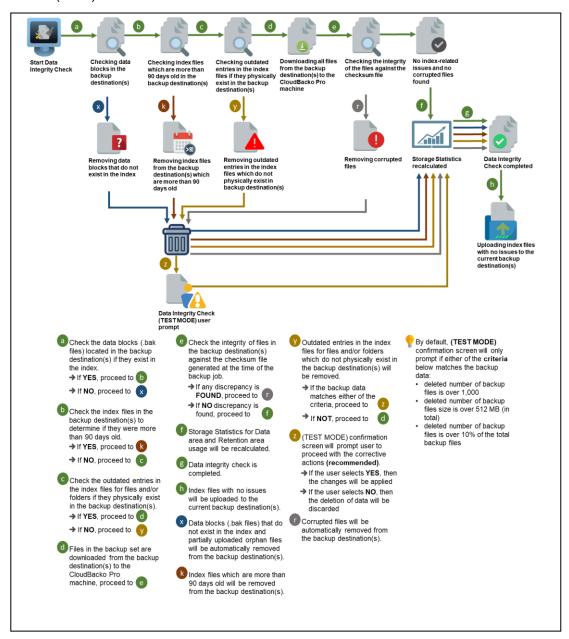
Option 4

Enabled Run Cyclic Redundancy Check (CRC) and Rebuild index.

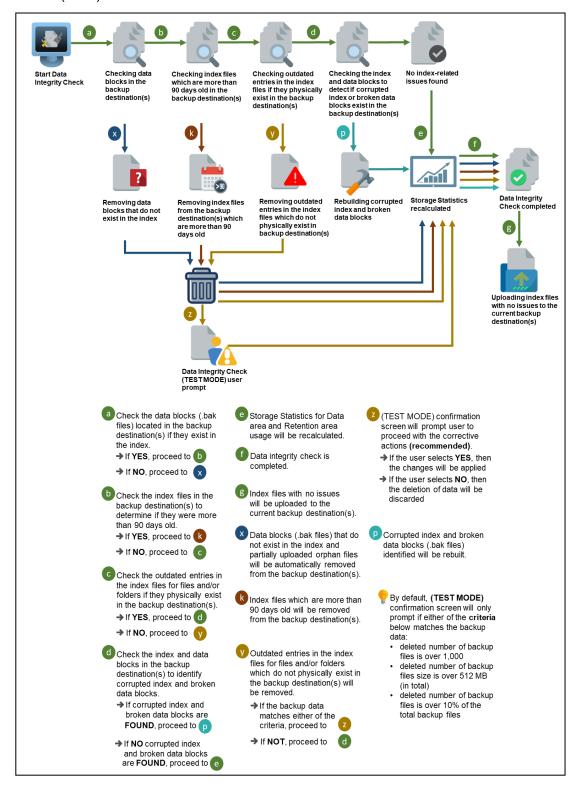
Option 1: Disabled Data Integrity Check (DIC) Process with Run Cyclic Redundancy Check (CRC) and Rebuild Index (Default mode)



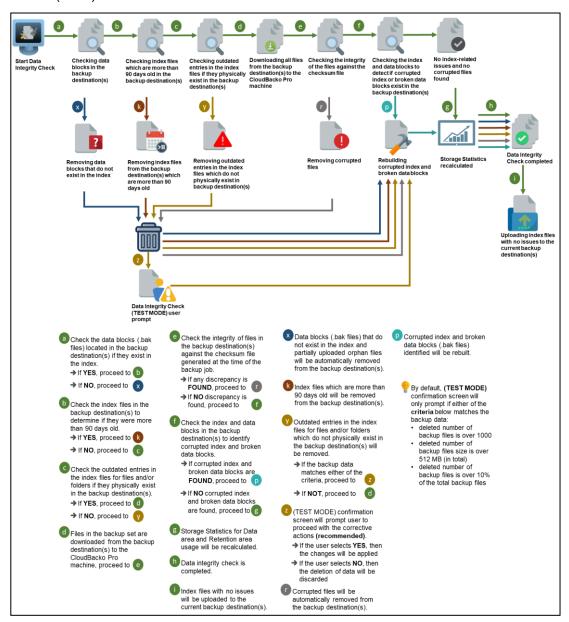
Option 2: Enabled Data Integrity Check (DIC) Process with Run Cyclic Redundancy Check (CRC) and Disabled Rebuild Index



Option 3: Disabled Data Integrity Check (DIC) Process with Run Cyclic Redundancy Check (CRC) and Enabled Rebuild Index



Option 4: Enabled Data Integrity Check (DIC) Process with Run Cyclic Redundancy Check (CRC) and Rebuild Index

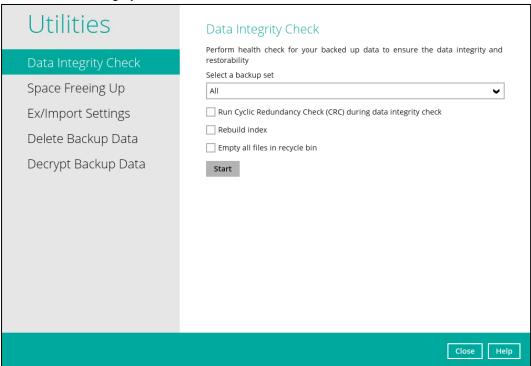




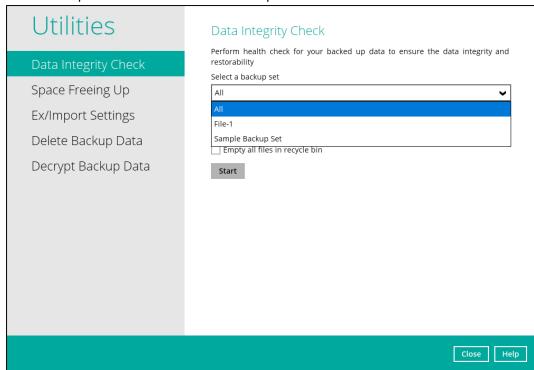
Perform a Data Integrity Check

To perform a Data Integrity Check, follow the instructions below:

1. Go to the Data Integrity Check tab in the Utilities menu.

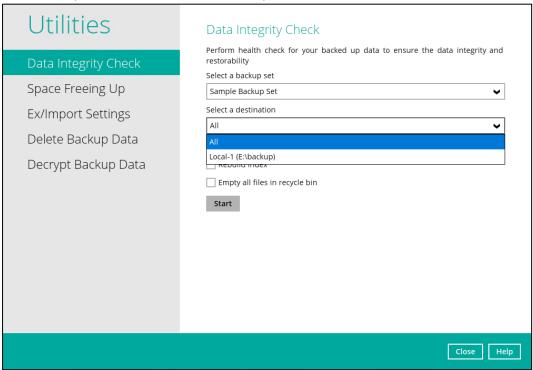


2. Click the drop-down button to select a backup set.

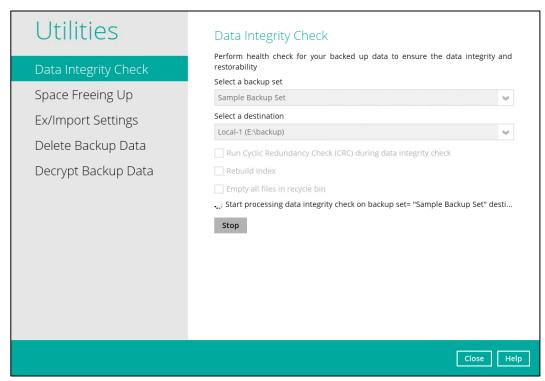




3. Click the drop-down button to select a backup destination.

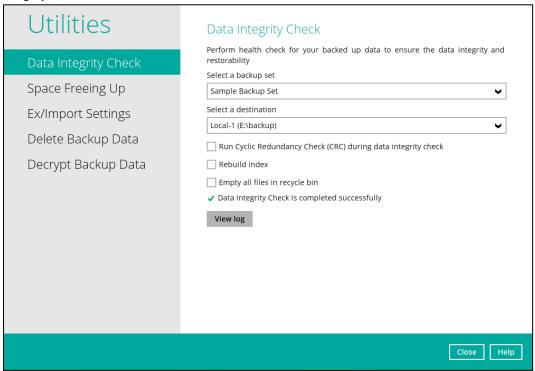


- 4. Click the Start button to begin the Data Integrity Check.
- 5. Data Integrity Check will start running on the selected backup set(s) and backup destination(s).

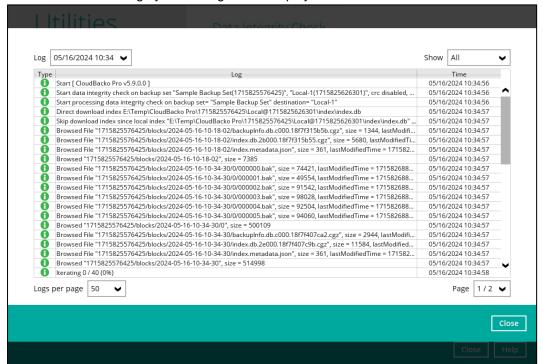




6. Once the DIC is complete, click the **View log** button to check the detailed process of the data integrity check.

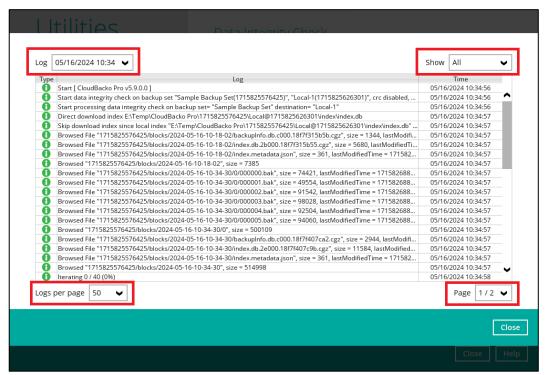


7. The detailed Data Integrity Check log will be displayed.



For further viewing of the detailed DIC log, there are four options that can be used:

- Log filter
- Show filter
- Logs per page
- Page

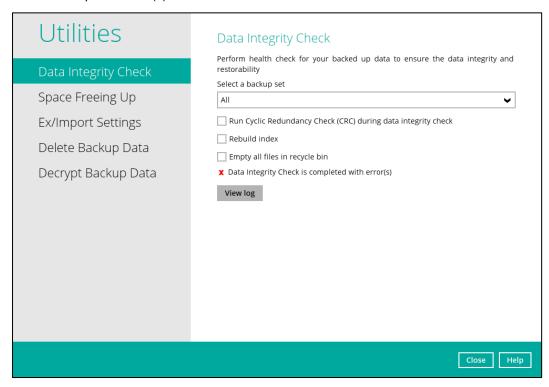


Control	Screenshot	Description
Log filter	Log 05/16/2024 10:34 Type 05/16/2024 10:16 05/16/2024 10:20 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 05/16/2024 10:34 0	This option can be used to display logs of the previous data integrity check jobs.
Show filter	Show All All 09 Information 99 Warning 99 Error	This option can be used to sort the data integrity check log by its status (i.e. All, Information, Warning, and Error). With this filter, it will be easier to sort the DIC logs by its status especially for longer data integrity check logs.
Logs per page	Logs per page 50 V 50 100 200	This option allows user to control the displayed number of logs per page.
Page	Page 1/2 V	This option allows user to navigate the logs to the next page(s).

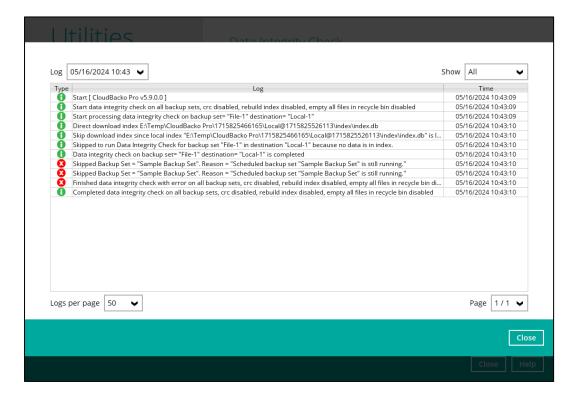


8.8.1.1 Data Integrity Check Completd with Errors

The following screenshot is an example of a Data Integrity Check completed with error(s). A Data Integrity Check is run on a backup set with an active backup job running which resulted the Data Integrity Check to stop with error(s).



Clicking the View log button will display the details of the Data Integrity Check job error(s).



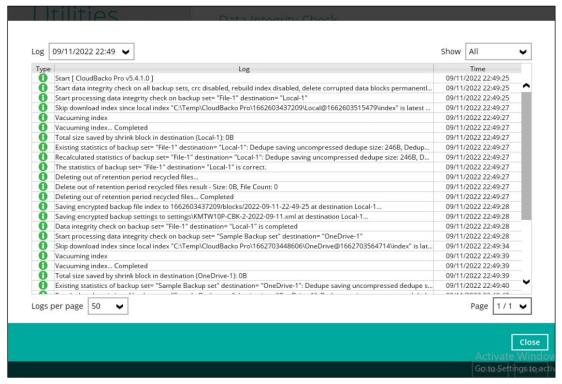


8.8.1.2 Data Integrity Check Result

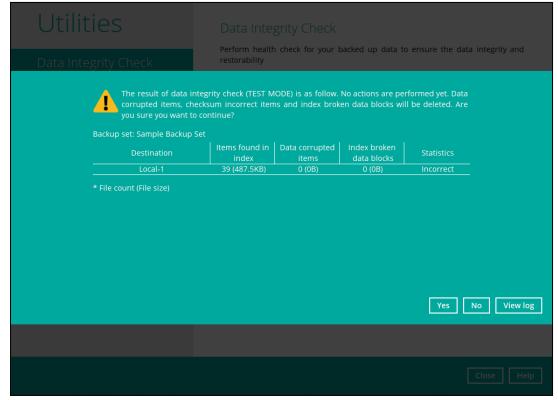
There are two possible outcomes after the completion of a data integrity check:

- Data Integrity Check is completed successfully with no data corruption/issues detected
- Corrupted data (e.g. index files, checksum files and/or broken data blocks) has been detected

The screenshot below shows an example of a data integrity check log with NO data corruption/issues detected.



If corrupted data is happened to be found, the (TEST MODE) confirmation screen will be displayed.



This is to inform the user of the following details:

- Backup set that contains an error
- Backup Destination
- Items found in index
- Data corrupted items
- Index broken data blocks
- Statistics (i.e. Correct or Incorrect)

8.8.1.3 Test Mode Confirmation

The (TEST MODE) confirmation will ONLY prompt if either of the **criteria** below matches the backup data during the data integrity check operation:

- deleted number of backup files is over 1,000
- deleted number of backup file size is over 512 MB (in total)
- deleted number of backup files is over 10% of total backup files

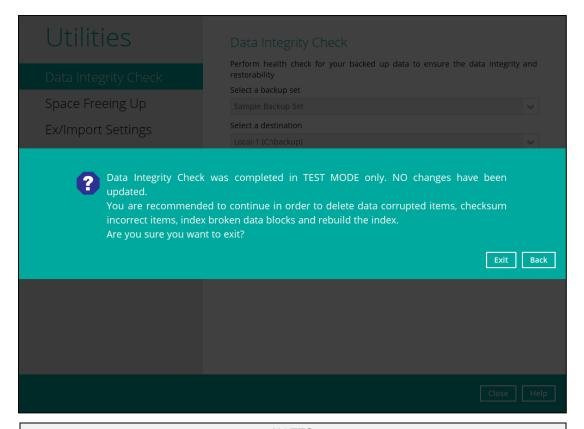
Otherwise, the Data Integrity Check job will automatically take corrective actions.

There are three options on the (TEST MODE) confirmation prompt:

Control	Screenshot	Description	
Yes	Yes	Corrupted data (e.g. index files, checksum files and/or broken data blocks) will be deleted and statistics will be recalculated.	
No	No	No action will be taken and a prompt message will be displayed.	
View log		The detailed process of the data integrity check will be displayed.	

Clicking **No** will display the following screen:

- If the Exit button is clicked, the data integrity check result will be discarded.
- If the Back button is clicked, it will go back to the (TEST MODE) confirmation screen.

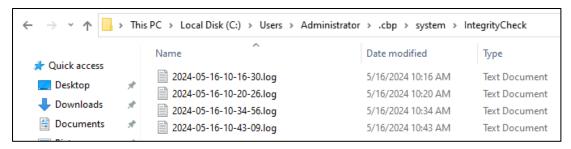


NOTES

- 1. It is strongly recommended to apply corrective actions when the (TEST MODE) confirmation screen pops up (clicking the Yes button). This is to ensure that the remaining corrupted file(s) will be removed from the backup destination(s), so on the next backup job, these files are backed up again if they are still present on the client machine. However, if the corrupted files are in retention area, then they will not be backed up again as the source file has already been deleted from the client machine.
- If the DIC detects data blocks (.bak files) in the backup destination(s) that does not have related index entries, then these physical data blocks will be automatically removed from the backup destination(s) without the (TEST MODE) confirmation prompt.

Besides viewing the Data Integrity Check logs directly on the CloudBacko Pro, they can be viewed on the file system of the CloudBacko Pro machine. For CloudBacko Pro Windows, the DIC logs are located in:

%UserProfile%\cbp\system\IntegrityCheck



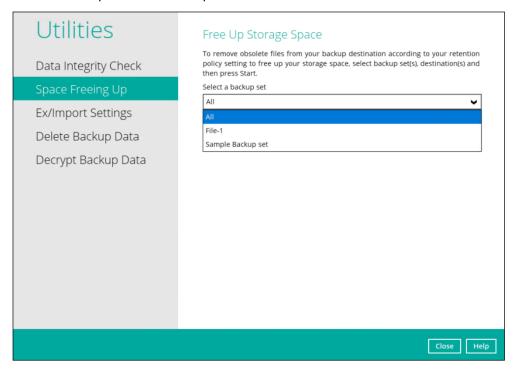


8.8.2 Space Freeing Up

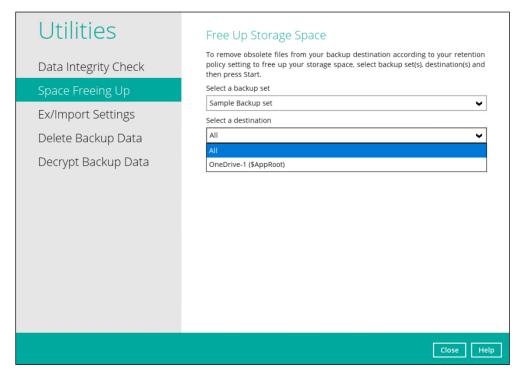
This feature is used to remove obsolete file(s) from your selected backup set and destination (manually start retention policy). After the Space Freeing Up job is completed, the storage statistics of the backup set(s) are updated.

To perform deletion of backup data, follow the instructions below:

1. Select a backup set from the drop-down list.

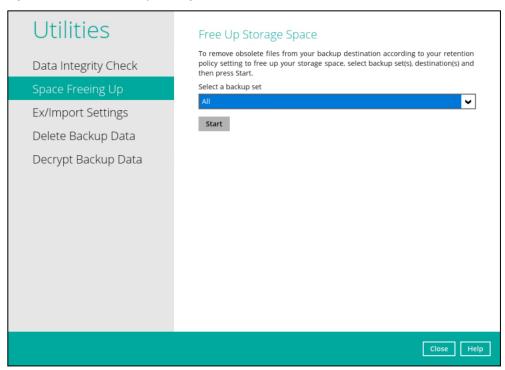


If you select a specific backup set, you will also have to choose a specific or **ALL** destination.

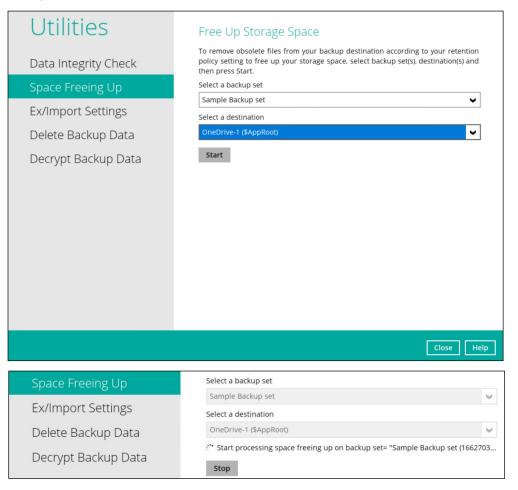




If you select ALL backup sets, you will not have to choose a destination.

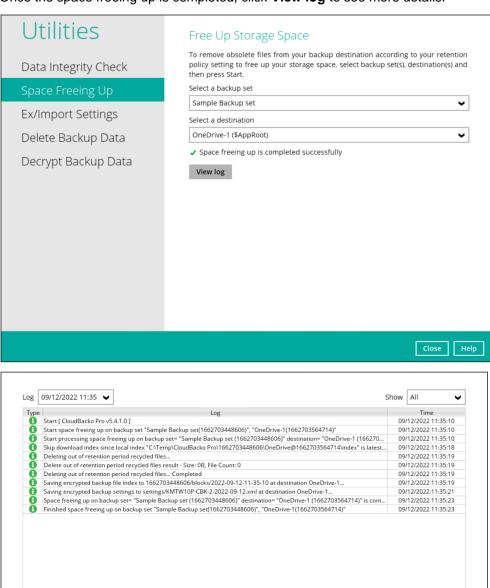


2. Once a backup set and destination have been selected, click **Start** to perform space free up.





3. Once the space freeing up is completed, click **View log** to see more details.



Logs per page 50

Page 1/1 **▼**

8.8.3 Ex/Import Settings

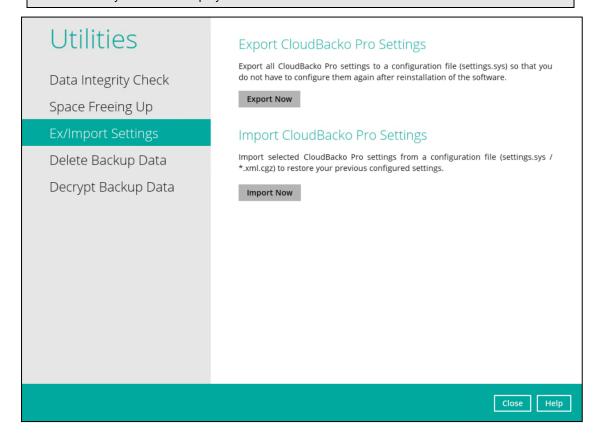
This feature is used to export and import CloudBacko Pro Settings to the **settings.sys** file, this includes information on:

- Proxy Settings
- Email Report Settings
- Software Update Settings
- Windows Event Log Settings (Windows Platform Only)
- Backup Set Settings

It is strongly recommended to export a copy of the configuration file (settings.sys) whenever there are general settings changes to CloudBacko Pro, new backup sets added, or updates to existing backup sets.

WARNING!

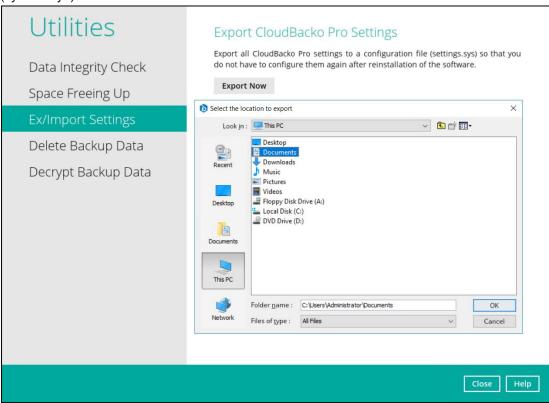
A separate copy of the settings.sys file should be saved in another location for safe keeping. Otherwise, If the machine where the CloudBacko Pro is installed on suffers a disk or hardware failure or is stolen and a copy of the settings.sys file is not available, it will not be possible to access and recover any data backed up by CloudBacko Pro.



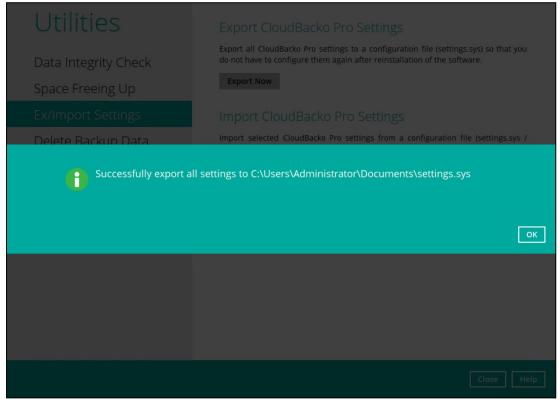


Export CloudBacko Pro Settings

To export, click the **Export Now** button. Select a path where the CloudBacko Pro configuration file (system.sys) will be stored then click **OK**.



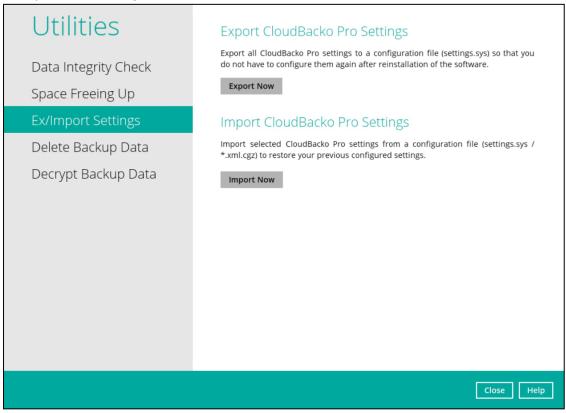
If the system.sys file is successfully exported to the preferred path, it will display a message containing the status and path of the CloudBacko Pro configuration file.



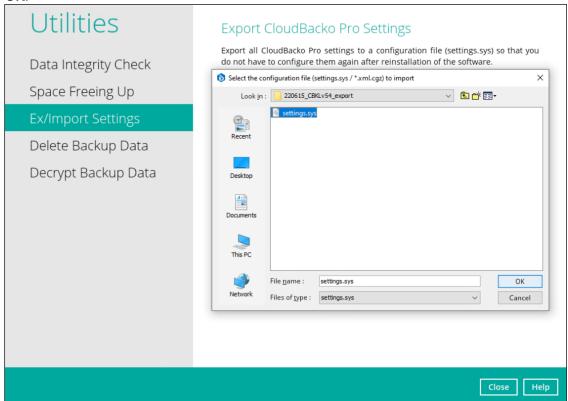


Import CloudBacko Pro Settings

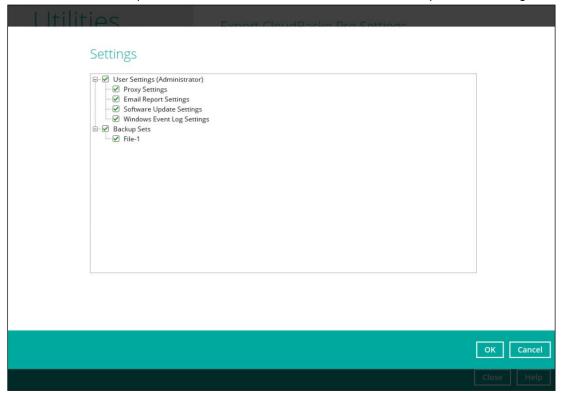
To import, click the **Import Now** button.



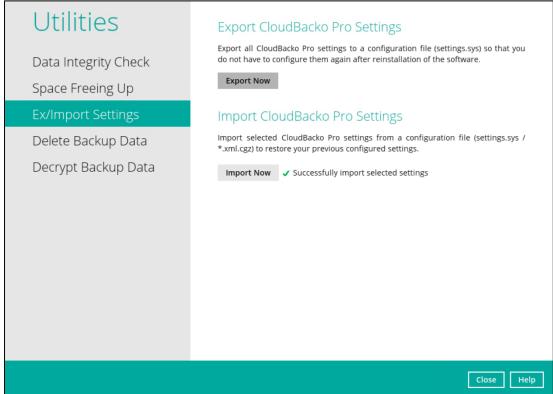
Select a path where the CloudBacko Pro configuration file (system.sys / .xml, .cgz) is stored then click **OK**.



It will show the following Settings: User Settings and Backup Sets. By default, all settings are included, however, there is an option to uncheck the checkboxes and choose the preferred settings.



If the system.sys / .xml, .cgz file is successfully imported, it will display a check sign besides the **Import Now** button with a successful status of imported settings.



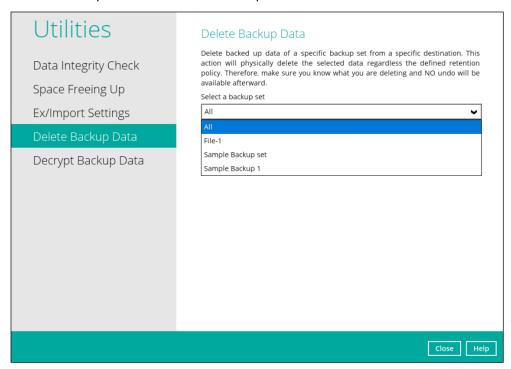


8.8.4 Delete Backup Data

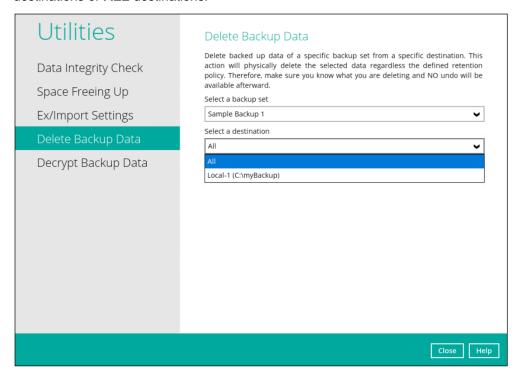
This feature is used to permanently delete backed up data from a backup set(s), destination(s), backup job, or delete all backed-up data. After the data is deleted, the storage statistics of the backup set(s) are updated.

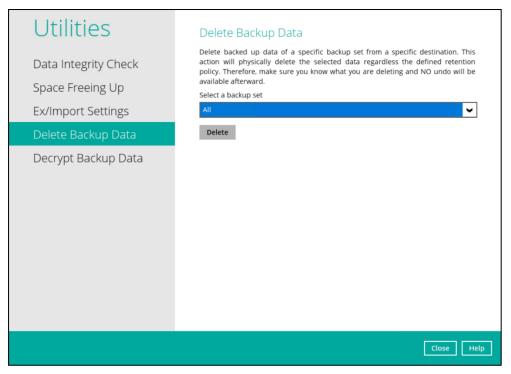
To perform deletion of backup data, follow the instructions below:

1. Select a backup set to delete from the drop-down list.



If you select a specific backup set, then you will also have to select a specific destinations or **ALL** destinations.

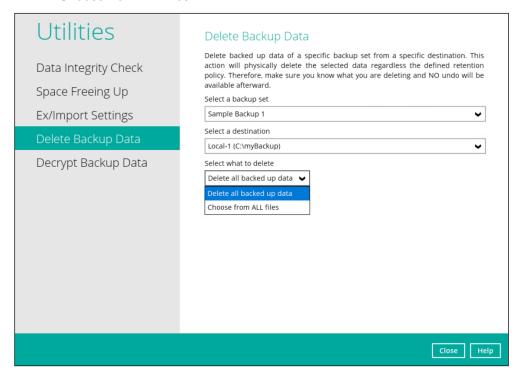




2. If you select ALL backup sets, you will not have to choose a specific destination.

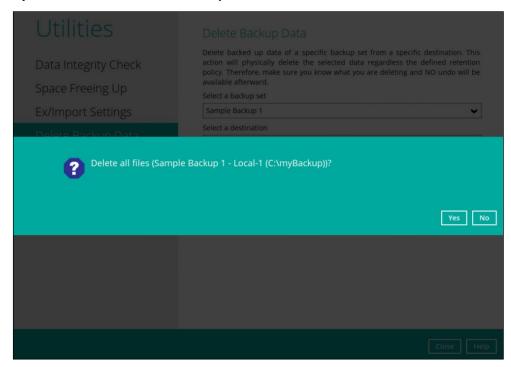
There are two (2) options from the type of file(s) to delete if you select a specific backup set and a specific destination:

- Delete all backed up data
- Choose from ALL files

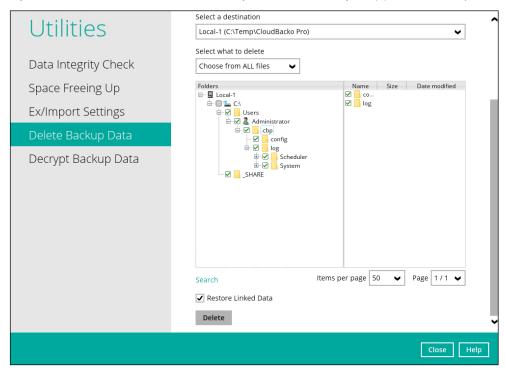




All backed up files from the chosen backup set and selected destination will be deleted if you choose "**Delete all backed up data**". Click **Yes** to confirm.



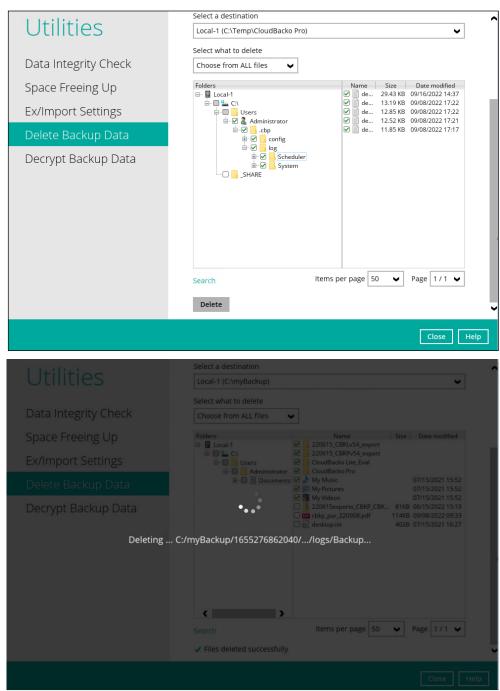
If you select "Choose from ALL files", you can select any file(s) in the backup set.



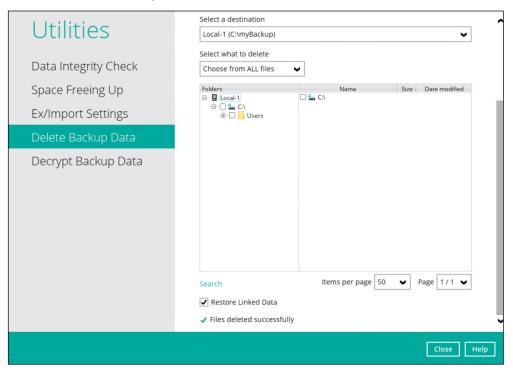
You also have the option to click the Search link to do an advance search.



3. Click the **Delete** button, then click **Yes** to start the deletion of files.



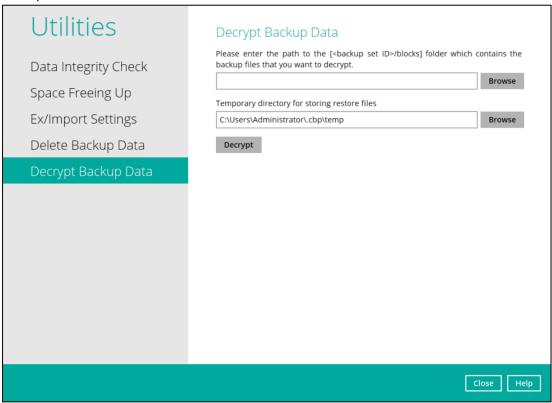
4. Files deleted successfully.



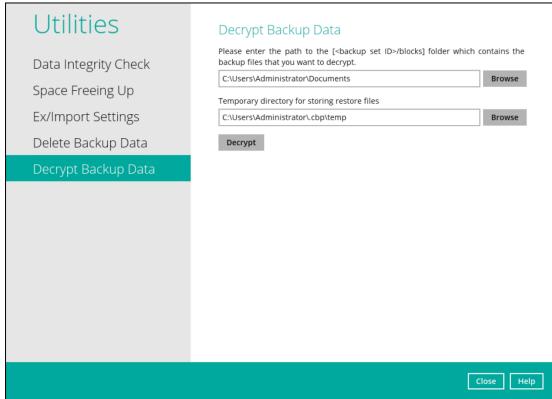


8.8.5 Decrypt Backup Data

This feature is used to restore raw data by using the **data encryption key** that was set for the backup set.



Enter the path of the folder which contains the backup files you want to decrypt. Click **Decrypt** to start decrypting backup data.



8.9 **Buy**

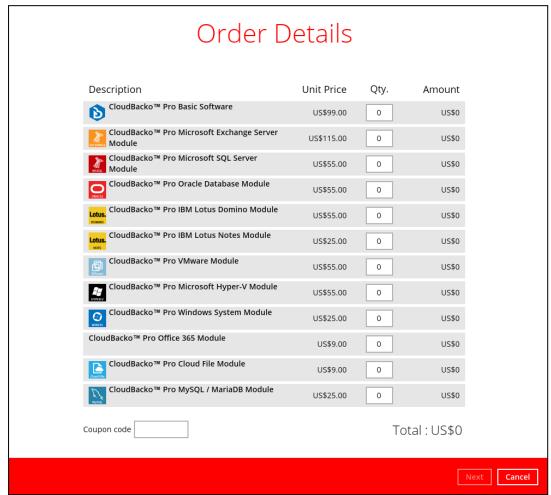
This feature allows customer to buy additional software license and or modules.

This feature allows,

- new customers who are evaluating the product using a trial key to purchase a license key and/or module
- existing customers to purchase additional software license and/or module

Please refer to the CloudBacko forum article for the details on the license purchase instructions: How to Buy CloudBacko Pro

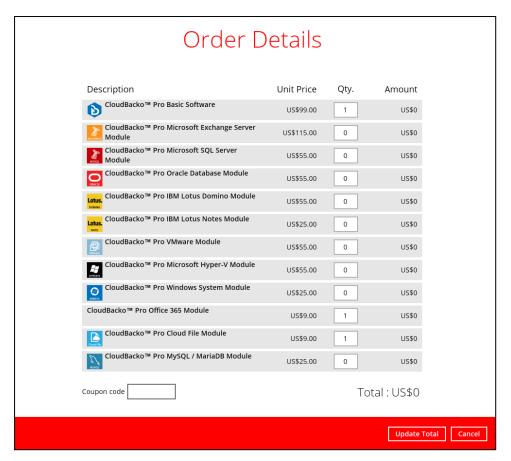




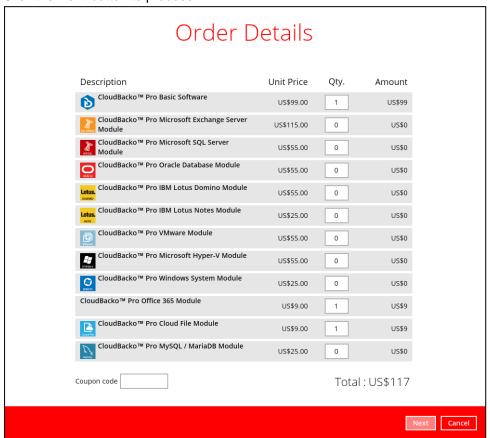
To purchase additional software license and/or modules, follow the instructions below:

1. Select the software license and/or modules by adding a number on the **Qty** field then click the **Update Total** button to show the updated cost.

If Coupon code is available, input it in the "Coupon code" field.



Click the Next button to proceed.



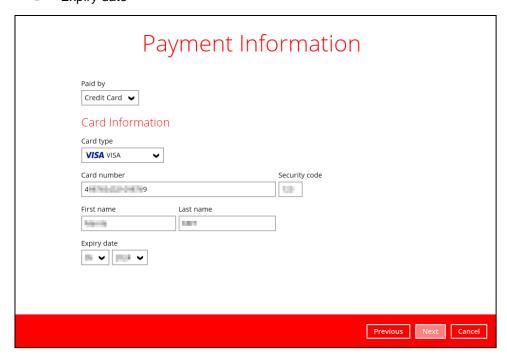
2. The Payment Information screen will be displayed. Select the payment mode, Credit Card or TT (Telegraphic Transfer), by clicking the dropdown **Paid by**.



8.9.1 Credit Card

Payment through online via a Credit Card (Visa or Mastercard is accepted) is the quickest way to purchase a software license or additional add-on modules. The only requirements are a valid Credit Card and Contact Information. Once the payment is confirmed, purchased software license or add-on modules will be available immediately.

- 1. Complete the following fields then click the Next button to proceed.
 - Card type
 - VISA
 - Master Card
 - Card number
 - Security code
 - First name
 - Last name
 - Expiry date





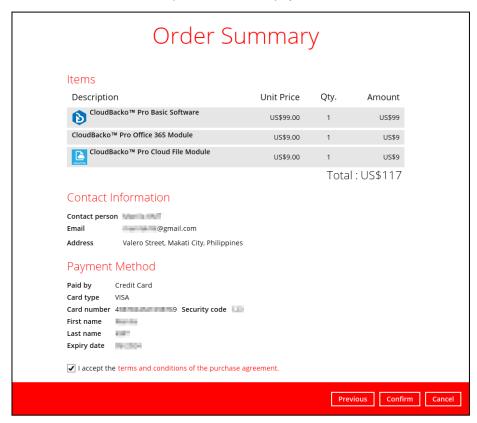
- 2. Complete the following fields for the Contact Information then click the **Next** button to proceed.
 - Contact person
 - Email for receiving receipt
 - Company name (optional)
 - VAT number (optional)
 - Street line 1
 - Street line 2 (optional)
 - City
 - State / Province / Territory (optional)
 - Postal / Zip code (optional)
 - Country



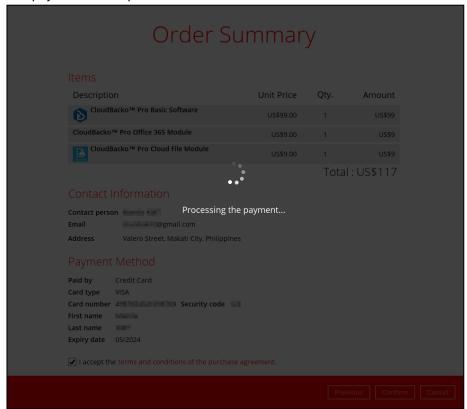


3. In the Order Summary screen, order Items, Contact Information, and Payment Method are displayed.

Tick the "I accept the terms and conditions of the purchase agreement" and click the Confirm button to proceed with the payment.

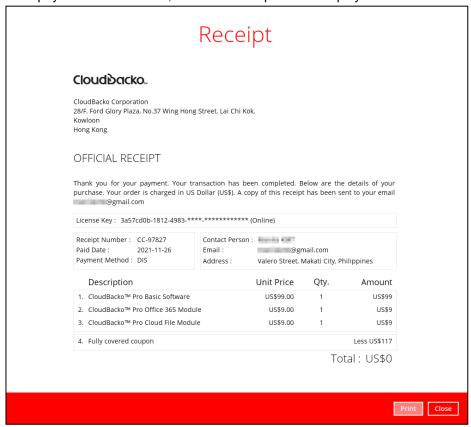


4. The payment will be processed.

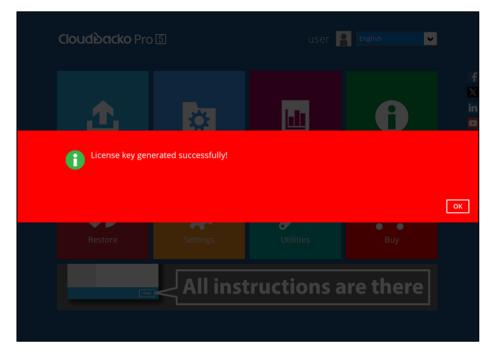




If the payment is successful, an official receipt will be displayed.

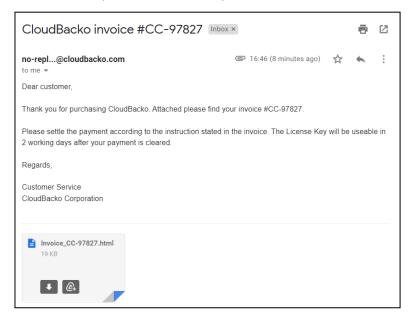


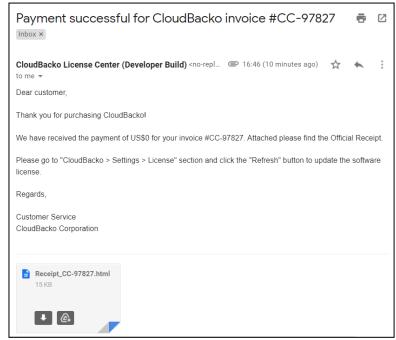
The license key on the CloudBacko Pro is now successfully applied.





These are sample emails for the copies of Invoice and Official Receipt.







Please keep the copy of your invoice as it contains half of your license key. The other half of the license key can be found on CloudBacko Pro. Both parts of the license key are required if you need to reinstall CloudBacko Pro or apply the license to another installation.

Please check this article for more information:

Where can I find my full CloudBacko Pro license key?





However, if the payment is not successful, this prompt message will appear.

It will state the reason and four (4) options for the failed transaction:

Retry

This will process the payment again.

Try another card

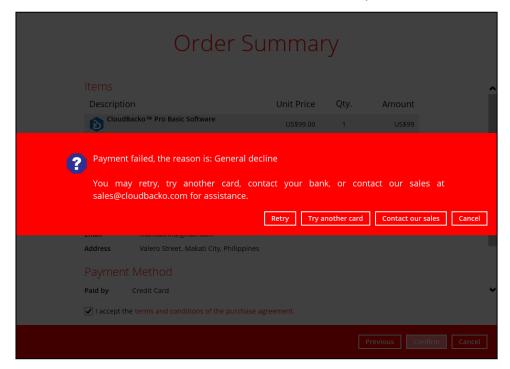
This will redirect you to the Credit Card Information and input another Credit Card details.

Contact our sales

This will redirect you to the CloudBacko website.

Cancel

This will cancel the transaction and exit from the Buy module.

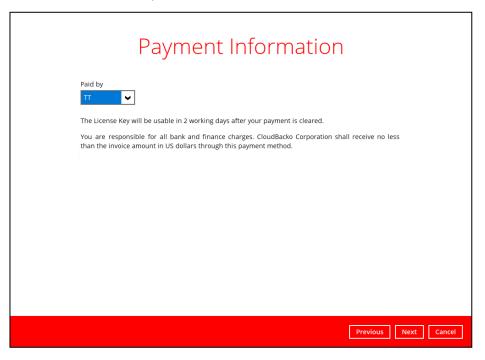


8.9.2 TT (Telegraphic Transfer)

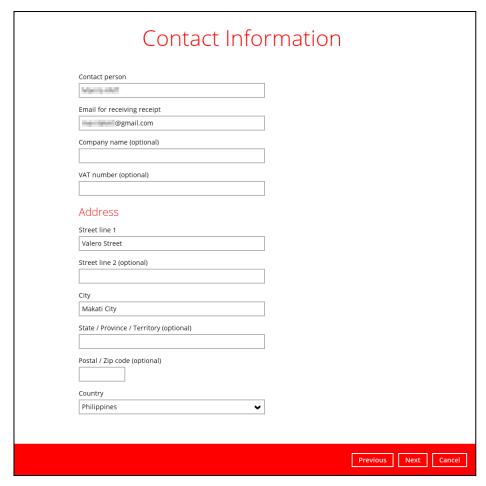
TT (Telegraphic Transfer) is an electronic mode of transferring funds from bank to bank. Processing time can take up to two weeks to settle, depending on the origin, destination, and individual bank.

This payment mode can be used to purchase software licenses and/or additional add-on modules for trial users and for paid license users who want to avail add-on modules.

1. Click the **Next** button to proceed.



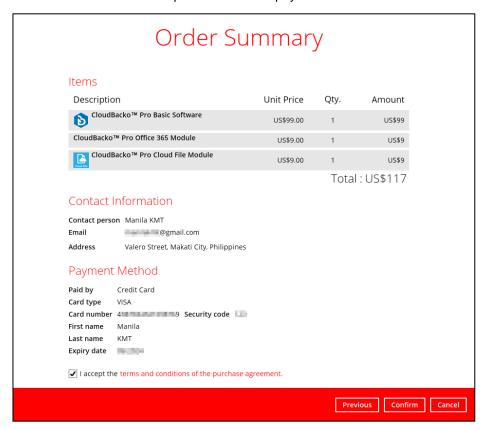
- Complete the following fields for the Contact Information then click the Next button to proceed.
 - Contact person
 - Email for receiving receipt
 - Company name (optional)
 - VAT number (optional)
 - Street line 1
 - Street line 2 (optional)
 - City
 - State / Province / Territory (optional)
 - Postal / Zip code (optional)
 - Country



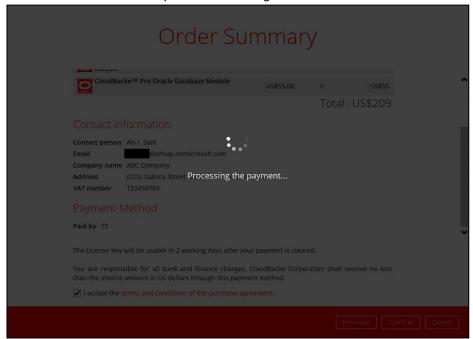
3. In the Order Summary screen, order Items, Contact Information, and Payment Method are displayed.



Tick the "I accept the terms and conditions of the purchase agreement" and click the Confirm button to proceed with the payment.

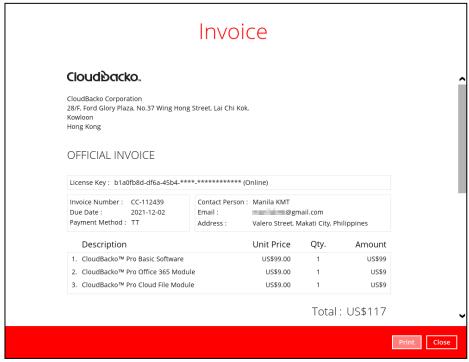


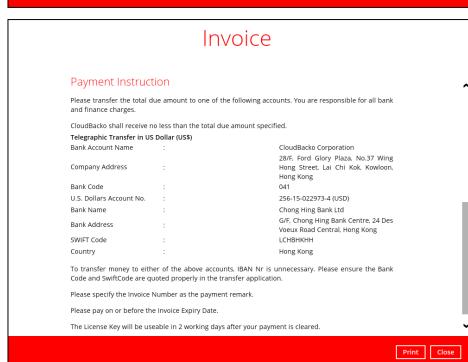
4. The invoice for the license purchase will be generated.



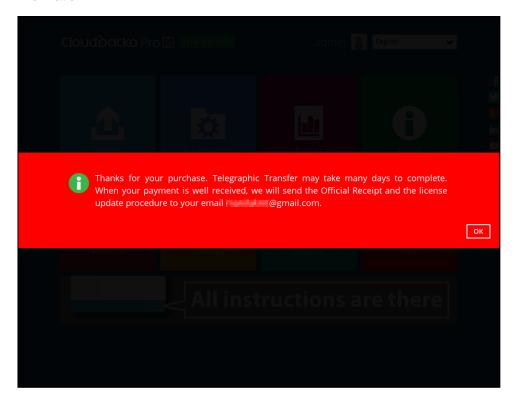


The Invoice will be displayed. Click the **Print** button to print out the invoice and bring it to your bank to arrange TT payment.

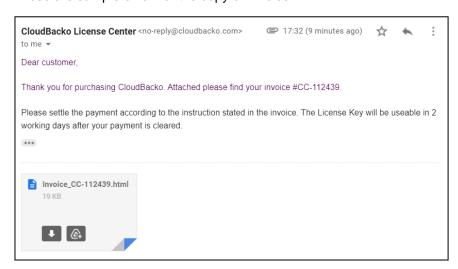




This prompt message will appear to inform customer that if the payment through telegraphic transfer is successful, the official receipt, software license, and license update procedure will be sent to the email address indicated in the Contact Information.



These are sample email for the copy of Invoice.





CloudBacko Corporation

28/F, Ford Glory Plaza, No.37 Wing Hong Street, Lai Chi Kok, Kowloon, Hong Kong

OFFICIAL INVOICE

License Key:	****** (Online)			
Invoice Number:	CC-112439	Contact Person:	Manila KMT	
Invoice Expiry Date:	2021-12-02	Email:	@gmail.com	
Payment Method:	TT	Company Name:		
		Address:	Valero Street, Makati City, Philippines	
		VAT:		

Description Unit Price Qty Amount CloudBacko™ Pro Basic Software
 CloudBacko™ Pro Office 365 Module
 CloudBacko™ Pro Cloud File Module US\$99.00 US\$99 US\$9.00 US\$9 US\$9.00 US\$9

Total: US\$117

Payment Instruction

Please transfer the total due amount to one of the following accounts. You are responsible for all bank and finance charges. CloudBacko shall receive no less than the total due amount specified.

Telegraphic Transfer in US Dollar (US\$)

Bank Account Name : CloudBacko Corporation
Company Address : 28/F, Ford Glory Plaza, No.37 Wing Hong Street, Lai
Chi Kok, Kowloon, Hong Kong

Bank Code : 041

U.S. Dollars Account No. : 256-15-022973-4 (USD) Bank Name : Chong Hing Bank Ltd

: G/F, Chong Hing Bank Centre, 24 Des Voeux Road Bank Address

Central, Hong Kong

SWIFT Code : LCHBHKHH Country : Hong Kong

To transfer money to either of the above accounts, IBAN Nr is unnecessary. Please ensure the Bank Code and SwiftCode are quoted properly in the transfer application.

Please specify the Invoice Number as the payment remark

Please pay on or before the Invoice Expiry Date.

The License Key will be useable in 2 working days after your payment is cleared.



8.10 Social Media Icons

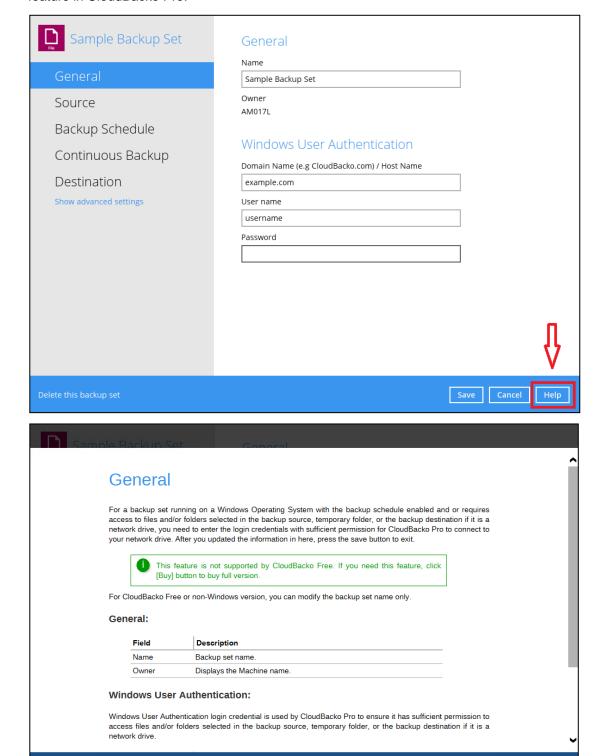
These are the social media accounts of CloudBacko. Each icon links to the CloudBacko page or channel.





8.11 Online Help

This allows the user to view the summary of information and instructions of each available feature in CloudBacko Pro.



Close

8.12 System Tray

If CloudBacko Pro is installed in the computer, you will see a CloudBacko Pro icon in the taskbar at the lower right corner of the screen.



When you right-click the CloudBacko Pro icon, a control menu will pop-up

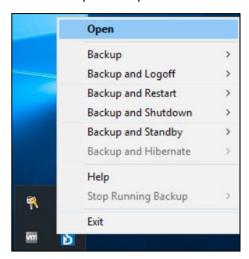


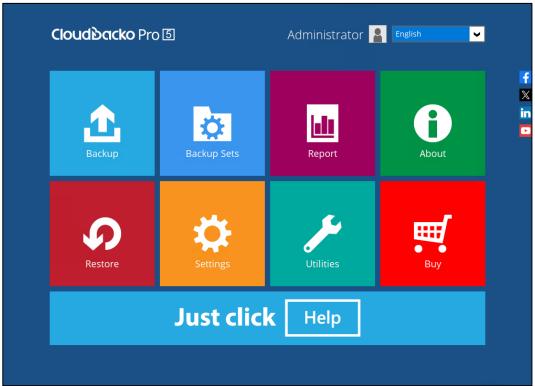
CloudBacko Pro system tray has ten (10) controls:

- Open
- Backup
- Backup and Logoff
- Backup and Restart
- Backup and Shutdown
- Backup and Standby
- Backup and Hibernate
- Help
- Stop Running Backup
- Exit

8.12.1 Open

Select this option to open the CloudBacko Pro.







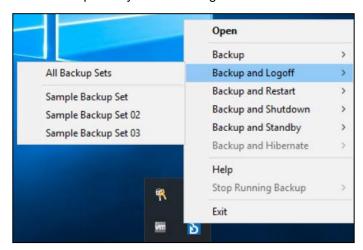
8.12.2 Backup

If you want to perform a backup without going to the interface, hover the mouse to this option and select the backup set you want to back up.



8.12.3 Backup and Logoff

Select this option if you want to logoff Windows after a manual backup job is done.



8.12.4 Backup and Restart

Choose this option if you want the machine to restart after a manual backup job is done.





8.12.5 Backup and Shutdown

Choose this option if you want the machine to shut down after a manual backup job is done.



8.12.6 Backup and Standby

Choose this option if you want the machine to go on standby after a manual backup job is done.



8.12.7 Backup and Hibernate

Choose this option if you want the machine to hibernate after a manual backup job is done. This will be disabled if hibernate mode is not available on the Windows version you are using.

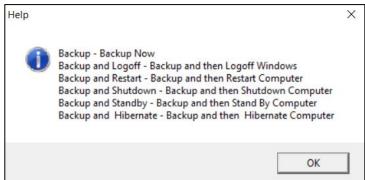


8.12.8 Help



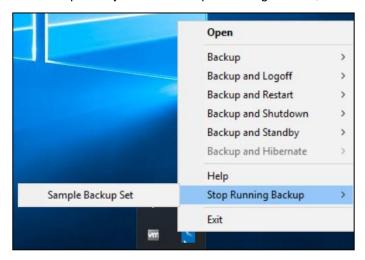
This tab will show you the function of each backup option.





8.12.9 Stop Running Backup

Use this option if you wish to stop a running manual, continuous or scheduled backup.

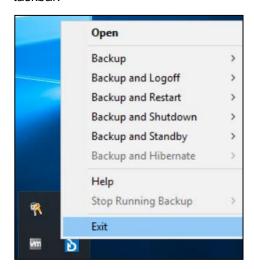


This option will be disabled if there is no backup job running.



8.12.10 Exit

Select this option if you want to close the application including the CloudBacko Pro icon at the taskbar.



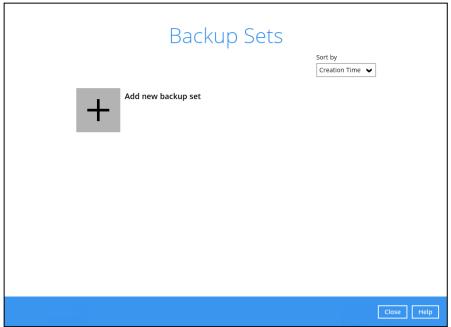


9 Create a Backup Set

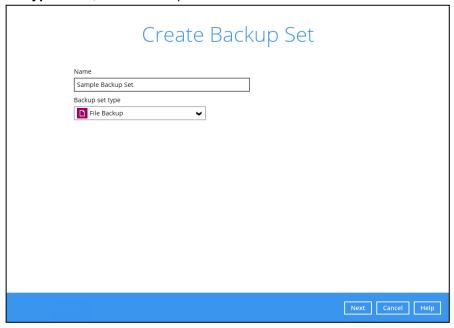
1. Click the **Backup Sets** icon on the main interface of CloudBacko Pro.



2. Create a new backup set by clicking + next to **Add new backup set**.

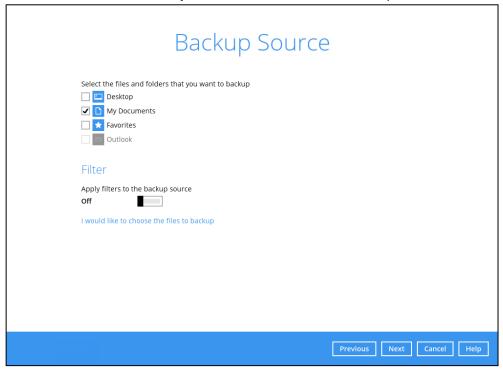


3. When the Create Backup Set window appears, name your new backup set, and select the **Backup** set type. Then, click **Next** to proceed.

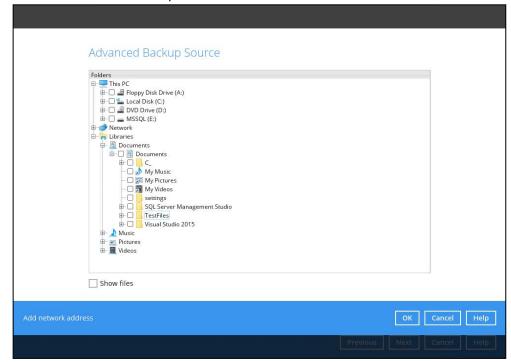




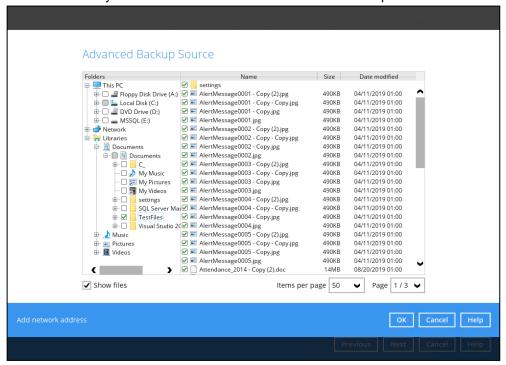
4. In the Backup Source window, select the source files and folders for backup. Click **I would like** to choose the files to backup to select individual files for backup.



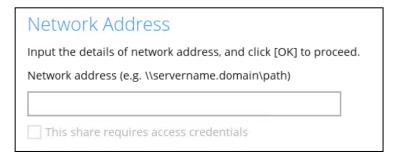
- 5. In the **Advanced Backup Source** window, there are three (3) ways to select file(s) and/or folder(s) for back up:
 - Select folder(s) to back up all files in the folder(s). Click **OK** to save the selection and close the Advanced Backup Source window.



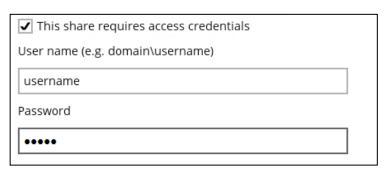
ii. Alternatively, if you want to back up only specific files instead of all files in your selected folder(s), select the **Show files** checkbox at the bottom of the screen. A list of files will appear on the right-hand side. Select the checkbox(es) next to the file(s) to back up. Then, click **OK** to save your selections and close the Advanced Backup Source window.



iii. Back up file(s) and/or folder(s) located in a network drive. Click the **Add network address** link at the botton of the screen. In the Network Address window, enter the network address.

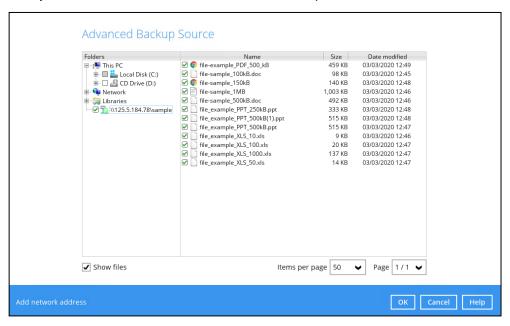


Once a network address is entered, **This share requires access credentials** will be enabled. Check the box beside it if access credentials are required to backup and enter the User name and Password. Otherwise leave it unchecked and click **OK**.

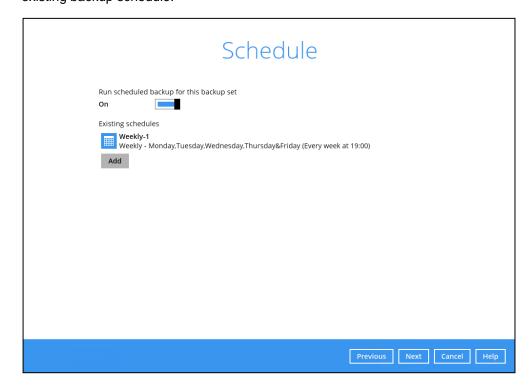




The network drive will now be added and automatically selected. There is also an option to select only specific file(s) to back up by checking the **Show files** checkbox. Click **OK** to save your selections and close the Advanced Backup Source window.

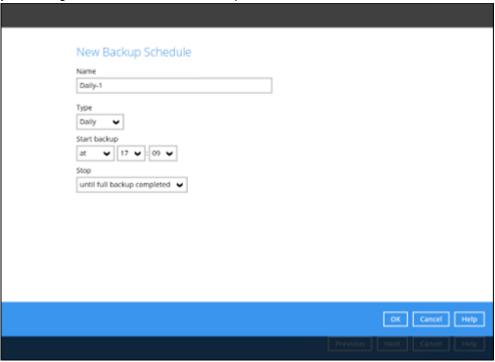


- 6. In the Backup Source window, click Next to proceed.
- 7. When the **Schedule** window appears, you can configure a backup schedule to automatically run a backup job at your specified time interval. In the Schedule window, the Run scheduled backup for this backup set is **On** by default.
 - In the default backup schedule, there will be a scheduled backup that will be performed daily at 8pm. You can leave it as is or you can modify it by clicking on the existing backup schedule.

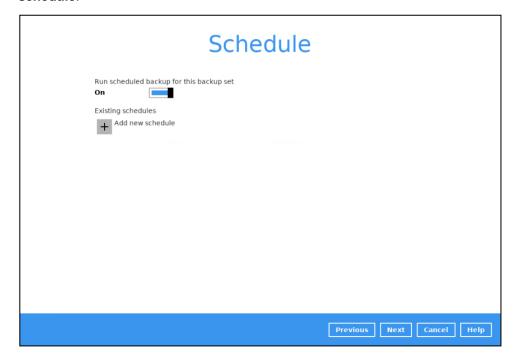




If you want to add another schedule, click the Add button. When the New Backup Schedule window appears, specify your backup schedule. Then, click OK to save your changes and close the New Backup Schedule window.

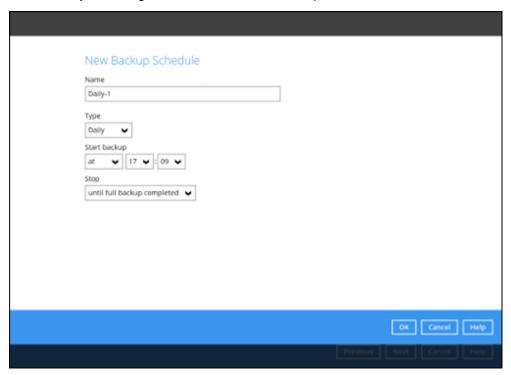


8. You can leave it as is if you want to add a schedule later. If you want to add a schedule now, switch **On** Run scheduled backup for this backup set. Then, click next to **Add new schedule**.

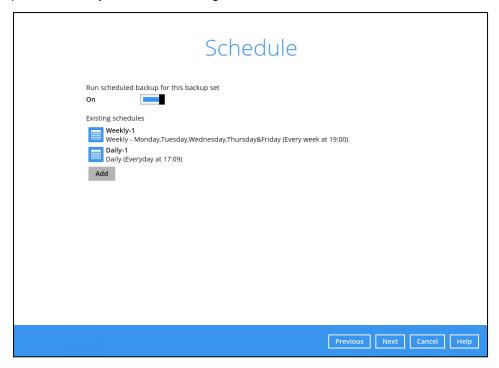




When the New Backup Schedule window appears, specify your backup schedule. Then, click **OK** to save your changes and close the New Backup Schedule window.

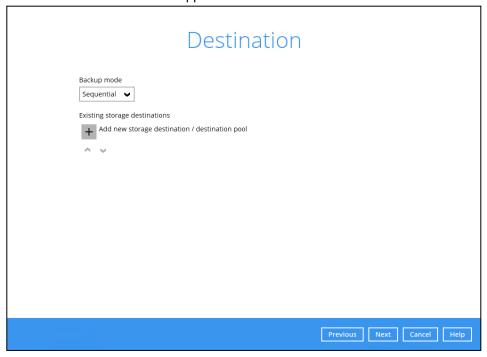


9. In case you have added a schedule, it will be shown in the Schedule window. Click **Next** to proceed when you are done setting.





10. The **Destination** window will appear.

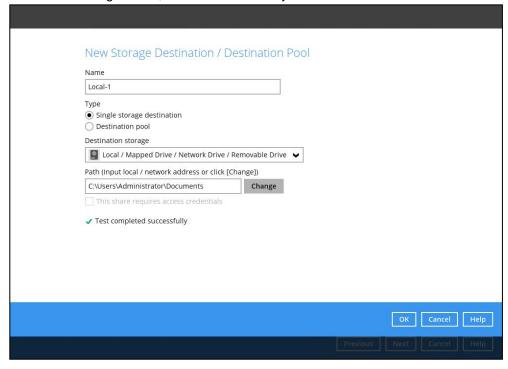


Select the appropriate option from the Backup mode dropdown menu.

- Sequential (default value) run backup jobs to each backup destination one by one
- Oconcurrent run backup jobs to all backup destinations at the same time

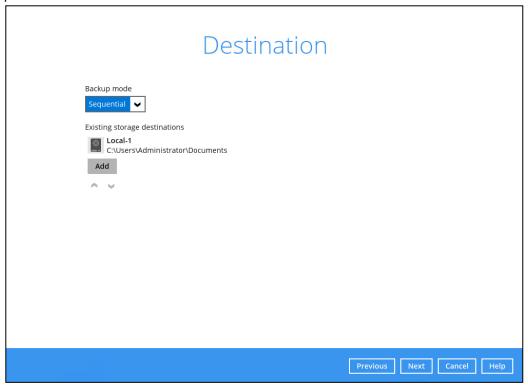
To select a backup destination for the backup data storage, click heat next to **Add new storage** destination / destination pool.

11. In the **New Storage Destination / Destination Pool** window, select the destination type and destination storage. Then, click **OK** to confirm your selection.

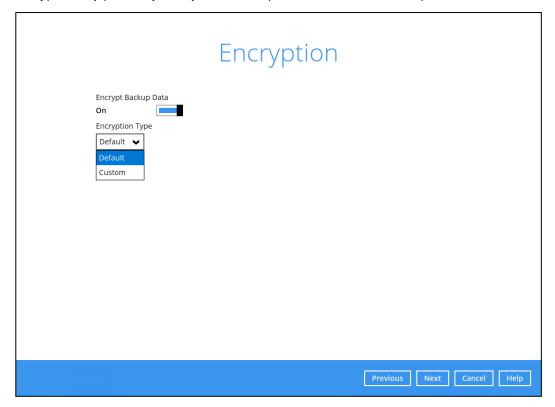




12. In the **Destination** window, your selected storage destination will be shown. Click **Next** to proceed.



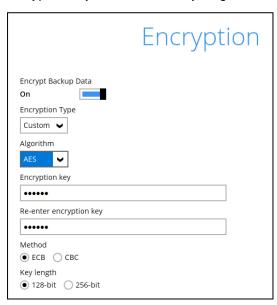
13. In the Encryption window, the default **Encrypt Backup Data** option is enabled with an encryption key preset by the system which provides the most secure protection.





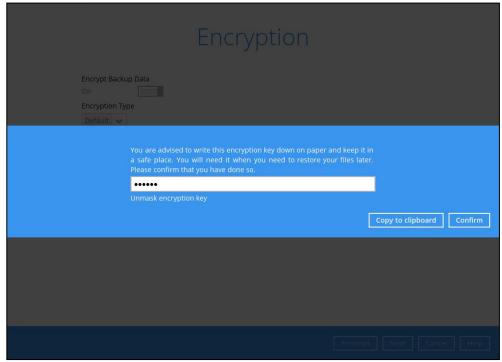
You can choose from one of the following three Encryption Type options:

- ➤ **Default** an encryption key with 44 alpha numeric characters will be randomly generated by the system
- ➤ **Custom** you can customize your encryption key, where you can set your own algorithm, encryption key, method, and key length.



Click Next when you are done setting.

14. If you have enabled the Encryption Key feature in the previous step, the following pop-up window shows, no matter which encryption type you have selected.





The pop-up window has the following three options to choose from:

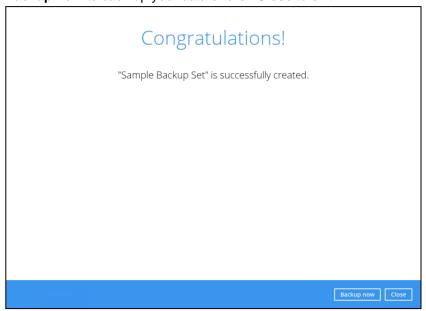
➤ Unmask encryption key – The encryption key is masked by default. Click this option to show the encryption key.



- Copy to clipboard Click to copy the encryption key, then you can paste it in another location of your choice.
- > Confirm Click to exit this pop-up window and proceed to the next step.
- 15. The following screen prompts you to enter the Windows login credentials for user authentication if you have enabled the Schedule Backup feature in step 8.

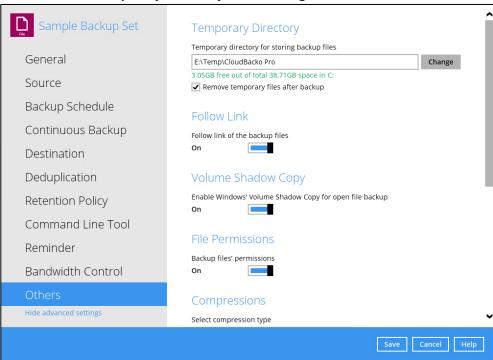


16. Upon successful creation of the backup set, the following screen will appear. You can click **Backup now** to back up your data or click **Close** to exit.



17. It is highly recommended to change the <u>Temporary Directory</u>. Select another location with sufficient free disk space other than **C:\Temp\CloudBacko Pro**.

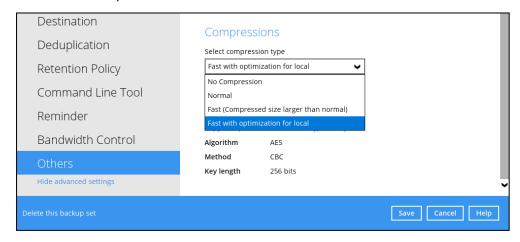
Go to Others > Temporary Directory. Click Change to browse for another location.



18. Optional: Select your preferred **Compression** type. By default, the compression is set to Fast with optimization for local. Go to **Others** > **Compressions**.

Select from the following:

- No Compression
- Normal
- Fast
- · Fast with optimization for local



10 Overview on Backup Process

The following steps are performed during a backup job. For an overview of the detailed process for Steps **2**, **4**,**10**, and **12**, refer to the following chapters:

- Periodic Data Integrity Check (PDIC) Process (Step 2)
- Backup Set Index Handling Process
 - Start Backup Job (Step 4)
 - Completed Backup Job (Step12)
- Data Validation Check (Step 10)

Start backup job A checksum verification of each backup file Connection from the backup client to the which was split into several blocks of varying destination is established. size will be performed to compare its content Establishing and remove duplicated data(if enabled). connection 1 Physical .bak files (data blocks) that do not exist Data are compressed, encrypted, divided into in the index are removed from the backup individual data block size of 32 or 64 MB, and destination(s), then the statistic of both data Uploading files then uploaded to the backup destination(s). area and retention area will be recalculated. 9 The number of 32 or 64 MB data blocks and the Pre-backup command is running (if configured). individual block size in the backup destination(s) is identical to the blocks transferred. check 10 Latest index.db file and checksum files are downloaded from the backup destination(s) to Retention policy job is running (if enabled). the temporary folder. retention 11 Latest index files on the client computer are Create VSS snapshot of local disk(s) (if enabled). saved to the backup destination(s) and client log Taking VSS Snapshot files are saved to the backup server. 5 Local file list is compiled according to the Post-backup command is running (if configured). backup source setting. Local and remote file lists are compared to Temporary data is removed from the temporary storage location specified in the backup set (if identify new, updated, moved or deleted files enabled). and/or folders since the last backup job. 14 Backup job completed

10.1 Periodic Data Integrity Check (PDIC) Process

The PDIC will run on the first backup job that falls on the corresponding day of the week from **Monday to Friday**.

To minimize the impact of the potential load of large number of PDIC jobs running, the schedule of a PDIC job for each backup set is automatically determined by the result of the following formula:

PDIC schedule = %BackupSetID% modulo 5
or
%BackupSetID% mod 5

The calculated **result** will map to the corresponding day of the week (i.e., from Monday to Friday).

0	Monday
1	Tuesday
2	Wednesday
3	Thursday
4	Friday

NOTE

The PDIC schedule cannot be changed.

Example:

Backup set ID: 1594627447932

Calculation: $1594627447932 \mod 5 = 2$

2 Wednesday

In this example:

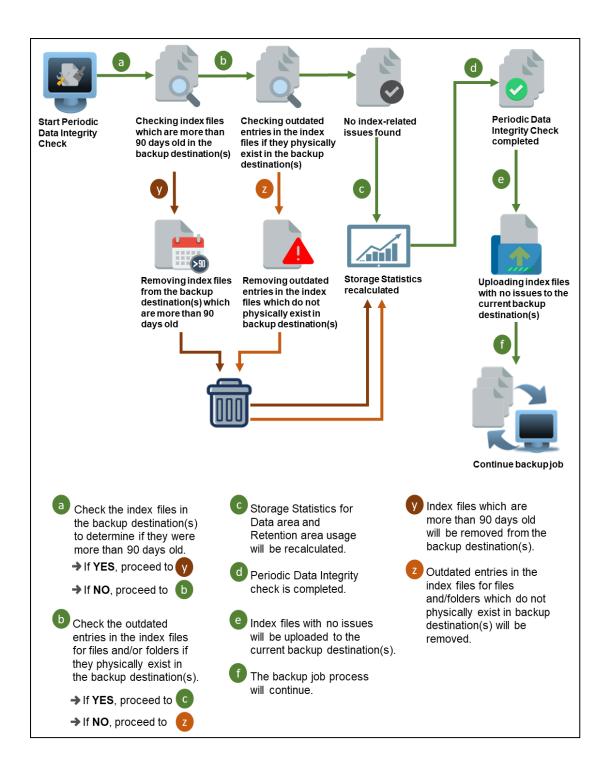
- the PDIC will run on the first backup job that falls on Wednesday; or
- if there is no active backup job(s) running from Monday to Friday, then the PDIC will run on the next available backup job.

NOTE

Although according to the PDIC formula for determining the schedule is **%BackupSetID% mod 5**, this schedule only applies if the previous PDIC job was actually run more than 7 days prior.

Under certain conditions, the PDIC may not run strictly according to this formula. For example:

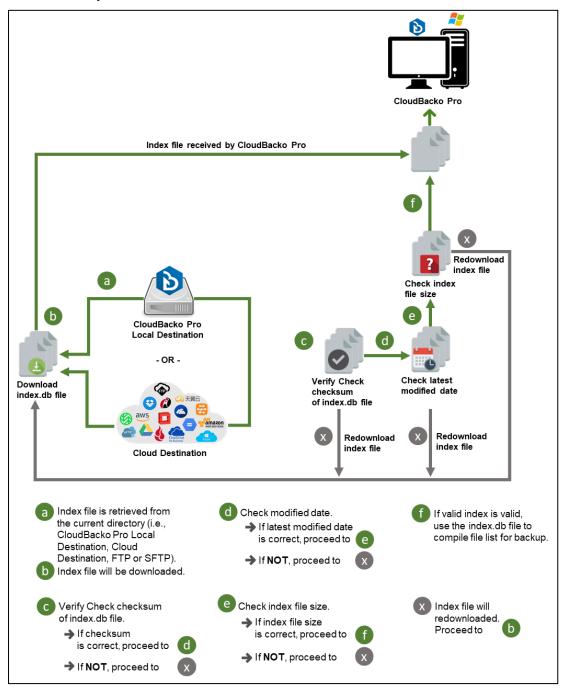
- If backup jobs for a backup set are not run on a regular daily backup schedule (for example: on a weekly or monthly schedule), then the PDIC job will run if it detects that the previous PDIC job was run more than 7 days ago.
- 2. Every time a data integrity check (DIC) is run, the latest PDIC run date is reset, the next PDIC job will run after 7 days.
- The PDIC job will not run if there are no files in both the data and retention areas. For example: a newly
 created backup set with no backup job history or a backup set where all the data has been deleted
 using the <u>Delete Backup Data</u> feature.



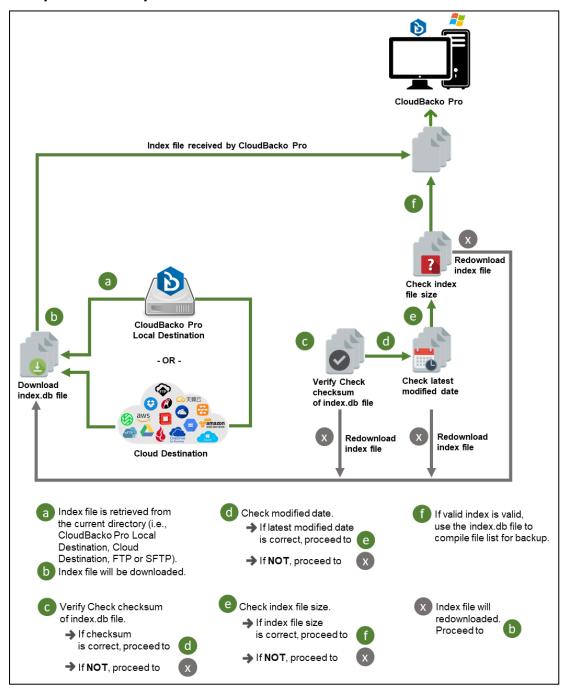
10.2 Backup Set Index Handling Process

To minimize the possibility of index related issues affecting backups, each time index files are downloaded from and uploaded to backup destination(s); the file size, last modified date, and checksum is verified to ensure index file integrity.

10.2.1 Start Backup Job

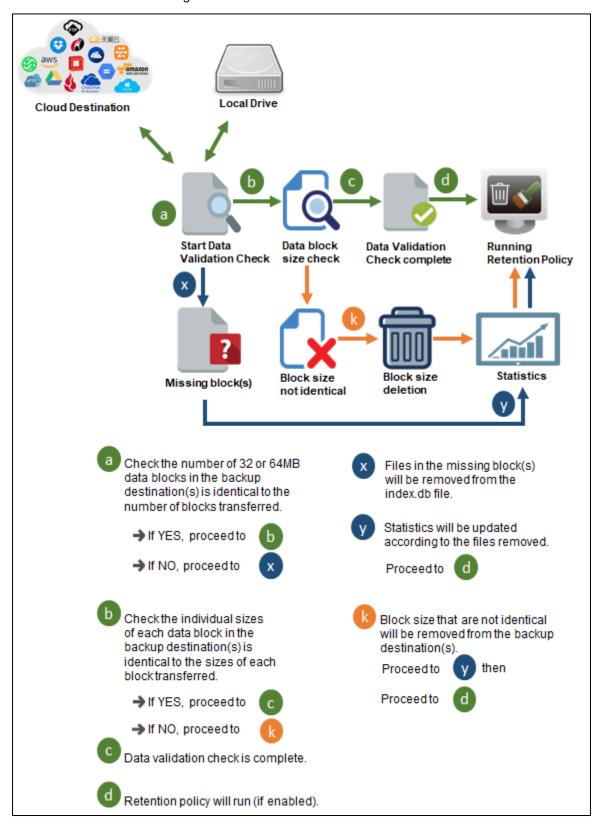


10.2.2 Completed Backup Job



10.3 Data Validation Check Process

As an additional measure to ensure that all files transferred to the backup destination(s) are received and saved correctly, both the number of 16 or 32 MB data block files and the size of each block file are checked again after the files are transferred.



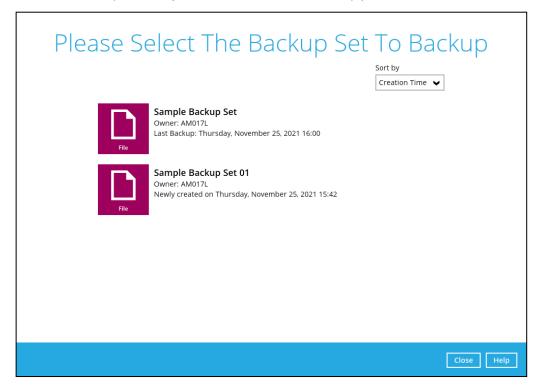


11 Run Backup Jobs

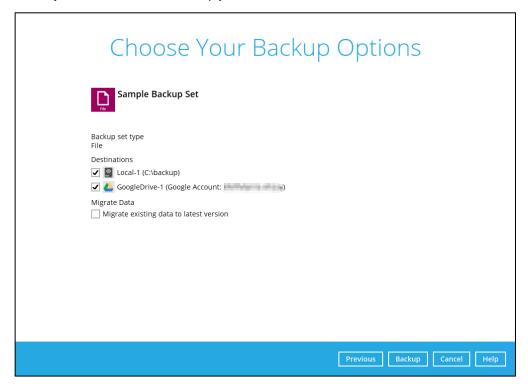
1. Click **Backup** on the main interface of CloudBacko Pro.



2. Select the backup set that you would like to start a backup job for.



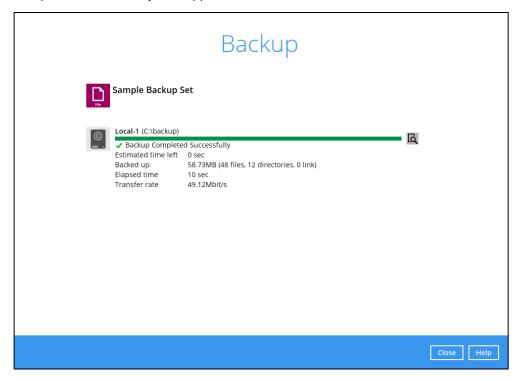
3. You can modify the Destinations and Migrate Data options. Once done with the settings, click the **Backup** button to start the backup job.



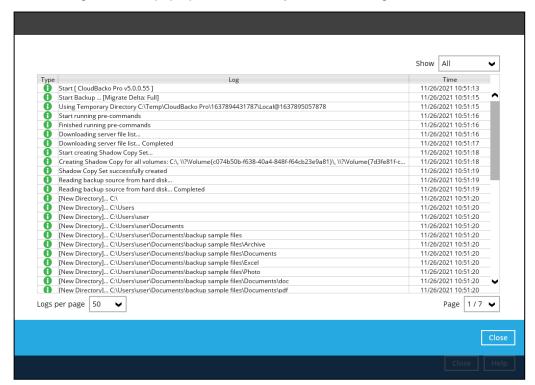
NOTE

The Migrate Data option will only be displayed if Deduplication is enabled for the backup set. Backup job(s) for backup sets with Migrate Data enabled may take longer to finish.

4. When the backup is completed, the progress bar will be green in color and the message "Backup Completed Successfully" will appear.



5. You can click the **View** icon on the right-hand side to check the log. A window will pop up to show the log. Close the pop-up window when you finish reading it.



12 Restore Data

12.1 Restore Method

There are two restore methods available, the traditional restore and OpenDirect restore. OpenDirect restore applies only to File backup sets with OpenDirect feature enabled.

For more details on the differences of the two restore methods, refer to Benefits of using OpenDirect Restore.

12.1.1 Traditional Restore

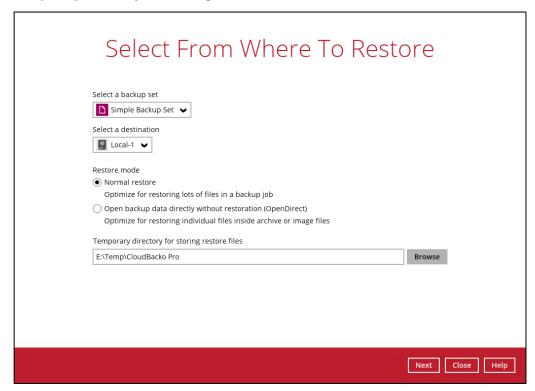
- Log in to the CloudBacko Pro application according to the instructions in section <u>Chapter 7 Start</u> <u>CloudBacko Pro.</u>
- 2. Click the **Restore** icon on the main interface of CloudBacko Pro.



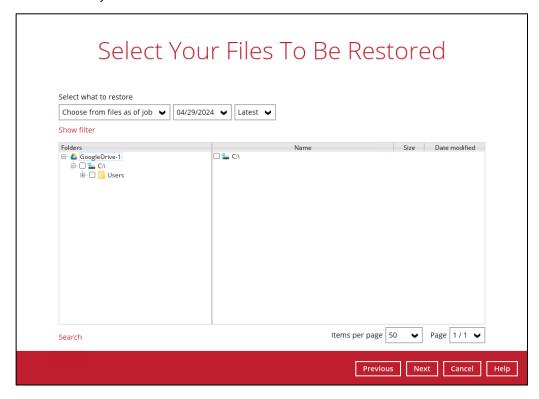
3. In the next page, you will have several options to select. On this page, you may select the **Backup**Set to restore, as well as the **Destination** to which the data will be restored to.

For "Restore mode", select Normal restore.

You may also choose the temporary directory for restoring files by selecting a destination beneath **Temporary directory for storing restore files**.



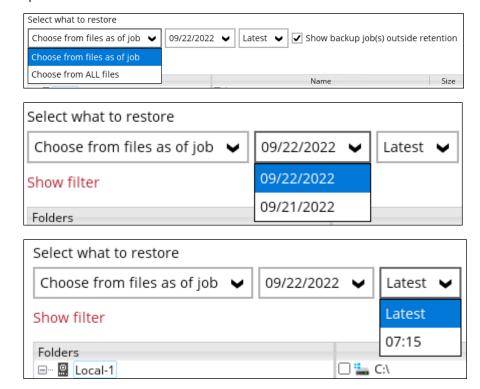
4. Select to restore files from a specific backup job, or from all files available. Then, select the files or folders that you would like to restore.



5. Select to restore files from a specific backup job, or from all files available. Then, select the files or folders that you would like to restore.

There are two options from the **Select what to restore** dropdown menu:

 Choose from files as of job – This option allows you to select a backup version from a specific date and time to restore.

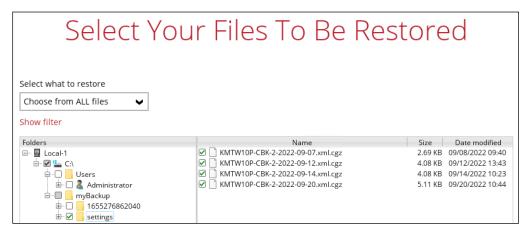




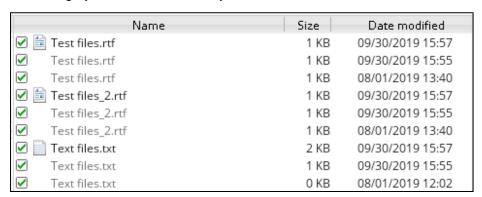
NOTE

Backup jobs that are outside the retention policy are greyed out.

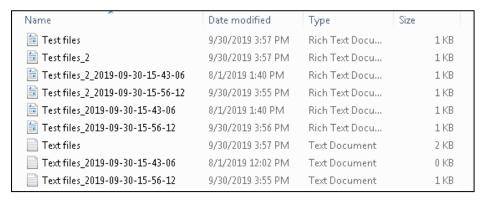
• Choose from ALL files – This option allows you to restore all the available backup versions for this backup set. Among all the available backup versions, you can even select only some of the backup versions of a file to restore.



The following is an example showing all the available backup versions of the file **Test files.rtf**. The latest version is shown in solid black color and all the previous versions are shown in grey color. You can identify the file version from the **Date modified** column.



When the restore is done, you will see all the selected backup versions in the restore destination. The latest backup version has the file name as the original file, while the previous versions have the time stamps added to their file names for easy identification.



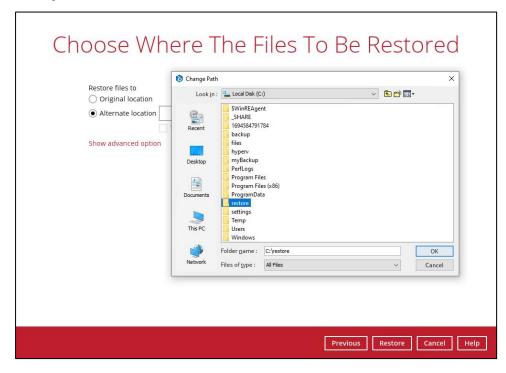
6. Click the **Show files** checkbox to select individual files for restoration. Click **Next** to proceed when you are done with the selections.

- 7. Select to restore the files to their **Original location**, or to an **Alternate location**. Then, click **Next** to proceed.
 - Original location the backed-up data will be restored to the computer running the CloudBacko Pro under the same directory path as on the machine storing the backup source.

For example, if the backup source files are stored under **Users/[User's Name]/Downloads** folder, the data will be restored to **Users/[User's Name]/Downloads** as well on the computer running the CloudBacko Pro.

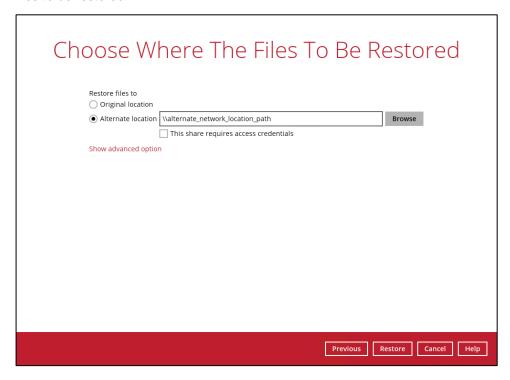


- Alternate location you can choose to restore the data to a location of your choice on the computer where CloudBacko Pro is running.
 - i. To restore to a location of your choice on the computer where CloudBacko Pro is running, click **Browse**. Select the location and click **OK**.





ii. To restore to a network drive, enter the network address where you want the backup files to be restored.



Check the box beside **This share requires access credentials** if the network drive was set up with password. Enter the User name and Password.



8. Click **Show advanced option** to configure other restore settings.

Restore files to Original location		
Alternate location		
_ 1		
Show advanced option		
Restore file permissions		
Delete unmatched data in restore location		
✓ Verify checksum of in-file delta files during restore		
Hide advanced option		

Restore file permissions

Restore file permissions are disabled by default. When you perform a file restore on shared files or folders using a shared computer, it is recommended that you enable Restore file permissions by ticking the checkbox so that the files restored will not be fully accessible to everyone using the shared computer.

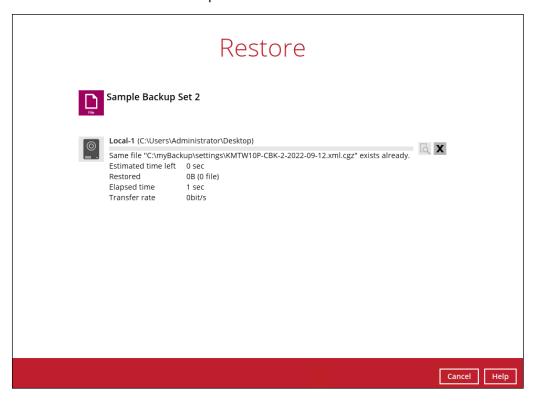
Delete unmatched data in restore location

By enabling this option, the restore process will attempt to synchronize the selected restore source with the restore destination, making sure the data in the restore destination is the same as the restore source. Any data created after backup will be treated as "unmatched data" and will be deleted from the restore source if this feature is enabled.

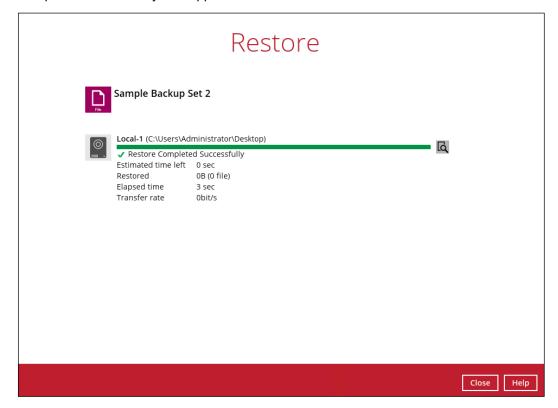
Verify checksum of in-file delta files during restore

Verify checksum of in-file delta files during restore is disabled by default. You can enable the feature by ticking the checkbox so that the checksum of in-file delta files will be verified. As the feature will make the restore process time longer, it is recommended to enable the feature only if you want to verify whether the merged files were correct.

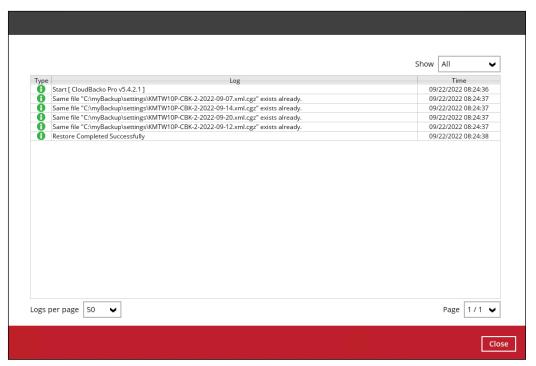
9. Click **Restore** to start the restore process. The status will be shown.



10. When the restore is completed, the progress bar will be green in color and the message "Restore Completed Successfully" will appear.



11. You can click the **View** icon on the right-hand side to check the log. A window will pop up to show the log. Close the pop-up window when you finish reading it.



- 12. In the Restore window, click Cancel to close the Restore window.
- 13. To exit CloudBacko Pro, click \times on the top right corner. A message will appear to ask for your confirmation. Click **Yes** to close the application. If you wish to use CloudBacko Pro again, you will then have to launch it again.



12.1.2 OpenDirect Restore

This restore method applies to backup sets created with OpenDirect restore enabled only.

IMPORTANT

Before you proceed with the OpenDirect Restore, make sure the following dependencies are fulfilled. Failure to do so may cause the restore to fail.

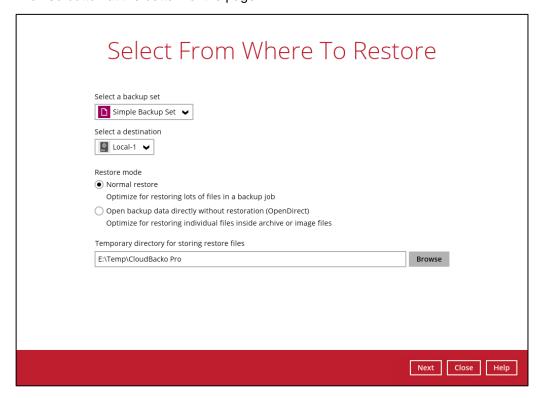
- Microsoft Visual C++ 2015 Redistributable (x86) / (x64) https://www.microsoft.com/en-us/download/details.aspx?id=48145
- Update for Universal C Runtime in Windows https://support.microsoft.com/en-us/help/2999226/update-for-universal-c-runtime-in-windows
- Microsoft Security Advisory 3033929 (for Windows 7 and Windows Server 2008 R2) https://www.microsoft.com/en-sg/download/details.aspx?id=46078
- 1. Log in to the CloudBacko Pro application according to the instructions in section Chapter 7 Start CloudBacko Pro.
- 2. Click the **Restore** icon on the CloudBacko Pro main interface.



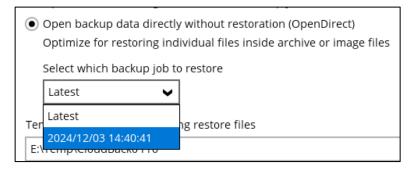
3. In the next page, you will have several options to select. On this page, you may select the **Backup**Set to restore, as well as the **Destination** to which the data will be restored to.

For "Restore mode", select the second option <u>Open backup data directly without restoration (Open Direct)</u>.

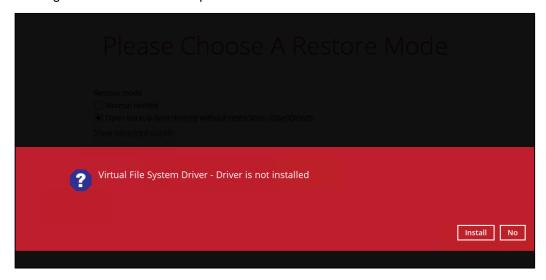
You may also choose the temporary directory for restoring files by selecting a location using the **Browse** button at the bottom of the page.



When you select the second option under **Restore mode**, you will be able to select which specific backup job to restore. By default, this setting is set to **Latest**.



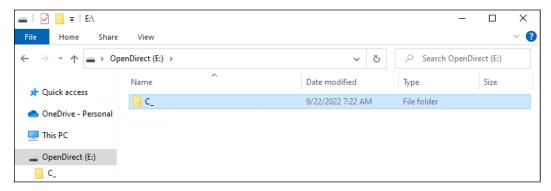
The following screen shows when you perform OpenDirect restore for this backup set on this machine for the first time only. Make sure you click **Install** to confirm installation of the driver. Clicking **No** will exit the restore process.



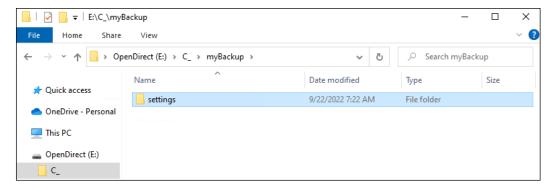
4. You will be prompted to select drive letter where you wish the mounted files to be mapped on your machine, click **OK** when you have finished selection.



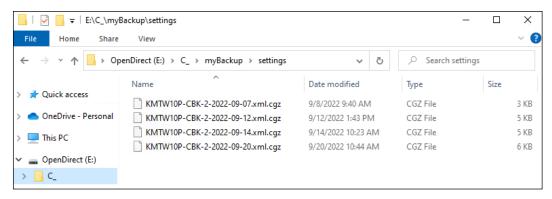
5. The selected drive letter will be mapped and prompted in the Windows Files Explorer with the files you wish to restore shown.



6. You can now click on the files to view them directly from here, which will be in read-only mode.

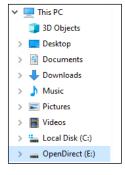


If it is a zipped file, you can directly click on it to see all the individual files inside.

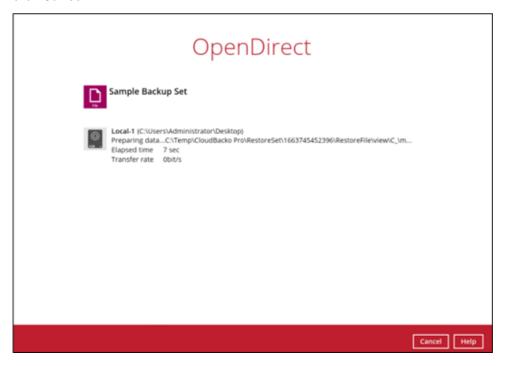


You may also copy individual file(s) you wish to restore to your local machine.

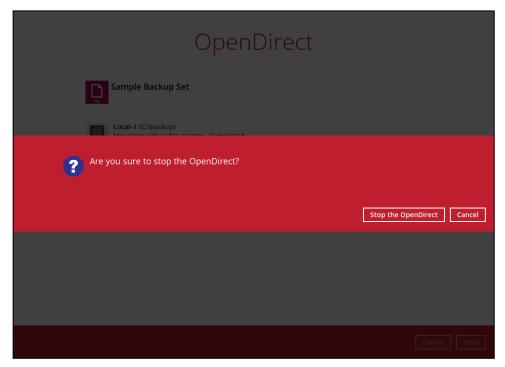
7. The mounted drive letter cannot be ejected from the Windows File Explorer, it will only be closed when you exit CloudBacko Pro.



8. When you have finished restoring the necessary files, you can go back to CloudBacko Pro and click **Cancel**.



Click Stop the OpenDirect to exit from the OpenDirect Restore.



IMPORTANT

- As a result of the limitation of the virtual file system library, the mapped drive will only be unmounted from your machine when you exit CloudBacko Pro. In other words, each OpenDirect restore session on CloudBacko Pro can only mount and unmount once.
- 2. OpenDirect restore of file backup sets will not generate restore log on CloudBacko Pro.

12.2 Restore Filter

This search feature allows you to search directories, files, and folders.

To make it more flexible, the search feature offers filtering. You can add additional pattern upon searching. Pattern includes the following criteria:

Contains

These are Directories, Files, and Folders with the name **containing** the specific letter or word.

Exact

These are Directories, Files, and Folders with the **exact** or **accurate** name.

Start With

These are Directories, Files, and Folders with the name **<u>starting</u>** with a specific letter or word.

Ends With

These are Directories, Files, and Folders with the name **ending** with a specific letter or word.

It also has the **Match Case** function, which serves as an additional accuracy when searching for any specific directories, files, folders, and mails.

For more detailed examples using the restore filter on CloudBacko Pro, refer to <u>Appendix B: Example</u> Scenarios for Restore Filter.

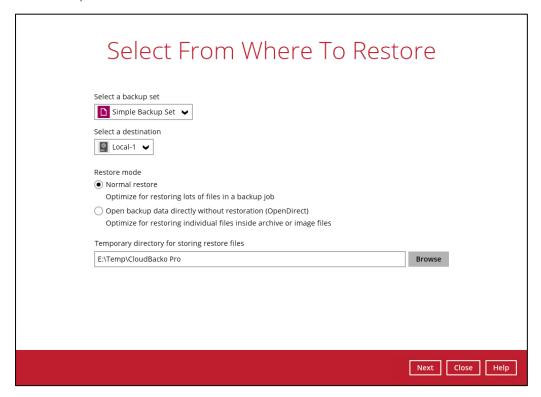
- 1. Log in to the CloudBacko Pro application according to the instructions in section Chapter 7 Start CloudBacko Pro.
- 2. Click the **Restore** icon on the main interface of CloudBacko Pro.
- 3. In the next page, you will have several options to select. On this page, you may select the **Backup**Set to restore, as well as the **Destination** to which the data will be restored to.

For "Restore mode", select Normal restore.

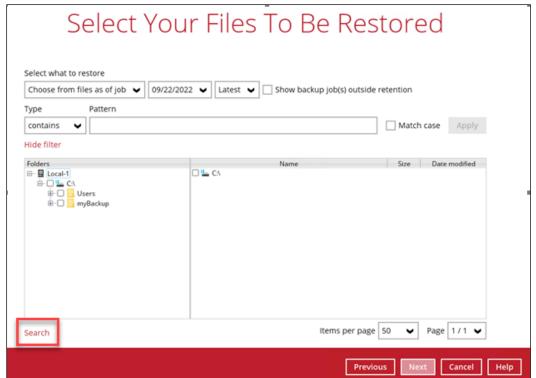
You may also choose the temporary directory for restoring files by clicking on the **Show advanced option**.



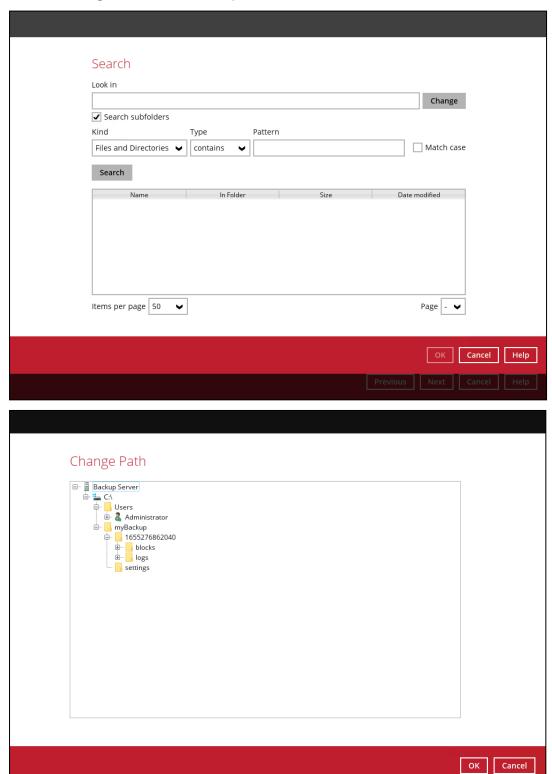
Once done, click on Restore.

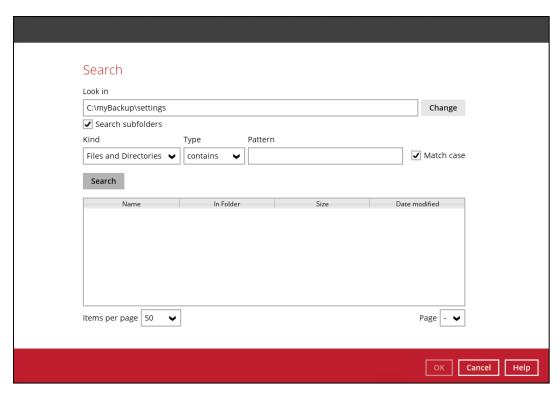


4. Click **Search** located on the lower left side of the screen.

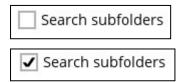


5. Click the **Change** button to select the path where to look for items to be restored.

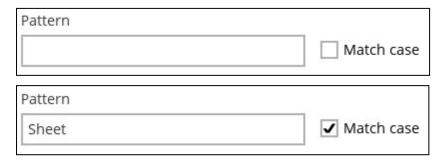




6. Tick the Search subfolders to include available subfolders upon searching.



- 7. Select from the following Kind of files you want to search.
 - Files and Directories
 - Files only
 - Directories
- 8. Select from the following Type of filtering you want to search.
 - Contains
 - Exact
 - Starts With
 - Ends With
- 9. Enter a pattern you want and tick the **Match case** box if you want to accurately search for a specific file.



10. Click the **Search** button and the result will be displayed.



11. Check all the items or check a specific item that you want and click the **OK** button to proceed and you will return to the restore main screen.

13 Mobile Backup and Restore to Cloud

To do a mobile backup and restore to Cloud, follow these steps:

- Backup photos, videos, documents and 2FA accounts from CloudBacko app to CloudBacko Pro local destination. For detailed information, check the <u>CloudBacko app</u> <u>guide</u>.
- Create a File Backup Set on CloudBacko Pro and follow these steps:
 - Backup source should be photos, videos, documents and 2FA accounts backed up in CloudBacko Pro local destination. Example: D:\Backup\Redmi.
 - Backup destination should be a Cloud destination. Examples: Google Drive, OneDrive, Wasabi, etc.
- Run a Backup Job on CloudBacko Pro.
- Restore Data on CloudBacko Pro. This can be from Original or Alternate location.

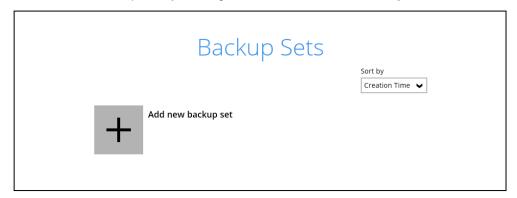


13.1 Create a File Backup Set

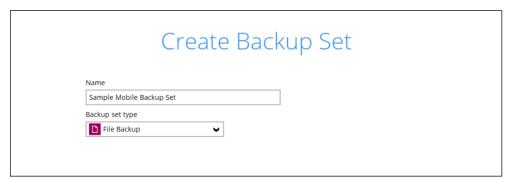
1. Click the Backup Sets icon on the main interface of CloudBacko Pro.



2. Create a new backup set by clicking + next to **Add new backup set**.

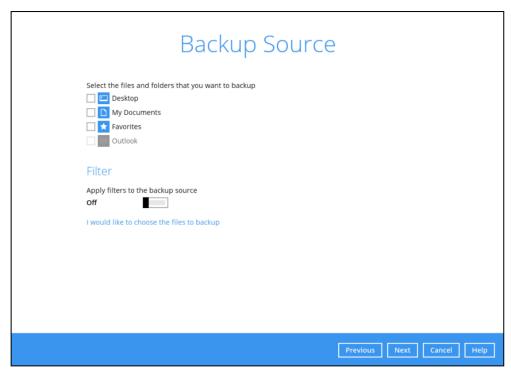


3. When the Create Backup Set window appears, name your new backup set, and select the **File Backup** set type. Then, click **Next** to proceed.



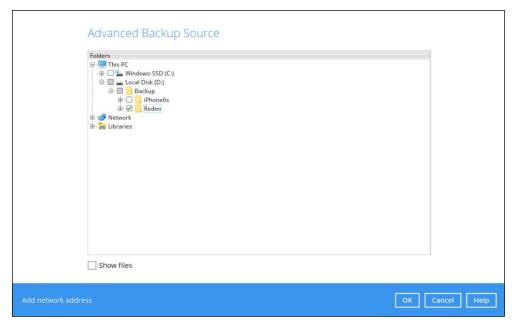
4. In the Backup Source window, select the mobile backup source for backup. Click I would like to choose the files to backup.



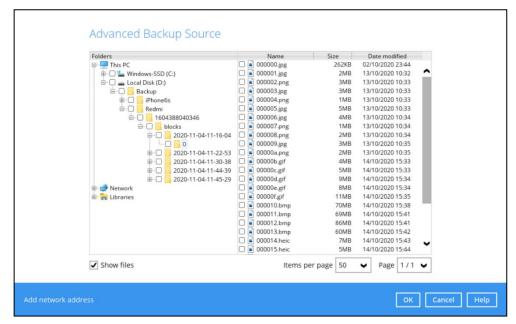


In the Advanced Backup Source window, select the mobile backup source.

In this example, Redmi folder is selected. The mobile backup source is in Local Disk (D:).



Alternatively, if you want to back up only specific files instead of all files in your selected folder(s), select the **Show files** checkbox at the bottom of the screen. A list of files will appear on the right-hand side. Select the checkbox(es) next to the file(s) to back up. Then, click **OK** to save your selections and close the Advanced Backup Source window.



In the Backup Source window, click Next to proceed.

5. Follow steps 8 - 18 discussed in Chapter 9 to finish creating the backup set.

13.2 Run a Backup Job

To backup your mobile data to the cloud please refer to the instructions in <u>Chapter 11</u> and select the backup set that you created in Chapter 13.1.

13.3 Restore Data

There are two (2) options to restore data from Cloud storage to the mobile device, Original location, and Alternate location.

- Original location, data will be restored on the original location which is the backup destination for your mobile device.
 - Using this option, you can perform seamless restore to your mobile device as the location is the same with the mobile backup destination.
- Alternate location, data will be restored on an alternate location which can be setup anywhere in the CloudBacko Pro local machine. If you choose this option, then restoring to your mobile device will have to be manually done. There are two (2) options available:
 - Option 1: Copy the restored data from alternate location to original location which is the backup destination for your mobile device. You can now use the CloudBacko app to restore the photos, videos, documents and 2FA accounts back to your mobile device.
 - Option 2: Copy the restored data from the alternate location to your Android or iOS mobile device.

Examples:

- For an Android device, you need to plug your cable and transfer the restored data from the alternate location to your mobile device storage.
- For an iOS device, you need to transfer the restored data from the alternate location to iCloud.

Restore to alternate location is not supported on another CloudBacko Pro machine. Options 1 and 2 must be on the original machine where the backups were performed.

In case the original machine is no longer available, CloudBacko Pro will be able to restore the photos, videos, documents and 2FA accounts from the Cloud destination to the mobile backup destination folder. However, as the mobile devices were not originally paired with the new installation or machine, the mobile devices will not be able to restore the photos, videos, documents and 2FA accounts from the CloudBacko Pro.

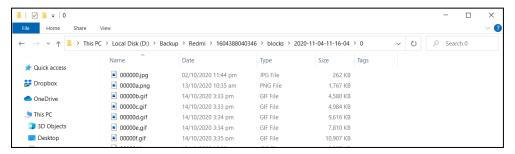


13.3.1 Original Location

To restore data from the Cloud storage to the mobile device using Original location, please refer to instructions in Chapter 12.1.1.

Then you can restore the restored data from the original location to your mobile device by using the CloudBacko app.

Example: Original location is in D:\Backup\Redmi



Android device



iOS device





13.3.2 Alternate Location

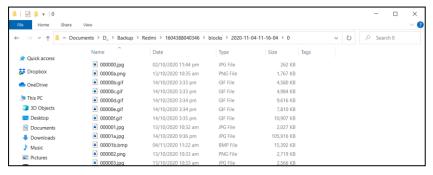
To restore data from the Cloud storage to the mobile device using Alternate location, please refer to instructions in Chapter 12.1.1.

Then follow these steps to restore the restored data from the alternate location to your mobile device. To do this there are two (2) options:

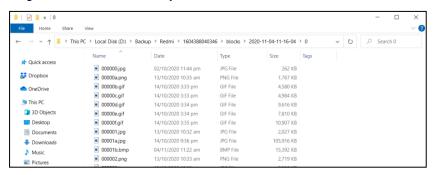
Option 1: Copy the restored data from the alternate location to the original location which is the **backup destination for your mobile device**.

Example:

Alternate location: D:\D_\Backup



Original location: D:\Backup\Redmi



You can now use the CloudBacko app to restore the photos, videos, documents and 2FA accounts back to your mobile device.

Option 2: Copy the restored data from the alternate location to your Android or iOS mobile device.

Examples:

• For an Android device, you need to plug your cable and transfer the restored data from the alternate location to your mobile device storage.

Alternate location: D:\D_\Backup



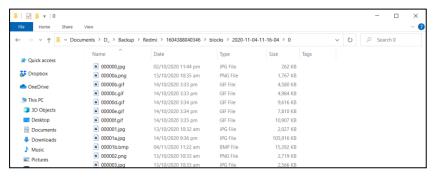


Mobile device storage: Redmi Note 8 Internal storage and SD Card

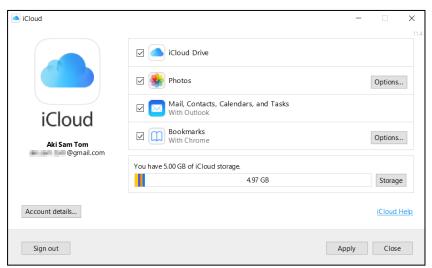


• For an iOS device, you need to transfer the restored data from the alternate location to iCloud.

Alternate location: D:\D_\Backup



Upload to iCloud using the iCloud app



14 Contact CloudBacko

Technical Assistance

To contact CloudBacko support representatives for technical assistance, please visit the Contact Us page to submit a support ticket:

https://www.cloudbacko.com/support

Use the CloudBacko Wiki for resource such as Hardware Compatibility List, Software Compatibility List, and other product information. To also check available documentations and hotfix please visit the Support page.

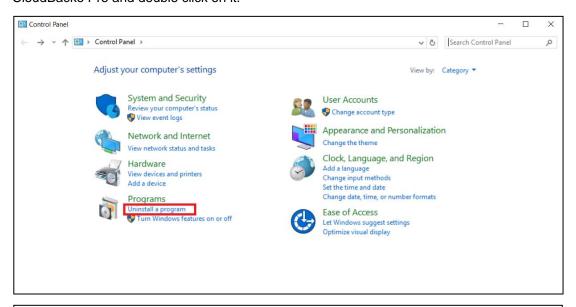
Appendix

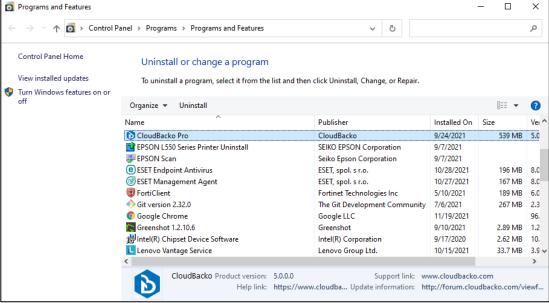
Appendix A: Uninstall CloudBacko Pro

Before you uninstall CloudBacko Pro, it is recommended that you make a backup of your current CloudBacko settings, using the **Utilities > Ex/Import Settings > Export Now** feature to get a copy of the latest **settings.sys** file. For more information, please check <u>Chapter 8.8.3 Ex/Import Settings</u>.

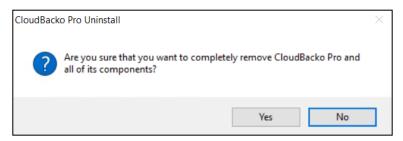
Otherwise, if you intend to re-install CloudBacko Pro either on the same machine or a new machine, you will lose your current settings and access to any backed-up data.

1. Go to **Control Panel** > **Programs and Features** > **Uninstall a program**, then look for CloudBacko Pro and double click on it.

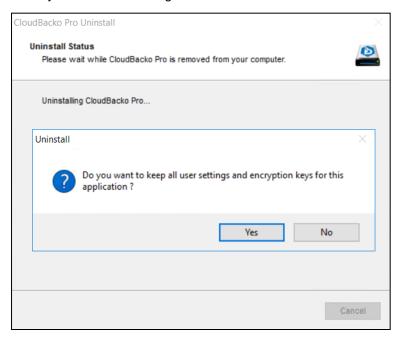




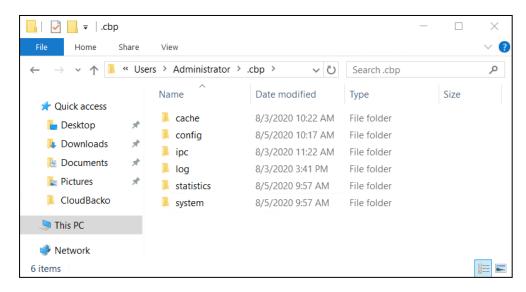
2. Click **Yes** to confirm and proceed with the uninstallation.



3. When you see the following screen:



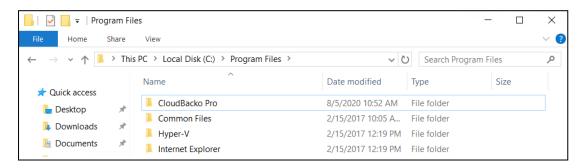
Choose Yes to keep all user settings and the encryption keys associated with the users. If you are likely to install CloudBacko Pro on the same machine in the future again, the user settings, e.g. login details, backup sets and so forth will remain in C:\Users\[username]\.cbp\] by default. The screen capture below shows the folders remain in the machine after uninstallation.



- Choose No to delete all user settings and encryption keys with this uninstallation. Please be reminded that the encryption keys are not retrievable once they have been deleted unless the encryption keys have been uploaded to the destination and therefore it will no longer be possible for backup user to recover their encryption key in case they do not have a separate written record.
- 4. The following screen prompts when the uninstallation is completed.



5. (Optional) For a complete removal of all CloudBacko Pro-related files in your machine, please go to **C:\Program Files** and manually remove the **CloudBacko Pro** folder.



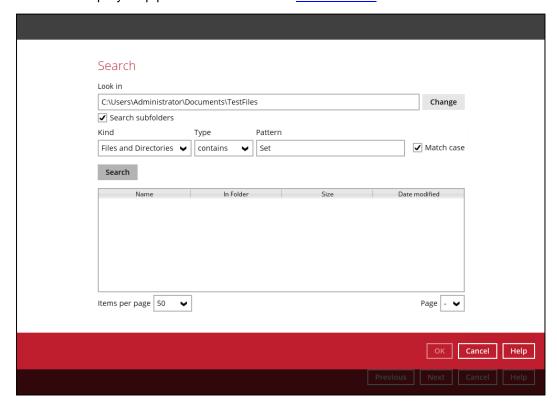


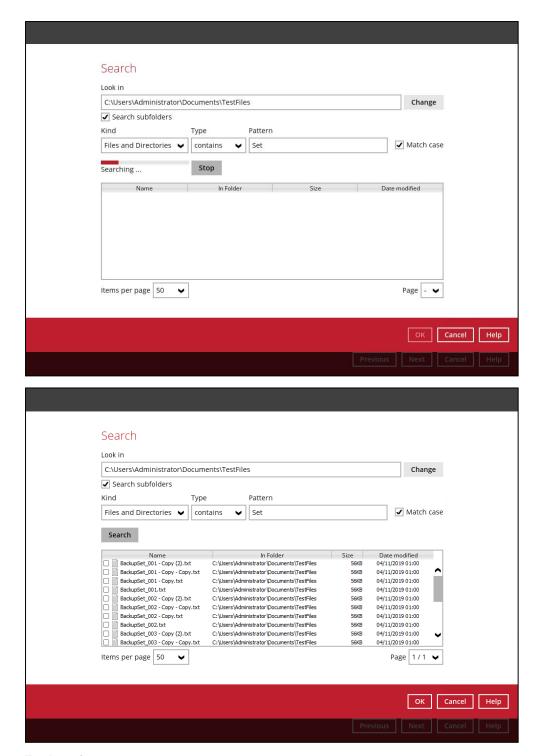
Appendix B: Example Scenarios for Restore Filter

Example No.1: Restore filter setting from C:\Users\Administrator\Documents\TestFiles with filter type Contains

Location:	C:\Users\Administrator\Documents\TestFiles
Search subfolders:	True
Kind:	Files and Directories
Type:	Contains
Pattern:	Set
Match Case:	True

Follow the step-by-step procedure indicated on Restore Filter.





Explanation:

All files and directories under $\underline{C:\Users\land Administrator\land Documents\land TestFiles}$ that has the pattern that contains with 'Set' with match case set to true will be included upon performing search.

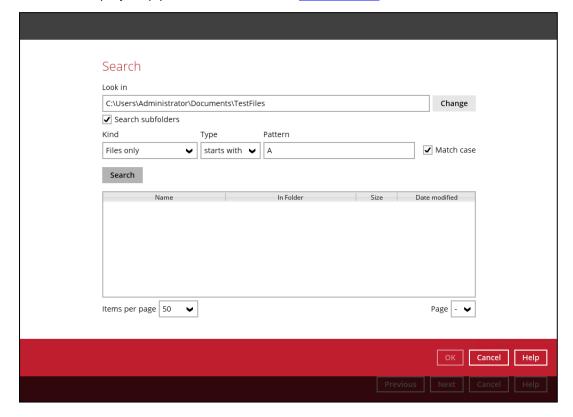
As you can see on the screen shot above, the result panel contains the Name of the file or directory, Directory which are indicated In-Folder column, Size, and Date Modified.

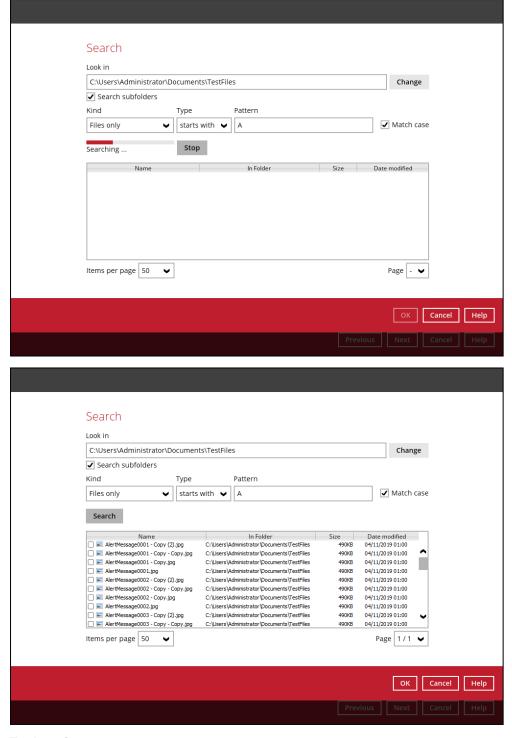
The restore filter setting includes the Search subfolder and Match case set to true. Meaning, the filter will include all available subfolders in \TestFiles upon searching. And it will strictly search only the specified pattern and case which starts with 'Set'.

Example No.2: Restore filter setting from C:\Users\Administrator\Documents\TestFiles with filter type Starts With

Location:	C:\Users\Administrator\Documents\TestFiles
Search subfolders:	True
Kind:	Files
Type:	Starts With
Pattern:	A
Match Case:	True

Follow the step-by-step procedure indicated on Restore Filter.





Explanation:

All files and directories under <u>C:\Users\Administrator\Documents\TestFiles</u> that has the pattern that starts with 'A' with match case set to true will be included upon performing search.

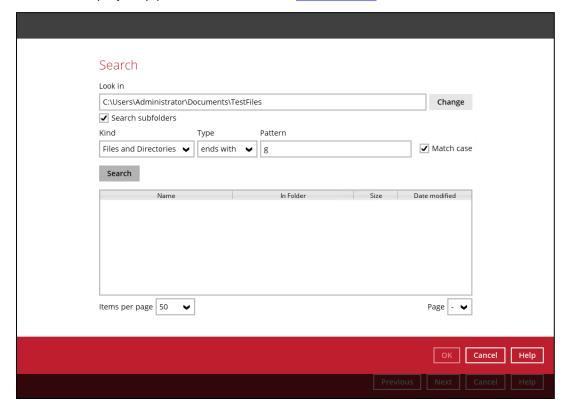
As you can see on the screen shot above, the result panel contains the Name of the file, Directory which are indicated In-Folder column, Size, and Date Modified.

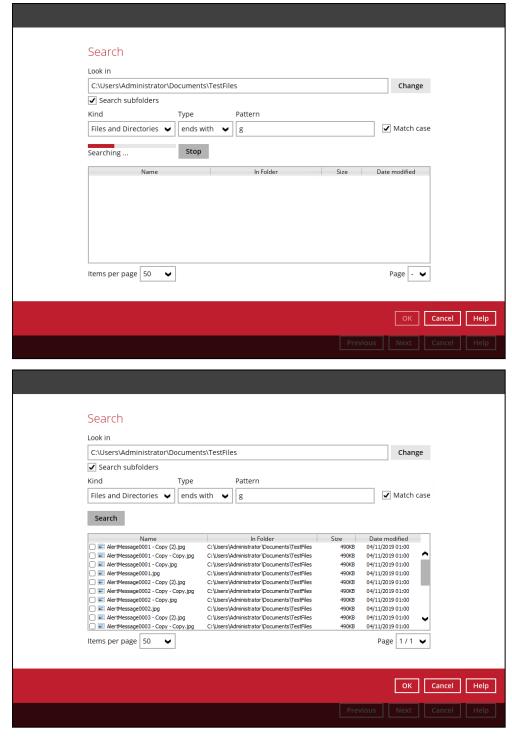
The restore filter setting includes the Search subfolder and Match case set to true. Meaning, the filter will include all available subfolders in \TestFiles upon searching. And it will strictly search only the specified pattern and case which starts with 'A'.

 $\label{lem:condition} \mbox{Example No.3: Restore filter setting from $C:\Users\Administrator\Documents\TestFiles with filter type $Ends With $C:\Users\Administrator\Documents\TestFiles with $C:\Users\Administrator\Documents\TestFi$

Location:	C:\Users\Administrator\Documents\TestFiles
Search subfolders:	True
Kind:	Files and Directories
Type:	Ends With
Pattern:	g
Match Case:	True

Follow the step-by-step procedure indicated on Restore Filter.





Explanation:

All files and directories under C:\Users\Administrator\Documents\TestFiles that has the pattern that ends with 'g' with match case set to true will be included upon performing search.

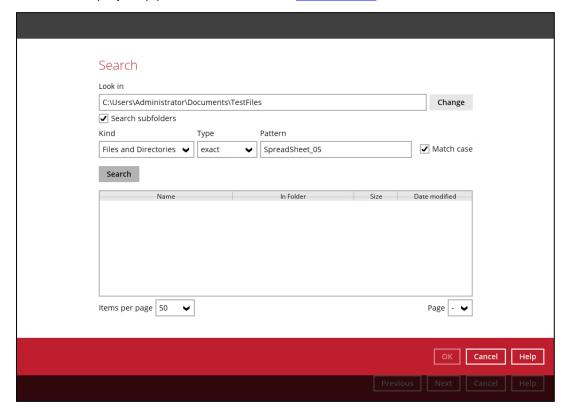
As you can see on the screen shot above, the result panel contains the Name of the files and directories, Directory which are indicated In-Folder column, Size, and Date Modified.

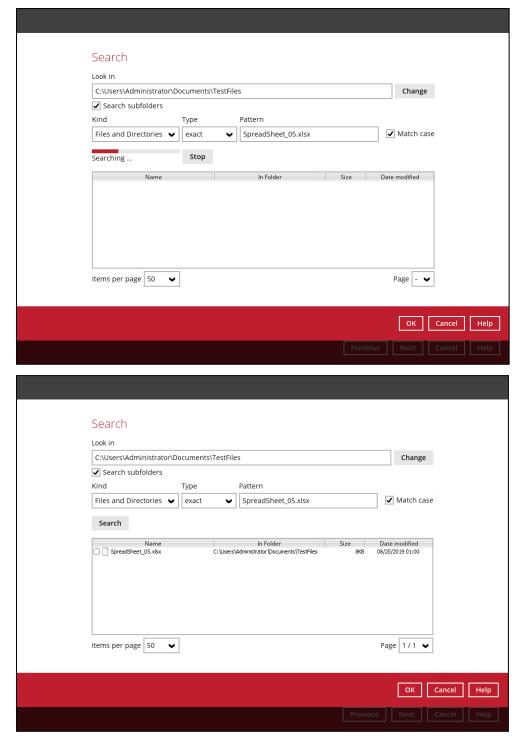
The restore filter setting includes the Search subfolder and Match case set to true. Meaning, the filter will include all available subfolders in \TestFiles upon searching. And it will strictly search only the specified pattern and case which starts with 'g'.

Example No.4: Restore filter setting from C:\Users\Administrator\Documents\TestFiles with filter type Exact

Location:	C:\Users\Administrator\Documents\TestFiles
Search subfolders:	True
Kind:	Files and Directories
Type:	Exact
Pattern:	SpreadSheet_05.xlsx
Match Case:	True

Follow the step-by-step procedure indicated on Restore Filter.





Explanation:

All files and directories under <u>C:\Users\Administrator\Documents\TestFiles</u> that has the pattern that has the exact pattern 'SpreadSheet_05.xlsx' with match case set to true will be included upon performing search.

As you can see on the screen shot above, the result panel contains the Name of the files and directories, Directory which are indicated In-Folder column, Size, and Date Modified.

The restore filter setting includes the Search subfolder and Match case set to true. Meaning, the filter will include all available subfolders in \TestFiles upon searching. And it will strictly search only the specified pattern and case which starts with 'SpreadSheet_05.xlsx'.

Appendix C: Batch Files

Below is the list of batch files which can be used as an alternative way to run the CloudBacko Pro.

- RunCB.bat
- ListBackupSet.bat
- RunBackupSet.bat
- ListBackupJob.bat
- Restore.bat
- Decrypt.bat
- RunDataIntegrityCheck.bat



RunCB.bat

This allows the user to open the CloudBacko Pro without clicking the CloudBacko Pro icon.

On the command prompt (cmd), export the batch file to a text editor using the following script.

```
C:\Program Files\CloudBacko Pro\bin>notepad RunCB.bat
C:\Program Files\CloudBacko Pro\bin>
```

Configure the following parameters:

 SETTING_HOME – this is the directory to your setting home. If not set, the directory will be "C:\Users\USER\.cbp" by default.

```
e.g. SET SETTING_HOME="C:\Users\John\.cbp"
```

 DEBUG_MODE – this parameter is used to enable or disable the debug mode when opening the CloudBacko Pro application.

```
e.g. SET DEBUG_MODE="--debug" or SET DEBUG_MODE=""
```

```
@ECHO OFF
REM ############################ RunCB.bat
######################################
REM # You can use this batch to run the backup client application
REM
REM ################# Start: User Defined Section
###########################
REM ----- SETTING HOME -----
REM | Directory to your setting home. Default to
REM | "C:\Users\USER\.cbp" when not set.
REM | e.g. SET SETTING HOME="C:\Users\John\.cbp"
REM ----
SET SETTING_HOME=""
REM ----- DEBUG MODE -----
REM | Enable/Disable debug mode
REM | e.g. SET DEBUG MODE="--debug"
REM | or SET DEBUG_MODE=""
REM -----
SET DEBUG_MODE=""
```

```
REM ################# END: User Defined Section
##############################
SET EXE DIR=%CD%
SET APP HOME=..
SET JAVA_HOME=%APP_HOME%\jvm
SET JAVA EXE=%JAVA HOME%\bin\bJW.exe
SET JAVA LIB PATH=-Djava.library.path=%APP HOME%\bin
SET PATH=%JAVA HOME%\bin;%PATH%
IF "%PROCESSOR ARCHITECTURE%"=="x86" (
 SET "DEP LIB PATH=X86"
 SET JAVA OPTS=-Xms128m -Xmx768m -XX:MaxDirectMemorySize=512m -
Dsun.java2d.noddraw -Dsun.nio.PageAlignDirectMemory=true
) ELSE (
 SET "DEP_LIB_PATH=X64"
 SET JAVA OPTS=-Xms128m -Xmx2048m -XX:MaxDirectMemorySize=1024m -
Dsun.java2d.noddraw -Dsun.nio.PageAlignDirectMemory=true
SET PATH=%APP HOME%\bin\%DEP LIB PATH%;%JAVA HOME%\bin;%PATH%
SET CLASSPATH=%APP HOME%\bin;%APP HOME%\bin\cb.jar
REM
ECHO APP HOME=%APP HOME%
ECHO SETTING HOME=%SETTING HOME%
ECHO JAVA HOME=%JAVA HOME%
ECHO JAVA_EXE=%JAVA EXE%
ECHO JAVA OPTS=%JAVA OPTS%
ECHO JAVA LIB PATH=%JAVA LIB PATH%
ECHO PATH=%PATH%
ECHO CLASSPATH=%CLASSPATH%
ECHO -
@ECHO ON
%JAVA EXE% %JAVA LIB PATH% -cp %CLASSPATH% %JAVA OPTS% Gui %DEBUG MODE%
%APP HOME% %SETTING HOME%
@ECHO OFF
CD "%EXE_DIR%"
IF "%APP HOME%"==".." PAUSE
```

Once the parameters are configured, save the changes, and close the text editor. Proceed back to *cmd* and enter *RunCB.bat*.

```
C:\Program Files\CloudBacko Pro\bin>RunCB.bat

-

APP_HOME=..

SETTING_HOME=""

JAVA_HOME=..\jvm

JAVA_EXE=..\jvm\bin\bJW.exe

JAVA_OPTS=-Xms128m -Xmx2048m -XX:MaxDirectMemorySize=1024m -

Dsun.java2d.noddraw

-Dsun.nio.PageAlignDirectMemory=true

JAVA_LIB_PATH=-Djava.library.path=..\bin

PATH=..\bin\X64;..\jvm\bin;..\jvm\bin;C:\Windows\system32;C:\Windows;C:\Windows
s\
```

```
System32\Wbem;C:\Windows\System32\WindowsPowerShell\v1.0\
CLASSPATH=..\bin;..\bin\cb.jar

-

C:\Program Files\CloudBacko Pro\bin>..\jvm\bin\bJW.exe -
Djava.library.path=..\bi
n -cp ..\bin;..\bin\cb.jar -Xms128m -Xmx2048m -XX:MaxDirectMemorySize=1024m -
Dsu
n.java2d.noddraw -Dsun.nio.PageAlignDirectMemory=true Gui "" .. ""

JComFlashPlayer failed to start. Please update your Flash player and try again
Press any key to continue . . .
```



If the debug mode is ENABLED, more technical information will be displayed for troubleshooting purposes.

```
C:\Program Files\CloudBacko Pro\bin>RunCB.bat
APP HOME=..
SETTING HOME=""
JAVA HOME=..\jvm
JAVA EXE=..\jvm\bin\bJW.exe
JAVA OPTS=-Xms128m -Xmx2048m -XX:MaxDirectMemorySize=1024m -
Dsun.java2d.noddraw
-Dsun.nio.PageAlignDirectMemory=true
JAVA LIB PATH=-Djava.library.path=..\bin
PATH=... bin \times 64;... jvm \cdot bin;... jvm \cdot bin;... bin \times 64;... jvm \cdot bin;... ivm \cdot bin;... ivm \cdot bin;...
s\system 32\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windows\c:\windo
rS
hell \v1.0 \
CLASSPATH=..\bin;..\bin\cb.jar
C:\Program Files\CloudBacko Pro\bin>..\jvm\bin\bJW.exe -
Djava.library.path=..\bi
n -cp ..\bin;..\bin\cb.jar -Xms128m -Xmx2048m -XX:MaxDirectMemorySize=1024m -
n.java2d.noddraw -Dsun.nio.PageAlignDirectMemory=true Gui "--debug" .. ""
Adding file:\C:\Program%20Files\CloudBacko%20Pro\bin\..\bin\asm-3.1.jar to
class
path ... OK
Adding file:\C:\Program%20Files\CloudBacko%20Pro\bin\..\bin\b2-core-sdk-
r to classpath ... OK
Adding file:\C:\Program%20Files\CloudBacko%20Pro\bin\..\bin\b2-http-client-
2.0.0
.jar to classpath ... OK
Adding file:\C:\Program%20Files\CloudBacko%20Pro\bin\..\bin\bcmail-jdk15on-
1.51.
jar to classpath ... OK
Adding file:\C:\Program%20Files\CloudBacko%20Pro\bin\..\bin\bcmail-jdk15to18-
164
.jar to classpath ... OK
Adding file:\C:\Program%20Files\CloudBacko%20Pro\bin\..\bin\bcpkix-jdk15on-
1.51.
jar to classpath ... OK
Adding file:\C:\Program%20Files\CloudBacko%20Pro\bin\..\bin\bcpkix-jdk15to18-
.jar to classpath ... OK
Adding file:\C:\Program%20Files\CloudBacko%20Pro\bin\..\bin\bcprov-jdk15on-
151.j
ar to classpath ... OK
Adding file:\C:\Program%20Files\CloudBacko%20Pro\bin\..\bin\bcprov-jdk15to18-
.jar to classpath ... OK
Adding file:\C:\Program%20Files\CloudBacko%20Pro\bin\..\bin\cab-parser-2.9.jar
o classpath ... OK
Adding file:\C:\Program%20Files\CloudBacko%20Pro\bin\..\bin\cab-parser-
dorkbox-u
til-1.1.jar to classpath ... OK
```

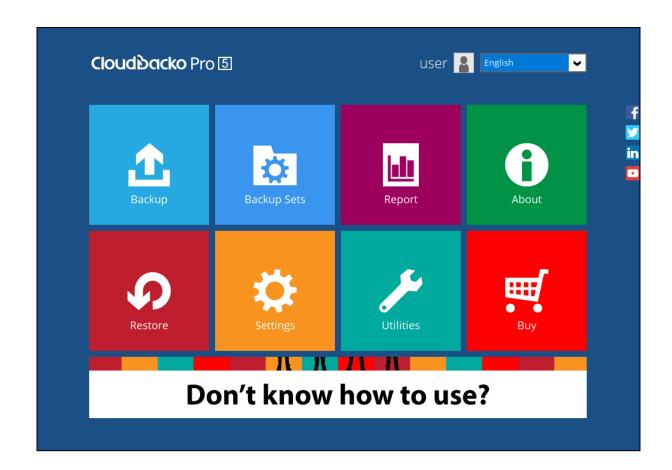
```
Adding file:\C:\Program%20Files\CloudBacko%20Pro\bin\..\bin\cabinet-maker-
1.0.0.
1. jar to classpath ... OK
Adding file:\C:\Program%20Files\CloudBacko%20Pro\bin\..\bin\commons-codec-
1.6. ja
r to classpath ... OK
Adding file:\C:\Program%20Files\CloudBacko%20Pro\bin\..\bin\commons-codec-
1.9.ja
r to classpath ... OK
Adding file:\C:\Program%20Files\CloudBacko%20Pro\bin\..\bin\commons-io-2.5.jar
o classpath ... OK
Adding file:\C:\Program%20Files\CloudBacko%20Pro\bin\..\bin\commons-logging-
1.1.
3. jar to classpath ... OK
Adding file:\C:\Program%20Files\CloudBacko%20Pro\bin\..\bin\commons-logging-
1.2.
jar to classpath ... OK
Adding file:\C:\Program%20Files\CloudBacko%20Pro\bin\..\bin\commons-net-
3.3. iar
to classpath ... OK
Adding file:\C:\Program%20Files\CloudBacko%20Pro\bin\..\bin\dom4j-1.6.1.jar to
lasspath ... OK
Adding file:\C:\Program%20Files\CloudBacko%20Pro\bin\..\bin\dropbox-core-sdk-
.5. jar to classpath ... OK
Adding file:\C:\Program%20Files\CloudBacko%20Pro\bin\..\bin\dropbox-core-sdk-
3.0
.3.1. jar to classpath ... OK
Adding file:\C:\Program%20Files\CloudBacko%20Pro\bin\..\bin\dropbox-core-sdk-
.3. jar to classpath ... OK
Adding file:\C:\Program%20Files\CloudBacko%20Pro\bin\..\bin\fluent-hc-
4.3.5.jar
to classpath ... OK
Adding file:\C:\Program%20Files\CloudBacko%20Pro\bin\..\bin\forms-1.3.0.jar to
lasspath ... OK
Adding file:\C:\Program%20Files\CloudBacko%20Pro\bin\..\bin\google-api-client-
1.
19.1.jar to classpath ... OK
Adding file:\C:\Program%20Files\CloudBacko%20Pro\bin\..\bin\google-api-client-
ckson2-1.19.1.jar to classpath ... OK
Adding file:\C:\Program%20Files\CloudBacko%20Pro\bin\..\bin\google-api-
services-
drive-v2-rev158-1.19.1.jar to classpath ... OK
Adding file:\C:\Program%20Files\CloudBacko%20Pro\bin\..\bin\google-http-
client-1
.19.0.jar to classpath ... OK
Adding file:\C:\Program%20Files\CloudBacko%20Pro\bin\..\bin\google-http-
ackson2-1.19.0.jar to classpath ... OK
Adding file:\C:\Program%20Files\CloudBacko%20Pro\bin\..\bin\google-oauth-
client-
1.19.0.jar to classpath ... OK
Adding file:\C:\Program%20Files\CloudBacko%20Pro\bin\..\bin\httpclient-
4.3.5.jar
```

```
to classpath ... OK
Adding file:\C:\Program%20Files\CloudBacko%20Pro\bin\..\bin\httpclient-
4.5.3.jar
 to classpath ... OK
Adding file:\C:\Program%20Files\CloudBacko%20Pro\bin\..\bin\httpclient-cache-
4.3
.5. jar to classpath ... OK
Adding file:\C:\Program%20Files\CloudBacko%20Pro\bin\..\bin\httpclient-cache-
.3. jar to classpath ... OK
Adding file:\C:\Program%20Files\CloudBacko%20Pro\bin\..\bin\httpcore-4.3.2.jar
o classpath ... OK
Adding file:\C:\Program%20Files\CloudBacko%20Pro\bin\..\bin\httpcore-4.4.6.jar
o classpath ... OK
Adding file:\C:\Program%20Files\CloudBacko%20Pro\bin\..\bin\httpmime-4.3.5.jar
o classpath ... OK
Adding \ file: \C: \Program \& 20 Files \Cloud Backo \& 20 Pro \bin \L. \bin \httpmime-4.5.3. jar \Adding \Add
o classpath ... OK
Adding file:\C:\Program%20Files\CloudBacko%20Pro\bin\..\bin\jackson-
annotations-
2.2.3. jar to classpath ... OK
Adding file:\C:\Program%20Files\CloudBacko%20Pro\bin\..\bin\jackson-
annotations-
2.7.4.jar to classpath ... OK
Adding file:\C:\Program%20Files\CloudBacko%20Pro\bin\..\bin\jackson-core-
ar to classpath ... OK
Adding file:\C:\Program%20Files\CloudBacko%20Pro\bin\..\bin\jackson-core-
2.7.4.7
ar to classpath ... OK
Adding file:\C:\Program%20Files\CloudBacko%20Pro\bin\..\bin\jackson-core-asl-
1.9
.13. jar to classpath ... OK
Adding file:\C:\Program%20Files\CloudBacko%20Pro\bin\..\bin\jackson-databind-
2.2
.3.jar to classpath ... OK
Adding file:\C:\Program%20Files\CloudBacko%20Pro\bin\..\bin\jackson-databind-
2.7
.4. jar to classpath ... OK
Adding file:\C:\Program%20Files\CloudBacko%20Pro\bin\..\bin\jackson-jaxrs-
1.9.2.
jar to classpath ... OK
Adding file:\C:\Program%20Files\CloudBacko%20Pro\bin\..\bin\jackson-mapper-
as1-1
.9.13.jar to classpath ... OK
Adding file:\C:\Program%20Files\CloudBacko%20Pro\bin\..\bin\jackson-xc-
1.9.2.jar
 to classpath ... OK
Adding file:\C:\Program%20Files\CloudBacko%20Pro\bin\..\bin\java-xmlbuilder-
0.4.
jar to classpath ... OK
Adding file:\C:\Program%20Files\CloudBacko%20Pro\bin\..\bin\javax.mail.jar to
c1
asspath ... OK
```

```
Adding file:\C:\Program%20Files\CloudBacko%20Pro\bin\..\bin\jcifs-1.3.18.jar
classpath ... OK
Adding file:\C:\Program%20Files\CloudBacko%20Pro\bin\..\bin\jdokan-
20170627.jar
to classpath ... OK
Adding file:\C:\Program%20Files\CloudBacko%20Pro\bin\..\bin\jdom-1.1.3.jar to
asspath ... OK
Adding file:\C:\Program%20Files\CloudBacko%20Pro\bin\..\bin\jersey-apache-
client
4-1.18.1.jar to classpath ... OK
Adding file:\C:\Program%20Files\CloudBacko%20Pro\bin\..\bin\jersey-bundle-
1.18.1
.jar to classpath ... OK
Adding file:\C:\Program%20Files\CloudBacko%20Pro\bin\..\bin\jersey-multipart-
1.1
8.1. jar to classpath ... OK
Adding file:\C:\Program%20Files\CloudBacko%20Pro\bin\..\bin\jettison-1.1.jar
classpath ... OK
Adding file:\C:\Program%20Files\CloudBacko%20Pro\bin\..\bin\jsch-0.1.50.jar to
lasspath ... OK
Adding file:\C:\Program%20Files\CloudBacko%20Pro\bin\..\bin\jsch-0.1.54.1.jar
 classpath ... OK
Adding file:\C:\Program%20Files\CloudBacko%20Pro\bin\..\bin\json simple-
1.1. jar
to classpath ... OK
Adding file:\C:\Program%20Files\CloudBacko%20Pro\bin\..\bin\jsr305-1.3.9.jar
classpath ... OK
Adding file:\C:\Program%20Files\CloudBacko%20Pro\bin\..\bin\log4j-1.2.17.jar
classpath ... OK
Adding file:\C:\Program%20Files\CloudBacko%20Pro\bin\..\bin\microsoft-
windowsazu
re-api-0.4.6.jar to classpath ... OK
windowsazu
re-storage-sdk-1.0.0.jar to classpath ... OK
Adding file:\C:\Program%20Files\CloudBacko%20Pro\bin\..\bin\microsoft-
windowsazu
re-storage-sdk-6.0.0.1.jar to classpath ... OK
Adding file:\C:\Program%20Files\CloudBacko%20Pro\bin\..\bin\microsoft-
windowsazu
re-storage-sdk-6.0.0.jar to classpath ... OK
Adding file:\C:\Program%20Files\CloudBacko%20Pro\bin\..\bin\mysql-connector-
java
-5.0.8-bin.jar to classpath ... OK
Adding file:\C:\Program%20Files\CloudBacko%20Pro\bin\..\bin\mysql-connector-
-5.1.46-bin.jar to classpath ... OK
Adding file:\C:\Program%20Files\CloudBacko%20Pro\bin\..\bin\ojdbc6.jar to
classp
ath ... OK
Adding file:\C:\Program%20Files\CloudBacko%20Pro\bin\..\bin\org.json-
20150730.ja
```

```
r to classpath ... OK
Adding file:\C:\Program%20Files\CloudBacko%20Pro\bin\..\bin\servlet-api.jar to
lasspath ... OK
Adding file:\C:\Program%20Files\CloudBacko%20Pro\bin\..\bin\sinetfactory.jar
classpath ... OK
Adding file:\C:\Program%20Files\CloudBacko%20Pro\bin\..\bin\snappy-java-
jar to classpath ... OK
Adding file:\C:\Program%20Files\CloudBacko%20Pro\bin\..\bin\sqlite-jdbc-
3.27.2.1
.jar to classpath ... OK
Adding file:\C:\Program%20Files\CloudBacko%20Pro\bin\..\bin\yavijava.jar to
clas
spath ... OK
Adding file:\C:\Program%20Files\CloudBacko%20Pro\jvm\lib\charsets.jar to
classpa
th ... OK
Adding file:\C:\Program%20Files\CloudBacko%20Pro\jvm\lib\jce.jar to
classpath ..
. OK
Adding file:\C:\Program%20Files\CloudBacko%20Pro\jvm\lib\jfxswt.jar to
classpath
Adding file:\C:\Program%20Files\CloudBacko%20Pro\jvm\lib\jsse.jar to
classpath .
.. OK
Adding file:\C:\Program%20Files\CloudBacko%20Pro\jvm\lib\management-agent.jar
classpath ... OK
Adding file:\C:\Program%20Files\CloudBacko%20Pro\jvm\lib\resources.jar to
classp
ath ... OK
Adding file:\C:\Program%20Files\CloudBacko%20Pro\jvm\lib\rt.jar to
classpath ...
OK
JComFlashPlayer failed to start. Please update your Flash player and try again
Press any key to continue . . .
```

Eventually, the CloudBacko Pro main screen will be displayed.





ListBackupSet.bat

This allows the user to see the list of existing backup set/s under the backup account.

Enter ListBackupSet.bat to display the list of available backup sets with their backup set ID.

```
C:\Program Files\CloudBacko Pro\bin>ListBackupSet.bat
APP HOME=..
SETTING HOME=
JAVA HOME=..\jvm
JAVA EXE=..\jvm\bin\bJW.exe
JAVA OPTS=-Xms128m -Xmx768m -Dsun.java2d.noddraw -
Dsun.nio.PageAlignDirectMemory
=true
JAVA LIB PATH=-Djava.library.path=..\bin
PATH=...\jvm\bin;...\bin\X64;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\bin\bin;...\bin\bin;...\bin\bin;...\bin\bin;...\bin\bin;...\bin\bin;...\bin\bin;...\bin\bin;...\bin\bin;...\bin\bin;...\bin\bin;...\bin\bin;...\bin\bin;...\bin\bin;...\bin\bin;...\bin\bin;...\bin\bin;...\bin\bin;...\bin\bin;...\bin\bin;...\bin\bin;...\bin\bin;...\bin\bin;...\bin\bin;...\bin\bin;...\bin\bin;...\bin\bin;...\bin\bin;...\bin\bin;...\bin\bin;...\bin\bin;...\bin\bin;...\bin\bin;...\bin\bin;...\bin\bin;...\bin\bin;...\bin\bin;...\bin\bin;...\bin\bin;...\bin\bin;...\bin\bin;...\bin\bin;...\bin\bin;...\bin\bin;...\bin\bin;...\bin\bin;...\bin\bin;...\bin\bin;...\bin\bin;...\bin\bin;...\bin\bin;...\bin\bin;...\bin\bin;...\bin\bin;...\bin\bin;...\bin\bin;...\bin\bin;...\bin\bin;...\bin\bin;...\bin\bin;...\bin\bin;...\bin\bin;...\bin\bin;...\bin\bin;...\bin\bin;...\bin\bin;...\bin\bin;...\bin\bin;...\bin\bin;...\bin\bin;...\bin\bin;...\bin\bin;...\bin\bin;...\bin\bin;...\bin\bin;...\bin\bin;...\bin\bin;...\bin\bin;...\bin\bin;...\bin\bin;...\bin\bin;...\bin\bin;...\bin\bin;...\bin\bin;...\bin\bin;...\bin\bin;...\bin\bin;...\bin\bin;...\bin\bin;...\bin\bin;...\bin\bin;...\bin\bin;...\bin\bin;...\bin\bin
n; C: \verb|Windows| system 32; C: \verb|Windows| System 32| Wbem; C
ndowsPowerShell \ \ v1.0 \ \ 
CLASSPATH=..\bin;..\bin\cb.jar
Listing all backup sets under this backup account ...
C:\Program Files\CloudBacko Pro\bin>..\jvm\bin\bJW.exe -
Djava.library.path=..\bi
n -cp ..\bin;..\bin\cb.jar -Xms128m -Xmx768m -Dsun.java2d.noddraw -
Dsun.nio.Page
AlignDirectMemory=true ListBackupSet ..
BackupSet Name= Sample Backup Set, ID= 1596781705469
BackupSet Name= Sample Backup Set 01, ID= 1596781730429
BackupSet Name= Sample Backup Set 03, ID= 1596781791301
BackupSet Name= Sample Backup Set 02, ID= 1596781839988
C:\Program Files\CloudBacko Pro\bin>PAUSE
Press any key to continue . . .
```



RunBackupSet.bat

This allows the user to run a backup. Export the batch file to a text editor using the following script.

```
C:\Program Files\CloudBacko Pro\bin>notepad RunBackupSet.bat
C:\Program Files\CloudBacko Pro\bin>
```

Make sure that the following parameters are set accordingly:

• **BACKUP_SET** – this is the backup set which you would like to run. There are two (2) options to specify the backup set; using the *backup set name* or the *backup set ID*. If the backup set name is not in English, use the backup set ID.

```
e.g. SET BACKUP_SET="FileBackupSet-1" or SET BACKUP_SET="1119083740107"
```

You can leave this parameter blank if you only have one (1) backup set.

```
e.g. SET BACKUP SET=""
```

If having multiple backup sets, you must specify which backup set you would like to be run.

• **BACKUP_DESTS** – this is the destination(s) of the backup set which you will run. There are two (2) options to specify the destination; using the *destination name* or the *destination ID*. If the destination is not in English, use the destination ID.

```
e.g. SET BACKUP_DEST="Local-1" or SET BACKUP_DEST="1119083740107"
```

Multiple destinations can be specified in a comma-separated format, or you can indicate "ALL" to run a backup for all destinations.

```
e.g. SET BACKUP_DESTS="Destination-1,Destination-2" or SET BACKUP_DESTS="ALL"
```

• **BACKUP_TYPE** – this is the backup set type. This does not need to be changed if backing up a file backup set.

Options available: FILE/DATABASE/DIFFERENTIAL/LOG

```
e.g. SET BACKUP_TYPE="FILE" for file backup
or SET BACKUP_TYPE="DATABASE" for Full database backup
or SET BACKUP_TYPE="DIFFERENTIAL" for Differential database backup
or SET BACKUP_TYPE="LOG" for Log database backup
```

For MSExchange 2010 BackupSet:

```
e.g. SET BACKUP_TYPE="DATABASE" for Full database backup for SET BACKUP_TYPE="DIFFERENTIAL" for Differential database backup or SET BACKUP_TYPE="LOG" for Incremental database backup for Copy database backup
```

 SETTING_HOME – this is the directory to your setting home. If not set, the directory will be "C:\Users\USER\.cbp" by default.

```
e.g. SET SETTING_HOME="C:\Users\John\.cbp"
```

- **DELTA_MODE** this is used to set the In-File Delta mode when running a backup.
 - e.g. SET DELTA_MODE="I" for Incremental In-file delta backup
 - or SET DELTA_MODE="D" for Differential In-file delta backup
 - or SET DELTA_MODE="F" for Full File backup
 - or SET DELTA_MODE="" for using backup set in-file delta setting
- **CLEANUP_MODE** same as the retention policy job and space freeing up, this parameter is used to remove obsolete files from your backup destinations after a backup has been run.

Options available: ENABLE-CLEANUP/DISABLE-CLEANUP

- e.g. SET CLEANUP_MODE="ENABLE-CLEANUP" or SET CLEANUP_MODE="DISABLE-CLEANUP"
- DEBUG_MODE this parameter is used to enable or disable the debug mode when there is a backup job running.

Options available: ENABLE-DEBUG/DISABLE-DEBUG

e.g. SET DEBUG_MODE="ENABLE-DEBUG"
 or SET DEBUG_MODE="DISABLE-DEBUG"

```
@ECHO OFF
REM # You can use this batch to run any of your backup sets from the
REM # command line. Just customize the "User Defined Section" below with your #
REM # values for your backup action.
REM ----- BACKUP SET -----
REM | The name or ID of the backup set that you want to run.
REM | If backup set name is not in English, please use ID instead.
REM | e.g. SET BACKUP SET="1119083740107"
REM | or SET BACKUP SET="FileBackupSet-1"
REM | You can leave this parameter blank if you have only 1 backup set.
REM -----
SET BACKUP_SET=""
REM ----- BACKUP DESTS -----
REM | The list of name or ID of the backup destinations that you want to run. |
REM | If backup destination name is not in English, please use ID instead.
REM | e.g. SET BACKUP DESTS="1740107119083"
REM | or SET BACKUP DESTS="Destination-1, Destination-2"
    or SET BACKUP DESTS="ALL"
REM | You can specify multiple destinations in comma-separated format,
REM | or use "ALL" to run backup for all destinations.
SET BACKUP DESTS="ALL"
REM ----- BACKUP TYPE -----
REM | Set backup type. You don't need to change this if you are backing up a
REM | file backup set.
REM | Options available: FILE/DATABASE/DIFFERENTIAL/LOG
REM | e.g. SET BACKUP_TYPE="FILE" for file backup
REM | or SET BACKUP_TYPE="DATABASE" for Full database backup
REM | or SET BACKUP_TYPE="DIFFERENTIAL" for Differential database backup
REM | or SET BACKUP TYPE="LOG"
                                 for Log database backup
REM |
REM | For MSExchange 2010 BackupSet
REM | e.g. SET BACKUP_TYPE="DATABASE"
                                 for Full database backup
REM | or SET BACKUP TYPE="DIFFERENTIAL" for Differential database backup
REM | or SET BACKUP TYPE="LOG"
                                 for Incremental database backup
REM | or SET BACKUP_TYPE="COPY"
                                 for Copy database backup
REM -----
SET BACKUP TYPE="FILE"
REM ----- SETTING HOME
REM | Directory to your setting home. Default to
REM | "C:\Users\USER\.cbp" when not set.
REM | e.g. SET SETTING HOME="C:\Users\John\.cbp"
REM -----
SET SETTING HOME=""
REM ----- DELTA MODE -----
REM | Set In-File Delta mode.
REM | Options available: Incremental/Differential/Full (I/D/F)
REM | e.g. SET DELTA MODE="I" for Incremental In-file delta backup
```

```
REM | or SET DELTA MODE="D" for Differential In-file delta backup
REM | or SET DELTA_MODE="F" for Full File backup

REM | or SET DELTA_MODE="" for using backup set in-file delta setting
SET DELTA MODE=""
REM ----- CLEANUP MODE -----
REM | You can enable Cleanup mode to remove obsolete files from your backup |
REM | destinations after backup.
REM | Options available: ENABLE-CLEANUP/DISABLE-CLEANUP
REM | e.g. SET CLEANUP MODE="ENABLE-CLEANUP"
REM | or SET CLEANUP MODE="DISABLE-CLEANUP"
REM -----
SET CLEANUP MODE="DISABLE-CLEANUP"
REM ----- DEBUG_MODE -----
REM | Set Debug mode.
REM | Options available: ENABLE-DEBUG/DISABLE-DEBUG
REM | e.g. SET DEBUG MODE="ENABLE-DEBUG"
REM | or SET DEBUG MODE="DISABLE-DEBUG"
REM -----
SET DEBUG MODE="DISABLE-DEBUG"
SET APP HOME=..
SET JAVA HOME=%APP HOME%\jvm
SET JAVA EXE=%JAVA HOME%\bin\bJW.exe
SET JAVA LIB PATH=-Djava.library.path=%APP HOME%\bin
SET PATH=%JAVA HOME%\bin;%PATH%
SET CLASSPATH=%APP HOME%\bin;%APP HOME%\bin\cb.jar
IF "%PROCESSOR ARCHITECTURE%"=="x86" (
 SET "DEP LIB PATH=X86"
 SET JAVA OPTS=-Xms128m -Xmx768m -XX:MaxDirectMemorySize=512m -
Dsun.java2d.noddraw -Dsun.nio.PageAlignDirectMemory=true
) ELSE (
 SET "DEP LIB PATH=X64"
 SET JAVA OPTS=-Xms128m -Xmx2048m -XX:MaxDirectMemorySize=1024m -
Dsun.java2d.noddraw -Dsun.nio.PageAlignDirectMemory=true
SET PATH=%CD%\%APP HOME%\bin\%DEP LIB PATH%;%PATH%
ECHO -
ECHO APP HOME=%APP HOME%
ECHO SETTING HOME=%SETTING HOME%
ECHO JAVA HOME=%JAVA HOME%
ECHO JAVA EXE=%JAVA EXE%
ECHO JAVA OPTS=%JAVA OPTS%
ECHO JAVA LIB PATH=%JAVA LIB PATH%
ECHO PATH=%PATH%
ECHO CLASSPATH=%CLASSPATH%
ECHO Running Backup Set - '%BACKUP SET%' ...
@ECHO ON
```

```
%JAVA_EXE% %JAVA_LIB_PATH% -cp %CLASSPATH% %JAVA_OPTS% RunBackupSet %APP_HOME%
%BACKUP_SET% %BACKUP_DESTS% %BACKUP_TYPE% %SETTING_HOME% %DELTA_MODE%
%CLEANUP_MODE% %DEBUG_MODE%
@ECHO OFF
CD %APP_HOME%
IF "%APP_HOME%"==".." PAUSE
@ECHO ON
```

NOTE

If some parameters are not configured, the backup job will run with the default backup settings.

Save the changes and close the text editor. Proceed back to cmd and enter RunBackupSet.bat.

```
C:\Program Files\CloudBacko Pro\bin>RunBackupSet.bat
APP HOME=..
SETTING HOME=""
JAVA HOME=..\jvm
JAVA EXE=..\jvm\bin\bJW.exe
{\it JAVA\_OPTS=-Xms128m--Xmx2048m--XX:MaxDirectMemorySize=1024m--Dsun.java2d.noddraw}
-Dsun.nio.PageAlignDirectMemory=true
JAVA LIB PATH=-Djava.library.path=..\bin
PATH=C:\Program Files\CloudBacko Pro\bin\..\bin\X64;..\jvm\bin;..\jvm\bin;..\bin
\X64;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jvm\bin;...\jv
C: \\ \ Windows; C: \\ \ Windows \\ \ System 32 \\ \ Wbem; C: \\ \ Windows \\ \ System 32 \\ \ Windows \\ \ Power Shell \\ \ v1.0 \\ \ V1.0 \\ \ V2.0 \\ \ V3.0 \\ \ V4.0 \\ \ V4
CLASSPATH=..\bin;..\bin\cb.jar
Running Backup Set - '""' ...
C:\Program Files\CloudBacko Pro\bin>..\jvm\bin\bJW.exe -Djava.library.path=..\bi
n -cp ..\bin;..\bin\cb.jar -Xmx128m -Xmx2048m -XX:MaxDirectMemorySize=1024m -Dsu
n.java2d.noddraw -Dsun.nio.PageAlignDirectMemory=true RunBackupSet .. "" "ALL" "
FILE" "" "DISABLE-CLEANUP" "DISABLE-DEBUG"
[NullPointerException] Backup set name or ID must not be null.
Press any key to continue . . .
```



ListBackupJob.bat

This allows the user to display the list of backup jobs under a specific backup set. Enter the following script to export the batch file to a text editor.

```
C:\Program Files\CloudBacko Pro\bin>notepad ListBackupJob.bat
C:\Program Files\CloudBacko Pro\bin>
```

Configure the following parameters:

• **BACKUP_SET** – this is the backup set which you would like to be displayed. There are two (2) ways to specify the backup set; using the *backup set name* or the *backup set ID*. If the backup set name is not in English, use the backup set ID.

```
e.g. SET BACKUP_SET="FileBackupSet-1" or SET BACKUP_SET="1119083740107"
```

You can leave this parameter blank if you only have one (1) backup set.

```
e.g. SET BACKUP_SET=""
```

• **BACKUP_DEST** – this is the destination of the backup set which you would like to be displayed. There are two (2) ways to specify the backup destination; using the *destination name* or the *destination ID*. If the destination is not in English, use the destination ID.

```
e.g. SET BACKUP_DEST="Local-1" or SET BACKUP_DEST="1119083740107"
```

You can leave this parameter blank if you only have one (1) backup destination.

```
e.g. SET BACKUP_DEST=""
```

```
@ECHO OFF
REM ############## ListBackupJob.bat
REM # You can use this batch to list all backup jobs which ran under this
REM # backup set.
REM
REM ################ Start: User Defined Section
##########################
REM ----- BACKUP SET -----
REM | The name or ID of the backup set that you want to run
REM | If backup set name is not in English, please use BackupSetID
REM | e.g. SET BACKUP SET="1119083740107"
REM | or SET BACKUP SET="FileBackupSet-1"
REM |
REM | You can leave this parameter blank if you have only 1 backup set.
REM -----
SET BACKUP SET=""
REM ----- BACKUP DEST -----
REM | The name or ID of the destination that you want to list
REM | If destination name is not in English, please use DestinationID
REM | e.g. SET BACKUP DEST="1119083740107"
REM | or SET BACKUP_DEST="CBS"
REM |
REM | You can leave this parameter blank if you have only 1 destination.
SET BACKUP DEST=""
REM ################# END: User Defined Section
#############################
REM
REM #
              SCRIPT
                                  USAGE
REM # Input Arguments will overwrite the above settings
REM # defined in 'User Defined Section'.
IF NOT %1.==. SET BACKUP SET=%1
IF NOT %2.==. SET BACKUP DEST=%2
SET APP HOME=..
SET SETTING HOME=
```

```
SET JAVA HOME=%APP HOME%\jvm
SET JAVA EXE=%JAVA HOME%\bin\bJW.exe
SET JAVA OPTS=-Xms128m -Xmx768m -Dsun.java2d.noddraw -
Dsun.nio.PageAlignDirectMemory=true
SET JAVA LIB PATH=-Djava.library.path=%APP HOME%\bin
SET PATH=%JAVA HOME%\bin;%PATH%
SET CLASSPATH=%APP HOME%\bin;%APP_HOME%\bin\cb.jar
REM
ECHO
ECHO APP_HOME=%APP HOME%
ECHO SETTING HOME=%SETTING HOME%
ECHO JAVA HOME=%JAVA HOME%
ECHO JAVA_EXE=%JAVA_EXE%
ECHO JAVA OPTS=%JAVA OPTS%
ECHO JAVA LIB PATH=%JAVA LIB PATH%
ECHO PATH=%PATH%
ECHO CLASSPATH=%CLASSPATH%
ECHO -
ECHO Listing all backup jobs for Backup Set - '%BACKUP SET%' ...
@ECHO ON
%JAVA EXE% %JAVA LIB PATH% -cp %CLASSPATH% %JAVA OPTS% ListBackupJob --app-
home=%APP_HOME% --backup-set=%BACKUP_SET% --backup-dest=%BACKUP_DEST% --
setting-home=%SETTING HOME%
PAUSE
```

NOTE

You can only select one (1) backup set and one (1) destination at a time.

Save the changes and close the text editor. Proceed back to *cmd* and enter *ListBackupJob.bat*. The list of backup jobs under the specified backup set will be displayed.

```
C:\Program Files\CloudBacko Pro\bin>ListBackupJob.bat
APP HOME=..
SETTING HOME=
JAVA HOME=..\j∨m
JAVA EXE=..\jvm\bin\bJW.exe
JAVA OPTS=-Xms128m -Xmx768m -Dsun.java2d.noddraw -
Dsun.nio.PageAlignDirectMemory
=trije
JAVA LIB PATH=-Djava.library.path=..\bin
ws\System32\WindowsPowerShell\v1.0\
CLASSPATH=..\bin;..\bin\cb.jar
Listing all backup jobs for Backup Set - '"Sample Backup Set"' ...
C:\Program Files\CloudBacko Pro\bin>..\jvm\bin\bJW.exe -
Djava.library.path=..\bi
n -cp ..\bin;..\bin\cb.jar -Xms128m -Xmx768m -Dsun.java2d.noddraw -
Dsun.nio.Page
AlignDirectMemory=true ListBackupJob --app-home=.. --backup-set="Sample Backup
et" --backup-dest="" --setting-home=
Sample Backup Set [1596781705469]
2020-08-07-15-23-00
```

C:\Program Files\CloudBacko Pro\bin>PAUSE Press any key to continue . . .



Restore.bat

This allows the user to restore backed-up data. Enter the following script to export the batch file to a text editor.

```
C:\Program Files\CloudBacko Pro\bin>notepad Restore.bat
C:\Program Files\CloudBacko Pro\bin>
```

Configure the following parameters:

 BACKUP_SET – this is the backup set which you would like to restore. If the backup set name is not in English, use the backup set ID.

```
e.g. SET BACKUP_SET="FileBackupSet-1" or SET BACKUP_SET="1119083740107"
```

• **DESTINATION** – this is the destination where you want to restore the backed-up data from. If the destination is not in English, use the destination ID.

```
e.g. SET DESTINATION="Local-1" or SET DESTINATION="1119083740107"
```

You can leave this parameter blank if you only have one (1) backup destination.

```
e.g. SET DESTINATION=""
```

RESTORE_TO – this is the location where the files will be restored.

```
e.g. SET RESTORE_TO=" C:\Temp"
```

 RESTORE_FROM – this is the selected file or directory on the backup server which you would like to restore.

```
e.g. SET RESTORE_FROM="C:\Users"
```

POINT_IN_TIME – this is the point-in-time snapshot (of a successful backup) that you want
to restore from the backup server. Use "Current" for the latest backup snapshot. You can
retrieve the point in time by using the ListBackupJob.bat.

```
e.g. SET POINT_IN_TIME="2006-10-04-12-57-13" or SET POINT_IN_TIME="Current"
```

• **RESTORE_PERMISSION** – set this to "Y" if you want to restore file permissions. Otherwise, indicate "N" if you do NOT want to restore file permissions.

```
e.g. SET RESTORE_PERMISSION="N"
```

• **SKIP_INVALID_KEY** – set this to "Y" if you want to skip restore file with an invalid key. Set this to "N" if you want to prompt user to input the correct key.

```
e.g. SET SKIP INVALID KEY="N"
```

• **SYNC_OPTION** – set this to "Y" if you want to enable the sync option. Set this to "N" if you do NOT want to enable sync option. Leave this blank if you want to prompt user for a selection.

```
e.g. SET SYNC_OPTION="N"
```

• **REPLACE_EXISTING_FILE** – set to "--all" to replace all existing file(s) of the same filename. Set this to "--none" to skip all existing file(s) with the same filename. Leave this blank if you want to prompt user for a selection.

```
e.g. SET REPLACE_EXISTING_FILE="--all"
```

 SETTING_HOME – this is the directory to your setting home. If not set, the directory will be "C:\Users\USER\.cbp" by default.

```
e.g. SET SETTING_HOME="C:\Users\John\.cbp"
```

FILTER – this parameter is used to filter the files that you want to restore.

```
e.g. SET FILTER="-Pattern=.txt-Type=exact-Target=toFile"
```

TEMP_DIR – this is the directory where you would like to store the restore files temporarily.

```
e.g. SET TEMP_DIR="C:\Temp"
```

 VERIFY_CHKSUM – set this to "Y" if you want to verify the in-file delta file checksum during restore. Otherwise, set this to "N" if you do NOT want to verify the in-file delta file checksum during restore.

e.g. SET VERIFY_CHKSUM="N"

```
@ECHO OFF
REM ############################ Restore.bat
###################################
REM # You can use this batch file to restore backup files using command-line.
REM # Just customize the "User Define Section" below with values for your
REM # restore action.
REM
******************************
REM ################ Start: User Defined Section
############################
REM ----- BACKUP SET ------
REM | The name or ID of the backup set that you want to restore.
REM | If backup set name is not in English, please use ID instead.
REM | e.g. SET BACKUP SET="1119083740107"
REM | or SET BACKUP SET="FileBackupSet-1"
REM |
REM | You can leave this parameter blank if you have only 1 backup set.
REM -----
SET BACKUP SET=""
REM ----- DESTINATION -----
REM | The name or ID of the backup destination that you want to restore from.
REM | If backup destination name is not in English, please use ID instead.
REM | e.g. SET DESTINATION="1740107119083"
REM | or SET DESTINATION="Destination-1"
REM |
REM | You can leave this parameter blank if you have only 1 destination.
REM -----
SET DESTINATION=""
REM ----- RESTORE TO -----
REM | Directory to where you want files to be restored
REM | Use "\\\" instead of "\\" when you specify a UNC path
REM | set to "" to restore files to original location
```



```
REM | e.g. SET RESTORE TO="C:\Temp"
REM -----
SET RESTORE TO=""
REM ----- RESTORE FROM ------
REM | File/Directory on the backup server that you would like to restore
REM | e.g. SET RESTORE FROM="C:\Data"
REM -----
SET RESTORE FROM=""
REM ----- POINT IN TIME -----
REM | The point-in-time snapshot (successful backup) that you want to restore
REM | from the backup server. Use "Current" for the latest backup snapshot
REM | e.g. SET POINT IN TIME="2006-10-04-12-57-13"
REM | or SET POINT IN TIME="Current"
REM |
REM | You can retrieve the point in time by using the ListBackupJob.bat
REM -----
SET POINT_IN_TIME="Current"
REM ----- RESTORE PERMISSION -----
REM | set to "Y" if you want to restore file permissions
REM | set to "N" if you do NOT want to restore file permissions
REM -----
                 ______
SET RESTORE PERMISSION="N"
REM ----- SKIP_INVALID_KEY ------
REM | set to "Y" if you want to skip restore file with invalid key
REM | set to "N" if you want to prompt user to input a correct key
REM -----
SET SKIP INVALID KEY="N"
REM ----- SYNC OPTION -----
REM | Delete extra files
```

```
REM | set to "Y" if you want to enable sync option
REM | set to "N" if you do NOT want to enable sync option
REM | set to "" to prompt for selection
REM -----
SET SYNC OPTION="N"
REM ----- REPLACE EXISTING FILE -----
REM | set to "--all" to replace all existing file(s) of the same filename
REM | set to "--none" to skip all existing file(s) with the same filename
REM | set to "" to prompt for selection
REM -----
SET REPLACE EXISTING FILE="--all"
REM ----- SETTING HOME -----
REM | Directory to your setting home. Default to
REM | "C:\Users\USER\.cbp" when not set.
REM | e.g. SET SETTING HOME="C:\Users\John\.cbp"
REM -----
SET SETTING HOME=""
REM OPTION:
REM ----- FILTER ------
REM | Filter out what files you want to restore
REM | -Pattern=xxx-Type=yyy-Target=zzz
REM | where xxx is the filter pattern,
        yyy is the filter type, whice can be one of the following:
REM |
REM |
           [exact | exactMatchCase | contains | containsMatchCase|
REM |
            startWith | startWithMatchCase | endWith | endWithMatchCase]
REM |
        zzz is the filter target, which can be one of the following:
           [toFile | toFileDir | toDir]
REM |
REM |
REM | e.g. SET FILTER="-Pattern=.txt-Type=exact-Target=toFile"
         _____
REM -----
```

```
SET FILTER=""
REM ----- TEMP DIR ------
REM | Directory to where you want to store restore files temporarily
REM | Use "\\\" instead of "\\" when you specify a UNC path
REM | set to "" to use the temporary directory in the backup set
REM | e.g. SET TEMP DIR="C:\Temp"
REM -----
SET TEMP DIR=""
REM ----- VERIFY CHKSUM -----
REM | set to "Y" if you want to verify in-file delta file checksum during
REM | restore
REM | set to "N" if you do NOT want to verify in-file delta file checksum
REM | during restore
REM ----
SET VERIFY CHKSUM="N"
REM ################ END: User Defined Section
###############################
SET APP HOME=..
SET JAVA HOME=%APP HOME%\jvm
SET JAVA EXE=%JAVA HOME%\bin\bJW.exe
SET JAVA LIB PATH=-Djava.library.path=%APP_HOME%\bin
SET PATH=%JAVA HOME%\bin;%PATH%
SET CLASSPATH=%APP HOME%\bin;%APP HOME%\bin\cb.jar
IF "%PROCESSOR ARCHITECTURE%"=="x86" (
 SET "DEP LIB PATH=X86"
 SET JAVA OPTS=-Xms128m -Xmx768m -XX:MaxDirectMemorySize=512m -
Dsun.java2d.noddraw -Dsun.nio.PageAlignDirectMemory=true
) ELSE (
 SET "DEP LIB PATH=X64"
 SET JAVA OPTS=-Xms128m -Xmx2048m -XX:MaxDirectMemorySize=1024m -
Dsun.java2d.noddraw -Dsun.nio.PageAlignDirectMemory=true
SET PATH=%CD%\%APP HOME%\bin\%DEP LIB PATH%;%PATH%
REM
ECHO APP HOME=%APP HOME%
ECHO SETTING HOME=%SETTING HOME%
ECHO JAVA HOME=%JAVA HOME%
ECHO JAVA EXE=%JAVA EXE%
ECHO JAVA OPTS=%JAVA OPTS%
```

```
ECHO JAVA_LIB_PATH=%JAVA_LIB_PATH%
ECHO PATH=%PATH%
ECHO CLASSPATH=%CLASSPATH%
ECHO -
@ECHO ON
%JAVA_EXE% %JAVA_LIB_PATH% -cp %CLASSPATH% %JAVA_OPTS% Restore --
to=%RESTORE TO% --from=%RESTORE FROM% --backup-set=%BACKUP SET% --backup-
dest=%DESTINATION% %REPLACE EXISTING FILE% --date=%POINT IN TIME% --set-
permission=%RESTORE PERMISSION% --skip-invalid-key=%SKIP INVALID KEY% --
sync=%SYNC OPTION% --filter=%FILTER% --temp-dir=%TEMP DIR% --verify-delta-
file-chksum=%VERIFY_CHKSUM% --app-home=%APP_HOME% --setting-
home=%SETTING HOME%
@ECHO OFF
CD %APP HOME%
IF "%APP HOME%"==".." PAUSE
@ECHO ON
```

NOTE

If some parameters are not set, the restore job will run with the default restore settings.



Save the changes and close the text editor. Proceed back to cmd and enter Restore.bat.

```
C:\Program Files\CloudBacko Pro\bin>Restore.bat
APP HOME=..
SETTING HOME="C:\Users\Administrator\.cbp"
JAVA HOME=..\jvm
JAVA EXE=..\jvm\bin\bJW.exe
JAVA OPTS=-Xms128m -Xmx2048m -XX:MaxDirectMemorySize=1024m -
Dsun.java2d.noddraw
-Dsun.nio.PageAlignDirectMemory=true
JAVA LIB PATH=-Djava.library.path=..\bin
PATH=C:\Program Files\CloudBacko Pro\bin\..\bin\X64;..\jvm\bin;C:\Program
Files \
CloudBacko Pro\bin\..\bin\X64;...\jvm\bin;C:\Program Files\CloudBacko
Pro\bin\..\
bin\X64;...\jvm\bin;C:\Windows\system32;C:\Windows;C:\Windows\System32\Wbem;C:\Windows\system32\Vbem;C:\Windows\System32\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbem;C:\Vbe
ndows\System32\WindowsPowerShell\v1.0\
CLASSPATH=..\bin;..\bin\cb.jar
C:\Program Files\CloudBacko Pro\bin>..\jvm\bin\bJW.exe -
Djava.library.path=..\bi
n -cp ..\bin;..\bin\cb.jar -Xms128m -Xmx2048m -XX:MaxDirectMemorySize=1024m -
n.java2d.noddraw -Dsun.nio.PageAlignDirectMemory=true Restore --to="C:\Temp" -
rom="C:\Desktop" --backup-set="Sample Backup Set" --backup-dest="" "--all" --
e="Current" --set-permission="N" --skip-invalid-key="N" --sync="N" --filter=""
-temp-dir="" --verify-delta-file-chksum="N" --app-home=.. --setting-
home="C:\Use
rs\Administrator\.cbp"
Filter Pattern not set, filter would not apply to restore
Temporary directory not set, use the temporary directory in the backup set
[2020-08-07 17:53:52] Start [ CloudBacko Pro v4.1.2.13 ]
[2020-08-07 17:53:55] OS: Windows 7 (w7-pro); CPU Model: VMware-Intel(R)
Xeon(R)
 CPU
                            E5520 @ 2.27GHz, Intel(R) Xeon(R) CPU
                                                                                                                       E5520 @
2.27GHz;
 Number of Processors: 4; Heap Size: 14.9MB (Current) / 1.8GB (Maximum);
Physica
1 Memory: 2.9GB (Free) / 4GB (Total)
[2020-08-07 17:53:55] start, Start [ CloudBacko Pro v4.1.2.13 ],0,0,0,0,0
[2020-08-07 17:53:55] Selected job: 2020-08-07-17-53-48
[2020-08-07 17:53:55] Selected source: [C:\Desktop]
[2020-08-07 17:53:55] Info: [followLink=true marshalTargetPath=false
deleteForSy
nc=false skipFaultKey=false verifyDeltaFileChecksum=false
restorePermission=fals
e [RestoreLocation] type=RAW path=[C:\Temp]]
[2020-08-07 17:53:55] Initializing decrypt action...
[2020-08-07 17:53:55] Initializing decrypt action... Completed
[2020-08-07 17:53:56] Creating new directory... "C:\Temp\C_"
[2020-08-07 17:53:56] Restore Completed Successfully
[2020-08-07 17:53:56] end, RESTORE_STOP_SUCCESS, 0, 0, 0, 0, 0
```

Press any key to continue . . .

Decrypt.bat

This allows the user to restore raw data. Enter the following script to export the batch file to a text editor

```
C:\Program Files\CloudBacko Pro\bin>notepad Decrypt.bat
C:\Program Files\CloudBacko Pro\bin>
```

Configure the following parameters:

 SOURCE_DIR – this is the path of the folder which contains the backed-up files that you want to decrypt.

```
e.g. SOURCE_DIR="C:\john\backupdata\1498444438340\blocks"
```

• **ENCRYPT_KEY** – this is the encryption key that was set for the backup set. You can leave this parameter blank if the backed-up data is not encrypted.

```
e.g. ENCRYPT_KEY="NjQAtHhBSyAVgfFkaFl=" e.g. ENCRYPT_KEY=""
```

DECRYPT_TO – this is the specified directory where the decrypted files will be stored.

```
e.g. SET DECRYPT_TO=" C:\Temp"
```

 DECRYPT_FROM – this is the file or directory on the backup data that you would like to decrypt.

```
e.g. SET DECRYPT_TO="C:\Data"
```

POINT_IN_TIME – this is the point-in-time snapshot (of a successful backup) that you want
to decrypt from the backed-up data. Use "Current" for the latest backup snapshot. The pointin-time should be one of the directory names under SOURCE_DIR.

```
e.g. SET POINT_IN_TIME="2006-10-04-12-57-13" or SET POINT_IN_TIME="Current"
```

• **RESTORE_PERMISSION** – set this to "Y" if you want to restore file permissions. Otherwise, indicate "N" if you do NOT want to restore file permissions.

```
e.g. SET RESTORE_PERMISSION="N"
```

• **SKIP_INVALID_KEY** – set this to "Y" if you want to skip decrypt file with invalid key. Set this set to "N" if you want to prompt user to input a correct key.

```
e.g. SKIP INVALID KEY="Y"
```

• SYNC_OPTION – set this to "Y" if you want to enable sync option. Set this to "N" if you do NOT want to enable sync option. Leave this parameter blank if you want to prompt user for selection.

```
e.g. SET SYNC_OPTION="N"
```

e.g. SET SYNC_OPTION=""

- REPLACE_EXISTING_FILE set this to "--all" if you want to replace all existing file(s) of the same filename. Set this to "--none" if you want to skip all existing file(s) with the same filename. Leave this parameter blank if you want to prompt user for selection.
 - e.g. SET REPLACE_EXISTING_FILE="--all"
 - e.g. SET REPLACE_EXISTING_FILE="--none"
 - e.g. SET REPLACE_EXISTING_FILE=""
- **SETTING_HOME** this is the directory to your setting home. This is where the log files will be placed. If not set, the directory will be "C:\Users\USER\.cbp" by default.
 - e.g. SET SETTING_HOME="C:\Users\John\.cbp"
- FILTER this parameter is used to filter the files that you want to decrypt.
 - e.g. SET FILTER="-Pattern=.txt-Type=exact-Target=toFile"
- TEMP_DIR this is the directory where you would like to store the decrypt files temporarily.
 - e.g. SET TEMP_DIR="C:\Temp"
- VERIFY_CHKSUM set this to "Y" if you want to verify the in-file delta file checksum during decrypt. Set this to "N" if you do NOT want to verify the in-file delta file checksum during decrypt.
 - e.g. SET VERIFY_CHKSUM="N"



```
@ECHO OFF
REM ################## Decrypt.bat
##################################
REM # You can use this batch file to decrypt backup files using command-line.
REM # Just customize the "User Define Section" below with values for your
REM # decrypt action.
REM
REM ################ Start: User Defined Section
##############################
REM ----- SOURCE DIR -----
REM | The path to the [<backup set ID>/blocks] folder which contains
REM | the backup files that you want to decrypt.
REM | This folder should located under backup destination physically.
REM | e.g. SET SOURCE DIR="C:\john\backupdata\1498444438340\blocks"
      where directory "C:\john\backupdata" is path of local destination
REM -----
SET SOURCE DIR=""
REM ----- ENCRYPT KEY -----
REM | The encrypting key of the backup data.
REM | e.g. SET ENCRYPT KEY="RU5DU11QVF9LRVk="
REM |
REM | You can leave this parameter blank if backup data is not encrypted.
REM -----
SET ENCRYPT KEY=""
REM ----- DECRYPT TO -----
REM | Directory to where you want files to be decrypted
REM | Use "\\\" instead of "\\" when you specify a UNC path
REM | e.g. SET DECRYPT_TO="C:\Temp"
REM -----
SET DECRYPT TO=""
REM ----- DECRYPT FROM -----
REM | File/Directory on the backup data that you would like to decrypt
REM | e.g. SET DECRYPT FROM="C:\Data"
REM -----
                    _____
SET DECRYPT FROM=""
```



```
REM ----- POINT IN TIME -----
REM | The point-in-time snapshot (successful backup) that you want to decrypt
REM | from the backup data. Use "Current" for the latest backup snapshot
REM | e.g. SET POINT IN TIME="2006-10-04-12-57-13"
REM | or SET POINT IN TIME="Current"
REM |
REM | The point in time should be one of the directory name under SOURCE_DIR
REM | unless you want to decrypt latest backup snapshot.
REM -----
SET POINT IN TIME="Current"
REM ----- RESTORE PERMISSION -----
REM | set to "Y" if you want to restore file permissions
\it REM \mid \it set to "N" \it if you do NOT \it want to restore file permissions
SET RESTORE PERMISSION="N"
REM ----- SKIP INVALID KEY -----
REM | set to "Y" if you want to skip decrypt file with invalid key
REM | set to "N" if you want to prompt to input a correct key
REM -----
SET SKIP INVALID KEY="N"
REM ----- SYNC OPTION -----
REM | Delete extra files
REM | set to "Y" if you want to enable sync option
REM | set to "N" if you do NOT want to enable sync option
REM | set to "" to prompt for selection
REM -----
SET SYNC OPTION="N"
REM ----- REPLACE EXISTING FILE -----
REM | set to "--all" to replace all existing file(s) of the same filename
REM | set to "--none" to skip all existing file(s) with the same filename
REM | set to "" to prompt for selection
REM -----
SET REPLACE EXISTING FILE="--all"
REM ----- SETTING HOME -----
```

```
REM | Directory to your setting home. Log files will be located inside.
REM | Default to "C:\Users\USER\.cbp" when not set.
REM | e.g. SET SETTING HOME="C:\Users\John\.cbp"
REM
SET SETTING HOME=""
REM OPTION:
           ----- FILTER -----
REM ----
REM | Filter out what files you want to decrypt
REM | -Pattern=xxx-Type=yyy-Target=zzz
REM | where xxx is the filter pattern,
         yyy is the filter type, whice can be one of the following:
REM |
              [exact | exactMatchCase | contains | containsMatchCase|
REM |
REM |
              startWith | startWithMatchCase | endWith | endWithMatchCase]
REM |
         zzz is the filter target, which can be one of the following:
             [toFile | toFileDir | toDir]
REM |
REM |
REM | e.g. SET FILTER="-Pattern=.txt-Type=exact-Target=toFile"
REM -----
SET FILTER=""
REM ----- TEMP DIR -----
REM | Directory to where you want to store decrypt files temporarily
REM | Use "\\\" instead of "\\" when you specify a UNC path
REM | e.g. SET TEMP DIR="C:\Temp"
REM -----
SET TEMP DIR=""
REM ----- VERIFY CHKSUM -----
REM | set to "Y" if you want to verify in-file delta file checksum during
REM | decrypt
\mathit{REM} | set to "N" if you do NOT want to verify in-file delta file checksum
REM | during decrypt
REM -----
SET VERIFY CHKSUM="N"
REM ################# END: User Defined Section
#############################
SET APP HOME=..
SET JAVA HOME=%APP HOME%\jvm
SET JAVA EXE=%JAVA HOME%\bin\bJW.exe
SET JAVA LIB PATH=-Djava.library.path=%APP HOME%\bin
```

```
SET PATH=%JAVA HOME%\bin;%PATH%
SET CLASSPATH=%APP HOME%\bin;%APP HOME%\bin\cb.jar
IF "%PROCESSOR_ARCHITECTURE%"=="x86" (
 SET "DEP LIB PATH=X86"
 SET JAVA OPTS=-Xms128m -Xmx768m -XX:MaxDirectMemorySize=512m -
Dsun.java2d.noddraw -Dsun.nio.PageAlignDirectMemory=true
 SET "DEP LIB PATH=X64"
 SET JAVA_OPTS=-Xms128m -Xmx2048m -XX:MaxDirectMemorySize=1024m -
Dsun.java2d.noddraw -Dsun.nio.PageAlignDirectMemory=true
SET PATH=%CD%\%APP HOME%\bin\%DEP LIB PATH%;%PATH%
REM
ECHO
ECHO APP HOME=%APP HOME%
ECHO SETTING HOME=%SETTING HOME%
ECHO JAVA HOME=%JAVA HOME%
ECHO JAVA EXE=%JAVA EXE%
ECHO JAVA OPTS=%JAVA OPTS%
ECHO JAVA LIB PATH=%JAVA_LIB_PATH%
ECHO PATH=%PATH%
ECHO CLASSPATH=%CLASSPATH%
ECHO -
@ECHO ON
%JAVA_EXE% %JAVA_LIB_PATH% -cp %CLASSPATH% %JAVA OPTS% Decrypt --
to=%DECRYPT TO% --from=%DECRYPT FROM% --source-dir=%SOURCE DIR% --
key=%ENCRYPT KEY% %REPLACE EXISTING FILE% --date=%POINT IN TIME% --set-
permission=%RESTORE PERMISSION% --skip-invalid-key=%SKIP INVALID KEY% --
sync=%SYNC OPTION% --filter=%FILTER% --temp-dir=%TEMP DIR% --verify-delta-file-
chksum=%VERIFY CHKSUM% --app-home=%APP HOME% --setting-home=%SETTING HOME%
@ECHO OFF
CD %APP HOME%
IF "%APP HOME%"==".." PAUSE
@ECHO ON
```

Save the changes and close the text editor. On the *cmd*, enter *Decrypt.bat*. When asked if you want to input the encrypting key, select '1' (Yes). Enter the correct encryption key to continue.

```
C:\Program Files\CloudBacko Pro\bin>Decrypt.bat
APP HOME=..
SETTING HOME="C:\Users\Administrator\.cbp"
JAVA HOME=..\j∨m
JAVA EXE=..\jvm\bin\bJW.exe
{\it JAVA\_OPTS=-Xms128m--Xmx2048m--XX:MaxDirectMemorySize=1024m--Dsun.java2d.noddraw}
-Dsun.nio.PageAlignDirectMemory=true
JAVA LIB PATH=-Djava.library.path=..\bin
PATH=C:\Program Files\CloudBacko
Pro\bin\...\bin\X64;...\jvm\bin;C:\Windows\system32;C:\Windows;C:\Windows\System32
\Wbem; C: \Windows \System32 \Windows Power Shell \v1.0\; C: \Wers \Administrator \AppData
\Local\Microsoft\WindowsApps
CLASSPATH=..\bin;..\bin\cb.jar
C:\Program Files\CloudBacko Pro\bin>..\jvm\bin\bJW.exe -
Djava.library.path=..\bin -cp ..\bin;..\bin\cb.jar -Xms128m -Xmx2048m -
XX:MaxDirectMemorySize=1024m -Dsun.java2d.noddraw -
Dsun.nio.PageAlignDirectMemory=true Decrypt --to="C:\Temp" --from="C:\Data" --
source-dir="C:\Users\Administrator\Documents\1596421745336\blocks" --key="" "--
all" --date="Current" --set-permission="N" --skip-invalid-key="N" --sync="N" --
```

```
filter="" --temp-dir="C:\Temp" --verify-delta-file-chksum="N" --app-home=.. --
setting-home="C:\Users\Administrator\.cbp"
Filter Pattern not set, filter would not apply to decrypt
[2020-08-05 10:00:55] Start [ CloudBacko Pro v4.1.2.13 ]
[2020-08-05 10:00:58] OS: Windows Server 2016 (w2k16-std); CPU Model: VMware-
Intel(R) Xeon(R) CPU
                             E5520 @ 2.27GHz, Intel(R) Xeon(R) CPU
E5520 @ 2.27GHz; Number of Processors: 4; Heap Size: 15.9MB (Current) / 1.8GB
(Maximum); Physical Memory: 2.2GB (Free) / 4GB (Total)
[2020-08-05 10:00:58] start, Start [ CloudBacko Pro v4.1.2.13 ],0,0,0,0,0
[2020-08-05 10:00:58] Selected job: 2020-08-05-10-00-38
[2020-08-05 10:00:58] Selected source: [C:\Data]
[2020-08-05 10:00:58] Info: [followLink=true marshalTargetPath=false
deleteForSync=false\ skipFaultKey=false\ verifyDeltaFileChecksum=false
restorePermission=false [RestoreLocation] type=RAW path=[C:\Temp]]
[2020-08-05 10:00:58] Initializing decrypt action...
[2020-08-05 10:00:58] Initializing decrypt action... Completed
[2020-08-05 10:01:00] Restore Completed Successfully
[2020-08-05 10:01:00] end, RESTORE_STOP_SUCCESS, 0, 0, 0, 0, 0
Press any key to continue . . .
```



RunDataIntegrityCheck.bat

C:\Program Files\CloudBacko Pro\bin>

This allows the user to perform data integrity check on all available backup sets. Enter the following script to export the batch file to a text editor.

```
C:\Program Files\CloudBacko Pro\bin>notepad RunDataIntegrityCheck.bat
```

To perform a data integrity check, the following parameters must be set first:

• **SETTING_HOME** (Optional)— this is the directory to your setting home. This is where the log files will be located. If not set, the directory will be "C:\Users\USER\.cbp" by default

```
e.g. SET SETTING_HOME="C:\Users\John\.cbp"
```

• BACKUP_SET – this is the backup set which you would like to run a data integrity check on. If the backup set name is not in English, use the backup set ID.

```
e.g. SET BACKUP_SET="FileBackupSet-1" or SET BACKUP_SET="1119083740107"
```

You can leave this parameter blank if you only have one (1) backup set.

```
e.g. SET BACKUP_SET=""
```

• **BACKUP_DEST** – this is the destination of the backup set which you will run a data integrity check on. If the destination is not in English, use the destination ID.

```
e.g. SET BACKUP_DEST="Destination-1" or SET BACKUP_DEST="1740107119083"
```

This parameter can be left blank if you have a single destination.

```
e.g. SET BACKUP_DEST=""
```

This parameter will be ignored if the BACKUP_SET is set to "ALL".

```
e.g. SET BACKUP_SET="ALL"
```

 CRC_MODE – when enabled, a Cyclic Redundancy Check (CRC) will run during the data integrity check.

```
e.g. SET CRC_MODE="ENABLE-CRC"
SET CRC_MODE="DISABLE-CRC"
```

```
@ECHO OFF
REM ################## RunDataIntegrityCheck.bat
#########################
REM # You can use this batch to run any of your backup sets from the
REM # command line. Just customize the "User Defined Section" below with your
REM # values for your backup action.
REM
REM ################## START: User Defined Section
#######################
REM ----- SETTING HOME (Optional) -----
REM | Directory to your setting home. Default to
REM | "C:\Users\USER\.cbp" when not set.
REM | e.g. SET SETTING HOME="C:\Users\John\.cbp"
REM -----
SET SETTING HOME=""
REM ----- BACKUP SET -----
REM | The name or ID of the backup set that you want to run.
REM | If backup set name is not in English, please use ID instead.
REM | e.g. SET BACKUP SET="1119083740107"
REM | or SET BACKUP SET="FileBackupSet-1"
REM | You can use "ALL" to run data integrity check for all backup sets.
REM | i.e. SET BACKUP SET="ALL"
REM |
REM | You can leave this parameter blank if you have only 1 backup set.
REM -----
SET BACKUP SET="ALL"
REM ----- BACKUP DEST -----
REM | The name or ID of the backup destination that you want to run.
REM | If backup destination name is not in English, please use ID instead.
REM | e.g. SET BACKUP DEST="1740107119083"
REM | or SET BACKUP DEST="Destination-1"
```

```
REM | You can use "ALL" to run data integrity check for all destinations.
REM | i.e. SET BACKUP DEST="ALL"
REM |
REM | You can leave this parameter blank if you have only 1 destination.
REM | Remark: This option is ignored if BACKUP SET="ALL"
REM -----
SET BACKUP DEST="ALL"
REM ----- CRC MODE -----
REM | You can run Cyclic Redundancy Check (CRC) during data integrity check
REM | Options available: ENABLE-CRC/DISABLE-CRC
REM | i.e. SET CRC MODE="ENABLE-CRC"
REM | or SET CRC_MODE="DISABLE-CRC"
REM -----
SET CRC MODE="DISABLE-CRC"
REM ###################### END: User Defined Section
############################
SET APP HOME=..
SET JAVA HOME=%APP HOME%\jvm
SET JAVA EXE=%JAVA HOME%\bin\bJW.exe
SET JAVA LIB PATH=-Djava.library.path=%APP HOME%\bin
SET PATH=%JAVA HOME%\bin;%PATH%
SET CLASSPATH=%APP HOME%\bin;%APP HOME%\bin\cb.jar
IF "%PROCESSOR ARCHITECTURE%"=="x86" (
SET "DEP LIB PATH=X86"
 SET JAVA OPTS=-Xms128m -Xmx768m -XX:MaxDirectMemorySize=512m -
Dsun.java2d.noddraw -Dsun.nio.PageAlignDirectMemory=true
) ELSE (
 SET "DEP LIB PATH=X64"
 SET JAVA_OPTS=-Xms128m -Xmx2048m -XX:MaxDirectMemorySize=1024m -
Dsun.java2d.noddraw -Dsun.nio.PageAlignDirectMemory=true
SET PATH=%CD%\%APP HOME%\bin\%DEP LIB PATH%;%PATH%
REM
ECHO -
ECHO APP HOME=%APP HOME%
ECHO SETTING HOME=%SETTING HOME%
ECHO JAVA HOME=%JAVA HOME%
ECHO JAVA EXE=%JAVA EXE%
ECHO JAVA OPTS=%JAVA OPTS%
ECHO JAVA LIB PATH=%JAVA LIB PATH%
ECHO PATH=%PATH%
```

```
ECHO CLASSPATH=%CLASSPATH%

ECHO -

ECHO Running data integrity check for backup set - '%BACKUP_SET%',

destination - '%BACKUP_DEST%' ...

@ECHO ON

%JAVA_EXE% %JAVA_LIB_PATH% -cp %CLASSPATH% %JAVA_OPTS% RunDataIntegrityCheck

%APP_HOME% %SETTING_HOME% %BACKUP_SET% %BACKUP_DEST% %CRC_MODE%

@ECHO OFF

CD %APP_HOME%

IF "%APP_HOME%"==".." PAUSE

@ECHO ON
```

Save the changes and close the text editor. Proceed back to cmd and enter the following script.

```
C:\Program Files\CloudBacko Pro\bin>RunDataIntegrityCheck.bat
APP HOME=..
SETTING HOME="C:\Users\Administrator\.cbp"
JAVA HOME=..\j∨m
JAVA EXE=..\jvm\bin\bJW.exe
JAVA OPTS=-Xms128m -Xmx2048m -XX:MaxDirectMemorySize=1024m -Dsun.java2d.noddraw
-Dsun.nio.PageAlignDirectMemory=true
JAVA LIB PATH=-Djava.library.path=..\bin
PATH=C: \ Program \ Files \\ \ CloudBacko \ Pro\\ \ bin\\ \ .. \\ \ bin\\ \ X64;... \\ \ jvm\\ \ bin;C: \\ \ Program \ Pro\\ \ bin\\ \ Addition \\ \ Addition
Files\CloudBacko Pro\bin\..\bin\X64;..\jvm\bin;C:\Program Files\CloudBacko
Pro\bin\..\bin\X64;..\jvm\bin;C:\Program Files\CloudBacko
Pro\bin\..\bin\X64;..\jvm\bin;C:\Windows\system32;C:\Windows;C:\Windows\System3
2\Wbem;C:\Windows\System32\WindowsPowerShell\v1.0\;C:\Users\Administrator\AppDa
ta\Local\Microsoft\WindowsApps
CLASSPATH=..\bin;..\bin\cb.jar
Running data integrity check for backup set - '"Sample Backup Set"',
destination - '"ALL"' ...
C:\Program Files\CloudBacko Pro\bin>..\jvm\bin\bJW.exe -
Djava.library.path=..\bin -cp ..\bin;..\bin\cb.jar -Xms128m -Xmx2048m -
XX:MaxDirectMemorySize=1024m -Dsun.java2d.noddraw -
Dsun.nio.PageAlignDirectMemory=true RunDataIntegrityCheck ..
"C:\Users\Administrator\.cbp" "Sample Backup Set" "ALL" "DISABLE-CRC"
[doInfo] Start [ CloudBacko Pro v4.1.2.13 ]
[doStart] Start data integrity check on backup set "Sample Backup
Set (1596421745336) " all destination, crc disabled
[doDetail] Start processing data integrity check on backup set= "Sample Backup
Set" destination= "Local-1"
[doLogProgress] Start processing data integrity check on backup set= "Sample
Backup Set" destination= "Local-1"
[doLogProgress] Download valid index files from backup job "Current" to
"C:\Temp\CloudBacko Pro\1596421745336\Local@1596423367285\index".
[doInfo] Download valid index files from backup job "Current" to
"C:\Temp\CloudBacko Pro\1596421745336\Local@1596423367285\index".
[doLogProgress] Browsing "1596421745336\blocks\2020-08-03-11-22-27"
[doLogProgress] Browsing "1596421745336\blocks\2020-08-03-11-22-27\0"
[doLogProgress] Processing Job "2020-08-03-11-22-27", ""
[doLogProgress] Processing Job "Current", ""
[doLogProgress] Processing Job "Current", "C:"
[doLogProgress] Processing Job "Current", "C:\Users"
[doLogProgress] Processing Job "Current", "C:\Users\Administrator"
[doLogProgress] Processing Job "Current", "C:\Users\Administrator\Desktop"
[doLogProgress] Processing Job "Current", "C:\Users\Administrator\Documents"
```

```
[doLogProgress] Processing Job "Current",
"C:\Users\Administrator\Documents\1596421745336"
[doLogProgress] Processing Job "Current",
"C:\Users\Administrator\...\Documents\1596421745336"
[doLogProgress] Processing Job "Current",
"C:\Users\Administrator\...\1596421745336\blocks"
[doLogProgress] Processing Job "Current",
"C:\Users\Administrator\Documents\1596423838603"
[doLogProgress] Processing Job "Current",
"C:\Users\Administrator\Documents\1596423878180"
[doLogProgress] Processing Job "Current",
"C:\Users\Administrator\Documents\HeidiSQL"
[doLogProgress] Processing Job "Current",
"C:\Users\Administrator\...\Documents\HeidiSQL"
[doLogProgress] Processing Job "Current", "C:\Users\Administrator\Documents\My
Music"
[doLogProgress] Processing Job "Current", "C:\Users\Administrator\Documents\My
[doLogProgress] Processing Job "Current", "C:\Users\Administrator\Documents\My
[doLogProgress] Processing Job "Current",
"C:\Users\Administrator\Documents\TestFiles"
[doLogProgress] Processing Job "Current",
"C:\Users\Administrator\Documents\settings"
[doLogProgress] Processing Job "Current", "C:\Users\Administrator\Favorites"
[doLogProgress] Processing Job "Current",
"C:\Users\Administrator\Favorites\Links"
[doLogProgress] Processing Job "Current", "C:\Users\Administrator\Music"
[doLogProgress] Processing Job "Current", "C:\Users\Administrator\Pictures"
[doLogProgress] Processing Job "Current", "C:\Users\Public"
[doLogProgress] Processing Job "Current", "C:\Users\Public\Desktop"
[doInfo] Checking dangling backup file index entries...
[doLogProgress] Checking dangling backup file index entries...
[doLogProgress] Saving encrypted backup file index to 1596421745336\blocks at
destination Local-1...
[doInfo] Saving encrypted backup file index to 1596421745336\blocks at
destination Local-1...
[doLogProgress] Saving encrypted backup settings to settings\w2k16-std-2020-08-
05.xml at destination Local-1...
[doInfo] Saving encrypted backup settings to settings\w2k16-std-2020-08-05.xml
at destination Local-1...
[doDetail] Data integrity check on backup set= "Sample Backup Set" destination=
"Local-1" is completed
[doLogProgress] Data integrity check on backup set= "Sample Backup Set"
destination= "Local-1" is completed
[doEnd][INFO] Finished data integrity check on backup set "Sample Backup
Set(1596421745336) " all destination, crc disabled
[doInfo] Completed data integrity check on backup set "Sample Backup
Set(1596421745336) " all destination, crc disabled
Press any key to continue . . .
```



Appendix D: Example Scenarios for the Reminder for Windows Logoff, Restart, and Shutdown

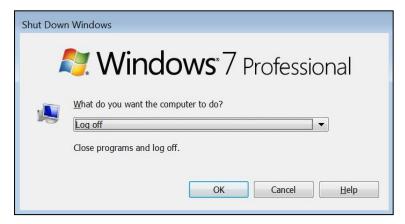
Windows Log Off

The following example shows when the user performs Windows Log off with the Reminder setting turned on.

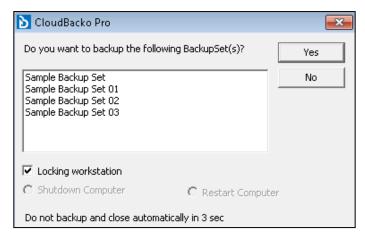
1. Turn on the Reminder setting, then click the **Save** button.



2. Perform Windows logoff.



3. A dialog box will prompt the user to back up all the backup sets with enabled 'Reminder' setting.





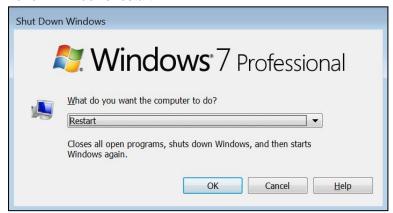
Windows Restart

The following example shows when the user performs Windows restart with the Reminder setting turned on

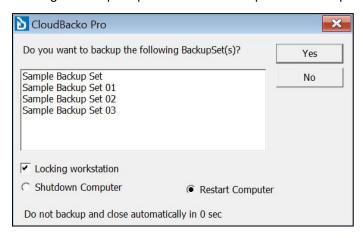
1. Turn on the Reminder setting, then click the **Save** button.



2. Perform Windows restart.



3. A dialog box will prompt the user to back up all the backup sets with enabled 'Reminder' setting.



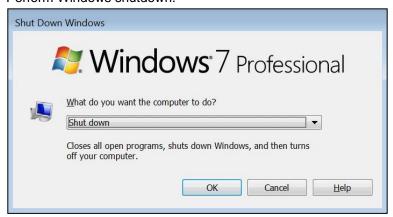
Windows Shutdown

The following example shows when the user performs Windows shutdown with the Reminder setting turned on.

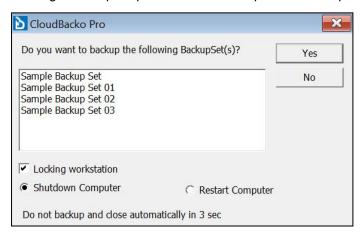
1. Turn on the Reminder setting, then click the **Save** button.



2. Perform Windows shutdown.



3. A dialog box will prompt the user to back up all the backup sets with enabled 'Reminder' setting.

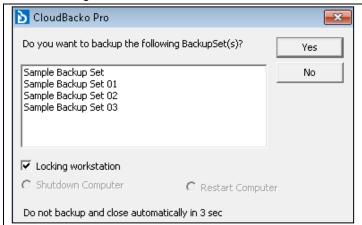




Below is the list of example scenarios with complex settings:

Scenario 1 (Windows Log Off + Enabled Locking Workstation)

The following scenario shows when the user performs Windows logoff with the Reminder setting turned on, and Locking Workstation enabled.



Yes – If Yes is selected, then the Windows will be locked, and the displayed backup sets will start backing up in the background. Once all the backup jobs are completed, the machine will log off automatically even if Windows is still on lock.

No – If No is selected, then no backup job will run, and the machine will proceed to log off.

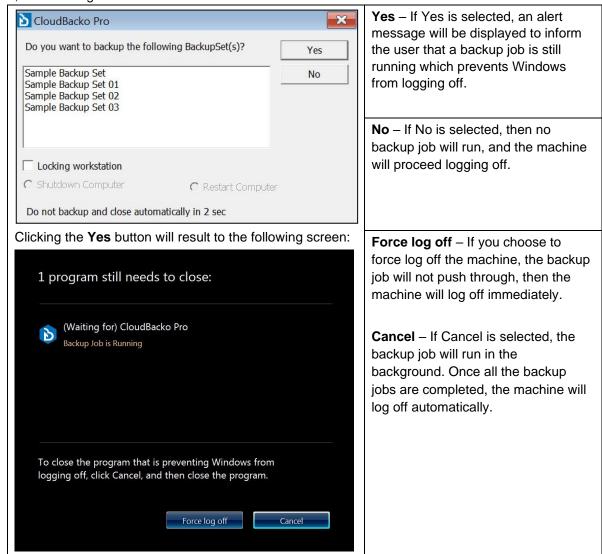
NOTE

The machine will log off after four (4) seconds if no action is selected.



Scenario 2 (Windows Log Off + Unselected Locking Workstation)

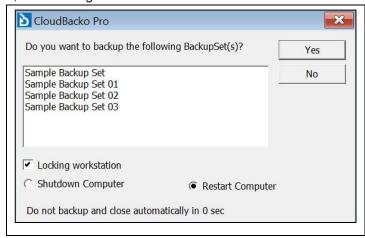
The following scenario shows when the user performs Windows logoff with the Reminder setting turned on, and Locking Workstation unselected.





Scenario 3 (Windows Restart + Enabled Locking Workstation)

The following scenario shows when the user performs Windows restart with the Reminder setting turned on, and Locking Workstation enabled.



Yes – If Yes is selected, then the Windows will be locked, and the displayed backup sets will start backing up in the background. Once all the backup jobs are completed, the machine will restart automatically even if the Windows is still on lock.

No – If No is selected, then no backup job will run, and the machine will restart immediately.

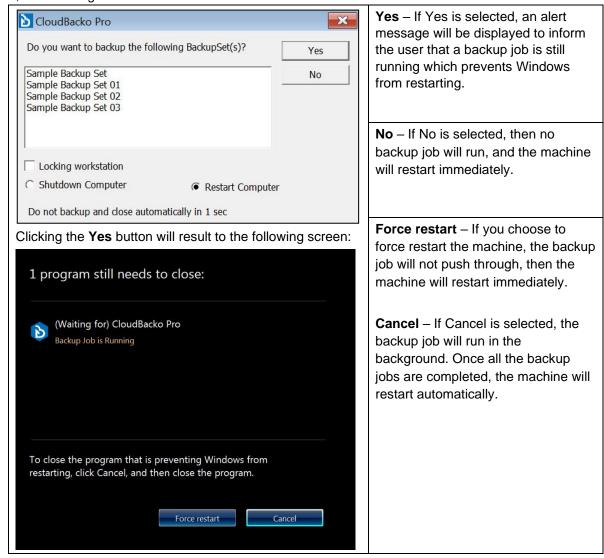
NOTE

- 1. You can select the 'Shutdown Computer' from the options in the dialog box, but the machine will still follow the action that you perform from the Windows, which is 'restart'. The machine will reboot once all the backup jobs are completed.
- 2. The machine will restart after four (4) seconds if no action is selected.



Scenario 4 (Windows Restart + Unselected Locking Workstation)

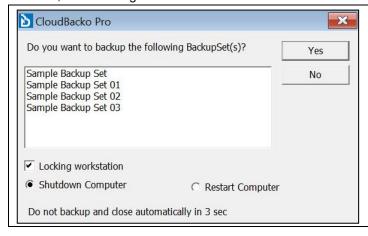
The following scenario shows when the user performs Windows restart with the Reminder setting turned on, and Locking Workstation unselected.





Scenario 5 (Windows Shutdown + Enabled Locking Workstation)

The following scenario shows when the user performs Windows shutdown with the Reminder setting turned on, and Locking Workstation enabled.



Yes – If Yes is selected, then the Windows will be locked, and the displayed backup sets will start backing up in the background. Once all the backup jobs are completed, the machine will shut down automatically even if the Windows is still on lock.

No – If No is selected, then no backup job will run, and the machine will shut down immediately.

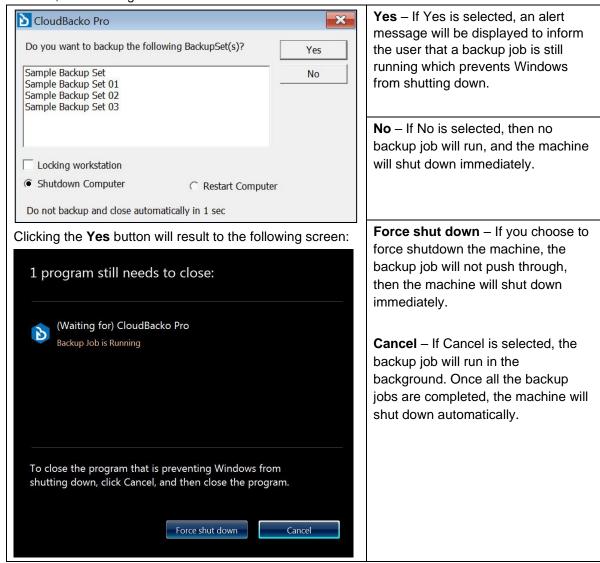
NOTE

- You can select the 'Restart Computer' from the options in the dialog box, but the machine will still follow
 the action that you perform from the Windows, which is 'shutdown'. The machine will shut down once all
 the backup jobs are completed.
- The machine will shut down after four (4) seconds if no action is selected.



Scenario 6 (Windows Shutdown + Unselected Locking Workstation)

The following scenario shows when the user performs Windows shut down with the Reminder setting turned on, and Locking Workstation unselected.



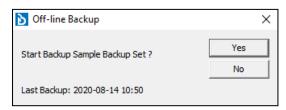


Appendix E: Example Scenarios for the Reminder for completed Tolerance Period

In this example, "Remind me to backup when last backup is over my tolerance period" is enabled and the tolerance period set is 1 day and 00 hour.



If the last backup is done, then this pop-up message will be displayed. It also shows the last backup details such as Date and Time. Click the **Yes** button to start backup. Otherwise, click the **No** button.



Appendix F: How to Manage Network Drives which are not set in Windows

Users have several options in managing network drives that are not set up on Windows, which are the following:

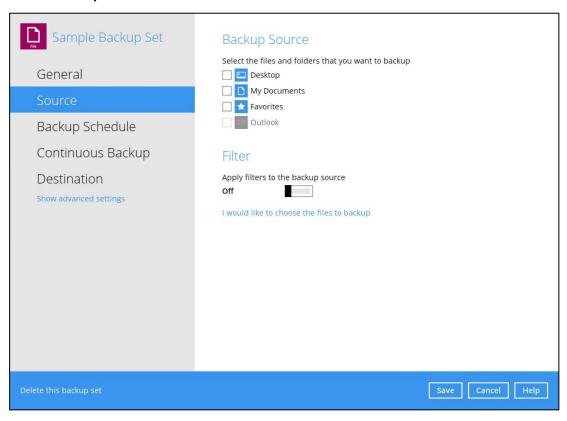
- Select All selects all the files and folders in the network drive
- Select Only will only deselect the network drive but the file selection will remain the same.
- Deselect All deselects all the files and folders in the network drive
- Edit Credential allows changing the credentials of the network drive even after it has been set upon creation of the backup set.
- <u>Delete</u> deletes the network drive

For instructions on how to use the different functions, see instructions below:

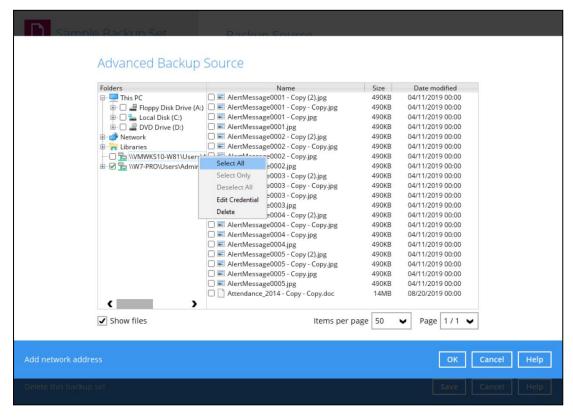


Select All

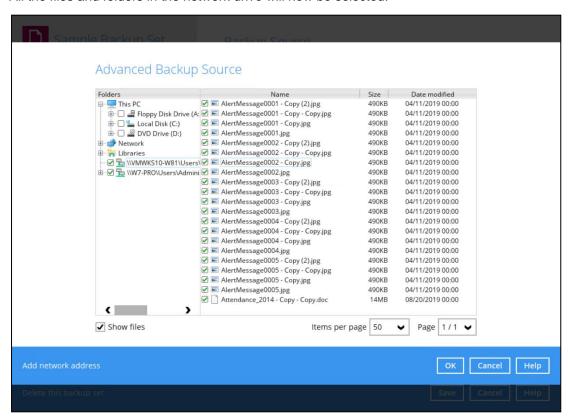
1. Go to Backup Sets, select the backup set. Select Source and click I would like to choose the files to backup.



2. Right-click on the network drive and select Select All.



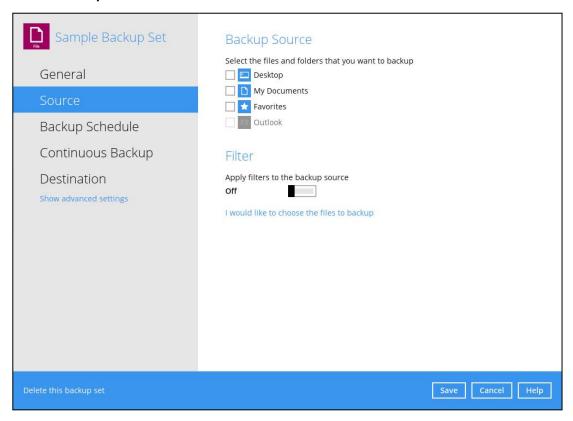
3. All the files and folders in the network drive will now be selected.



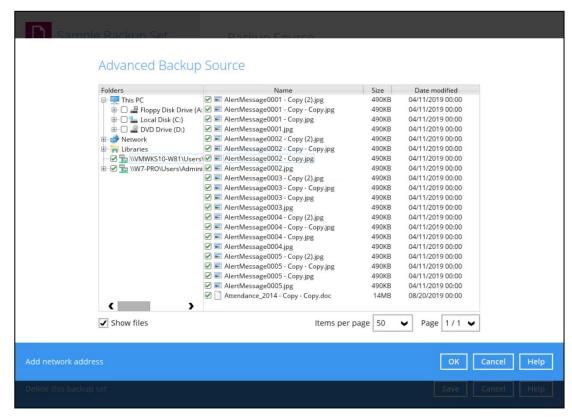


Select Only

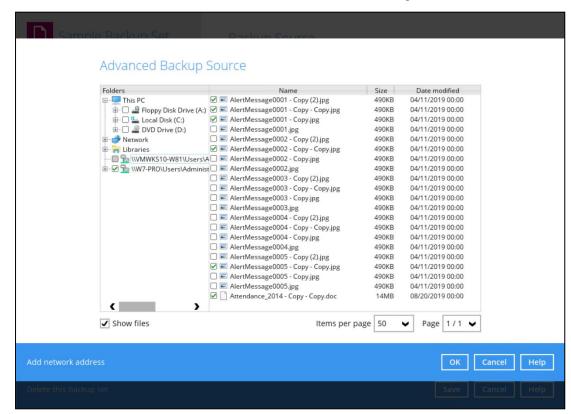
1. Go to Backup Sets, select the backup set. Select Source and click I would like to choose the files to backup.



Right-click on the network drive and select Select Only.



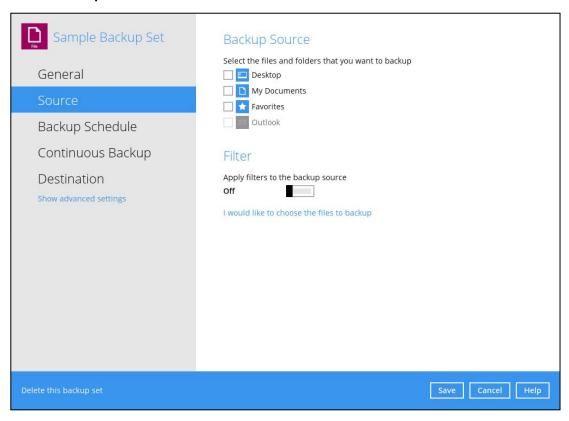
3. The network drive will now be deselected but there will be no change in the file selection.



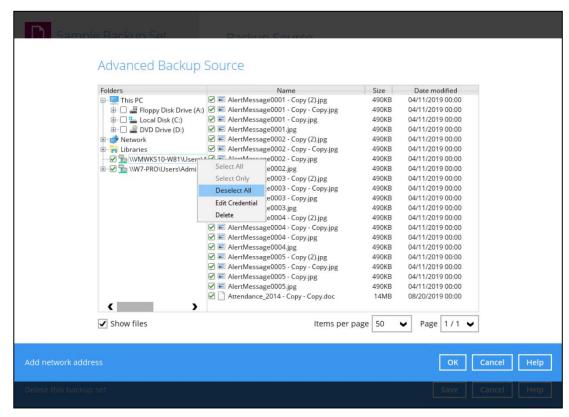


Deselect All

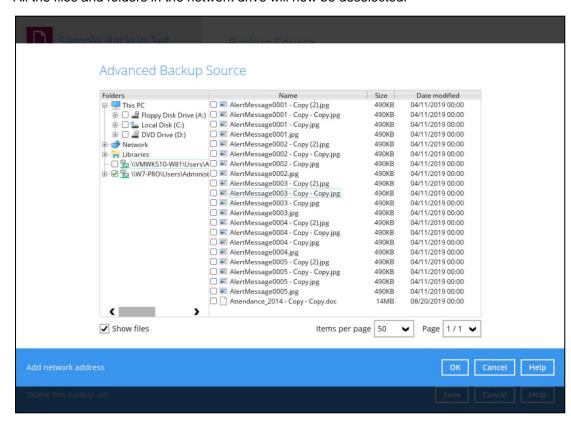
1. Go to Backup Sets, select the backup set. Select Source and click I would like to choose the files to backup.



2. Right-click on the network drive and select **Deselect All**.



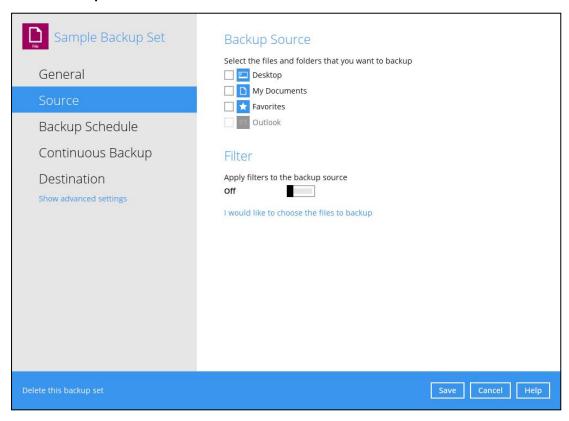
3. All the files and folders in the network drive will now be deselected.



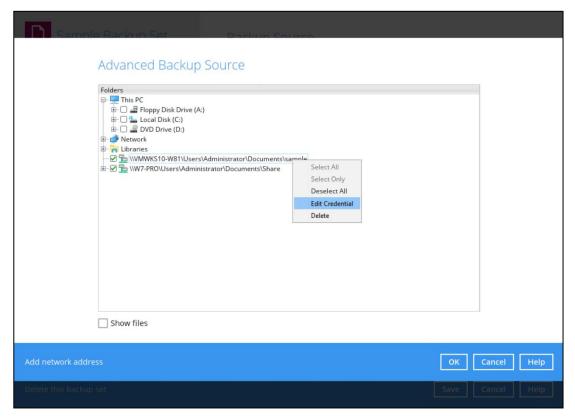


Edit Credential

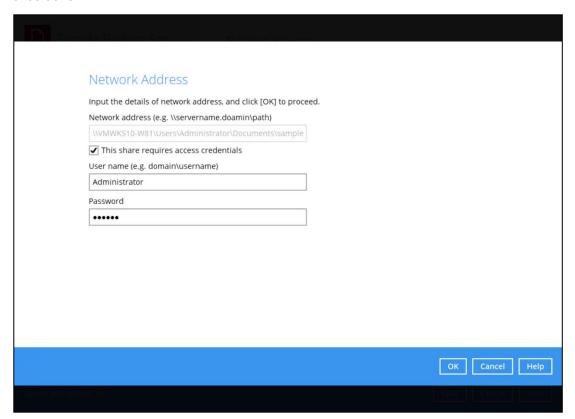
1. Go to Backup Sets, select the backup set. Select Source and click I would like to choose the files to backup.



2. Right-click on the network drive and select Edit Credential.

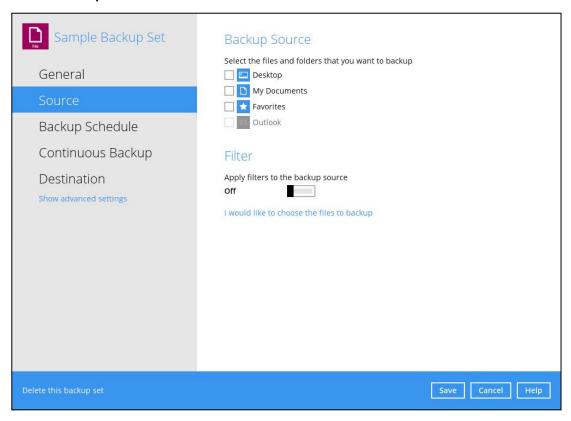


3. The Network Address window will appear, update the Username and/or Password. Click **OK** once done.

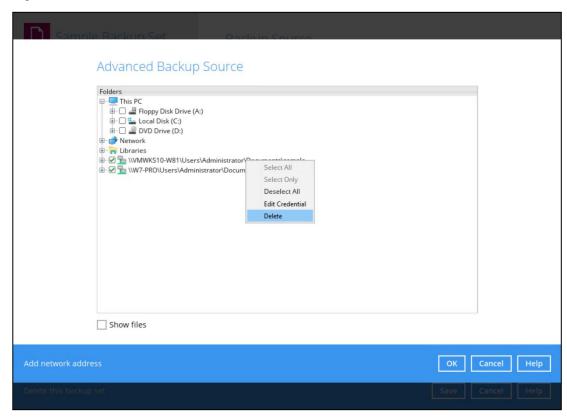


Delete

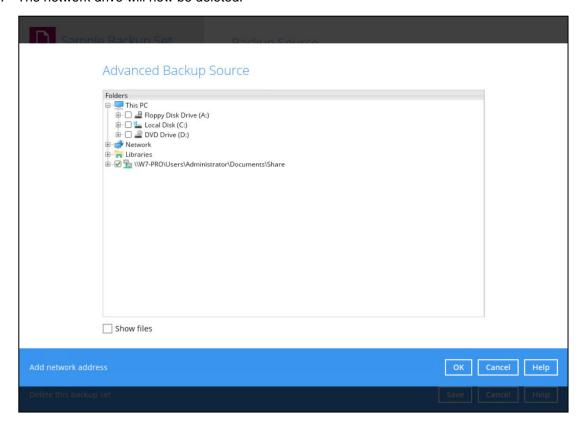
1. Go to Backup Sets, select the backup set. Select Source and click I would like to choose the files to backup.



2. Right-click on the network drive and select Delete.



3. The network drive will now be deleted.





Appendix G: Example Registration of Time-base One-time Password (TOTP) Authenticator app in CloudBacko app

The following are examples of how to register a TOTP authenticator app in the CloudBacko app.

Microsoft Authenticator app

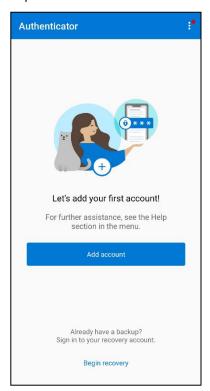
1. Download and install the Microsoft Authenticator from the Play Store for Android devices or the App Store for iOS devices.



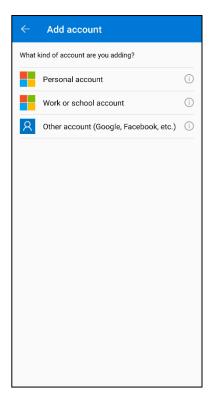
2. Launch the Microsoft Authenticator app.



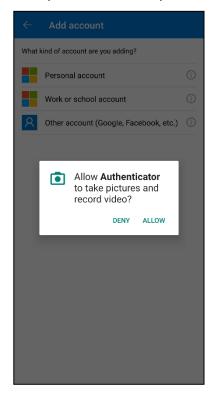
3. Tap Add account.



4. Select Other account (Google, Facebook, etc.).



5. Allow permission to take pictures and record video.



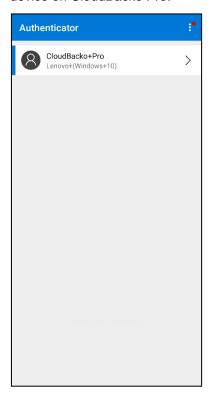
6. Setup the account. Select from the following methods: Scan the QR code or Enter a setup key.

Method 1: Scan the QR code

i. Scan the QR code on CloudBacko Pro.



ii. Account is successfully added to Microsoft Authenticator and registered the mobile device on CloudBacko Pro.

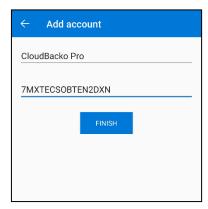


Method 2: Enter Code Manually

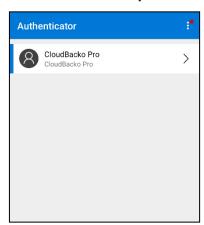
i. Tap OR ENTER CODE MANUALLY.



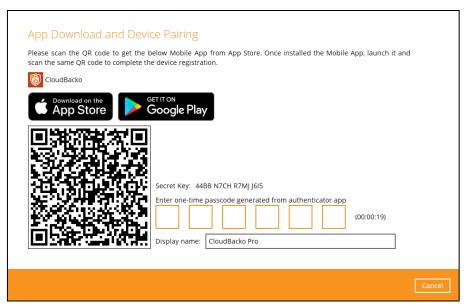
ii. Enter the account name and the key which is the Secret Key that is provided by CloudBacko Pro then tap **FINISH**.



iii. Account is successfully added to Microsoft Authenticator.



iv. In CloudBacko Pro, enter the display name and one-time password generated by the Microsoft Authenticator app.

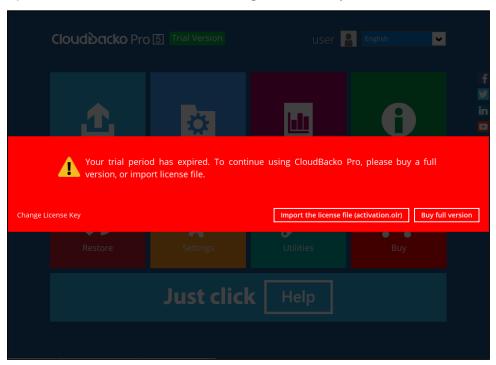


v. Mobile device is successfully registered on CloudBacko Pro.

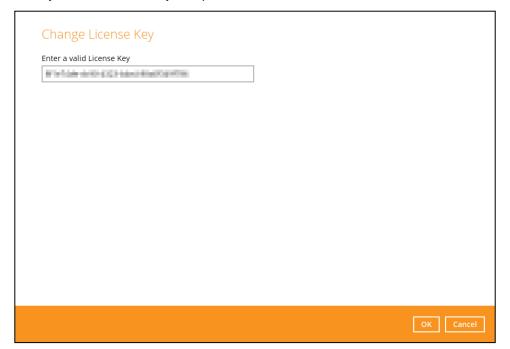


Appendix H: How to apply a license key to a CloudBacko Pro installation with an expired trial license?

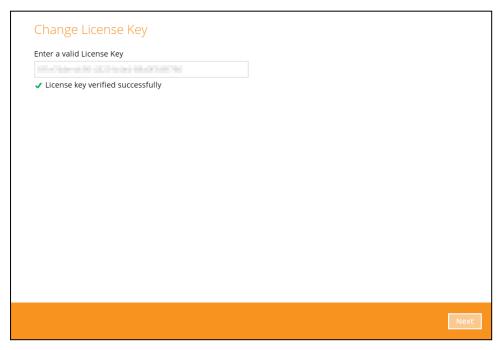
1. Open CloudBacko Pro and click on Change License Key.



2. Enter your new license key and press **OK** to continue.

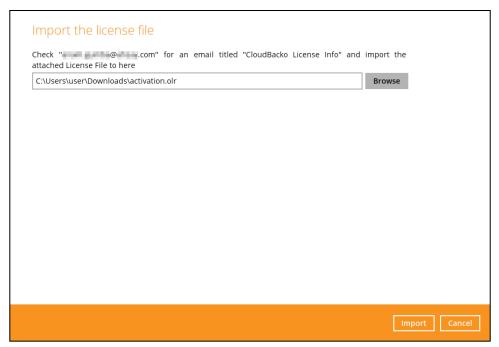


3. Once the new license key has been verified, press Next to continue.



An activation file will be sent to the email address registered during the license purchase immediately containing the license activation file.

4. Copy the "activation.olr" file to the CloudBacko machine. Click **Browse** to locate the "activation.olr" file and click **Import** to continue.



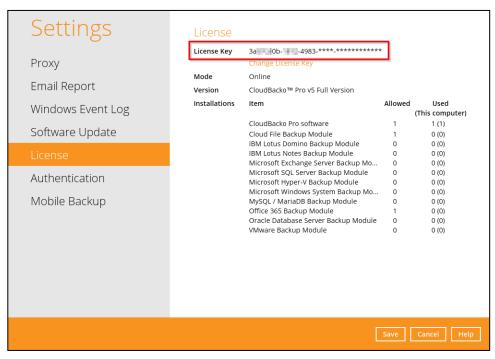
5. Your new license key has now been successfully imported to your CloudBacko Pro installation and is ready to use.



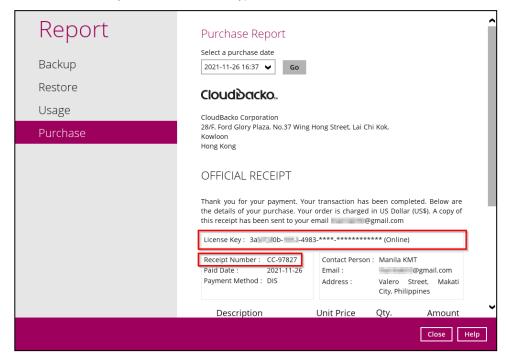


Appendix I: Where to find the CloudBacko Pro purchase license key?

1. Your CloudBacko Pro purchase license key is shown in the **Settings** > **License** page. For security reasons the CloudBacko Pro license key is only partially displayed on the application.

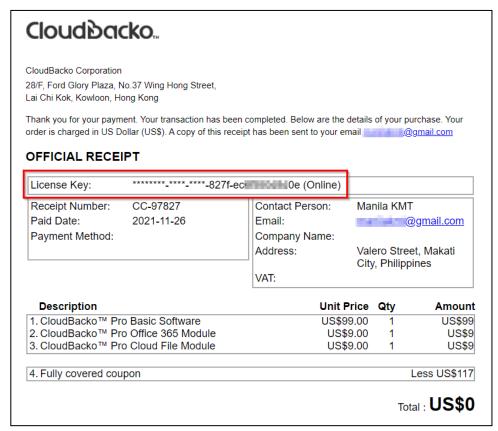


You can verify the license key displayed is our purchase key by comparing it with the details of
the license key and receipt no. in CloudBacko Pro under the Report > Purchase page. It is
recommended to print a copy of the receipt for your records (If there is no purchase record then
current license key is an evaluation key).



3. The remaining part of the license key will be emailed to you along with your official receipt at the time of purchase.

Please print a copy of the receipt and keep it in a safe place along with a copy of the invoice. In case you have to re-install CloudBacko Pro on another machine.





Appendix J: Different Date, Time, and Time zone with CloudBacko Pro machine and mobile device

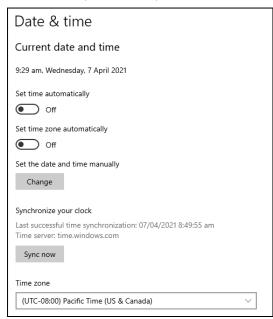
1. Check the date, time, and time zone in mobile device.

Example: Time zone settings of a mobile device used in the Philippines (time zone GMT+08:00).



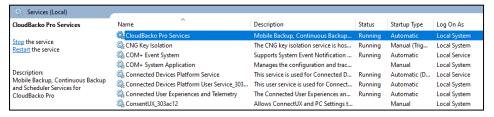
2. Check the date, time, and time zone in CloudBacko Pro machine.

Example: Time zone settings of a Windows machine used in the Philippines (time zone UTC+08:00). However, the set time zone in the CloudBacko Pro machine is set incorrectly in Pacific Time (US/Canada) UTC-08:00.

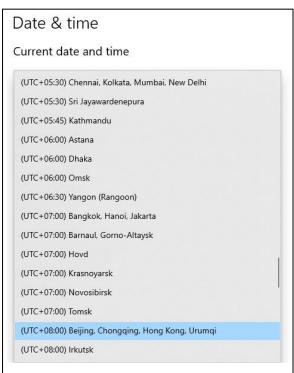




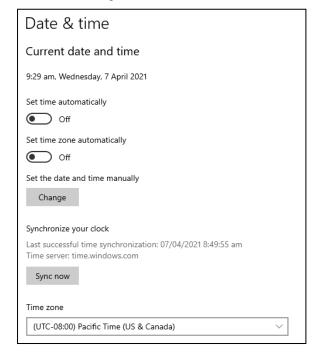
3. Stop the scheduler service.



4. Change the time zone in CloudBacko Pro machine.



5. Check the changed time zone in CloudBacko Pro machine.



6. Start the scheduler service.

Services (Local)					
CloudBacko Pro Services	Name	Description	Status	Startup Type	Log On As
Start the service	CloudBacko Pro Services	Mobile Backup, Continuous Backup		Automatic	Local System
	CNG Key Isolation	The CNG key isolation service is hos	Running	Manual (Trig	Local System
	COM+ Event System	Supports System Event Notification	Running	Automatic	Local Service
Description: Mobile Backup, Continuous Backup and Scheduler Services for CloudBacko Pro	COM+ System Application	Manages the configuration and trac		Manual	Local System
	Connected Devices Platform Service	This service is used for Connected D	Running	Automatic (D	Local Service
	Connected Devices Platform User Service_303	This user service is used for Connect	Running	Automatic	Local System
	Connected User Experiences and Telemetry	The Connected User Experiences an	Running	Automatic	Local System
	ConsentUX_303ac12	Allows ConnectUX and PC Settings t		Manual	Local System