

™ CloudBacko Lite

Quick Start Guide for Mac

CloudBacko Corporation 6 January 2025

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Revision History

Date	Descriptions	Version
23 May 2024	 Added Tibero Trademark 	5.9.14.0
	 Updated images 	
	 Ch. 7.4.1.5 – updated steps for Retention Policy 	
	 Ch. 7.8.1 – updated Data Integrity Check instructions 	
	■ Ch. 10 – updated Run Backup Job instructions	
	 Ch. 11 – updated Restore instructions 	
2 September 2024	■ Ch. 7.4.1.3 – updated screenshots	5.11
	 Ch. 7.4.1.5 – updated screenshots and instructions 	
6 January 2025	 Ch. 7.4.1.5 – Removed OpenDirect, updated Screenshots 	5.13
	 Ch. 8 – Removed OpenDirect 	
	 Ch. 11 – Updated Restore instructions 	
	 Ch. 11.2 – Updated Restore Filter instructions 	

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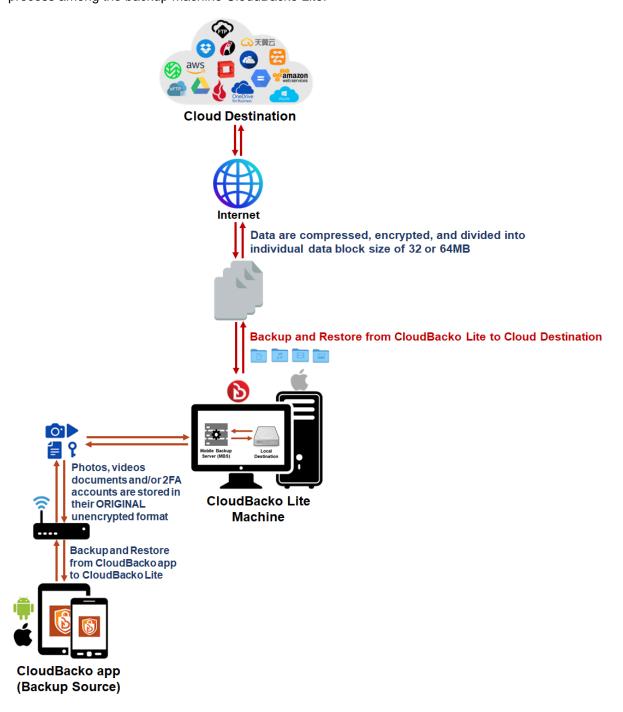
1 Overview

1.1 What is this software?

CloudBacko brings you specialized client backup software, namely CloudBacko Lite, to provide a comprehensive backup solution for protecting file(s) / folder(s) on your machine, with a wide variety of backup destinations (major cloud storage service providers, FTP/SFTP, local drive, etc.) of your choice.

1.2 System Architecture

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



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 Lite, which is located in the "mbs" folder inside the CloudBacko Lite 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 Lite. Afterwards, it will be automatically restarted whenever the CloudBacko Lite services is restarted or when the CloudBacko Lite 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 Lite services is restarted.

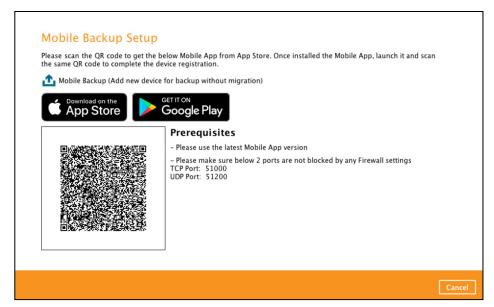
The MBS will use the following port ranges:

TCP Port: 51000 to 51099
 UDP Port: 51200 to 51299

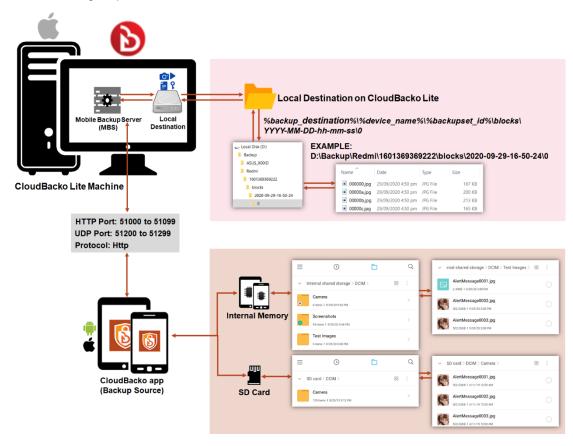
Protocol: Http, for the request of CloudBacko app.

The default TCP and UDP ports are 51000 and 51200, 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 Lite when pairing a mobile device for mobile backup.



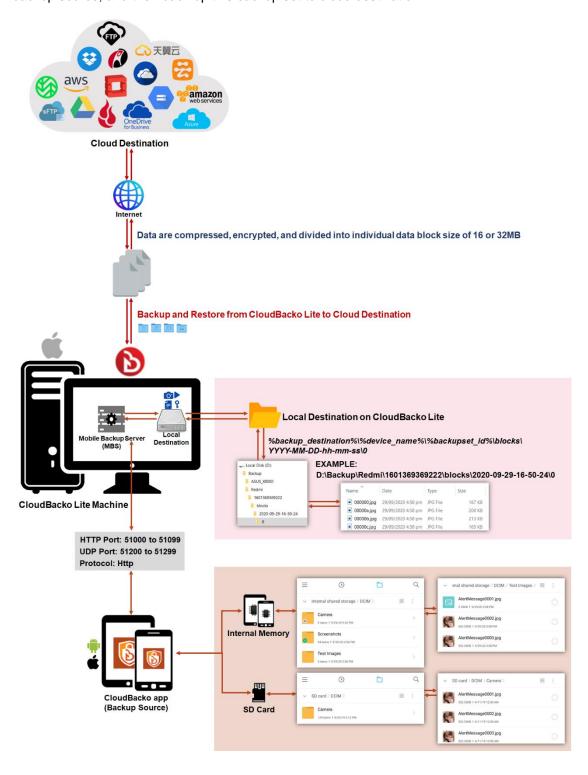
Photos, videos, documents and 2FA accounts are stored either in mobile device's internal memory or SD Card. These are selected as backup source using the CloudBacko app and will be backed up to the local destination of a CloudBacko machine, that can be a Hard Drive, Flash Drive, and/or Network Drive in their *original* unencrypted format. For Android devices, photos and videos will retain all EXIF. While for iOS devices, 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 Lite to perform a secondary backup and restore of the photos, videos, documents and 2FA accounts on the local drive to the cloud.

To back up and restore photos, videos, documents and 2FA accounts from CloudBacko app to CloudBacko Lite and Cloud, is a two-step process.

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

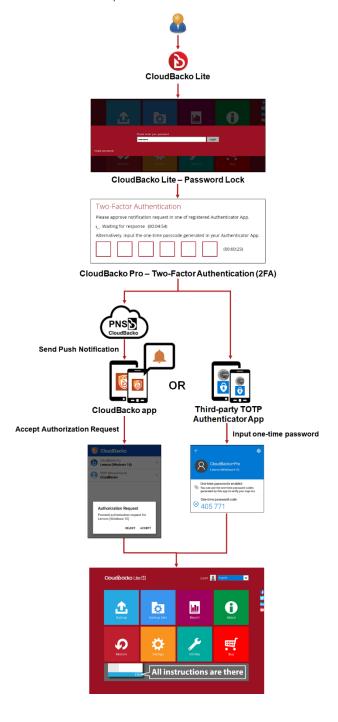


1.4 Two-Factor Authentication

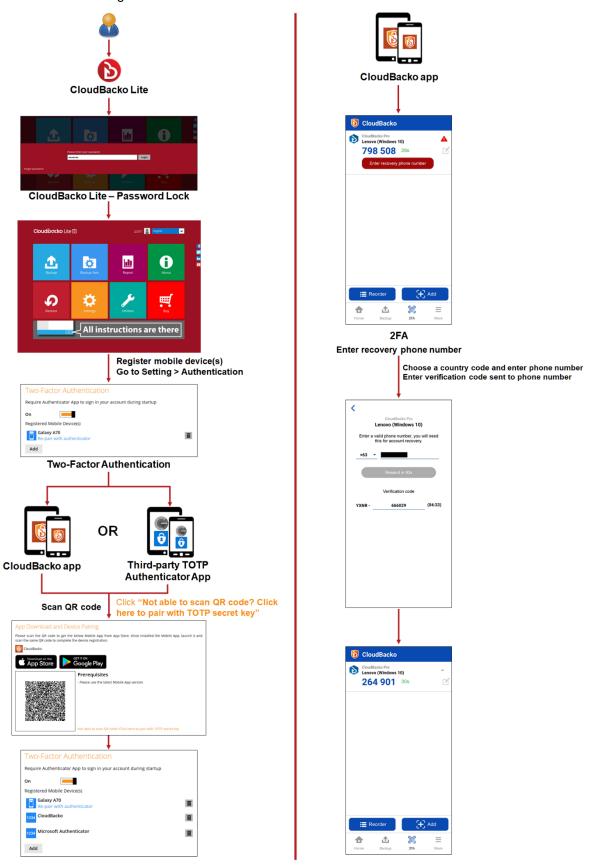
The two-factor authentication implemented on CloudBacko Lite include support for TOTP (Time-based One-time Password) and Push notification authentication using the CloudBacko app to provide additional security for the user login process.

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 Lite with multiple mobile devices for two-factor authentication.

For logins with two-factor authentication enabled CloudBacko Lite, you will be asked to select the method you would like to use. This depends on the authenticator app being 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 apps 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 Lite.
- Download and install the latest version of CloudBacko app on the Play Store for Android mobile devices and on 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 Lite. Failure to do so will prevent you from performing backup and/or 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 Lite on macOS

3.1 Hardware Requirements

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

CloudBacko Lite: Hardware Requirement

3.2 Supported Platforms

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

CloudBacko Lite: Supported Operating Systems

3.3 Internet Connection

CloudBacko machine must have a fixed internet connection.

3.4 SMTP Server

- CloudBacko Lite supports TLS v1.2
- CloudBacko Lite supports SMTP server with or without authentication.

3.5 Firewall Settings

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

- For CloudBacko Lite to function correctly 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: 51000 and UDP port: 51200.

The actual ports used may be different, please refer to <u>Chapter 1.3: Mobile Backup Server (MBS)</u> for more details.



3.6 Full Disk Access Permission

macOS 10.15 or higher "Full Disk Access" permission needs to be granted in, System Preferences>Security & Privacy>Privacy tab to CloudBacko Lite.

Due to an upgrade in security on macOS 10.15 or higher, additional security settings are required to allow applications to access the machine. CloudBacko Lite requires "Full Disk Access" permission to be able to access your files for selection and backup. Also, without "Full Disk Access" permission, CloudBacko Lite will not be able to restore files to the machine.



For more details on how to setup the Full Disk Access permission, please refer to <u>Appendix C:</u> Setting up Full Disk Access Permission.

3.7 Supported Applications

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

CloudBacko Lite: Supported Applications

3.8 Supported Microsoft 365 Services and Items

Refer to the link below for the details of the supported Microsoft 365 Services and Items for CloudBacko Lite.

CloudBacko Lite: Supported Microsoft 365 Services and Items Microsoft 365 Backup

3.9 Java Heap Size

The default maximum Java heap size setting is 768M. This value is usually sufficient for most types 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 Lite.

CloudBacko Lite: 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.

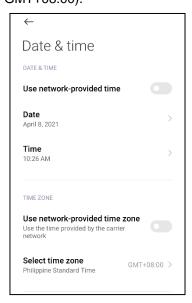
3.12 Date, Time, and Time Zone for 2FA (TOTP only)

Make sure to check the date, time, and time zone are synced between the CloudBacko Lite 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 H: Different Date, Time, and Time zone with CloudBacko Lite machine and mobile device.</u>

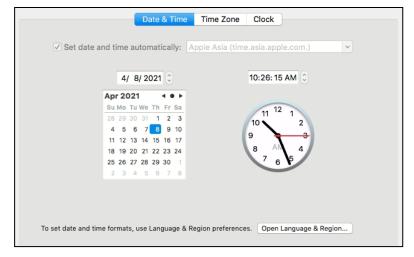
Same Date, Time, and Time Zone with CloudBacko Lite machine and mobile device

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 Lite machine.

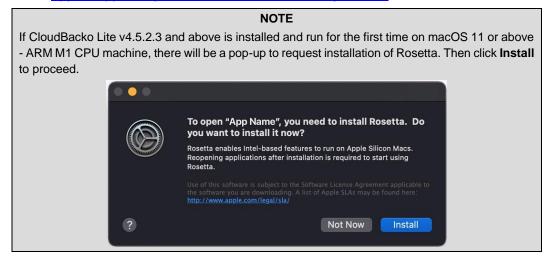
Example: Time zone setting of a macOS machine used (time zone Asia).





3.13 Supported macOS Big Sur on Intel and ARM (M1) CPU

CloudBacko Lite v4.5.2.3 and above supports macOS Big Sur on both Intel and ARM (M1) CPU. For macOS on ARM (M1) CPU, Rosetta 2 must be installed. Refer to the link for more details: Apple Support: If you need to install Rosetta on your Mac



3.14 Limitations

3.14.1 Advance Retention Policy

Advanced Retention Policy is not supported on CloudBacko Lite.

3.14.2 Bandwidth Control

Bandwidth Control is not supported on CloudBacko Lite.

3.14.3 Case-Insensitive File System

For volume with a case-insensitive file system, target file of a symbolic link will be backed up twice (in both upper case and in lower case), hence, doubling the backup quota storage requirement.

3.14.4 Command Line Tool

Pre-Backup / Post-Backup Commands are not supported on CloudBacko Lite.

3.14.5 Continuous Backup

Continuous Backup is only supported on Windows platform.

3.14.6 File Permissions

Backup of file permissions is enabled by default and the setting cannot be changed.

3.14.7 Follow Link

Follow Link is enabled by default and the setting cannot be changed.

3.14.8 Installation on Root Drive

CloudBacko Lite must be installed on the root drive of a volume (e.g. /Applications/...).



3.14.9 Resource Fork Files

Resource fork files cannot be restored with CloudBacko installation on macOS 10.8 above.

3.14.10 Software Update

Automatic software updates are not supported on macOS.

To upgrade CloudBacko Lite, please download the latest version from the CloudBacko website.

3.15 Best Practices and Recommendations

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 the 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 consider the Retention Policy settings and Retention Area storage management which can grow because of the changes in the backup data for each backup job.



4 Get Started with CloudBacko Lite

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

Download and Install

Download and Install CloudBacko Lite on your macOS

Launch the App

Launch CloudBacko Lite on your macOS

Set up 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 the backup jobs to back up data

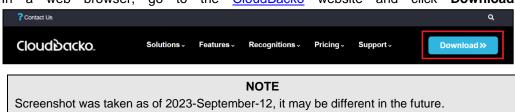
Restore Data

Restore backed up data to your system

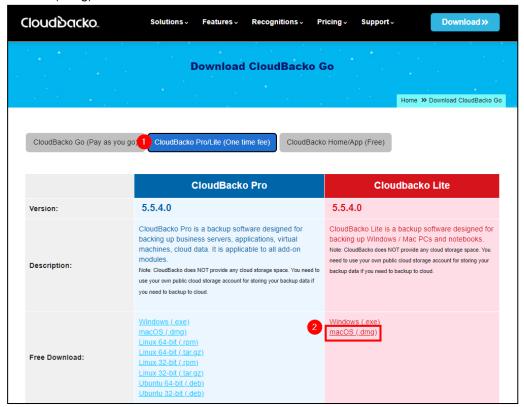
5 Download and Install CloudBacko Lite

5.1 Download CloudBacko Lite

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



 Click CloudBacko Pro/Lite. Under CloudBacko Lite you can choose the installer by operating system and click the corresponding link to start downloading. In this case click macOS (.dmg).

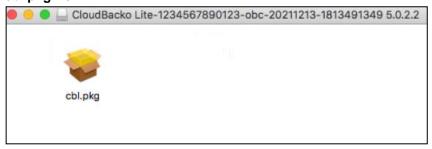


5.2 Install CloudBacko Lite

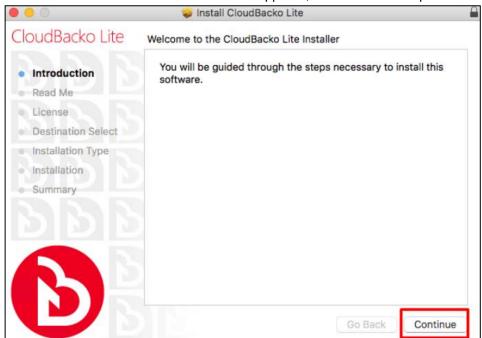
1. Double-click the .dmg file you have downloaded.



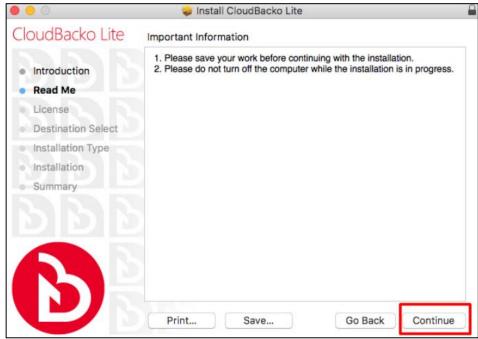
2. The CloudBacko Lite window will appear. Double-click the installation package **cbl.pkg** file.



3. When the CloudBacko Lite Installer wizard appears, click Continue to proceed.



4. Read the following information, then click Continue to proceed.



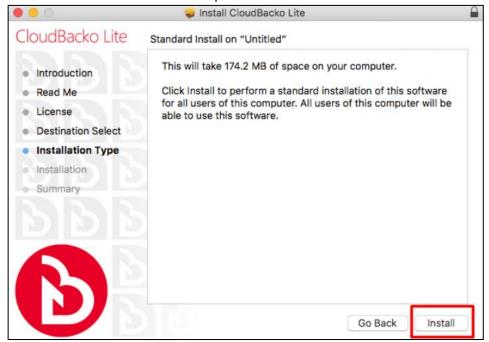
5. The Software License Agreement content will be displayed in English by default. If you prefer to read it in a different language, click the drop-down button to change the language. Click **Continue** to proceed.



6. The following message will appear in a pop-up window. Click **Agree** to accept the software license agreement.



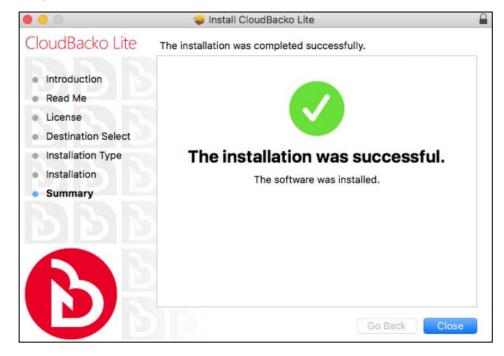
7. Click **Install** to start the installation process to the default location.



8. The following message will appear in a pop-up window. Enter your macOS login credentials. Then, click **Install Software** to proceed with the installation.



9. The following screen indicates that a successful installation of CloudBacko Lite is completed. Click **Close** to continue.





5.3 CloudBacko Lite Service

The CloudBacko Lite 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 or 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 Lite.
	The MBS will be activated when a mobile device is registered for mobile backup on CloudBacko Lite.
	The MBS will be deactivated when all mobile devices have been deregistered from the mobile backup settings and the CloudBacko Lite services is restarted.

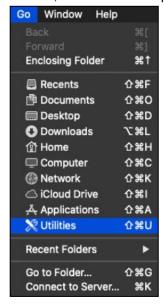
Therefore, it is very important to ensure the CloudBacko Lite Services is running after,

- 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, click Go at the top menu bar and select Utilities.



2. Open the **Terminal** application.



3. Use the command highlighted in red to enter the CloudBacko Lite folder.

```
[admins-Mac:bin admin$ cd /Applications/CloudBacko\ Lite.app/bin [admins-Mac:bin admin$
```

4. To check if the CloudBacko Lite Services is running, use the **ps** command. You will see that the CloudBacko Lite Services is running, highlighted in red.

```
admins-Mac:~ admin$ ps -ef|grep java

0 5735 1 0 9:05PM ttys000 0:02.07 /Applications/CloudBacko\
Lite.app /jvm/bin/ java -Xms128m -Xmx768m -Djava.library.path=.
-cp .:./cbs.jar cbs /Applications / CloudBacko\ Lite.app

501 5741 5705 0 9:05PM ttys000 0:00.00 grep java
```

There are two (2) options to **stop** and **start** the CloudBacko Lite Services.

Option 1

Stop CloudBacko Lite Services

To **stop** the CloudBacko Lite services, use the command highlighted in red. If you run this command for the first time, you will need to enter the login password of your local machine.

To check if the CloudBacko Lite Services has stopped running, use the **ps** command.

```
admin-admins-Mac-2~% sudo /Applications/CloudBacko\
Lite.app/bin/StopScheduler.sh

Password:
admin-admins-Mac-2% ps -ef|grep java

501 5721 5705 0 9:02PM ttys000 0:00.00 grep java
```

Start CloudBacko Lite Services

Use the command highlighted in red to **start** the CloudBacko Lite Services then use the **ps** command. You will see that the CloudBacko Lite Services is running, highlighted in red.

```
admin-admins-Mac-2~% sudo /Applications/CloudBacko\ Lite.app
/bin/Scheduler.sh
admin-admins-Mac-2~% ps -ef|grep java
0 5735 1 0 9:05PM ttys000 0:02.07 /Applications/CloudBacko Lite.app
/jvm/bin/java -Xms128m -Xmx768m -Djava.library.path=. -cp .:./cbs.jar
cbs
/Applications/CloudBacko Lite.app
501 5741 5705 0 9:05PM ttys000 0:00.00 grep java
```

Option 2

Stop CloudBacko Lite Services

To **stop** the CloudBacko Lite Services, use the command highlighted in **red**. Use the **ps** command to check if the CloudBacko Lite Services has stopped running.

```
admin-admins-Mac-2~% sudo launchctl unload -F
/Applications/CloudBacko\ Lite.app/bin/com.cb.scheduler.plist
Password:
admin-admins-Mac-2~% ps -ef|grep java
0 5735 1 0 9:05PM ttys000 0:02.07 /Applications/CloudBacko Lite.app
/jvm/bin/java -Xms128m -Xmx768m -Djava.library.path=. -cp .:./cbs.jar
cbs
/Applications/CloudBacko Lite.app
501 5741 5705 0 9:05PM ttys000 0:00.00 grep java
```

Start CloudBacko Lite Services

Use the command highlighted in red to start the CloudBacko Lite Services then use the ps command.

You will see that the CloudBacko Lite Services is running, highlighted in red.

```
admin-admins-Mac-2~% sudo launchctl load -F /Applications/CloudBacko\
Lite.app/bin/com.cb.scheduler.plist

Password:
admin-admins-Mac-2~% ps -ef|grep java

0 5805 1 0 9:21PM ?? 0:01.92 /Applications/CloudBacko
Lite.app/jvm/bin/java -

Xms128m -Xmx768m - Djava.class.path=/Applications/CloudBacko Lite.app
/bin:/Applications/CloudBacko Lite.app/bin/cbs.jar -
Djava.library.path=/Appli
cations/CloudBacko Lite.app/bin cbs /Applications/CloudBacko Lite.app

501 5811 5793 0 9:21PM ttys000 0:00.00 grep java
```

5.4 RunLevel Symlink Check

During installation, the following symlinks to the CloudBacko Lite Service startup script /Applications/CloudBacko Lite.app/bin/com.cb.scheduler.plist will be created that allows the CloudBacko Lite Services to automatically start each time the machine is rebooted or restarted.

To verify if the symlinks have been created correctly, use the **Is** command. You will see the symlink, highlighted in red.

```
admin-admins-Mac-2~% 1s -la /Library/LaunchDaemons/

total 128

drwxr-xr-x+ 62 root wheel 608 May 12 15:10 ..

lrwxr-xr-x 1 root wheel 60 May 12 11:21 com.CloudBacko

Lite.scheduler.plist -> /Applications/CloudBacko

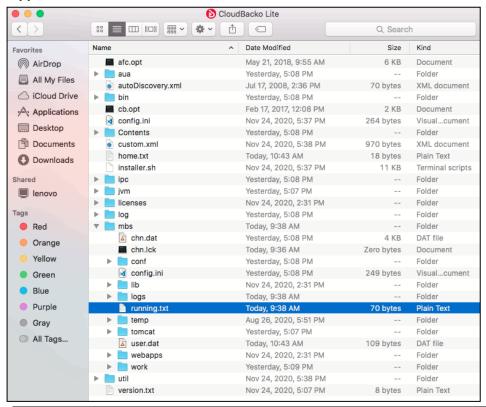
Lite.app/bin/com.cb.scheduler.plist

admin-admins-Mac-2~%
```

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

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

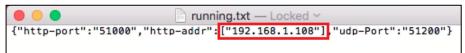
1. Check IP address, HTTP port, and UDP port in the "running.txt" file. Go to /Applications/CloudBacko Lite/mbs folder.



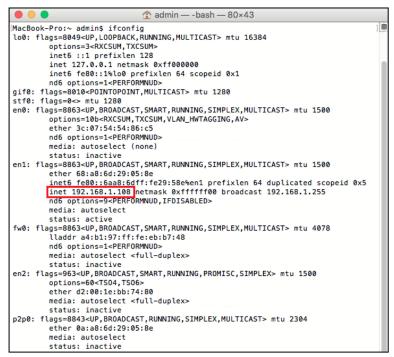
NOTE:

If the "running.txt" file does not exist then the MBS is not running, restart the CloudBacko Lite services

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

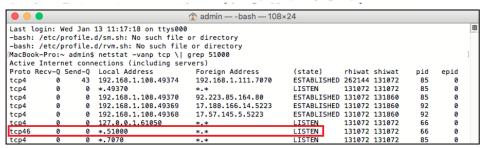


Open a command prompt and check if the IP address captured in the running.txt is the correct IP address of the machine where CloudBacko Lite is installed.



3. To verify the actual HTTP port used by MBS, type the following command:

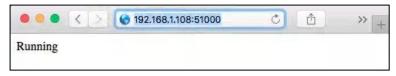
[MacBook-Pro:~ admin\$ netstat -vanp tcp \| grep 51000



- 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.
- 5. To perform a health check on the MBS. Open a browser on the CloudBacko Lite machine and type the IP address, followed by TCP port.

For example: If the HTTP port used is 51000, http://192.168.108:51000, you should get the following result that shows the "Running" status, which means that the MBS is running.

In the CloudBacko Lite machine



6. 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 TCP port.

For example: If the HTTP port used is 51000, http://192.168.108:51000, you should get the following result, which shows "Running" status.

This means that the CloudBacko app can successfully connect to the MBS and both backup and restore can proceed on the mobile device.

In the mobile device:



6 Start CloudBacko Lite

Starting with CloudBacko Lite v4.3.0.0 or above, you will find two new features introduced with this latest version which are the Mobile Backup and Two-Factor Authentication. With these new features there are several scenarios that will be encountered for first time login. Login steps for the different scenarios will be discussed in this chapter.

6.1. Launch CloudBacko Lite

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

- Initial launch skipping two-factor authentication and mobile backup features setup
- Subsequent login with no 2FA
- Subsequent login with no 2FA and enabled password lock

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

When launching the CloudBacko Lite for the first time and skipping the two-factor authentication feature setup, please follow the steps below:

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



2. The following screen will be displayed. Click **Next**.



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.





3. CloudBacko Lite main screen will appear.



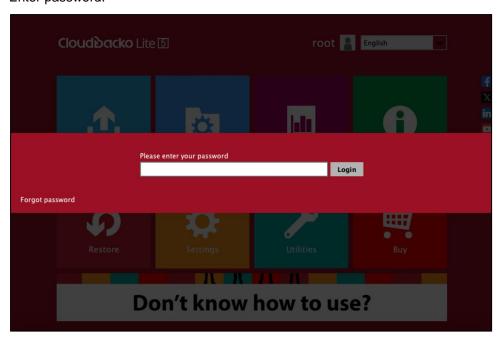
6.1.2 Subsequent logins with password lock and no 2FA

For succeeding logins to CloudBacko Lite with password lock and no two-factor authentication, please follow the steps below:

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



2. Enter password.



3. CloudBacko Lite main screen will appear.





6.1.3 Subsequent logins with no password lock and 2FA

For succeeding logins to CloudBacko Lite with no password lock and-factor authentication, please follow the steps below:

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



2. CloudBacko Lite main screen will appear.





6.2. Launch CloudBacko Lite with 2FA using Android or iOS mobile device

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

- CloudBacko app Authenticator
 - Supports two types of authentication:
 - Push Notification
 - TOTP
 - Oan be configured to support two 2FA modes:
 - Push Notification and TOTP (default mode) or,
 - TOTP only
- Third-party TOTP Authenticator

(e.g. Auth, Duo, Google)

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

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

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

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

1. A shortcut icon of CloudBacko Lite 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 Next.

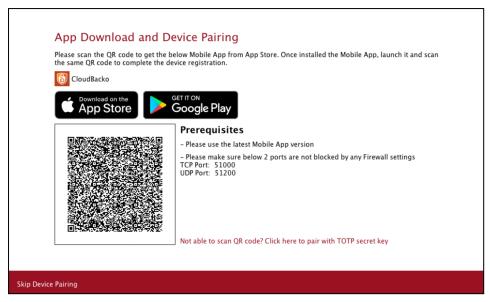




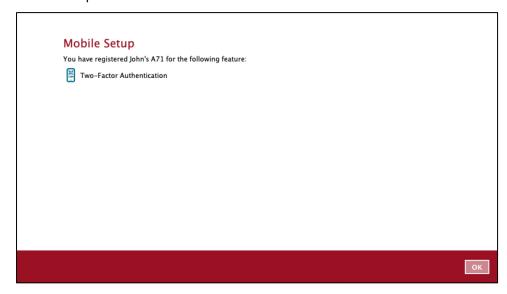
If you do not want to set up the mobile feature, click the **Skip Feature Setup** link. Click **Yes** in the pop-up message that will be displayed. Otherwise, click **No** to continue with the set-up of mobile feature.



3. Download the CloudBacko app by scanning the QR code or entering the given URL in your device's browser. Click **Next**.



4. Mobile device is successfully paired for mobile backup and 2FA with CloudBacko Lite. Click **OK** to proceed.



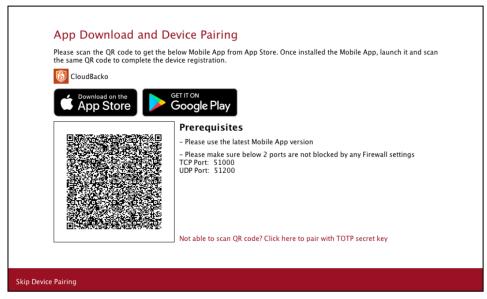
- 5. CloudBacko app supports two types of authentication method:
 - Push Notification
 - TOTP

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

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

Push Notification and TOTP (default mode)

i. To configure Push Notification and TOTP 2FA with CloudBacko app, simply scan the displayed QR code using the CloudBacko app.



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



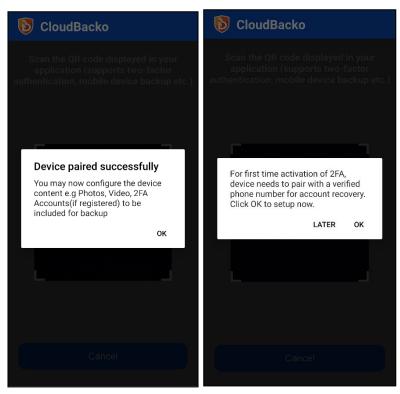




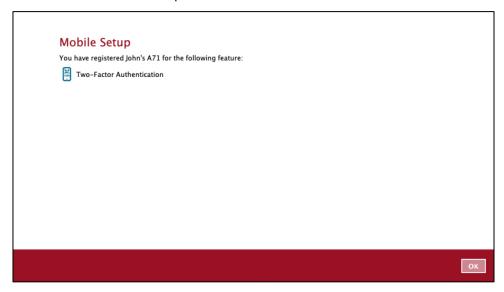
iii. QR Code is detected, tap **OK** to proceed.



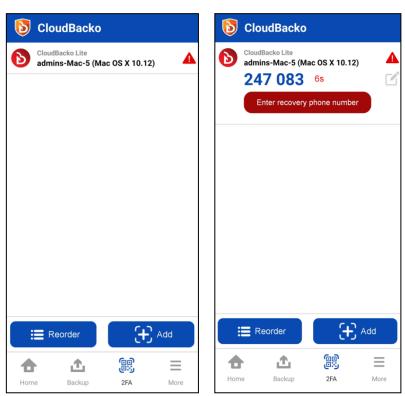
Device paired successfully.



iv. Once the registration is successful, the following screen will be displayed. You have now registered your device for mobile backup and Two-Factor Authentication. Click **OK** to proceed.



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

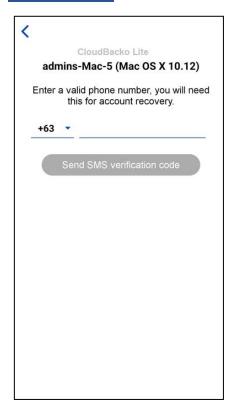


NOTE

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

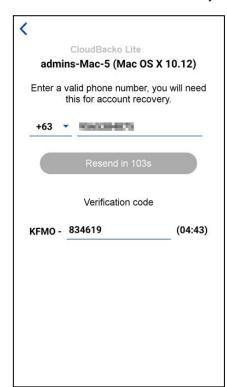


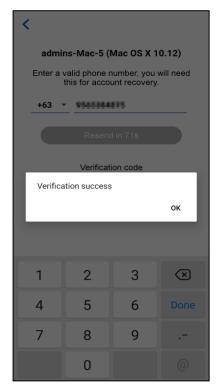
Select your country code and enter your phone number then click **Send SMS verification code**.





Enter the verification code sent to your mobile device.



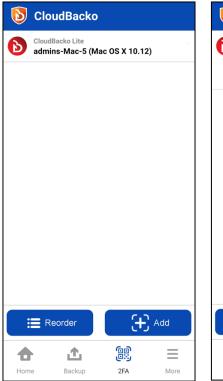




Sample verification code.



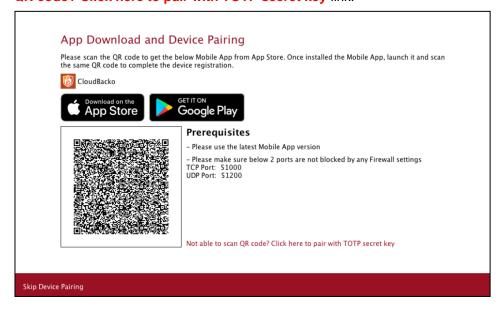
Successfully verified the phone number for account recovery.



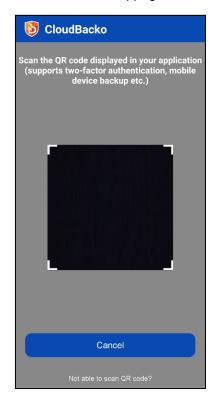


TOTP only

 To configure a TOTP only 2FA with CloudBacko app, click the Not able to scan QR code? Click here to pair with TOTP secret key link.

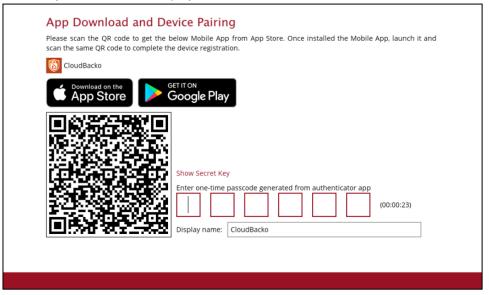


ii. In the CloudBacko app, go to 2FA. Tap the Not able to scan QR code? link.

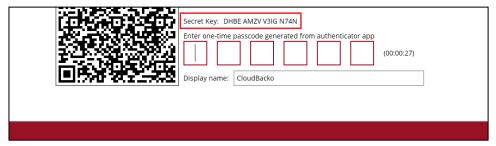




To see the secret key, click the **Show Secret Key** link to display the 16-digit secret key. And enter the display name.



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



iii. Enter the Username and Secret Key from CloudBacko Lite then tap **Connect** then **OK**.

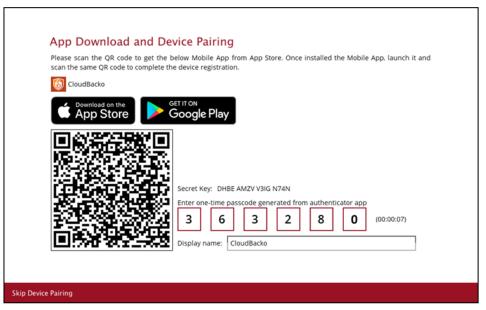








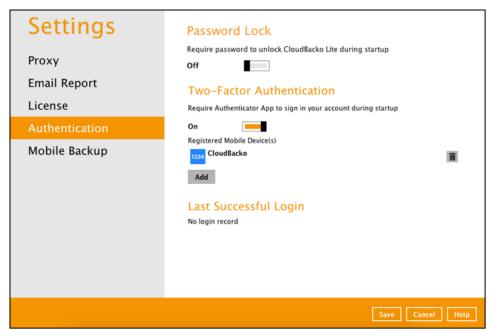
Enter the one-time passcode from the CloudBacko app.



iv. 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 **OK** to resume with the device pairing.

Mobile Setup

Due to session timeout, Two-Factor Authentication feature and Mobile Backup feature failed to be configured. You can go to Settings to configure the features again.

6. 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 Lite with Two-Factor Authentication with CloudBacko app.



6.2.2 Subsequent logins with 2FA

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

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



2. Select the authentication method to continue with the login.

There are two authentication method to choose from it is possible to use both methods on the same CloudBacko Lite:

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

(e.g. Authy, Duo, Google)

CloudBacko Authenticator

If **CloudBacko app** will be used as authenticator, there are two 2FA modes that can be selected:

Push Notification and TOTP (default mode)

Example of the 2FA alert screen on CloudBacko Lite after launch.

Two-Factor Authentication

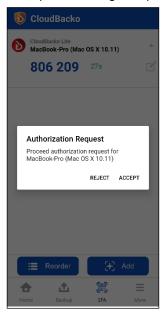
Please approve the notification request in Authenticator App on "Redmi Note 8".

:... Waiting for response (00:04:50)

Authenticate with one-time password

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

Example of the login request sent to CloudBacko app.



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.



TOTP only

Example of the 2FA alert screen on CloudBacko Lite after launch.



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





TOTP Authenticator App

If a third-party TOTP Authenticator App will be used instead, follow the steps below to login.

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



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



In the following example, both CloudBacko app and third-party TOTP Authenticator App has been setup for 2FA, select your preferred 2FA method from the options available to complete the login.



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 Lite with Two-Factor Authentication with CloudBacko app.



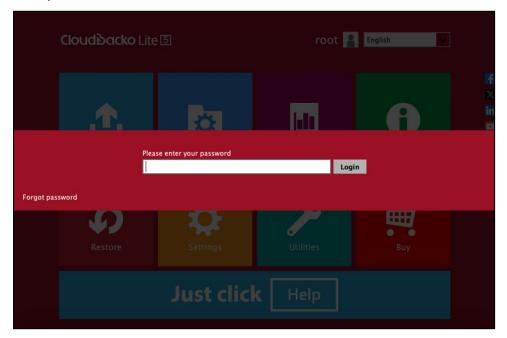
6.2.3 Subsequent logins with password lock and 2FA

For succeeding logins to CloudBacko Lite with two-factor authentication and enabled password lock, please follow the steps below:

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



2. Enter password.



3. Select the authentication method to continue with the login.

There are two authentication method to choose from it is possible to use both methods on the same CloudBacko Lite:

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

(e.g. Authy, Duo, Google)



CloudBacko Authenticator

If **CloudBacko app** will be used as authenticator, there are two 2FA modes that can be selected:

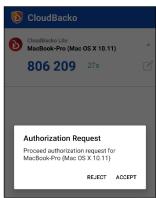
Push Notification and TOTP (default mode)

Example of the 2FA alert screen on CloudBacko Lite after launch.



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

Example of the login request sent to CloudBacko app.



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.



TOTP only

Example of the 2FA alert screen on CloudBacko Lite after launch.



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





TOTP Authenticator App

If a third-party TOTP Authenticator App will be used instead, follow the steps below to login.

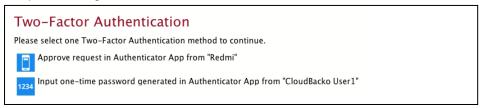
i. Enter the one-time password that is generated by the Authenticator App to proceed with login.

Two-Factor Authentic	cation	
Please input the one-time password generated in Authenticator App from "CloudBacko User1".		
452759	(00:00:11)	
432733	(00.00.11)	

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



In the following example, both CloudBacko app and third-party TOTP Authenticator App has been setup for 2FA, select your preferred 2FA method from the options available to complete the login.



4. 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 Lite with Two-Factor Authentication with CloudBacko app.

6.3. Trial Mode

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

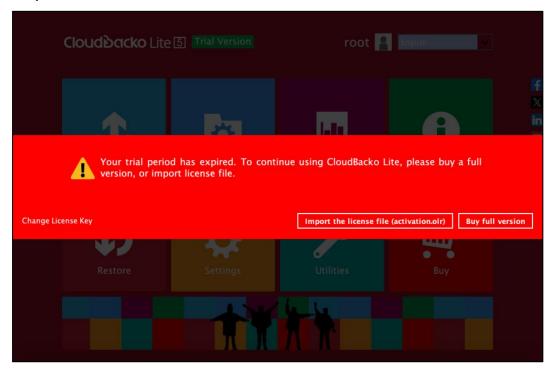
Trial Mode



CloudBacko Lite 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. 7.9 Buy
 - 2. Ch. 7.9.1 Credit Card
 - 3. Ch. 7.9.2 TT (Telegraphic Transfer)
- An existing license key may be applied even if CloudBacko Lite is still in trial.
 Please see this chapter, Ch. 7.7.3 License.

Expired Trial Mode

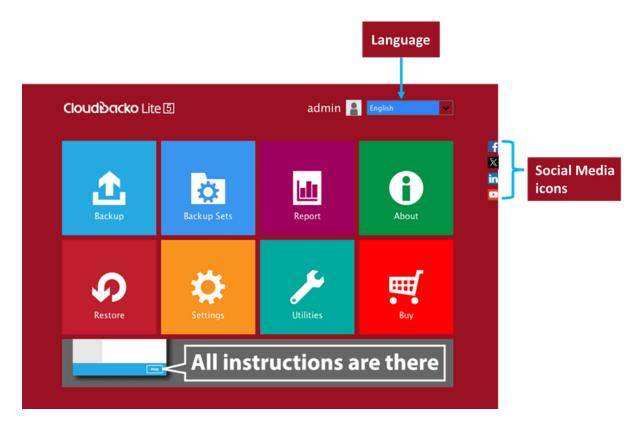


If you want to apply license key after Trial mode has expired, please check Appendix F: How to apply a license key to a CloudBacko Lite installation with an expired trial license?

CloudBacko License Key

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

7 CloudBacko Lite Overview

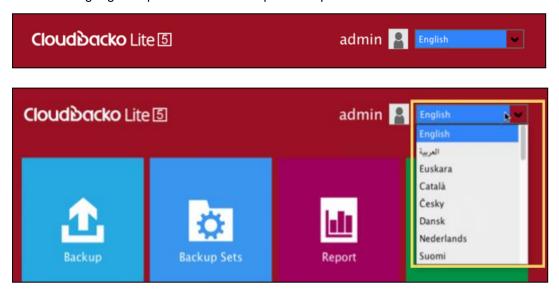


CloudBacko Lite main interface has ten (10) icons that can be accessed by the user:

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

7.1 Language

This option is used to change the language of the CloudBacko Lite interface. The list of the available languages depends on the backup service provider.

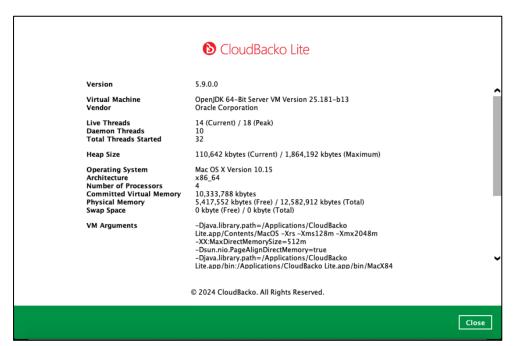


Once the language is selected, it will reflect on the CloudBacko Lite interface right away.

7.2 About

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



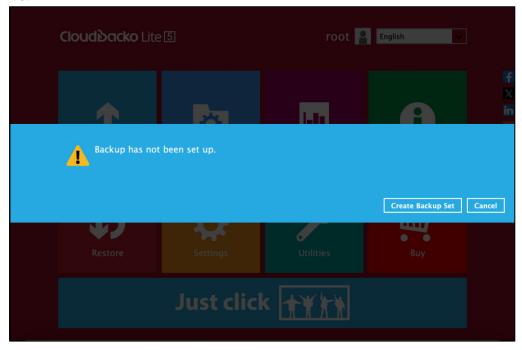


7.3 Backup

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



When using CloudBacko Lite 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 10 Run Backup Jobs.

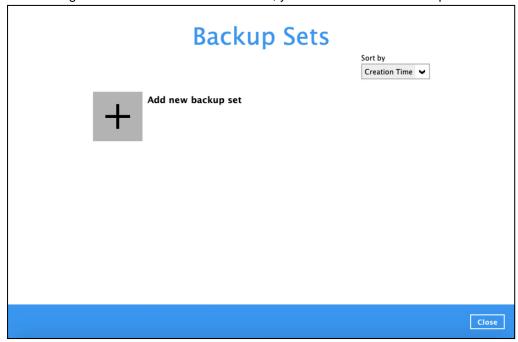


7.4 Backup Sets

A backup set is a place for files and/or folders of your backed up data. This feature allows the user to select files individually or an entire folder to backup. It is also used to delete backup set(s).



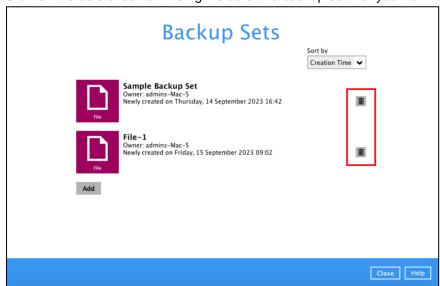
When using CloudBacko Lite for the first time, you must add a new backup set first.



For instructions on how to create a backup set, refer to Chapter 8 Create a Backup Set.

To delete a backup set, follow the instructions below:

1. Click on the delete icon on the right side of the backup set that you want to delete.

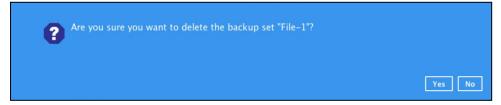




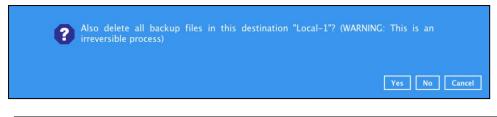
2. If the account is registered for 2FA, accept the push notification or enter the one-time password. Otherwise, skip to the next step.



3. Click the **Yes** button to delete the backup set or click the **No** button to abort the deletion.



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



WARNING! This is an irreversible process

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





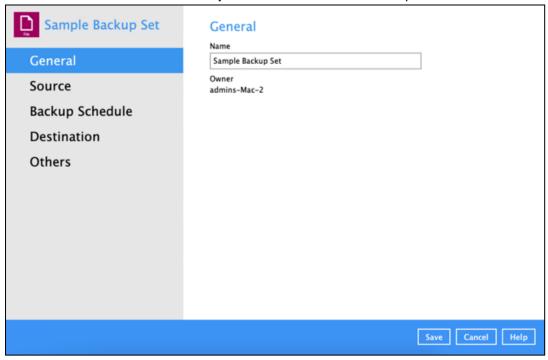
7.4.1 Backup Set Settings

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

- General
- Source
- Backup Schedule
- Destination
- Others
- Delete Backup Set

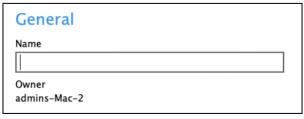
7.4.1.1 General

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



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

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

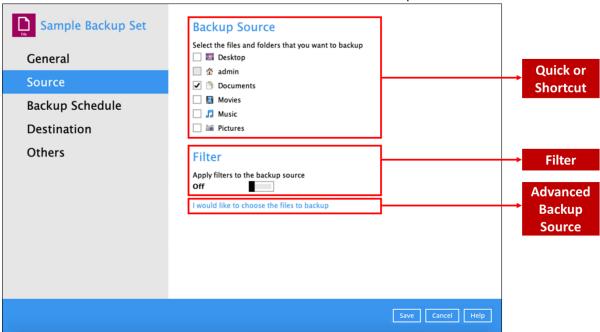


2. Click the Save button to save the updated backup set name.

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

7.4.1.2 Source

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



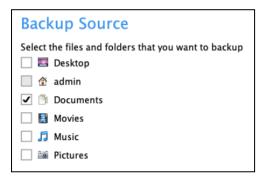
There are three (3) ways to select files and/or folders to back up:

Option	Description
Quick or Shortcut	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 or Shortcut

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 admin.



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

Backup Source		Description
Desktop		If Desktop is selected, all files and/or folders in the following location will be backed up:
	%UserProfile%/Desktop	
		Example: If the account name is admin , the location is /Users/admin/Desktop
		If home for admin is selected, all files and/or folders located in the following location / <i>Users/admin/</i> will be backed up this includes:
		/Users/admin/Desktop
	/Users/admin/Documents	
	/Users/admin/Downloads	
		/Users/admin/Movies
		/Users/admin/Music
		/Users/admin/Pictures
		/Users/admin/Public
Admin		This selection also includes some macOS system level folders and CloudBacko system folders which are hidden. It is recommended these folders are excluded from the backup source using the Exclude Filter .
		/Users/admin/Library
		/Users/admin/Downloads
		/Users/admin/.Trash
		/Users/admin/.bash_sessions
		/Users/admin/.cbl
		Note : If you select admin during the creation of backup set, the entire Backup Source in the Quick or Shortcut option will also be selected (e.g. Desktop, Documents, Movies, Music, and Pictures), but you may choose to unselect any of each.

	If Documents is selected, all files and/or folders located in the following location will be backed up:
Documents	%UserProfile%/Documents
	Example: If the account name is admin , the location is /Users/admin/Documents
	If Movies is selected, all files and/or folders located in the following location will be backed up:
Movies	%UserProfile%/Movies
	Example: If the account name is admin , the location is /Users/admin/Movies
	If Music is selected, all files and/or folders located in the following location will be backed up:
Music	%UserProfile%/Music
	Example: If the account name is admin , the location is //Users/admin/Music
	If Pictures is selected, all files and/or folders located in the following location will be backed up:
Pictures	%UserProfile%/Pictures
	Example: If the account name is admin , the location is //Users/admin/Pictures

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

- 1. Select a backup source.
- 2. Click the **Save** button to store the selected backup source.



Option 2: Filter

This option allows the user to manually select files and/or folders in the selected location(s) to back up.



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

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



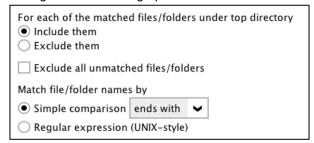
2. Click the **Add** button to create a filter.



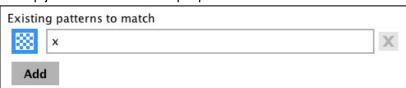
3. Assign a desired name to the backup filter.



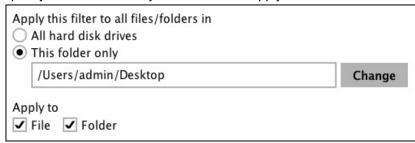
4. Configure the following options.



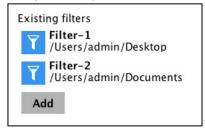
5. In this example, all files and/or folders that end with the letter 'X' will be included to the backup job. You can add multiple patterns here.



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 specify the folder where you would like to apply the filter to.



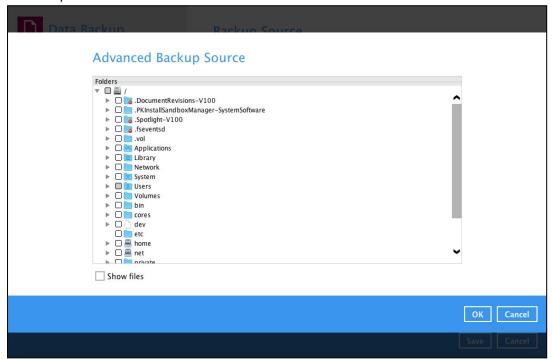
- 7. Click the **OK** button to save the created filter, then click the **Save** button to store settings. Once you run a backup, all files and/or folders that match the applied filter will be backed up.
- 8. Multiple backup filters can be created by clicking the **Add** button.





Option 3: Advanced Backup Source

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

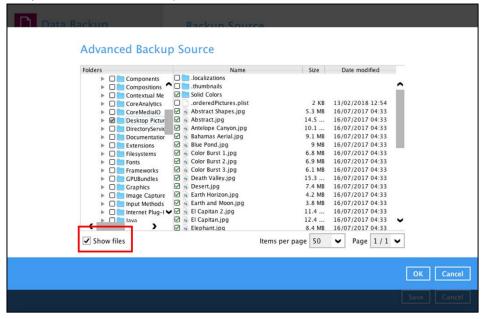


To select files and/or folders using the Advanced Backup Source, follow the steps below:

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. Select 'Show files' to display the files inside each folder, then select the files and/or folders that you would like to back up.



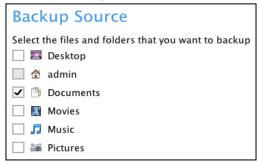
3. Click the **OK** button to save the selection, then click the **Save** button to store settings.

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 or Shortcut + Filter)

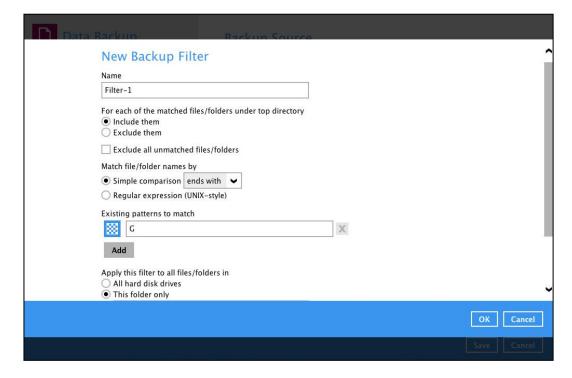
You can use the quick or shortcut option and apply filter to the selected backup source at the same time. To use this type of combination, follow the steps below:

1. Choose a backup source.



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





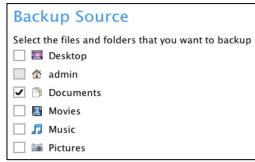
3. Click the **OK** button to save the created filter, then click the **Save** button to save settings.



Scenario 2 (Quick or Shortcut + Advanced Backup Source)

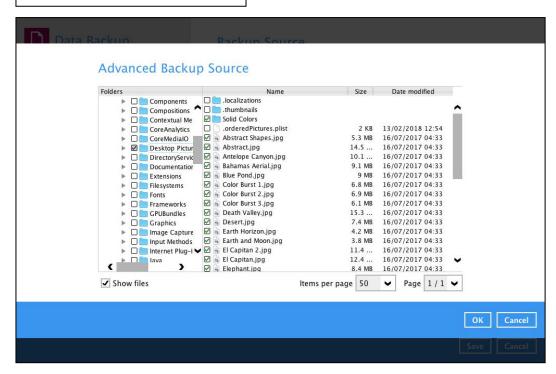
You can use the quick or shortcut option and select files and/or folders in the advanced backup source at the same time. To use this type of combination, follow the steps below:

1. Choose a backup source.



2. In the Source window, click 'I would like to choose the files to backup', then 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 **Save** to store settings.



Scenario 3 (Filter + Advanced Backup Source)

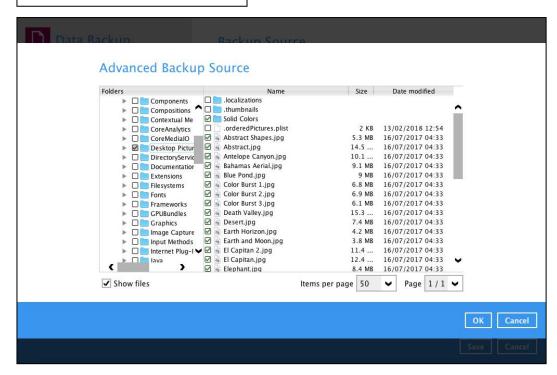
You can use the filter backup source and select files and/or folders in the advanced backup source at the same time. To use this type of combination, follow the steps below:

1. Create a filter.



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

I would like to choose the files to backup

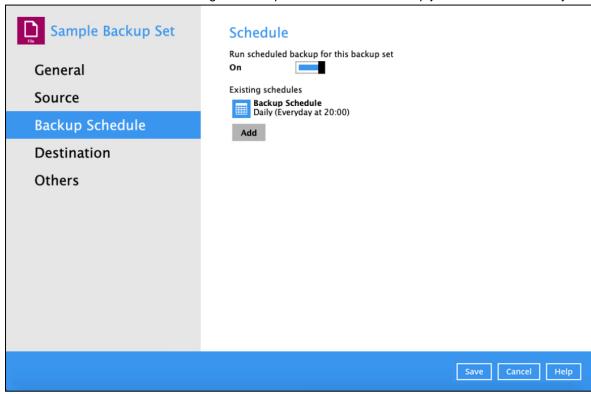


3. Click the **OK** button to save the selection, then click **Save** button to store settings.



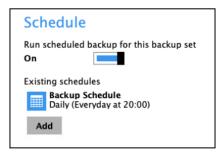
7.4.1.3 Backup Schedule

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:

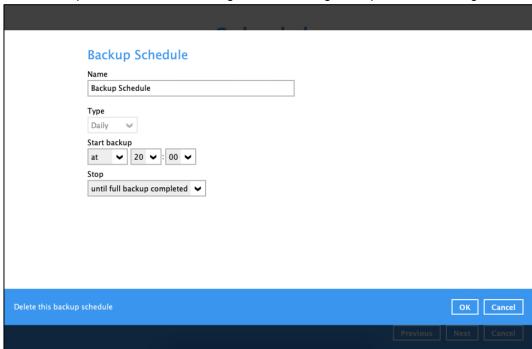
1. Select an existing backup schedule to modify or click **Add** to create a new one.



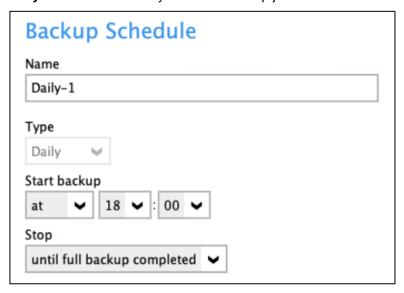
2. Select an existing backup schedule to modify or click the **Add** button to create a new one.



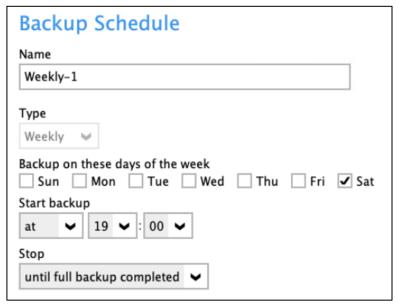
3. In the Backup Schedule window, configure the following backup schedule settings.



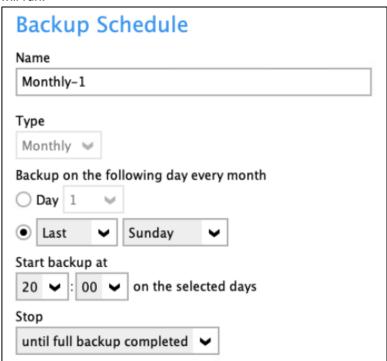
- Name the name of the backup schedule.
- Type the type of the backup schedule. There are four (4) different types of backup schedule: Daily, Weekly, Monthly and Custom.
 - Daily the time of the day when the backup job will run.



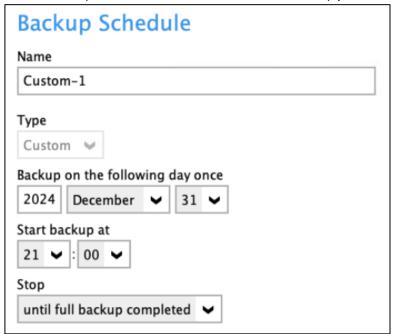
 Weekly – the day of the week and the time of the day when the backup job will run.



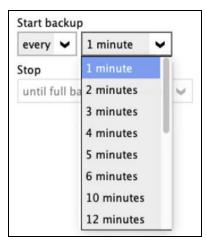
Monthly – the day of the month and the time of the day when the backup job will run.

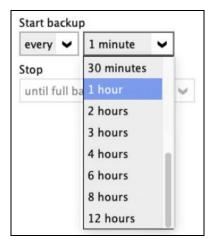


Custom – a specific date and the time when the backup job will run.

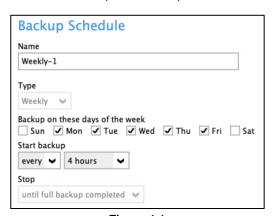


- > Start backup the start time of the backup job.
 - at this option will start a backup job at a specific time.
 - every this option will start a backup job in intervals of minutes or hours.





Here is an example of backup set that has a daily and weekly backup schedule.





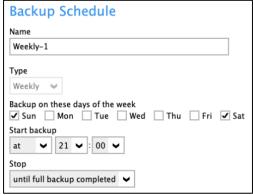


Figure 1.2



Figure 1.1 – Periodic scheduled every 4 hours Monday - Friday for business hours

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

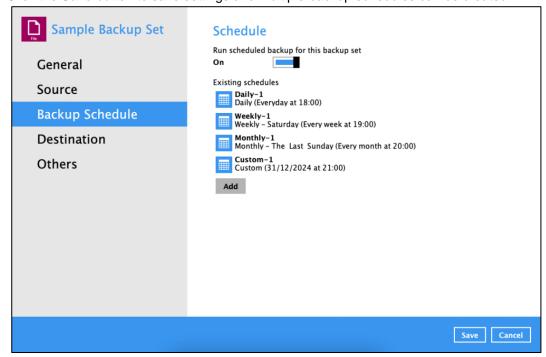
- > **Stop** the stop **time** of the backup job. This only applies to schedules with start backup "at" and is not supported for periodic backup schedule (start backup "every")
 - until full backup completed this option will stop a backup job once it is complete. This is the configured stop time of the 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.

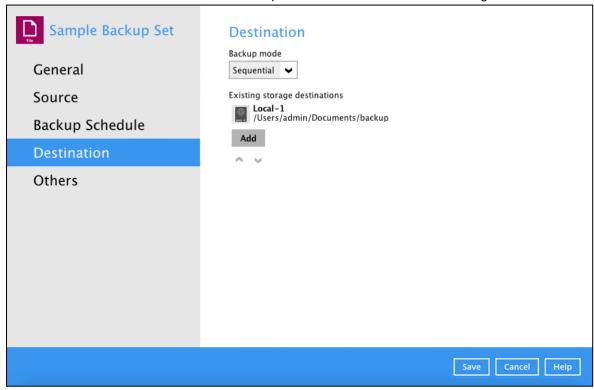
- 4. Click the **OK** button to save the configured backup schedule settings.
- 5. Click the **Save** button to save settings and multiple backup schedules can be created.



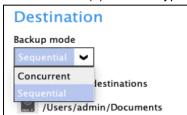


7.4.1.4 Destination

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

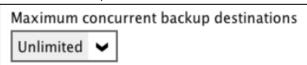
Backup mode	Pros	Cons
Sequential	Takes less resources in the local machine (e.g. memory, CPU, bandwidth, etc.) to complete a backup job.	Backup job is slower than in concurrent mode since the backup job will upload the backup data to the selected backup destinations one at a time.
Concurrent	Backup job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

- 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

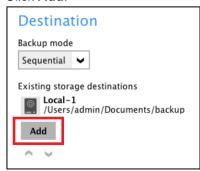
An "Immutable" checkbox is provided to be able to create an immutable storage destination.

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 Add.

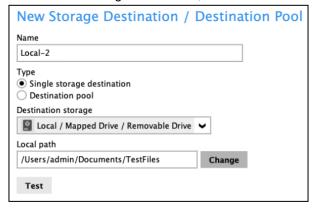


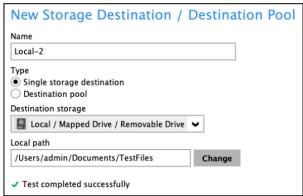
2. Click the drop-down button to select a backup destination.



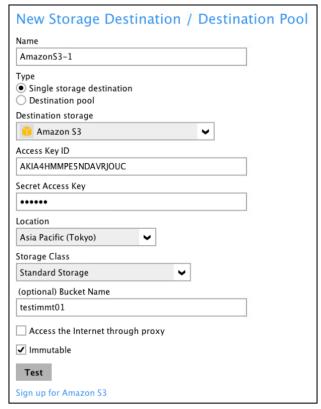


3. If the **Local / Mapped Drive / Removable Drive** is selected, click the **Change** button to select a new storage destination, then click the **Test** button to validate access to it.



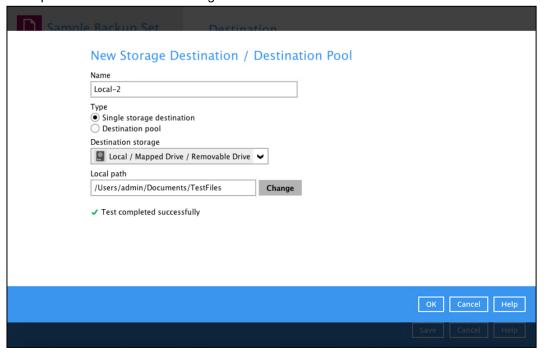


If you want to create an immutable storage destination, select one of the supported destinations then provide the needed information. Check 'Immutable' then click the **Test** button to validate access to it.

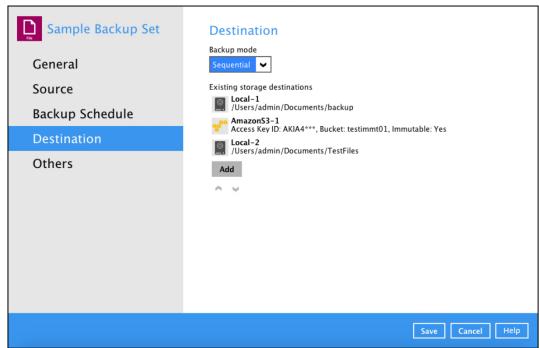




4. Click **OK** to save the added storage destination, then click **Save** to store the updated backup mode and the added storage destination.



5. Click the **Save** button to store the updated backup mode and the added storage destination.



7.4.1.5 Others

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

- Retention Policy
- Temporary Directory
- Compressions
- Encryption
- Recycle Bin
- Restore Drill

Retention Policy

When CloudBacko Lite 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.

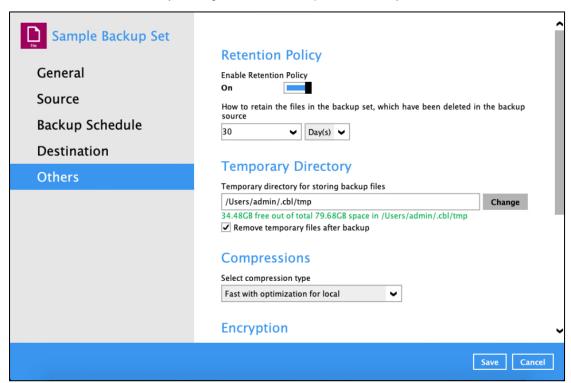
Data Area is the place where backed up files and/or folders are stored.

While the **Retention Area** is a 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. 7.8.2 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.

To configure the Retention Policy, follow the steps below:

- 1. Select the **Others** tab in the Backup Set Settings.
- 2. Slide the switch to the right to turn on **Enable Retention Policy**.
- 3. Click the drop-down button to define the number of day(s) or job(s) that the deleted files will be retained. This is configured as 30 days by default.
- 4. Click the **Save** button to store the configured Retention Policy.

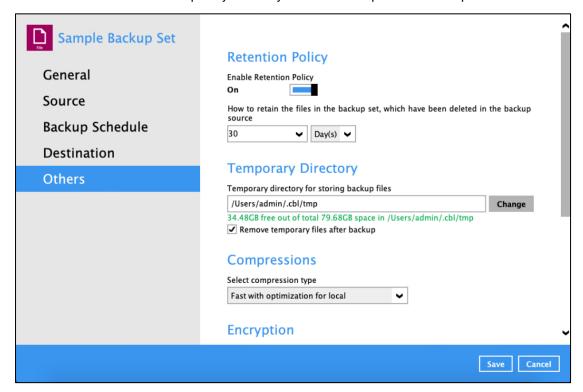
WARNING

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



Temporary Directory

CloudBacko Lite 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 job. 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.

NOTES

For best practice, the temporary directory should be located on:

A local drive for optimal backup and restore performance.

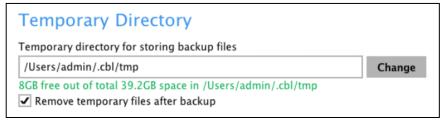
And should not be located on:

- System drive, as the System drive is used by Mac 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.

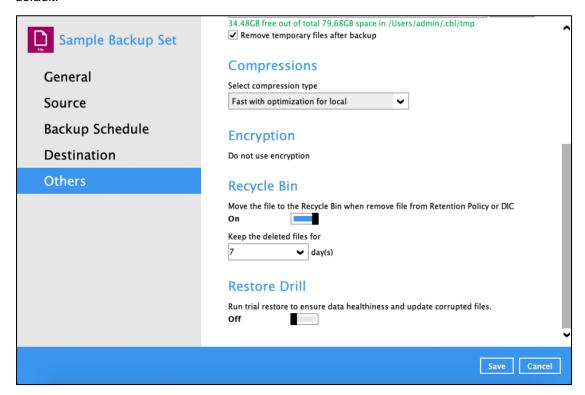


2. Locate the directory that you would like to use, then click **OK** to select the folder. Click the **Save** button to apply the settings.



Compressions

This feature is used to enable compression of data during a backup job. When the compression is enabled, the CloudBacko Lite 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" by default.



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 Snappy compression library when baking up to local destination only, otherwise setting will default to gzip if baking up to other destinations. Has the lowest CPU usage, very high speed and reasonable compression but compressed file size may be larger that Fast.

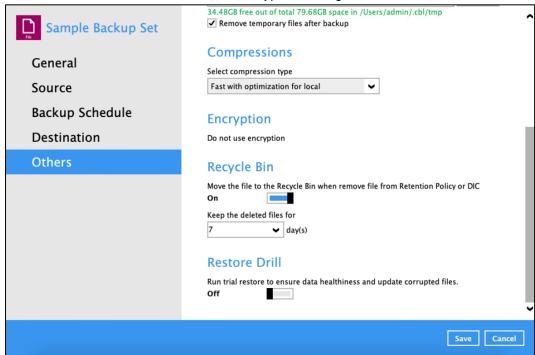
WARNING

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

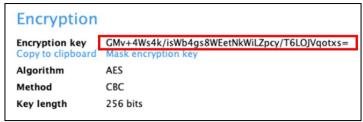
This feature allows the user to view the encryption settings.



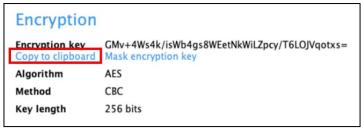
To view the encryption key of the backup set, follow the steps below:

- 1. In the backup set settings, select the **Others** tab, then scroll-down to display **Encryption**.
- 2. Click Unmask encryption key to display the encryption key of the backup set.





3. Click Copy to clipboard if you would like to copy the encryption key of the backup set.



NOTE

The encryption setting can only be configured during the creation of backup set. For more details about encryption settings, please refer to step no. **13** in Chapter 8 <u>Create a Backup Set</u> a Backup Set.

Recycle Bin

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

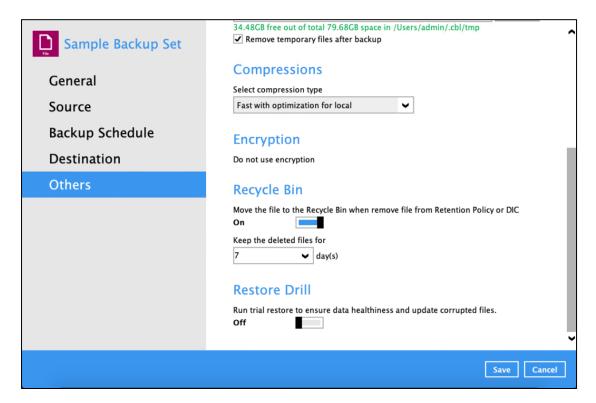
This is how the Recycle Bin will treat deleted data:

- Data in the Recycle Bin will consume Quota.
- It does not move the data in another location within the storage, instead the index tracks the xxxxxx.bak files and the 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, if there are already deleted files 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.
- Recovering from Recycle Bin requires reverting the index. For instructions on how to revert the
 index please refer to this article: <u>FAQ</u>: <u>How to un-delete backup data moved to Retention, or
 revert indexes to a healthy state from an earlier successful backup.
 </u>

WARNING

When reverting index, new data will be lost.

This is enabled by default set with 7 days.



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

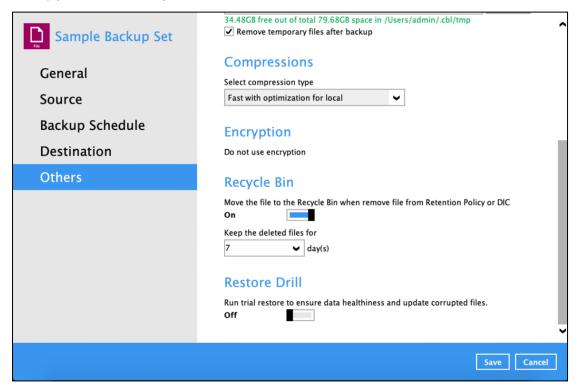
- 1. Go to Backup Sets, then select a backup set.
- 2. Click the Others tab in the backup set settings.
- 3. Under Recycle Bin, select the number of days or you can enter it manually.





Restore Drill

This feature is used to run a trial restore to detect corrupted data. It helps to ensure that backup data is always restorable since it will alert users regarding the corrupted data, which requires running the backup job either manually or via schedule to fix.



To configure the restore drill, 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. Enable the Restore Drill by sliding the lever to the right.
- 4. Select the interval in months when the restore drill will run.



5. 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. 7.7.2 Email Report. The report received will depend on this setting.

Here is a sample of the restore drill report.

Restore Drill Report of admins-Mac-2 (2023-09-13 10:25 AM) Indox x @gmail.com < @gmail.com> to === + Hi admin, Here is the summary of your restore drill job "2023-09-13-10-19-30". Backup Set: Sample Backup Set Destination: Local-1 Backup Job: 2023-09-12-21-27-35 Job Status: OK Restore Drill Duration: 09/13/2023 10:19:30 IRKT - 09/13/2023 10:19:38 IRKT Total Data Size: 4.74 M (16) Restored Data Size: 4.74 M (16) Invalid Data: 0 Unverifiable Data: 0 Have a nice day! - CloudBacko Team

NOTE

If there are several restore drill jobs that ran, it will all be displayed in this email.

If the email report setting was changed, all the previous restore drill job report that was not sent will be sent according to the new email report setting.

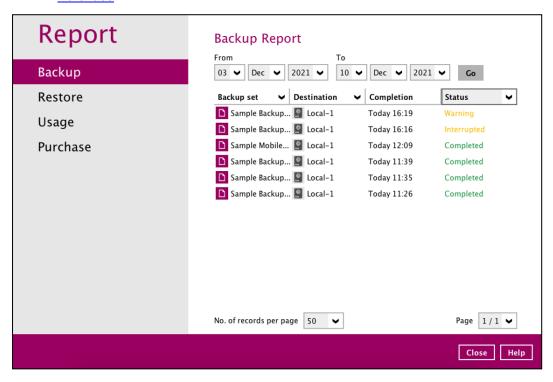
7.5 Report

This feature allows user to run and view backup / restore reports, usage, and purchases.



There are four options available for this feature:

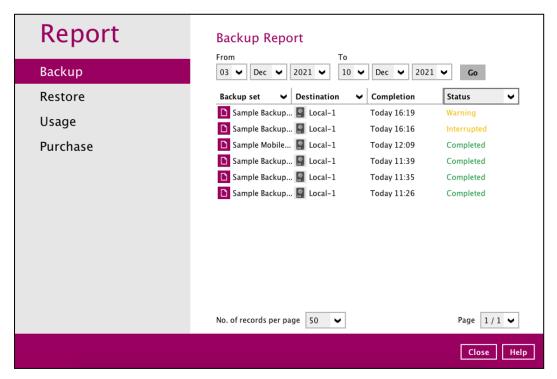
- Backup
- Restore
- Usage
- Purchase



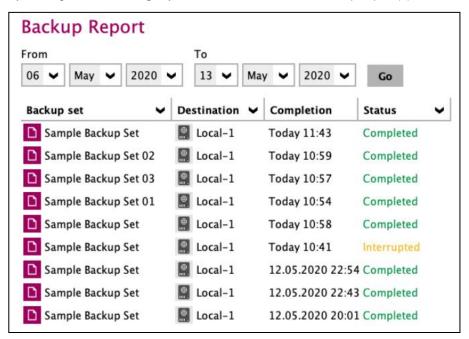
7.5.1 Backup

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

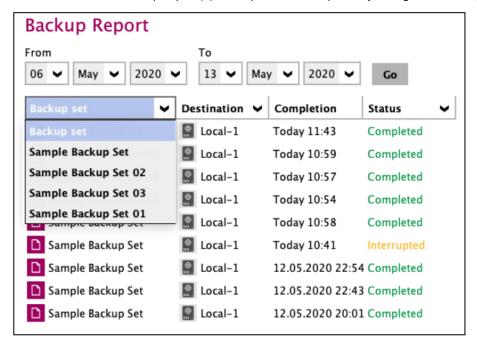
- Date
- Backup set
- Destination
- Status



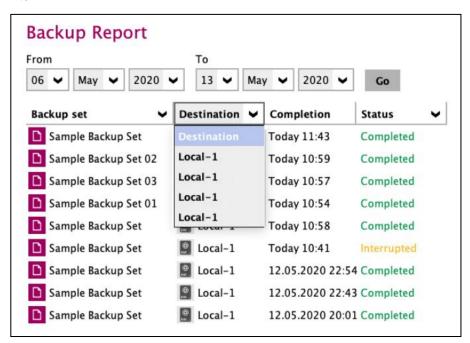
By setting the Date range, you will see the list of all backup report(s) within that period.



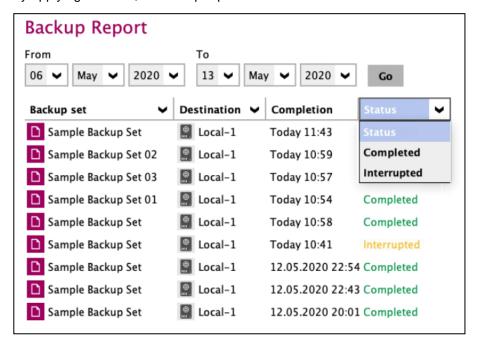
You can view the backup report(s) of a specific backup set by using the Backup set filter.



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.

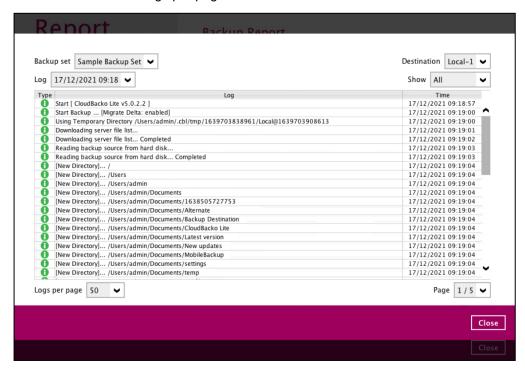


To view the backup log, follow the instructions below:

1. 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.

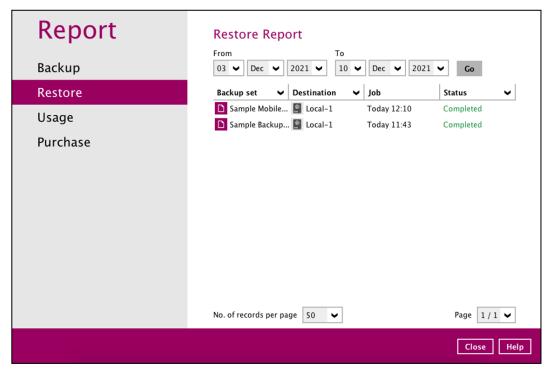




7.5.2 Restore

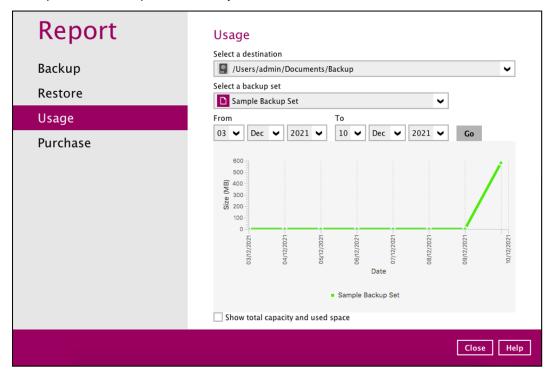
This feature displays the restore report logs for each backup set. Similar to the **Backup** tab, this feature also consists of the following filters:

- Date
- Backup set
- Destination
- Status



7.5.3 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.



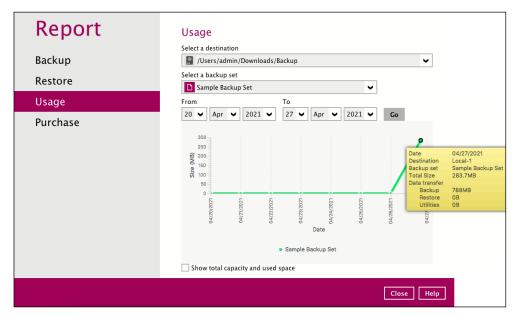
Storage Statistics

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

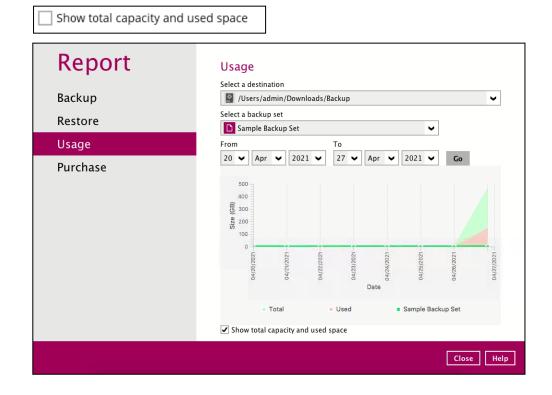
Example: The data transfer statistics will pop up when mouse pointer moves over a specific date.



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.

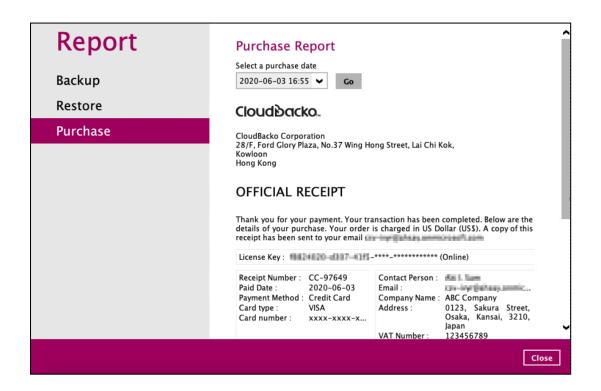




7.5.4 Purchase

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 Lite.

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



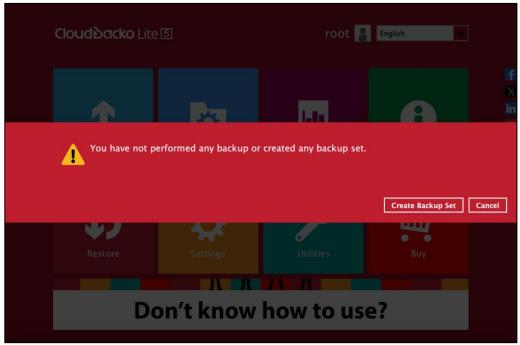


7.6 Restore

This feature is used to copy the backed up file(s) from the backup set and restoring it to its original location or alternate location.



When using CloudBacko Lite 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.



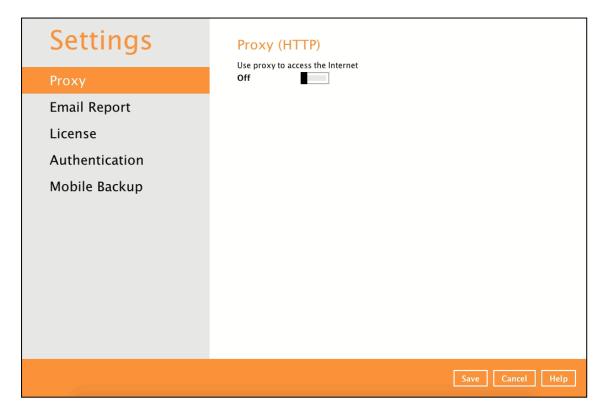
To restore backed up files, follow the instructions on Chapter 11.1 Restore Data.

7.7 Settings

Settings consist of four (5) sub modules:

- Proxy
- Email Report
- License
- Authentication
- Mobile Backup

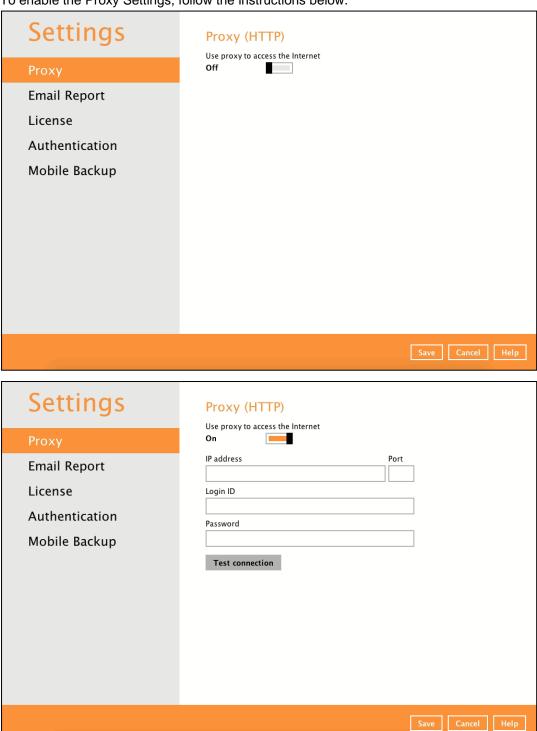






7.7.1 Proxy

To enable the Proxy Settings, follow the instructions below.

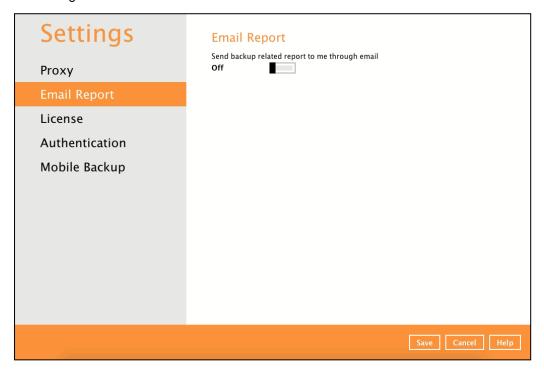


- 1. Complete the following fields:
 - IP address
 - Port
 - Login ID
 - Password
- 2. Click **Test Connection** to validate the connection.
- 3. Click **Save** to store the settings.



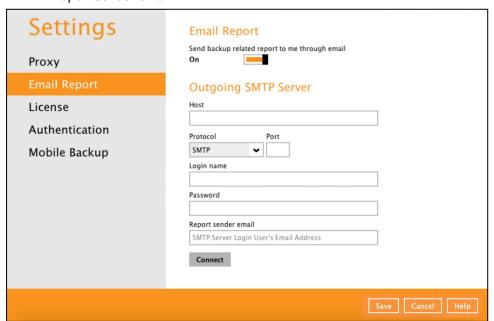
7.7.2 Email Report

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



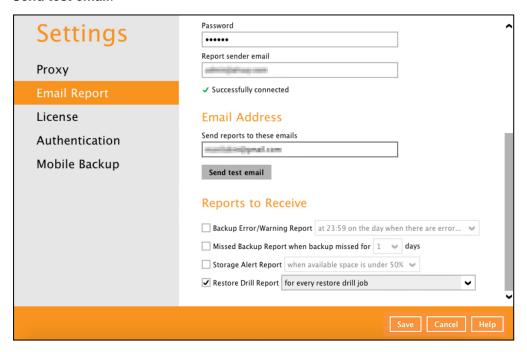
To enable the Email Report feature, follow the instructions below:

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





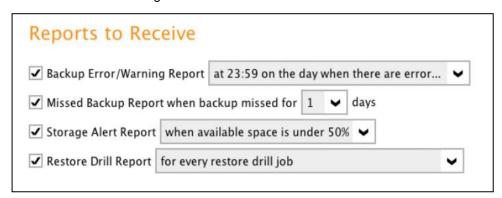
Once successfully connected, the email address where the reports will be sent should be displayed as well as the list of reports to be receive. Enter a valid email then click **Send test email**.



Below is a sample screenshot of the test email.



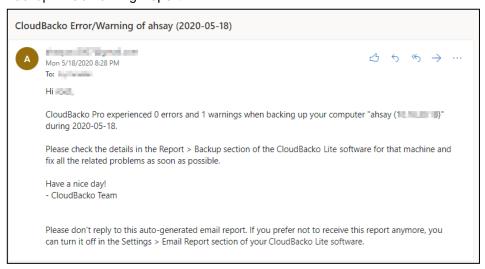
Select the reports you want to receive by ticking the checkboxes then click the Save button to store the settings.



- Backup Error/Warning Report
 - at 23.59 on the day when there are error or warning (default setting)
 - at 23:59 every day, 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 (1 day is the default setting)
- Storage Alert Report
 - when available space is under 50% (default setting)
 - 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

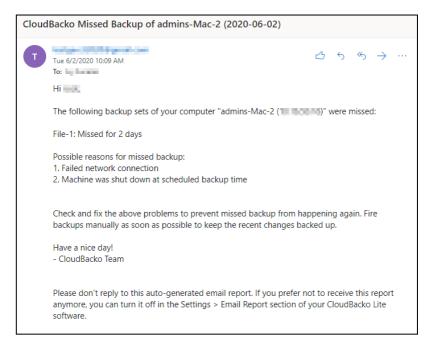
These are sample reports:

Backup Error/Warning Report

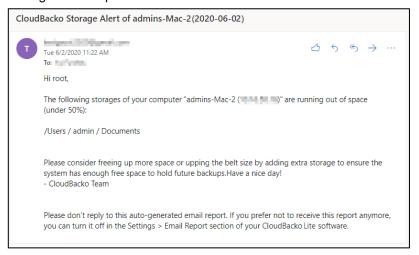


Missed Backup Report when backup missed for a specific number of days.

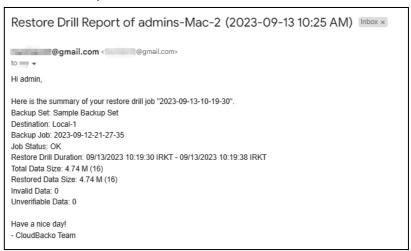




Storage Alert Report



Restore Drill Report



7.7.3 License

The License module shows the current license key applied along with the licenses and module usage. Also, it allows the customer to apply full license key to a trial version of CloudBacko Lite.

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 Lite.

Modules (Displays in trial version only)

This are the following modules enabled for CloudBacko Lite.

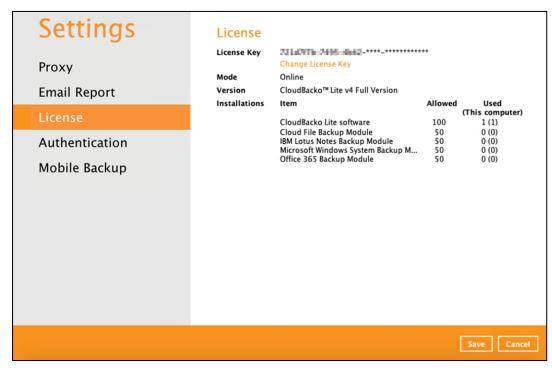
- CloudBacko Lite software Enabled
- Cloud File Backup Module Enabled
- IBM Lotus Notes Backup Module Enabled
- Microsoft Windows System Backup Module Enabled
- Microsoft 365 Backup Module Enabled
- Installations (Displays in full version only)
 - Item these are the software and modules allowed for CloudBacko Lite.
 - CloudBacko Lite software
 - Cloud File Backup Module
 - IBM Lotus Notes Backup Module
 - Microsoft Windows System Backup Module
 - Microsoft 365 Backup Module
 - Allowed displays the allowed number for each module for CloudBacko Lite.
 - 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 Lite.



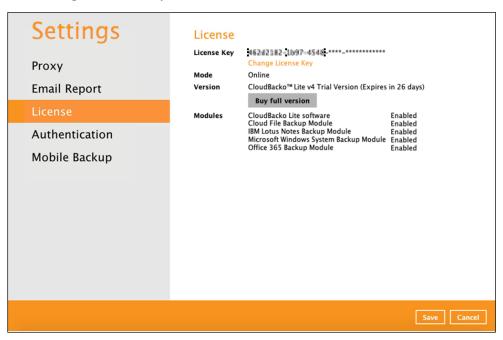
This is a sample screenshot for a full version of CloudBacko Lite.



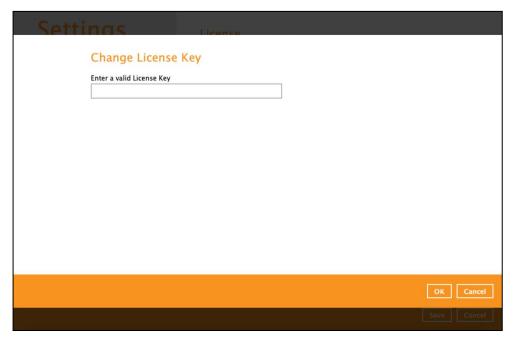


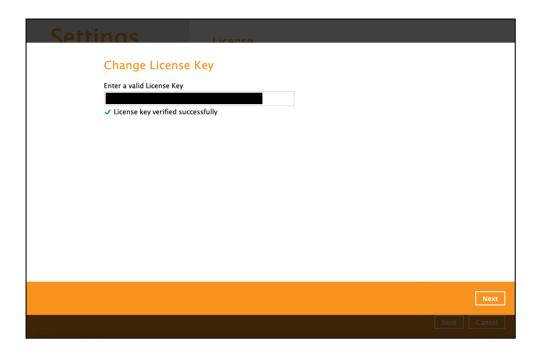
To apply a license key, follow the instructions below:

1. Click Change License Key.

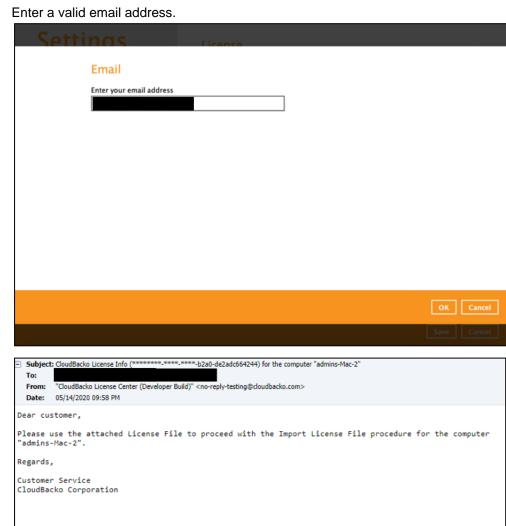


2. Enter a valid license key then click the **OK**.





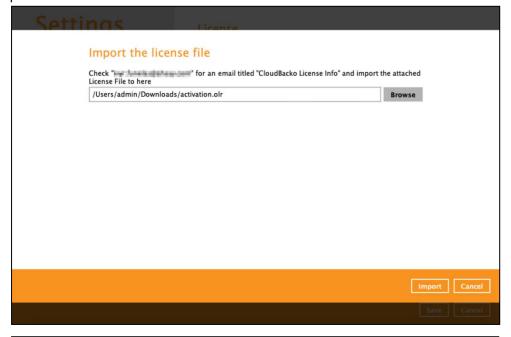


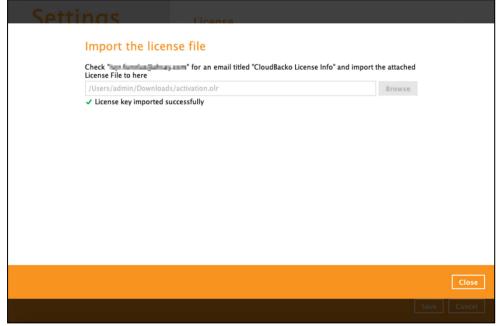


1 Attachments



4. Click **Browse** to search for the **activation.olr** sent to thru email. Click **Import** to process the activation then click **Close** to return to the main screen.





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





7.7.4 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 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.

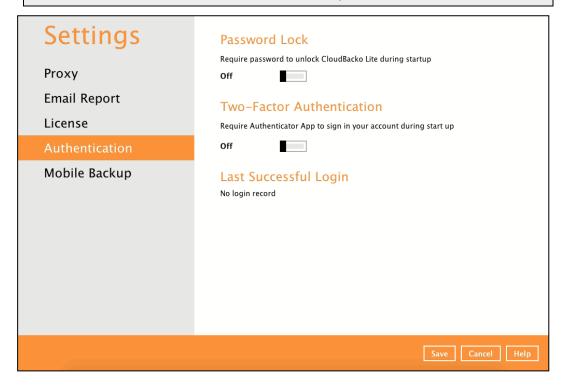
Re-pair with authenticator.

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

- Remove one or more device(s) registered for Two-Factor Authentication (2FA).
- 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 TOTP Authenticator (e.g. 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.



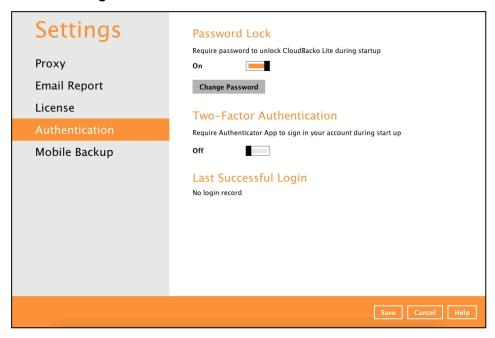
- 3. Click **OK** then click **Save** button to store the settings.
- 4. Upon launching the CloudBacko Lite, it is required to enter the password to login.



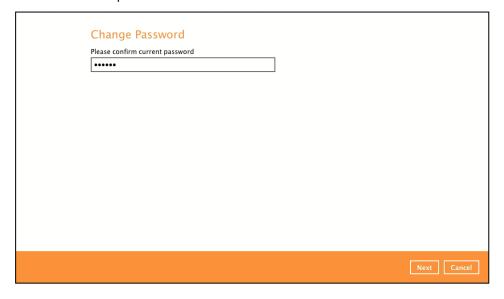


To change the password, follow the instructions below:

1. Click the Change Password.

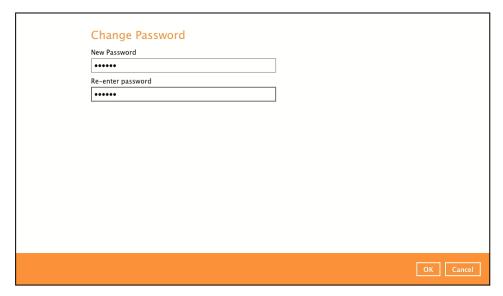


2. Enter the current password.

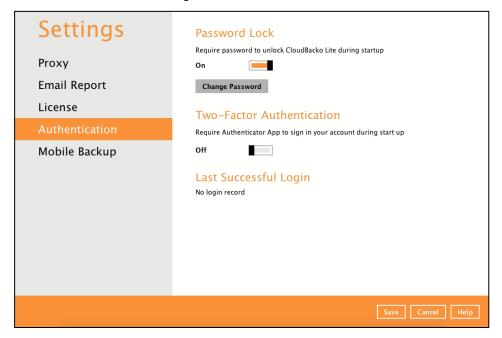




3. Enter the new password and re-enter it for authentication purposes. Click **OK** to return to main screen.



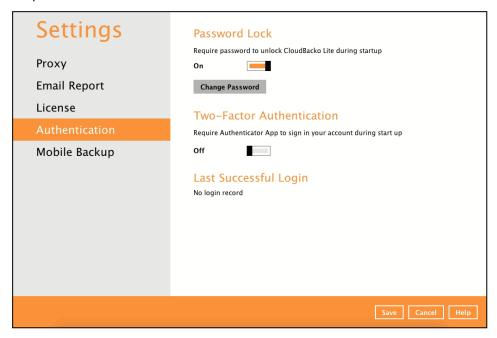
4. Click **Save** to store the settings.





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.



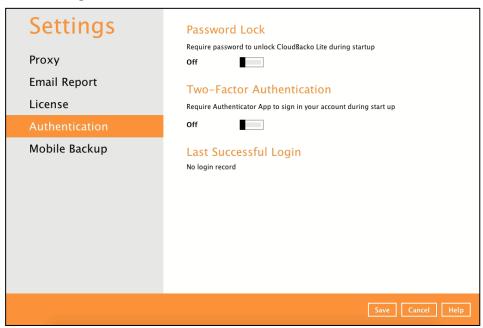
Two-Factor Authentication

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

NOTE

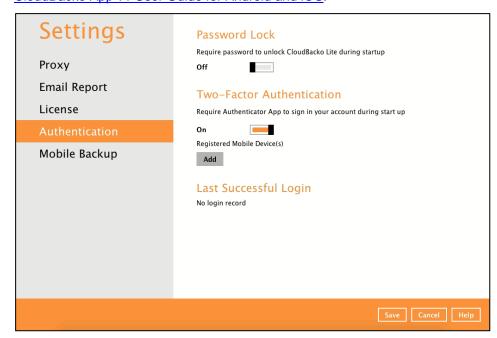
The CloudBacko app or a third-party **TOTP Authenticator** is needed for 2FA.

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



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

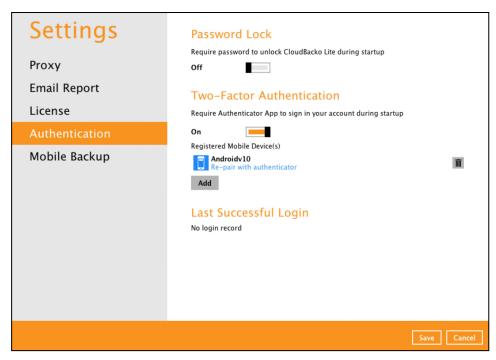
For the detailed step-by-step procedure on how to add a mobile device, please refer to CloudBacko App v1 User Guide for Android and iOS.





To re-pair the mobile device with authenticator, follow the instructions below:

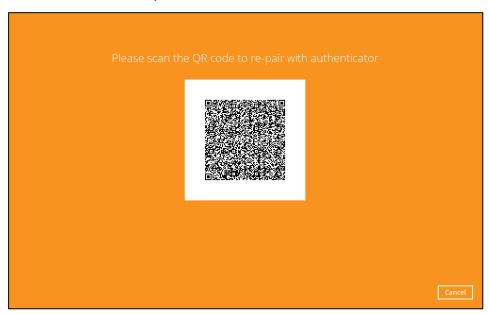
1. Go to Settings > Authentication > Two-Factor Authentication. Click Re-pair with authenticator.



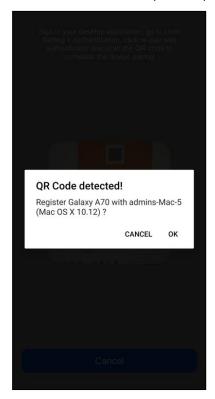
2. In the CloudBacko app, go to 2FA then tap Re-pair with backup user account.



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



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

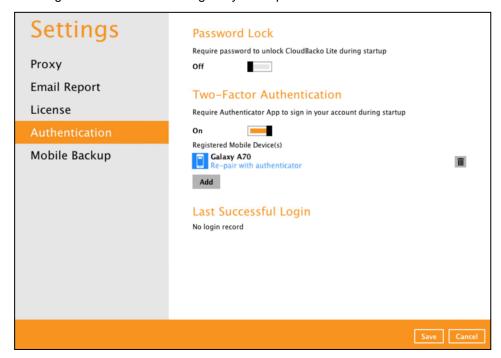


5. The migrated 2FA account has been successfully re-paired.



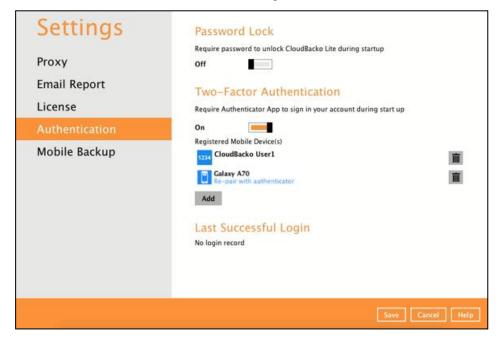


6. The original device will be changed by the replacement device.



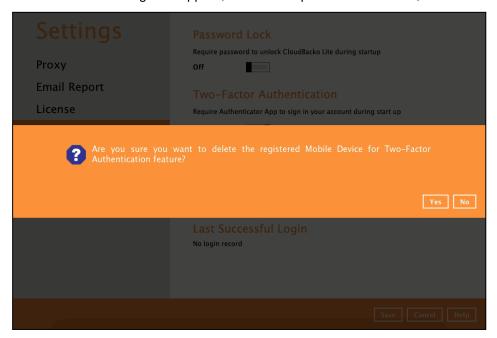
To remove a mobile device, follow the instructions below:

1. Click the button on the left side of the registered mobile device.

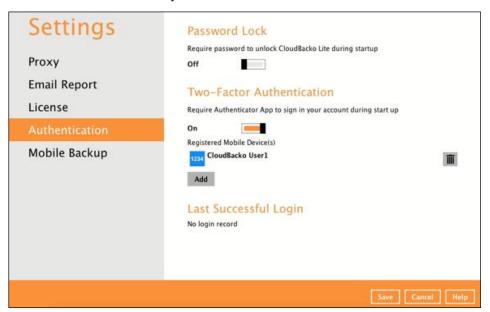




2. A confirmation message will appear, click Yes to proceed. Otherwise, click No.



3. Mobile device is successfully removed.



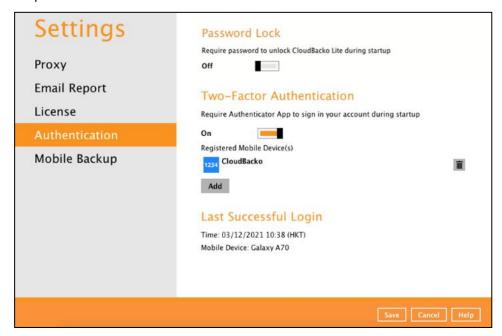
To disable the two-factor authentication feature, follow the instructions below:

NOTE

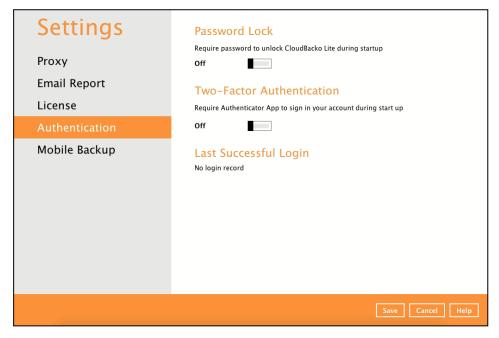
Sliding the switch to right hand side will only turn off the two-factor authentication but it will not automatically delete the registered mobile device(s) for Two-Factor Authentication. If you need to delete the registered mobile device(s), this must be done manually first before disabling Two-Factor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



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



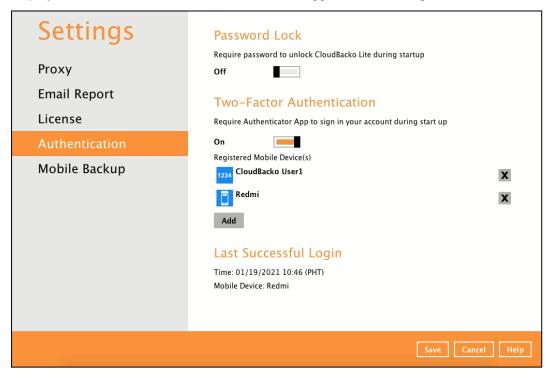
2. Click Save to save the settings.



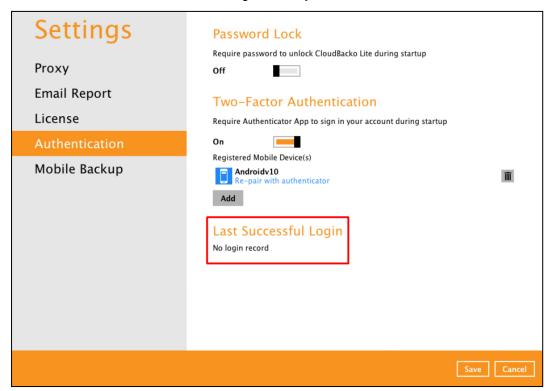


Last Successful Login

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.





7.7.5 Mobile Backup

You can use the Mobile backup function to:

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

NOTE

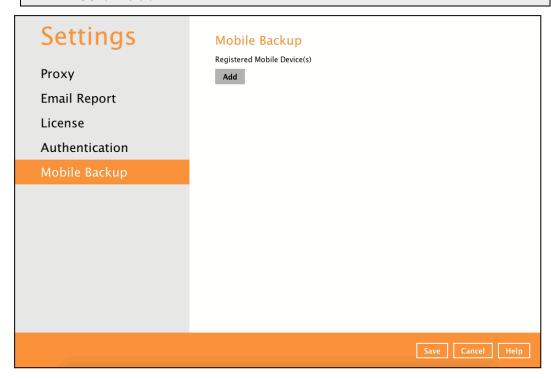
Please refer to the <u>CloudBacko App v1 User Guide for Android and iOS</u> for the detailed step-by-step procedure.

- View backed up photos, videos and documents saved in the mobile backup destination.
- Ohange 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 Lite.

- 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.

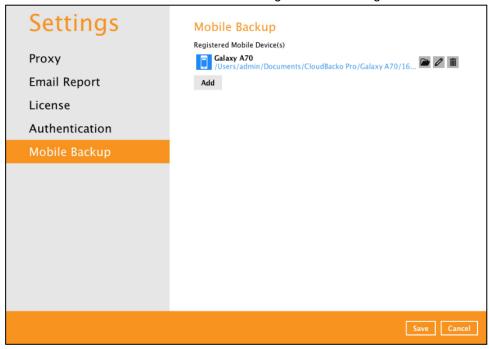




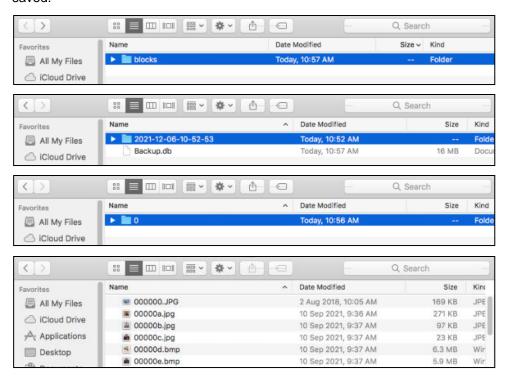
View backed up photos and videos saved in the mobile backup destination

To view backed up photos and videos 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.



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 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 a 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.

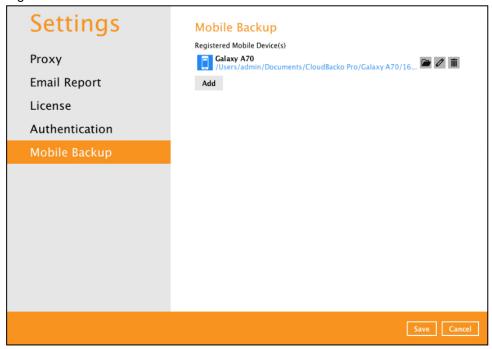
To change the mobile backup destination to another drive or folder on the CloudBacko machine, follow the instructions below:

- 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 Lite.



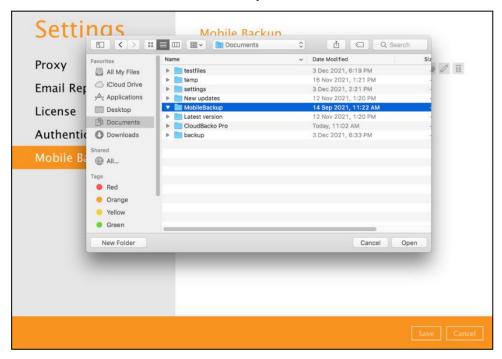


3. Go to **Settings** > **Mobile Backup**. Click the **Edit** cicon on the right side of the registered mobile device.



4. Select a new mobile backup destination then click Open.

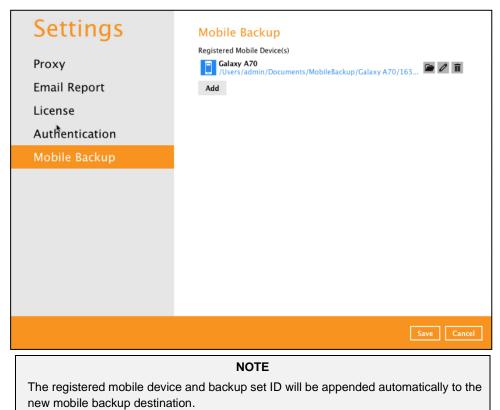
In this example, the new mobile backup destination will be /Users/admin/Documents/MobileBackup.





5. Click **Save** to store the change made. Otherwise, click **Cancel**.

Mobile backup destination is successfully changed to /Users/admin/Documents/MobileBackup.



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

Change mobile backup destination 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.

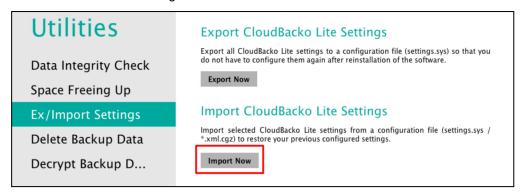
To change the mobile backup destination to a new machine, follow the instructions below:

- 1. From the old machine,
 - secure a copy of the previously backed-up photos, videos, documents and 2FA account.

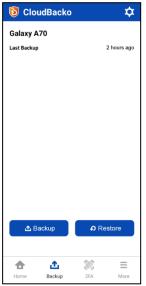
save a copy of the configuration file by going to Utilities > Ex/Import Setting then click Export Now. Select the destination where the file will be saved.



- 2. On the new machine, install CloudBacko Lite.
- 3. Apply the CloudBacko license key to the new installation.
- 4. 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.



- If the mobile backup destination needs to be updated, please follow the steps on how to change mobile backup destination to a new location in the same local machine.
 Otherwise, skip this step and proceed to step 6.
- 6. Copy the previously backed up photos, videos and 2FA accounts from the old machine to the new mobile destination.
- 7. Restart the **CloudBacko Lite Services** because importing the configuration file (settings.sys) on a newly installed CloudBacko Lite will not trigger the MBS.
- 8. Start backup of photos, videos, documents and 2FA accounts.

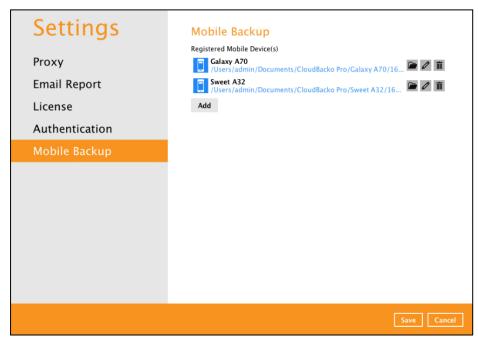




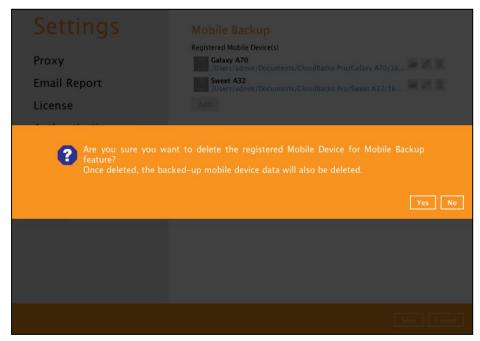
Remove one or more device(s) registered for Mobile Backup

To remove a mobile device, follow the instructions below:

1. Click **Delete** icon on the left 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.



7.8 Utilities

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



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

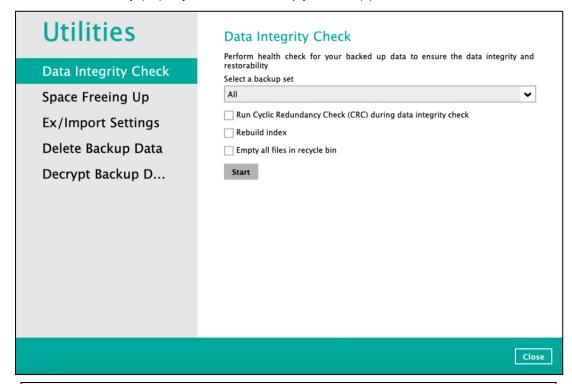
- Data Integrity Check
- Space Freeing Up
- Ex/Import Settings
- Delete Backup Data
- Decrypt Backup Data



7.8.1 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

- 1. 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 and will be removed from the backup destination(s). If these files still exist on the client machine on the next backup job, AhsayOBM will upload the latest copy of the files.

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

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

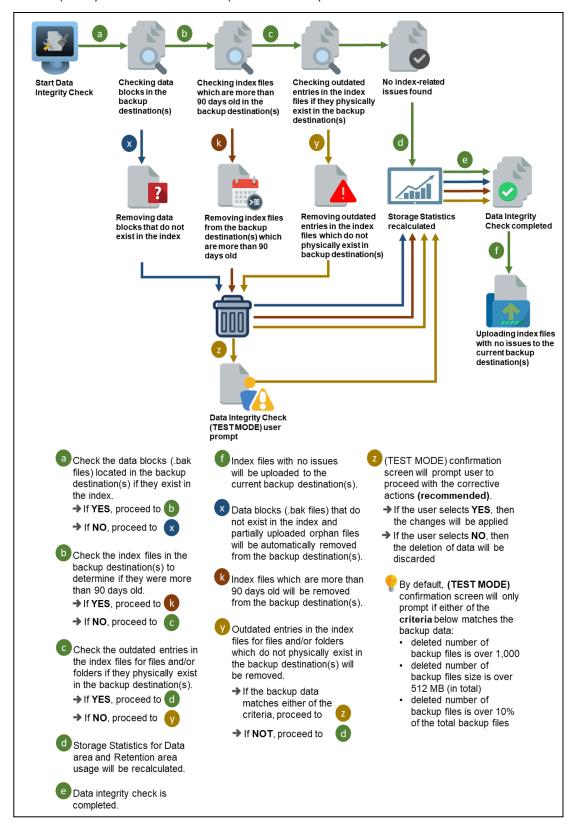
Option 3

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

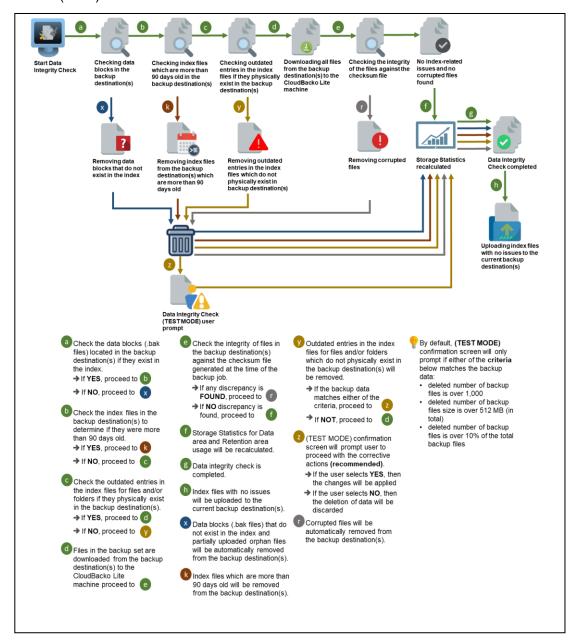
Option 4

Enabled Run Cyclic Redundancy Check (CRC) and Rebuild index

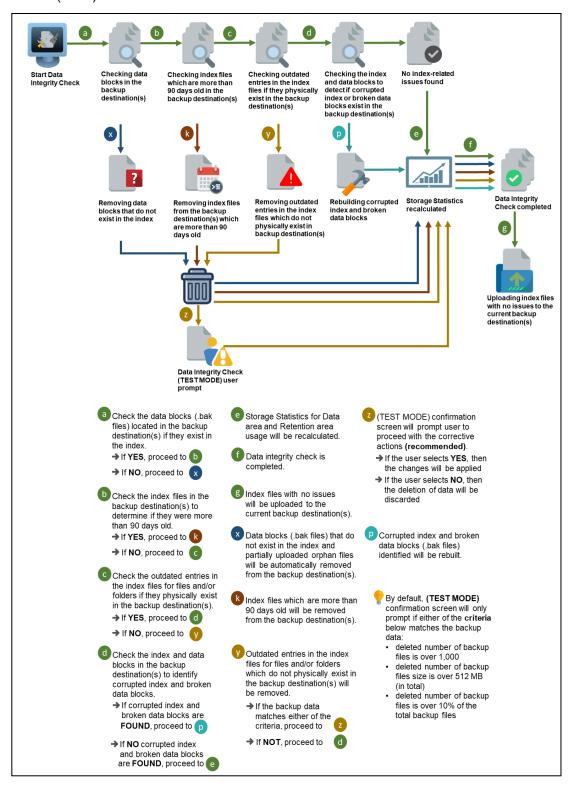
Option 1: Disabled Data Integrity Check (DIC) Process with Run Cyclic Redundancy Check (CRC) and Rebuild Index (Default mode)



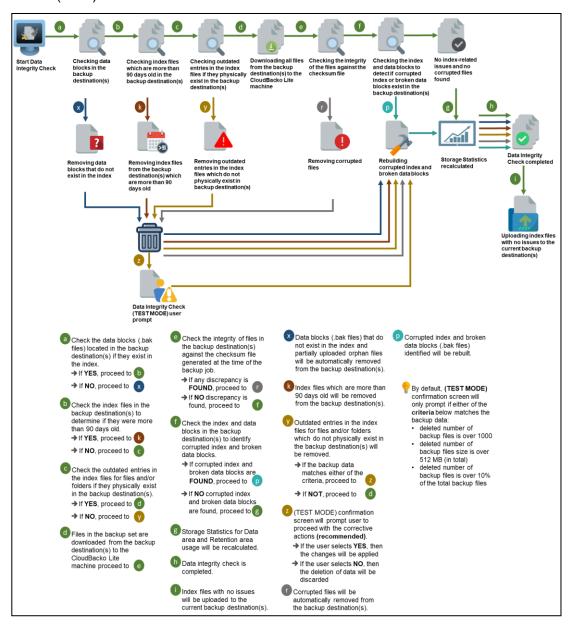
Option 2: Enabled Data Integrity Check (DIC) Process with Run Cyclic Redundancy Check (CRC) and Disabled Rebuild Index



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

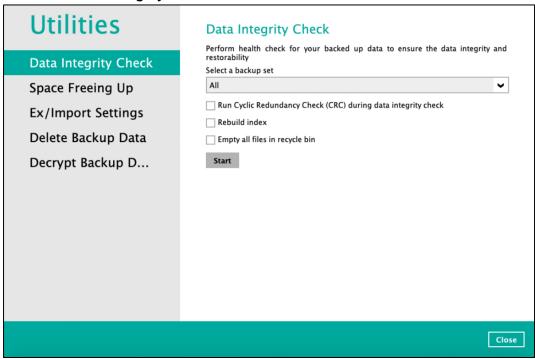




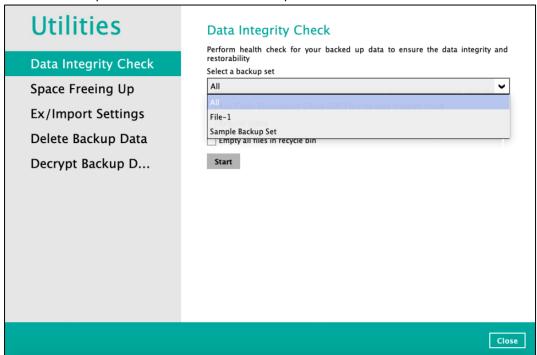
Perform a Data Integrity Check

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

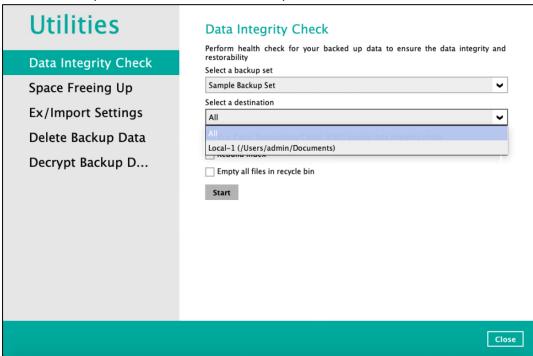
1. Go to the **Data Integrity Check** tab in the Utilities menu.



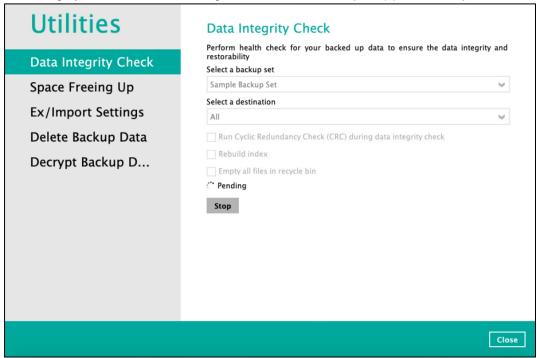
2. Click the drop-down button to select a backup set.



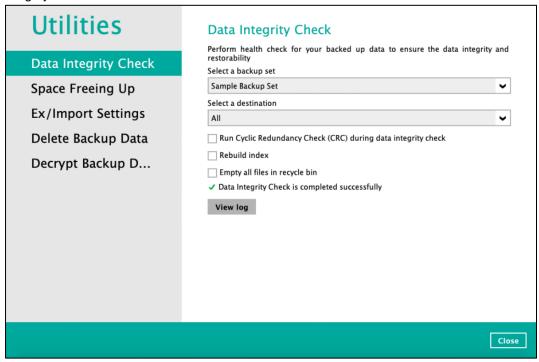
3. Click the drop-down button to select a backup destination.



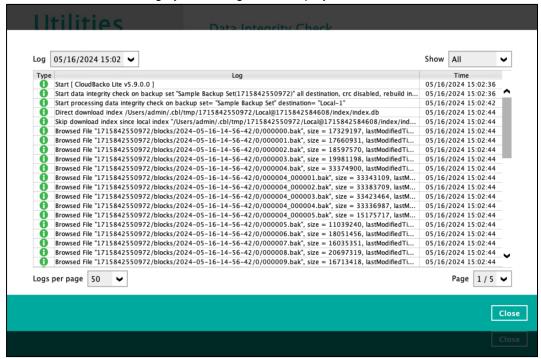
- 4. Click the Start button to begin the Data Integrity Check.
- 5. Data Integrity Check will start running on the selected backup set(s) and backup destination(s).



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

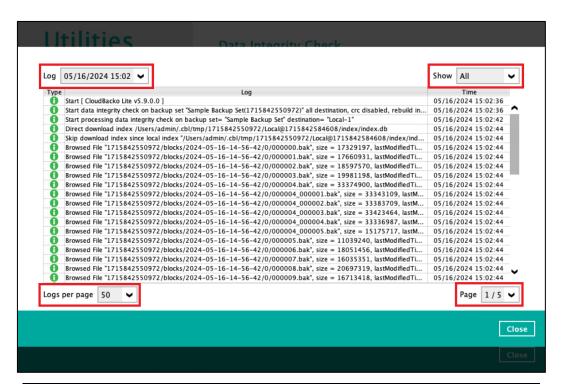


7. The detailed Data Integrity Check log will be displayed.



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

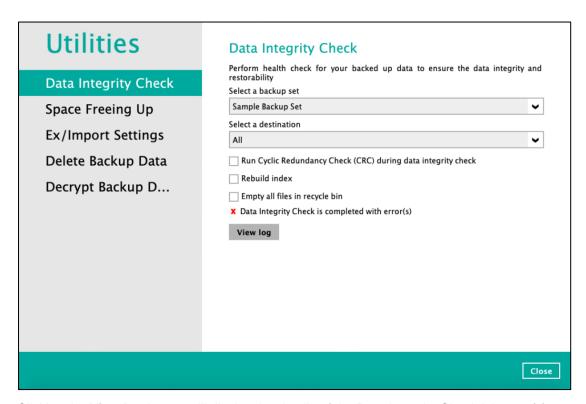
- Log filter
- Show filter
- · Logs per page
- Page



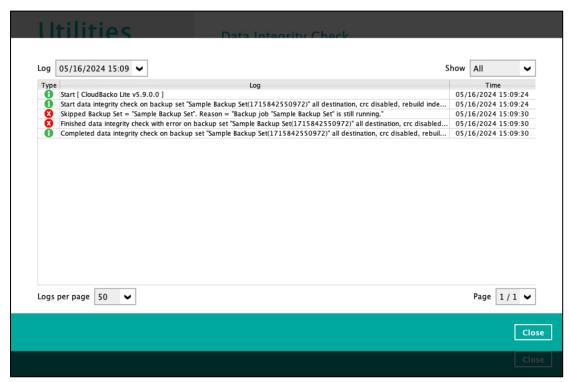
Control	Screenshot	Description
Log filter	Log 05/16/2024 15:07 ▼ Type 05/16/2024 15:02 05/16/2024 15:07	This option can be used to display logs of the previous data integrity check jobs.
Show filter	Show All All 14/1 14/1 14/1 14/1 14/1 14/1 14/1 Error	This option can be used to sort the data integrity 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 1/3 V 1/3 2/3 3/3	This option allows user to navigate the logs to the next page(s).

7.8.1.1 Data Integrity Check Completed 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).



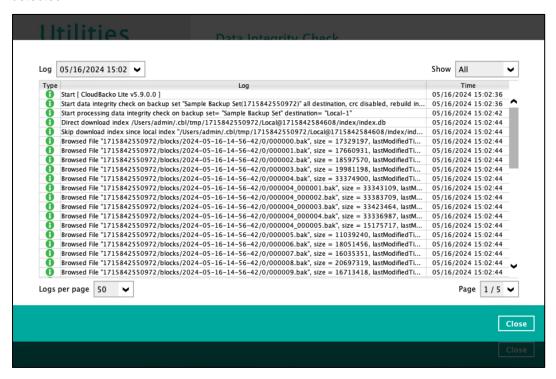


7.8.1.2 Data Integrity Check Result

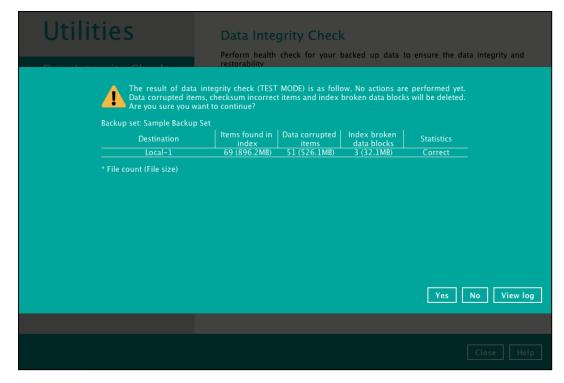
There are two possible outcomes after the completion of a data integrity check:

- 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)



7.8.1.3 Test Mode Confirmation

The (TEST MODE) confirmation will ONLY prompt if either of the **criteria's** 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

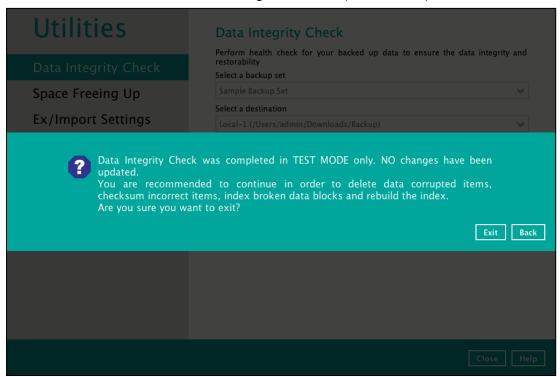
Otherwise, the Data Integrity Check job will automatically take corrective actions.

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	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.

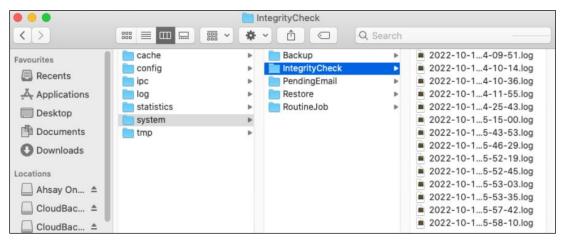


NOTES

- 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 Lite, they can be viewed on the file system of the CloudBacko Lite machine. For CloudBacko Lite Mac, the DIC logs are located in:

%UserProfile%/.cbl/system/IntegrityCheck



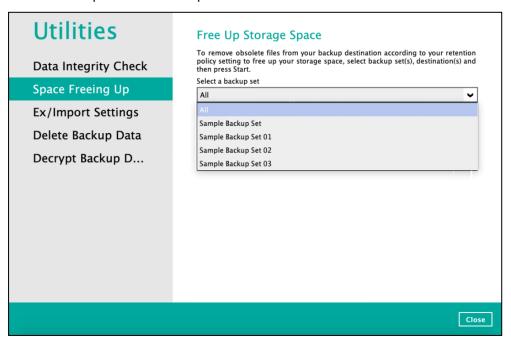


7.8.2 Space Freeing Up

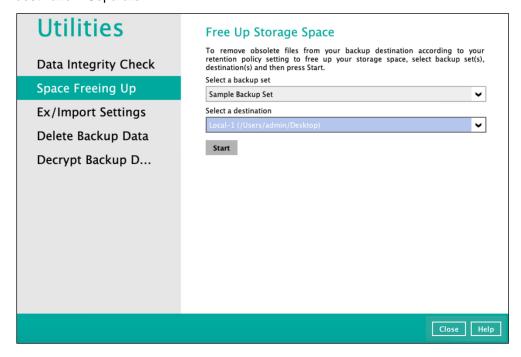
This feature is used to remove obsolete file(s) from your selected backup set and destination (manually start Retention Policy). After the Space Freeing Up job is completed, the storage statistics of the backup set(s) are updated.

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

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

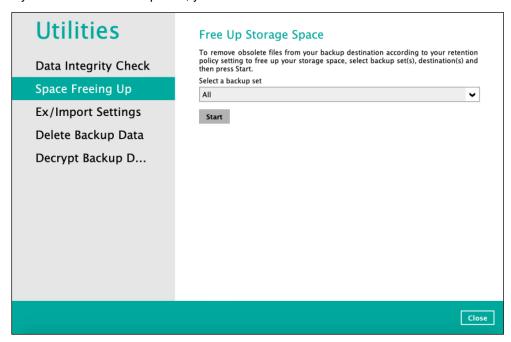


If you select a specific backup set, you will also have to choose a specific or **ALL** destination. Separate

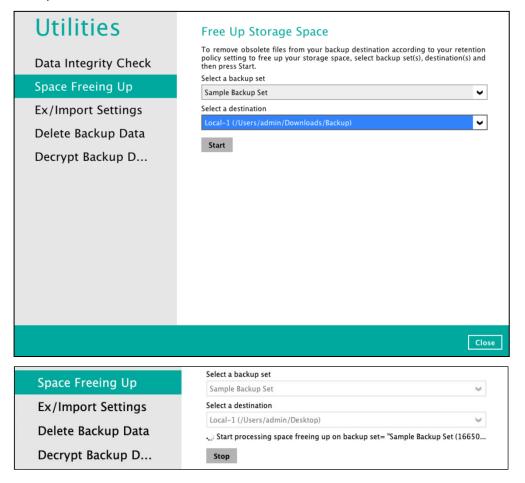




If you select ALL backup sets, you will not have to choose a destination.

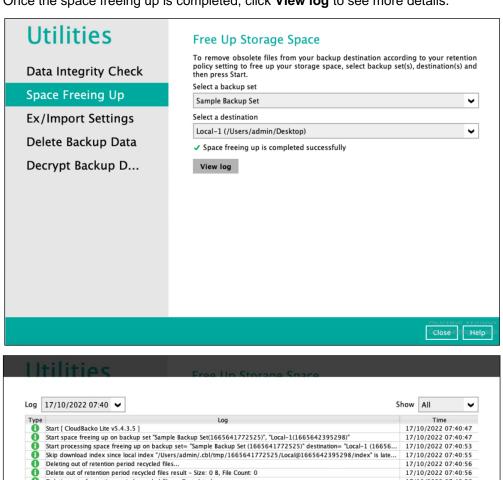


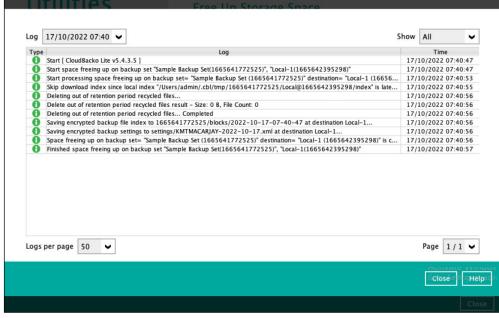
2. Once a backup set and destination have been selected, click **start** to perform space free up.





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







7.8.3 Ex/Import Settings

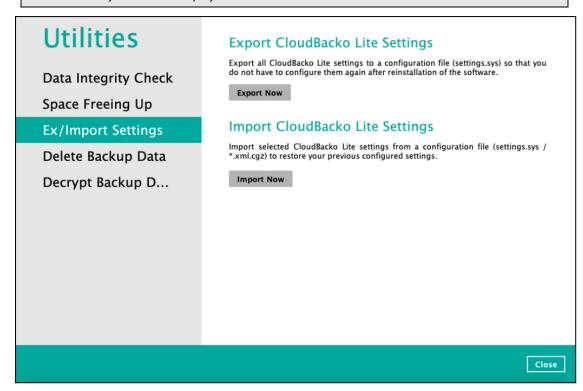
This feature is used to export and import CloudBacko Lite Settings to the **settings.sys** file, this includes information on:

- 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 Lite, new backup sets added, or updates to existing backup sets.

WARNING!

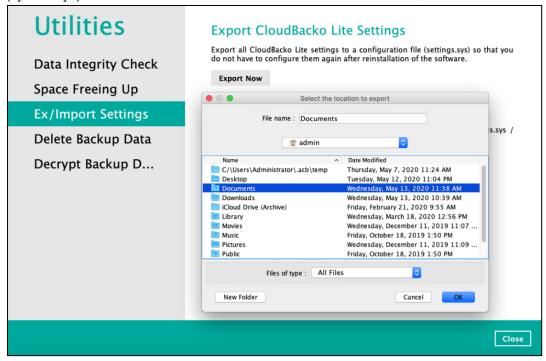
A separate copy of the settings.sys file should be saved in another location for safe keeping. Otherwise, If the machine where the CloudBacko Lite is installed on suffers a disk or hardware failure or is stolen and a copy of the settings.sys file is not available, it will not be possible to access and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



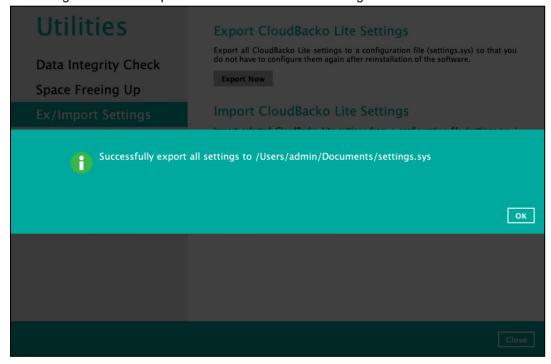


Export CloudBacko Lite Settings

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



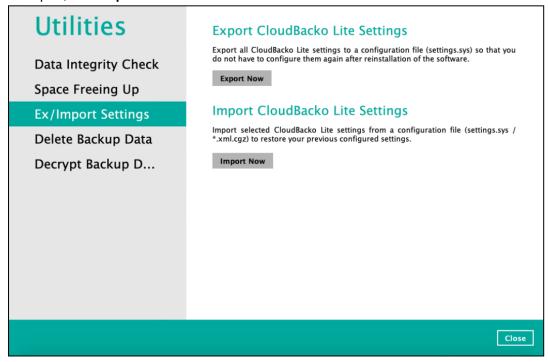
If the system.sys file is successfully exported to the preferred path, it will display a message containing the status and path of the CloudBacko Lite configuration file.



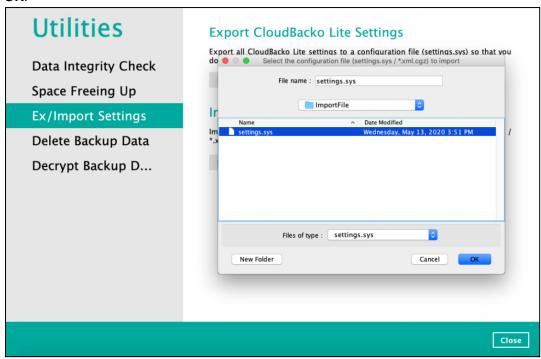


Import CloudBacko Lite Settings

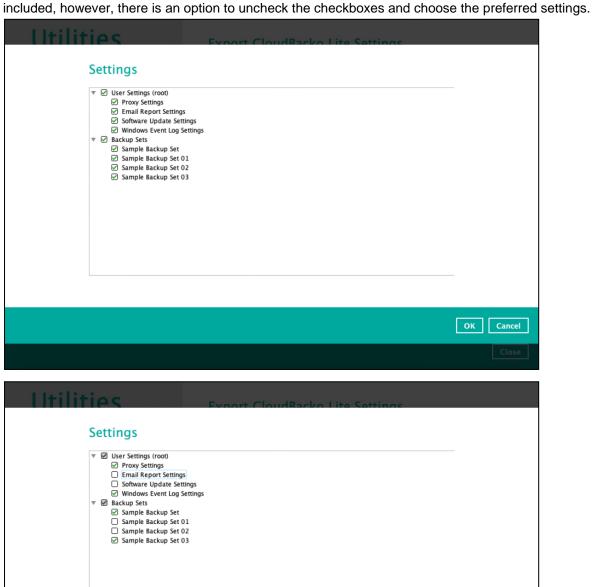
To import, click Import Now.



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

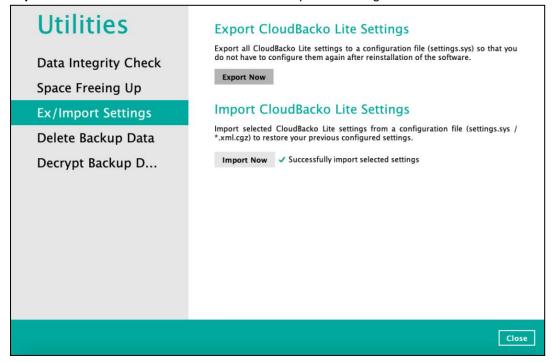


It will show the following Settings: User Settings and Backup Sets. By default, all settings are included, however, there is an option to uncheck the checkboxes and choose the preferred settings.



OK Cancel

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.



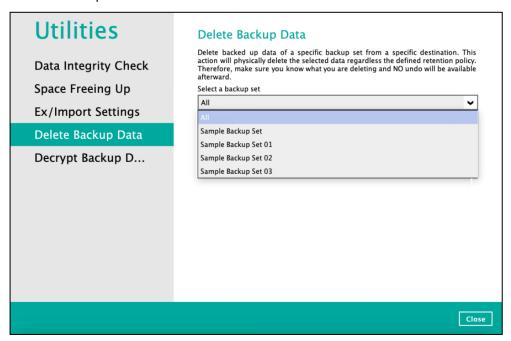


7.8.4 Delete Backup Data

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:

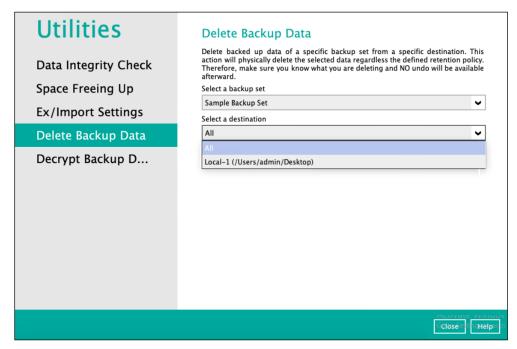
1. Select a backup set to delete from.



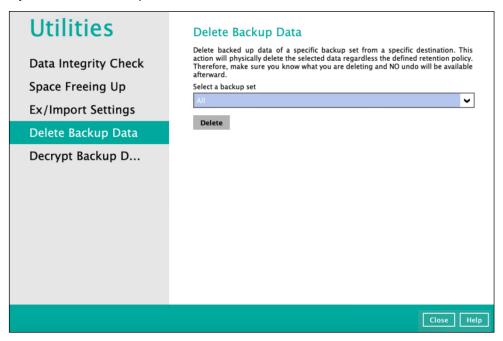
NOTE

This will only delete the backed up files in a backup set(s) and destination(s), but the backup set and destination will remain.

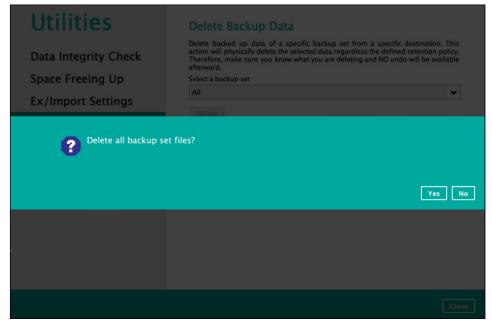
If you select a specific backup set, you will also have to choose a specific or **ALL** destination.



If you select All backup sets, then there is no need to select a destination.

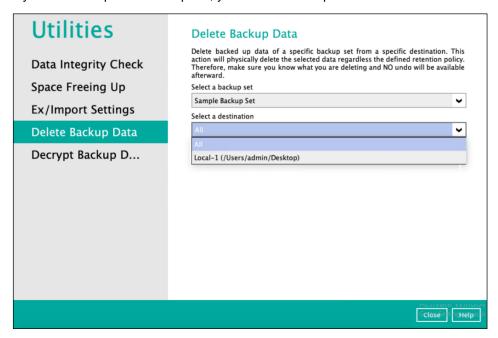


 If you choose to delete All backup set(s), the following message will be displayed. By clicking Yes, all backed up files from the selected backup set(s) and destination(s) will be deleted.





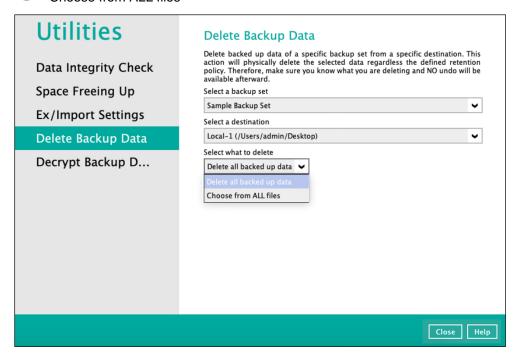
If you select a specific backup set, you will have an option to choose a destination.



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:

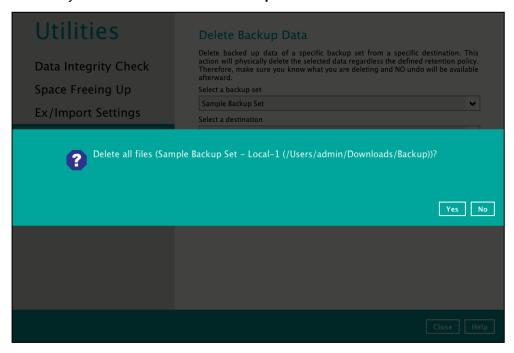
- Delete all backed-up data
- Choose from ALL files





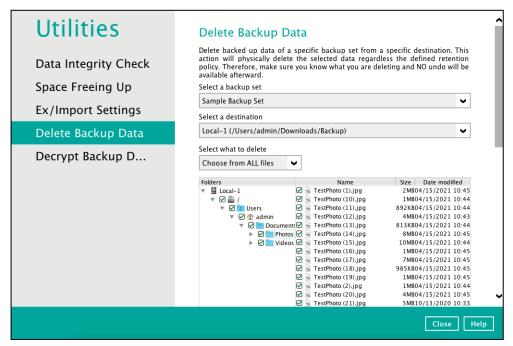
Delete all backed up data

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.



Choose from ALL files

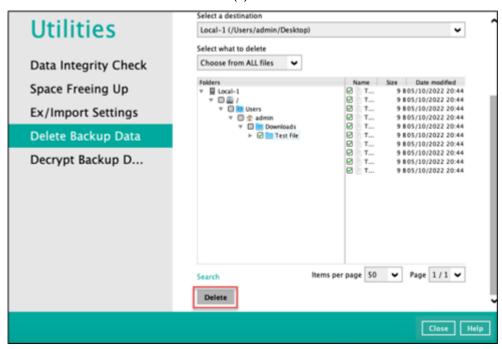
If you select "Choose from ALL files", you can select any file(s) in the backup set.

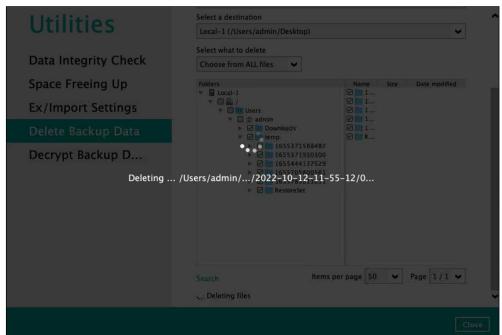


You also have the option to click the Search link to do an advance search.

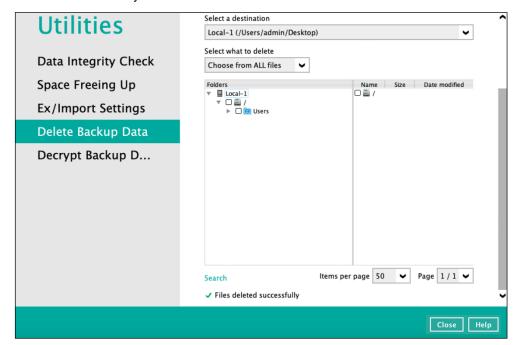


3. Click **Delete** to start the deletion of file(s).





4. Files are successfully deleted.



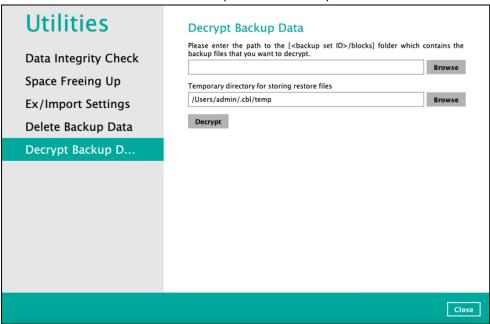


7.8.5 Decrypt Backup Data

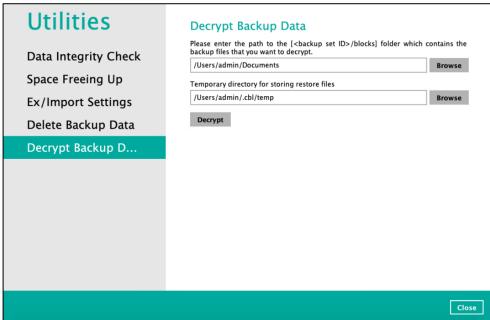
This feature is used to restore raw data by using the **data encryption key** that was set for the backup set.

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

1. Click the **Browse** button to locate the path of the backup set ID / blocks folder.



2. Click the **Browse** button to re-select the temporary folder for the decrypt process. Then click the **Decrypt** button to begin.



7.9 Buy

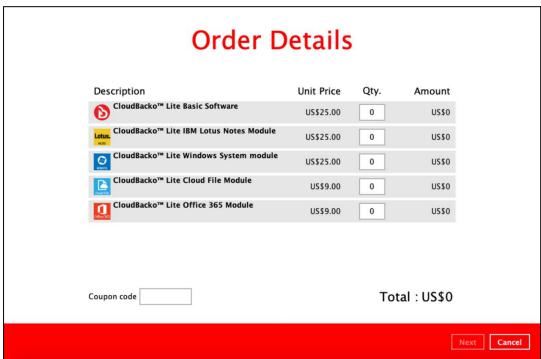
This feature allows customer to buy additional software license and or modules.

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 article for the license purchase instructions: https://wiki.cloudbacko.com/doku.php?id=public:license:how-to-buy-cloudbacko-pro-lite

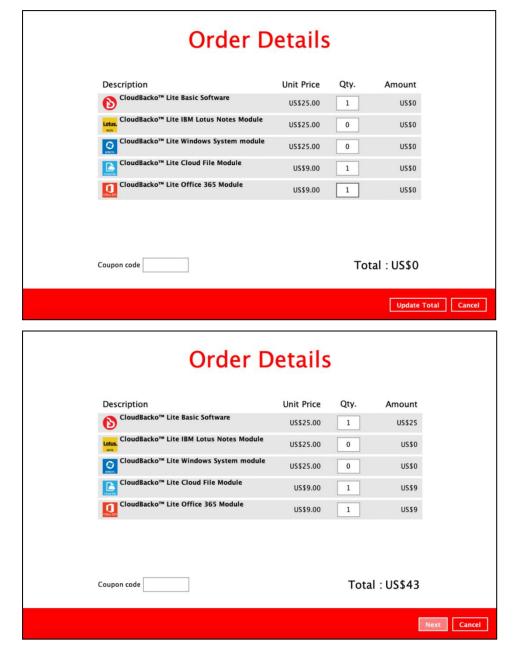






To purchase additional software license and/or modules, follow the instructions below:

 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. Click Next to proceed.
 If Coupon code is available, input it in the "Coupon code" field.



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





7.9.1 Credit Card

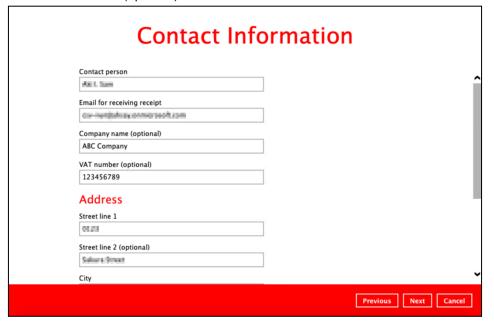
Payment through online via a Credit Card (Visa or Mastercard is accepted) is the quickest way to purchase a software license or additional add-on modules. The only requirements are a valid Credit Card and Contact Information. Once the payment is confirmed, purchased software license or add-on modules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

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

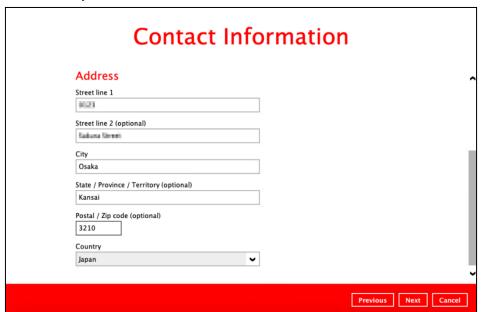




- 2. Complete the following fields for the Contact Information then click the **Next** button to proceed.
 - Contact person
 - Email for receiving receipt
 - Company name (optional)
 - VAT number (optional)



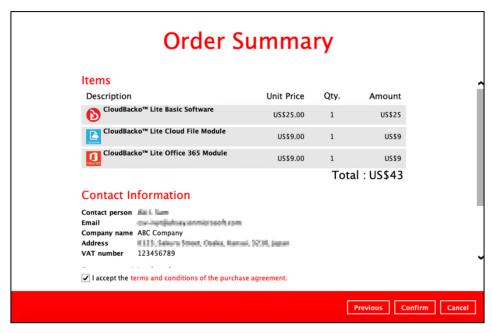
- Street line 1
- Street line 2 (optional)
- City
- State / Province / Territory (optional)
- Postal / Zip code (optional)
- Country





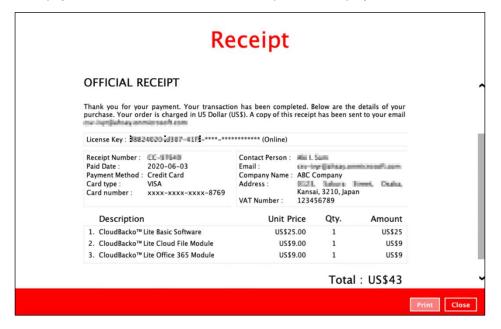
3. In the Order Summary screen, order Items, Contact Information, and Payment Method are displayed.

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



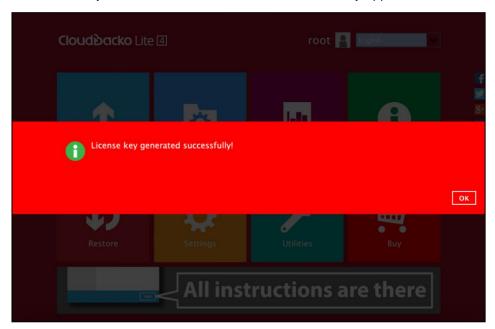
4. The payment will be processed.

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

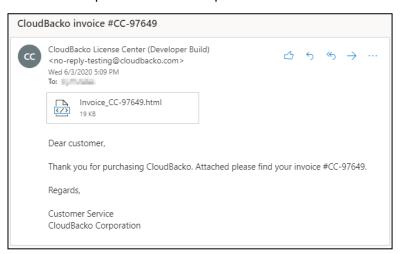


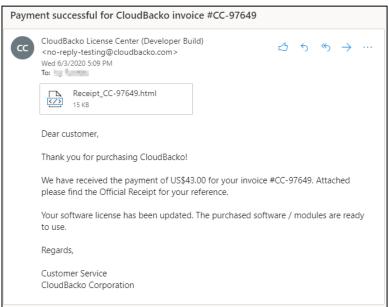


The license key on the CloudBacko Lite is now successfully applied.



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



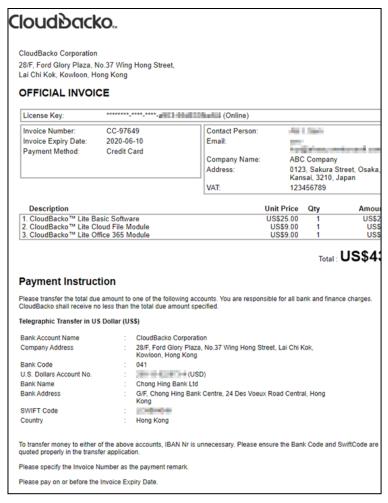


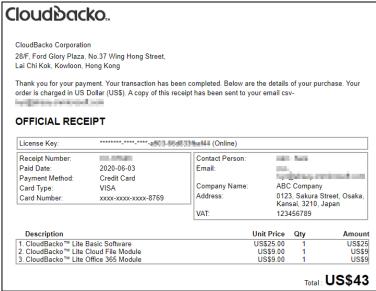


Please keep the copy of your invoice as it contains half of your license key. The other half of the license key can be found on CloudBacko Lite. Both parts of the license key is required if you need to reinstall CloudBacko Lite or apply the license to another installation.

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

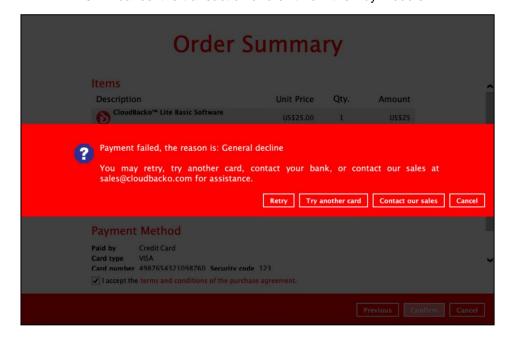
This will redirect you to the Credit Card Information and input another Credit Card details.

Contact our sales

This will redirect you to the CloudBacko website.

Cancel

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





7.9.2 TT (Telegraphic Transfer)

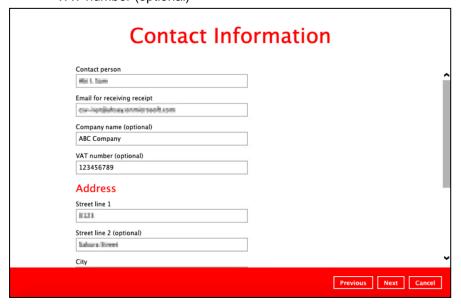
TT (Telegraphic Transfer) is an electronic mode of transferring funds from bank to bank. Processing time can take up to two weeks to settle, depending on the origin, destination, and individual bank.

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

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

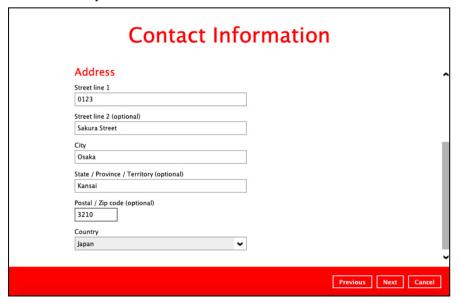


- 2. Complete the following fields for the Contact Information then click the **[Next]** button to proceed.
 - Contact person
 - Email for receiving receipt
 - Company name (optional)
 - VAT number (optional)



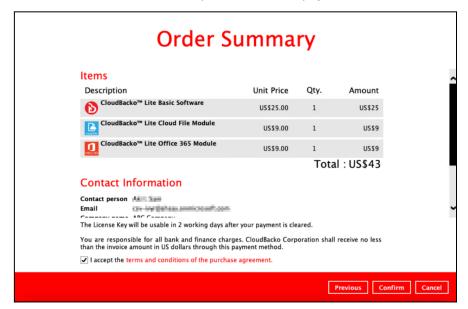


- Street line 1
- Street line 2 (optional)
- City
- State / Province / Territory (optional)
- Postal / Zip code (optional)
- Country

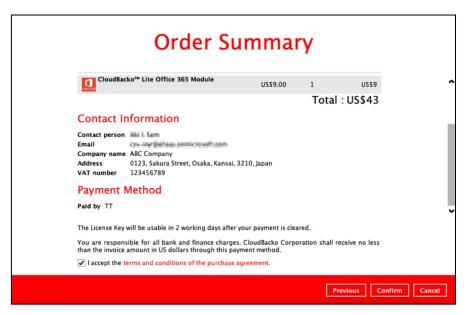


 In the Order Summary screen, order Items, Contact Information, and Payment Method are displayed.

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





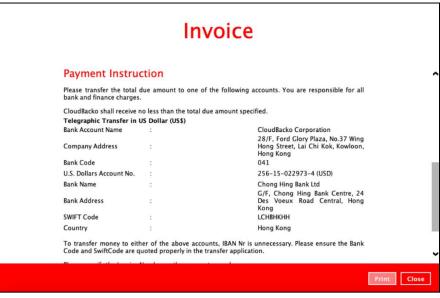


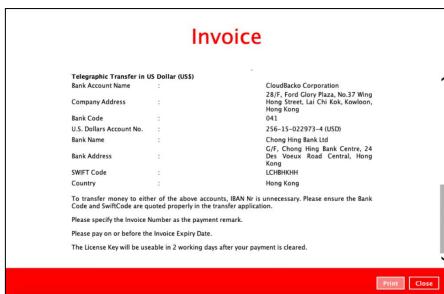
4. The invoice for the license purchase will be generated.

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

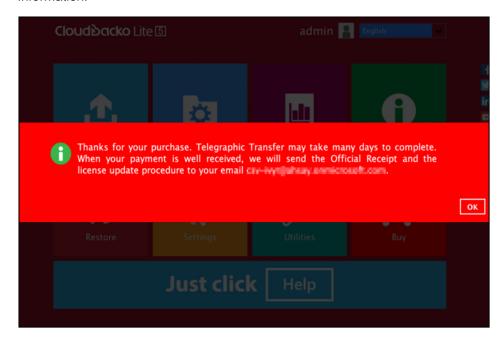




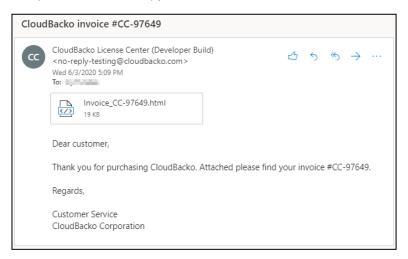


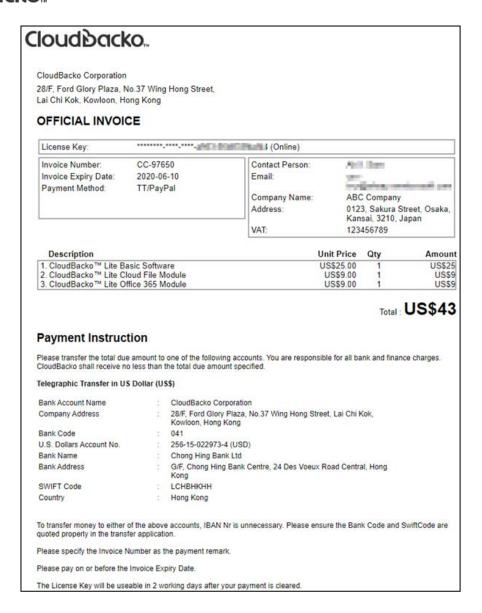


This prompt message will appear to inform customer that if the payment through telegraphic transfer is successful, the official receipt, software license, and license update procedure will be sent to the email address indicated in the Contact Information.



Sample email for the copy of Invoice.





7.10 Social Media Icons

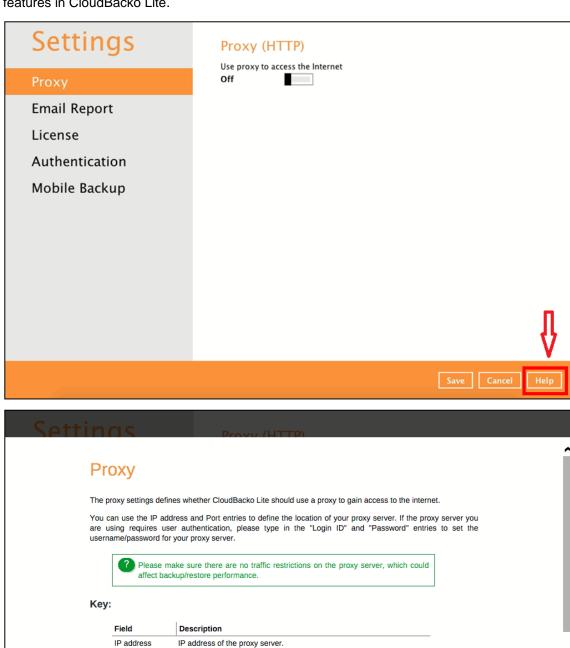
These are the social media accounts of CloudBacko. Each icon links to the CloudBacko page or channel.



- Facebook https://www.facebook.com/cloud.backo
- X / Twitter https://twitter.com/CloudBacko
- LinkedIn https://www.linkedin.com/company/cloudbacko-corporation
- YouTube https://www.youtube.com/user/CloudBacko

7.11 Online Help

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



Port

Login ID Password Listening port of the proxy server.

Login ID of the proxy server.

Password Password of the proxy server.

Test connection Test the connection to the proxy server.

Print Close

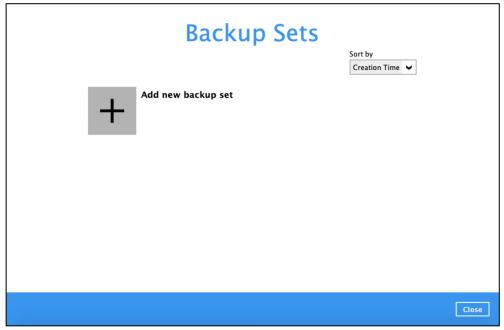


8 Create a Backup Set

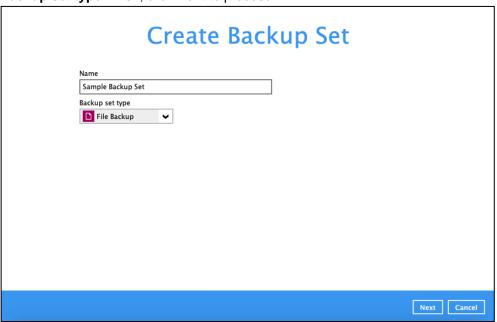
1. Click the Backup Sets icon on the main interface of CloudBacko Lite.



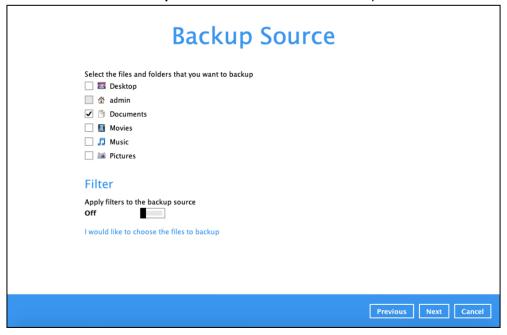
2. Create a new backup set by clicking + next to **Add new backup set**.



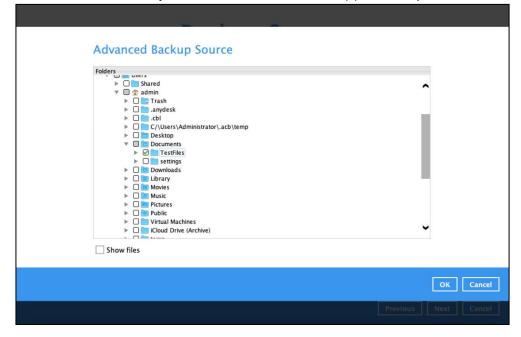
3. When the Create Backup Set window appears, name your new backup set, and select the **Backup set type**. Then, click **Next** to proceed.



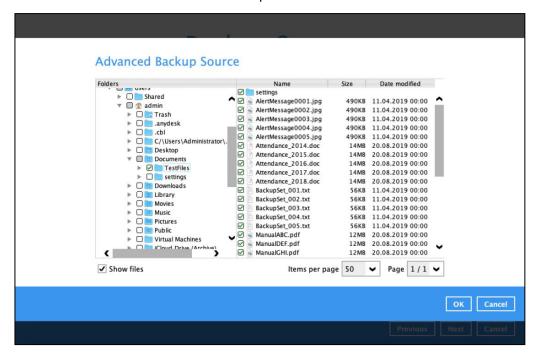
4. In the Backup Source window, select the source files and folders for backup. Click **I would like to choose the files to backup** to select individual files for backup.



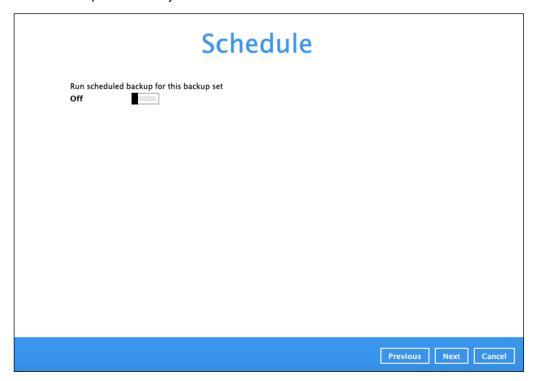
1. In the Advanced Backup Source window, select folder(s) to back up all files in the folder(s).



 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 righthand 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.

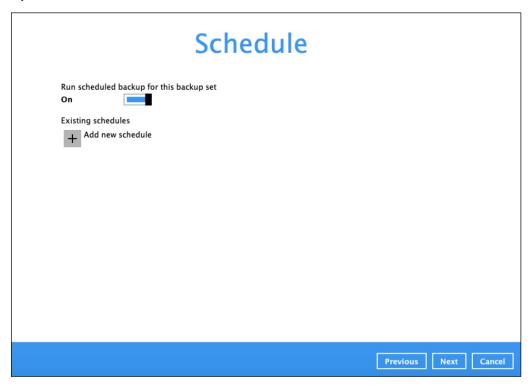


- 3. In the Backup Source window, click Next to proceed.
- 4. When the **Schedule** window appears, you can configure a backup schedule to automatically run a backup job at your specified time interval. In the Schedule window, the Run scheduled backup for this backup set is **Off** by default.

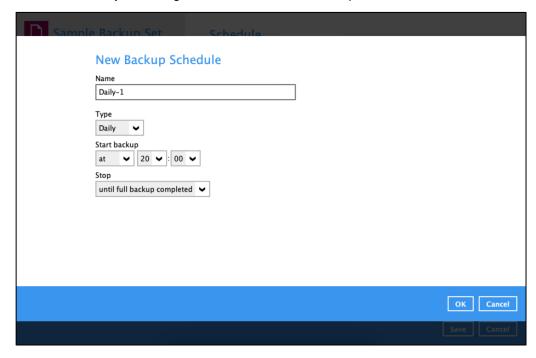




If you want to add another schedule, click the Add button.

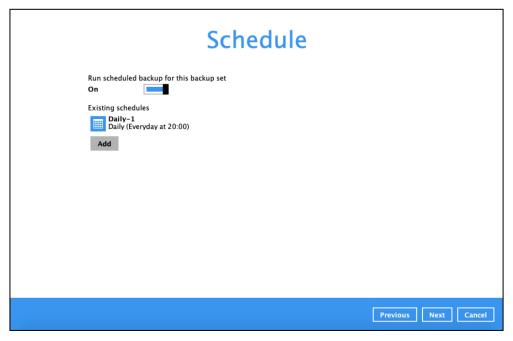


• When the New Backup Schedule window appears, specify your backup schedule. Then, click **OK** to save your changes and close the New Backup Schedule window.

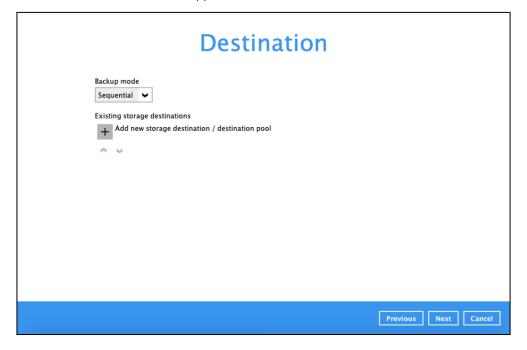




5. In case you have added a schedule, it will be shown in the Schedule window. Click **Next** to proceed when you are done setting.



6. The **Destination** window will appear.

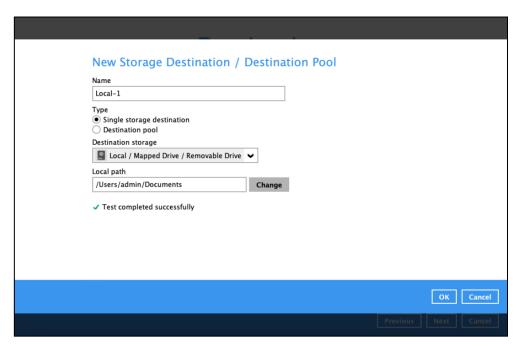


Select the appropriate option from the **Backup mode** dropdown menu.

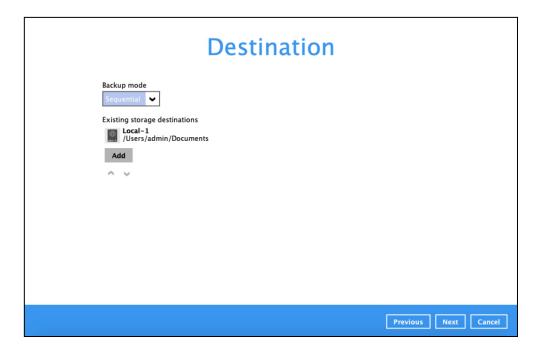
- Sequential (default) run backup jobs to each backup destination one by one
- O Concurrent run backup jobs to all backup destinations at the same time

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

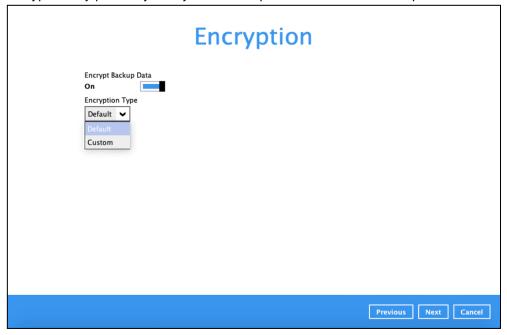
 In the New Storage Destination / Destination Pool window, select the destination type and destination storage. Then, click OK to confirm your selection.



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



9. 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.

10. 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.



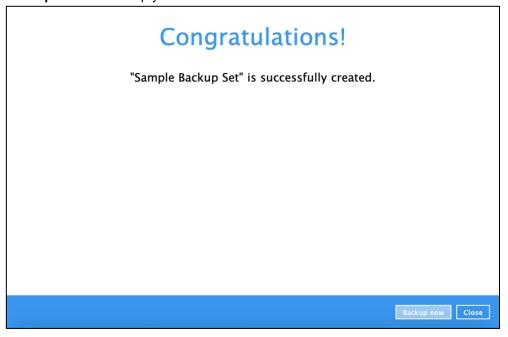
The pop-up window has the following three options to choose from:

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



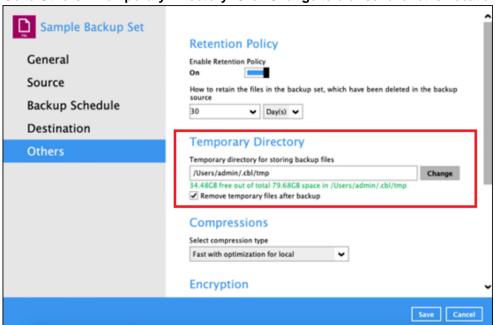
- > Copy to clipboard Click to copy the encryption key, then you can paste it in another location of your choice.
- > Confirm Click to exit this pop-up window and proceed to the next step.

11. 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.

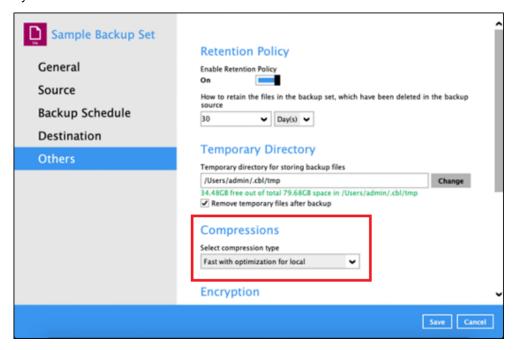


12. It is highly recommended to change the <u>Temporary Directory</u>. Select another location with sufficient free disk space other than **/Users/admin/.cbl/tmp**.

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

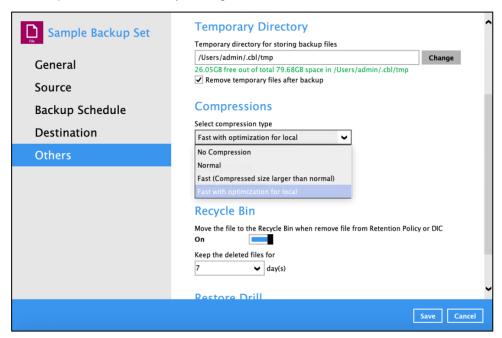


13. Optional: Select your preferred **Compression** type. "Fast with optimization for local" is selected by default.



Go to **Others** > **Compressions**. Select from the following list:

- 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.



9 Overview on Backup Process

The following steps are performed during a backup job. For an overview of the detailed process for Steps **2**, **3**, **9**, and **11**, refer to the following chapters:

- Periodic Data Integrity Check (PDIC) Process (Step 2)
- Backup Set Index Handling Process
 - Start Backup Job (Step 3)
 - Ompleted Backup Job (Step 11)
- Data Validation Check Process (Step 9)

Start backup job

A checksum verification of each backup file which was split into several blocks of varying Connection from the backup client to the size is performed where its contents are Data destination(s) is established. Establishing connection compared, and the duplicated data are removed deduplication (if enabled). 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 64MB then destination(s), then the statistics of both Data **Uploading** uploaded to the backup destination(s). Area and Retention Area will be recalculated. 8 The number of 32 or 64MB data blocks and the Latest index.db file and checksum files are individual block size in the backup destination(s) downloaded from the backup destination(s) to Data is identical to the blocks transferred. Downloading validation the temporary folder. Retention Policy job is running (if enabled). Create VSS snapshot of local disk(s) (if enabled). Taking VSS Snapshot 10 Latest index files on the client computer are Local file list is compiled according to the backup saved to the backup destination(s) and client log source setting. Compiling files are saved to the backup server. Saving files 5 11 Temporary data is removed from the temporary Local and remote file lists are compared to storage location specified in the backup set identify new, updated, moved, or deleted files Removing (if enabled). and/or folders since the last backup job. temporary files 6 12

Backup job completed

9.1 Periodic Data Integrity Check (PDIC) Process

For CloudBacko Lite v4.5.0.0 (or above), 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:

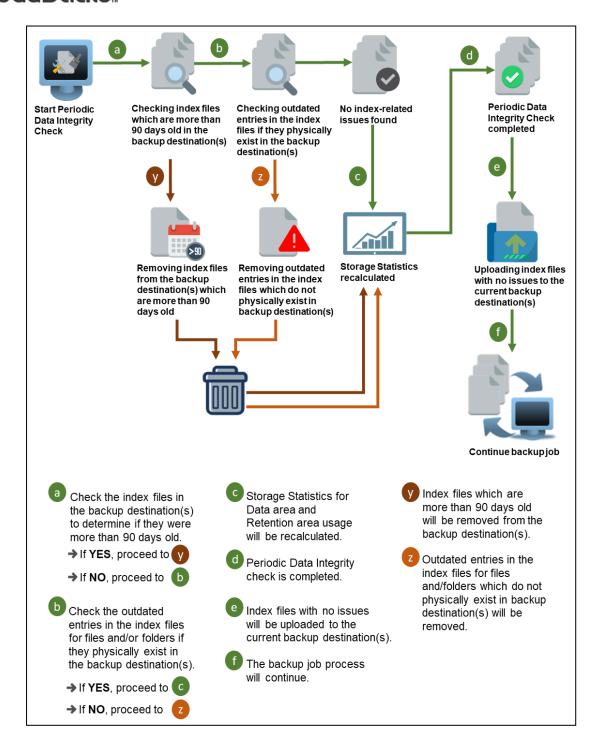
- the PDIC will run on the first backup job that falls on Wednesday; or
- if there is no active backup job(s) running from Monday to Friday, then the PDIC will run on the next available backup job.

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:

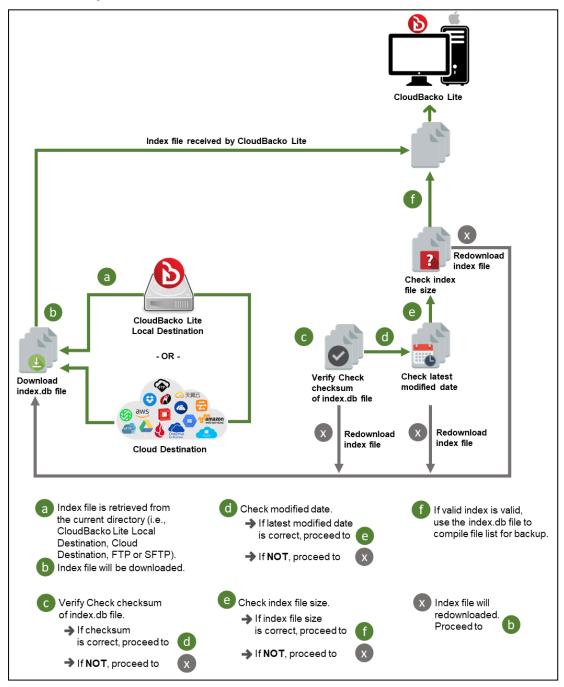
- 1. If backup jobs for a backup set are not run on a regular daily backup schedule (for example: on a weekly or monthly schedule), then the PDIC job will run if it detects that the previous PDIC job was run more than 7 days ago.
- 2. Every time a data integrity check (DIC) is run, the latest PDIC run date is reset, the next PDIC job will run after 7 days.
- 3. 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.



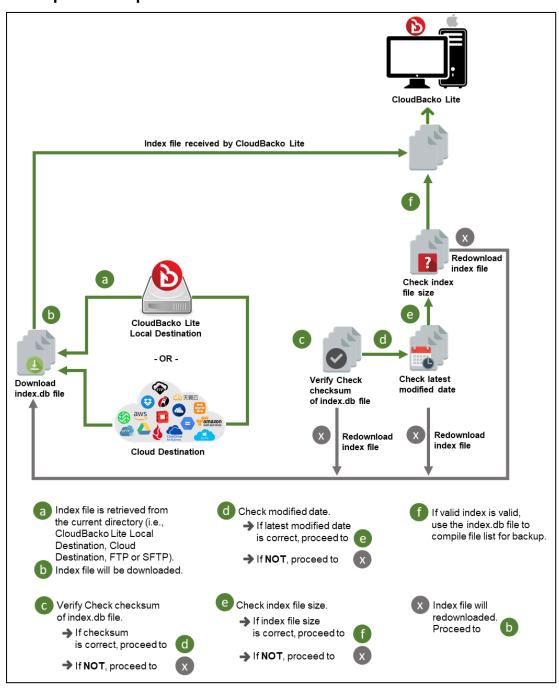
9.2 Backup Set Index Handling Process

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.

9.2.1 Start Backup Job

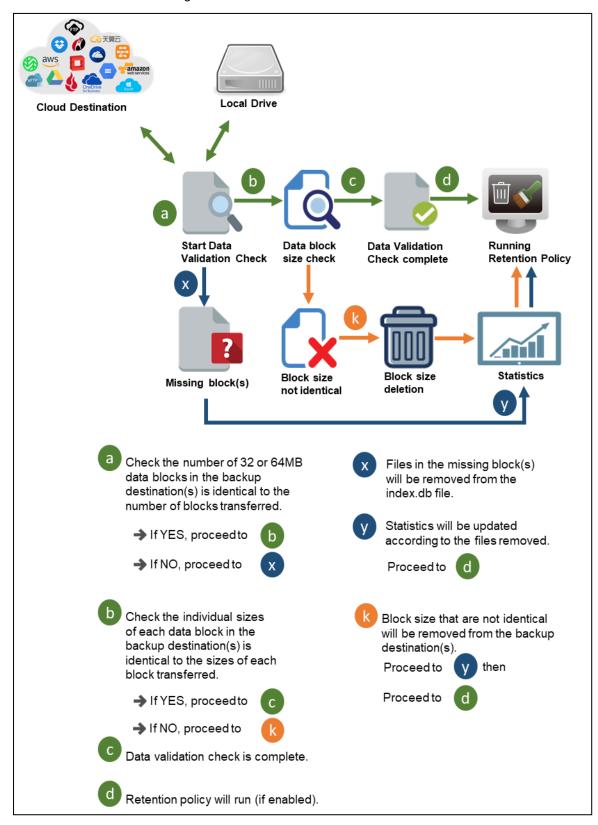


9.2.2 Backup Job Completed



9.3 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.





10 Run Backup Jobs

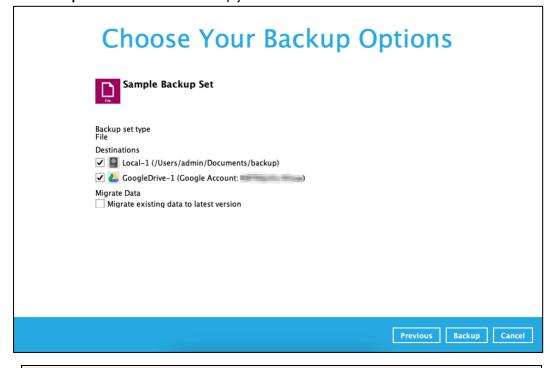
1. Click **Backup** on the main interface of CloudBacko Lite.



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



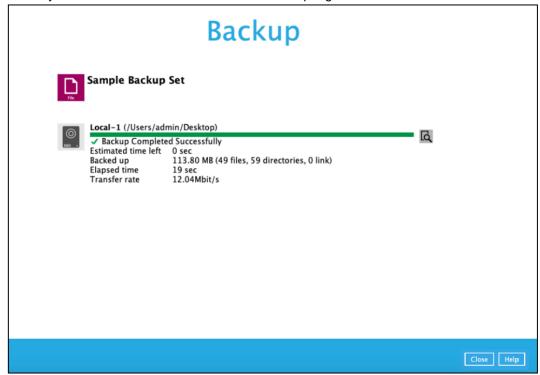
3. You can modify the Destinations and Migrate Data options. Once done with the settings, click the **Backup** button to start the backup job.



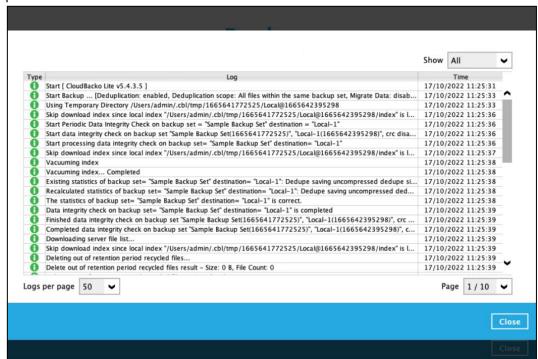
NOTE

Backup job(s) for backup sets with Migrate Data enabled may take longer to finish.

4. The following screen will be displayed to indicate that the backup job is successfully completed. You may click the button to check for the backup log.



4. Once you are done with checking the backup log, click the **Close** button to return to the previous screen.





11 Restore Data

11.1 Restore Data

- 1. Log in to the CloudBacko Lite application according to the instructions in section Chapter 6 Start CloudBacko Lite.
- 2. Click the **Restore** icon on the main interface of CloudBacko Lite.

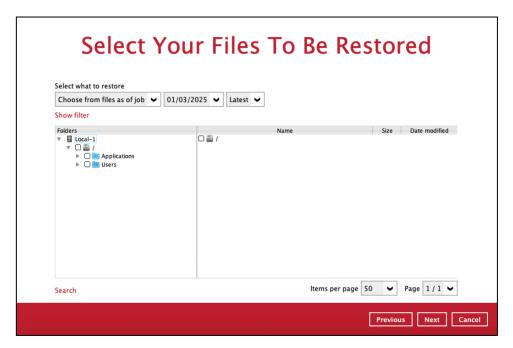


3. In the next page, you will have several options to select. On this page, you may select the **Backup Set** to restore, as well as the **Destination** to which the data will be restored to.

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

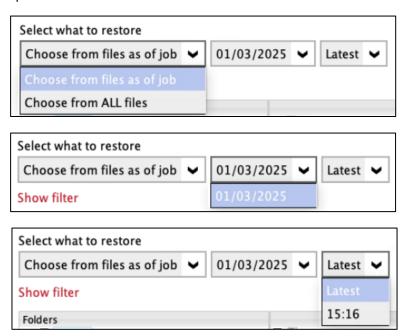


4. Select to restore files from a specific backup job, or from all files available. Then, select the files or folders that you would like to restore.



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.

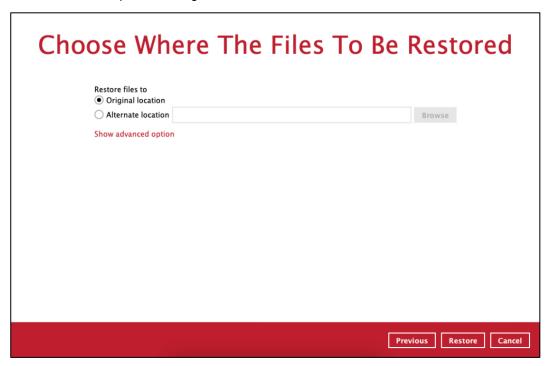


Choose from ALL files – This option allows you to restore all the available backup versions for this backup set. Among all the available backup versions, you can even select only some of the backup versions of a file to restore. Click the Show files checkbox to select individual files for restoration.

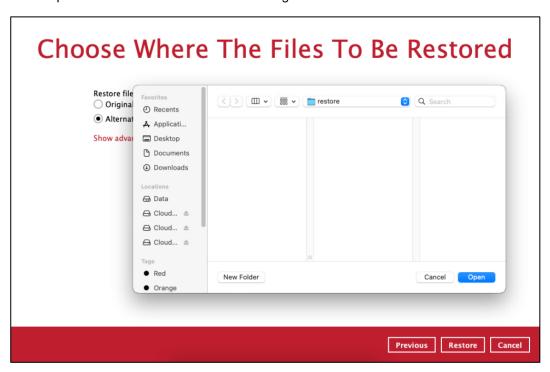
Click **Next** to proceed when you are done with the selections.

- 5. 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 Lite 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 Lite.



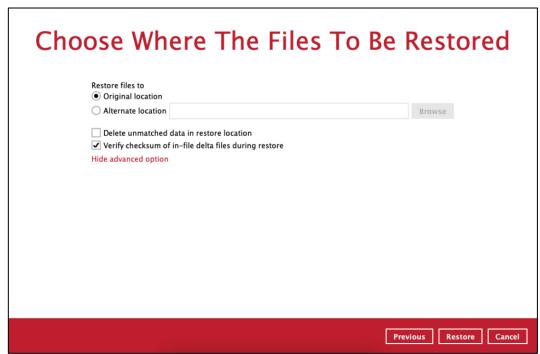
 Alternate location – you can choose to restore the data to a location of your choice on the computer where CloudBacko Lite is running.





6. Click **Show advanced option** to configure other restore settings:







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.

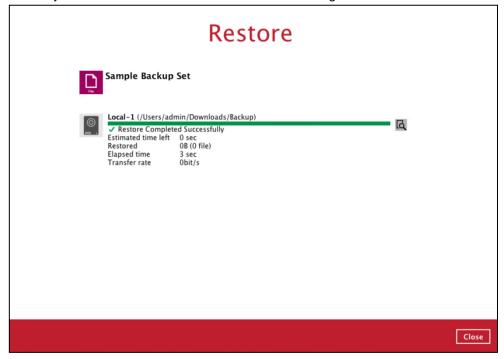
WARNING

Please exercise extra caution when enabling this feature. Consider what data in the restore source has not been backed up and what impact it would cause if those data were deleted. Prior to the data restore and synchronization, a warning message shows as the one shown below. Only clicking **Yes** will the "unmatched data" be deleted. You can click **Apply to all** to confirm deleting all the "unmatched data" at a time.

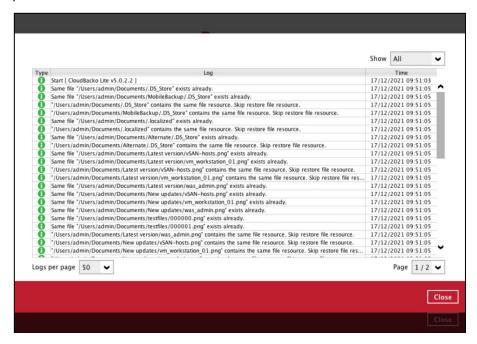
Verify checksum of in-file delta files during restore

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.

- 7. Click **Restore** to start the restore process when you are done with the settings.
- 8. The following screen will be displayed to indicate that the restore job is successfully completed. You may click the button to check for the restore log.



9. Once you are done with checking the backup log, click the **Close** button to return to the previous screen.



10. In the Restore window, click Close to close the Restore window.

11.2 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

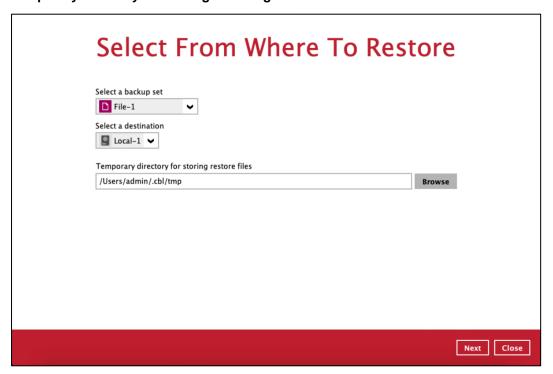
These are Directories, Files, and Folders with the name **ending** with a specific letter or word.

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 Lite, refer to <u>Appendix B: Example Scenarios for Restore Filter</u>.

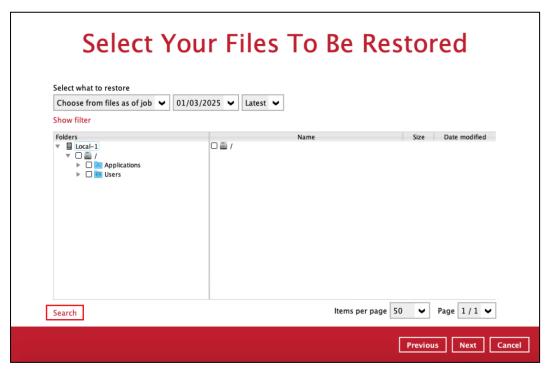
- 1. Log in to the CloudBacko Lite application according to the instructions in section Chapter 6 Start CloudBacko Lite.
- 2. Click the **Restore** icon on the main interface of CloudBacko Lite.
- 3. In the next page, you will have several options to select. On this page, you may select the **Backup Set** to restore, as well as the **Destination** to which the data will be restored to.

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

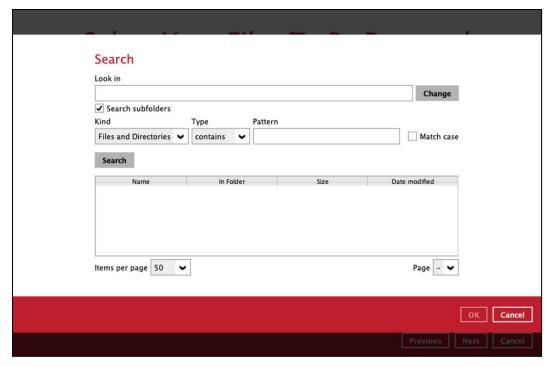


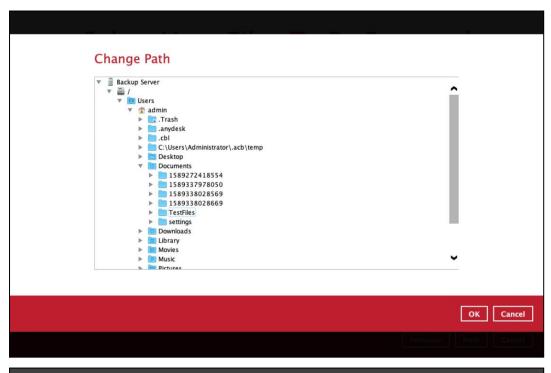


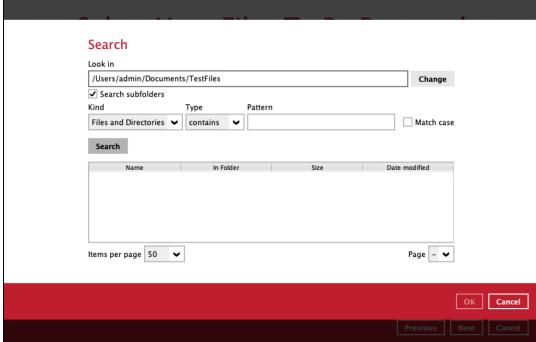
4. Click the **Search** link located on the lower left side of the screen.



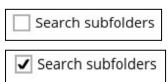
5. Click the **Change** button to change the path of the restore items from other location.







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.

Pattern	
	☐ Match case
Pattern	
Sheet	✓ Match case

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 **OK** to proceed and you will return to the restore main screen.



12 Mobile Backup and Restore to Cloud

To perform mobile backup and restore to Cloud, follow the steps below:

- Back up photos, videos, documents and 2FA accounts from CloudBacko app to CloudBacko Lite local destination. For more detailed information, refer to <u>CloudBacko App User Guide for Android and iOS</u>.
- 2. Create a File backup set according to the instructions in Chapter 8 Create a Backup Set with the following setup:
 - The backup source should be the photos, videos, documents and/or 2FA account(s) backed up in the CloudBacko Lite local destination.
 - Example: /Users/admin/Documents/Backup/%mobile_device%
 - The backup destination should be a Cloud destination (e.g., Google Drive, OneDrive, Wasabi, etc.).
- 3. Run a backup job according to the instructions in Chapter 10 Run Backup Jobs.
- 4. Restore data according to the instructions in Chapter 11.1 Restore Data. This can be from Original or Alternate Location.

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 Lite 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.

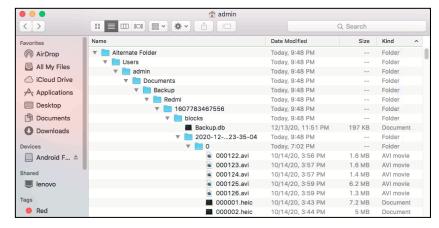
NOTE: Restore to alternate location is not supported on another CloudBacko Lite machine. Options 1 and 2 must be on the original machine where the backups were performed.

In case the original machine is no longer available, CloudBacko Lite 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 device was not originally paired with the new installation or machine, the mobile device will not be able to restore the photos, videos, documents and 2FA accounts from the CloudBacko Lite.

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.

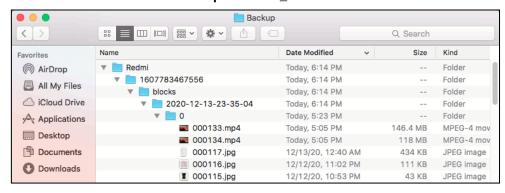


Example of the Alternate location: /Users/admin/Alternate Folder



Example of the Original location:

/Users/admin/Documents/Backup/%mobile_device%



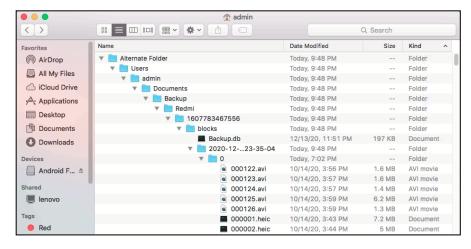
You can now use the CloudBacko app to restore the photos, videos, documents and 2FA accounts back to your mobile device.

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

Instructions:

 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: /Users/admin/Alternate Folder





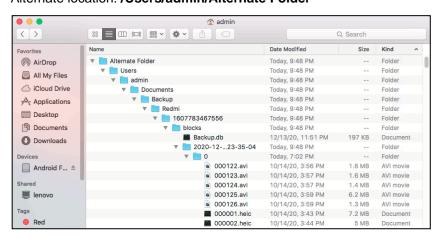
Mobile device internal storage and SD Card





 For an iOS device, you need to transfer the restored data from the alternate location to iCloud.

Alternate location: /Users/admin/Alternate Folder



Upload to iCloud using the iCloud app





13 Contact CloudBacko

Technical Assistance

To contact CloudBacko support representatives for technical assistance, visit the Ticket Support:

https://www.cloudbacko.com/support

Also use the CloudBacko Wiki for resource such as Hardware Compatibility List, Software Compatibility List, and other product information:

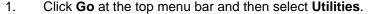
https://wiki.cloudbacko.com/

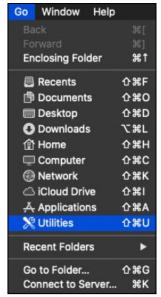
Appendix

Appendix A: Uninstall CloudBacko Lite

Before you uninstall CloudBacko Lite 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 7.8.3 Ex/Import Settings</u>.

Otherwise, if you intend to re-install CloudBacko Lite either on the same machine or a new machine, you will lose your current settings and access to any backed-up data.





2. Double-click the Terminal.app icon.



3. Use the command highlighted in red to enter the Applications folder.

```
#cd /Applications
#[user]-Mac-mini:Applications [user]$
```

4. Use the command highlighted in red to enter the CloudBacko Lite folder.

```
#[user]-Mac-mini:Applications [user]$ cd CloudBacko\
Lite.app/bin
#[user]-Mac-mini:bin [user]$
```

5. Use the command highlighted in red to execute the uninstallation. Enter the password for logging in to your Mac when prompted.

```
#[user]-Mac-mini:bin [user]$sudo sh uninstall.sh
#Password:
```

6. The following scripts show when the uninstallation is completed.

```
#Shutdown Scheduler for CloudBacko Lite

#Wait 5 seconds before Scheduler exits

#Kill Process by Image Name:/Applications/CloudBacko
Lite.app/jvm/bin/bJW

#Ignore Process by Image Name:

#Kill Process by Image Name: /Applications/ CloudBacko Lite.app
/jvm/bin/bschJW

#Ignore Process by Image Name:

#Kill Process by Image Name:

#Kill Process by Image Name: /Applications/ CloudBacko Lite.app
/jvm/bin/java

#Ignore Process by Image Name:

#Remove LaunchDaemons for com.CloudBackoLite.scheduler from
service

#Remove CloudBacko Lite from Your Mac OS X

#[user]-Mac-mini:bin [user]$
```

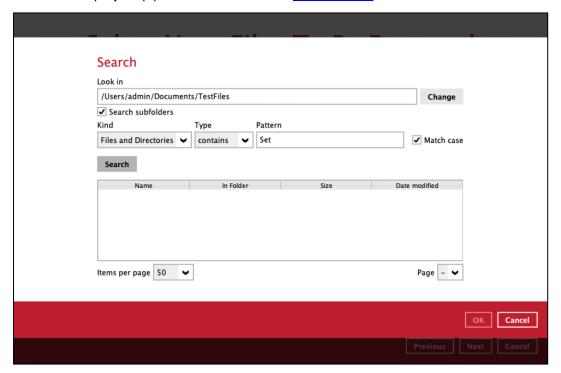


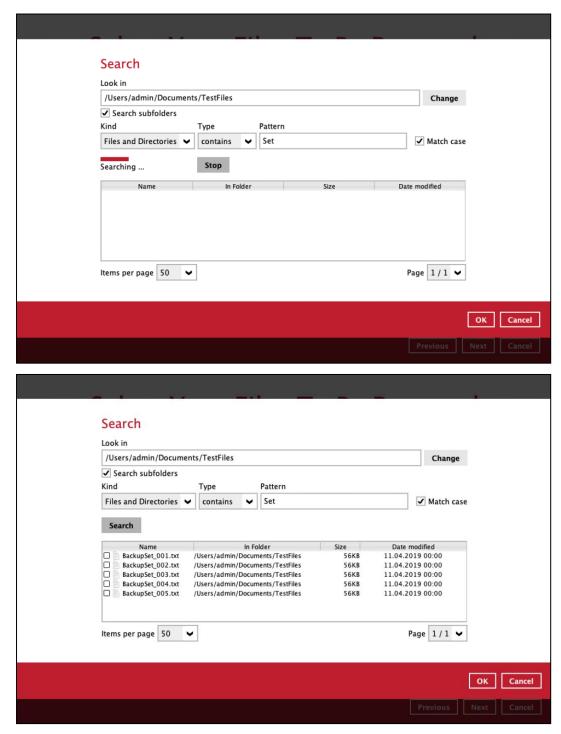
Appendix B: Example Scenarios for Restore Filter

Example No.1: Restore filter setting from /Users/admin/Documents/TestFiles with filter type Contains

Location:	/Users/admin/Documents/TestFiles
Search subfolders:	True
Kind:	Files and Directories
Туре:	Contains
Pattern:	Set
Match Case:	True

Follow the step-by-step procedure indicated on Restore Filter.





Explanation:

All files and directories under <u>/Users/admin/Documents/TestFiles</u> that has the pattern that contains with 'Set' with match case set to true will be included upon performing search.

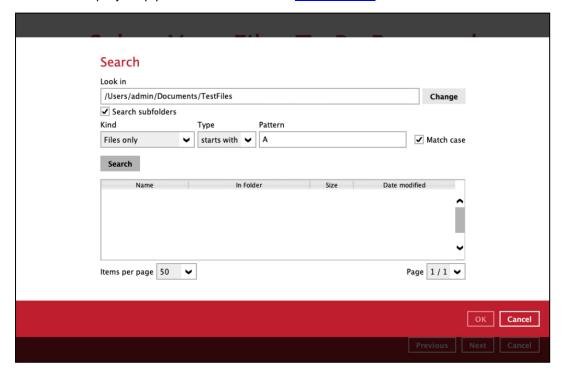
As you can see on the screen shot above, the result panel contains the Name of the file or directory, Directory which are indicated In-Folder column, Size, and Date Modified.

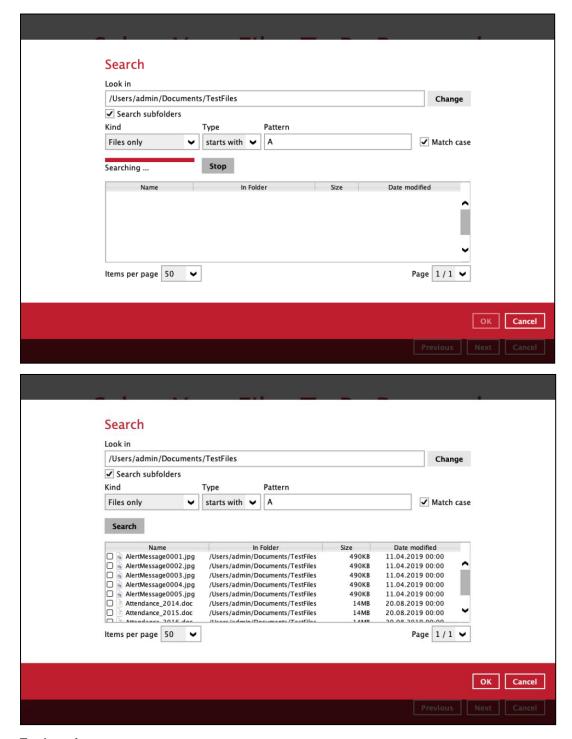
The restore filter setting includes the Search subfolder and Match case set to true. This means that filter will include all available subfolders in \TestFiles upon searching. And it will strictly search only the specified pattern and case which starts with 'Set'.

Example No.2: Restore filter setting from /Users/admin/Documents/TestFiles with filter type Starts With

Location:	/Users/admin/Documents/TestFiles
Search subfolders:	True
Kind:	Files
Туре:	Starts With
Pattern:	A
Match Case:	True

Follow the step-by-step procedure indicated on Restore Filter.





Explanation:

All files and directories under <u>/Users/admin/Documents/TestFiles</u> that has the pattern that starts with 'A' with match case set to true will be included upon performing search.

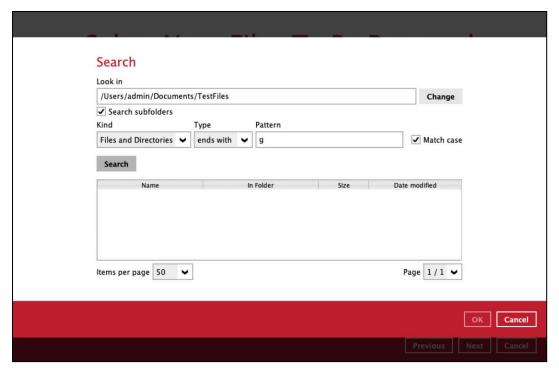
As you can see on the screen shot above, the result panel contains the Name of the file, Directory which are indicated In-Folder column, Size, and Date Modified.

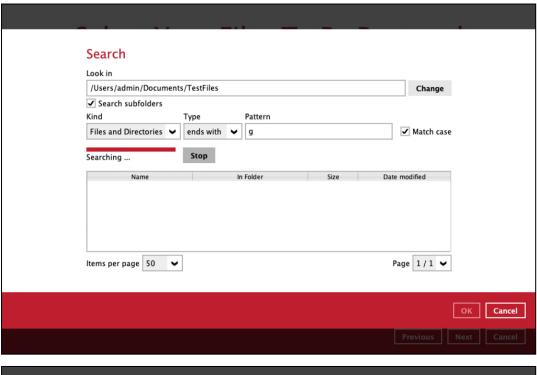
The restore filter setting includes the Search subfolder and Match case set to true. This means that the filter will include all available subfolders in \TestFiles upon searching. And it will strictly search only the specified pattern and case which starts with 'A'.

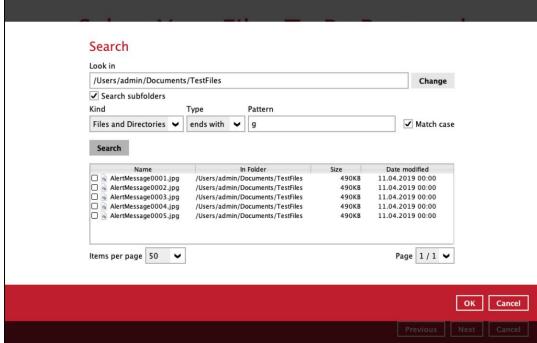
Example No.3: Restore filter setting from /Users/admin/Documents/TestFiles with filter type Ends With

Location:	/Users/admin/Documents/TestFiles
Search subfolders:	True
Kind:	Files and Directories
Туре:	Ends With
Pattern:	g
Match Case:	True

Follow the step-by-step procedure indicated on Restore Filter.







Explanation:

All files and directories under <u>/Users/admin/Documents/TestFiles</u> that has the pattern that ends with 'g' with match case set to true will be included upon performing search.

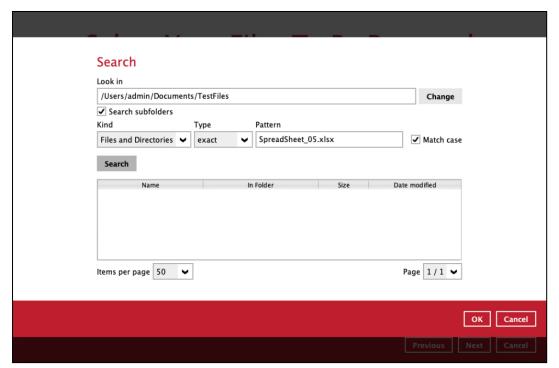
As you can see on the screen shot above, the result panel contains the Name of the files and directories, Directory which are indicated In-Folder column, Size, and Date Modified.

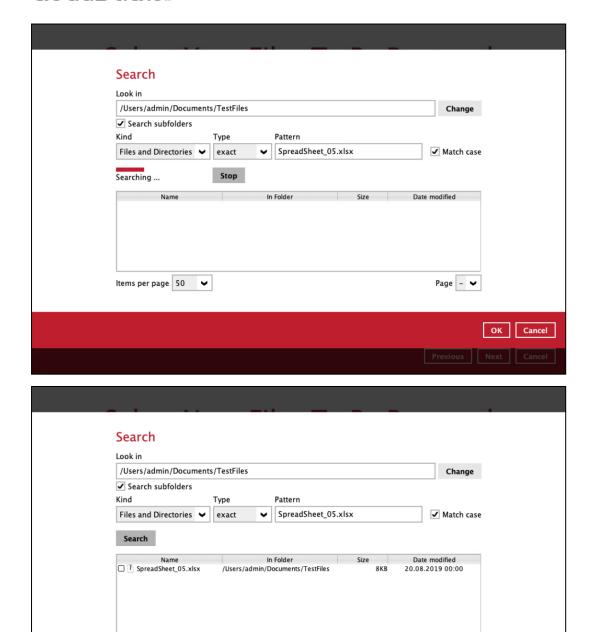
The restore filter setting includes the Search subfolder and Match case set to true. This means that filter will include all available subfolders in \TestFiles upon searching. And it will strictly search only the specified pattern and case which starts with 'g'.

Example No.4: Restore filter setting from /Users/admin/Documents/TestFiles with filter type Exact

Location:	/Users/admin/Documents/TestFiles
Search subfolders:	True
Kind:	Files and Directories
Туре:	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>/Users/admin/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.

Page 1 / 1 🕶

OK Cancel

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. This means that 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'.

Items per page 50

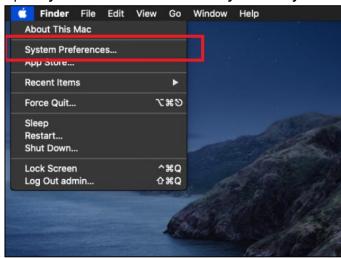


Appendix C: Setting up Full Disk Access Permission

What is Full Disk Access? Full Disk Access is a new security feature in macOS 10.15 or higher that requires some applications to be given full permission to access your protected files and have certain administrative settings available.

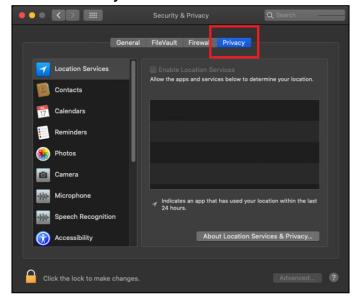
Here are the steps on how to setup and grant CloudBacko Lite a Full Disk Access:

Open System Preferences > Security & Privacy.

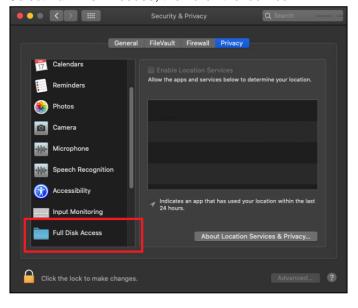




2. Select the **Privacy** tab.



3. Select **Full Disk Access**, then click the lock icon.



4. Enter the <u>System Administrator credentials</u> and click the **Unlock**.

Click the lock to make changes.



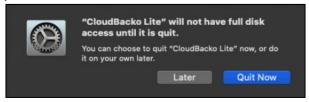
5. Click the plus icon.



6. Click the Applications, then select CloudBacko Lite, and click Open.



This message will appear if you have the CloudBacko Lite open. Click **Quit Now** to proceed.



7. CloudBacko Lite has now Full Disk Access.





Appendix D: Exclude Filter System Files

If home for admin is selected, all files and/or folders located in /Users/admin/ is recommended to include these folders to exclude from the backup source using the Exclude Filter.

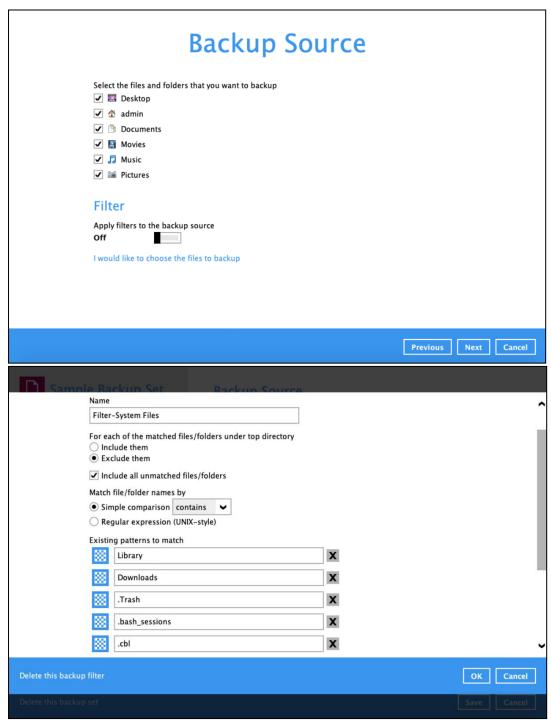
/Users/admin/Library

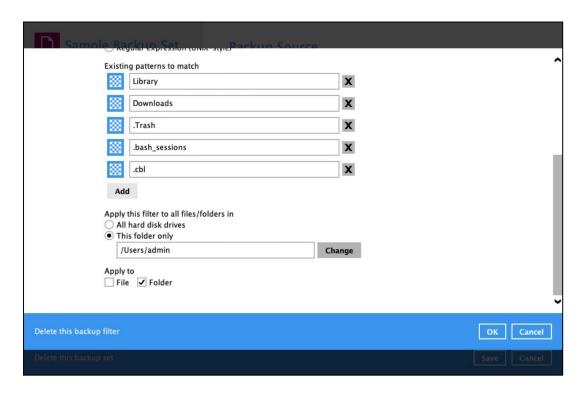
/Users/admin/Download

/Users/admin/.Trash

/Users/admin/.bash_sessions

/Users/admin/.cbl





Appendix E: 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

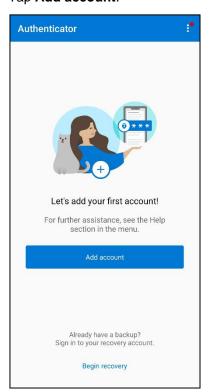
1. Download and install the Microsoft Authenticator from the Play Store for android devices or the App Store for iOS devices.



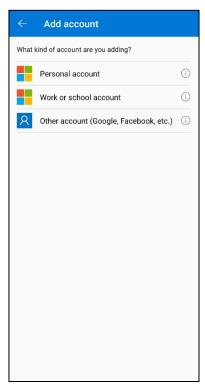
2. Launch the Microsoft Authenticator app.



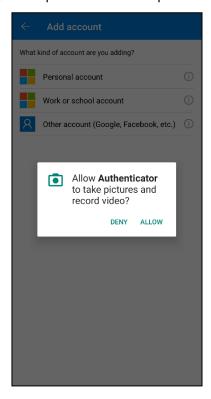
3. Tap Add account.



4. Select Other account (Google, Facebook, etc.).



5. Allow permission to take pictures and record video.



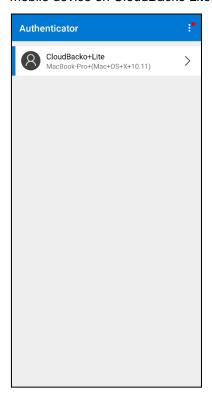
6. Setup the account. Select from the following methods: Scan the QR code or Enter a setup key.

Method 1: Scan the QR code

i. Scan the QR code on CloudBacko Lite.



ii. Account is successfully added to Microsoft Authenticator and registered the mobile device on CloudBacko Lite.



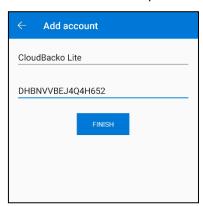


Method 2: Enter Code Manually

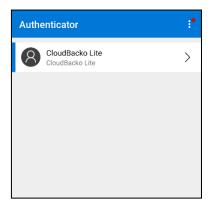
i. Tap **OR ENTER CODE MANUALLY**.



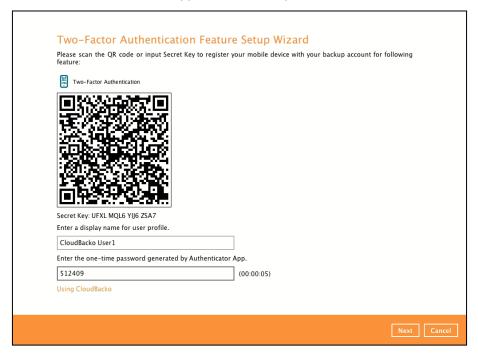
ii. Enter the account name and the key which is the Secret Key that is provided by CloudBacko Lite then tap **FINISH**.



iii. Account is successfully added to Microsoft Authenticator.



iv. In CloudBacko Lite, enter the display name and one-time password generated by the Microsoft Authenticator app. Click Next to proceed.

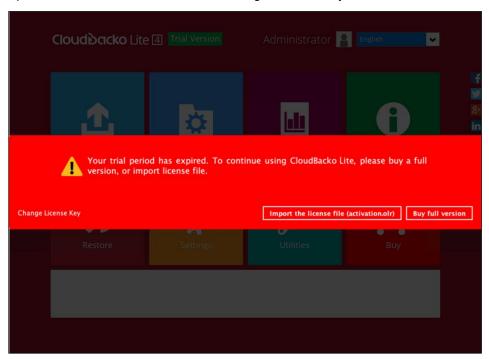


v. Mobile device is successfully registered on CloudBacko Lite.

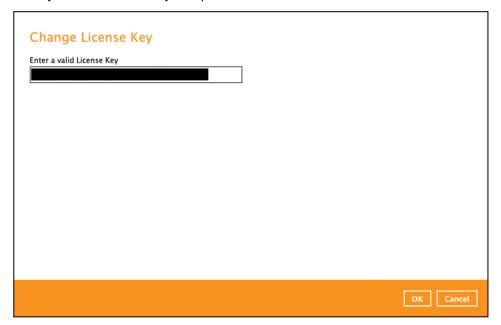


Appendix F: How to apply a license key to a CloudBacko Lite installation with an expired trial license?

1. Open CloudBacko Lite 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.

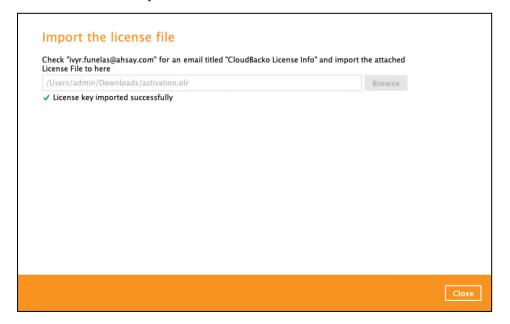


An activation file will be sent to the email address registered during the license purchase immediately containing the license activation file.

4. Copy the "activation.olr" file to the CloudBacko machine. Using "Browse" to locate "activation.olr" file and press **Import** to continue.



5. Your new license key has now been successfully imported to your CloudBacko Lite installation and is ready to use.

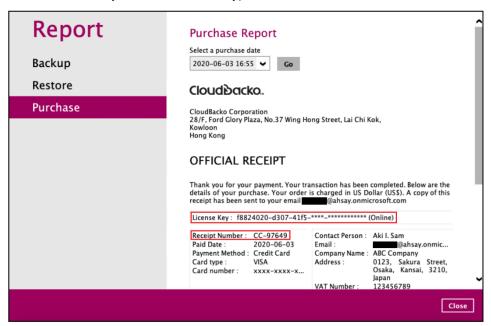


Appendix G: Where to find the CloudBacko Lite purchase license key?

 Your CloudBacko Lite purchase license key is shown in the Settings > License page. For security reasons the CloudBacko Lite license key is only partially displayed on the application.

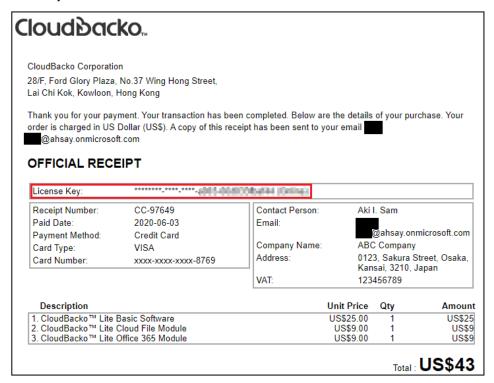


You can verify the license key displayed is our purchase key by comparing it with the details of
the license key and receipt no. in CloudBacko Lite under the Report > Purchase page. It is
recommended to print a copy of the receipt for your records (If there is no purchase record then
current license key is an evaluation key).



3. The remaining part of the license key is email to you along with your official receipt at the time of purchase.

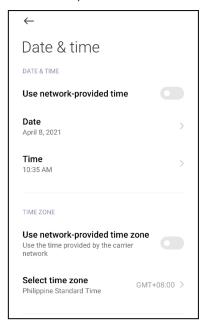
Please print a copy of the receipt and keep it in a safe place along with a copy of the invoice. In case you have to re-install CloudBacko Lite on another machine.



Appendix H: Different Date, Time, and Time zone with CloudBacko Lite machine and mobile device

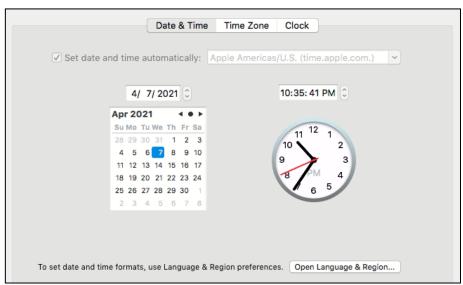
1. Check the date, time, and time zone in mobile device.

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 Lite machine.

Example: Time zone settings of a macOS machine used in the Philippines (time zone Asia). However, the set time zone in the CloudBacko Lite machine is set incorrectly in America/USA.



3. Stop the scheduler service.

```
MacBook-Pro:bin admin$ sudo sh StopScheduler.sh

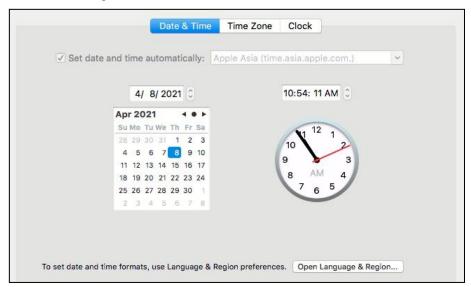
MacBook-Pro:bin admin$ ps -ef|grep java

504 2950 2938 0 10:44PM ttys000 0:00.01 grep java
```

4. Change the time zone in CloudBacko Lite machine, follow the command in red.

```
[MacBook-Pro:~ admin$ sudo systemsetup -settimezone Asia/Manila
Set Timezone: Asia/Manila
```

5. Check the changed time zone in CloudBacko Lite machine.



6. Start the scheduler service.

```
MacBook-Pro:bin admin$ sudo sh Scheduler.sh

MacBook-Pro:bin admin$ ps -ef|grep java

0 2961 1 0 10:44PM ttys000 0:00.24 /Applications/CloudBacko
Lite.app/jvm/bin/java -Xms128m -Xmx768m -Djava.library.path=.:./MacX84
-cp .:./cbs.jar cbs /Applications/CloudBacko Lite.app

504 2964 2938 0 10:44PM ttys000 0:00.00 grep java
```