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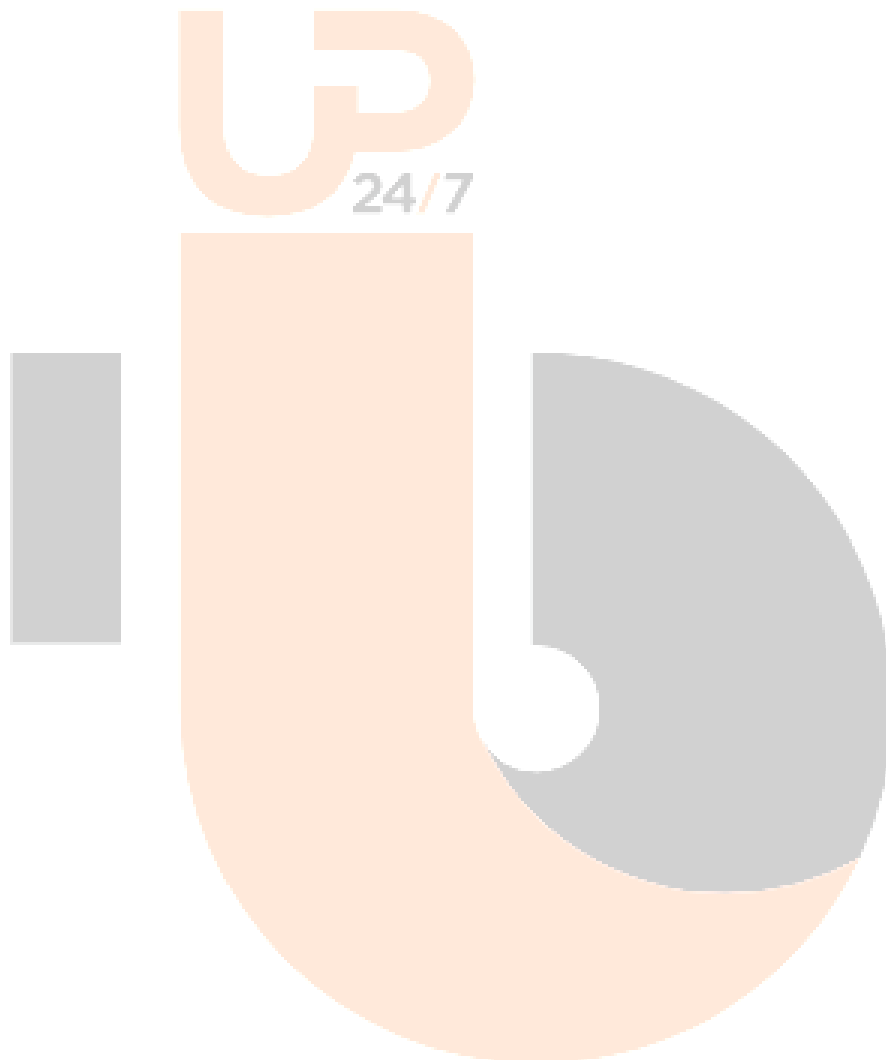
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## Revision History

Date	Descriptions	Version
25 January 2022	▪ Ch. 5 – added login with 2FA using authenticator app	9.1.0.0



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# 1 Overview

## 1.1 What is this software?

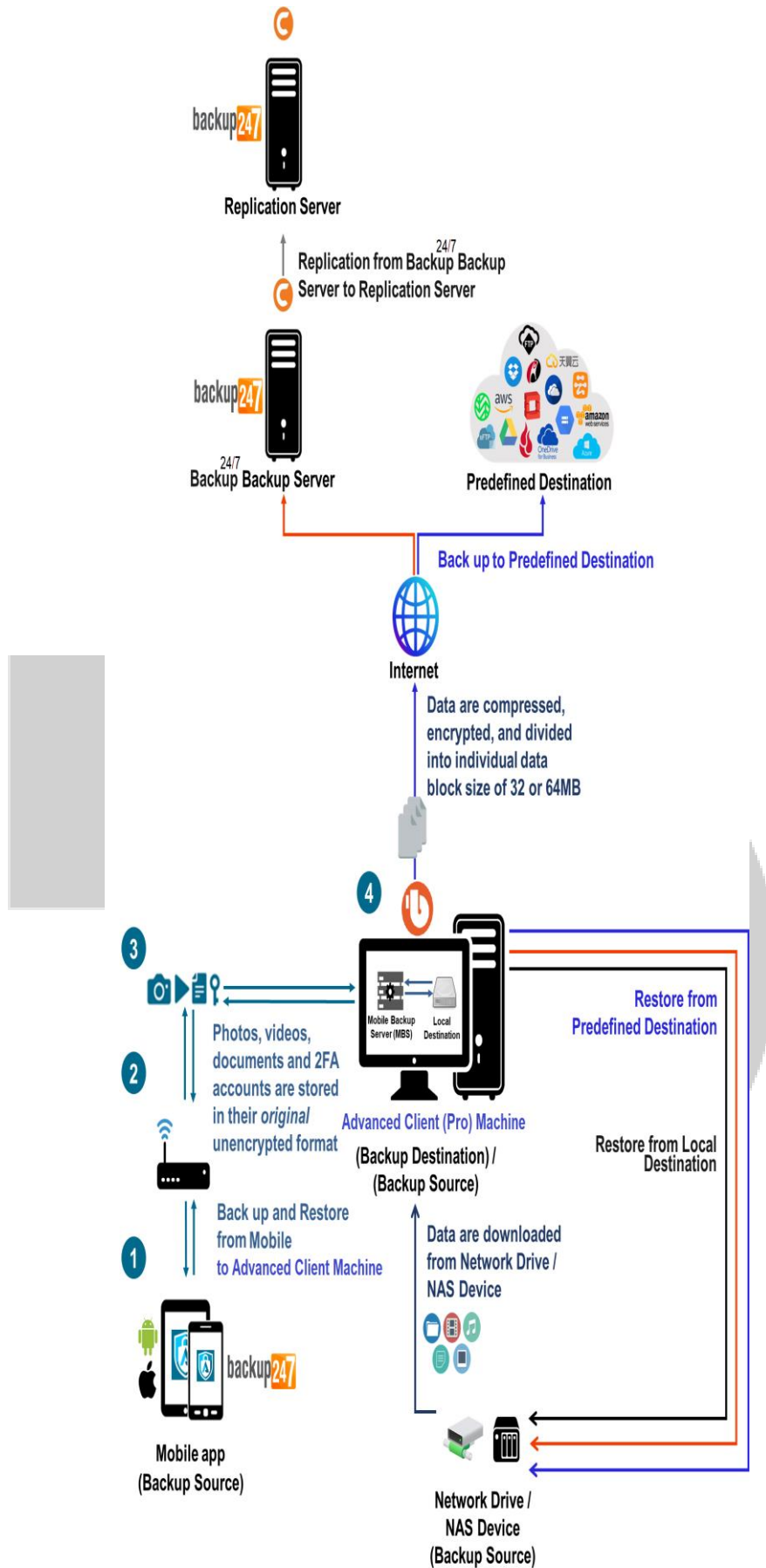
Backup247 brings you specialized client backup software, namely Backup247 Advanced Client (B247PRO), to provide a comprehensive backup solution for protecting file(s) / folder(s) on your machine, with a wide variety of backup destinations (major cloud storage service providers, FTP/SFTP, local drive, etc.) of your choice.

## 1.2 System Architecture

Below is the system architecture diagram illustrating the major elements involved in the backup and restore process among the backup machine, Backup247 Advanced Client (B247PRO) and B247B247CBS.

In this user guide, we will focus on the software installation, as well as the end-to-end backup and restore process using the Backup247 Advanced Client (B247PRO) as a client backup software.





## 2 System Requirements

### 2.1 Supported Platforms

Refer to the following article for the list of supported operating systems:

[FAQ: Backup247 Software Compatibility List \(SCL\) for version 9.1 or above](#)

### 2.2 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,
  - 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
- 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.



## 2.3 Linux Packages

The following packages have to be present on the Linux machine in order for Backup247 Advanced Client (B247PRO) version 9 to be installed.

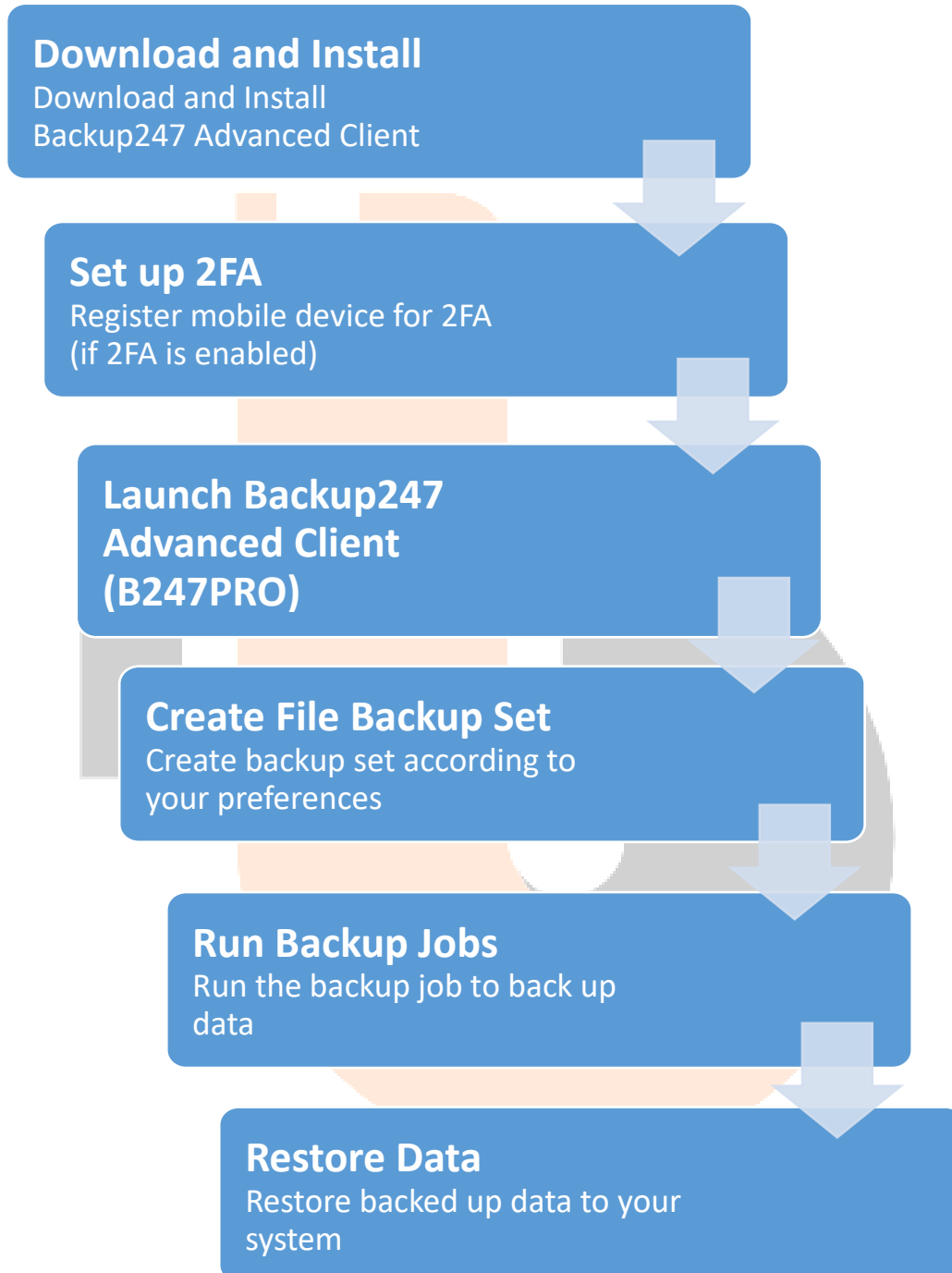
- **GNU LIBC 2.14** <https://www.gnu.org/software/libc/>  
The installed 'GNU LIBC' version must at least be 2.14 for OpenJDK 8 to work.
- **psmisc** <http://psmisc.sourceforge.net/>  
The 'psmisc' package which contains the 'fuser' components must be installed for the auto update agent (AUA) process to work properly for Backup247 Advanced Client (B247PRO) on Linux.
- **curl** <https://curl.haxx.se>  
The 'curl' command is used by both the Backup247 Advanced Client (B247PRO) SH online installer and RPM online installer to download components from B247B247CBS server during the installation process.
- **tar** <https://www.gnu.org/software/tar>  
The 'tar' command is used by both the Backup247 Advanced Client (B247PRO) TAR GZ offline installer and RPM online installer to uncompress and extract installation files or components downloaded from the B247B247CBS backup server onto the Linux machine.
- **rpm** <http://rpm.org>  
The 'rpm' package must be installed to use the Backup247 Advanced Client (B247PRO) RPM online installer method on CentOS and Red Hat Enterprise Linux platforms.
- **dpkg**  
Debian <https://packages.debian.org/buster/dpkg>  
Ubuntu <https://packages.ubuntu.com/trusty/dpkg>  
The 'dpkg' package must be installed to support Backup247 Advanced Client (B247PRO) DEB online installer method on Debian and Ubuntu platforms.

## 2.4 Network Bandwidth

10 Mbps or above connection speed.

### 3 Getting started

This quick start guide will walk you through the following 5 major parts to get you started with using Backup247 Advanced Client (B247PRO) .



## 4 Download and Install Backup247 Advanced Client (B247PRO)

There are two installation modes of Backup247 Advanced Client (B247PRO), online installation and offline installation. Below is the table of comparison between online installation and offline installation.

	Online Installation	Offline Installation
<b>Installation Time</b>	<ul style="list-style-type: none"> <li>➤ Takes more time as it needs to download the binary and component files (80MB to 132MB depending on operating system) each time the installation is run.</li> <li>➤ Online installer size is 6KB to 3.5MB depending on operating system as it contains only the initial installation package files.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Takes less time as all the necessary binary and component files are already available in the offline installer and offline installer can be downloaded once but reused many times.</li> <li>➤ Offline installer size is 80MB to 132MB depending on operating system as it contains all the necessary binary and component files.</li> </ul>
<b>Deployments</b>	<ul style="list-style-type: none"> <li>➤ Suitable for single or small amount of device installations.</li> <li>➤ Suitable for sites with fast and stable internet connection as internet connection is needed each time when an installation is run.</li> <li>➤ A slow internet connection will result in longer installation time and interrupted, or unstable internet connection may lead to unsuccessful installation.</li> <li>➤ Ensures the latest version of the product is installed.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Suitable for multiple or mass device installations.</li> <li>➤ Suitable for client sites with metered internet connections as once the offline installer is downloaded, internet connection is not needed each time when an installation is run.</li> <li>➤ May need to update the product version after installation if an older offline installer is used.</li> </ul>

### NOTE

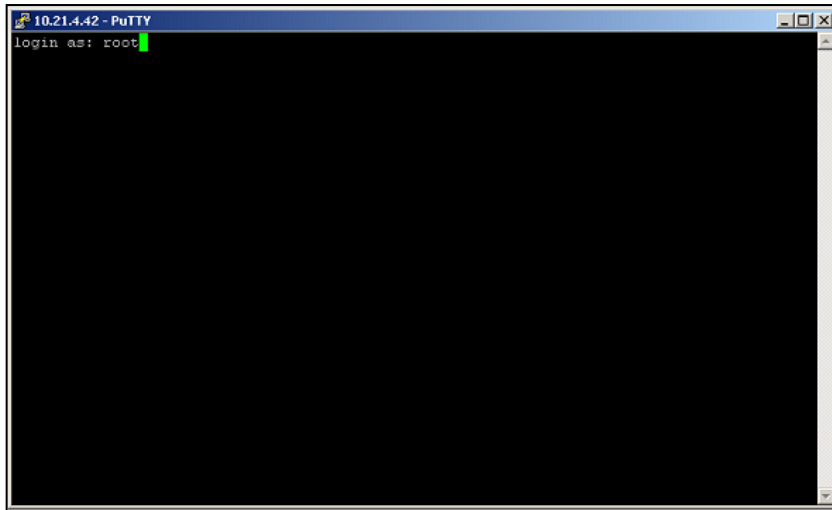
The following platforms only support online installation:

- Debian and Ubuntu – using deb package
- CentOS and Red Hat – using rpm package

## 4.1 Online Installation

### 4.1.1 SH online installer

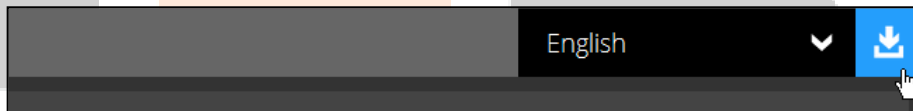
1. Log in to the Linux machine via a ssh client using the root account.



2. Create a new directory for Backup247 Advanced Client (B247PRO) installation using the following script.

```
# mkdir -p /usr/local/B247Pro
# cd /usr/local/B247Pro
```

3. Go to the download page of your backup service provider's website to download the Backup247 Advanced Client (B247PRO) **SH online installer**.



4. Right click on the **SH online installer** link, then copy the link address of the Backup247 Advanced Client (B247PRO) installer.



5. Use the **curl** command with the copied link address to download the Backup247 Advanced Client (B247PRO) installer from the backup service provider's website onto the Linux machine.

```
# curl -Ok https://10.120.10.12/B247CBS/download/B247Pro-nix-443-10.120.10.12-https-00.sh?dlName=B247Pro-linux-443-10.120.10.12-https-00.sh
```

	% Total Time	% Received Current	% Xferd	Average Speed Dload	Speed Upload	Time Total	Time Spent
Left	17971	100	17971	0	0	9568	0
	0:00:01	--:--:--	9735				

6. Rename the file by removing the characters from "?" until the end. In the example below, remove the characters highlighted in red:

Before:

B247Pro-nix-443-10.120.10.12-https-00.sh?dlName=B247Pro-linux-443-10.120.10.12-https-00.sh

After:

B247Pro-nix-443-10.120.10.12-https-00.sh

You may perform the renaming of file using the **mv** command:

```
# mv B247Pro-nix-443-10.120.10.12-https-00.sh?dlName=B247Pro-linux-443-10.120.10.12-https-00.sh B247Pro-nix-443-10.120.10.12-https-00.sh
# ls -la
total 24
drwxr-xr-x. 2 root root 55 May 6 15:56 .
drwxr-xr-x. 22 root root 268 May 6 15:53 ..
-rw-r--r--. 1 root root 24034 May 6 15:53 B247Pro-nix-443-10.120.10.12-https-00.sh
```

7. Add the executable permissions to the Backup247 Advanced Client (B247PRO) install script.

```
# chmod 755 B247Pro-nix-443-10.120.10.12-https-00.sh
```

8. Run the Backup247 Advanced Client (B247PRO) installation script. At the end of the script, the installation path and "Done" will be shown to indicate that the Backup247 Advanced Client (B247PRO) installation is successful.

**NOTE:** The .sh script file should be copied and run under the directory path where you want the Backup247 Advanced Client (B247PRO) application to be installed, i.e., /usr/local/B247Pro

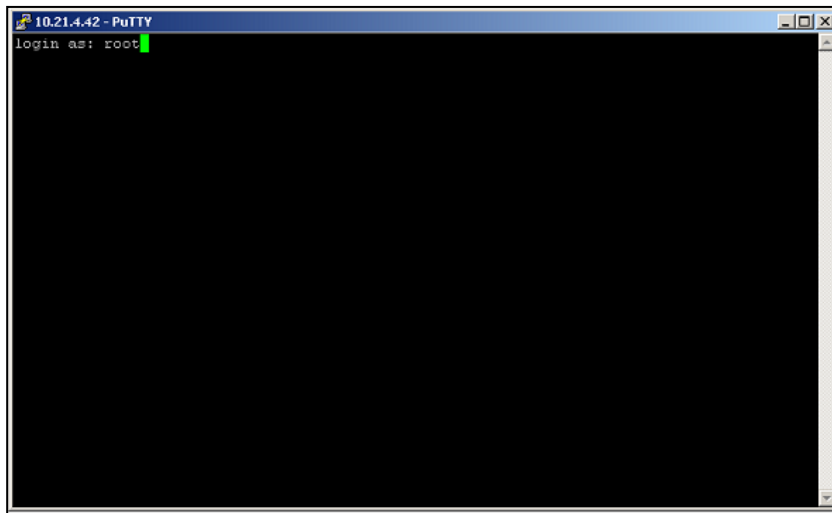
```
# ./B247Pro-nix-443-10.120.10.12-https-00.sh
Log Time: Thu Jan 6 11:23:40 HKT 2022
Host address: https://10.120.10.12:443
Downloading file... jre-std-linux-amd64.tar.gz
% Total % Received % Xferd Average Speed Time Time
Time Current
Dload Upload Total Spent Left Speed
100 91.3M 100 91.3M 0 0 3672k 0 0:00:25
0:00:25 --:--:-- 12.0M
Download file completed
Untar component file to /tmp/_B247Pro.190114184240/jvm
Downloading file... app-common.tar.gz
```

```
% Total      % Received % Xferd  Average Speed   Time    Time
Time Current
Dload Upload  Total   Spent    Left  Speed
100 34.9M 100 34.9M   0      0 1126k      0 0:00:31
0:00:31 --:--:-- 4478k
Download file completed
.
.
.
Untar component file to /tmp/_B247Pro.190114184240
Downloading file... aua-inst-nix-B247Pro.tar.gz
% Total      % Received % Xferd  Average Speed   Time    Time
Time Current
Dload Upload  Total   Spent    Left  Speed
100 54564 100 54564   0      0 329k      0 --:--:-- --:--
--:-- --:--:-- 330k
Download file completed
Untar component file to /tmp/_B247Pro.190114184240
No old application found, begin fresh install
Install Application Path: /usr/local/B247Pro
Done
```



## 4.1.2 RPM online installer

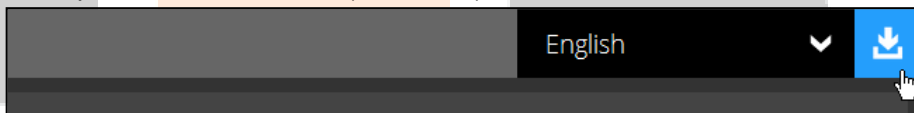
1. Log in to the Linux machine via a ssh client using the root account.



2. Create a new directory for Backup247 Advanced Client (B247PRO) installation using the following script.

```
# mkdir -p /usr/local/B247Pro
# cd /usr/local/B247Pro
```

3. Go to the download page of your backup service provider's website to download the Backup247 Advanced Client (B247PRO) **RPM online installer**.



4. Right click on the **RPM online installer** link, then copy the link address of the Backup247 Advanced Client (B247PRO) installer.



5. Use the **curl** command to download the Backup247 Advanced Client (B247PRO) installer from the backup service provider's website onto the Linux machine.

```
# curl -Ok https://10.120.10.12/B247CBS/download/B247Pro-
linux-noarch-443-10.120.10.12-https-00.rpm
% Total      % Received % Xferd Average Speed   Time    Time
Time Current
```

		Dload		Upload		Total		Spent	
Left	Speed								
100	7719	100	7719	0	0	4377	0	0:00:01	
0:00:01	--:--:--		4726						

6. Run the **rpm** command to install Backup247 Advanced Client (B247PRO) .

```
# rpm -i B247Pro-linux-noarch-443-10.120.10.12-https-00.rpm
Start install B247Pro
Log Time: Thu Jan 6 11:23:40 HKT 2022
Checking host address... rpm -i B247Pro-linux-noarch-443-
10.120.10.12-https-00.rpm
Host address: https://10.120.10.12:443
Downloading file... jre-std-linux-amd64.tar.gz
  % Total    % Received % Xferd  Average Speed   Time    Time
  Time      Current
                                 Dload  Upload  Total  Spent
  Left  Speed
100 91.3M 100 91.3M  0     0 2717k      0  0:00:34
0:00:34 --:--:-- 10.9M
Download file completed
.
.
Downloading file... app-inst-nix-B247Pro.tar.gz
  % Total    % Received % Xferd  Average Speed   Time    Time
  Time      Current
                                 Dload  Upload  Total  Spent
  Left  Speed
100 172k 100 172k  0     0 762k      0 --:--:-- --:--:--
- --:--:-- 774k
Download file completed
Untar component file to /tmp/_B247Pro.190114183512
Downloading file... aua-inst-nix-B247Pro.tar.gz
  % Total    % Received % Xferd  Average Speed   Time    Time
  Time      Current
                                 Dload  Upload  Total  Spent
  Left  Speed
100 54564 100 54564  0     0 240k      0 --:--:-- --:--:--
- --:--:-- 254k
Download file completed
Untar component file to /tmp/_B247Pro.190114183512
No old application found, begin fresh install
Install Application Path: /usr/local/B247Pro
Done
Install B247Pro finished
```

7. Check if the Backup247 Advanced Client (B247PRO) is installed correctly by running the following script.

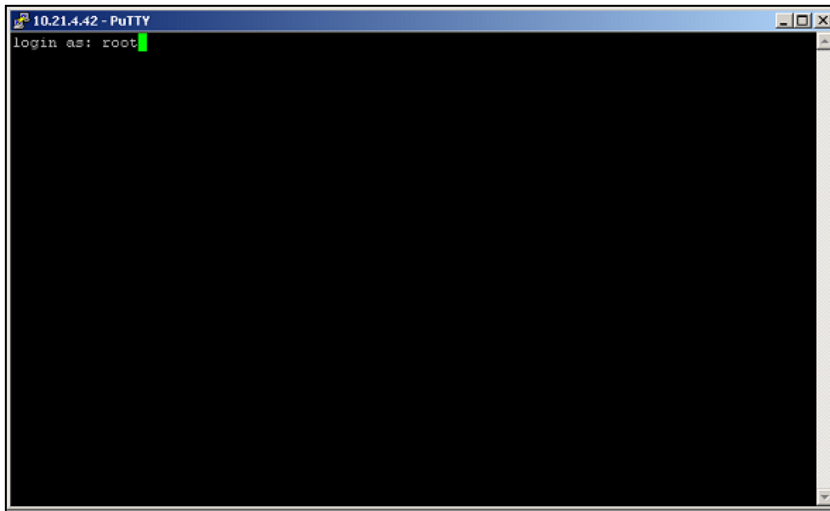
```
Name      : B247Pro
Version   : 9.0.3.0
Release   : 0
Architecture: noarch
Install Date: Thu Jan 6 10:12:08 HKT 2022
Group     : Applications/System
Size      : 24034
License   : GPLv2+
Signature : (none)
Source RPM : B247Pro-9.0.3.0-0.src.rpm
Build Date : Wed Jan 5 12:45:08 HKT 2022
```



```
Build Host : cxb-cos6x.releng.dev.test
Relocations : (not relocatable)
URL : www.Backup247.com
Summary : Backup247 Online Backup Manager
Description :
Backup247 Online Backup Manager
```

### 4.1.3 DEB online installer

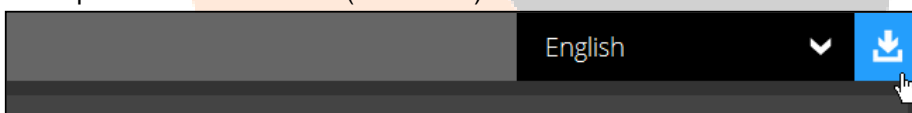
1. Log in to the Debian or Ubuntu machine via a ssh client using the root account.



2. Create a new directory for Backup247 Advanced Client (B247PRO) installation using the following script.

```
# mkdir -p /usr/local/B247Pro
# cd /usr/local/B247Pro
```

3. Go to the download page of your backup service provider's website to download the Backup247 Advanced Client (B247PRO) **DEB online installer**.



4. Right click on the **DEB online installer** link, then copy the link address of the Backup247 Advanced Client (B247PRO) installer.



- Use the **curl** command to download the Backup247 Advanced Client (B247PRO) installer from the backup service provider's website onto the Debian or Ubuntu machine.

```
# curl -Ok https://10.120.10.12/B247CBS/download/B247Pro-ubuntu-noarch-443-10.120.10.12-https-00.deb?dlName=B247Pro-ubuntu-noarch-443-10.120.10.12-https-00.deb
% Total    % Received % Xferd  Average Speed   Time    Time
Time  Current
Dload  Upload  Total  Spent    Left  Speed
100  5768  100  5768    0    0   236      0  0:00:24
      0:00:24 --:--:--  237
```

- Rename the file by removing the characters from "?" until the end. In the example below, remove the characters highlighted in red:

Before:

```
B247Pro-ubuntu-noarch-443-10.120.10.12-https-00.deb?dlName=B247Pro-ubuntu-noarch-443-10.120.10.12-https-00.deb
```

After:

```
B247Pro-ubuntu-noarch-443-10.120.10.12-https-00.deb
```

You may perform the renaming of file using the **mv** command:

```
# mv B247Pro-ubuntu-noarch-443-10.120.10.12-https-00.deb?dlName=B247Pro-ubuntu-noarch-443-10.120.10.12-https-00.deb B247Pro-ubuntu-noarch-443-10.120.10.12-https-00.deb
# ls -la
total 24
drwxr-xr-x.  2 root root   55 May  6 15:56 .
drwxr-xr-x. 22 root root  268 May  6 15:53 ..
-rw-r--r--.  1 root root 24034 May  6 15:53 B247Pro-ubuntu-noarch-443-10.120.10.12-https-00.deb
```

- Run the **dpkg** command to install Backup247 Advanced Client (B247PRO) .

```
# dpkg -i B247Pro-ubuntu-noarch-443-10.120.10.12-https-00.deb
Selecting previously unselected package B247Pro.
(Reading database ... 210408 files and directories currently installed.)
Preparing to unpack B247Pro-ubuntu-noarch-443-10.120.10.12-https-00.deb ...
Unpacking B247Pro (9.0.3.0) ...
Setting up B247Pro (9.0.3.0) ...
Start install B247Pro
Log Time: Thu Jan  6 11:23:40 HKT 2022
Checking host address... dpkg -i B247Pro-ubuntu-noarch-443-10.120.10.12-https-00.deb
Host address: https://10.120.10.12:443
Downloading file... jre-std-linux-amd64.tar.gz
% Total    % Received % Xferd  Average Speed   Time    Time
Time  Current
```

```

Dload Upload Total Spent Left Speed
100 36.9M 100 36.9M 0 0 18.6M 0 0:00:01
0:00:01 --:--:-- 18.6M
Download file completed
.
.
.
Untar component file to /tmp/_B247Pro. 181227113558
Downloading file... aua-inst-nix-B247Pro.tar.gz
% Total % Received % Xferd Average Speed Time Time
Time Current
Dload Upload Total
Spent Left Speed
100 49002 100 49002 0 0 899k 0 --:--:-- --:--
--:-- --:--:-- 902k
Download file completed
Untar component file to /tmp/_B247Pro. 181227113558
No old application found, begin fresh install
Install Application Path: /usr/local/B247Pro
Done
Install B247Pro finished
  
```

8. To check the status of the installation, run the **dpkg -s B247Pro** script.

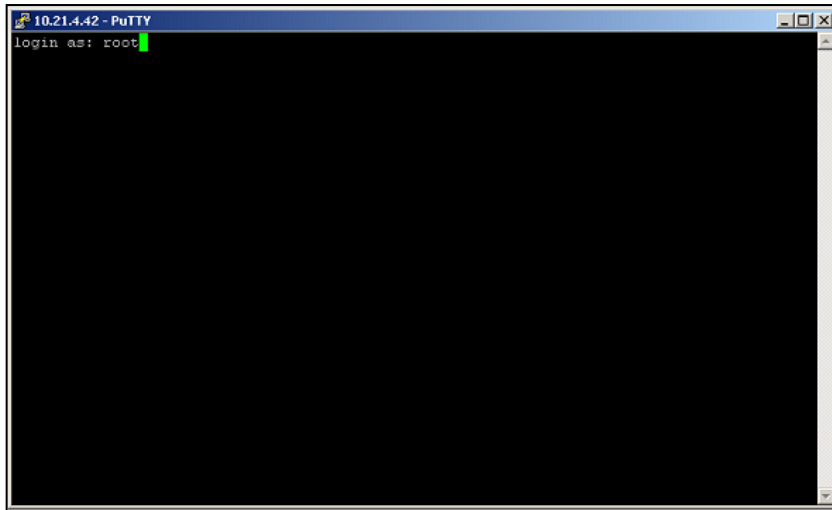
```

# dpkg -s B247Pro
Package: B247Pro
Status: install ok installed
Priority: optional
Section: utils
Installed-Size: 204800
Maintainer: Backup247 Systems Corporation <support-
kb@Backup247.com>
Architecture: all
Version: 9.0.3.0
Description: Backup247 Online Backup Manager
Backup247 Online Backup Manager
  
```

## 4.2 Offline Installation

### TAR GZ offline installer

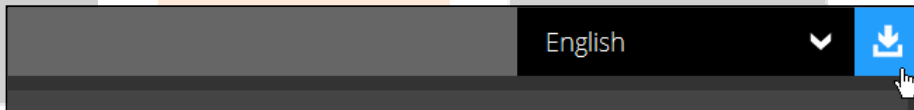
1. Log in to the Linux machine via a ssh client using the root account.



2. Create a new directory for Backup247 Advanced Client (B247PRO) installation using the following script.

```
# mkdir -p /usr/local/B247Pro
# cd /usr/local/B247Pro
```

3. Go to the download page of your backup service provider's website to download the Backup247 Advanced Client (B247PRO) **TAR GZ offline installer**.



4. Right click on the **TAR GZ offline installer** link, then copy the link address of the Backup247 Advanced Client (B247PRO) installer.



5. Use the **curl** command to download the Backup247 Advanced Client (B247PRO) installer from the backup service provider's website onto the Linux machine.

```
# curl -Ok https://10.120.10.12/B247CBS/download/B247Pro-
linux.tar.gz
% Total % Received % Xferd Average Speed Time Time
Time Current
Dload Upload Total Spent Left Speed
```

```
100 287M 0 287M 0 0 198k 0 --:--:--
0:24:43 --:--:-- 62707
```

6. Run the **tar** command to extract the package component files.

```
# tar xvzf B247Pro-linux.tar.gz
app.pkg/version.txt
app.pkg/app-common.tar.gz
app.pkg/app-native-nix-x64.tar.gz
app.pkg/app-native-nix-x86.tar.gz
app.pkg/app-nix-B247Pro.tar.gz
app.pkg/aua-common.tar.gz
app.pkg/aua-native-nix-x64.tar.gz
app.pkg/aua-native-nix-x86.tar.gz
app.pkg/aua-nix-B247Pro.tar.gz
app.pkg/util-common.tar.gz
app.pkg/util-nix-B247Pro.tar.gz
app.pkg/properties-common.tar.gz
app.pkg/app-inst-nix-B247Pro.tar.gz
app.pkg/aua-inst-nix-B247Pro.tar.gz
app.pkg/jre-std-linux-amd64.tar.gz
app.pkg/jre-std-linux-x86-586.tar.gz
app.pkg/app-native-nix-others.tar.gz
app.pkg/aua-native-nix-others.tar.gz
B247Pro-linux.sh
```

7. Use the **sh** command to install Backup247 Advanced Client (B247PRO).

```
sh B247Pro-linux.sh
Log Time: Thu Jan 6 10:12:08 HKT 2022
Using package in /usr/local/B247Pro/app.pkg
Package version: 9.0.3.0
Untar jre-std-linux-amd64.tar.gz to
/tmp/_B247Pro.210507103221/jvm
Untar app-common.tar.gz to /tmp/_B247Pro.210507103221
Untar app-native-nix-x64.tar.gz to
/tmp/_B247Pro.210507103221
Untar app-nix-B247Pro.tar.gz to /tmp/_B247Pro.210507103221
Untar aua-common.tar.gz to /tmp/_B247Pro.210507103221
Untar aua-native-nix-x64.tar.gz to
/tmp/_B247Pro.210507103221
Untar aua-nix-B247Pro.tar.gz to /tmp/_B247Pro.210507103221
Untar util-common.tar.gz to /tmp/_B247Pro.210507103221
Untar util-nix-B247Pro.tar.gz to /tmp/_B247Pro.210507103221
Untar properties-common.tar.gz to /tmp/_B247Pro.210507103221
Untar app-inst-nix-B247Pro.tar.gz to
/tmp/_B247Pro.210507103221
Untar aua-inst-nix-B247Pro.tar.gz to
/tmp/_B247Pro.210507103221
Backup user setting files
Backup finished
Uninstall previous version...
Remove previous application files
Remove file B247Pro-linux.tar.gz
Remove application files finished
```

```
Install Application Path: /usr/local/B247Pro
Restore Previous Setting backup...
Previous Setting backup restored
Done
```

### 4.3 Backup247 Advanced Client (B247PRO) Scheduler Service Check

The Backup247 Advanced Client (B247PRO) scheduler service is used to kick automated or scheduled backup jobs, to check if the Backup247 Advanced Client (B247PRO) scheduler service is running use the **ps** command.

```
# ps -ef|grep java
root      11569      1   9 10:35 pts/0      00:00:09
/usr/local/B247Pro/jvm/bin/bschJW -Xms128m -Xmx768m -
Dsun.nio.PageAlignDirectMemory=true -Djava.library.path=. -
cp ../B247CBS.jar B247CBS /usr/local/B247Pro
root      11676 10144   0 10:37 pts/0      00:00:00 grep --color=auto
java
```

1. To manually start the scheduler service, use the **/usr/local/B247Pro/bin/Scheduler.sh** script.
2. To manually stop the scheduler service, use the **/usr/local/B247Pro/bin/StopScheduler.sh** script.

### 4.4 RunLevel Symlink Check

During installation, the following symlinks to the scheduler startup script **/etc/init.d/B247Proscheduler** will be created for Runlevels 2 to 5, to allow the Backup247 Advanced Client (B247PRO) scheduler service to be started up automatically each time after the Linux machine is rebooted or restarted.

To verify the symlinks have been created correctly:

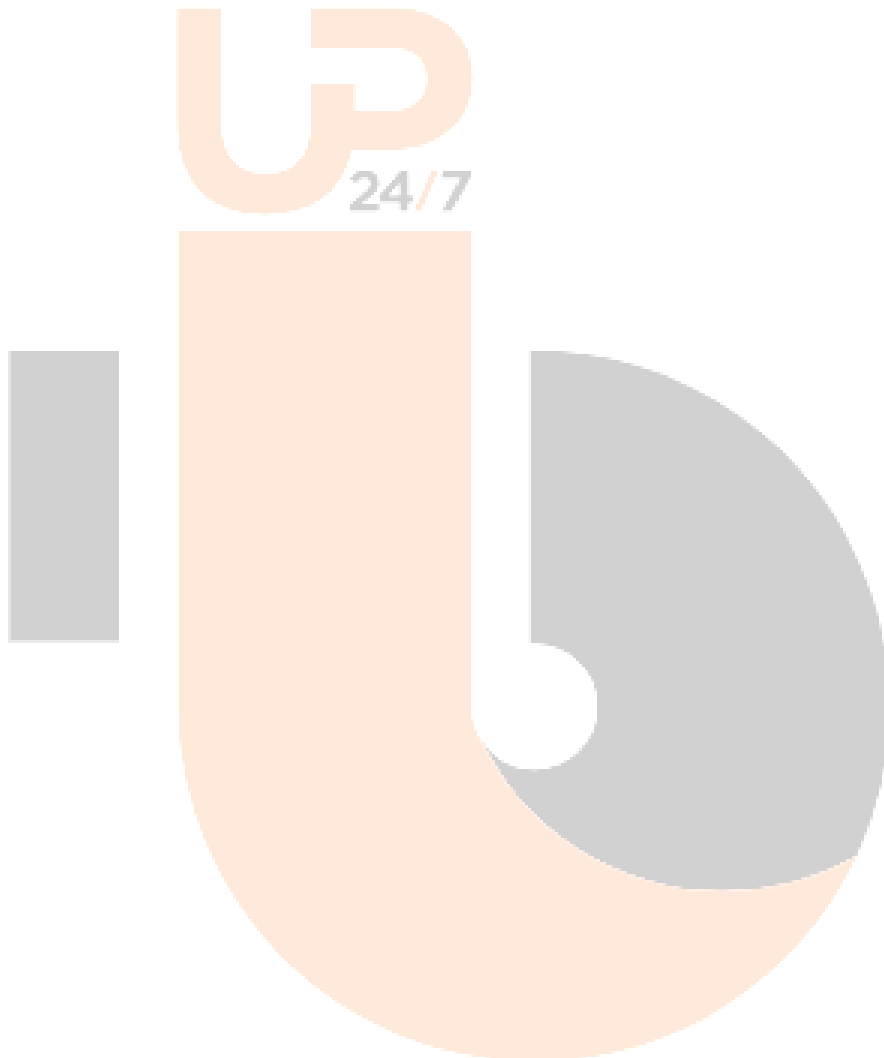
#### Example: Ubuntu 16.04 LTS

```
# ls -la /etc/rc[2-5].d/*B247Pro*
lrwxrwxrwx 1 root root 24 Jan 10 17:09
/etc/rc2.d/S99B247Proscheduler ->
/etc/init.d/B247Proscheduler
lrwxrwxrwx 1 root root 24 Jan 10 17:09
/etc/rc3.d/S99B247Proscheduler ->
/etc/init.d/B247Proscheduler
lrwxrwxrwx 1 root root 24 Jan 10 17:09
/etc/rc4.d/S99B247Proscheduler ->
/etc/init.d/B247Proscheduler
lrwxrwxrwx 1 root root 24 Jan 10 17:09
/etc/rc5.d/S99B247Proscheduler ->
/etc/init.d/B247Proscheduler
#
```

#### Example: CentOS 7

```
# ls -la /etc/rc.d/rc[2-5].d/*B247Pro*
lrwxrwxrwx. 1 root root 24 Jan 15 10:35
/etc/rc.d/rc2.d/S99B247Proscheduler ->
/etc/init.d/B247Proscheduler
```

```
lrwxrwxrwx. 1 root root 24 Jan 15 10:35  
/etc/rc.d/rc3.d/S99B247Proscheduler ->  
/etc/init.d/B247Proscheduler  
lrwxrwxrwx. 1 root root 24 Jan 15 10:35  
/etc/rc.d/rc4.d/S99B247Proscheduler ->  
/etc/init.d/B247Proscheduler  
lrwxrwxrwx. 1 root root 24 Jan 15 10:35  
/etc/rc.d/rc5.d/S99B247Proscheduler ->  
/etc/init.d/B247Proscheduler
```



## 5 Starting Backup247 Advanced Client (B247PRO)

To startup Backup247 Advanced Client (B247PRO) and connect to B247B247CBS, you need to use the **RunConfigurator.sh** script to configure the backup server URL, port and proxy server settings (if applicable) and enter the user id and password.

When you login for the first time, the Free Trial Registration option will be displayed. If you want to create a free trial account, please proceed to Appendix K. Otherwise, proceed to the next step below.

```
# cd /usr/local/B247Pro/bin
# sh RunConfigurator.sh

Startup Backup247 Online Backup Manager ...
User Configuration file not found
Create a new Configuration file at directory
[/root/.B247Pro/config]

Login Menu (No configuration files found)
-----
(1). Login
(2). Free Trial
(3). Quit
-----
Your Choice:
```

### NOTE

The Free Trial Registration option may not be available. This depends on the settings of your backup service provider. Please contact your backup service provider for more information.

**Please contact your backup service provider to obtain your user login and password and backup server URL settings.**

```
# cd /usr/local/B247Pro/bin
# sh RunConfigurator.sh

Startup Backup247 Online Backup Manager ...
Config file found

Login Menu
-----
(1). Login
(2). Change Network Settings
(3). Forgot Password
(4). Quit
-----
Your Choice:
```



Once the Backup247 Advanced Client (B247PRO) started, login menu will be displayed. If you want to modify the **network settings** before you log in, select option **(2)**.

```
Login Menu
-----
(1). Login
(2). Change Network Settings
(3). Forgot Password
(4). Quit
-----
Your Choice: 2

Network Setting
-----
(1). Backup Server URL [10.3.121.17]
(2). Port [80]
(3). Protocol [http]
(4). Proxy Setting [Not in Use]
(5). Save and Return
(6). Discard and Return
-----
Your Choice:
```

Otherwise, select option **(1)**. Input your Login name and password to log in.

```
Login Menu
-----
(1). Login
(2). Change Network Settings
(3). Forgot Password
(4). Quit
-----
Your Choice: 1

Login Name : sample
Password : *****

Please wait while verifying user account with server...
Your profile has been downloaded and updated.

Main Menu
-----
(1). List Backup Sets
(2). Delete Backup Set
(3). Export Backup Set Settings to XML
(4). Import Backup Set Settings from XML
(5). Generate new Backup Set Settings Template
(6). Change Language [English]
(7). Update Profile Settings
```

```
(8). Quit
-----
Your Choice:
```

- If Two-Factor Authentication (2FA) is enabled, there will be two login scenarios:
  - 🔵 using Backup247 Mobile or third-party TOTP authenticator
  - 🔵 using Twilio

**Backup247 Mobile or third-party TOTP authenticator**

A mobile device with Backup247 Mobile or a third-party authenticator app installed must first be registered using the B247B247CBS web console or an Backup247 Advanced Client (B247PRO) with GUI before you can login for the first time. Otherwise, this message will be displayed.

```
Please wait while verifying user account with server...

Your account (sample) is found on server (10.3.121.17:80).
New configuration file has been created

Mobile2FALoginFirstLogin
-----

Failed to login (Reason: Please register device in web console or
GUI client.)
```

For instructions on how to register a mobile device for 2FA using:

- 🔵 Backup247 Advanced Client (B247PRO) please refer to Chapter 6 of the Backup247 Advanced Client (B247PRO) v9 Quick Start Guide for Linux (GUI).
- 🔵 B247B247CBS web console please refer to Chapter 7 of the B247B247CBS v9 Quick Start Guide.

Once a mobile device is registered for 2FA, this will be the screen displayed. Enter the passcode generated in your authenticator app and press **Enter**.

```
Please wait while verifying user account with server...
Your profile has been downloaded and updated.

Mobile2FALogin
-----

Please enter the passcode to continue login.
Passcode : 544979

Main Menu
-----

(1). List Backup Sets
(2). Delete Backup Set
(3). Export Backup Set Settings to XML
(4). Import Backup Set Settings from XML
(5). Generate new Backup Set Settings Template
```

- (6). Change Language [English]
- (7). Update Profile Settings
- (8). Quit

-----  
Your Choice:

## Twilio

Press **Enter** to continue then provide your country code, phone number and email. A passcode will be sent to the phone number provided. Enter the passcode to continue logging in. The MFA Configuration screen will only be displayed when you log in for the first time.

MFA Configuration  
Multi-Factor Authentication is enabled for helping safeguard access to your account. Please provide a phone number to setup in the first-time login.  
Press Enter to continue... 24/7

-----  
Supported Country List:

Andorra (+376)  
United Arab Emirates (+971)  
Afghanistan (+93)  
Antigua and Barbuda (+1268)  
Anguilla (+1264)  
Albania (+355)  
Armenia (+374)  
Angola (+244)  
Argentina (+54)  
American Samoa (+1684)  
Austria (+43)  
Australia, Christmas Island, Cocos (Keeling) Islands (+61)  
Aruba (+297)  
Åland Islands, Finland (+358)  
Azerbaijan (+994)  
Bosnia and Herzegovina (+387)  
Barbados (+1246)  
Bangladesh (+880)  
Belgium (+32)  
Burkina Faso (+226)  
Bulgaria (+359)  
Bahrain (+973)  
Burundi (+257)  
Benin (+229)  
Bermuda (+1441)  
Brunei (+673)  
Bolivia (+591)  
Brazil (+55)  
Bahamas (+1242)  
Bhutan (+975)  
Botswana (+267)  
Belarus (+375)

Belize (+501)  
DR Congo (+243)  
Central African Republic (+236)  
Republic of the Congo (+242)  
Switzerland (+41)  
Ivory Coast (+225)  
Cook Islands (+682)  
Chile (+56)  
Cameroon (+237)  
China (+86)  
Colombia (+57)  
Costa Rica (+506)  
Cuba (+53)  
Cape Verde (+238)  
Cyprus (+357)  
Czechia (+420)  
Germany (+49)  
Djibouti (+253)  
Denmark (+45)  
Dominica (+1767)  
Dominican Republic (+1809)  
Algeria (+213)  
Ecuador (+593)  
Estonia (+372)  
Egypt (+20)  
Eritrea (+291)  
Spain (+34)  
Ethiopia (+251)  
Fiji (+679)  
Falkland Islands, South Georgia (+500)  
Micronesia (+691)  
Faroe Islands (+298)  
France (+33)  
Gabon (+241)  
Grenada (+1473)  
Georgia (+995)  
French Guiana (+594)  
Guernsey, Isle of Man, Jersey, United Kingdom (+44)  
Ghana (+233)  
Gibraltar (+350)  
Greenland (+299)  
Gambia (+220)  
Guinea (+224)  
Guadeloupe, Saint Barthélemy, Saint Martin (+590)  
Equatorial Guinea (+240)  
Greece (+30)  
Guatemala (+502)  
Guam (+1671)  
Guinea-Bissau (+245)  
Guyana (+592)  
Hong Kong (+852)  
Honduras (+504)  
Croatia (+385)

Haiti (+509)  
Hungary (+36)  
Indonesia (+62)  
Ireland (+353)  
Israel (+972)  
India (+91)  
Iraq (+964)  
Iran (+98)  
Iceland (+354)  
Italy (+39)  
Jamaica (+1876)  
Jordan (+962)  
Japan (+81)  
Kenya (+254)  
Kyrgyzstan (+996)  
Cambodia (+855)  
Kiribati (+686)  
Comoros (+269)  
Saint Kitts and Nevis (+1869)  
South Korea (+82)  
Kuwait (+965)  
Cayman Islands (+1345)  
Kazakhstan (+76)  
Laos (+856)  
Lebanon (+961)  
Saint Lucia (+1758)  
Liechtenstein (+423)  
Sri Lanka (+94)  
Liberia (+231)  
Lesotho (+266)  
Lithuania (+370)  
Luxembourg (+352)  
Latvia (+371)  
Libya (+218)  
Morocco, Western Sahara (+212)  
Monaco (+377)  
Moldova (+373)  
Montenegro (+382)  
Madagascar (+261)  
Marshall Islands (+692)  
Macedonia (+389)  
Mali (+223)  
Myanmar (+95)  
Mongolia (+976)  
Macau (+853)  
Martinique (+596)  
Mauritania (+222)  
Montserrat (+1664)  
Malta (+356)  
Mauritius (+230)  
Maldives (+960)  
Malawi (+265)  
Mexico (+52)

Malaysia (+60)  
Mozambique (+258)  
Namibia (+264)  
New Caledonia (+687)  
Niger (+227)  
Norfolk Island (+672)  
Nigeria (+234)  
Nicaragua (+505)  
Netherlands (+31)  
Norway (+47)  
Nepal (+977)  
Niue (+683)  
New Zealand, Pitcairn Islands (+64)  
Oman (+968)  
Panama (+507)  
Peru (+51)  
French Polynesia (+689)  
Papua New Guinea (+675)  
Philippines (+63)  
Pakistan (+92)  
Poland (+48)  
Saint Pierre and Miquelon (+508)  
Puerto Rico (+1787)  
Palestine (+970)  
Portugal (+351)  
Palau (+680)  
Paraguay (+595)  
Qatar (+974)  
Romania (+40)  
Serbia (+381)  
Russia (+7)  
Rwanda (+250)  
Saudi Arabia (+966)  
Solomon Islands (+677)  
Seychelles (+248)  
Sudan (+249)  
Sweden (+46)  
Singapore (+65)  
Slovenia (+386)  
Slovakia (+421)  
Sierra Leone (+232)  
San Marino (+378)  
Senegal (+221)  
Somalia (+252)  
Suriname (+597)  
SouthSudan (+211)  
São Tomé and Príncipe (+239)  
El Salvador (+503)  
Syria (+963)  
Swaziland (+268)  
Turksand Caicos Islands (+1649)  
Chad (+235)  
Togo (+228)

Thailand (+66)  
Tajikistan (+992)  
Timor-Leste (+670)  
Turkmenistan (+993)  
Tunisia (+216)  
Tonga (+676)  
Turkey (+90)  
Trinidad and Tobago (+1868)  
Taiwan (+886)  
Tanzania (+255)  
Ukraine (+380)  
Uganda (+256)  
United States, Canada (+1)  
Uruguay (+598)  
Uzbekistan (+998)  
Saint Vincent and the Grenadines (+1784)  
Venezuela (+58)  
British Virgin Islands (+1284)  
United States Virgin Islands (+1340)  
Vietnam (+84)  
Vanuatu (+678)  
Samoa (+685)  
Kosovo (+383)  
Yemen (+967)  
Mayotte, Réunion (+262)  
South Africa (+27)  
Zambia (+260)  
Zimbabwe (+263)

-----  
The list above shows all the supported countries and corresponding country code  
Please enter your country code.

Country code: +63

Enter Phone number: 1234567890

There is no contact email address defined in your account.  
Please enter an email address for account recovery.

Email: sample@email.com

We will send you a SMS message with passcode to your entered phone number: Philippines (+63) - 1234567890. Continue?

- (1). Yes, send SMS message
- (2). Change country code
- (3). Modify phone number
- (4). Cancel

Your Choice: 1

A SMS message with a passcode was already sent to the phone number Philippines (+63) - \*\*\*\*\*7890 (Expiry time: 04/06/2019 09:39)

Please enter the passcode with AWKQ prefix to continue login.

Passcode: 722458

This will be the screen displayed for subsequent log ins. Select the phone number to receive the passcode.

```
MFALogin
-----
Please select phone number to receive passcode via SMS message
to continue login.
(1). Philippines (+63) - *****7890
(2). Philippines (63+) - *****1234
Your Choice: 1

A SMS message with a passcode was already sent to the phone
number Philippines (+63) - *****7890 (Expiry time: 04/06/2019
09:51)
Please enter the passcode with FCAK prefix to continue login.
Passcode: 481267
```

If the password is forgotten, choose **(3)** on the login menu and input the login name. A link to reset the password will be sent to the email you provided in the B247B247CBS server.

```
Login Menu
-----
(1). Login
(2). Change Network Settings
(3). Forgot Password
(4). Quit
-----
Your Choice: 3

Login name: sample
```

Select option **(4)** to exit the Login menu.

```
Login Menu
-----
(1). Login
(2). Change Network Settings
(3). Forgot Password
(4). Quit
-----
Your Choice: 4

Exit Configurator Utility
```



## 6 Backup247 Advanced Client (B247PRO) Main Menu

Once you have successfully logged on to Backup247 Advanced Client (B247PRO) , the **main menu** will be displayed.

```
Main Menu
```

```
-----
```

- (1). List Backup Sets
- (2). Delete Backup Set
- (3). Export Backup Set Settings to XML
- (4). Import Backup Set Settings from XML
- (5). Generate new Backup Set Settings Template
- (6). Change Language [English]
- (7). Update Profile Settings
- (8). Quit

### 6.1 List Backup Sets

By selecting option **(1)**, the list of backup sets you have created will be shown.

```
Main Menu
```

```
-----
```

- (1). List Backup Sets
- (2). Delete Backup Set
- (3). Export Backup Set Settings to XML
- (4). Import Backup Set Settings from XML
- (5). Generate new Backup Set Settings Template
- (6). Change Language [English]
- (7). Update Profile Settings
- (8). Quit

```
-----
```

```
Your Choice: 1
```

```
Select a Backup Set to show more details
```

```
-----
```

- (1). Daily Backup
- (2). Sample Backup
- (3). Backup247 Advanced Client (B247PRO) Backup
- (4). B247PRO Backup

```
-----
```

```
Your Choice:
```

To show more details of a specific backup set, choose a backup set to display.

```
Select a Backup Set to show more details
-----
(1). Daily Backup
(2). Sample Backup
(3). Backup247 Advanced Client (B247PRO) Backup
-----
Your Choice: 1

Name           : Daily Backup
Owner          : centos7
Type           : FILE
Selected Source : /root/Documents
Selected Source : /mnt
Selected Source : /etc
Selected Source : /home
Deselected Source : /root/.B247Pro
Deselected Source : /usr/local/B247Pro
Deselected Source : /root/temp
Destination Name : B247B247CBS, Type: OBS
Encryption Key   : abc123$%
Encryption Algorithm : AES
Encryption Mode   : CBC
Encryption Key Length: 256

Press Enter to continue...
```

No backup set will be shown if no backup set has been created yet.

```
Main Menu
-----
(1). List Backup Sets
(2). Delete Backup Set
(3). Export Backup Set Settings to XML
(4). Import Backup Set Settings from XML
(5). Generate new Backup Set Settings Template
(6). Change Language [English]
(7). Update Profile Settings
(8). Quit
-----
Your Choice: 1

No backup set has been created yet.
```

## 6.2 Delete Backup Set

Select option **(2)** from the main menu if you wish to delete a backup set.

```
Main Menu
-----
(1). List Backup Sets
(2). Delete Backup Set
(3). Export Backup Set Settings to XML
(4). Import Backup Set Settings from XML
(5). Generate new Backup Set Settings Template
(6). Change Language [English]
(7). Update Profile Settings
(8). Quit
-----
Your Choice: 2

Choose your backup set to delete
-----
(1). Daily Backup
(2). Sample Backup
(3). Backup247 Advanced Client (B247PRO) Backup
(4). B247PRO Backup
-----
Your Choice:
```

Select a backup set you want to delete. Once selected, choose “Y” to confirm deletion and the backup set will be deleted successfully.

**Note:** If you choose “Y”, the selected backup set and all its backed-up data will be deleted.

```
Choose your backup set to delete
-----
(1). Daily Backup
(2). Sample Backup
(3). Backup247 Advanced Client (B247PRO) Backup
(4). B247PRO Backup
-----
Your Choice: 4

Name           : B247PRO Backup
Owner          : centos7
Type           : FILE
Encryption Key : abc123$%
Encryption Algorithm : AES
Encryption Mode   : CBC
Encryption Key Length: 256

Are you sure you want to delete this backup set? (Y/N) ? y
Backup set deleted
```

## 6.3 Export Backup Set Settings to XML

This feature is used to export a backup set to XML file if you want to modify the backup set settings.

To do this, select option **(3)** on the main menu.

```
Main Menu
-----
(1). List Backup Sets
(2). Delete Backup Set
(3). Export Backup Set Settings to XML
(4). Import Backup Set Settings from XML
(5). Generate new Backup Set Settings Template
(6). Change Language [English]
(7). Update Profile Settings
(8). Quit
-----
Your Choice: 3

Choose your backup set to generate XML file
-----
(1). Daily Backup
(2). Sample Backup
(3). Backup247 Advanced Client (B247PRO) Backup
(4). B247PRO Backup
-----
Your Choice:
```

Select a backup set. An XML file will be generated and exported to the **/root/.B247Pro/config** directory.

**Note:** The **/root/.B247Pro/config** folder cannot be changed.

```
Choose your backup set to generate XML file
-----
(1). Daily Backup
(2). Sample Backup
(3). Backup247 Advanced Client (B247PRO) Backup
(4). B247PRO Backup
-----
Your Choice: 4

XML file successfully exported to
/root/.B247Pro/config/backupSet.xml

Main Menu
-----
(1). List Backup Sets
(2). Delete Backup Set
(3). Export Backup Set Settings to XML
```

```
(4). Import Backup Set Settings from XML
(5). Generate new Backup Set Settings Template
(6). Change Language [English]
(7). Update Profile Settings
(8). Quit
-----
Your Choice:
```

**Note:** To see the list of all configurable items with their available options, please refer to Appendix B File Backup Set XML Template (with explanation).

To see instructions on how to configure the backup set setting, please refer to number 3 **Configuring Backup Set Settings** in Chapter 7.

## 6.4 Import Backup Set Settings from XML

This option allows user to import the updated backupSet.xml file to the B247B247CBS server.

Select option **(4)** to import the backup set XML file.

```
Main Menu
-----
(1). List Backup Sets
(2). Delete Backup Set
(3). Export Backup Set Settings to XML
(4). Import Backup Set Settings from XML
(5). Generate new Backup Set Settings Template
(6). Change Language [English]
(7). Update Profile Settings
(8). Quit
-----
Your Choice: 4

Backup Set 'Daily Backup' already exist. Confirm overwrite? (Y/N) ?
Y
XML imported, uploading to server...

XML successfully uploaded to server

Main Menu
-----
(1). List Backup Sets
(2). Delete Backup Set
(3). Export Backup Set Settings to XML1
(4). Import Backup Set Settings from XML
(5). Generate new Backup Set Settings Template
(6). Change Language [English]
(7). Update Profile Settings
(8). Quit
```

To see if the modification of the backup set settings is successful, select option **(1)** from the main menu and select the imported XML file.

```
Main Menu
-----
(1). List Backup Sets
(2). Delete Backup Set
(3). Export Backup Set Settings to XML
(4). Import Backup Set Settings from XML
(5). Generate new Backup Set Settings Template
(6). Change Language [English]
(7). Update Profile Settings
(8). Quit
-----
Your Choice: 1

Select a Backup Set to show more details
-----
(1). Daily Backup
(2). Sample Backup
(3). Backup247 Advanced Client (B247PRO) Backup
(4). B247PRO Backup
-----
Your Choice: 1

Name           : Daily Backup
Owner          : centos7
Type           : FILE
Selected Source : /etc
Selected Source : /home
Deselected Source : /root/.B247Pro
Deselected Source : /usr/local/B247Pro
Deselected Source : /root/temp
Destination Name : B247B247CBS, Type: OBS
Encryption Key  : abc123$%
Encryption Algorithm : AES
Encryption Mode : CBC
Encryption Key Length: 256

Press Enter to continue...
```

## 6.5 Generate new Backup Set Settings Template

This feature is used to create a new backup set. The supported backup set types are **File**, **MySQL Database**, **MariaDB**, **Oracle Database Server** and **IBM Domino**.

Select option **(5)** on the main menu then select **(1)**. **File** to generate a File Backup Set Template to the `/root/.B247Pro/config` directory.

**Note:** To see example of a **File Backup Setting**, please refer to Appendix C Example File Backup Set Setting.

```

Main Menu
-----
(1). List Backup Sets
(2). Delete Backup Set
(3). Export Backup Set Settings to XML
(4). Import Backup Set Settings from XML
(5). Generate new Backup Set Settings Template
(6). Change Language [English]
(7). Update Profile Settings
(8). Quit
-----
Your Choice: 5

Choose a template from a backup set type
-----
(1). File
(2). MySQL Database
(3). MariaDB
(4). Oracle Database Server
(5). IBM Domino
-----
Your Choice: 1

XML file successfully exported to
/root/.B247Pro/config/backupSet.xml

Main Menu
-----
(1). List Backup Sets
(2). Delete Backup Set
(3). Export Backup Set Settings to XML
(4). Import Backup Set Settings from XML
(5). Generate new Backup Set Settings Template
(6). Change Language [English]
(7). Update Profile Settings
(8). Quit
-----
Your Choice:

```

## 6.6 Change Language Settings

This option allows user to modify the language settings. Select option **(6)** on the main menu then choose the selected language.

**Note:** The list of available languages depends on the backup service provider.

```

Main Menu
-----
(1). List Backup Sets
(2). Delete Backup Set
(3). Export Backup Set Settings to XML
(4). Import Backup Set Settings from XML
(5). Generate new Backup Set Settings Template
(6). Change Language [English]
(7). Update Profile Settings
(8). Quit
-----
Your Choice: 6

Select
-----
(1). English
(2). □□□□□□
(3). Euskara
(4). Català
(5). Český
(6). Dansk
(7). Nederlands
(8). Suomi
(9). Français
(10). Deutsch
(11). Ελληνικά
(12). עִבְרִית
(13). Magyar
(14). Bahasa Indonesia
(15). Italiano
(16). 日本語
(17). 한국어
(18). Lietuvių
(19). Norsk
(20). Polski
(21). Português (Brasil)
(22). Português (Portugal)
(23). На русском
(24). Slovenščina
(25). Español
(26). Svenska
(27). ภาษาไทย
  
```



```
(28). Türkçe
(29). Tiếng Việt
(30). 简体中文
(31). 繁體中文
(32). Cancel
-----
Your Choice: 1

Main Menu
-----
(1). List Backup Sets
(2). Delete Backup Set
(3). Export Backup Set Settings to XML
(4). Import Backup Set Settings from XML
(5). Generate new Backup Set Settings Template
(6). Change Language [English]
(7). Update Profile Settings
(8). Quit
-----
Your Choice:
```

## 6.7 Update Profile Settings

This option allows user to modify the profile settings.

From the main menu, select option **(7)** to update profile settings.

```
Main Menu
-----
(1). List Backup Sets
(2). Delete Backup Set
(3). Export Backup Set Settings to XML
(4). Import Backup Set Settings from XML
(5). Generate new Backup Set Settings Template
(6). Change Language [English]
(7). Update Profile Settings
(8). Quit
-----
Your Choice: 7

Profile Menu
-----
(1). Display Name
(2). Contacts
(3). Time Zone [GMT+08:00 (HKT)]
(4). Encryption Recovery [Enabled]
(5). Change Password
(6). Return
-----
```

Your Choice:

To create a **display name**, select option **(1)** on the profile menu and input a display name.

```
Profile Menu
-----
(1). Display Name
(2). Contacts
(3). Time Zone [GMT+08:00 (HKT)]
(4). Encryption Recovery [Enabled]
(5). Change Password
(6). Return
-----
Your Choice: 1

Display name : John Backup
Display name is updated!

Profile Menu
-----
(1). Display Name [John Backup]
(2). Contacts
(3). Time Zone [GMT+08:00 (HKT)]
(4). Encryption Recovery [Enabled]
(5). Change Password
(6). Return
-----
Your Choice:
```

Select option **(2)** to see the list of contact(s).

```
Contacts
-----
(1). List
(2). Update
(3). Add
(4). Delete
(5). Save and Return
(6). Discard and return
-----
Your Choice: 1

Name: John Cruz II, Email: John2000@gmail.com
```

Choose option **(3)** to update an existing contact. Input the contact name of an existing contact you wish to update and fill in the new information.

```
Contacts
-----
(1). List
(2). Update
(3). Add
(4). Delete
(5). Save and Return
(6). Discard and return
-----
Your Choice: 2

Enter contact name : John Cruz II
Name : Luis Stark
Email : Stark3000@gmail.com
Send me encrypted email (S/MIME) (Y/N) ? n
Address : Blakewood City
Company : Backup247
Website : www.Backup247.com
Phone 1 : 8214544
Phone 2 : 8225515
```

To check if is updated successfully, choose option (1) on the main menu to display contact list.

```
Contacts
-----
(1). List
(2). Update
(3). Add
(4). Delete
(5). Save and Return
(6). Discard and return
-----
Your Choice: 1

Name: Luis Stark, Email: Stark3000@gmail.com
```

Add a new contact by selecting option **(3)**. Fill in the information of the new added contact.

```
Contacts
-----
(1). List
(2). Update
(3). Add
(4). Delete
(5). Save and Return
(6). Discard and return
-----
Your Choice: 3
```

Name : Jason Webb  
Email : Jwebb@gmail.com  
Send me encrypted email (S/MIME) (Y/N) ? n  
Address : Michigan State  
Company : Backup247  
Website : www.Backup247.com  
Phone 1 : 8221121  
Phone 2 : 8221212

Contacts

-----  
(1). List  
(2). Update  
(3). Add  
(4). Delete  
(5). Save and Return  
(6). Discard and return  
-----

Your Choice: 1

Name: Luis Stark, Email: Stark3000@gmail.com  
Name: Jason Webb, Email: Jwebb@gmail.com

To delete a contact, select option **(4)** from the contact menu and input the contact name you wish to delete.

Contacts

-----  
(1). List  
(2). Update  
(3). Add  
(4). Delete  
(5). Save and Return  
(6). Discard and return  
-----

Your Choice: 4

Enter contact name : Luis Stark

Contacts

-----  
(1). List  
(2). Update  
(3). Add  
(4). Delete  
(5). Save and Return  
(6). Discard and return  
-----

Your Choice: 1

No contact exists

Choose option **(5)** to save settings and return to the profile menu.

```
Contacts
-----
(1). List
(2). Update
(3). Add
(4). Delete
(5). Save and Return
(6). Discard and return
-----
Your Choice: 5

Profile Menu
-----
(1). Display Name [John Backup]
(2). Contacts
(3). Time Zone [GMT+08:00 (HKT)]
(4). Encryption Recovery [Enabled]
(5). Change Password
(6). Return
-----
Your Choice:
```

If you want to discard the changes you have made, select option **(6)**.


```
Contacts
-----
(1). List
(2). Update
(3). Add
(4). Delete
(5). Save and Return
(6). Discard and return
-----
Your Choice: 6

Profile Menu
-----
(1). Display Name [John Backup]
(2). Contacts
(3). Time Zone [GMT+08:00 (HKT)]
(4). Encryption Recovery [Enabled]
(5). Change Password
(6). Return
-----
Your Choice:
```

If you want to modify the time zone, select option (3) on the profile menu. The list of the available time zones will be displayed.

```
Profile Menu
-----
(1). Display Name [John Backup]
(2). Contacts
(3). Time Zone [GMT+08:00 (HKT)]
(4). Encryption Recovery [Enabled]
(5). Change Password
(6). Return
-----
Your Choice: 3

Select
-----
(1). GMT-11:00 (NUT)
(2). GMT-11:00 (SST)
(3). GMT-10:00 (CKT)
(4). GMT-10:00 (HADT)
(5). GMT-10:00 (HST)
(6). GMT-10:00 (TAHT)
(7). GMT-09:00 (AKDT)
(8). GMT-09:00 (GAMT)
(9). GMT-08:00 (PDT)
(10). GMT-08:00 (PST)
(11). GMT-07:00 (MDT)
(12). GMT-07:00 (MST)
(13). GMT-06:00 (CST)
(14). GMT-06:00 (EAST)
(15). GMT-06:00 (GALT)
(16). GMT-05:00 (CDT)
(17). GMT-05:00 (COT)
(18). GMT-05:00 (ECT)
(19). GMT-05:00 (EST)
(20). GMT-05:00 (GMT-05:00)
(21). GMT-05:00 (PET)
(22). GMT-04:30 (VET)
(23). GMT-04:00 (ACT)
(24). GMT-04:00 (ADT)
(25). GMT-04:00 (AMT)
(26). GMT-04:00 (AST)
(27). GMT-04:00 (BOT)
(28). GMT-04:00 (CLT)
(29). GMT-04:00 (EDT)
(30). GMT-04:00 (GYT)
(31). GMT-04:00 (PYT)
(32). GMT-03:30 (NST)
(33). GMT-03:00 (ART)
(34). GMT-03:00 (BET)
(35). GMT-03:00 (BRT)
```

- 
- (36). GMT-03:00 (FKT)  
(37). GMT-03:00 (GFT)  
(38). GMT-03:00 (PMDT)  
(39). GMT-03:00 (SRT)  
(40). GMT-03:00 (UYT)  
(41). GMT-03:00 (WGST)  
(42). GMT-02:00 (FNT)  
(43). GMT-02:00 (GST)  
(44). GMT-01:00 (AZOST)  
(45). GMT-01:00 (CVT)  
(46). GMT-01:00 (EGST)  
(47). GMT-01:00 (EGT)  
(48). GMT+00:00 (BST)  
(49). GMT+00:00 (GMT)  
(50). GMT+00:00 (IST)  
(51). GMT+00:00 (UTC)  
(52). GMT+00:00 (WEST)  
(53). GMT+00:00 (WET)  
(54). GMT+01:00 (CET)  
(55). GMT+01:00 (WAT)  
(56). GMT+02:00 (CAT)  
(57). GMT+02:00 (CEST)  
(58). GMT+02:00 (EEST)  
(59). GMT+02:00 (EET)  
(60). GMT+02:00 (IDT)  
(61). GMT+02:00 (SAST)  
(62). GMT+03:00 (ADT)  
(63). GMT+03:00 (AST)  
(64). GMT+03:00 (EAT)  
(65). GMT+03:30 (IRST)  
(66). GMT+04:00 (AMST)  
(67). GMT+04:00 (AZST)  
(68). GMT+04:00 (GEST)  
(69). GMT+04:00 (GST)  
(70). GMT+04:00 (MSD)  
(71). GMT+04:00 (MUT)  
(72). GMT+04:00 (RET)  
(73). GMT+04:00 (SAMST)  
(74). GMT+04:00 (SCT)  
(75). GMT+05:00 (AQTST)  
(76). GMT+05:00 (MAWT)  
(77). GMT+05:00 (MVT)  
(78). GMT+05:00 (PKT)  
(79). GMT+05:00 (TFT)  
(80). GMT+05:00 (TJT)  
(81). GMT+05:00 (TMT)  
(82). GMT+05:00 (UZT)  
(83). GMT+05:30 (IST)  
(84). GMT+05:30 (LKT)  
(85). GMT+06:00 (ALMST)  
(86). GMT+06:00 (BDT)  
(87). GMT+06:00 (BTT)  
(88). GMT+06:00 (IOT)

- (89). GMT+06:00 (KGST)
- (90). GMT+06:00 (YEKST)
- (91). GMT+07:00 (CXT)
- (92). GMT+07:00 (ICT)
- (93). GMT+07:00 (JAVT)
- (94). GMT+07:00 (NOVT)
- (95). GMT+08:00 (BNT)
- (96). GMT+08:00 (BORT)
- (97). GMT+08:00 (CST)
- (98). GMT+08:00 (HKT)
- (99). GMT+08:00 (KRAT)
- (100). GMT+08:00 (MYT)
- (101). GMT+08:00 (PHT)
- (102). GMT+08:00 (SGT)
- (103). GMT+08:00 (ULAT)
- (104). GMT+08:00 (WST)
- (105). GMT+09:00 (IRKST)
- (106). GMT+09:00 (JAYT)
- (107). GMT+09:00 (JST)
- (108). GMT+09:00 (KST)
- (109). GMT+09:00 (PWT)
- (110). GMT+09:30 (CST)
- (111). GMT+10:00 (ChST)
- (112). GMT+10:00 (DDUT)
- (113). GMT+10:00 (EST)
- (114). GMT+10:00 (PGT)
- (115). GMT+10:00 (TRUT)
- (116). GMT+10:00 (YAKT)
- (117). GMT+11:00 (KOST)
- (118). GMT+11:00 (NCT)
- (119). GMT+11:00 (PONT)
- (120). GMT+11:00 (SBT)
- (121). GMT+11:00 (VLAT)
- (122). GMT+11:00 (VUT)
- (123). GMT+12:00 (ANAST)
- (124). GMT+12:00 (FJT)
- (125). GMT+12:00 (GILT)
- (126). GMT+12:00 (MAGT)
- (127). GMT+12:00 (MHT)
- (128). GMT+12:00 (NRT)
- (129). GMT+12:00 (NZST)
- (130). GMT+12:00 (PETST)
- (131). GMT+12:00 (TVT)
- (132). GMT+12:00 (WAKT)
- (133). GMT+12:00 (WFT)
- (134). GMT+13:00 (TKT)
- (135). GMT+13:00 (WST)
- (136). Cancel

-----  
Your Choice: 98

Profile Menu



```
-----  
(1). Display Name [John Backup]  
(2). Contacts  
(3). Time Zone [GMT+08:00 (HKT)]  
(4). Encryption Recovery [Enabled]  
(5). Change Password  
(6). Return  
-----  
Your Choice:
```

Select option **(4)** from the profile menu to modify the **encryption key settings**. If this feature is on, an encryption key will be uploaded after running a recovery backup.

```
Profile Menu  
-----  
(1). Display Name [JohnB247PRO]  
(2). Contacts  
(3). Time Zone [GMT+08:00 (HKT)]  
(4). Encryption Recovery [Disabled]  
(5). Change Password  
(6). Return  
-----  
Your Choice: 4  
  
Upload encryption key (Y/N) ? y  
  
Encryption recovery setting is updated!  
  
Profile Menu  
-----  
(1). Display Name [JohnB247PRO]  
(2). Contacts  
(3). Time Zone [GMT+08:00 (HKT)]  
(4). Encryption Recovery [Enabled]  
(5). Change Password  
(6). Return  
-----  
Your Choice:
```

If you wish to update your password, select option **(5)** from the profile menu. Input your old password and replace it with a new one. Re-enter your new password and it will be updated.

```
Profile Menu  
-----  
(1). Display Name [JohnB247PRO]  
(2). Contacts  
(3). Time Zone [GMT+08:00 (HKT)]  
(4). Encryption Recovery [Disabled]  
(5). Change Password  
(6). Return  
-----  
Your Choice: 5
```

```
Old password : *****  
New password : *****  
Re-Enter new password : *****
```

*Password is updated!*

*Profile Menu*

- ```
-----  
(1). Display Name [JohnB247PRO]  
(2). Contacts  
(3). Time Zone [GMT+08:00 (HKT)]  
(4). Encryption Recovery [Disabled]  
(5). Change Password  
(6). Return  
-----
```

*Your Choice:*

## 6.8 Quit

Select this option to exit Backup247 Advanced Client (B247PRO) .

*Main Menu*

- ```
-----  
(1). List Backup Sets  
(2). Delete Backup Set  
(3). Export Backup Set Settings to XML  
(4). Import Backup Set Settings from XML  
(5). Generate new Backup Set Settings Template  
(6). Change Language [English]  
(7). Update Profile Settings  
(8). Quit  
-----
```

*Your Choice: 8*

*Exit Configurator Utility*

## 7 Creating a File Backup Set using ssh

There are two ways to create a File Backup Set. One is to create it using B247B247CBS while another way is through ssh. If you prefer creating the File backup set using B247B247CBS, refer to this document for more information: B247B247CBS v9 User's Guide.

1. To create a File backup set select **(5). Generate new Backup Set Settings Template** from the menu.

```

Main Menu
-----
(1). List Backup Sets
(2). Delete Backup Set
(3). Export Backup Set Settings to XML
(4). Import Backup Set Settings from XML
(5). Generate new Backup Set Settings Template
(6). Change Language [English]
(7). Update Profile Settings
(8). Quit
-----
Your Choice: 5
  
```

2. Select **(1). File** to generate a File Backup Set template file to the **/root/.B247Pro/config** directory.

```

Choose a template from a backup set type
-----
(1). File
(2). MySQL Database
(3). MariaDB
(4). Oracle Database Server
(5). IBM Domino
-----
Your Choice: 1

XML file successfully exported to
  /root/.B247Pro/config/backupSet.xml

Main Menu
-----
(1). List Backup Sets
(2). Delete Backup Set
(3). Export Backup Set Settings to XML
(4). Import Backup Set Settings from XML
(5). Generate new Backup Set Settings Template
(6). Change Language [English]
(7). Update Profile Settings
(8). Quit
-----
Your Choice:
  
```

3. **Configuring Backup Set Settings.**

To configure the backup set setting you need to edit the **/root/.B247Pro/config/backupSet.xml** file using a text editor, for example vi

You can either quit the RunConfigurator.sh script or open a new ssh session to edit the backupSet.xml file.

Please refer to Appendix A, B, and C for details and examples on how to create a backup sets using the **backupSet.xml** file.

**Notes:**

- i. Before importing the backupSet.xml file please remove any unused destinations and backup schedule settings. Otherwise, the following error will be displayed **"Failed to import XML file (Reason: Value of Name is empty!)"** when trying to import the backupSet.xml file.
- ii. Setup of the following cloud storage destinations; OneDrive, OneDrive For Business, DropBox, and Google Drive are not supported in Linux CLI environment, as these cloud storage destinations require authentication using a web browser.

4. **Importing the updated backupSet.xml file to Backup247 Advanced Client (B247PRO)**

After you have edited the backupSet.xml file with your chosen backup settings you need to import the settings back to Backup247 Advanced Client (B247PRO) so they can be uploaded to B247B247CBS backup server in order to create the backup set.

For example: to create a new file backup set called "filebackup" with encryption enabled and default encryption settings.

```
Main Menu
-----
(1). List Backup Sets
(2). Delete Backup Set
(3). Export Backup Set Settings to XML
(4). Import Backup Set Settings from XML
(5). Generate new Backup Set Settings Template
(6). Change Language [English]
(7). Update Profile Settings
(8). Quit
-----
Your Choice: 4
-----

The backup set "filebackup" is not owned by this computer, do
you want to take the ownership? (Y/N) ? Y
New backup set created.
Enable Encryption (Y/N) ? Y
Use default encryption settings (Y/N) ? Y
XML imported, uploading to server...

XML successfully uploaded to server
```

5. **Verify the Backup Set Settings**

To verify the uploaded backup set settings are correct select **(1). List Backup Sets** and then select the backup you wish to verify, for example backup set name filebackup.

```
Main Menu
-----
(1). List Backup Sets
(2). Delete Backup Set
(3). Export Backup Set Settings to XML
(4). Import Backup Set Settings from XML
(5). Generate new Backup Set Settings Template
```

```

(6). Change Language [English]
(7). Update Profile Settings
(8). Quit
-----
Your Choice: 1

Select a Backup Set to show more details
-----
(1). filebackup
-----
Your Choice: 1

Name           : filebackup
Owner          : centos-7-1810-temp
Type           : FILE
Selected Source : /backupsamples
Deselected Source : /root/.B247Pro
Deselected Source : /temp
Destination Name : B247B247CBS, Type: OBS
Encryption Key   :
                qtpHlg3uNVfoYkuZNOmpsPNf3ct3cCBgFI0CAlb3LC4=
Encryption Algorithm : AES
Encryption Mode      : CBC
Encryption Key Length: 256

Press Enter to continue...

```

**Congratulations! The backup set configuration is now complete!**

**Notes:**

- i. We would like to stress that it is very important to keep a separate record of your encryption key in a safe place, as you will not be able to restore your data without the correct encryption key.*
- ii. If you re-install Backup247 Advanced Client (B247PRO) or install Backup247 Advanced Client (B247PRO) on another machine the encryption will be required for restoring data from the backup set.*

**6. Verify the Backup Schedule**

To verify the scheduled backup settings are correct, check the Backup247 Advanced Client (B247PRO) scheduler log (**debug.log**) located in **/root/.B247Pro/log/Scheduler** folder.

```

# cat /root/.B247Pro/log/Scheduler/debug.log
[2022/01/07 12:14:46][info] Scheduler Version='9.0.2.24'
[2022/01/07 12:14:46][info] OS Name='Linux 3.10.0-
957.5.1.el7.x86_64' Version='3.10.0-957.5.1.el7.x86_64'
[2022/01/07 12:14:46][info] Java Vendor='Oracle Corporation'
Version='1.8.0_181'
[2022/01/07 12:14:46][info] Computer Name='centos-7-1810-temp'
[2022/01/07 12:14:46][info] User='LinuxTest''
[2022/01/07 12:14:46][info] Starting UserScheduler ...
[2022/01/07 12:14:46][info] UserScheduler started.
[2022/01/07 12:14:46][info] [filebackup (1641454921535)] Start
scheduler.

```

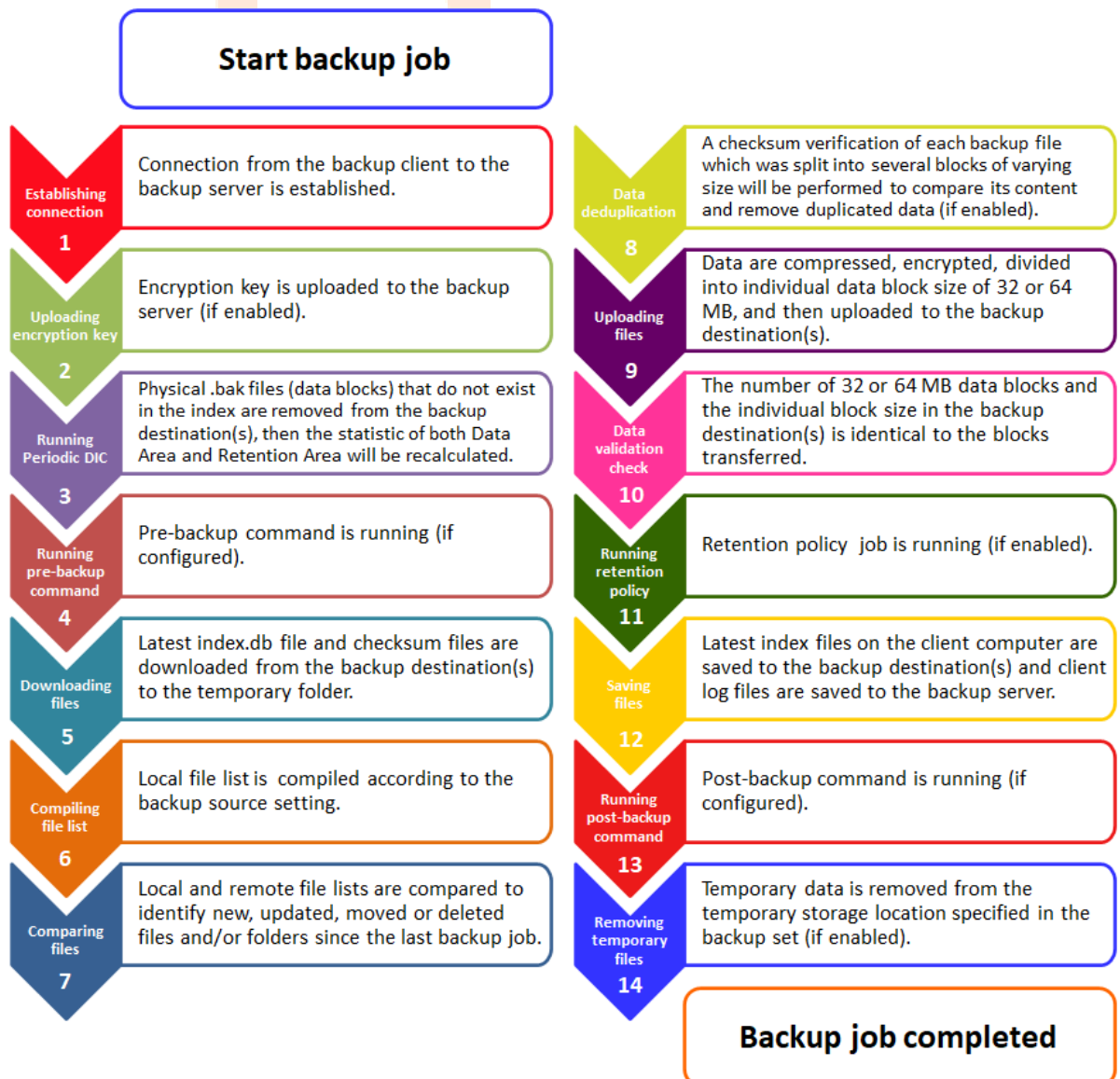
```
[2022/01/07 12:14:46][info] Profile is updated. Reloading scheduler ... Completed
[2022/01/07 12:14:46][info] [filebackup (1641454921535)] Next backup will run in 57 hr 45 min 13 sec.
[2022/01/07 12:19:46][info] Loading profile...
[2022/01/07 12:19:46][info] Loading profile from server ...
[2022/01/07 12:19:46][info] Loading profile from server ... Completed
[2022/01/07 12:19:46][info] Loading profile... Completed
[2022/01/07 12:19:46][info] Profile is reloaded from server. Reloading scheduler ...
[2022/01/07 12:19:46][info] [filebackup (1641454921535)] Next backup will run in 57 hr 40 min 13 sec.
[2022/01/07 12:19:46][info] Profile is reloaded from server. Reloading scheduler ... Completed
```

The Backup247 Advanced Client (B247PRO) scheduler service connects to the B247B247CBS backup server every 5 minutes to retrieve the latest profile updates. It will display a countdown of when the scheduled backup job(s) will be kicked off.

## 8 Overview on the Backup Process

The following steps are performed during a backup job. For an overview of the detailed process for Steps 3, 5, 10, and 12, please refer to the following chapters.

- ▶ Periodic Data Integrity Check (PDIC) Process (**Step 3**)
- ▶ Backup Set Index Handling Process
  - Start Backup Job (**Step 5**)
  - Completed Backup Job (**Step 12**)
- ▶ Data Validation Check Process (**Step 10**)



## 8.1 Periodic Data Integrity Check (PDIC) Process

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

To minimize the impact of the potential load of large number of PDIC jobs running at the same time on the B247B247CBS server, the schedule of a PDIC job for each backup set is automatically determined by the result of the following formula:

$$\text{PDIC schedule} = \%BackupSetID\% \text{ modulo } 5$$

or

$$\%BackupSetID\% \text{ mod } 5$$

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

<b>0</b>	<b>Monday</b>
<b>1</b>	<b>Tuesday</b>
<b>2</b>	<b>Wednesday</b>
<b>3</b>	<b>Thursday</b>
<b>4</b>	<b>Friday</b>

**NOTE: The PDIC schedule cannot be changed.**

**Example:**

Backup set ID: 1594627447932

Calculation:  $1594627447932 \text{ mod } 5 = 2$

<b>2</b>	<b>Wednesday</b>
----------	------------------

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.

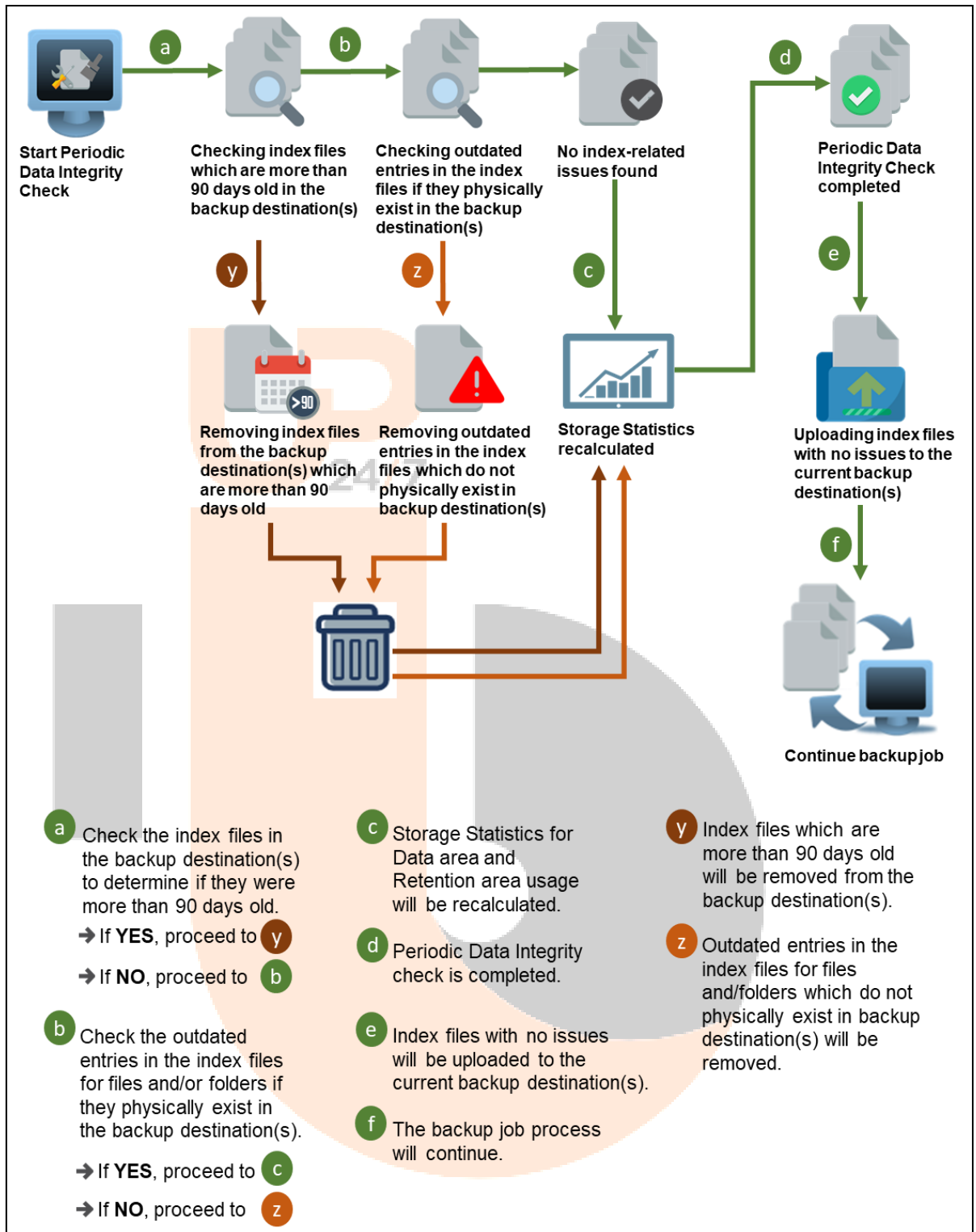
### NOTE

Although according to the PDIC formula for determining the schedule is  $\%BackupSetID\% \text{ mod } 5$ , 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. The PDIC job will run on the first backup job after upgrade to the latest client version from Backup247 Advanced Client (B247PRO) v6, v7, or pre-8.3.6.0 version.
2. 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.
3. 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.
4. 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 Delete Backup Data feature.
5. The PDIC job will not run on a backup set that contains any data which still in v6 format. It will only run if all v6 data format on a backup set has undergone data migration to v9 block format.

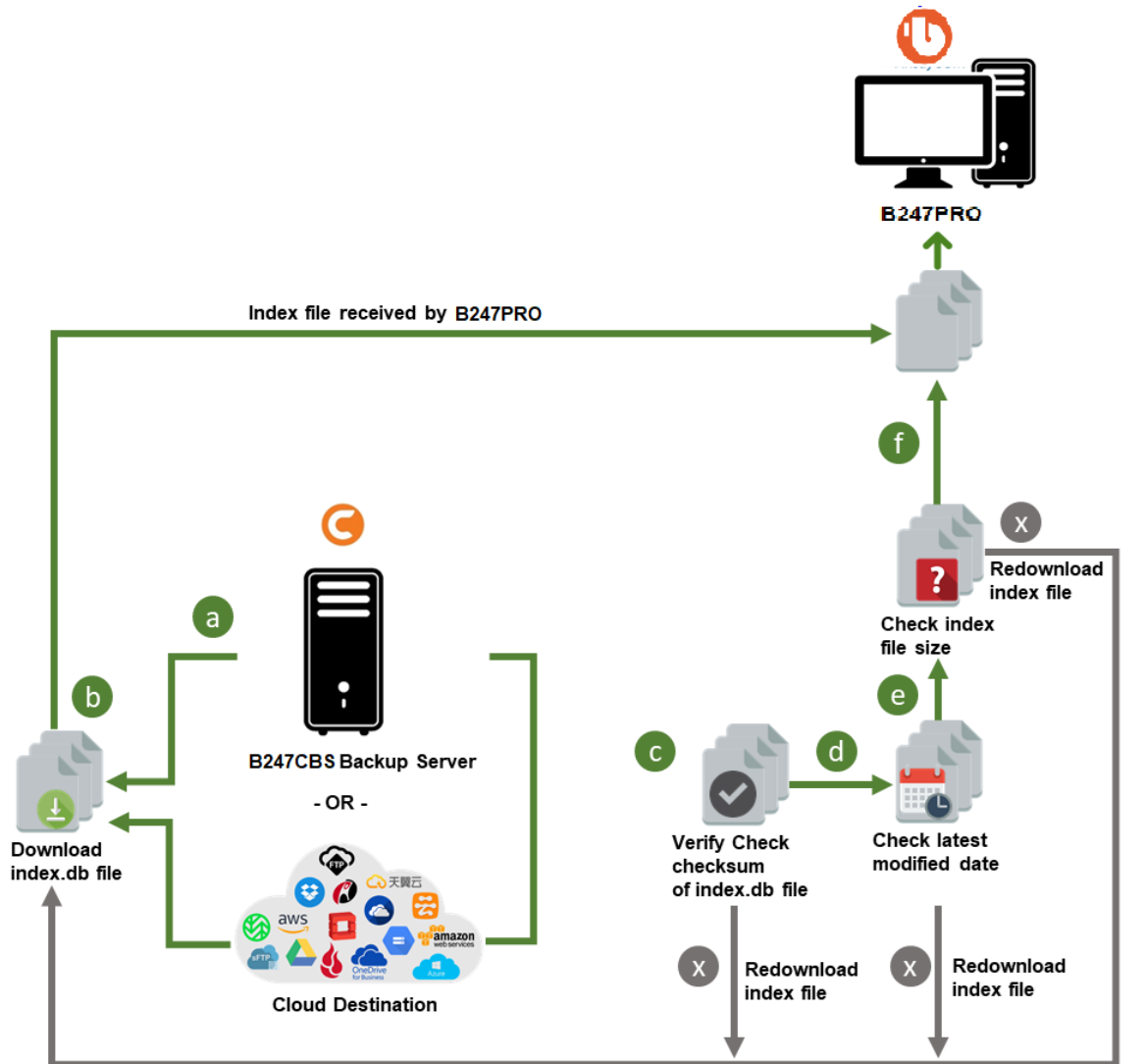




## 8.2 Backup Set Index Handling Process

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.

### 8.2.1 Start Backup Job



**a** Index file is retrieved from the current directory (i.e., AhsayCBS, Cloud Destination, FTP or SFTP).

**b** Index file will be downloaded.

**c** Verify Check checksum of index.db file.  
 → If checksum is correct, proceed to **d**  
 → If **NOT**, proceed to **x**

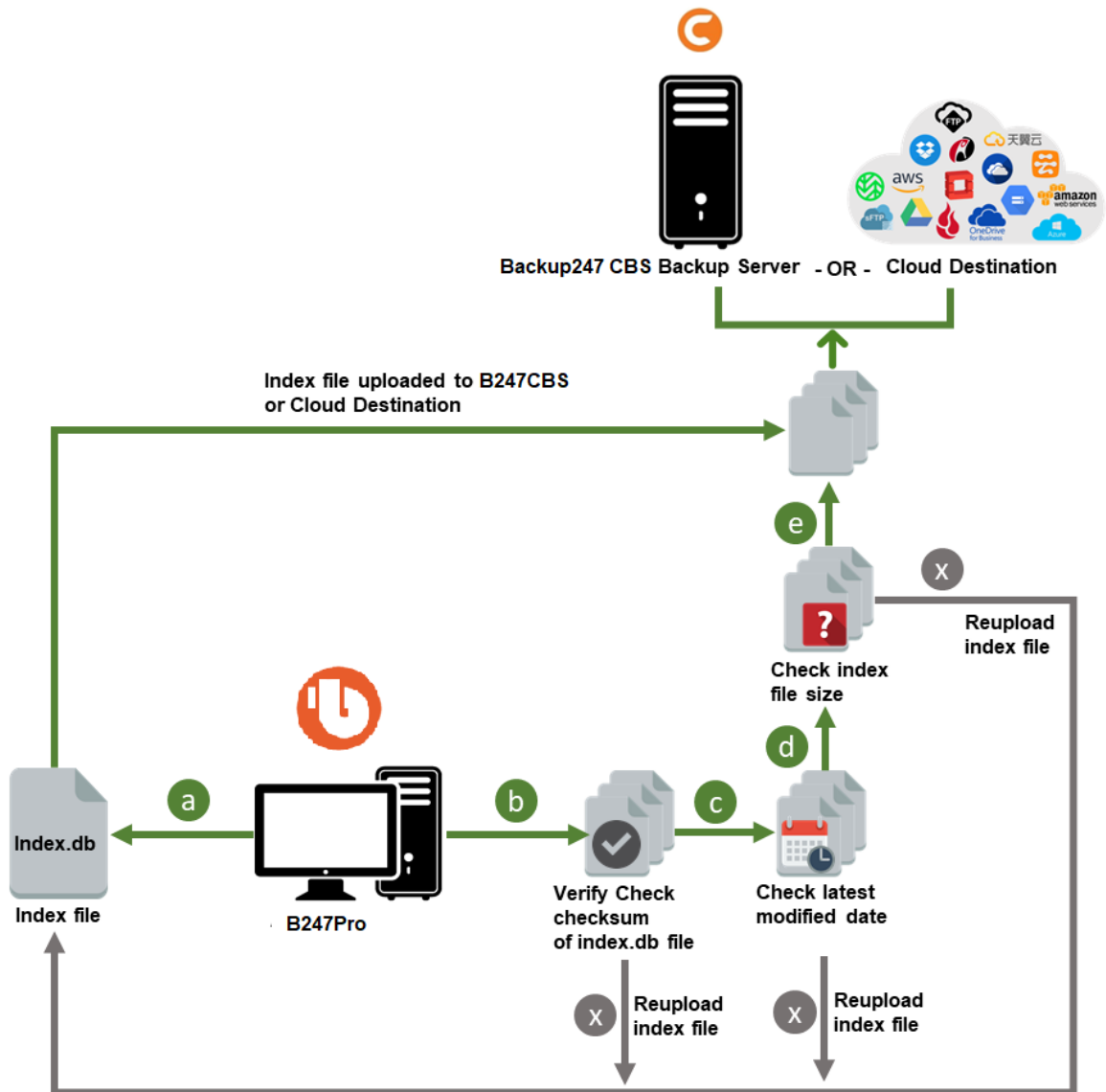
**d** Check modified date.  
 → If latest modified date is correct, proceed to **e**  
 → If **NOT**, proceed to **x**

**e** Check index file size.  
 → If index file size is correct, proceed to **f**  
 → If **NOT**, proceed to **x**

**f** If index is valid, use the index.db file to compile file list for backup.

**x** Index file will be redownloaded. Proceed to **b**

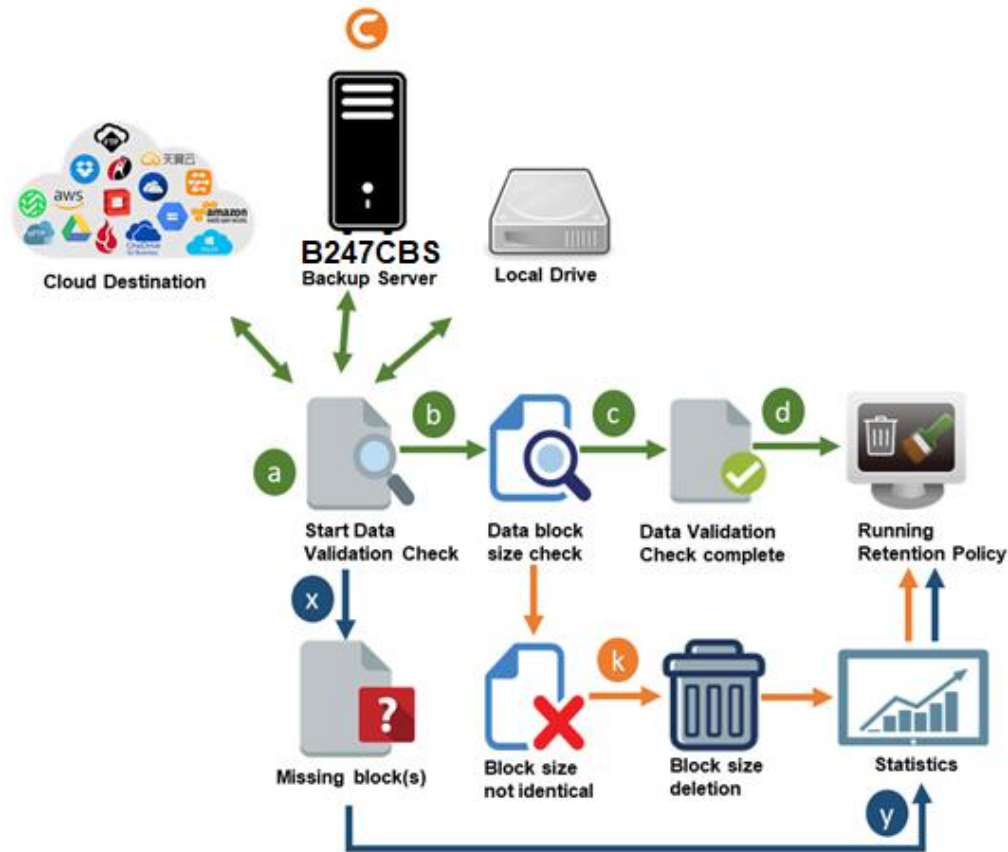
## 8.2.2 Completed Backup Job



- a** Index file from B247Pro is uploaded to B247CBS, Cloud Destination, FTP or SFTP.
- b** Verify Check checksum of index.db file.
  - If checksum is correct, proceed to **c**
  - If **NOT**, proceed to **X**
- c** Check modified date.
  - If latest modified date is correct, proceed to **d**
  - If **NOT**, proceed to **X**
- d** Check index file size.
  - If index file size is correct, proceed to **e**
  - If **NOT**, proceed to **X**
- e** Index file is uploaded correctly to B247CBS or Cloud Destination.
- X** Index file will be reuploaded. Proceed to **a**

### 8.3 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 32 or 64 MB data block files and the size of each block file are checked again after the files are transferred.



- a** Check the number of 32 or 64MB data blocks in the backup destination(s) is identical to the number of blocks transferred.
  - If YES, proceed to **b**
  - If NO, proceed to **x**
- b** Check the individual sizes of each data block in the backup destination(s) is identical to the sizes of each block transferred.
  - If YES, proceed to **c**
  - If NO, proceed to **k**
- c** Data validation check is complete.
- d** Retention policy will run (if enabled).
  - If NOT, proceed to **x**
- x** Files in the missing block(s) will be removed from the index.db file.
- y** Statistics will be updated according to the files removed.
  - Proceed to **d**
- k** Block size that are not identical will be removed from the backup destination(s).
  - Proceed to **y** then
  - Proceed to **d**

## 9 Running Backup Jobs

Use the `RunBackupSet.sh` script to start a backup job manually.

```
# cd /usr/local/B247Pro/bin
# sh RunBackupSet.sh "Sample Backup Set 03"
Using APP_HOME      : /usr/local/B247Pro
Using SETTING_HOME  :
Using JAVA_HOME     : /usr/local/B247Pro/jvm
Using JAVA_EXE      : /usr/local/B247Pro/jvm/bin/java
Using JAVA_OPTS     : -Xrs -Xms128m -Xmx2048m -
XX:MaxDirectMemorySize=512m -client -
Dsun.nio.PageAlignDirectMemory=true
Using JNI_PATH      : -Djava.library.path=../LinX64
Using CLASSPATH     : ../cb.jar
-
Running Backup Set - ' Sample Backup Set 03' ...
[2022/01/05 15:47:57] [info] [-] Start [ Backup247 Advanced
Client (B247PRO) v9.0.2.24 ]
[2022/01/05 15:47:57] [info] [-] Saving encrypted backup set
encryption keys to server...
[2022/01/05 15:47:58] [info] [1641349114378] Start Backup ...
[Deduplication: enabled, Deduplication scope: All files within
the same backup set, Migrate Delta: enabled]
[2022/01/05 15:47:58] [info] [1641349114378] Using Temporary
Directory /root/.B247Pro/temp/1641347569071/OBS@1641349114378
[2022/01/05 15:48:00] [info] [1641349114378] Start Periodic Data
Integrity Check on backup set = "Sample Backup Set 03"
destination = "B247B247CBS"
[2022/01/05 15:48:00] [info] [1641349114378] Start data integrity
check on backup set "Sample Backup Set 03(1641347569071)",
"B247B247CBS(1641349114378)", crc disabled, rebuild index
disabled
[2022/01/05 15:48:00] [info] [1641349114378] Start processing
data integrity check on backup set= "Sample Backup Set 03"
destination= "B247B247CBS"
[2022/01/05 15:48:02] [info] [1641349114378] Download valid index
files from backup job "Current" to
"/root/.B247Pro/temp/1641347569071/OBS@1641349114378/index".
[2022/01/05 15:48:02] [info] [1641349114378] Skipped to run Data
Integrity Check for backup set "Sample Backup Set 03" in
destination "B247B247CBS" because no data is in index.
[2022/01/05 15:48:03] [info] [1641349114378] Data integrity check
on backup set= "Sample Backup Set 03" destination= "B247B247CBS"
is completed
[2022/01/05 15:48:03] [info] [1641349114378] Finished data
integrity check on backup set "Sample Backup Set
03(1641347569071)", "B247B247CBS(1641349114378)", crc disabled,
rebuild index disabled
[2022/01/05 15:48:03] [info] [1641349114378] Completed data
integrity check on backup set "Sample Backup Set
03(1641347569071)", "B247B247CBS(1641349114378)", crc disabled,
rebuild index disabled
[2022/01/05 15:48:03] [info] [-] Start running pre-commands
[2022/01/05 15:48:03] [info] [-] Finished running pre-commands
[2022/01/05 15:48:03] [info] [1641349114378] Downloading server
file list...
[2022/01/05 15:48:03] [info] [1641349114378] Download valid index
files from backup job "Current" to
"/root/.B247Pro/temp/1641347569071/OBS@1641349114378/index".
```

```
[2022/01/05 15:48:03] [info] [1641349114378] Downloading server
file list... Completed
[2022/01/05 15:48:04] [info] [1641349114378] Reading backup
source from hard disk...
[2022/01/05 15:48:04] [info] [1641349114378] Reading backup
source from hard disk... Completed
[2022/01/05 15:48:04] [info] [1641349114378] [New Directory]... /
[2022/01/05 15:48:04] [info] [1641349114378] [New Directory]...
/root
[2022/01/05 15:48:05] [info] [1641349114378] [New Directory]...
/root/Documents
[2022/01/05 15:48:05] [info] [1641349114378] [New Directory]...
/root/Documents/testfiles
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 100%
of "/root/Documents/sample1.rtf"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 10% of
"/root/Documents/sample1.ppt"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 21% of
"/root/Documents/sample1.ppt"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 11% of
"/root/Documents/sample1.pdf"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 25% of
"/root/Documents/sample1.pdf"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 36% of
"/root/Documents/sample1.pdf"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 32% of
"/root/Documents/sample1.ppt"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 47% of
"/root/Documents/sample1.pdf"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 59% of
"/root/Documents/sample1.pdf"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 43% of
"/root/Documents/sample1.ppt"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 70% of
"/root/Documents/sample1.pdf"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 53% of
"/root/Documents/sample1.ppt"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 81% of
"/root/Documents/sample1.pdf"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 100%
of "/root/Documents/sample1.txt"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 92% of
"/root/Documents/sample1.pdf"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 64% of
"/root/Documents/sample1.ppt"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 100%
of "/root/Documents/sample1.pdf"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 100%
of "/root/Documents/sample1.xls"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 75% of
"/root/Documents/sample1.ppt"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 49% of
"/root/Documents/sample2.pdf"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 74% of
"/root/Documents/sample2.pdf"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 99% of
"/root/Documents/sample2.pdf"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 100%
of "/root/Documents/sample2.pdf"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 12% of
"/root/Documents/sample2.ppt"
```

```
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 100%
of "/root/Documents/sample2.rtf"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 89% of
"/root/Documents/sample1.ppt"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 24% of
"/root/Documents/sample2.ppt"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 100%
of "/root/Documents/sample1.ppt"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 37% of
"/root/Documents/sample2.ppt"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 100%
of "/root/Documents/sample2.txt"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 49% of
"/root/Documents/sample2.ppt"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 100%
of "/root/Documents/sample3.xls"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 61% of
"/root/Documents/sample2.ppt"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 100%
of "/root/Documents/sample3.txt"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 100%
of "/root/Documents/sample2.xls"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 71% of
"/root/Documents/sample2.ppt"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 100%
of "/root/Documents/sample2.ppt"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 10% of
"/root/Documents/sample_640x360.avi"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 20% of
"/root/Documents/sample_640x360.avi"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 10% of
"/root/Documents/sample_960x540.mpg"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 30% of
"/root/Documents/sample_640x360.avi"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 20% of
"/root/Documents/sample_960x540.mpg"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 10% of
"/root/Documents/sample_960x540.mkv"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 40% of
"/root/Documents/sample_640x360.avi"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 30% of
"/root/Documents/sample_960x540.mpg"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 50% of
"/root/Documents/sample_640x360.avi"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 20% of
"/root/Documents/sample_960x540.mkv"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 60% of
"/root/Documents/sample_640x360.avi"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 40% of
"/root/Documents/sample_960x540.mpg"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 70% of
"/root/Documents/sample_640x360.avi"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 50% of
"/root/Documents/sample_960x540.mpg"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 30% of
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[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 60% of
"/root/Documents/sample_960x540.mpg"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 70% of
"/root/Documents/sample_960x540.mpg"
```

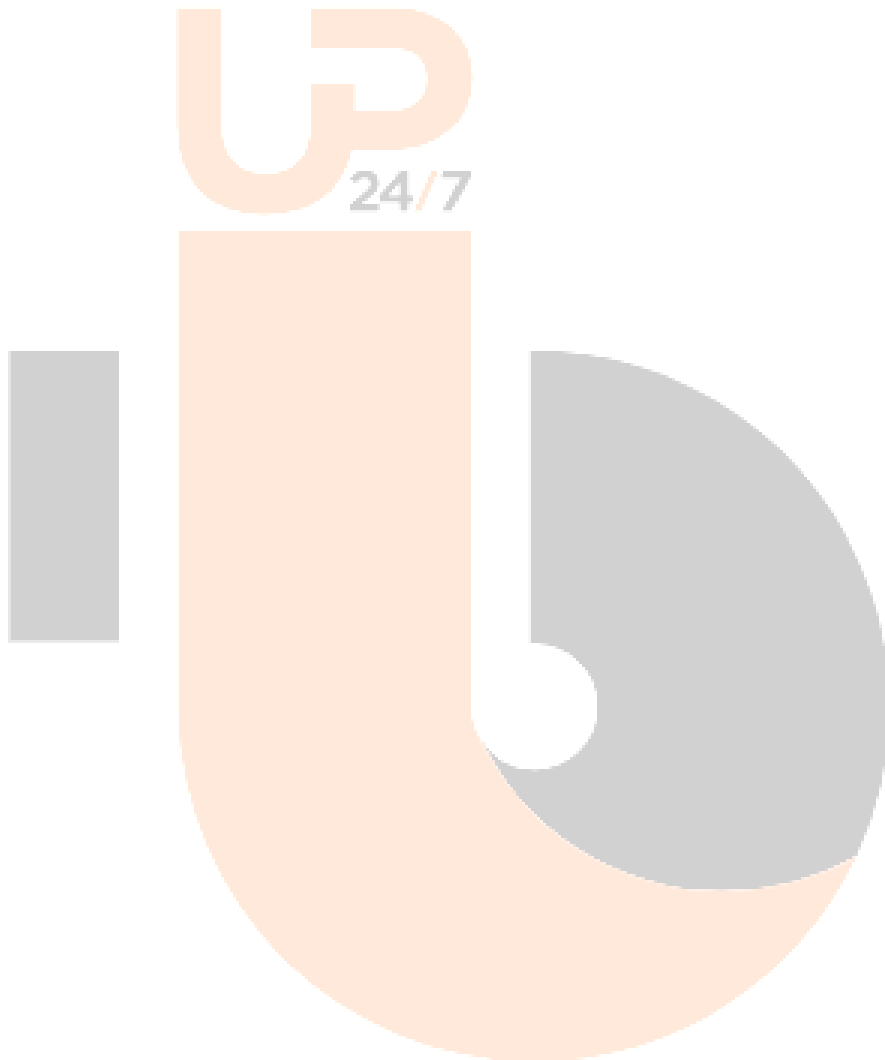
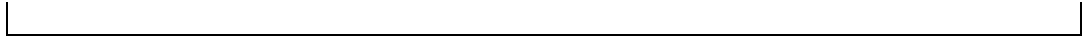
```
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[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 40% of
"/root/Documents/sample_960x540.mkv"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 90% of
"/root/Documents/sample_960x540.mpg"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 90% of
"/root/Documents/sample_640x360.avi"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 100%
of "/root/Documents/sample_960x540.mpg"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 100%
of "/root/Documents/sample_640x360.avi"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 50% of
"/root/Documents/sample_960x540.mkv"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 60% of
"/root/Documents/sample_960x540.mkv"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 70% of
"/root/Documents/sample_960x540.mkv"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 72% of
"/root/Documents/settings.sys"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 80% of
"/root/Documents/sample_960x540.mkv"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 100%
of "/root/Documents/settings.sys"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 90% of
"/root/Documents/sample_960x540.mkv"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 11% of
"/root/Documents/testfiles/sample1.pdf"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 100%
of "/root/Documents/sample_960x540.mkv"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 25% of
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[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 36% of
"/root/Documents/testfiles/sample1.pdf"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 10% of
"/root/Documents/testfiles/sample1.ppt"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 47% of
"/root/Documents/testfiles/sample1.pdf"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 100%
of "/root/Documents/testfiles/sample1.rtf"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 59% of
"/root/Documents/testfiles/sample1.pdf"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 100%
of "/root/Documents/testfiles/sample1.txt"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 70% of
"/root/Documents/testfiles/sample1.pdf"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 21% of
"/root/Documents/testfiles/sample1.ppt"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 81% of
"/root/Documents/testfiles/sample1.pdf"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 32% of
"/root/Documents/testfiles/sample1.ppt"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 49% of
"/root/Documents/testfiles/sample2.pdf"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 43% of
"/root/Documents/testfiles/sample1.ppt"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 74% of
"/root/Documents/testfiles/sample2.pdf"
```



```
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 99% of
"/root/Documents/testfiles/sample2.pdf"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 100%
of "/root/Documents/testfiles/sample2.pdf"
[2022/01/05 15:48:05] [info] [1641349114378]
com.Backup247.afc.event.d@6ce6b6a1
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 53% of
"/root/Documents/testfiles/sample1.ppt"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 100%
of "/root/Documents/testfiles/sample1.xls"
[2022/01/05 15:48:05] [info] [1641349114378]
com.Backup247.afc.event.d@5d640301
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 64% of
"/root/Documents/testfiles/sample1.ppt"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 92% of
"/root/Documents/testfiles/sample1.pdf"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 100%
of "/root/Documents/testfiles/sample1.pdf"
[2022/01/05 15:48:05] [info] [1641349114378]
com.Backup247.afc.event.d@701eac98
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 75% of
"/root/Documents/testfiles/sample1.ppt"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 12% of
"/root/Documents/testfiles/sample2.ppt"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 24% of
"/root/Documents/testfiles/sample2.ppt"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 37% of
"/root/Documents/testfiles/sample2.ppt"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 89% of
"/root/Documents/testfiles/sample1.ppt"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 49% of
"/root/Documents/testfiles/sample2.ppt"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 100%
of "/root/Documents/testfiles/sample1.ppt"
[2022/01/05 15:48:05] [info] [1641349114378]
com.Backup247.afc.event.d@2380b5c0
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"/root/Documents/testfiles/sample2.ppt"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 100%
of "/root/Documents/testfiles/sample2.rtf"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 71% of
"/root/Documents/testfiles/sample2.ppt"
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com.Backup247.afc.event.d@27bf3568
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 100%
of "/root/Documents/testfiles/sample2.xls"
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com.Backup247.afc.event.d@53a3e6dd
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 100%
of "/root/Documents/testfiles/sample3.txt"
[2022/01/05 15:48:05] [info] [1641349114378]
com.Backup247.afc.event.d@579c6871
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 100%
of "/root/Documents/testfiles/sample2.txt"
[2022/01/05 15:48:05] [info] [1641349114378]
com.Backup247.afc.event.d@62bdbffb
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 100%
of "/root/Documents/testfiles/sample3.xls"
[2022/01/05 15:48:05] [info] [1641349114378]
com.Backup247.afc.event.d@26ecf4e9
```

```
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 100%
of "/root/Documents/testfiles/sample2.ppt"
[2022/01/05 15:48:05] [info] [1641349114378]
com.Backup247.afc.event.d@3bad0936
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 10% of
"/root/Documents/testfiles/sample_640x360.avi"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 20% of
"/root/Documents/testfiles/sample_640x360.avi"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 30% of
"/root/Documents/testfiles/sample_640x360.avi"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 40% of
"/root/Documents/testfiles/sample_640x360.avi"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 50% of
"/root/Documents/testfiles/sample_640x360.avi"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 60% of
"/root/Documents/testfiles/sample_640x360.avi"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 70% of
"/root/Documents/testfiles/sample_640x360.avi"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 80% of
"/root/Documents/testfiles/sample_640x360.avi"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 90% of
"/root/Documents/testfiles/sample_640x360.avi"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 100%
of "/root/Documents/testfiles/sample_640x360.avi"
[2022/01/05 15:48:05] [info] [1641349114378]
com.Backup247.afc.event.d@6d2dd184
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 10% of
"/root/Documents/testfiles/sample_960x540.mkv"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 20% of
"/root/Documents/testfiles/sample_960x540.mkv"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 30% of
"/root/Documents/testfiles/sample_960x540.mkv"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 40% of
"/root/Documents/testfiles/sample_960x540.mkv"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 50% of
"/root/Documents/testfiles/sample_960x540.mkv"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 10% of
"/root/Documents/testfiles/sample_960x540.mpg"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 20% of
"/root/Documents/testfiles/sample_960x540.mpg"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 30% of
"/root/Documents/testfiles/sample_960x540.mpg"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 40% of
"/root/Documents/testfiles/sample_960x540.mpg"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 50% of
"/root/Documents/testfiles/sample_960x540.mpg"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 60% of
"/root/Documents/testfiles/sample_960x540.mpg"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 70% of
"/root/Documents/testfiles/sample_960x540.mpg"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 80% of
"/root/Documents/testfiles/sample_960x540.mpg"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 90% of
"/root/Documents/testfiles/sample_960x540.mpg"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 100%
of "/root/Documents/testfiles/sample_960x540.mpg"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 60% of
"/root/Documents/testfiles/sample_960x540.mkv"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 70% of
"/root/Documents/testfiles/sample_960x540.mkv"
```

```
[2022/01/05 15:48:05] [info] [1641349114378]
com.Backup247.afc.event.d@759d9a2a
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 80% of
"/root/Documents/testfiles/sample_960x540.mkv"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 90% of
"/root/Documents/testfiles/sample_960x540.mkv"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 100%
of "/root/Documents/testfiles/sample_960x540.mkv"
[2022/01/05 15:48:05] [info] [1641349114378]
com.Backup247.afc.event.d@19ealc7
[2022/01/05 15:48:06] [info] [1641349114378] Start validating the
presence and size of backup data in destination "B247B247CBS"...
[2022/01/05 15:48:06] [info] [1641349114378] File:
"1641347569071/blocks/2022-01-05-15-47-41/0/000000.bak", Size:
1,335,776, OK
[2022/01/05 15:48:06] [info] [1641349114378] File:
"1641347569071/blocks/2022-01-05-15-47-41/0/000001.bak", Size:
1,307,600, OK
[2022/01/05 15:48:06] [info] [1641349114378] File:
"1641347569071/blocks/2022-01-05-15-47-41/0/000002.bak", Size:
1,754,864, OK
[2022/01/05 15:48:06] [info] [1641349114378] File:
"1641347569071/blocks/2022-01-05-15-47-41/0/000003.bak", Size:
45,440, OK
[2022/01/05 15:48:06] [info] [1641349114378] Finished validating
the presence and size of backup data in destination "B247B247CBS"
[2022/01/05 15:48:06] [info] [1641349114378] Total New Files = 31
[2022/01/05 15:48:06] [info] [1641349114378] Total New
Directories = 4
[2022/01/05 15:48:06] [info] [1641349114378] Total New Links = 0
[2022/01/05 15:48:06] [info] [1641349114378] Total Updated Files
= 0
[2022/01/05 15:48:06] [info] [1641349114378] Total Attributes
Changed Files = 0
[2022/01/05 15:48:06] [info] [1641349114378] Total Deleted Files
= 0
[2022/01/05 15:48:06] [info] [1641349114378] Total Deleted
Directories = 0
[2022/01/05 15:48:06] [info] [1641349114378] Total Deleted Links
= 0
[2022/01/05 15:48:06] [info] [1641349114378] Total Moved Files =
0
[2022/01/05 15:48:06] [info] [1641349114378] Total Dedupe Saving
for this job = 4.57MB
[2022/01/05 15:48:06] [info] [1641349114378] Total Backup Data
Size for this job = 9.41MB
[2022/01/05 15:48:06] [info] [1641349114378] Total Dedupe Saving
for destination = 4.57MB
[2022/01/05 15:48:06] [info] [1641349114378] Total Backup Data
Size for destination = 9.41MB
[2022/01/05 15:48:06] [info] [-] Saving server information to
destination.
[2022/01/05 15:48:07] [info] [1641349114378] Saving encrypted
backup file index to 1641347569071/blocks/2022-01-05-15-47-41 at
destination B247B247CBS...
[2022/01/05 15:48:07] [info] [-] Start running post-commands
[2022/01/05 15:48:07] [info] [-] Finished running post-commands
[2022/01/05 15:48:10] [info] [1641349114378] Deleting temporary
file /root/.B247Pro/temp/1641347569071/OBS@1641349114378
[2022/01/05 15:48:10] [info] [1641349114378] Backup Completed
Successfully
```



## 10 Restoring Data

1. To restore files that have been backed up from your backup destination, you need to use the Restore.sh script by using a text editor like vi to configure the restore settings like:

- Backup Set Name -> BACKUP\_SET=""
- Backup Destination -> DESTINATION=""
- Location of Restored Files -> RESTORE\_TO=""
- Files/Folders to be Restored -> RESTORE\_FROM=""
- Snapshot to be restored ->POINT\_IN\_TIME=""
- Applying the original permission to the restore files ->RESTORE\_PERMISSION=""
- Verifying in-file delta file checksum during restore ->VERIFY\_CHKSUM=""

```
# cd /usr/local/B247Pro/bin
# vi Restore.sh

#!/bin/sh

##### Restore.sh
#####
# You can use this shell script to restore backup files using
command-line.
# Just customize the "User Define Section" below with values for
your restore
# action.

#####
##

##### Start: User Defined Section
#####

# ----- BACKUP_SET -----
# | The name or ID of the backup set that you want to restore.
# | If backup set name is not in English, please use ID instead.
# | e.g. BACKUP_SET="1119083740107"
# | or BACKUP_SET="FileBackupSet-1"
# |
# | You can leave this parameter blank if you have only 1 backup
set.
# -----
BACKUP_SET="Sample Backup Set 03"

# ----- DESTINATION -----
--
# The name or ID of the backup destination that you want to
restore from.
# If backup destination name is not in English, please use ID
instead.
# | e.g. DESTINATION="1740107119083"
# | or DESTINATION="Destination-1"
# |
# | You can leave this parameter blank if you have only 1
destination.
```

```

# -----
DESTINATION="B247B247CBS"

# ----- RESTORE_TO -----
# | Directory to where you want files to be restored
# | set to "" to restore files to original location
# | e.g. RESTORE_TO="/tmp"
# -----
RESTORE_TO="/usr/local/alternate"

# ----- RESTORE_FROM -----
# | File/Directory on the backup server that you would like to
restore
# | e.g. RESTORE_FROM="/Data"
# -----
RESTORE_FROM="/root/Documents"

# ----- POINT_IN_TIME -----
# The point-in-time snapshot (successful backup) that you want to
restore |
# from the backup server. Use "Current" for the latest backup
snapshot |
# e.g. POINT_IN_TIME="2006-10-04-12-57-13"
# or POINT_IN_TIME="Current"
#
# You can retrieve the point in time by using the
ListBackupJob.sh
# -----
POINT_IN_TIME="Current"

# ----- RESTORE_PERMISSION -----
# | set to "Y" if you want to restore file permissions
# | set to "N" if you do NOT want to restore file permissions
# -----
RESTORE_PERMISSION="N"

# ----- SKIP_INVALID_KEY -----
# | set to "Y" if you want to skip restore file with invalid key
# | set to "N" if you want to prompt user to input a correct key
# -----
SKIP_INVALID_KEY="N"

# ----- SYNC_OPTION -----
# | Delete extra files
# | set to "Y" if you want to enable sync option
# | set to "N" if you do NOT want to enable sync option
# | set to "" to prompt for selection
# -----
SYNC_OPTION="N"

# ----- REPLACE_EXISTING_FILE -----
# set to "--all" to replace all existing file(s) of the same
filename
# set to "--none" to skip all existing file(s) with the same
filename
# set to "" to prompt for selection
# -----
REPLACE_EXISTING_FILE="--all"

# ----- SETTING_HOME -----
# | Directory to your setting home.

```

```

# | Default to ${HOME}/.B247Pro when not set.
# | e.g. SETTING_HOME="${HOME}/.B247Pro"
# -----
SETTING_HOME=""

# ----- FILTER -----
# Filter out what files you want to restore
# -Pattern=xxx-Type=yyy-Target=zzz
# where xxx is the filter pattern,
# yyy is the filter type, which can be one of the following:
# [exact | exactMatchCase | contains | containsMatchCase]
|
# startWith | startWithMatchCase | endWith | endWithMatchCase]
|
# zzz is the filter target, which can be one of the following:
# [toFile | toFileDir | toDir]
|
#
# e.g. FILTER="-Pattern=.txt-Type=exact-Target=toFile"
# -----
FILTER=""

# ----- TEMP_DIR -----
# | Directory to where you want to store restore files
temporarily
# | set to "" to use the temporary directory in the backup set
# | e.g. TEMP_DIR="/tmp"
# -----
TEMP_DIR="/root/temp"

# ----- VERIFY_CHKSUM -----
# | set to "Y" if you want to verify in-file delta file checksum
during restore|
# | set to "N" if you do NOT want to verify in-file delta file
checksum during |
# | restore
|
# -----
VERIFY_CHKSUM="N"

##### END: User Defined Section #####

```

2. After the Restore.sh script is configured the files can be restored by running the Restore.sh script.

```

# cd /usr/local/B247Pro/bin
# sh Restore.sh
Using APP_HOME:           : /usr/local/B247Pro
Using BACKUP_SET          : Sample Backup Set 03
Using RESTORE_FROM        : /root/Documents
Using RESTORE_TO          : /usr/local/alternate
Using POINT_IN_TIME       : Current
Using RESTORE_PERMISSION : N
Using TEMP_DIR            : /root/temp
Filter Pattern not set, filter would not apply to restore
[2022-01-05 16:03:53] Start [ Backup247 Advanced Client (B247PRO)
v9.0.2.24 ]
[2022-01-05 16:03:53] OS: Linux 4.18.0-240.1.1.el8_3.x86_64
(localhost.localdomain); CPU Model: VMware-Intel(R) Xeon(R) Gold
5218R CPU @ 2.10GHz,Intel(R) Xeon(R) Gold 5218R CPU @

```

```
2.10GHz,Intel(R) Xeon(R) Gold 5218R CPU @ 2.10GHz,Intel(R)
Xeon(R) Gold 5218R CPU @ 2.10GHz; Number of Processors: 4; Heap
Size: 109.1MB (Current) / 1.8GB (Maximum); Physical Memory:
565.7MB (Free) / 3.6GB (Total)
[2022-01-05 16:03:53] start,Start [ Backup247 Advanced Client
(B247PRO) v9.0.2.24 ],0,0,0,,0,0

[2022-01-05 16:03:53] Selected job: 2022-01-05-16-03-45
[2022-01-05 16:03:53] Selected source: [/root/Documents]
[2022-01-05 16:03:53] Info: [followLink=false
marshalTargetPath=false deleteForSync=false skipFaultKey=false
verifyDeltaFileChecksum=false ignoreSegmentInfoCorruptedData=true
restorePermission=false [RestoreLocation] type=RAW
path=[/usr/local/alternate]]
[2022-01-05 16:03:54] Creating new directory...
"/usr/local/alternate/root"
[2022-01-05 16:03:54] Creating new directory...
"/usr/local/alternate/root/Documents"
[2022-01-05 16:03:54] Creating new directory...
"/usr/local/alternate/root/Documents/testfiles"
[2022-01-05 16:03:54] Downloading...
"/usr/local/alternate/root/Documents/settings.sys" (Total 44K
bytes)
[2022-01-05 16:03:54] Downloading...
"/usr/local/alternate/root/Documents/sample1.ppt" (Total 891K
bytes)
[2022-01-05 16:03:54] Downloading...
"/usr/local/alternate/root/Documents/testfiles/sample1.ppt"
(Total 891K bytes)
[2022-01-05 16:03:54] Downloading...
"/usr/local/alternate/root/Documents/sample3.xls" (Total 13K
bytes)
[2022-01-05 16:03:54] Downloading...
"/usr/local/alternate/root/Documents/testfiles/sample3.xls"
(Total 13K bytes)
[2022-01-05 16:03:54] Downloading...
"/usr/local/alternate/root/Documents/sample2.xls" (Total 7K
bytes)
[2022-01-05 16:03:54] Downloading...
"/usr/local/alternate/root/Documents/testfiles/sample2.xls"
(Total 7K bytes)
[2022-01-05 16:03:54] Downloading...
"/usr/local/alternate/root/Documents/sample_640x360.avi" (Total
569K bytes)
[2022-01-05 16:03:54] Downloading...
"/usr/local/alternate/root/Documents/testfiles/sample_640x360.avi
" (Total 569K bytes)
[2022-01-05 16:03:54] Downloading...
"/usr/local/alternate/root/Documents/sample1.pdf" (Total 567K
bytes)
[2022-01-05 16:03:54] Downloading...
"/usr/local/alternate/root/Documents/testfiles/sample1.pdf"
(Total 567K bytes)
[2022-01-05 16:03:54] Downloading...
"/usr/local/alternate/root/Documents/sample2.pdf" (Total 64K
bytes)
[2022-01-05 16:03:54] Downloading...
"/usr/local/alternate/root/Documents/testfiles/sample2.pdf"
(Total 64K bytes)
```



```

[2022-01-05 16:03:54] Downloading...
"/usr/local/alternate/root/Documents/sample2.rtf" (Total 1K
bytes)
[2022-01-05 16:03:54] Downloading...
"/usr/local/alternate/root/Documents/testfiles/sample2.rtf"
(Total 1K bytes)
[2022-01-05 16:03:54] Downloading...
"/usr/local/alternate/root/Documents/sample2.txt" (Total 2K
bytes)
[2022-01-05 16:03:54] Downloading...
"/usr/local/alternate/root/Documents/testfiles/sample2.txt"
(Total 2K bytes)
[2022-01-05 16:03:54] Downloading...
"/usr/local/alternate/root/Documents/sample3.txt" (Total 3K
bytes)
[2022-01-05 16:03:54] Downloading...
"/usr/local/alternate/root/Documents/testfiles/sample3.txt"
(Total 3K bytes)
[2022-01-05 16:03:54] Downloading...
"/usr/local/alternate/root/Documents/sample_960x540.mpg" (Total
733K bytes)
[2022-01-05 16:03:54] Downloading...
"/usr/local/alternate/root/Documents/testfiles/sample_960x540.mpg
" (Total 733K bytes)
[2022-01-05 16:03:54] Downloading...
"/usr/local/alternate/root/Documents/testfiles/sample1.rtf"
(Total 102K bytes)
[2022-01-05 16:03:54] Downloading...
"/usr/local/alternate/root/Documents/testfiles/sample1.txt"
(Total 607 bytes)
[2022-01-05 16:03:54] Downloading...
"/usr/local/alternate/root/Documents/sample1.rtf" (Total 116K
bytes)
[2022-01-05 16:03:54] Downloading...
"/usr/local/alternate/root/Documents/sample1.txt" (Total 14K
bytes)
[2022-01-05 16:03:54] Downloading...
"/usr/local/alternate/root/Documents/sample1.xls" (Total 16K
bytes)
[2022-01-05 16:03:54] Downloading...
"/usr/local/alternate/root/Documents/testfiles/sample1.xls"
(Total 16K bytes)
[2022-01-05 16:03:54] Downloading...
"/usr/local/alternate/root/Documents/sample2.ppt" (Total 518K
bytes)
[2022-01-05 16:03:54] Downloading...
"/usr/local/alternate/root/Documents/testfiles/sample2.ppt"
(Total 518K bytes)
[2022-01-05 16:03:54] Downloading...
"/usr/local/alternate/root/Documents/sample_960x540.mkv" (Total
1.26M bytes)
[2022-01-05 16:03:54] Downloading...
"/usr/local/alternate/root/Documents/testfiles/sample_960x540.mkv
" (Total 1.26M bytes)
[2022-01-05 16:03:55] Restore Completed Successfully
[2022-01-05 16:03:55] end,RESTORE_STOP_SUCCESS,0,0,0,,0,0
  
```

### 3. Verify the files are restored on the machine.

```
# ls -la /usr/local/alternate/root/Documents/testfiles/
```

```
total 4816
drwxr-xr-x. 2 root root    4096 Jan  5 16:03 .
drwxr-xr-x. 3 root root    4096 Jan  5 16:03 ..
-rw-r--r--. 1 root root 581407 Dec  9 18:28 sample1.pdf
-rw-r--r--. 1 root root 912384 Dec  9 18:29 sample1.ppt
-rw-r--r--. 1 root root 105344 Dec  9 18:31 sample1.rtf
-rw-r--r--. 1 root root    607 Dec  9 18:24 sample1.txt
-rw-r--r--. 1 root root   16384 Dec  9 18:30 sample1.xls
-rw-r--r--. 1 root root   65715 Dec  9 18:29 sample2.pdf
-rw-r--r--. 1 root root 530432 Dec  9 18:29 sample2.ppt
-rw-r--r--. 1 root root   1958 Dec  9 18:31 sample2.rtf
-rw-r--r--. 1 root root   2859 Dec  9 18:25 sample2.txt
-rw-r--r--. 1 root root   7168 Dec  9 18:30 sample2.xls
-rw-r--r--. 1 root root   3541 Dec  9 18:25 sample3.txt
-rw-r--r--. 1 root root   13312 Dec  9 18:30 sample3.xls
-rw-r--r--. 1 root root 583572 Dec  9 18:26 sample_640x360.avi
-rw-r--r--. 1 root root 1319066 Dec  9 18:27 sample_960x540.mkv
-rw-r--r--. 1 root root 751261 Dec  9 18:27 sample_960x540.mpg
```

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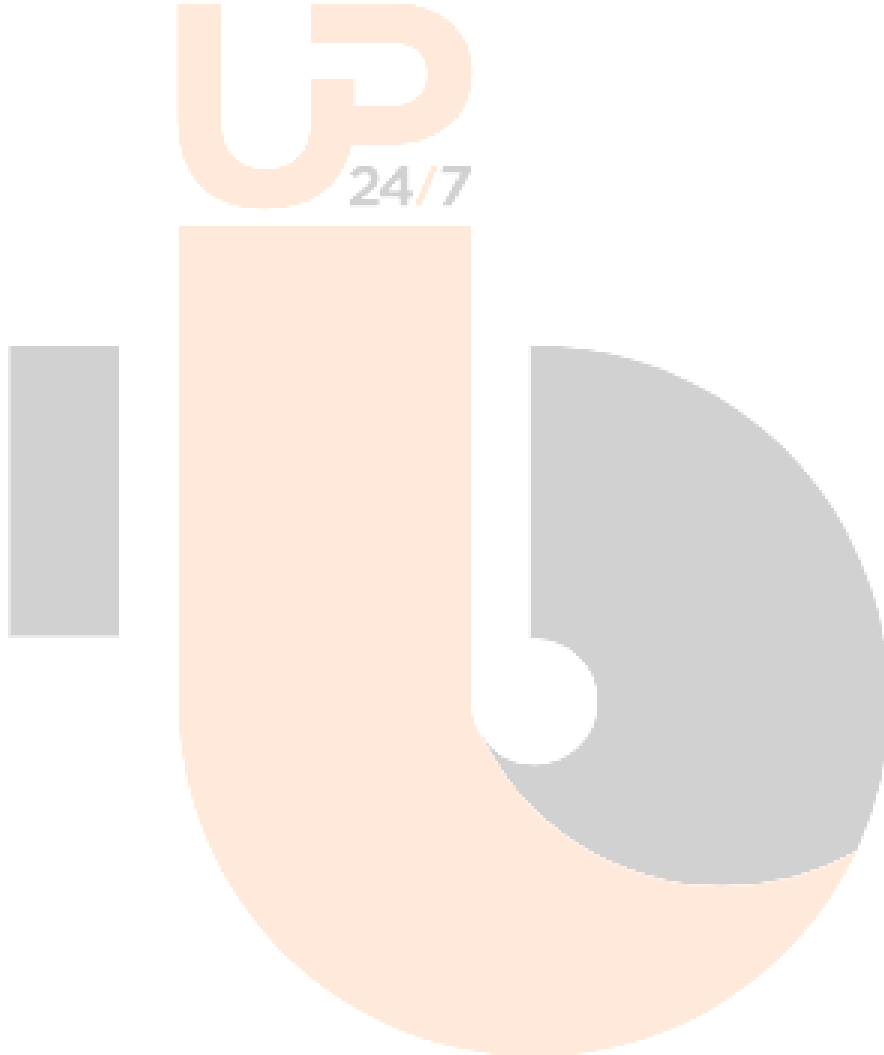
## 11 Contact Backup247

### 11.1 Technical Assistance

To contact Backup247 support representatives for technical assistance, visit our website <https://backup247.com.au/Support.php>

### 11.2 Documentation

Documentations for all Backup247 modules, user guide and QuickStart are available on our website. Alternatively, email us on [support@backup247.com.au](mailto:support@backup247.com.au) for technical demo.



## Appendix

### Appendix A File Backup Set XML Template (Raw)

```

<?xml version="1.0" encoding="UTF-8"?>
<Setting>
  <!-- This is the backup set setting -->
  <Key name="Backup Set Setting" allowMultiple="Y">
    <!-- Backup set type (Read Only) -->
    <Value data="FILE" name="Type" type="string" />
    <!-- Backup set name -->
    <Value data="" name="Name" type="string" />
    <!-- Temporary directory for storing backup files -->
    <Value data="" name="Temporary Working Directory"
    type="string" />
    <!-- Remove temporary files after backup -->
    <!-- Y: Yes -->
    <!-- N: No -->
    <Value data="Y" name="Delete temporary files after backup"
    type="boolean" />
    <!-- Support of opening backup data directly without restoration
-->
    <!-- Y: Yes -->
    <!-- N: No -->
    <Value data="N" name="OpenDirect" type="boolean" />
    <!-- Select compression type -->
    <!-- GzipDefaultCompression : Normal -->
    <!-- GzipBestSpeedCompression: Fast (Compressed size larger than
normal) -->
    <!-- SnappyDefaultCompression: Fast with optimization for local
-->
    <!-- Leave the field blank for no compression -->
    <Value data="" name="Compression Type" type="string" />
    <!-- Backup files' permissions -->
    <!-- Y: Yes -->
    <!-- N: No -->
    <Value data="Y" name="Upload files permission" type="boolean"
/>
    <!-- Follow link of the backup files -->
    <!-- Y: Yes -->
    <!-- N: No -->
    <Value data="Y" name="Follow links" type="boolean" />
    <!-- This includes the files you want to backup -->
    <!-- Copy and paste the whole <Key> to add more selected
sources -->
    <Key name="Selected Source">
      <!-- Please enter your file path, e.g. /root/Documents -->
      <Value data="" name="Path" type="string" />
    </Key>
    <!-- This excludes the files from the included source -->
    <!-- Copy and paste the whole <Key> to add more deselected
sources -->
    <Key name="Deselected Source">
      <!-- Please enter your file path, e.g. /root/Documents -->
      <Value data="" name="Path" type="string" />
    </Key>
    <!-- Settings for your scheduled backups -->
    <Key name="Schedule Settings">
      <!-- Enable scheduled backup on this computer -->

```

```

<!-- Y: Yes -->
<!-- N: No -->
<Value data="N" name="Enable" type="boolean" />
<!-- Daily settings -->
<!-- Copy and paste the whole <Key> to add more daily
schedules -->
<Key name="Daily Schedule Settings" allowMultiple="Y">
  <!-- Name of schedule -->
  <Value data="Daily-Schedule" name="Name" type="string" />
  <!-- Start hour -->
  <!-- 0, 1, 2... 23 -->
  <!-- This value will be ignored if the schedule is set to
be periodic ("Interval" field contains value other than -1) -->
  <Value data="21" name="Hour" type="integer" />
  <!-- Start minute -->
  <!-- 0, 1, 2... 59 -->
  <!-- This value will be ignored if the schedule is set to
be periodic ("Interval" field contains value other than -1) -->
  <Value data="0" name="Minute" type="integer" />
  <!-- Duration of this backup in hours -->
  <!-- 1, 2, 3... -->
  <!-- A value of -1 means run until job finish -->
  <!-- Duration can only be -1 if the schedule is set to be
periodic ("Interval" field contains value other than -1) -->
  <Value data="-1" name="Duration" type="integer" />
  <!-- Interval -->
  <!-- 1 : 1 minute -->
  <!-- 2 : 2 minutes -->
  <!-- 3 : 3 minutes -->
  <!-- 4 : 4 minutes -->
  <!-- 5 : 5 minutes -->
  <!-- 6 : 6 minutes -->
  <!-- 10 : 10 minutes -->
  <!-- 12 : 12 minutes -->
  <!-- 15 : 15 minutes -->
  <!-- 20 : 20 minutes -->
  <!-- 30 : 30 minutes -->
  <!-- 60 : 1 hour -->
  <!-- 120: 2 hours -->
  <!-- 180: 3 hours -->
  <!-- 240: 4 hours -->
  <!-- 360: 6 hours -->
  <!-- 480: 8 hours -->
  <!-- 720: 12 hours -->
  <!-- A value of -1 means a non-periodic normal schedule -
->
  <Value data="-1" name="Interval" type="integer" />
</Key>
<!-- Weekly settings -->
<!-- Copy and paste the whole <Key> to add more weekly
schedules -->
<Key name="Weekly Schedule Settings" allowMultiple="Y">
  <!-- Name of schedule -->
  <Value data="Weekly-Schedule" name="Name" type="string"
/>
  <!-- Start hour -->
  <!-- 0, 1, 2... 23 -->
  <!-- This value will be ignored if the schedule is set to
be periodic ("Interval" field contains value other than -1) -->
  <Value data="21" name="Hour" type="integer" />
  <!-- Start minute -->

```

```

    <!-- 0, 1, 2... 59 -->
    <!-- This value will be ignored if the schedule is set to
be periodic ("Interval" field contains value other than -1) -->
    <Value data="0" name="Minute" type="integer" />
    <!-- Duration of this backup in hours -->
    <!-- 1, 2, 3... -->
    <!-- A value of -1 means run until job finish -->
    <!-- Duration can only be -1 if the schedule is set to be
periodic ("Interval" field contains value other than -1) -->
    <Value data="-1" name="Duration" type="integer" />
    <!-- Interval -->
    <!-- 1 : 1 minute -->
    <!-- 2 : 2 minutes -->
    <!-- 3 : 3 minutes -->
    <!-- 4 : 4 minutes -->
    <!-- 5 : 5 minutes -->
    <!-- 6 : 6 minutes -->
    <!-- 10 : 10 minutes -->
    <!-- 12 : 12 minutes -->
    <!-- 15 : 15 minutes -->
    <!-- 20 : 20 minutes -->
    <!-- 30 : 30 minutes -->
    <!-- 60 : 1 hour -->
    <!-- 120: 2 hours -->
    <!-- 180: 3 hours -->
    <!-- 240: 4 hours -->
    <!-- 360: 6 hours -->
    <!-- 480: 8 hours -->
    <!-- 720: 12 hours -->
    <!-- A value of -1 means a non-periodic normal schedule -
->
    <Value data="-1" name="Interval" type="integer" />
    <!-- Backup on these days of the week -->
    <!-- Y: Yes -->
    <!-- N: No -->
    <Value data="Y" name="Sunday" type="boolean" />
    <Value data="Y" name="Monday" type="boolean" />
    <Value data="Y" name="Tuesday" type="boolean" />
    <Value data="Y" name="Wednesday" type="boolean" />
    <Value data="Y" name="Thursday" type="boolean" />
    <Value data="Y" name="Friday" type="boolean" />
    <Value data="Y" name="Saturday" type="boolean" />
  </Key>
  <!-- Monthly settings -->
  <!-- Copy and paste the whole <Key> to add more monthly
schedules -->
  <Key name="Monthly Schedule Settings">
    <!-- Name of schedule -->
    <Value data="Monthly-Schedule" name="Name"
type="string" />
    <!-- Start hour -->
    <!-- 0, 1, 2... 23 -->
    <Value data="21" name="Hour" type="integer" />
    <!-- Start minute -->
    <!-- 0, 1, 2... 59 -->
    <Value data="0" name="Minute" type="integer" />
    <!-- Duration of this backup in hours -->
    <!-- 1, 2, 3... -->
    <!-- A value of -1 means run until job finish -->
    <Value data="-1" name="Duration" type="integer" />
    <!-- Schedule date of month -->

```

```

<!-- 1, 2, 3... 31 -->
<!-- 32: Last -->
<!-- Set to 0 if you want to use the format of
occurrence + criteria, e.g. Third Wednesday, instead --
>
<Value data="1" name="Schedule Date" type="integer" />
<!-- Backup occurrence -->
<!-- First / Second / Third / Fourth / Last -->
<!-- If "Schedule Date" is not zero, this value will be
ignored -->
<Value data="First" name="Occurrence" type="string" />
<!-- Backup criteria -->
<!-- Sunday / Monday / Tuesday / Wednesday / Thursday /
Friday / Saturday / Weekday / Weekend -->
<!-- If "Schedule Date" is not zero, this value will be
ignored -->
<Value data="Friday" name="Criteria" type="string" />
</Key>
<!-- Custom settings -->
<!-- Copy and paste the whole <Key> to add more custom
schedules -->
<Key name="Custom Schedule Settings">
  <!-- Name of schedule -->
  <Value data="Custom" name="Name" type="string" />
  <!-- Start hour -->
  <!-- 0, 1, 2... 23 -->
  <Value data="21" name="Hour" type="integer" />
  <!-- Start minute -->
  <!-- 0, 1, 2... 59 -->
  <Value data="0" name="Minute" type="integer" />
  <!-- Duration of this backup in hours -->
  <!-- 1, 2, 3... -->
  <!-- A value of -1 means run until job finish -->
  <Value data="-1" name="Duration" type="integer" />
  <!-- Date for performing custom schedule backup -->
  <!-- Input in the format of YYYY-MM-DD -->
  <Value data="2016-4-30" name="Schedule Date"
type="string" />
</Key>
</Key>
<!-- This is the collection of destinations -->
<Key name="Destination Settings">
  <!-- Concurrency level is the number of destinations to run
backup concurrently -->
  <!-- 2, 3, 4... -->
  <!-- 1 : Backup to destinations one by one sequentially -->
  <!-- -1: Backup to all destinations concurrently -->
  <Value data="1" name="Concurrency Level" type="integer" />
  <!-- B247B247CBS destination is where the files are backup to
server -->
  <Key name="B247B247CBS Destination Settings">
  </Key>
  <!-- Local destination means backup files are stored in
your computer -->
  <!-- Copy and paste the whole <Key> to add more local
destinations -->
  <Key name="Local Destination Settings">
    <!-- Name of your destination -->
    <Value data="" name="Name" type="string" />
    <!-- Directory to store your backup files -->
    <!-- e.g. /tmp -->

```

```

    <Value data="" name="Local Path" type="string" />
</Key>
<!-- Aliyun destination for storing files -->
<!-- Copy and paste the whole <Key> to add more Aliyun
destinations -->
<Key name="Aliyun Destination Settings">
  <!-- Name of your destination -->
  <Value data="" name="Name" type="string" />
  <!-- Access key ID -->
  <Value data="" name="Access Key ID" type="string" />
  <!-- Access key secret -->
  <Value data="" name="Access Key Secret" type="string"
/>
  <!-- Region -->
  <!-- oss-cn-hangzhou : Hangzhou -->
  <!-- oss-cn-shenzhen : Shenzhen -->
  <!-- oss-cn-beijing : Beijing -->
  <!-- oss-cn-qingdao : Qingdao -->
  <!-- oss-cn-shanghai : Shanghai -->
  <!-- oss-cn-hongkong : Hong Kong -->
  <!-- oss-us-west-1 : US Silicon Valley -->
  <!-- oss-ap-southeast-1: Asia Pacific (Singapore) -->
  <Value data="" name="Region" type="string" />
  <!-- Bucket to store backup data -->
  <!-- Leave the field empty to use default -->
  <Value data="" name="Bucket Name" type="string" />
  <!-- Select whether to use proxy -->
  <!-- Y: Yes -->
  <!-- N: No -->
  <Value data="N" name="Enable proxy during backup"
type="boolean" />
</Key>
<!-- CTYun destination for storing files -->
<!-- Copy and paste the whole <Key> to add more CTYun
destinations -->
<Key name="CTYun Destination Settings">
  <!-- Name of your destination -->
  <Value data="" name="Name" type="string" />
  <!-- Access key ID -->
  <Value data="" name="Access Key ID" type="string" />
  <!-- Access secret key -->
  <Value data="" name="Access Secret Key" type="string"
/>
  <!-- Select whether to use proxy -->
  <!-- Y: Yes -->
  <!-- N: No -->
  <Value data="N" name="Enable proxy during backup"
type="boolean" />
</Key>
<!-- AmazonS3 destination for storing files -->
<!-- Copy and paste the whole <Key> to add more AmazonS3
destinations -->
<Key name="AmazonS3 Destination Settings">
  <!-- Name of your destination -->
  <Value data="" name="Name" type="string" />
  <!-- Access key ID -->
  <Value data="" name="Access Key ID" type="string" />
  <!-- Secret access key -->
  <Value data="" name="Secret Access Key" type="string"
/>
  <!-- Location -->

```



```

<!-- us-east-1      : US East (N. Virginia) -->
<!-- us-west-2     : US West (Oregon) -->
<!-- us-west-1     : US West (Northern California) -->
<!-- eu-west-1     : EU (Ireland) -->
<!-- eu-central-1  : EU (Frankfurt) -->
<!-- ap-southeast-1: Asia Pacific (Singapore) -->
<!-- ap-northeast-1: Asia Pacific (Tokyo) -->
<!-- ap-southeast-2: Asia Pacific (Sydney) -->
<!-- sa-east-1     : South America (Sao Paulo) -->
<!-- us-gov-west-1 : AWS GovCloud (US) -->
<!-- cn-north-1    : China (Beijing) -->
<!-- ap-northeast-2: Asia Pacific (Seoul) -->
<Value data="" name="Location" type="string" />
<!-- Select whether to use proxy -->
<!-- Y: Yes -->
<!-- N: No -->
<Value data="N" name="Enable proxy during backup"
type="boolean" />
</Key>
<!-- AWSCompatible destination for storing files -->
<!-- Copy and paste the whole <Key> to add more
AWSCompatible destinations -->
<Key name="AWSCompatible Destination Settings">
  <!-- Name of your destination -->
  <Value data="" name="Name" type="string" />
  <!-- Host -->
  <Value data="" name="Host" type="string" />
  <!-- Port -->
  <Value data="0" name="Port" type="integer" />
  <!-- Access key ID -->
  <Value data="" name="Access Key ID" type="string" />
  <!-- Secret access key -->
  <Value data="" name="Secret Access Key" type="string"
/>
  <!-- Bucket to store backup data (please create this
bucket manually first) -->
  <Value data="" name="Bucket Name" type="string" />
  <!-- Select whether to use proxy -->
  <!-- Y: Yes -->
  <!-- N: No -->
  <Value data="N" name="Enable proxy during backup"
type="boolean" />
</Key>
<!-- GoogleCloudStorage destination for storing files -->
<!-- Windows Azure destination for storing files -->
<!-- Copy and paste the whole <Key> to add more Windows
Azure destinations -->
<Key name="Windows Azure Destination Settings">
  <!-- Name of your destination -->
  <Value data="" name="Name" type="string" />
  <!-- Storage account name -->
  <Value data="" name="Storage Account Name"
type="string" />
  <!-- Access key -->
  <Value data="" name="Access Key" type="string" />
</Key>
<!-- Rackspace destination for storing files -->
<!-- Copy and paste the whole <Key> to add more Rackspace
destinations -->
<Key name="Rackspace Destination Settings">
  <!-- Name of your destination -->

```

```

<Value data="" name="Name" type="string" />
<!-- Username -->
<Value data="" name="Username" type="string" />
<!-- API key -->
<Value data="" name="API Key" type="string" />
<!-- Select whether to use proxy -->
<!-- Y: Yes -->
<!-- N: No -->
<Value data="N" name="Enable proxy during backup"
type="boolean" />
</Key>
<!-- OpenStack destination for storing files -->
<!-- Copy and paste the whole <Key> to add more OpenStack
destinations -->
<Key name="OpenStack Destination Settings">
  <!-- Name of your destination -->
  <Value data="" name="Name" type="string" />
  <!-- Host -->
  <Value data="" name="Host" type="string" />
  <!-- Keystone public port -->
  <Value data="5000" name="Keystone Public Port"
type="integer" />
  <!-- Username -->
  <Value data="" name="Username" type="string" />
  <!-- Password -->
  <Value data="" name="Password" type="string" />
  <!-- Select whether to use proxy -->
  <!-- Y: Yes -->
  <!-- N: No -->
  <Value data="N" name="Enable proxy during backup"
type="boolean" />
</Key>
<!-- Wasabi destination for storing files -->
<!-- Copy and paste the whole <Key> to add more Wasabi
destinations -->
<Key name="Wasabi Destination Settings" allowMultiple="Y">
  <!-- Name of your destination -->
  <Value data="" name="Name" type="string" />
  <!-- Access key -->
  <Value data="" name="Access Key" type="string" />
  <!-- Secret Key -->
  <Value data="" name="Secret Key" type="string" />
  <!-- Region -->
  <!-- us-west-1 : us-west-1 -->
  <!-- ap-northeast-1: ap-northeast-1 -->
  <!-- ap-northeast-2: ap-northeast-2 -->
  <!-- eu-central-1 : eu-central-1 -->
  <!-- eu-west-1 : eu-west-1 -->
  <!-- us-central-1 : us-central-1 -->
  <!-- us-east-1 : us-east-1 -->
  <!-- us-east-2 : us-east-2 -->
  <Value data="" name="Region" type="string" />
  <!-- Bucket to store backup data -->
  <!-- Leave the field empty to use default -->
  <Value data="" name="Bucket Name" type="string" />
  <!-- Select whether to use proxy -->
  <!-- Y: Yes -->
  <!-- N: No -->
  <Value data="N" name="Enable proxy during backup"
type="boolean" />
</Key>

```

```

<!-- FTP destination for storing files -->
<!-- Copy and paste the whole <Key> to add more FTP
destinations -->
<Key name="FTP Destination Settings">
  <!-- Name of your destination -->
  <Value data="" name="Name" type="string" />
  <!-- Host -->
  <Value data="" name="Host" type="string" />
  <!-- Port -->
  <Value data="0" name="Port" type="integer" />
  <!-- Username -->
  <Value data="" name="Username" type="string" />
  <!-- Password -->
  <Value data="" name="Password" type="string" />
  <!-- FTP directory to store backup data -->
  <!-- Leave the field empty to store to ~/Backup247 -->
  <Value data="" name="Directory" type="string" />
  <!-- Select whether to use proxy -->
  <!-- Y: Yes -->
  <!-- N: No -->
  <Value data="N" name="Enable proxy during backup"
  type="boolean" />
</Key>
</Key>
<!-- This shows the deduplication setting -->
<Key name="Deduplication Setting">
  <!-- Enable deduplication -->
  <!-- Y: Yes -->
  <!-- N: No -->
  <Value data="Y" name="Enable" type="boolean" />
  <!-- Deduplication scope -->
  <!-- F: Same file path within the same backup set -->
  <!-- B: All files within the same backup set -->
  <Value data="B" name="Deduplication level" type="string" />
</Key>
</Key>
</Setting>

```

## Appendix B File Backup Set XML Template (with explanation)

This appendix explains all configurable items with their available options, highlighted in red, in this file backup set XML scripts.

### Backup Set Setting

The following items define the basic configurations of the file backup set.

- **Backup set type** – enter the backup set type, for instance, File, MySQL etc.
- **Backup set name** – name your backup set.
- **Temporary directory for storing backup files** – Enter the directory path where you would like to have the backup files stored temporarily. The temporary directory is used for various purposes, such as storage of temporary spooled file (for database specific backup type in Backup247 Advanced Client (B247PRO) ), remote file list, local file list, temporary delta file and other files of temporary nature.
- **Remove temporary files after backup** – choose whether to remove temporary files after you finish backup.
- **Select compression type** – choose the backup compression mode among Normal, Fast, Fast with optimization for local, or No compression.

Compression type defines the compression method use during backup job for the corresponding backup set. The Compression Type can be changed at anytime after backup set creation.

There are four compression types available. By default, newly created backup sets are configured to use Fast Compression Type. Basically, there is a tradeoff between Compression Type and CPU usage.

- No Compression
- Normal (Compressed file size is smallest but with high CPU usage)
- Fast (Compressed file size is larger than Normal Compression but with lower CPU usage)
- Fast with optimization for local

The Compression Type selected will affect the size of the backup files, which in turn will affect the storage usage and therefore the storage cost for each backup set. The size of the compressed file will affect the overall backup performance, as backup of smaller files over the internet is going to be quicker than larger files.

For File backup set, then the compression type is automatically set to Fast with optimization for local in order to ensure optimal restore performance.

- **Backup files' permissions** – choose whether to backup operating system file permission of the data selected as backup source.
- **Follow link of the backup files** – choose whether to follow an NTFS junction point or NTFS symbolic link during backup. When the follow link option is enabled, not only is the symbolic link or junction point backed up, but directories and files that the junction point links to will also be backed up.

```
<?xml version="1.0" encoding="UTF-8"?>
<Setting>
<!-- This is the backup set setting -->
  <Key name="Backup Set Setting">
    <!-- Backup set type (Read Only) -->
      <Value data="FILE" name="Type" type="string" />
    <!-- Backup set name -->
    <Value data="" name="Name" type="string" />
    <!-- Temporary directory for storing backup files -->
    <Value data="" name="Temporary Working Directory"
type="string" />
    <!-- Remove temporary files after backup -->
    <!-- Y: Yes -->
    <!-- N: No -->
    <Value data="Y" name="Delete temporary files after backup"
type="boolean" />
    <!-- Select compression type -->
    <!-- GzipDefaultCompression : Normal -->
    <!-- GzipBestSpeedCompression: Fast (Compressed size larger than
normal) -->
    <!-- SnappyDefaultCompression: Fast with optimization for local
-->
    <!-- Leave the field blank for no compression -->
    <Value data="" name="Compression Type" type="string" />
    <!-- Backup files' permissions -->
    <!-- Y: Yes -->
    <!-- N: No -->
    <Value data="Y" name="Upload files permission" type="boolean"
/>
    <!-- Follow link of the backup files -->
    <!-- Y: Yes -->
    <!-- N: No -->
    <Value data="Y" name="Follow links" type="boolean" />
```

## Selected Source

- Enter the file path where the files you would like to backup are located.

```
<!-- This includes the files you want to backup -->
<!-- Copy and paste the whole <Key> to add more selected
sources -->
<Key name="Selected Source">
  <!-- Please enter your file path, e.g. /root/Documents -->
  <Value data="" name="Path" type="string" />
</Key>
```

## Deselected Source

- Enter the file path where files you would like to exclude from the backup.

```
<!-- This excludes the files from the included source -->
<!-- Copy and paste the whole <Key> to add more deselected
sources -->
<Key name="Deselected Source">
  <!-- Please enter your file path, e.g. /root/Documents -->
  <Value data="" name="Path" type="string" />
</Key>
```

## Schedule Settings

- Choose whether you would like backup jobs to be run at the scheduled time you set.

```

<!-- Settings for your scheduled backups -->
<Key name="Schedule Settings">
  <!-- Enable scheduled backup on this computer -->
  <!-- Y: Yes -->
  <!-- N: No -->
  <Value data="N" name="Enable" type="boolean" />

```

## Daily Schedule Settings

Set backup jobs to run daily at the time you specified.

- **Start hour** – the starting hour of the backup, from 0-23.
- **Start minute** – the starting minute of the backup, from 0-59.
- **Duration of this backup in hours** – the duration you would like this backup to perform, in hours. Set to -1 if you would like the backup job to run until it finishes.

- **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.

- **Interval** – the interval of the backup from minutes or hours.
  - minute interval, 1, 2, 3, 4, 5, 6, 10, 12, 15, 20, or 30 minutes
  - hourly interval, 1, 2, 3, 4, 6, 8, 10, or 12 hours

```

<!-- Daily settings -->
<!-- Copy and paste the whole <Key> to add more daily
schedules -->
<Key name="Daily Schedule Settings" allowMultiple="Y">
  <!-- Name of schedule -->
  <Value data="Daily-Schedule" name="Name" type="string" />
  <!-- Start hour -->
  <!-- 0, 1, 2... 23 -->
  <!-- This value will be ignored if the schedule is set to
be periodic ("Interval" field contains value other than -1) -->
  <Value data="21" name="Hour" type="integer" />
  <!-- Start minute -->
  <!-- 0, 1, 2... 59 -->
  <!-- This value will be ignored if the schedule is set to
be periodic ("Interval" field contains value other than -1) -->
  <Value data="0" name="Minute" type="integer" />
  <!-- Duration of this backup in hours -->
  <!-- 1, 2, 3... -->
  <!-- A value of -1 means run until job finish -->
  <!-- Duration can only be -1 if the schedule is set to be
periodic ("Interval" field contains value other than -1) -->
  <Value data="-1" name="Duration" type="integer" />
  <!-- Interval -->
  <!-- 1 : 1 minute -->
  <!-- 2 : 2 minutes -->
  <!-- 3 : 3 minutes -->
  <!-- 4 : 4 minutes -->
  <!-- 5 : 5 minutes -->
  <!-- 6 : 6 minutes -->
  <!-- 10 : 10 minutes -->
  <!-- 12 : 12 minutes -->
  <!-- 15 : 15 minutes -->
  <!-- 20 : 20 minutes -->
  <!-- 30 : 30 minutes -->
  <!-- 60 : 1 hour -->
  <!-- 120: 2 hours -->
  <!-- 180: 3 hours -->
  <!-- 240: 4 hours -->
  <!-- 360: 6 hours -->
  <!-- 480: 8 hours -->
  <!-- 720: 12 hours -->
  <!-- A value of -1 means a non-periodic normal schedule -
->
  <Value data="-1" name="Interval" type="integer" />
</Key>

```

## Weekly Schedule Settings

Set backup jobs to run weekly at the time you specified.

- **Start hour** – the starting hour of the backup, from 0-23.
- **Start minute** – the starting minute of the backup, from 0-59.
- **Duration of this backup in hours** – the duration you would like this backup to perform, in hours. Set to -1 if you would like the backup job to run until it finishes.
  - **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.

- **Interval** – the interval of the backup from minutes or hours.
  - minute interval, 1, 2, 3, 4, 5, 6, 10, 12, 15, 20, or 30 minutes
  - hourly interval, 1, 2, 3, 4, 6, 8, 10, or 12 hours
- **Backup on these days of the week** – choose to enable or disable backup on each day in week.



```

        <!-- Weekly settings -->
        <!-- Copy and paste the whole <Key> to add more weekly
schedules -->
        <Key name="Weekly Schedule Settings" allowMultiple="Y">
            <!-- Name of schedule -->
            <Value data="Weekly-Schedule" name="Name" type="string"
/>

            <!-- Start hour -->
            <!-- 0, 1, 2... 23 -->
            <!-- This value will be ignored if the schedule is set to
be periodic ("Interval" field contains value other than -1) -->
            <Value data="21" name="Hour" type="integer" />
            <!-- Start minute -->
            <!-- 0, 1, 2... 59 -->
            <!-- This value will be ignored if the schedule is set to
be periodic ("Interval" field contains value other than -1) -->
            <Value data="0" name="Minute" type="integer" />
            <!-- Duration of this backup in hours -->
            <!-- 1, 2, 3... -->
            <!-- A value of -1 means run until job finish -->
            <!-- Duration can only be -1 if the schedule is set to be
periodic ("Interval" field contains value other than -1) -->
            <Value data="-1" name="Duration" type="integer" />
            <!-- Interval -->
            <!-- 1 : 1 minute -->
            <!-- 2 : 2 minutes -->
            <!-- 3 : 3 minutes -->
            <!-- 4 : 4 minutes -->
            <!-- 5 : 5 minutes -->
            <!-- 6 : 6 minutes -->
            <!-- 10 : 10 minutes -->
            <!-- 12 : 12 minutes -->
            <!-- 15 : 15 minutes -->
            <!-- 20 : 20 minutes -->
            <!-- 30 : 30 minutes -->
            <!-- 60 : 1 hour -->
            <!-- 120: 2 hours -->
            <!-- 180: 3 hours -->
            <!-- 240: 4 hours -->
            <!-- 360: 6 hours -->
            <!-- 480: 8 hours -->
            <!-- 720: 12 hours -->
            <!-- A value of -1 means a non-periodic normal schedule -
->
            <Value data="-1" name="Interval" type="integer" />
            <!-- Backup on these days of the week -->
            <!-- Y: Yes -->
            <!-- N: No -->
            <Value data="Y" name="Sunday" type="boolean" />
            <Value data="Y" name="Monday" type="boolean" />
            <Value data="Y" name="Tuesday" type="boolean" />
            <Value data="Y" name="Wednesday" type="boolean" />
            <Value data="Y" name="Thursday" type="boolean" />
            <Value data="Y" name="Friday" type="boolean" />
            <Value data="Y" name="Saturday" type="boolean" />
        </Key>

```

## Monthly Schedule Settings

Set backup jobs to run monthly at the time you specified.

- **Start hour** – the starting hour of the backup, from 0-23.
- **Start minute** – the starting minute of the backup, from 0-59.
- **Duration of this backup in hours** – the duration you would like this backup to perform, in hours. Set to -1 if you would like the backup job to run until it finishes.
  - **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.

- **Schedule date of month** – set exact date in a month when you would like the backup to perform. Set to 0 if you would like the backup performed in a specified occurrence + criteria format, e.g. the third Wednesday in month.
- **Backup [Occurrence + Criteria] format**

You can set the backup to perform on a specified week (**Occurrence, First / Second / Third / Last**) and on a specified day of the week (**Criteria, Sun thru Sat**), for instance, the third Wednesday in a month.

  - **Backup occurrence** – set the week, i.e., First / Second / Third / Last. If you have set an exact date in the previous “Schedule date of month” configuration, this setting will be ignored.
  - **Backup criteria** – set a day of the week, i.e., Sunday thru Saturday. If you have set an exact date in the previous “Schedule date of month” configuration, this setting will be ignored.

```

<!-- Monthly settings -->
<!-- Copy and paste the whole <Key> to add more monthly
schedules -->
<Key name="Monthly Schedule Settings">
  <!-- Name of schedule -->
  <Value data="Monthly-Schedule" name="Name"
  type="string" />
  <!-- Start hour -->
  <!-- 0, 1, 2... 23 -->
  <Value data="21" name="Hour" type="integer" />
  <!-- Start minute -->
  <!-- 0, 1, 2... 59 -->
  <Value data="0" name="Minute" type="integer" />
  <!-- Duration of this backup in hours -->
  <!-- 1, 2, 3... -->
  <!-- A value of -1 means run until job finish -->
  <Value data="-1" name="Duration" type="integer" />
  <!-- Schedule date of month -->
  <!-- 1, 2, 3... 31 -->
  <!-- 32: Last -->
  <!-- Set to 0 if you want to use the format of
  occurrence + criteria, e.g. Third Wednesday, instead --
  >
  <Value data="1" name="Schedule Date" type="integer" />
  <!-- Backup occurrence -->
  <!-- First / Second / Third / Fourth / Last -->
  <!-- If "Schedule Date" is not zero, this value will be
  ignored -->
  <Value data="First" name="Occurrence" type="string" />
  <!-- Backup criteria -->
  <!-- Sunday / Monday / Tuesday / Wednesday / Thursday /
  Friday / Saturday / Weekday / Weekend -->
  <!-- If "Schedule Date" is not zero, this value will be
  ignored -->
  <Value data="Friday" name="Criteria" type="string" />
</Key>

```

## Custom Schedule Settings

Set backup jobs to run at the date and time you specified.

- **Start hour** – the starting hour of the backup, from 0-23.
- **Start minute** – the starting minute of the backup, from 0-59.
- **Duration of this backup in hours** – the duration you would like this backup to perform, in hours. Set to -1 if you would like the backup job to run until it finishes.
  - **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.

- **Date for performing custom schedule backup** - enter a specific date when you would like the backup to perform. The date format should be in YYYY-MM-DD.

```

<!-- Custom settings -->
<!-- Copy and paste the whole <Key> to add more custom
schedules -->
<Key name="Custom Schedule Settings">
  <!-- Name of schedule -->
  <Value data="Custom" name="Name" type="string" />
  <!-- Start hour -->
  <!-- 0, 1, 2... 23 -->
  <Value data="21" name="Hour" type="integer" />
  <!-- Start minute -->
  <!-- 0, 1, 2... 59 -->
  <Value data="0" name="Minute" type="integer" />
  <!-- Duration of this backup in hours -->
  <!-- 1, 2, 3... -->
  <!-- A value of -1 means run until job finish -->
  <Value data="-1" name="Duration" type="integer" />
  <!-- Date for performing custom schedule backup -->
  <!-- Input in the format of YYYY-MM-DD -->
  <Value data="2016-4-30" name="Schedule Date"
  type="string" />
</Key>
</Key>

```

## Destination Settings

- **Concurrency level** – set the number of destinations to run backup job concurrently
- **B247B247CBS Destination Settings** – this option allows backup files to be stored on the server
- **Local Destination Settings** – this option allows backup files to be stored in your local computer. Enter the directory path where you would like the backup files to be stored.

```

<!-- This is the collection of destinations -->
<Key name="Destination Settings">
  <!-- Concurrency level is the number of destinations to run
  backup concurrently -->
  <!-- 2, 3, 4... -->
  <!-- 1 : Backup to destinations one by one sequentially -->
  <!-- -1: Backup to all destinations concurrently -->
  <Value data="1" name="Concurrency Level" type="integer" />
  <!-- B247B247CBS destination is where the files are backup to
  server -->
  <Key name="B247B247CBS Destination Settings">
  </Key>
  <!-- Local destination means backup files are stored in
  your computer -->
  <!-- Copy and paste the whole <Key> to add more local
  destinations -->
  <Key name="Local Destination Settings">
    <!-- Name of your destination -->
    <Value data="" name="Name" type="string" />
    <!-- Directory to store your backup files -->
    <!-- e.g. /tmp -->
    <Value data="" name="Local Path" type="string" />
  </Key>
</Key>

```

- **Aliyun Destination Settings** – if you are using Aliyun as your backup destination, configure the login and network settings in this section.

```

<!-- Aliyun destination for storing files -->
<!-- Copy and paste the whole <Key> to add more Aliyun
destinations -->
<Key name="Aliyun Destination Settings">
  <!-- Name of your destination -->
  <Value data="" name="Name" type="string" />
  <!-- Access key ID -->
  <Value data="" name="Access Key ID" type="string" />
  <!-- Access key secret -->
  <Value data="" name="Access Key Secret" type="string"
  />
  <!-- Region -->
  <!-- oss-cn-hangzhou : Hangzhou -->
  <!-- oss-cn-shenzhen : Shenzhen -->
  <!-- oss-cn-beijing : Beijing -->
  <!-- oss-cn-qingdao : Qingdao -->
  <!-- oss-cn-shanghai : Shanghai -->
  <!-- oss-cn-hongkong : Hong Kong -->
  <!-- oss-us-west-1 : US Silicon Valley -->
  <!-- oss-ap-southeast-1: Asia Pacific (Singapore) -->
  <Value data="" name="Region" type="string" />
  <!-- Bucket to store backup data -->
  <!-- Leave the field empty to use default -->
  <Value data="" name="Bucket Name" type="string" />
  <!-- Select whether to use proxy -->
  <!-- Y: Yes -->
  <!-- N: No -->
  <Value data="N" name="Enable proxy during backup"
  type="boolean" />
</Key>

```

- **CTYun Destination Settings** – if you are using CTYun as your backup destination, configure the login and network settings in this section.

```

<!-- CTYun destination for storing files -->
<!-- Copy and paste the whole <Key> to add more CTYun
destinations -->
<Key name="CTYun Destination Settings">
  <!-- Name of your destination -->
  <Value data="" name="Name" type="string" />
  <!-- Access key ID -->
  <Value data="" name="Access Key ID" type="string" />
  <!-- Access secret key -->
  <Value data="" name="Access Secret Key" type="string"
  />
  <!-- Select whether to use proxy -->
  <!-- Y: Yes -->
  <!-- N: No -->
  <Value data="N" name="Enable proxy during backup"
  type="boolean" />
</Key>

```

- AmazonS3 Destination Settings** – if you are using AmazonS3 as your backup destination, configure the login and network settings in this section.

```

<!-- AmazonS3 destination for storing files -->
<!-- Copy and paste the whole <Key> to add more AmazonS3
destinations -->
<Key name="AmazonS3 Destination Settings">
  <!-- Name of your destination -->
  <Value data="" name="Name" type="string" />
  <!-- Access key ID -->
  <Value data="" name="Access Key ID" type="string" />
  <!-- Secret access key -->
  <Value data="" name="Secret Access Key" type="string"
  />
  <!-- Location -->
  <!-- us-east-1 : US East (N. Virginia) -->
  <!-- us-west-2 : US West (Oregon) -->
  <!-- us-west-1 : US West (Northern California) -->
  <!-- eu-west-1 : EU (Ireland) -->
  <!-- eu-central-1 : EU (Frankfurt) -->
  <!-- ap-southeast-1: Asia Pacific (Singapore) -->
  <!-- ap-northeast-1: Asia Pacific (Tokyo) -->
  <!-- ap-southeast-2: Asia Pacific (Sydney) -->
  <!-- sa-east-1 : South America (Sao Paulo) -->
  <!-- us-gov-west-1 : AWS GovCloud (US) -->
  <!-- cn-north-1 : China (Beijing) -->
  <!-- ap-northeast-2: Asia Pacific (Seoul) -->
  <Value data="" name="Location" type="string" />
  <!-- Select whether to use proxy -->
  <!-- Y: Yes -->
  <!-- N: No -->
  <Value data="N" name="Enable proxy during backup"
  type="boolean" />
</Key>

```

- AWSCompatible Destination Settings** – if you are using AWSCompatible as your backup destination, configure the login and network settings in this section.

```

<!-- AWSCompatible destination for storing files -->
<!-- Copy and paste the whole <Key> to add more
AWSCompatible destinations -->
<Key name="AWSCompatible Destination Settings">
  <!-- Name of your destination -->
  <Value data="" name="Name" type="string" />
  <!-- Host -->
  <Value data="" name="Host" type="string" />
  <!-- Port -->
  <Value data="0" name="Port" type="integer" />
  <!-- Access key ID -->
  <Value data="" name="Access Key ID" type="string" />
  <!-- Secret access key -->
  <Value data="" name="Secret Access Key" type="string"
  />
  <!-- Bucket to store backup data (please create this
  bucket manually first) -->
  <Value data="" name="Bucket Name" type="string" />
  <!-- Select whether to use proxy -->
  <!-- Y: Yes -->
  <!-- N: No -->
  <Value data="N" name="Enable proxy during backup"
  type="boolean" />
</Key>

```

- GoogleCloudStorage Destination Settings** – if you are using GoogleCloudStorage as your backup destination, configure the login and network settings in this section.

```

<!-- GoogleCloudStorage destination for storing files -->
<!-- Copy and paste the whole <Key> to add more
GoogleCloudStorage destinations -->
<Key name="GoogleCloudStorage Destination Settings"
allowMultiple="Y">
  <!-- Name of your destination -->
  <Value data="" name="Name" type="string" />
  <!-- Access key -->
  <Value data="" name="Access Key" type="string" />
  <!-- Secret -->
  <Value data="" name="Secret" type="string" />
  <!-- Storage Class -->
  <!-- MULTI_REGIONAL: Multi-Regional -->
  <!-- REGIONAL : Regional -->
  <!-- NEARLINE : Nearline -->
  <!-- COLDLINE : Coldline -->
  <Value data="" name="Storage Class" type="string" />
  <!-- Location -->
  <!-- NAM4 : nam4 (Iowa and South
  Carolina) -->
  <!-- US : us (multiple regions in
  United States) -->
  <!-- NORTHAMERICA-NORTHEAST1: northamerica-northeast1
  (Montreal) -->
  <!-- SOUTHAMERICA-EAST1 : southamerica-east1 (Sao
  Paulo) -->
  <!-- US-CENTRAL1 : us-central1 (Iowa) -->
  <!-- US-EAST1 : us-east1 (South Carolina) -
  ->
  <!-- US-EAST4 : us-east4 (Northern
  Virginia) -->
  <!-- US-WEST1 : us-west1 (Oregon) -->
  <!-- US-WEST2 : us-west2 (Los Angeles) -->
  <!-- EU : eu (multiple regions in
  European Union) -->
  <!-- EUR4 : eur4 (Netherlands and
  Finland) -->
  <!-- EUROPE-NORTH1 : europe-north1 (Finland) -->
  <!-- EUROPE-WEST1 : europe-west1 (Belgium) -->
  <!-- EUROPE-WEST2 : europe-west2 (London) -->
  <!-- EUROPE-WEST3 : europe-west3 (Frankfurt) --
  >
  <!-- EUROPE-WEST4 : europe-west4 (Netherlands)
  -->
  <!-- EUROPE-WEST6 : europe-west6 (Zurich) -->
  <!-- ASIA : asia (multiple regions in
  Asia) -->
  <!-- ASIA-EAST1 : asia-east1 (Taiwan) -->
  <!-- ASIA-EAST2 : asia-east2 (Hong Kong) -->
  <!-- ASIA-NORTHEAST1 : asia-northeast1 (Tokyo) -->
  <!-- ASIA-NORTHEAST2 : asia-northeast2 (Osaka) -->
  <!-- ASIA-NORTHEAST3 : asia-northeast3 (Seoul) -->
  <!-- ASIA-SOUTH1 : asia-south1 (Mumbai) -->
  <!-- ASIA-SOUTHEAST1 : asia-southeast1 (Singapore)
  -->
  <!-- AUSTRALIA-SOUTHEAST1 : australia-southeast1
  (Sydney) -->
  <Value data="" name="Location" type="string" />

```



```

    <!-- Bucket to store backup data -->
    <!-- Leave the field empty to use default -->
    <Value data="" name="Bucket Name" type="string" />
    <!-- Select whether to use proxy -->
    <!-- Y: Yes -->
    <!-- N: No -->
    <Value data="N" name="Enable proxy during backup"
    type="boolean" />
  </Key>

```

- **Windows Azure Destination Settings** – if you are using Windows Azure as your backup destination, configure the login and network settings in this section.

```

    <!-- Windows Azure destination for storing files -->
    <!-- Copy and paste the whole <Key> to add more Windows
    Azure destinations -->
    <Key name="Windows Azure Destination Settings">
      <!-- Name of your destination -->
      <Value data="" name="Name" type="string" />
      <!-- Storage account name -->
      <Value data="" name="Storage Account Name"
      type="string" />
      <!-- Access key -->
      <Value data="" name="Access Key" type="string" />
    </Key>
    <!-- Rackspace destination for storing files -->
    <!-- Copy and paste the whole <Key> to add more Rackspace
    destinations -->
    <Key name="Rackspace Destination Settings">
      <!-- Name of your destination -->
      <Value data="" name="Name" type="string" />
      <!-- Username -->
      <Value data="" name="Username" type="string" />
      <!-- API key -->
      <Value data="" name="API Key" type="string" />
      <!-- Select whether to use proxy -->
      <!-- Y: Yes -->
      <!-- N: No -->
      <Value data="N" name="Enable proxy during backup"
      type="boolean" />
    </Key>

```

- **OpenStack Destination Settings** – if you are using OpenStack as your backup destination, configure the login and network settings in this section.

```

<!-- OpenStack destination for storing files -->
<!-- Copy and paste the whole <Key> to add more OpenStack
destinations -->
<Key name="OpenStack Destination Settings">
  <!-- Name of your destination -->
  <Value data="" name="Name" type="string" />
  <!-- Host -->
  <Value data="" name="Host" type="string" />
  <!-- Keystone public port -->
  <Value data="5000" name="Keystone Public Port"
type="integer" />
  <!-- Username -->
  <Value data="" name="Username" type="string" />
  <!-- Password -->
  <Value data="" name="Password" type="string" />
  <!-- Select whether to use proxy -->
  <!-- Y: Yes -->
  <!-- N: No -->
  <Value data="N" name="Enable proxy during backup"
type="boolean" />
</Key>

```

- **Wasabi Destination Settings** – if you are using Wasabi as your backup destination, configure the login and network settings in this section.

```

<!-- Wasabi destination for storing files -->
<!-- Copy and paste the whole <Key> to add more Wasabi
destinations -->
<Key name="Wasabi Destination Settings" allowMultiple="Y">
  <!-- Name of your destination -->
  <Value data="" name="Name" type="string" />
  <!-- Access key -->
  <Value data="" name="Access Key" type="string" />
  <!-- Secret Key -->
  <Value data="" name="Secret Key" type="string" />
  <!-- Region -->
  <!-- us-west-1      : us-west-1 -->
  <!-- ap-northeast-1: ap-northeast-1 -->
  <!-- ap-northeast-2: ap-northeast-2 -->
  <!-- eu-central-1   : eu-central-1 -->
  <!-- eu-west-1      : eu-west-1 -->
  <!-- us-central-1   : us-central-1 -->
  <!-- us-east-1      : us-east-1 -->
  <!-- us-east-2      : us-east-2 -->
  <Value data="" name="Region" type="string" />
  <!-- Bucket to store backup data -->
  <!-- Leave the field empty to use default -->
  <Value data="" name="Bucket Name" type="string" />
  <!-- Select whether to use proxy -->
  <!-- Y: Yes -->
  <!-- N: No -->
  <Value data="N" name="Enable proxy during backup"
type="boolean" />
</Key>

```

- **FTP Destination Settings** – if you are using FTP as your backup destination, configure the login and network settings in this section.

```

<!-- FTP destination for storing files -->
<!-- Copy and paste the whole <Key> to add more FTP
destinations -->
<Key name="FTP Destination Settings">
  <!-- Name of your destination -->
  <Value data="" name="Name" type="string" />
  <!-- Host -->
  <Value data="" name="Host" type="string" />
  <!-- Port -->
  <Value data="0" name="Port" type="integer" />
  <!-- Username -->
  <Value data="" name="Username" type="string" />
  <!-- Password -->
  <Value data="" name="Password" type="string" />
  <!-- FTP directory to store backup data -->
  <!-- Leave the field empty to store to ~/Backup247 -->
  <Value data="" name="Directory" type="string" />
  <!-- Select whether to use proxy -->
  <!-- Y: Yes -->
  <!-- N: No -->
  <Value data="N" name="Enable proxy during backup"
type="boolean" />
</Key>
</Key>

```

## Deduplication setting

A checksum verification of each backup file which was split into several blocks of varying size will be performed to compare its content and identify which block is duplicated. There are 2 deduplication scope in this setting.

- **Same file path within the same backup set** - deduplication applies to the current backup job and it applies to duplicated contents within a file.
- **All files within the same backup set** - deduplication applies across different files in the backup set.

```

<!-- This shows the deduplication setting -->
<Key name="Deduplication Setting">
  <!-- Enable deduplication -->
  <!-- Y: Yes -->
  <!-- N: No -->
  <Value data="Y" name="Enable" type="boolean" />
  <!-- Deduplication scope -->
  <!-- F: Same file path within the same backup set -->
  <!-- B: All files within the same backup set -->
  <Value data="B" name="Deduplication level" type="string" />
</Key>
</Key>
</Setting>

```

## Appendix C Example File Backup Set Setting

Below are the configuration parameters of the file backup set sample.

<b>Backup Set Name</b>	b4
<b>Temporary Working Directory</b>	/tmp
<b>Remove temporary files after backup</b>	Yes
<b>Compression Type</b>	Fast
<b>Backup file permissions</b>	Yes
<b>Follow Link</b>	Yes
<b>Daily schedule</b>	Runs every 8 hours
<b>Destination</b>	B247CBS
<b>Backup Source</b>	/Templates
<b>Exclude</b>	/root/.B247Pro, /usr/local/B247Pro, /tmp
<b>Deduplication</b>	Yes

\*Configurable items are highlighted in red.

```
<?xml version="1.0" encoding="UTF-8"?>
<Setting>
  <!-- This is the backup set setting -->
  <Key name="Backup Set Setting" allowMultiple="Y">
    <!-- Backup set type (Read Only) -->
    <Value data="FILE" name="Type" type="string" />
    <!-- Backup set name -->
    <Value data="b4" name="Name" type="string" />
    <!-- Temporary directory for storing backup files -->
    <Value data="/tmp" name="Temporary Working Directory"
type="string" />
    <!-- Remove temporary files after backup -->
    <!-- Y: Yes -->
    <!-- N: No -->
    <Value data="Y" name="Delete temporary files after backup"
type="boolean" />
    <!-- Support of opening backup data directly without restoration
-->
    <!-- Y: Yes -->
    <!-- N: No -->
    <Value data="N" name="OpenDirect" type="boolean" />
    <!-- Select compression type -->
    <!-- GzipDefaultCompression : Normal -->
    <!-- GzipBestSpeedCompression: Fast (Compressed size larger than
normal) -->
    <!-- SnappyDefaultCompression: Fast with optimization for loca -
->
    <!-- Leave the field blank for no compression -->
    <Value data="GzipBestSpeedCompression" name="Compression Type"
type="string" />
    <!-- Backup files' permissions -->
    <!-- Y: Yes -->
    <!-- N: No -->
    <Value data="Y" name="Upload files permission" type="boolean" />
    <!-- Follow link of the backup files -->
    <!-- Y: Yes -->
    <!-- N: No -->
    <Value data="Y" name="Follow links" type="boolean" />
    <!-- This includes the files you want to backup -->
```

```

    <!-- Copy and paste the whole <Key> to add more selected
sources-->
    <Key name="Selected Source">
        <!-- Please enter your file path, e.g. /root/Documents -->
        <Value data="/Templates" name="Path" type="string" />
    </Key>
    <!-- This excludes the files from the included source -->
    <!-- Copy and paste the whole <Key> to add more deselected
sources -->
    <Key name="Deselected Source">
        <!-- Please enter your file path, e.g. /root/Documents -->
        <Value data="/root/.B247Pro" name="Path" type="string" />
    </Key>
    <Key name="Deselected Source">
        <!-- Please enter your file path, e.g. /root/Documents -->
        <Value data="/usr/local/B247Pro" name="Path" type="string" />
    </Key>
    <Key name="Deselected Source">
        <!-- Please enter your file path, e.g. /root/Documents -->
        <Value data="/tmp " name="Path" type="string" />
    </Key>
    <!-- Settings for your scheduled backups -->
    <Key name="Schedule Settings">
        <!-- Enable scheduled backup on this computer -->
        <!-- Y: Yes -->
        <!-- N: No -->
        <Value data="Y" name="Enable" type="boolean" />
        <!-- Daily settings -->
        <!-- Copy and paste the whole <Key> to add more daily
schedules -->
        <!-- Daily settings -->
        <!-- Copy and paste the whole <Key> to add more daily schedules
-->
        <Key name="Daily Schedule Settings" allowMultiple="Y">
            <!-- Name of schedule -->
            <Value data="Daily-1" name="Name" type="string" />
            <!-- Start hour -->
            <!-- 0, 1, 2... 23 -->
            <!-- This value will be ignored if the schedule is set to be
periodic ("Interval" field contains value other than -1) -->
            <Value data="0" name="Hour" type="integer" />
            <!-- Start minute -->
            <!-- 0, 1, 2... 59 -->
            <!-- This value will be ignored if the schedule is set to be
periodic ("Interval" field contains value other than -1) -->
            <Value data="0" name="Minute" type="integer" />
            <!-- Duration of this backup in hours -->
            <!-- 1, 2, 3... -->
            <!-- A value of -1 means run until job finish -->
            <!-- Duration can only be -1 if the schedule is set to be
periodic ("Interval" field contains value other than -1) -->
            <Value data="-1" name="Duration" type="integer" />
            <!-- Interval -->
            <!-- 1 : 1 minute -->
            <!-- 2 : 2 minutes -->
            <!-- 3 : 3 minutes -->
            <!-- 4 : 4 minutes -->
            <!-- 5 : 5 minutes -->
            <!-- 6 : 6 minutes -->
            <!-- 10 : 10 minutes -->
            <!-- 12 : 12 minutes -->

```

```

    <!-- 15 : 15 minutes -->
    <!-- 20 : 20 minutes -->
    <!-- 30 : 30 minutes -->
    <!-- 60 : 1 hour -->
    <!-- 120: 2 hours -->
    <!-- 180: 3 hours -->
    <!-- 240: 4 hours -->
    <!-- 360: 6 hours -->
    <!-- 480: 8 hours -->
    <!-- 720: 12 hours -->
    <!-- A value of -1 means a non-periodic normal schedule -->
    <Value data="480" name="Interval" type="integer" />
  </Key>
  <!-- This is the collection of destinations -->
  <Key name="Destination Settings">
    <!-- Concurrency level is the number of destinations to run
    backup concurrently -->
    <!-- 2, 3, 4... -->
    <!-- 1 : Backup to destinations one by one sequentially -->
    <!-- -1: Backup to all destinations concurrently -->
    <Value data="1" name="Concurrency Level" type="integer" />
    <!-- B247B247CBS destination is where the files are backup to
server --
    >
    <Key name="B247B247CBS Destination Settings">
    </Key>
  </Key>
  <!-- This shows the deduplication setting -->
  <Key name="Deduplication Setting">
    <!-- Enable deduplication -->
    <!-- Y: Yes -->
    <!-- N: No -->
    <Value data="Y" name="Enable" type="boolean" />
    <!-- Deduplication scope -->
    <!-- F: Same file path within the same backup set -->
    <!-- B: All files within the same backup set -->
    <Value data="B" name="Deduplication level" type="string" />
  </Key>
  </Key>
</Setting>

```

## Appendix D Uninstall Backup247 Advanced Client (B247PRO) (SH online installer)

To uninstall Backup247 Advanced Client (B247PRO) installed using SH online installer, use the **uninstall.sh** script, then run the **rm** command to remove the remaining Backup247 Advanced Client (B247PRO) files from the Linux machine.

```
# cd /usr/local/B247Pro/bin
# sh uninstall.sh
Log Time: Thu Jan 6 15:24:59 HKT 2022

Verifying current user privilege ...
Current user has enough privilege to "uninstall".

Uninstall Backup247 Online Backup Manager from /usr/local/B247Pro

Shutting down Scheduler
Wait 5 seconds before Scheduler exits
Kill running Backup247 Online Backup Manager
Kill Process by Image Name: /usr/local/B247Pro/jvm/bin/bJW
Ignore Process by Image Name:
Kill Process by Image Name: /usr/local/B247Pro/jvm/bin/bschJW
Ignore Process by Image Name:
Kill process of PID 1339
Kill Process by Image Name: /usr/local/B247Pro/jvm/bin/java
Ignore Process by Image Name:
Removing Scheduler script B247Proscheduler from service
Uninstall Service for NIX type OS
Using init script path /etc/init.d
Using run level script path /etc/rc.d
Removing symbolic link from run levels
Removing script file B247Proscheduler from /etc/init.d
Remove shortcut /usr/share/applications/B247Pro.desktop
Remove shortcut /root/Desktop/B247Pro.desktop
Backup247 Online Backup Manager uninstall procedure is complete!
It is now safe to remove files from /usr/local/B247Pro

# rm -fr /usr/local/B247Pro
```

## Appendix E Uninstall Backup247 Advanced Client (B247PRO) (RPM online installer)

To uninstall Backup247 Advanced Client (B247PRO) installed using RPM online installer, use the **rpm -e B247Pro** script, then run the **rm** command to remove the remaining Backup247 Advanced Client (B247PRO) files from the Linux machine.

```
# rpm -e B247Pro
Log Time: Thu Jan 6 16:24:59 HKT 2022

Verifying current user privilege ...
Current user has enough privilege to "uninstall".

Uninstall Backup247 Online Backup Manager from /usr/local/B247Pro

Shutting down Scheduler
Wait 5 seconds before Scheduler exits
Kill running Backup247 Online Backup Manager
Kill Process by Image Name: /usr/local/B247Pro/jvm/bin/bJW
Ignore Process by Image Name:
Kill Process by Image Name: /usr/local/B247Pro/jvm/bin/bschJW
Ignore Process by Image Name:
Kill process of PID 3337
Kill Process by Image Name: /usr/local/B247Pro/jvm/bin/java
Ignore Process by Image Name:
Removing Scheduler script B247Proscheduler from service
Uninstall Service for NIX type OS
Using init script path /etc/init.d
Using run level script path /etc/rc.d
Removing symbolic link from run levels
Removing script file B247Proscheduler from /etc/init.d
Remove shortcut /usr/share/applications/B247Pro.desktop
Remove shortcut /root/Desktop/B247Pro.desktop
Backup247 Online Backup Manager uninstall procedure is complete!
It is now safe to remove files from /usr/local/B247Pro
    Remove files in /usr/local/B247Pro

# rm -fr /usr/local/B247Pro
```



## Appendix F Uninstall Backup247 Advanced Client (B247PRO) (DEB online installer)

To uninstall Backup247 Advanced Client (B247PRO) installed using DEB online installer, use the **dpkg -r B247Pro** script, then run the **rm** command to remove the remaining Backup247 Advanced Client (B247PRO) files from the Debian or Ubuntu machine.

```
dpkg -r B247Pro
(Reading database ... 246553 files and directories currently
installed.)
Removing B247Pro (9.0.3.0) ...
Log Time: Thu Jan 6 17:24:59 HKT 2022

Verifying current user privilege ...
Current user has enough privilege to "uninstall".

Uninstall Backup247 Online Backup Manager from /usr/local/B247Pro

Shutting down Scheduler
Wait 5 seconds before Scheduler exits
Kill running Backup247 Online Backup Manager
Kill Process by Image Name: /usr/local/B247Pro/jvm/bin/bJW
Ignore Process by Image Name:
Kill Process by Image Name: /usr/local/B247Pro/jvm/bin/bschJW
Ignore Process by Image Name:
Kill Process by Image Name: /usr/local/B247Pro/jvm/bin/java
Ignore Process by Image Name:
Removing Scheduler script B247Proscheduler from service
Uninstall Service for NIX type OS
Using init script path /etc/init.d
Using run level script path /etc
Removing symbolic link from run levels
Removing script file B247Proscheduler from /etc/init.d
Remove shortcut /usr/share/applications/B247Pro.desktop
Backup247 Online Backup Manager uninstall procedure is complete!
It is now safe to remove files from /usr/local/B247Pro
    Remove files in /usr/local/B247Pro

rm -fr /usr/local/B247Pro
```

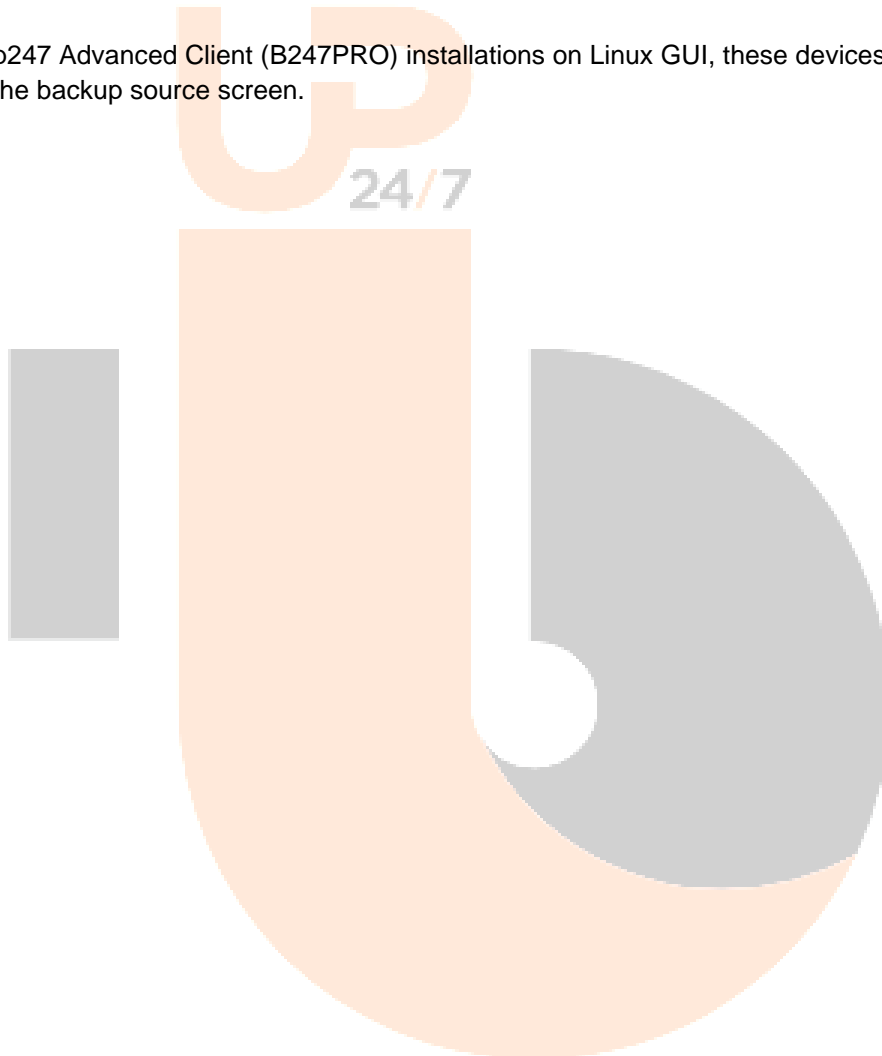
## Appendix G Handling of Non-regular Files

The following non-regular files/folders such as device files, block files, virtual files systems, pseudo file systems etc will be automatically ignored if selected for backup. Backup log entries of these files/folders will not appear in the backup logs.

**Example:**

/proc  
/dev  
/sys  
/run

For Backup247 Advanced Client (B247PRO) installations on Linux GUI, these devices will not be shown on the backup source screen.



## Appendix H How to Create a File Backup Set in Predefined Destination

File backup set in predefined destination can only be created by the user once the service provider has set up the predefined destination beforehand. This can be created through B247B247CBS and ssh.

### Using B247B247CBS

Follow the steps in Chapter 6.1 of the B247B247CBS User's Guide from 1 – 6.

In Step 7, add the predefined destination. Click [+] to add the predefined destination.

Destination

Backup Mode  
Sequential ▾

+ -

<input type="checkbox"/>	Name
--------------------------	------

← → X ?

Check the box of the predefined destination and click the Add button.

Add Destination

<input type="checkbox"/>	Name
<input type="checkbox"/>	
<input type="checkbox"/>	B247CBS
<input checked="" type="checkbox"/>	GoogleDrive-1

+ X ?

Continue with steps 8 – 10.

Once the backup set is saved you can check it in Backup247 Advanced Client (B247PRO) by selecting to List Backup Sets.

```
Main Menu
-----
(1). List Backup Sets
(2). Delete Backup Set
(3). Export Backup Set Settings to XML
(4). Import Backup Set Settings from XML
(5). Generate new Backup Set Settings Template
(6). Change Language [English]
(7). Update Profile Settings
(8). Quit
-----
Your Choice: 1

Select a Backup Set to show more details
-----
(1). predefined
-----
Your Choice: 1

Name           : predefined
Owner          : centos7
Type           : FILE
Selected Source : /root/Documents
Deselected Source : /root/.B247Pro
Deselected Source : /usr/local/B247Pro
Deselected Source : /root/tmp
Destination Name : GoogleDrive-1, Type: GDrive
Encryption Key   : abc123$%
Encryption Algorithm : AES
Encryption Mode   : CBC
Encryption Key Length: 256

Press Enter to continue...
```

## Using ssh

Please refer to the steps in Chapter 7 on how to create a backup set using ssh.

## Appendix I How to Change Ownership of Backup Set

Backup sets may be transferred from one computer to another by a simple export and import of the BackupSet.xml file provided that the following requirements are met:

1. Backup247 Advanced Client (B247PRO) version must be the same or a newer version.
2. Both computers are on similar operating system platforms (i.e. both on Linux)

An example of this is backup set “b1” was originally created on a Linux machine “centos7” is transferred to another Linux machine “centos65”. In order to do this, follow the instructions below to change ownership of a backup set:

1. Login to the Backup247 Advanced Client (B247PRO) Linux machine where you intend to transfer the ownership of the backup set to using root.

```
login as: root
root@10.90.30.2's password:
Last login: Wed Jul 31 09:43:09 2019 from 192.168.12.1
[root@centos65 ~]#
```

2. Change directory by using the command `cd /usr/local/B247Pro/bin`. Then run “`sh RunConfigurator.sh`”. Login by selecting (1). Login.

```
[root@centos65 bin]# cd /usr/local/B247Pro/bin
[root@centos65 bin]# sh RunConfigurator.sh
Startup Backup247 Online Backup Manager ...
Config file found

Login Menu
-----
(1). Login
(2). Change Network Settings
(3). Forgot Password
(4). Quit
-----
Your Choice: 1
```

3. Enter your Login Name and Password.

```
Login Name : LinuxTest
Password : *****

Please wait while verifying user account with server...
log4j:WARN No appenders could be found for logger
(org.apache.http.impl.conn.PoolingClientConnectionManager).
log4j:WARN Please initialize the log4j system properly.
log4j:WARN See
http://logging.apache.org/log4j/1.2/faq.html#noconfig for more
info.
Your profile has been downloaded and updated.

Main Menu
-----
(1). List Backup Sets
```

```
(2). Delete Backup Set
(3). Export Backup Set Settings to XML
(4). Import Backup Set Settings from XML
(5). Generate new Backup Set Settings Template
(6). Change Language [English]
(7). Update Profile Settings
(8). Quit
-----
Your Choice:
```

4. Select **(3). Export Backup Set Settings to XML**, to export backup set setting to xml. Choose the backup set to be exported. Enter **y** to enter the encryption key. Enter your encryption key twice to export the backup set settings.

```
Choose your backup set to generate XML file
-----
(1). b1
-----
Your Choice: 1

Update encryption key for backup set "b1"
Do you want to enter the encryption key for this backup set?
(Y/N) ? y
Enter encryption key : *****
Re-enter encryption key : *****

XML file successfully exported to
/root/.B247Pro/config/backupSet.xml
```

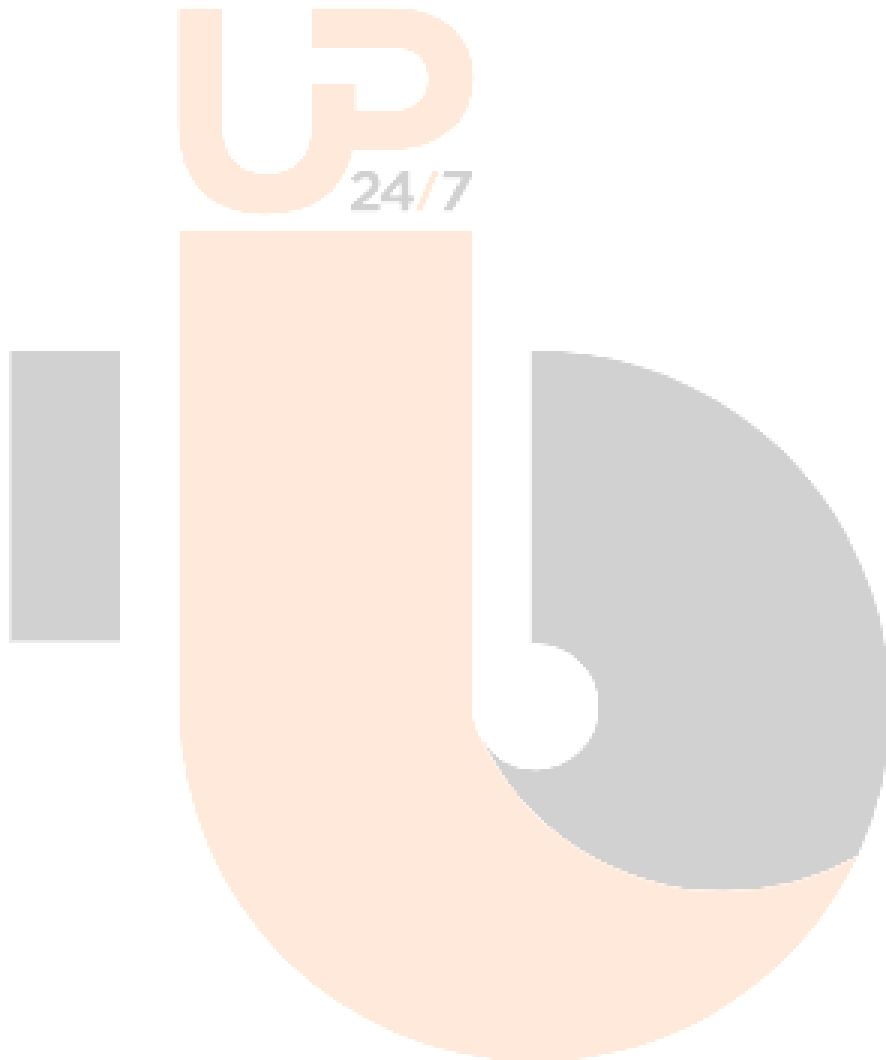
**Note:** The step to enter the encryption key will only be displayed if the backup set have an encryption key defined.

5. Modify `/root/.B247Pro/config/backupSet.xml` in a text editor like vi. Change the Value data under **“Schedule Settings”** and save. If Value data is **“Y”** change it to **“N”**, if **“N”** then change to **“Y”**.

```
<Key name="Schedule Settings">
  <!-- Enable scheduled backup on this computer -->
  <!-- Y: Yes -->
  <!-- N: No -->
  <Value data="Y" name="Enable" type="boolean" />
```

6. Select **(4). Import Backup Set Settings from XML**, to import backup set settings from xml.

```
Main Menu
-----
(1). List Backup Sets
(2). Delete Backup Set
(3). Export Backup Set Settings to XML
(4). Import Backup Set Settings from XML
(5). Generate new Backup Set Settings Template
(6). Change Language [English]
(7). Update Profile Settings
(8). Quit
-----
Your Choice: 4
```



7. In the prompt, enter **y** to take ownership of the backup set. Also confirm overwrite by entering **y**. Then list backup set by selecting **(1). List Backup Sets** to verify that the ownership of the backup set has been changed to the new owner.

```

The backup set "b1" is owned by "centos7", do you want to take
the ownership? (Y/N) ? y
Backup Set 'b1' already exist. Confirm overwrite? (Y/N) ? y
XML imported, uploading to server...

XML successfully uploaded to server

Main Menu
-----
(1). List Backup Sets
(2). Delete Backup Set
(3). Export Backup Set Settings to XML
(4). Import Backup Set Settings from XML
(5). Generate new Backup Set Settings Template
(6). Change Language [English]
(7). Update Profile Settings
(8). Quit
-----
Your Choice: 1

Select a Backup Set to show more details
-----
(1). b1
-----
Your Choice: 1

Name                : b1
Owner              : Centos65
Type                : FILE
Selected Source     : /root/Documents
Encryption Key      : abc123$%
Encryption Algorithm : AES
Encryption Mode     : CBC
Encryption Key Length: 256

Press Enter to continue...

```

8. Modify `/root/.B247Pro/config/backupSet.xml` and change the value data of **"Schedule Settings"** back to its original value and save. If Value data is "N" change it to "Y", if "Y" then change to "N".

```

<Key name="Schedule Settings">
  <!-- Enable scheduled backup on this computer -->
  <!-- Y: Yes -->
  <!-- N: No -->
  <Value data="N" name="Enable" type="boolean" />

```



9. Import the BackupSet.xml again for the scheduled backup to take effect. Since in the example the scheduled backup was disabled before changing the ownership, so afterwards the scheduled backup must be enabled again for it to run on schedule. Select **(4). Import Backup Set Settings from XML**, then **y** to confirm overwrite.

```
Main Menu
-----
(1). List Backup Sets
(2). Delete Backup Set
(3). Export Backup Set Settings to XML
(4). Import Backup Set Settings from XML
(5). Generate new Backup Set Settings Template
(6). Change Language [English]
(7). Update Profile Settings
(8). Quit
-----
Your Choice: 4

Backup Set 'b1' already exist. Confirm overwrite? (Y/N) ? y
XML imported, uploading to server...

XML successfully uploaded to server
```

## Appendix J Script Files

### RunConfigurator.sh

This script file is used to run Backup247 Advanced Client (B247PRO) . To configure the parameters, open the script file in a text editor like vi.

```
# vi RunConfigurator.sh
```

Configure the following parameters:

- **SETTING\_HOME** – this is the directory to your setting home. If not set, the default directory is “\${HOME}/.B247Pro”.
   
 e.g. SETTING\_HOME="/root/.B247Pro"
  
- **DEBUG\_MODE** – this parameter is used to enable or disable the debug mode when opening Backup247 Advanced Client (B247PRO) .
   
 e.g. DEBUG\_MODE="- -debug" or DEBUG\_MODE=""

```
# vi RunConfigurator.sh

#!/bin/sh

##### RunConfigurator.sh
#####
# You can use this shell to run the application
#
#####
#####

##### START: User Defined Section
#####

# ----- SETTING_HOME -----
-----
# | Directory to your setting home.
# |
# | Default to ${HOME}/.B247Pro when not set.
# |
# | e.g. SETTING_HOME="${HOME}/.B247Pro"
# |
# -----

SETTING_HOME=""

# ----- DEBUG_MODE -----
-----
# | Enable/Disable debug mode
# |
# | e.g. DEBUG_MODE="--debug"
# |
# | or DEBUG_MODE=""
# |
# -----

DEBUG_MODE=""
```

```
##### END: User Defined Section
#####

#####
#####
#           R E T R I E V E       A P P _ H O M E       P A T H
#
#####
#####

EXE_DIR=`pwd`
SCRIPT_HOME=`dirname "$0"`
cd "$SCRIPT_HOME"
APP_BIN=`pwd`
APP_HOME=`dirname "$APP_BIN"`

#####
#####
#           R E T R I E V E       J A V A _ H O M E       P A T H
#
#####
#####

if [ "Darwin" = `uname` ]; then
    JAVA_HOME="/System/Library/Frameworks/JavaVM.framework/Home"
fi

if [ ! -x "$APP_HOME/jvm" ];
then
    echo "'$APP_HOME/jvm' does not exist!"
    if [ ! -n "$JAVA_HOME" ]; then
        echo "Please set JAVA_HOME!"
        exit 0
    else
        ln -sf "$JAVA_HOME" "$APP_HOME/jvm"
        echo "Created JAVA_HOME symbolic link at '$APP_HOME/jvm'"
    fi
fi

if [ ! -x "$APP_HOME/jvm" ];
then
    echo "Please create symbolic link for '$JAVA_HOME' to
'$APP_HOME/jvm'"
    exit 0
fi

JAVA_HOME="$APP_HOME/jvm"

# Use alternative executable name to define the GUI execution
if [ "Darwin" = `uname` ]; then
    JAVA_EXE="$JAVA_HOME/bin/java"
else
    JAVA_EXE="$JAVA_HOME/bin/bJW"
fi

# Verify the JAVA_EXE whether it is a valid JAVA Executable or not.
STRING_JAVA_VERSION="java version,openjdk version"
OUTPUT_JAVA_VERSION=`"${JAVA_EXE}" -version 2>&1`
OUTPUT_JVM_SUPPORT=0
BACKUP_IFS=$IFS
```

```

IFS=", "
for word in $STRING_JAVA_VERSION; do
  if [ `echo "${OUTPUT_JAVA_VERSION}" | grep "${word}" | grep -cv
"grep ${word}"` -le 0 ]
  then
    #echo "The Java Executable \"${JAVA_EXE}\" is not a valid Java
Executable. Exit \"``basename \"$0\"``\" now."
    continue;
  else
    OUTPUT_JVM_SUPPORT=1
    break;
  fi
done
IFS=$BACKUP_IFS
if [ $OUTPUT_JVM_SUPPORT -eq 0 ]
then
  echo "The Java Executable \"${JAVA_EXE}\" is not a valid Java
Executable. Exit \"``basename \"$0\"``\" now."
  exit 1
fi

#####
#####
#                               S T A R T - U P
#
#####
#####

# Set LD_LIBRARY_PATH for Lotus Notes on Linux
if [ "Linux" = `uname` ]; then
  NOTES_PROGRAM=`cat "$APP_HOME/bin/notesenv"`
  LD_LIBRARY_PATH="$APP_HOME/bin:$NOTES_PROGRAM:$LD_LIBRARY_PATH"
  export NOTES_PROGRAM
else
  LD_LIBRARY_PATH="$APP_HOME/bin:$LD_LIBRARY_PATH"
fi

DEP_LIB_PATH="X64"
case "`uname -m`" in
  i[3-6]86)
    DEP_LIB_PATH="X86"
  ;;
esac
LD_LIBRARY_PATH="${APP_BIN}/${DEP_LIB_PATH}":".":"${LD_LIBRARY_PATH}"

SHLIB_PATH="$LD_LIBRARY_PATH"
export LD_LIBRARY_PATH SHLIB_PATH

# Change to APP_BIN for JAVA execution
cd "${APP_BIN}"

# Reference path will be used to avoid empty space in the parent
directory
LIB_HOME=.
JAVA_OPTS="-Xrs -Xms128m -Xmx768m -client -
Dsun.nio.PageAlignDirectMemory=true"
JNI_PATH="-Djava.library.path=$LIB_HOME"
CLASSPATH="$LIB_HOME:$LIB_HOME/cb.jar"
MAIN_CLASS=Gui

```

```
# Execute Java VM Runtime for BackupManager
echo "Startup Backup247 Online Backup Manager ... "
"${JAVA_EXE}" $JAVA_OPTS $JNI_PATH -cp $CLASSPATH $MAIN_CLASS --config
"${DEBUG_MODE}" "${APP_HOME}" "${SETTING_HOME}"

#####
#####
#
#           R E S E T           A N D           E X I T
#
#####
#####

cd "${EXE_DIR}"
exit 0
```

Once you have configured the parameters, save the changes. Use the **sh** command to run the script. The Backup247 Advanced Client (B247PRO) Login Menu will be displayed.

```
# sh RunConfigurator.sh
Startup Backup247 Online Backup Manager ...
Config file found

Login Menu
-----
(1). Login
(2). Change Network Settings
(3). Forgot Password
(4). Quit
-----
Your Choice:
```

### ListBackupSet.sh

This script file is used to display the list of backup set under your backup account. To configure the parameters, open the script file in a text editor like vi.

```
# vi ListBackupSet.sh
```

Configure the following parameters:

- **SETTING\_HOME** – this is the directory to your setting home. If not set, the default directory is "\${HOME}/.B247Pro".

e.g. SETTING\_HOME="/root/.B247Pro"

```
# vi ListBackupSet.sh

#!/bin/sh

##### ListBackupSet.sh
#####
# You can use this shell script to list all backup sets available under
#
# your backup account.
#
```

```
#####
#####

##### Start: User Defined Section
#####

# ----- SETTING_HOME -----
# | Directory to your setting home.
# | Default to ${HOME}/.B247Pro when not set.
# | e.g. SETTING_HOME="${HOME}/.B247Pro"
# -----
SETTING_HOME=""

##### END: User Defined Section
#####

#####
#####
#           R E T R I E V E       A P P _ H O M E       P A T H
#
#####
#####
EXE_DIR=`pwd`
SCRIPT_HOME=`dirname "$0"`
cd "$SCRIPT_HOME"
APP_BIN=`pwd`
APP_HOME=`dirname "$APP_BIN"`

#####
#####
#           R E T R I E V E       J A V A _ H O M E       P A T H
#
#####
#####

if [ "Darwin" = `uname` ]; then
    JAVA_HOME="/System/Library/Frameworks/JavaVM.framework/Home"
fi

if [ ! -x "$APP_HOME/jvm" ];
then
    echo "'$APP_HOME/jvm' does not exist!"
    if [ ! -n "$JAVA_HOME" ]; then
        echo "Please set JAVA_HOME!"
        exit 0
    else
        ln -sf "$JAVA_HOME" "$APP_HOME/jvm"
        echo "Created JAVA_HOME symbolic link at '$APP_HOME/jvm'"
    fi
fi

if [ ! -x "$APP_HOME/jvm" ];
then
    echo "Please create symbolic link for '$JAVA_HOME' to
'$APP_HOME/jvm'"
```

```

    exit 0
fi

JAVA_HOME="$APP_HOME/jvm"
JAVA_EXE="$JAVA_HOME/bin/java"

# Verify the JAVA_EXE whether it can be executed or not.
if [ ! -x "${JAVA_EXE}" ]
then
    echo "The Java Executable file \"${JAVA_EXE}\" cannot be executed.
Exit \"``basename \"$0\" \"\" now."
    exit 1
fi

# Verify the JAVA_EXE whether it is a valid JAVA Executable or not.
STRING_JAVA_VERSION="java version,openjdk version"
OUTPUT_JAVA_VERSION=`"${JAVA_EXE}" -version 2>&1`
OUTPUT_JVM_SUPPORT=0
BACKUP_IFS=$IFS
IFS=","
for word in $STRING_JAVA_VERSION; do
    if [ `echo "${OUTPUT_JAVA_VERSION}" | grep "${word}" | grep -cv
"grep ${word}"` -le 0 ]
    then
        #echo "The Java Executable \"${JAVA_EXE}\" is not a valid Java
Executable. Exit \"``basename \"$0\" \"\" now."
        continue;
    else
        OUTPUT_JVM_SUPPORT=1
        break;
    fi
done
IFS=$BACKUP_IFS
if [ $OUTPUT_JVM_SUPPORT -eq 0 ]
then
    echo "The Java Executable \"${JAVA_EXE}\" is not a valid Java
Executable. Exit \"``basename \"$0\" \"\" now."
    exit 1
fi

#####
#####
#                               J A V A       E X E C U T I O N
#
#####
#####

# Change to APP_BIN for JAVA execution
cd "${APP_BIN}"

# Reference path will be used to avoid empty space in the parent
directory
LIB_HOME=.
JAVA_OPTS="-Xrs -Xms128m -Xmx768m -client -
Dsun.nio.PageAlignDirectMemory=true"
JNI_PATH="-Djava.library.path=$LIB_HOME"
CLASSPATH="$LIB_HOME:$LIB_HOME/cb.jar"
MAIN_CLASS=ListBackupSet

echo "Using APP_HOME      : ${APP_HOME}"
echo "Using SETTING_HOME  : ${SETTING_HOME}"

```

```
# API Arguments: ListBackupSet [APP_HOME] [SETTING_HOME]

# Do not include double-quote for java options, jni path, classpath and
main class
# Only apply double-quote for path to java executable and execution
arguments
"${JAVA_EXE}" $JAVA_OPTS $JNI_PATH -cp $CLASSPATH $MAIN_CLASS
"${APP_HOME}" "${SETTING_HOME}"

#####
#####
#                               R E S E T           A N D           E X I T
#
#####
#####

cd "${EXE_DIR}"
exit 0
```

Once you have configured the parameters, save the changes. Use the **sh** command to run the script. The list of backup sets will be displayed.

```
# sh ListBackupSet.sh
Using APP_HOME      : /usr/local/B247Pro
Using SETTING_HOME :
BackupSet Name= Sample Backup Set 03, ID= 1641349114378
```

## ListBackupJob.sh

This script file is used to display the list of backup jobs under a specific backup set. To configure the parameters, open the script file in a text editor like vi.

```
# vi ListBackupJob.sh
```

Configure the following parameters:

- ❶ **SETTING\_HOME** – this is the directory to your setting home. If not set, the default directory is “\${HOME}/.B247Pro”.

e.g. SETTING\_HOME="/root/.B247Pro"
- ❷ **BACKUP\_SET** – this is the name of the backup set which contains the backup job that you want to list. There are two (2) ways to specify the backup set; by using the *backup set name* or by *backup set ID*. If the backup set name is not in English, use the backup set ID. You can leave this blank if you only have one (1) backup set.

e.g. BACKUP\_SET="1119083740107" or BACKUP\_SET="FileBackupSet-1"
- ❸ **BACKUP\_DEST** – this is the name of the destination of the backup set. There are two (2) ways to specify the destination; by using the *destination name* or *destination ID*. If the destination name is not in English, use the DestinationID. You can leave this blank if you only have one (1) backup destination.

e.g. BACKUP\_DEST="1119083740107" or BACKUP\_DEST="B247CBS"



```
# vi ListBackupJob.sh

#!/bin/sh

##### ListBackupJob.sh
#####
# You can use this shell script to list all backup job which ran under
#
# this backup set.
#
#####
#####

##### Start: User Defined Section
#####

# ----- SETTING_HOME -----
# | Directory to your setting home.
# |
# | Default to ${HOME}/.B247Pro when not set.
# |
# | e.g. SETTING_HOME="${HOME}/.B247Pro"
# |
# -----
SETTING_HOME=""

# ----- BACKUP_SET -----
# | The name or ID of the backup set that you want to run
# |
# | If backup set name is not in English, please use BackupSetID
# |
# | e.g. BACKUP_SET="1119083740107"
# |
# | or BACKUP_SET="FileBackupSet-1"
# |
# |
# | You can leave this parameter blank if you have only 1 backup set.
# |
# -----
BACKUP_SET=""

# ----- BACKUP_DEST -----
# | The name or ID of the destination that you want to run
# |
# | If destination name is not in English, please use DestinationID
# |
# | e.g. BACKUP_DEST="1119083740107"
# |
# | or BACKUP_DEST="B247CBS"
# |
# |
# | You can leave this parameter blank if you have only 1 destination.
# |
```

```

# -----
-----
BACKUP_DEST=""

##### END: User Defined Section
#####

#####
#####
#                               S C R I P T                               U S A G E
#
#####
#####

# Input Arguments will overwrite the above settings
# defined in 'User Defined Section'.
if [ $# -ge 1 ]; then

    if [ -n "$1" ]; then
        BACKUP_SET="$1"
    fi

    if [ -n "$2" ]; then
        BACKUP_DEST="$2"
    fi
fi

#####
#####
#           R E T R I E V E           A P P _ H O M E           P A T H
#
#####
#####

EXE_DIR=`pwd`
SCRIPT_HOME=`dirname "$0"`
cd "$SCRIPT_HOME"
APP_BIN=`pwd`
APP_HOME=`dirname "$APP_BIN"`

#####
#####
#           R E T R I E V E           J A V A _ H O M E           P A T H
#
#####
#####

if [ "Darwin" = `uname` ]; then
    JAVA_HOME="/System/Library/Frameworks/JavaVM.framework/Home"
fi

if [ ! -x "$APP_HOME/jvm" ];
then
    echo "'$APP_HOME/jvm' does not exist!"
    if [ ! -n "$JAVA_HOME" ]; then
        echo "Please set JAVA_HOME!"
        exit 0
    else
        ln -sf "$JAVA_HOME" "$APP_HOME/jvm"
        echo "Created JAVA_HOME symbolic link at '$APP_HOME/jvm'"
    fi
fi

```

```

fi
fi

if [ ! -x "$APP_HOME/jvm" ];
then
    echo "Please create symbolic link for '$JAVA_HOME' to
'$APP_HOME/jvm'"
    exit 0
fi

JAVA_HOME="$APP_HOME/jvm"
JAVA_EXE="$JAVA_HOME/bin/java"

# Verify the JAVA_EXE whether it can be executed or not.
if [ ! -x "${JAVA_EXE}" ]
then
    echo "The Java Executable file \"${JAVA_EXE}\" cannot be executed.
Exit \"``basename \"$0\"``\" now."
    exit 1
fi

# Verify the JAVA_EXE whether it is a valid JAVA Executable or not.
STRING_JAVA_VERSION="java version,openjdk version"
OUTPUT_JAVA_VERSION=`"${JAVA_EXE}" -version 2>&1`
OUTPUT_JVM_SUPPORT=0
BACKUP_IFS=$IFS
IFS=","
for word in $STRING_JAVA_VERSION; do
    if [ `echo "${OUTPUT_JAVA_VERSION}" | grep "${word}" | grep -cv
"grep ${word}"` -le 0 ]
    then
        #echo "The Java Executable \"${JAVA_EXE}\" is not a valid Java
Executable. Exit \"``basename \"$0\"``\" now."
        continue;
    else
        OUTPUT_JVM_SUPPORT=1
        break;
    fi
done
IFS=$BACKUP_IFS
if [ $OUTPUT_JVM_SUPPORT -eq 0 ]
then
    echo "The Java Executable \"${JAVA_EXE}\" is not a valid Java
Executable. Exit \"``basename \"$0\"``\" now."
    exit 1
fi

#####
#####
#           J A V A           E X E C U T I O N
#
#####
#####

# Change to APP_BIN for JAVA execution
cd "${APP_BIN}"

# Reference path will be used to avoid empty space in the parent
directory
LIB_HOME=.

```

```

JAVA_OPTS="-Xrs -Xms128m -Xmx768m -client -
Dsun.nio.PageAlignDirectMemory=true"
JNI_PATH="-Djava.library.path=$LIB_HOME"
CLASSPATH="$LIB_HOME:$LIB_HOME/cb.jar"
MAIN_CLASS=ListBackupJob

echo "Using APP_HOME      : ${APP_HOME}"
echo "Using SETTING_HOME  : ${SETTING_HOME}"
echo "Using BACKUP_SET     : ${BACKUP_SET}"

# API Arguments: ListBackupJob [APP_HOME] [BACKUP_SET] [BACKUP_DEST]
[SETTING_HOME]

# Do not include double-quote for java options, jni path, classpath and
# main class.
# Only apply double-quote for path to java executable and execution
arguments
"${JAVA_EXE}" $JAVA_OPTS $JNI_PATH -cp $CLASSPATH $MAIN_CLASS "--app-
home=${APP_HOME}" "--backup-set=${BACKUP_SET}" "--backup-
dest=${BACKUP_DEST}" "--setting-home=${SETTING_HOME}"

#####
#####
#           R E S E T           A N D           E X I T
#
#####
#####

cd "${EXE_DIR}"
exit 0

```

Once you have configured the parameters, save the changes. Use the **sh** command to run the script. The list of backup jobs of a specific backup set will be displayed.

```

# sh ListBackupJob.sh
Using APP_HOME      : /usr/local/B247Pro
Using SETTING_HOME  :
Using BACKUP_SET    : Sample Backup Set 03
Sample Backup Set 03 [1641349114378]
2022-01-05-15-47-41

```

## RunBackupSet.sh

This script file is used to manually run a backup. To configure the parameters, open the script file in a text editor like vi.

```
# vi RunBackupSet.sh
```

Configure the following parameters:

- ❶ **BACKUP\_SET** – this is the name of the backup set which you want to backup. There are two (2) ways to specify the backup set; by using the *backup set name* or by *backup set ID*. If the backup set name is not in English, use the backup set ID. You can leave this blank if you only have one (1) backup set.  
  
e.g. `BACKUP_SET="1119083740107"` or `BACKUP_SET="FileBackupSet-1"`
- ❷ **BACKUP\_DESTS** – this is the name of the destination where you want your backup to be stored. There are two (2) ways to specify the destination; by using the *destination name* or *destination ID*. If the destination name is not in English, use the DestinationID. You can leave this blank if you only have one (1) backup destination.  
  
e.g. `BACKUP_DESTS="1119083740107"` or `BACKUP_DEST="B247CBS"`
- ❸ **BACKUP\_TYPE** – this is the backup set type. You do not need to change this if you are backing up a file backup set. There are four (4) options available for this: *FILE*, *DATABASE*, *DIFFERENTIAL* and *LOG*.  
  
e.g. `BACKUP_TYPE="FILE"` for file backup  
`BACKUP_TYPE="DATABASE"` for full database backup  
`BACKUP_TYPE="DIFFERENTIAL"` for differential database backup  
`BACKUP_TYPE="LOG"` for log database backup
- ❹ **SETTING\_HOME** – this is the directory to your setting home. If not set, the default directory is "\${HOME}/.B247Pro".  
  
e.g. `SETTING_HOME="/root/.B247Pro"`
- ❺ **DELTA\_MODE** – this is the In-File Delta setting. There are three (3) options available for this: *Incremental*, *Differential* and *Full*.  
  
e.g. `DELTA_MODE="I"` for Incremental In-file delta backup  
`DELTA_MODE="D"` for Differential In-file delta backup  
`DELTA_MODE="F"` for full file backup  
`DELTA_MODE=""` for using backup set in-file delta setting
- ❻ **CLEANUP\_MODE** – this is used to remove obsolete files from your backup destination after a backup has been run. There are two (2) options available for this: *ENABLE-CLEANUP* and *DISABLE-CLEANUP*.  
  
e.g. `CLEANUP_MODE="ENABLE-CLEANUP"` or `CLEANUP_MODE="DISABLE-CLEANUP"`
- ❼ **DEBUG\_MODE** – this is used to enable or disable debug for a backup job. There are two (2) options available for this: *ENABLE-DEBUG* and *DISABLE-DEBUG*.

e.g. `DEBUG_MODE="ENABLE-DEBUG"` or `DEBUG_MODE="DISABLE-DEBUG"`

```
# vi RunBackupSet.sh

#!/bin/sh

##### RunBackupSet.sh
#####
# You can use this shell script to run any of your backup sets from the
#
# command line. Just customize the "User Defined Section" below with
your      #
# values for your backup action.
#
#####
#####

##### START: User Defined Section
#####

# ----- BACKUP_SET -----
# | The name or ID of the backup set that you want to run
# | If backup set name is not in English, please use ID instead.
# | e.g. BACKUP_SET="1119083740107"
# | or BACKUP_SET="FileBackupSet-1"
# |
# | You can leave this parameter blank if you have only 1 backup set.
# -----
BACKUP_SET=""

# ----- BACKUP_DESTS -----
# | The list of name or ID of the backup destinations that you want to
run. |
# | If backup destination name is not in English, please use ID
instead. |
# | e.g. BACKUP_DESTS="1740107119083"
# | or BACKUP_DESTS="Destination-1, Destination-2"
# | or BACKUP_DESTS="ALL"
# |
# | You can specify multiple destinations in comma-separated format,
# | or use "ALL" to run backup for all destinations.
# -----
BACKUP_DESTS="ALL"
```

```

# ----- BACKUP_TYPE -----
# | Set backup type. You don't need to change this if you are backing
up a |
# | file backup set.
|
# | Options available: FILE/DATABASE/DIFFERENTIAL/LOG
|
# | e.g. BACKUP_TYPE="FILE"          for file backup
|
# | or BACKUP_TYPE="DATABASE"       for Full database backup
|
# | or BACKUP_TYPE="DIFFERENTIAL"   for Differential database backup
|
# | or BACKUP_TYPE="LOG"            for Log database backup
|
# -----
BACKUP_TYPE="FILE"

# ----- SETTING_HOME -----
# | Directory to your setting home.
|
# | Default to ${HOME}/.B247Pro when not set.
|
# | e.g. SETTING_HOME="${HOME}/.B247Pro"
|
# -----
SETTING_HOME=""

# ----- DELTA_MODE -----
# | Set In-File Delta mode.
|
# | Options available: Incremental/Differential/Full (I/D/F)
|
# | e.g. DELTA_MODE="I"    for Incremental In-file delta backup
|
# | or DELTA_MODE="D"    for Differential In-file delta backup
|
# | or DELTA_MODE="F"    for Full File backup
|
# | or DELTA_MODE=""     for using backup set in-file delta setting
|
# -----
DELTA_MODE=""

# ----- CLEANUP_MODE -----
# | You can enable Cleanup mode to remove obsolete files from your
backup |
# | destinations after backup.
|
# | Options available: ENABLE-CLEANUP/DISABLE-CLEANUP
|
# | e.g. CLEANUP_MODE="ENABLE-CLEANUP"
|

```

```

# | or CLEANUP_MODE="DISABLE-CLEANUP"
|
# -----
CLEANUP_MODE="DISABLE-CLEANUP"

# ----- DEBUG_MODE -----
# | Set Debug mode.
|
# | Options available: ENABLE-DEBUG/DISABLE-DEBUG
|
# | e.g. DEBUG_MODE="ENABLE-DEBUG"
|
# | or DEBUG_MODE="DISABLE-DEBUG"
|
# -----
DEBUG_MODE="DISABLE-DEBUG"

##### END: User Defined Section
#####

#####
#####
#           S C R I P T           U S A G E
#
#####
#####
# Input Arguments will overwrite the above settings
# defined in 'User Defined Section'.
if [ $# -ge 1 ]; then
    if [ -n "$1" ]; then
        BACKUP_SET="$1"
    fi
fi

#####
#####
#           R E T R I E V E           A P P _ H O M E           P A T H
#
#####
#####
EXE_DIR=`pwd`
SCRIPT_HOME=`dirname "$0"`
cd "$SCRIPT_HOME"
APP_BIN=`pwd`
APP_HOME=`dirname "$APP_BIN"`

#####
#####
#           R E T R I E V E           J A V A _ H O M E           P A T H
#
#####
#####

```



```

if [ "Darwin" = `uname` ]; then
    JAVA_HOME="/System/Library/Frameworks/JavaVM.framework/Home"
fi

if [ ! -x "$APP_HOME/jvm" ];
then
    echo "'$APP_HOME/jvm' does not exist!"
    if [ ! -n "$JAVA_HOME" ]; then
        echo "Please set JAVA_HOME!"
        exit 0
    else
        ln -sf "$JAVA_HOME" "$APP_HOME/jvm"
        if [ ! -x "$APP_HOME/jvm" ];
        then
            echo "Please create symbolic link for '$JAVA_HOME' to
'$APP_HOME/jvm'"
            exit 0
        else
            echo "Created JAVA_HOME symbolic link at '$APP_HOME/jvm'"
        fi
    fi
fi

JAVA_HOME="$APP_HOME/jvm"
JAVA_EXE="$JAVA_HOME/bin/java"

# Verify the JAVA_EXE whether it can be executed or not.
if [ ! -x "${JAVA_EXE}" ]
then
    echo "The Java Executable file \"${JAVA_EXE}\" cannot be executed.
Exit \"\"`basename "$0"``\" now."
    exit 1
fi

# Verify the JAVA_EXE whether it is a valid JAVA Executable or not.
STRING_JAVA_VERSION="java version,openjdk version"
OUTPUT_JAVA_VERSION=`"${JAVA_EXE}" -version 2>&1`
OUTPUT_JVM_SUPPORT=0
BACKUP_IFS=$IFS
IFS=","
for word in $STRING_JAVA_VERSION; do
    if [ `echo "${OUTPUT_JAVA_VERSION}" | grep "${word}" | grep -cv
"grep ${word}"` -le 0 ]
    then
        #echo "The Java Executable \"${JAVA_EXE}\" is not a valid Java
Executable. Exit \"\"`basename "$0"``\" now."
        continue;
    else
        OUTPUT_JVM_SUPPORT=1
        break;
    fi
done
IFS=$BACKUP_IFS
if [ $OUTPUT_JVM_SUPPORT -eq 0 ]
then
    echo "The Java Executable \"${JAVA_EXE}\" is not a valid Java
Executable. Exit \"\"`basename "$0"``\" now."
    exit 1
fi

```

```
#####
#####
#           E X E C U T I O N   J A V A   P R O P E R T I E S
#
#####
#####

# Set LD_LIBRARY_PATH for Lotus Notes on Linux
if [ "Linux" = `uname` ];
then
    NOTES_PROGRAM=`cat "$APP_HOME/bin/notesenv"`
    LD_LIBRARY_PATH="$APP_HOME/bin:$NOTES_PROGRAM:$LD_LIBRARY_PATH"
    export NOTES_PROGRAM
else
    LD_LIBRARY_PATH="$APP_HOME/bin:$LD_LIBRARY_PATH"
fi

DEP_LIB_PATH="X64"
case "`uname -m`" in
    i[3-6]86)
        DEP_LIB_PATH="X86"
    ;;
esac
LD_LIBRARY_PATH="${APP_BIN}/${DEP_LIB_PATH}":".":"${LD_LIBRARY_PATH}"

SHLIB_PATH="$LD_LIBRARY_PATH"
export LD_LIBRARY_PATH SHLIB_PATH

#####
#####
#           J A V A   E X E C U T I O N
#
#####
#####

# Change to APP_BIN for JAVA execution
cd "${APP_BIN}"

# Reference path will be used to avoid empty space in the parent
directory
LIB_HOME=.
JAVA_OPTS="-Xrs -Xms128m -Xmx768m -XX:MaxDirectMemorySize=512m -client
-Dsun.nio.PageAlignDirectMemory=true"
JNI_PATH="-Djava.library.path=$LIB_HOME"
CLASSPATH="$LIB_HOME:$LIB_HOME/cb.jar"
MAIN_CLASS=RunBackupSet

echo "-"
echo "Using APP_HOME       : $APP_HOME"
echo "Using SETTING_HOME    : $SETTING_HOME"
echo "Using JAVA_HOME        : $JAVA_HOME"
echo "Using JAVA_EXE         : $JAVA_EXE"
echo "Using JAVA_OPTS        : $JAVA_OPTS"
echo "Using JNI_PATH         : $JNI_PATH"
echo "Using CLASSPATH        : $CLASSPATH"
echo "-"

echo "Running Backup Set - '$BACKUP_SET' ..."

# API Arguments: RunBackupSet [APP_HOME] [BACKUP_SET] [BACKUP_DESTS]
[BACKUP_TYPE] [SETTING_HOME] [DELTA_MODE] [CLEANUP_MODE] [DEBUG_MODE]
```

```
# Do not include double-quote for java options, jni path, classpath and
# main class.
# Only apply double-quote for path to java executable and execution
arguments
"${JAVA_EXE}" $JNI_PATH -cp $CLASSPATH $JAVA_OPTS $MAIN_CLASS
"${APP_HOME}" "${BACKUP_SET}" "${BACKUP_DESTS}" "${BACKUP_TYPE}"
"${SETTING_HOME}" "${DELTA_MODE}" "${CLEANUP_MODE}" "${DEBUG_MODE}"

#####
#####
#           R E S E T           A N D           E X I T
#
#####
#####

cd "${EXE_DIR}"
exit 0
```

Once you have configured the parameters, save the changes. Use the **sh** command to run the script. The backup will be run manually.

```
# sh RunBackupSet.sh
Using APP_HOME      : /usr/local/B247Pro
Using SETTING_HOME  :
Using JAVA_HOME     : /usr/local/B247Pro/jvm
Using JAVA_EXE      : /usr/local/B247Pro/jvm/bin/java
Using JAVA_OPTS     : -Xrs -Xms128m -Xmx2048m -
XX:MaxDirectMemorySize=512m -client -
Dsun.nio.PageAlignDirectMemory=true
Using JNI_PATH      : -Djava.library.path=../LinX64
Using CLASSPATH     : ../cb.jar
-
Running Backup Set - 'Sample Backup Set 03' ...
[2022/01/05 15:47:57] [info] [-] Start [ Backup247 Advanced Client
(B247PRO) v9.0.2.24 ]
[2022/01/05 15:47:57] [info] [-] Saving encrypted backup set encryption
keys to server...
[2022/01/05 15:47:58] [info] [1641349114378] Start Backup ...
[Deduplication: enabled, Deduplication scope: All files within the same
backup set, Migrate Delta: enabled]
[2022/01/05 15:47:58] [info] [1641349114378] Using Temporary Directory
/root/.B247Pro/temp/1641347569071/OBS@1641349114378
[2022/01/05 15:48:00] [info] [1641349114378] Start Periodic Data
Integrity Check on backup set = "Sample Backup Set 03" destination =
"B247B247CBS"
[2022/01/05 15:48:00] [info] [1641349114378] Start data integrity check
on backup set "Sample Backup Set 03(1641347569071)",
"B247B247CBS(1641349114378)", crc disabled, rebuild index disabled
[2022/01/05 15:48:00] [info] [1641349114378] Start processing data
integrity check on backup set= "Sample Backup Set 03" destination=
"B247B247CBS"
[2022/01/05 15:48:02] [info] [1641349114378] Download valid index files
from backup job "Current" to
"/root/.B247Pro/temp/1641347569071/OBS@1641349114378/index".
[2022/01/05 15:48:02] [info] [1641349114378] Skipped to run Data
Integrity Check for backup set "Sample Backup Set 03" in destination
"B247B247CBS" because no data is in index.
```

```
[2022/01/05 15:48:03] [info] [1641349114378] Data integrity check on
backup set= "Sample Backup Set 03" destination= "B247B247CBS" is
completed
[2022/01/05 15:48:03] [info] [1641349114378] Finished data integrity
check on backup set "Sample Backup Set 03(1641347569071)",
"B247B247CBS(1641349114378)", crc disabled, rebuild index disabled
[2022/01/05 15:48:03] [info] [1641349114378] Completed data integrity
check on backup set "Sample Backup Set 03(1641347569071)",
"B247B247CBS(1641349114378)", crc disabled, rebuild index disabled
[2022/01/05 15:48:03] [info] [-] Start running pre-commands
[2022/01/05 15:48:03] [info] [-] Finished running pre-commands
[2022/01/05 15:48:03] [info] [1641349114378] Downloading server file
list...
[2022/01/05 15:48:03] [info] [1641349114378] Download valid index files
from backup job "Current" to
"/root/.B247Pro/temp/1641347569071/OBS@1641349114378/index".
[2022/01/05 15:48:03] [info] [1641349114378] Downloading server file
list... Completed
[2022/01/05 15:48:04] [info] [1641349114378] Reading backup source from
hard disk...
[2022/01/05 15:48:04] [info] [1641349114378] Reading backup source from
hard disk... Completed
[2022/01/05 15:48:04] [info] [1641349114378] [New Directory]... /
[2022/01/05 15:48:04] [info] [1641349114378] [New Directory]... /root
[2022/01/05 15:48:05] [info] [1641349114378] [New Directory]...
/root/Documents
[2022/01/05 15:48:05] [info] [1641349114378] [New Directory]...
/root/Documents/testfiles
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 100% of
"/root/Documents/sample1.rtf"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 10% of
"/root/Documents/sample1.ppt"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 21% of
"/root/Documents/sample1.ppt"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 11% of
"/root/Documents/sample1.pdf"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 25% of
"/root/Documents/sample1.pdf"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 36% of
"/root/Documents/sample1.pdf"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 32% of
"/root/Documents/sample1.ppt"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 47% of
"/root/Documents/sample1.pdf"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 59% of
"/root/Documents/sample1.pdf"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 43% of
"/root/Documents/sample1.ppt"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 70% of
"/root/Documents/sample1.pdf"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 53% of
"/root/Documents/sample1.ppt"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 81% of
"/root/Documents/sample1.pdf"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 100% of
"/root/Documents/sample1.txt"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 92% of
"/root/Documents/sample1.pdf"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 64% of
"/root/Documents/sample1.ppt"
```

```
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 100% of
"/root/Documents/sample1.pdf"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 100% of
"/root/Documents/sample1.xls"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 75% of
"/root/Documents/sample1.ppt"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 49% of
"/root/Documents/sample2.pdf"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 74% of
"/root/Documents/sample2.pdf"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 99% of
"/root/Documents/sample2.pdf"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 100% of
"/root/Documents/sample2.pdf"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 12% of
"/root/Documents/sample2.ppt"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 100% of
"/root/Documents/sample2.rtf"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 89% of
"/root/Documents/sample1.ppt"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 24% of
"/root/Documents/sample2.ppt"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 100% of
"/root/Documents/sample1.ppt"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 37% of
"/root/Documents/sample2.ppt"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 100% of
"/root/Documents/sample2.txt"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 49% of
"/root/Documents/sample2.ppt"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 100% of
"/root/Documents/sample3.xls"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 61% of
"/root/Documents/sample2.ppt"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 100% of
"/root/Documents/sample3.txt"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 100% of
"/root/Documents/sample2.xls"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 71% of
"/root/Documents/sample2.ppt"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 100% of
"/root/Documents/sample2.ppt"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 10% of
"/root/Documents/sample_640x360.avi"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 20% of
"/root/Documents/sample_640x360.avi"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 10% of
"/root/Documents/sample_960x540.mpg"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 30% of
"/root/Documents/sample_640x360.avi"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 20% of
"/root/Documents/sample_960x540.mpg"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 10% of
"/root/Documents/sample_960x540.mkv"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 40% of
"/root/Documents/sample_640x360.avi"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 30% of
"/root/Documents/sample_960x540.mpg"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 50% of
"/root/Documents/sample_640x360.avi"
```

```
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 20% of
"/root/Documents/sample_960x540.mkv"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 60% of
"/root/Documents/sample_640x360.avi"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 40% of
"/root/Documents/sample_960x540.mpg"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 70% of
"/root/Documents/sample_640x360.avi"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 50% of
"/root/Documents/sample_960x540.mpg"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 30% of
"/root/Documents/sample_960x540.mkv"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 60% of
"/root/Documents/sample_960x540.mpg"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 70% of
"/root/Documents/sample_960x540.mpg"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 80% of
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"/root/Documents/sample_640x360.avi"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 40% of
"/root/Documents/sample_960x540.mkv"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 90% of
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[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 90% of
"/root/Documents/sample_640x360.avi"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 100% of
"/root/Documents/sample_960x540.mpg"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 100% of
"/root/Documents/sample_640x360.avi"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 50% of
"/root/Documents/sample_960x540.mkv"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 60% of
"/root/Documents/sample_960x540.mkv"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 70% of
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"/root/Documents/settings.sys"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 80% of
"/root/Documents/sample_960x540.mkv"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 100% of
"/root/Documents/settings.sys"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 90% of
"/root/Documents/sample_960x540.mkv"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 11% of
"/root/Documents/testfiles/sample1.pdf"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 100% of
"/root/Documents/sample_960x540.mkv"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 25% of
"/root/Documents/testfiles/sample1.pdf"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 36% of
"/root/Documents/testfiles/sample1.pdf"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 10% of
"/root/Documents/testfiles/sample1.ppt"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 47% of
"/root/Documents/testfiles/sample1.pdf"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 100% of
"/root/Documents/testfiles/sample1.rtf"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 59% of
"/root/Documents/testfiles/sample1.pdf"
```

```
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 100% of
"/root/Documents/testfiles/sample1.txt"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 70% of
"/root/Documents/testfiles/sample1.pdf"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 21% of
"/root/Documents/testfiles/sample1.ppt"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 81% of
"/root/Documents/testfiles/sample1.pdf"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 32% of
"/root/Documents/testfiles/sample1.ppt"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 49% of
"/root/Documents/testfiles/sample2.pdf"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 43% of
"/root/Documents/testfiles/sample1.ppt"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 74% of
"/root/Documents/testfiles/sample2.pdf"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 99% of
"/root/Documents/testfiles/sample2.pdf"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 100% of
"/root/Documents/testfiles/sample2.pdf"
[2022/01/05 15:48:05] [info] [1641349114378]
com.Backup247.afc.event.d@6ce6b6a1
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 53% of
"/root/Documents/testfiles/sample1.ppt"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 100% of
"/root/Documents/testfiles/sample1.xls"
[2022/01/05 15:48:05] [info] [1641349114378]
com.Backup247.afc.event.d@5d640301
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 64% of
"/root/Documents/testfiles/sample1.ppt"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 92% of
"/root/Documents/testfiles/sample1.pdf"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 100% of
"/root/Documents/testfiles/sample1.pdf"
[2022/01/05 15:48:05] [info] [1641349114378]
com.Backup247.afc.event.d@701eac98
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 75% of
"/root/Documents/testfiles/sample1.ppt"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 12% of
"/root/Documents/testfiles/sample2.ppt"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 24% of
"/root/Documents/testfiles/sample2.ppt"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 37% of
"/root/Documents/testfiles/sample2.ppt"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 89% of
"/root/Documents/testfiles/sample1.ppt"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 49% of
"/root/Documents/testfiles/sample2.ppt"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 100% of
"/root/Documents/testfiles/sample1.ppt"
[2022/01/05 15:48:05] [info] [1641349114378]
com.Backup247.afc.event.d@2380b5c0
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 61% of
"/root/Documents/testfiles/sample2.ppt"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 100% of
"/root/Documents/testfiles/sample2.rtf"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 71% of
"/root/Documents/testfiles/sample2.ppt"
[2022/01/05 15:48:05] [info] [1641349114378]
com.Backup247.afc.event.d@27bf3568
```

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[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 100% of
"/root/Documents/testfiles/sample2.xls"
[2022/01/05 15:48:05] [info] [1641349114378]
com.Backup247.afc.event.d@53a3e6dd
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 100% of
"/root/Documents/testfiles/sample3.txt"
[2022/01/05 15:48:05] [info] [1641349114378]
com.Backup247.afc.event.d@579c6871
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 100% of
"/root/Documents/testfiles/sample2.txt"
[2022/01/05 15:48:05] [info] [1641349114378]
com.Backup247.afc.event.d@62bdbffb
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 100% of
"/root/Documents/testfiles/sample3.xls"
[2022/01/05 15:48:05] [info] [1641349114378]
com.Backup247.afc.event.d@26ecf4e9
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 100% of
"/root/Documents/testfiles/sample2.ppt"
[2022/01/05 15:48:05] [info] [1641349114378]
com.Backup247.afc.event.d@3bad0936
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 10% of
"/root/Documents/testfiles/sample_640x360.avi"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 20% of
"/root/Documents/testfiles/sample_640x360.avi"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 30% of
"/root/Documents/testfiles/sample_640x360.avi"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 40% of
"/root/Documents/testfiles/sample_640x360.avi"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 50% of
"/root/Documents/testfiles/sample_640x360.avi"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 60% of
"/root/Documents/testfiles/sample_640x360.avi"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 70% of
"/root/Documents/testfiles/sample_640x360.avi"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 80% of
"/root/Documents/testfiles/sample_640x360.avi"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 90% of
"/root/Documents/testfiles/sample_640x360.avi"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 100% of
"/root/Documents/testfiles/sample_640x360.avi"
[2022/01/05 15:48:05] [info] [1641349114378]
com.Backup247.afc.event.d@6d2dd184
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 10% of
"/root/Documents/testfiles/sample_960x540.mkv"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 20% of
"/root/Documents/testfiles/sample_960x540.mkv"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 30% of
"/root/Documents/testfiles/sample_960x540.mkv"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 40% of
"/root/Documents/testfiles/sample_960x540.mkv"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 50% of
"/root/Documents/testfiles/sample_960x540.mkv"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 10% of
"/root/Documents/testfiles/sample_960x540.mpg"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 20% of
"/root/Documents/testfiles/sample_960x540.mpg"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 30% of
"/root/Documents/testfiles/sample_960x540.mpg"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 40% of
"/root/Documents/testfiles/sample_960x540.mpg"
```



```
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 50% of
"/root/Documents/testfiles/sample_960x540.mpg"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 60% of
"/root/Documents/testfiles/sample_960x540.mpg"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 70% of
"/root/Documents/testfiles/sample_960x540.mpg"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 80% of
"/root/Documents/testfiles/sample_960x540.mpg"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 90% of
"/root/Documents/testfiles/sample_960x540.mpg"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 100% of
"/root/Documents/testfiles/sample_960x540.mpg"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 60% of
"/root/Documents/testfiles/sample_960x540.mkv"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 70% of
"/root/Documents/testfiles/sample_960x540.mkv"
[2022/01/05 15:48:05] [info] [1641349114378]
com.Backup247.afc.event.d@759d9a2a
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 80% of
"/root/Documents/testfiles/sample_960x540.mkv"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 90% of
"/root/Documents/testfiles/sample_960x540.mkv"
[2022/01/05 15:48:05] [info] [1641349114378] [New File]... 100% of
"/root/Documents/testfiles/sample_960x540.mkv"
[2022/01/05 15:48:05] [info] [1641349114378]
com.Backup247.afc.event.d@19ealc7
[2022/01/05 15:48:06] [info] [1641349114378] Start validating the
presence and size of backup data in destination "B247B247CBS"...
[2022/01/05 15:48:06] [info] [1641349114378] File:
"1641347569071/blocks/2022-01-05-15-47-41/0/000000.bak", Size:
1,335,776, OK
[2022/01/05 15:48:06] [info] [1641349114378] File:
"1641347569071/blocks/2022-01-05-15-47-41/0/000001.bak", Size:
1,307,600, OK
[2022/01/05 15:48:06] [info] [1641349114378] File:
"1641347569071/blocks/2022-01-05-15-47-41/0/000002.bak", Size:
1,754,864, OK
[2022/01/05 15:48:06] [info] [1641349114378] File:
"1641347569071/blocks/2022-01-05-15-47-41/0/000003.bak", Size: 45,440,
OK
[2022/01/05 15:48:06] [info] [1641349114378] Finished validating the
presence and size of backup data in destination "B247B247CBS"
[2022/01/05 15:48:06] [info] [1641349114378] Total New Files = 31
[2022/01/05 15:48:06] [info] [1641349114378] Total New Directories = 4
[2022/01/05 15:48:06] [info] [1641349114378] Total New Links = 0
[2022/01/05 15:48:06] [info] [1641349114378] Total Updated Files = 0
[2022/01/05 15:48:06] [info] [1641349114378] Total Attributes Changed
Files = 0
[2022/01/05 15:48:06] [info] [1641349114378] Total Deleted Files = 0
[2022/01/05 15:48:06] [info] [1641349114378] Total Deleted Directories
= 0
[2022/01/05 15:48:06] [info] [1641349114378] Total Deleted Links = 0
[2022/01/05 15:48:06] [info] [1641349114378] Total Moved Files = 0
[2022/01/05 15:48:06] [info] [1641349114378] Total Dedupe Saving for
this job = 4.57MB
[2022/01/05 15:48:06] [info] [1641349114378] Total Backup Data Size for
this job = 9.41MB
[2022/01/05 15:48:06] [info] [1641349114378] Total Dedupe Saving for
destination = 4.57MB
[2022/01/05 15:48:06] [info] [1641349114378] Total Backup Data Size for
destination = 9.41MB
```

```
[2022/01/05 15:48:06] [info] [-] Saving server information to destination.
[2022/01/05 15:48:07] [info] [1641349114378] Saving encrypted backup file index to 1641347569071/blocks/2022-01-05-15-47-41 at destination B247B247CBS...
[2022/01/05 15:48:07] [info] [-] Start running post-commands
[2022/01/05 15:48:07] [info] [-] Finished running post-commands
[2022/01/05 15:48:10] [info] [1641349114378] Deleting temporary file /root/.B247Pro/temp/1641347569071/OBS@1641349114378
[2022/01/05 15:48:10] [info] [1641349114378] Backup Completed Successfully
```

## Restore.sh

This script file is used to restore backup files to its original or alternate location. To configure the parameters, open the script file in a text editor like vi.

```
# vi Restore.sh
```

Configure the following parameters:

- **BACKUP\_SET** – this is the name of the backup set which you want to restore. There are two (2) ways to specify the backup set; by using the *backup set name* or by *backup set ID*. If the backup set name is not in English, use the backup set ID. You can leave this blank if you only have one (1) backup set.  
e.g. BACKUP\_SET="1119083740107" or BACKUP\_SET="FileBackupSet-1"
- **DESTINATION** – this is the name of the destination where the backup set was stored. There are two (2) ways to specify the destination; by using the *destination name* or *destination ID*. If the destination name is not in English, use the DestinationID. You can leave this blank if you only have one (1) backup destination.  
e.g. DESTINATION="1119083740107" or DESTINATION="B247CBS"
- **RESTORE\_TO** – this is the directory where you want to restore the backup file. You do not need to change this if you want the backup file to be restored to its original location.  
e.g. RESTORE\_TO="" or RESTORE\_TO="/tmp"
- **RESTORE\_FROM** – this is the file or directory that you would like to restore.  
e.g. RESTORE\_FROM="/Data"
- **POINT\_IN\_TIME** – this is the specific successful backup that you want to restore. You can use *Current* if you want to use the latest backup snapshot. You can see the point in time snapshot by using the *ListBackupJob.sh* script file.  
e.g. POINT\_IN\_TIME="Current" or POINT\_IN\_TIME="2006-10-04-12-57-13"
- **RESTORE\_PERMISSION** – you can set the file permission here.  
e.g. RESTORE\_PERMISSION="N" or RESTORE\_PERMISSION="Y"
- **SKIP\_INVALID\_KEY** – you can set here if you want to skip restoring the backup file with an invalid key. There are two (2) options for this: *Y* or *N*.  
e.g. SKIP\_INVALID\_KEY="N"

- **SYNC\_OPTION** – this is the sync options if you want to delete extra files.

e.g. SYNC\_OPTIONS="Y" if you want to enable sync options  
 SYNC\_OPTIONS="N" if you do not want to enable sync options  
 SYNC\_OPTIONS="" if you want to prompt for selection
- **REPLACE\_EXISTING\_FILE** – you can set here if you want files with the same filename to be replaced. There are three (3) options for this: *--all*, *--none* or blank.

e.g. REPLACE\_EXISTING\_FILE="--all" if you want to replace existing files with the same filename  
 REPLACE\_EXISTING\_FILE="--none" if you want to keep all existing files with the same filename  
 REPLACE\_EXISTING\_FILE="" if you want to be prompted for selection
- **SETTING\_HOME** – this is the directory to your setting home. If not set, the default directory is "\${HOME}/.B247Pro".

e.g. SETTING\_HOME="/root/.B247Pro"
- **FILTER** – you can filter the files that you want to be restored. You can use this format to set the filter *-Pattern=xxx-Type=yyy-Target=zzz*.

xxx is the filter pattern

yyy is the filter type, you have eight (8) options available for this: *exact*, *exactMatchCase*, *contains*, *containsMatchCase*, *startWith*, *startWithMatchCase*, *endWith* and *endWithMatchCase*.

zzz is the filter target, you have three (3) options available for this: *toFile*, *toFileDir* and *toDir*.

e.g. FILTER="-Pattern=.txt-Type=exact-Target=toFile"
- **TEMP\_DIR** – this is the directory where the restore files will be stored temporarily. If set to "" the temporary directory in the backup set will be used.

e.g. TEMP\_DIR="/tmp"
- **VERIFY\_CHKSUM** – you can set here if you want the in-file delta file checksum to be verified during restore. There are two (2) options available for this: *Y* or *N*.

e.g. VERIFY\_CHKSUM="N" or VERIFY\_CHKSUM="Y"

```
# vi Restore.sh

#!/bin/sh

##### Restore.sh
#####
# You can use this shell script to restore backup files using command-
line. #
# Just customize the "User Define Section" below with values for your
restore #
# action.
#
```

```
#####  
#####  
  
##### Start: User Defined Section  
#####  
  
# ----- BACKUP_SET -----  
-----  
# | The name or ID of the backup set that you want to restore.  
|  
# | If backup set name is not in English, please use ID instead.  
|  
# | e.g. BACKUP_SET="1119083740107"  
|  
# | or BACKUP_SET="FileBackupSet-1"  
|  
# |  
# | You can leave this parameter blank if you have only 1 backup set.  
|  
# -----  
-----  
BACKUP_SET=""  
  
# ----- DESTINATION -----  
-----  
# | The name or ID of the backup destination that you want to restore  
from. |  
# | If backup destination name is not in English, please use ID  
instead. |  
# | e.g. DESTINATION="1740107119083"  
|  
# | or DESTINATION="Destination-1"  
|  
# |  
# | You can leave this parameter blank if you have only 1 destination.  
|  
# -----  
-----  
DESTINATION=""  
  
# ----- RESTORE_TO -----  
-----  
# | Directory to where you want files to be restored  
|  
# | set to "" to restore files to original location  
|  
# | e.g. RESTORE_TO="/tmp"  
|  
# -----  
-----  
RESTORE_TO=""  
  
# ----- RESTORE_FROM -----  
-----  
# | File/Directory on the backup server that you would like to restore  
|  
# | e.g. RESTORE_FROM="/Data"  
|
```

```
# -----  
-----  
RESTORE_FROM=""  
  
# ----- POINT_IN_TIME -----  
-----  
# | The point-in-time snapshot (successful backup) that you want to  
restore |  
# | from the backup server. Use "Current" for the latest backup  
snapshot |  
# | e.g. POINT_IN_TIME="2006-10-04-12-57-13"  
|  
# | or POINT_IN_TIME="Current"  
|  
# |  
# | You can retrieve the point in time by using the ListBackupJob.sh  
|  
# -----  
-----  
POINT_IN_TIME="Current"  
  
# ----- RESTORE_PERMISSION -----  
-----  
# | set to "Y" if you want to restore file permissions  
|  
# | set to "N" if you do NOT want to restore file permissions  
|  
# -----  
-----  
RESTORE_PERMISSION="N"  
  
# ----- SKIP_INVALID_KEY -----  
-----  
# | set to "Y" if you want to skip restore file with invalid key  
|  
# | set to "N" if you want to prompt user to input a correct key  
|  
# -----  
-----  
SKIP_INVALID_KEY="N"  
  
# ----- SYNC_OPTION -----  
-----  
# | Delete extra files  
|  
# | set to "Y" if you want to enable sync option  
|  
# | set to "N" if you do NOT want to enable sync option  
|  
# | set to "" to prompt for selection  
|  
# -----  
-----  
SYNC_OPTION="N"  
  
# ----- REPLACE_EXISTING_FILE -----  
-----  
# | set to "--all" to replace all existing file(s) of the same filename  
|
```

```

# | set to "--none" to skip all existing file(s) with the same filename
|
# | set to "" to prompt for selection
|
# -----
REPLACE_EXISTING_FILE="--all"

# ----- SETTING_HOME -----
# | Directory to your setting home.
|
# | Default to ${HOME}/.B247Pro when not set.
|
# | e.g. SETTING_HOME="${HOME}/.B247Pro"
|
# -----
SETTING_HOME=""

# ----- FILTER -----
# | Filter out what files you want to restore
|
# | -Pattern=xxx-Type=yyy-Target=zzz
|
# | where xxx is the filter pattern,
|
# |      yyy is the filter type, whice can be one of the following:
|
# |      [exact | exactMatchCase | contains | containsMatchCase|
|
# |      startWith | startWithMatchCase | endWith |
endWithMatchCase]
|
# |      zzz is the filter target, which can be one of the following:
|
# |      [toFile | toFileDir | toDir]
|
# |
|
# | e.g. FILTER="-Pattern=.txt-Type=exact-Target=toFile"
|
# -----
FILTER=""

# ----- TEMP_DIR -----
# | Directory to where you want to store restore files temporarily
|
# | set to "" to use the temporary directory in the backup set
|
# | e.g. TEMP_DIR="/tmp"
|
# -----
TEMP_DIR=""

# ----- VERIFY_CHKSUM -----

```

```

# | set to "Y" if you want to verify in-file delta file checksum during
restore|
# | set to "N" if you do NOT want to verify in-file delta file checksum
during |
# | restore
|
# -----
-----
VERIFY_CHKSUM="N"

##### END: User Defined Section
#####

#####
#####
#      R E T R I E V E      A P P _ H O M E      P A T H
#
#####
#####

EXE_DIR=`pwd`
SCRIPT_HOME=`dirname "$0"`
cd "$SCRIPT_HOME"
APP_BIN=`pwd`
APP_HOME=`dirname "$APP_BIN"`

#####
#####
#      R E T R I E V E      J A V A _ H O M E      P A T H
#
#####
#####

if [ "Darwin" = `uname` ]; then
    JAVA_HOME="/System/Library/Frameworks/JavaVM.framework/Home"
fi

if [ ! -x "$APP_HOME/jvm" ];
then
    echo "'$APP_HOME/jvm' does not exist!"
    if [ ! -n "$JAVA_HOME" ]; then
        echo "Please set JAVA_HOME!"
        exit 0
    else
        ln -sf "$JAVA_HOME" "$APP_HOME/jvm"
        echo "Created JAVA_HOME symbolic link at '$APP_HOME/jvm'"
    fi
fi

if [ ! -x "$APP_HOME/jvm" ];
then
    echo "Please create symbolic link for '$JAVA_HOME' to
'$APP_HOME/jvm'"
    exit 0
fi

JAVA_HOME="$APP_HOME/jvm"
JAVA_EXE="$JAVA_HOME/bin/java"

# Verify the JAVA_EXE whether it can be executed or not.
if [ ! -x "${JAVA_EXE}" ]
then

```

```

    echo "The Java Executable file \"${JAVA_EXE}\" cannot be executed.
Exit \"``basename "$0"``\" now."
    exit 1
fi

# Verify the JAVA_EXE whether it is a valid JAVA Executable or not.
STRING_JAVA_VERSION="java version,openjdk version"
OUTPUT_JAVA_VERSION=`"${JAVA_EXE}" -version 2>&1`
OUTPUT_JVM_SUPPORT=0
BACKUP_IFS=$IFS
IFS=","
for word in $STRING_JAVA_VERSION; do
    if [ `echo "${OUTPUT_JAVA_VERSION}" | grep "${word}" | grep -cv
"grep ${word}"` -le 0 ]
    then
        #echo "The Java Executable \"${JAVA_EXE}\" is not a valid Java
Executable. Exit \"``basename "$0"``\" now."
        continue;
    else
        OUTPUT_JVM_SUPPORT=1
        break;
    fi
done
IFS=$BACKUP_IFS
if [ $OUTPUT_JVM_SUPPORT -eq 0 ]
then
    echo "The Java Executable \"${JAVA_EXE}\" is not a valid Java
Executable. Exit \"``basename "$0"``\" now."
    exit 1
fi

#####
#####
#           J A V A           E X E C U T I O N
#
#####
#####

# Set LD_LIBRARY_PATH for Lotus Notes on Linux
if [ "Linux" = `uname` ];
then
    NOTES_PROGRAM=`cat "$APP_BIN/notesenv"`
    LD_LIBRARY_PATH="$APP_BIN:$NOTES_PROGRAM:$LD_LIBRARY_PATH"
    export NOTES_PROGRAM
else
    LD_LIBRARY_PATH="$APP_BIN:$LD_LIBRARY_PATH"
fi

# The Restore Action must be execute at path $APP_HOME/bin
cd "${APP_BIN}"

DEP_LIB_PATH="X64"
case "`uname -m`" in
    i[3-6]86)
        DEP_LIB_PATH="X86"
    ;;
esac
LD_LIBRARY_PATH="${APP_BIN}/${DEP_LIB_PATH}":"":"${LD_LIBRARY_PATH}"

SHLIB_PATH="$LD_LIBRARY_PATH"

```



```

export LD_LIBRARY_PATH SHLIB_PATH

# Reference path will be used to avoid empty space in the parent
directory
LIB_HOME=.
JAVA_OPTS="-Xrs -Xms128m -Xmx768m -XX:MaxDirectMemorySize=512m -client
-Dsun.nio.PageAlignDirectMemory=true"
JNI_PATH="-Djava.library.path=$LIB_HOME"
CLASSPATH="$LIB_HOME:$LIB_HOME/cb.jar"
MAIN_CLASS=Restore

echo "Using APP_HOME:           : ${APP_HOME}"
echo "Using BACKUP_SET          : ${BACKUP_SET}"
echo "Using RESTORE_FROM         : ${RESTORE_FROM}"
echo "Using RESTORE_TO           : ${RESTORE_TO}"
echo "Using POINT_IN_TIME        : ${POINT_IN_TIME}"
echo "Using RESTORE_PERMISSION    : ${RESTORE_PERMISSION}"
echo "Using TEMP_DIR              : ${TEMP_DIR}"

# Do not include double-quote for java options, jni path, classpath and
# main class.
# Only apply double-quote for path to java executable and execution
arguments
"${JAVA_EXE}" $JAVA_OPTS $JNI_PATH -cp $CLASSPATH $MAIN_CLASS --
to="${RESTORE_TO}" --from="${RESTORE_FROM}" --backup-
set="${BACKUP_SET}" --backup-dest="${DESTINATION}"
"${REPLACE_EXISTING_FILE}" --date="${POINT_IN_TIME}" --set-
permission="${RESTORE_PERMISSION}" --skip-invalid-
key="${SKIP_INVALID_KEY}" --sync="${SYNC_OPTION}" --filter="${FILTER}"
--temp-dir="${TEMP_DIR}" --verify-delta-file-chksum="${VERIFY_CHKSUM}"
--app-home="${APP_HOME}" --setting-home="${SETTING_HOME}"

#####
#####
#           R E S E T           A N D           E X I T
#
#####
#####

cd "${EXE_DIR}"
exit 0

```

Once you have configured the parameters, save the changes. Use the **sh** command to run the script. The restore will be run manually.

```

# sh Restore.sh
Using APP_HOME           : /usr/local/B247Pro
Using BACKUP_SET         : Sample Backup Set 03
Using RESTORE_FROM       : /root/Documents
Using RESTORE_TO         : /usr/local/alternate
Using POINT_IN_TIME      : Current
Using RESTORE_PERMISSION : N
Using TEMP_DIR           : /root/temp
Filter Pattern not set, filter would not apply to restore
[2022-01-05 16:03:53] Start [ Backup247 Advanced Client (B247PRO)
v9.0.2.24 ]
[2022-01-05 16:03:53] OS: Linux 4.18.0-240.1.1.el8_3.x86_64
(localhost.localdomain); CPU Model: VMware-Intel(R) Xeon(R) Gold 5218R
CPU @ 2.10GHz,Intel(R) Xeon(R) Gold 5218R CPU @ 2.10GHz,Intel(R)

```

```
Xeon(R) Gold 5218R CPU @ 2.10GHz,Intel(R) Xeon(R) Gold 5218R CPU @  
2.10GHz; Number of Processors: 4; Heap Size: 109.1MB (Current) / 1.8GB  
(Maximum); Physical Memory: 565.7MB (Free) / 3.6GB (Total)  
[2022-01-05 16:03:53] start,Start [ Backup247 Advanced Client (B247PRO)  
v9.0.2.24 ],0,0,0,,0,0
```

```
[2022-01-05 16:03:53] Selected job: 2022-01-05-16-03-45  
[2022-01-05 16:03:53] Selected source: [/root/Documents]  
[2022-01-05 16:03:53] Info: [followLink=false marshalTargetPath=false  
deleteForSync=false skipFaultKey=false verifyDeltaFileChecksum=false  
ignoreSegmentInfoCorruptedData=true restorePermission=false  
[RestoreLocation] type=RAW path=[/usr/local/alternate]]  
[2022-01-05 16:03:54] Creating new directory...  
"/usr/local/alternate/root"  
[2022-01-05 16:03:54] Creating new directory...  
"/usr/local/alternate/root/Documents"  
[2022-01-05 16:03:54] Creating new directory...  
"/usr/local/alternate/root/Documents/testfiles"  
[2022-01-05 16:03:54] Downloading...  
"/usr/local/alternate/root/Documents/settings.sys" (Total 44K bytes)  
[2022-01-05 16:03:54] Downloading...  
"/usr/local/alternate/root/Documents/sample1.ppt" (Total 891K bytes)  
[2022-01-05 16:03:54] Downloading...  
"/usr/local/alternate/root/Documents/testfiles/sample1.ppt" (Total 891K  
bytes)  
[2022-01-05 16:03:54] Downloading...  
"/usr/local/alternate/root/Documents/sample3.xls" (Total 13K bytes)  
[2022-01-05 16:03:54] Downloading...  
"/usr/local/alternate/root/Documents/testfiles/sample3.xls" (Total 13K  
bytes)  
[2022-01-05 16:03:54] Downloading...  
"/usr/local/alternate/root/Documents/sample2.xls" (Total 7K bytes)  
[2022-01-05 16:03:54] Downloading...  
"/usr/local/alternate/root/Documents/testfiles/sample2.xls" (Total 7K  
bytes)  
[2022-01-05 16:03:54] Downloading...  
"/usr/local/alternate/root/Documents/sample_640x360.avi" (Total 569K  
bytes)  
[2022-01-05 16:03:54] Downloading...  
"/usr/local/alternate/root/Documents/testfiles/sample_640x360.avi"  
(Total 569K bytes)  
[2022-01-05 16:03:54] Downloading...  
"/usr/local/alternate/root/Documents/sample1.pdf" (Total 567K bytes)  
[2022-01-05 16:03:54] Downloading...  
"/usr/local/alternate/root/Documents/testfiles/sample1.pdf" (Total 567K  
bytes)  
[2022-01-05 16:03:54] Downloading...  
"/usr/local/alternate/root/Documents/sample2.pdf" (Total 64K bytes)  
[2022-01-05 16:03:54] Downloading...  
"/usr/local/alternate/root/Documents/testfiles/sample2.pdf" (Total 64K  
bytes)  
[2022-01-05 16:03:54] Downloading...  
"/usr/local/alternate/root/Documents/sample2.rtf" (Total 1K bytes)  
[2022-01-05 16:03:54] Downloading...  
"/usr/local/alternate/root/Documents/testfiles/sample2.rtf" (Total 1K  
bytes)  
[2022-01-05 16:03:54] Downloading...  
"/usr/local/alternate/root/Documents/sample2.txt" (Total 2K bytes)  
[2022-01-05 16:03:54] Downloading...  
"/usr/local/alternate/root/Documents/testfiles/sample2.txt" (Total 2K  
bytes)
```

```
[2022-01-05 16:03:54] Downloading...
"/usr/local/alternate/root/Documents/sample3.txt" (Total 3K bytes)
[2022-01-05 16:03:54] Downloading...
"/usr/local/alternate/root/Documents/testfiles/sample3.txt" (Total 3K
bytes)
[2022-01-05 16:03:54] Downloading...
"/usr/local/alternate/root/Documents/sample_960x540.mpg" (Total 733K
bytes)
[2022-01-05 16:03:54] Downloading...
"/usr/local/alternate/root/Documents/testfiles/sample_960x540.mpg"
(Total 733K bytes)
[2022-01-05 16:03:54] Downloading...
"/usr/local/alternate/root/Documents/testfiles/sample1.rtf" (Total 102K
bytes)
[2022-01-05 16:03:54] Downloading...
"/usr/local/alternate/root/Documents/testfiles/sample1.txt" (Total 607
bytes)
[2022-01-05 16:03:54] Downloading...
"/usr/local/alternate/root/Documents/sample1.rtf" (Total 116K bytes)
[2022-01-05 16:03:54] Downloading...
"/usr/local/alternate/root/Documents/sample1.txt" (Total 14K bytes)
[2022-01-05 16:03:54] Downloading...
"/usr/local/alternate/root/Documents/sample1.xls" (Total 16K bytes)
[2022-01-05 16:03:54] Downloading...
"/usr/local/alternate/root/Documents/testfiles/sample1.xls" (Total 16K
bytes)
[2022-01-05 16:03:54] Downloading...
"/usr/local/alternate/root/Documents/sample2.ppt" (Total 518K bytes)
[2022-01-05 16:03:54] Downloading...
"/usr/local/alternate/root/Documents/testfiles/sample2.ppt" (Total 518K
bytes)
[2022-01-05 16:03:54] Downloading...
"/usr/local/alternate/root/Documents/sample_960x540.mkv" (Total 1.26M
bytes)
[2022-01-05 16:03:54] Downloading...
"/usr/local/alternate/root/Documents/testfiles/sample_960x540.mkv"
(Total 1.26M bytes)
[2022-01-05 16:03:55] Restore Completed Successfully
[2022-01-05 16:03:55] end,RESTORE_STOP_SUCCESS,0,0,0,,0,0
```

## Decrypt.sh

This script file is used to decrypt backup files. To configure the parameters, open the script file in a text editor like vi.

```
# vi Decrypt.sh
```

Configure the following parameters:

- ❶ **SOURCE\_DIR** – this is the path of the folder that contains the backup files that you want to decrypt.  
e.g. SOURCE\_DIR="/usr/local/B247CBS/user/LinuxTest/1563436721634/blocks"
- ❷ **ENCRYPT\_KEY** – this is the encryption key the backup set. You can leave this blank if you backup set is not encrypted.  
e.g. ENCRYPT\_KEY="RU5DUllQVF9LRVk="

- **DECRYPT\_TO** – this is the directory where you want to store the decrypted backup file.  
 e.g. `DECRYPT_TO="/tmp"`
- **DECRYPT\_FROM** – this is the file or directory that you would like to decrypt.  
 e.g. `RESTORE_FROM="/Data"`
- **POINT\_IN\_TIME** – this is the specific successful backup that you want to decrypt. You can use *Current* if you want to use the latest backup snapshot. You can see the point in time snapshot by using the *ListBackupJob.sh* script file.  
 e.g. `POINT_IN_TIME="Current"` or `POINT_IN_TIME="2006-10-04-12-57-13"`
- **RESTORE\_PERMISSION** – you can set the file permission here.  
 e.g. `RESTORE_PERMISSION="N"` or `RESTORE_PERMISSION="Y"`
- **SKIP\_INVALID\_KEY** – you can set here if you want to skip decrypting the backup file with an invalid key. There are two (2) options for this: *Y* or *N*.  
 e.g. `SKIP_INVALID_KEY="N"`
- **SYNC\_OPTION** – this is the sync options if you want to delete extra files.  
 e.g. `SYNC_OPTIONS="Y"` if you want to enable sync options  
       `SYNC_OPTIONS="N"` if you do not want to enable sync options  
       `SYNC_OPTIONS=""` if you want to prompt for selection
- **REPLACE\_EXISTING\_FILE** – you can set here if you want files with the same filename to be replaced. There are three (3) options for this: *--all*, *--none* or blank.  
 e.g. `REPLACE_EXISTING_FILE="--all"` if you want to replace existing files with the same filename  
       `REPLACE_EXISTING_FILE="--none"` if you want to keep all existing files with the same filename  
       `REPLACE_EXISTING_FILE=""` if you want to be prompted for selection
- **SETTING\_HOME** – this is the directory to your setting home. If not set, the default directory is `"${HOME}/.B247Pro"`.  
 e.g. `SETTING_HOME="/root/.B247Pro"`
- **FILTER** – you can filter the files that you want to be restored. You can use this format to set the filter `-Pattern=xxx-Type=yyy-Target=zzz`.  
 xxx is the filter pattern  
 yyy is the filter type, you have eight (8) options available for this: *exact*, *exactMatchCase*, *contains*, *containsMatchCase*, *startWith*, *startWithMatchCase*, *endWith* and *endWithMatchCase*.  
 zzz is the filter target, you have three (3) options available for this: *toFile*, *toFileDir* and *toDir*.  
 e.g. `FILTER="-Pattern=.txt-Type=exact-Target=toFile"`
- **TEMP\_DIR** – this is the directory where the restore files will be stored temporarily. If set to "" the temporary directory in the backup set will be used.

e.g. TEMP\_DIR="/tmp"

- **VERIFY\_CHKSUM** – you can set here if you want the in-file delta file checksum to be verified during restore. There are two (2) options available for this: Y or N.

e.g. VERIFY\_CHKSUM="N" or VERIFY\_CHKSUM="Y"

```
# vi Decrypt.sh

#!/bin/sh

##### Decrypt.sh
#####
# You can use this shell script to decrypt backup files using command-
line. #
# Just customize the "User Define Section" below with values for your
decrypt #
# action.
#
#####
#####

##### Start: User Defined Section
#####

# ----- SOURCE_DIR -----
-----
# | The path to the [<backup set ID>/blocks] folder which contains
|
# | the backup files that you want to decrypt.
|
# | This folder should located under backup destination physically.
|
# | e.g. SET SOURCE_DIR="/Users/john/backupdata/1498444438340/blocks"
|
# | where directory "/Users/john/backupdata" is path of local
destination |
# -----
-----
SOURCE_DIR=""

# ----- ENCRYPT_KEY -----
-----
# | The encrypting key of the backup data.
|
# | e.g. SET ENCRYPT_KEY="RU5DU1lQVF9LRVk="
|
# |
|
# | You can leave this parameter blank if backup data is not encrypted.
|
# -----
-----
ENCRYPT_KEY=""

# ----- DECRYPT_TO -----
-----
# | Directory to where you want files to be decrypted
|
# | e.g. DECRYPT_TO="/tmp"
|
```

```

# -----
DECRYPT_TO=""

# ----- DECRYPT_FROM -----
# | File/Directory on the backup data that you would like to decrypt
# | e.g. DECRYPT_FROM="/Data"
# -----
DECRYPT_FROM=""

# ----- POINT_IN_TIME -----
# | The point-in-time snapshot (successful backup) that you want to
# | decrypt
# | from the backup data. Use "Current" for the latest backup snapshot
# | e.g. POINT_IN_TIME="2006-10-04-12-57-13"
# | or POINT_IN_TIME="Current"
# | You can retrieve the point in time by using the ListBackupJob.sh
# -----
POINT_IN_TIME="Current"

# ----- RESTORE_PERMISSION -----
# | set to "Y" if you want to restore file permissions
# | set to "N" if you do NOT want to restore file permissions
# -----
RESTORE_PERMISSION="N"

# ----- SKIP_INVALID_KEY -----
# | set to "Y" if you want to skip decrypt file with invalid key
# | set to "N" if you want to prompt to input a correct key
# -----
SKIP_INVALID_KEY="N"

# ----- SYNC_OPTION -----
# | Delete extra files
# | set to "Y" if you want to enable sync option
# | set to "N" if you do NOT want to enable sync option
  
```

```

# | set to "" to prompt for selection
|
# -----
-----
SYNC_OPTION="N"

# ----- REPLACE_EXISTING_FILE -----
-----
# | set to "--all" to replace all existing file(s) of the same filename
|
# | set to "--none" to skip all existing file(s) with the same filename
|
# | set to "" to prompt for selection
|
# -----
-----
REPLACE_EXISTING_FILE="--all"

# ----- SETTING_HOME -----
-----
# | Directory to your setting home. Log files will be located inside.
|
# | Default to ${HOME}/.B247Pro when not set.
# | e.g. SETTING_HOME="/Users/john/.B247Pro"
# -----
-----
SETTING_HOME=""

# ----- FILTER -----
-----
# | Filter out what files you want to decrypt
|
# | -Pattern=xxx-Type=yyy-Target=zzz
|
# | where xxx is the filter pattern,
|
# |     yyy is the filter type, whice can be one of the following:
|
# |     [exact | exactMatchCase | contains | containsMatchCase|
|
# |     startWith | startWithMatchCase | endWith |
endWithMatchCase]
# |     zzz is the filter target, which can be one of the following:
|
# |     [toFile | toFileDir | toDir]
|
# |
|
# | e.g. FILTER="-Pattern=.txt-Type=exact-Target=toFile"
|
# -----
-----
FILTER=""

# ----- TEMP_DIR -----
-----
# | Directory to where you want to store decrypt files temporarily
|
# | e.g. TEMP_DIR="/tmp"
|

```

```

# -----
-----
TEMP_DIR=""

# ----- VERIFY_CHKSUM -----
-----
# | set to "Y" if you want to verify in-file delta file checksum during
decrypt|
# | set to "N" if you do NOT want to verify in-file delta file checksum
during |
# | decrypt
|
# -----
-----
VERIFY_CHKSUM="N"

##### END: User Defined Section
#####

#####
#####
#     R E T R I E V E           A P P _ H O M E           P A T H
#
#####
#####

EXE_DIR=`pwd`
SCRIPT_HOME=`dirname "$0"`
cd "$SCRIPT_HOME"
APP_BIN=`pwd`
APP_HOME=`dirname "$APP_BIN"`

#####
#####
#     R E T R I E V E           J A V A _ H O M E           P A T H
#
#####
#####

if [ "Darwin" = `uname` ]; then
    JAVA_HOME="/System/Library/Frameworks/JavaVM.framework/Home"
fi

if [ ! -x "$APP_HOME/jvm" ];
then
    echo "'$APP_HOME/jvm' does not exist!"
    if [ ! -n "$JAVA_HOME" ]; then
        echo "Please set JAVA_HOME!"
        exit 0
    else
        ln -sf "$JAVA_HOME" "$APP_HOME/jvm"
        echo "Created JAVA_HOME symbolic link at '$APP_HOME/jvm'"
    fi
fi

if [ ! -x "$APP_HOME/jvm" ];
then
    echo "Please create symbolic link for '$JAVA_HOME' to
'$APP_HOME/jvm'"
    exit 0
fi
    
```



```

JAVA_HOME="$APP_HOME/jvm"
JAVA_EXE="$JAVA_HOME/bin/java"

# Verify the JAVA_EXE whether it can be executed or not.
if [ ! -x "${JAVA_EXE}" ]
then
  echo "The Java Executable file \"${JAVA_EXE}\" cannot be executed.
Exit \"``basename \"$0\"``\" now."
  exit 1
fi

# Verify the JAVA_EXE whether it is a valid JAVA Executable or not.
STRING_JAVA_VERSION="java version,openjdk version"
OUTPUT_JAVA_VERSION=`"${JAVA_EXE}" -version 2>&1`
OUTPUT_JVM_SUPPORT=0
BACKUP_IFS=$IFS
IFS=","
for word in $STRING_JAVA_VERSION; do
  if [ `echo "${OUTPUT_JAVA_VERSION}" | grep "${word}" | grep -cv
"grep ${word}"` -le 0 ]
  then
    #echo "The Java Executable \"${JAVA_EXE}\" is not a valid Java
Executable. Exit \"``basename \"$0\"``\" now."
    continue;
  else
    OUTPUT_JVM_SUPPORT=1
    break;
  fi
done
IFS=$BACKUP_IFS
if [ $OUTPUT_JVM_SUPPORT -eq 0 ]
then
  echo "The Java Executable \"${JAVA_EXE}\" is not a valid Java
Executable. Exit \"``basename \"$0\"``\" now."
  exit 1
fi

#####
#####
#           J A V A           E X E C U T I O N
#
#####
#####

# Set LD_LIBRARY_PATH for Lotus Notes on Linux
if [ "Linux" = `uname` ];
then
  NOTES_PROGRAM=`cat "$APP_BIN/notesenv"`
  LD_LIBRARY_PATH="$APP_BIN:$NOTES_PROGRAM:$LD_LIBRARY_PATH"
  export NOTES_PROGRAM
else
  LD_LIBRARY_PATH="$APP_BIN:$LD_LIBRARY_PATH"
fi

# The Decrypt Action must be execute at path $APP_HOME/bin
cd "${APP_BIN}"

DEP_LIB_PATH="X64"
case "`uname -m`" in
  i[3-6]86)

```

```

        DEP_LIB_PATH="X86"
    ;;
esac
LD_LIBRARY_PATH="${APP_BIN}/${DEP_LIB_PATH}":".":"${LD_LIBRARY_PATH}"

SHLIB_PATH="${LD_LIBRARY_PATH}"
export LD_LIBRARY_PATH SHLIB_PATH

# Reference path will be used to avoid empty space in the parent
directory
LIB_HOME=.
JAVA_OPTS="-Xrs -Xms128m -Xmx768m -XX:MaxDirectMemorySize=512m -client
-Dsun.nio.PageAlignDirectMemory=true"
JNI_PATH="-Djava.library.path=${LIB_HOME}"
CLASSPATH="${LIB_HOME}:${LIB_HOME}/cb.jar"
MAIN_CLASS=Decrypt

echo "Using APP_HOME:           : ${APP_HOME}"
echo "Using SETTING_HOME:        : ${SETTING_HOME}"
echo "Using SOURCE_DIR            : ${SOURCE_DIR}"
echo "Using DECRYPT_FROM           : ${DECRYPT_FROM}"
echo "Using DECRYPT_TO             : ${DECRYPT_TO}"
echo "Using POINT_IN_TIME         : ${POINT_IN_TIME}"
echo "Using RESTORE_PERMISSION    : ${RESTORE_PERMISSION}"
echo "Using TEMP_DIR              : ${TEMP_DIR}"

# Do not include double-quote for java options, jni path, classpath and
# main class.
# Only apply double-quote for path to java executable and execution
arguments
"${JAVA_EXE}" $JAVA_OPTS $JNI_PATH -cp $CLASSPATH $MAIN_CLASS --
to="${DECRYPT_TO}" --from="${DECRYPT_FROM}" --source-
dir="${SOURCE_DIR}" --key="${ENCRYPT_KEY}" "${REPLACE_EXISTING_FILE}" -
-date="${POINT_IN_TIME}" --set-permission="${RESTORE_PERMISSION}" --
skip-invalid-key="${SKIP_INVALID_KEY}" --sync="${SYNC_OPTION}" --
filter="${FILTER}" --temp-dir="${TEMP_DIR}" --verify-delta-file-
checksum="${VERIFY_CHKSUM}" --app-home="${APP_HOME}" --setting-
home="${SETTING_HOME}"

#####
#####
#                               R E S E T           A N D           E X I T
#
#####
#####

cd "${EXE_DIR}"
exit 0

```

Once you have configured the parameters, save the changes. Use the **sh** command to run the script. The decryption will be run manually.

```

# sh Decrypt.sh
Using APP_HOME           : /usr/local/B247Pro
Using SETTING_HOME:      :
Using SOURCE_DIR         : /root/backup/1641347569071/blocks
Using DECRYPT_FROM        : /root/Documents
Using DECRYPT_TO          : /tmp
Using POINT_IN_TIME      : Current

```

```

Using RESTORE_PERMISSION : N
Using TEMP_DIR           : /root/temp
Filter Pattern not set, filter would not apply to decrypt
[2022-01-05 16:45:14] Start [ Backup247 Advanced Client (B247PRO)
v9.0.2.24 ]
[2022-01-05 16:45:14] OS: Linux 4.18.0-240.1.1.el8_3.x86_64
(localhost.localdomain); CPU Model: VMware-Intel(R) Xeon(R) Gold 5218R
CPU @ 2.10GHz,Intel(R) Xeon(R) Gold 5218R CPU @ 2.10GHz,Intel(R)
Xeon(R) Gold 5218R CPU @ 2.10GHz,Intel(R) Xeon(R) Gold 5218R CPU @
2.10GHz; Number of Processors: 4; Heap Size: 30.5MB (Current) / 1.8GB
(Maximum); Physical Memory: 457.2MB (Free) / 3.6GB (Total)
[2022-01-05 16:45:14] start,Start [ Backup247 Advanced Client (B247PRO)
v9.0.2.24 ],0,0,0,,0,0

[2022-01-05 16:45:14] Selected job: 2022-01-05-16-45-06
[2022-01-05 16:45:14] Selected source: [/root/Documents]
[2022-01-05 16:45:14] Info: [followLink=false marshalTargetPath=false
deleteForSync=false skipFaultKey=false verifyDeltaFileChecksum=false
ignoreSegmentInfoCorruptedData=true restorePermission=false
[RestoreLocation] type=RAW path=[/tmp]]
[2022-01-05 16:45:16] Creating new directory... "/tmp/root"
[2022-01-05 16:45:16] Creating new directory... "/tmp/root/Documents"
[2022-01-05 16:45:16] Creating new directory...
"/tmp/root/Documents/testfiles"
[2022-01-05 16:45:16] Downloading... "/tmp/root/Documents/sample1.rtf"
(Total 116K bytes)
[2022-01-05 16:45:16] Downloading... "/tmp/root/Documents/sample1.txt"
(Total 14K bytes)
[2022-01-05 16:45:16] Downloading... "/tmp/root/Documents/sample1.xls"
(Total 16K bytes)
[2022-01-05 16:45:16] Downloading... "/tmp/root/Documents/sample1.pdf"
(Total 567K bytes)
[2022-01-05 16:45:16] Downloading...
"/tmp/root/Documents/testfiles/sample1.xls" (Total 16K bytes)
[2022-01-05 16:45:16] Downloading... "/tmp/root/Documents/sample2.pdf"
(Total 64K bytes)
[2022-01-05 16:45:16] Downloading...
"/tmp/root/Documents/testfiles/sample1.pdf" (Total 567K bytes)
[2022-01-05 16:45:16] Downloading... "/tmp/root/Documents/sample1.ppt"
(Total 891K bytes)
[2022-01-05 16:45:16] Downloading... "/tmp/root/Documents/sample2.txt"
(Total 2K bytes)
[2022-01-05 16:45:16] Downloading...
"/tmp/root/Documents/testfiles/sample1.ppt" (Total 891K bytes)
[2022-01-05 16:45:16] Downloading...
"/tmp/root/Documents/testfiles/sample2.txt" (Total 2K bytes)
[2022-01-05 16:45:16] Downloading... "/tmp/root/Documents/sample2.ppt"
(Total 518K bytes)
[2022-01-05 16:45:16] Downloading... "/tmp/root/Documents/sample3.txt"
(Total 3K bytes)
[2022-01-05 16:45:16] Downloading...
"/tmp/root/Documents/testfiles/sample3.txt" (Total 3K bytes)
[2022-01-05 16:45:16] Downloading... "/tmp/root/Documents/sample2.xls"
(Total 7K bytes)
[2022-01-05 16:45:16] Downloading...
"/tmp/root/Documents/testfiles/sample2.xls" (Total 7K bytes)
[2022-01-05 16:45:16] Downloading... "/tmp/root/Documents/sample3.xls"
(Total 13K bytes)
[2022-01-05 16:45:16] Downloading...
"/tmp/root/Documents/testfiles/sample3.xls" (Total 13K bytes)

```

```
[2022-01-05 16:45:16] Downloading...
"/tmp/root/Documents/sample_640x360.avi" (Total 569K bytes)
[2022-01-05 16:45:16] Downloading...
"/tmp/root/Documents/testfiles/sample_640x360.avi" (Total 569K bytes)
[2022-01-05 16:45:16] Downloading...
"/tmp/root/Documents/testfiles/sample2.ppt" (Total 518K bytes)
[2022-01-05 16:45:16] Downloading...
"/tmp/root/Documents/testfiles/sample2.pdf" (Total 64K bytes)
[2022-01-05 16:45:16] Downloading...
"/tmp/root/Documents/testfiles/sample1.rtf" (Total 102K bytes)
[2022-01-05 16:45:16] Downloading... "/tmp/root/Documents/sample2.rtf"
(Total 1K bytes)
[2022-01-05 16:45:16] Downloading...
"/tmp/root/Documents/testfiles/sample2.rtf" (Total 1K bytes)
[2022-01-05 16:45:16] Downloading...
"/tmp/root/Documents/testfiles/sample1.txt" (Total 607 bytes)
[2022-01-05 16:45:16] Downloading... "/tmp/root/Documents/settings.sys"
(Total 44K bytes)
[2022-01-05 16:45:16] Downloading...
"/tmp/root/Documents/sample_960x540.mkv" (Total 1.26M bytes)
[2022-01-05 16:45:16] Downloading...
"/tmp/root/Documents/testfiles/sample_960x540.mkv" (Total 1.26M bytes)
[2022-01-05 16:45:16] Downloading...
"/tmp/root/Documents/sample_960x540.mpg" (Total 733K bytes)
[2022-01-05 16:45:16] Downloading...
"/tmp/root/Documents/testfiles/sample_960x540.mpg" (Total 733K bytes)
[2022-01-05 16:45:17] Restore Completed Successfully
[2022-01-05 16:45:17] end,RESTORE_STOP_SUCCESS,0,0,0,,0,0
```

## RunDataIntegrityCheck.sh

This script file is used to run data integrity check on your backup set. To configure the parameters, open the script file in a text editor like vi.

```
# vi RunDataIntegrityCheck.sh
```

Configure the following parameters:

- 🔴 **SETTING\_HOME** – this is the directory to your setting home. If not set, the default directory is “\${HOME}/.B247Pro”.

e.g. SETTING\_HOME="/root/.B247Pro"
- 🔴 **BACKUP\_SET** – this is the name of the backup set which you want to run data integrity check on. There are two (2) ways to specify the backup set; by using the *backup set name* or by *backup set ID*. If the backup set name is not in English, use the backup set ID. You can leave this blank if you only have one (1) backup set. You can also run the data integrity check on all backup sets by using “ALL”.

e.g. BACKUP\_SET="1119083740107", BACKUP\_SET="FileBackupSet-1" or  
BACKUP\_SET="ALL"
- 🔴 **BACKUP\_DEST** – this is the name of the destination where the backup set was stored. There are two (2) ways to specify the destination; by using the *destination name* or *destination ID*. If the destination name is not in English, use the DestinationID. You can leave this blank if you only have one (1) backup destination. This will be disregarded if BACKUP\_SET="ALL".

e.g. DESTINATION="1119083740107" or DESTINATION="B247CBS"

- **CRC\_MODE** – you can set here if you want to run cyclic redundancy check while doing the data integrity check. There are two (2) options available: *ENABLE-CRC* or *DISABLE-CRC*

e.g. CRC\_MODE="DISABLE-CRC" or CRC\_MODE="ENABLE-CRC"

```
# vi RunDataIntegrityCheck.sh

#!/bin/sh

##### RunDataIntegrityCheck.sh
#####
# You can use this shell script to run any of your backup sets from the
#
# command line. Just customize the "User Defined Section" below with
your      #
# values for your backup action.
#
#####
#####

##### START: User Defined Section
#####

# ----- SETTING_HOME (Optional) -----
-----
# | Directory to your setting home.
|
# | Default to ${HOME}/.B247Pro when not set.
|
# | e.g. SETTING_HOME="${HOME}/.B247Pro"
|
# -----
-----
SETTING_HOME=""

# ----- BACKUP_SET -----
-----
# | The name or ID of the backup set that you want to run.
|
# | If backup set name is not in English, please use ID instead.
|
# | e.g. BACKUP_SET="1119083740107"
|
# | or BACKUP_SET="FileBackupSet-1"
|
# | You can use "ALL" to run data integrity check for all backup sets.
|
# | i.e. BACKUP_SET="ALL"
|
# |
|
# | You can leave this parameter blank if you have only 1 backup set.
|
# -----
-----
BACKUP_SET="ALL"
```

```

# ----- BACKUP_DEST -----
# | The name or ID of the backup destination that you want to run.
# | If backup destination name is not in English, please use ID
# | instead.
# | e.g. BACKUP_DEST="1740107119083"
# | or BACKUP_DEST="Destination-1"
# | You can use "ALL" to run data integrity check for all destinations.
# | i.e. BACKUP_DEST="ALL"
# |
# | You can leave this parameter blank if you have only 1 destination.
# | Remark: This option is ignored if BACKUP_SET="ALL"
# -----
BACKUP_DEST="ALL"

# ----- CRC_MODE -----
# | You can run Cyclic Redundancy Check (CRC) during data integrity
# | check
# | Options available: ENABLE-CRC/DISABLE-CRC
# | i.e. CRC_MODE="ENABLE-CRC"
# | or CRC_MODE="DISABLE-CRC"
# -----
CRC_MODE="DISABLE-CRC"

##### END: User Defined Section
#####

#####
#                               S C R I P T                               U S A G E
#
#####

# Input Arguments will overwrite the above settings
# defined in 'User Defined Section'.
if [ $# -ge 1 ]; then

    if [ -n "$1" ]; then
        BACKUP_SET="$1"
    fi

fi
  
```

```
#####
#####
#           R E T R I E V E       A P P _ H O M E       P A T H
#
#####
#####

EXE_DIR=`pwd`
SCRIPT_HOME=`dirname "$0"`
cd "$SCRIPT_HOME"
APP_BIN=`pwd`
APP_HOME=`dirname "$APP_BIN"`

#####
#####
#           R E T R I E V E       J A V A _ H O M E       P A T H
#
#####
#####

if [ "Darwin" = `uname` ]; then
    JAVA_HOME="/System/Library/Frameworks/JavaVM.framework/Home"
fi

if [ ! -x "$APP_HOME/jvm" ];
then
    echo "'$APP_HOME/jvm' does not exist!"
    if [ ! -n "$JAVA_HOME" ]; then
        echo "Please set JAVA_HOME!"
        exit 0
    else
        ln -sf "$JAVA_HOME" "$APP_HOME/jvm"
        if [ ! -x "$APP_HOME/jvm" ];
        then
            echo "Please create symbolic link for '$JAVA_HOME' to
'$APP_HOME/jvm'"
            exit 0
        else
            echo "Created JAVA_HOME symbolic link at '$APP_HOME/jvm'"
        fi
    fi
fi

JAVA_HOME="$APP_HOME/jvm"
JAVA_EXE="$JAVA_HOME/bin/java"

# Verify the JAVA_EXE whether it can be executed or not.
if [ ! -x "${JAVA_EXE}" ]
then
    echo "The Java Executable file \"${JAVA_EXE}\" cannot be executed.
Exit \"``basename \"$0\"``\" now."
    exit 1
fi

# Verify the JAVA_EXE whether it is a valid JAVA Executable or not.
STRING_JAVA_VERSION="java version,openjdk version"
OUTPUT_JAVA_VERSION=`"${JAVA_EXE}" -version 2>&1`
OUTPUT_JVM_SUPPORT=0
BACKUP_IFS=$IFS
IFS=","
for word in $STRING_JAVA_VERSION; do
```

```

    if [ `echo "${OUTPUT_JAVA_VERSION}" | grep "${word}" | grep -cv
"grep ${word}"` -le 0 ]
    then
        #echo "The Java Executable \"${JAVA_EXE}\" is not a valid Java
Executable. Exit \"\"`basename "$0"`\" now."
        continue;
    else
        OUTPUT_JVM_SUPPORT=1
        break;
    fi
done
IFS=$BACKUP_IFS
if [ $OUTPUT_JVM_SUPPORT -eq 0 ]
then
    echo "The Java Executable \"${JAVA_EXE}\" is not a valid Java
Executable. Exit \"\"`basename "$0"`\" now."
    exit 1
fi

#####
#####
#           E X E C U T I O N       J A V A       P R O P E R T I E S
#
#####
#####

# Set LD_LIBRARY_PATH for Lotus Notes on Linux
if [ "Linux" = `uname` ];
then
    NOTES_PROGRAM=`cat "$APP_HOME/bin/notesenv"`
    LD_LIBRARY_PATH="$APP_HOME/bin:$NOTES_PROGRAM:$LD_LIBRARY_PATH"
    export NOTES_PROGRAM
else
    LD_LIBRARY_PATH="$APP_HOME/bin:$LD_LIBRARY_PATH"
fi

DEP_LIB_PATH="X64"
case "`uname -m`" in
    i[3-6]86)
        DEP_LIB_PATH="X86"
    ;;
esac
LD_LIBRARY_PATH="${APP_BIN}/${DEP_LIB_PATH}":".":"${LD_LIBRARY_PATH}"

SHLIB_PATH="${LD_LIBRARY_PATH}"
export LD_LIBRARY_PATH SHLIB_PATH

#####
#####
#           J A V A       E X E C U T I O N
#
#####
#####

# Change to APP_BIN for JAVA execution
cd "${APP_BIN}"

# Reference path will be used to avoid empty space in the parent
directory
LIB_HOME=.

```



```

JAVA_OPTS="-Xrs -Xms128m -Xmx768m -XX:MaxDirectMemorySize=512m -client
-Dsun.nio.PageAlignDirectMemory=true"
JNI_PATH="-Djava.library.path=$LIB_HOME"
CLASSPATH="$LIB_HOME:$LIB_HOME/cb.jar"
MAIN_CLASS=RunDataIntegrityCheck

echo "-"
echo "Using APP_HOME      : $APP_HOME"
echo "Using SETTING_HOME   : $SETTING_HOME"
echo "Using JAVA_HOME       : $JAVA_HOME"
echo "Using JAVA_EXE        : $JAVA_EXE"
echo "Using JAVA_OPTS       : $JAVA_OPTS"
echo "Using JNI_PATH        : $JNI_PATH"
echo "Using CLASSPATH       : $CLASSPATH"
echo "-"

echo "Running data integrity check for backup set - '$BACKUP_SET',
destination - '$BACKUP_DEST' ..."

# API Arguments: RunDataIntegrityCheck [APP_HOME] [SETTING_HOME]
[BACKUP_SET] [BACKUP_DEST] [CRC_MODE] [REBUILD_MODE]

# Do not include double-quote for java options, jni path, classpath and
# main class.
# Only apply double-quote for path to java executable and execution
arguments
"${JAVA_EXE}" $JNI_PATH -cp $CLASSPATH $JAVA_OPTS $MAIN_CLASS
"${APP_HOME}" "${SETTING_HOME}" "${BACKUP_SET}" "${BACKUP_DEST}"
"${CRC_MODE}" "${REBUILD_MODE}"

#####
#####
#           R E S E T           A N D           E X I T
#
#####
#####

cd "${EXE_DIR}"
exit 0

```

Once you have configured the parameters, save the changes. Use the **sh** command to run the script. The data integrity check will be run in the backup set.

```

# sh RunDataIntegrityCheck.sh
-
Using APP_HOME      : /usr/local/B247Pro
Using SETTING_HOME   :
Using JAVA_HOME       : /usr/local/B247Pro/jvm
Using JAVA_EXE        : /usr/local/B247Pro/jvm/bin/java
Using JAVA_OPTS       : -Xrs -Xms128m -Xmx2048m -
XX:MaxDirectMemorySize=512m -client -
Dsun.nio.PageAlignDirectMemory=true
Using JNI_PATH        : -Djava.library.path=./LinX64
Using CLASSPATH       : ./cb.jar
-
Running data integrity check for backup set - 'Sample Backup Set 03',
destination - 'Local-1' ...
[doInfo] Start [ Backup247 Advanced Client (B247PRO) v9.0.2.24 ]

```

```
[doStart] Start data integrity check on backup set "Sample Backup Set 03(1641347569071)", "Local-1(1641353833383)", crc disabled, rebuild index disabled
[doDetail] Start processing data integrity check on backup set= "Sample Backup Set 03" destination= "Local-1"
[doLogProgress] Start processing data integrity check on backup set= "Sample Backup Set 03" destination= "Local-1"
[doLogProgress] Download valid index files from backup job "Current" to "/root/.B247Pro/temp/1641347569071/Local@1641353833383/index".
[doInfo] Download valid index files from backup job "Current" to "/root/.B247Pro/temp/1641347569071/Local@1641353833383/index".
[doLogProgress] Browsing "1641347569071/blocks/2022-01-05-16-39-20"
[doLogProgress] Browsing "1641347569071/blocks/2022-01-05-16-39-20/0"
[doLogProgress] Browsing "1641347569071/blocks/2022-01-05-16-51-08"
[doLogProgress] Processing Job "Current", ""
[doInfo] Vacuuming index
[doInfo] Vacuuming index... Completed
[doInfo] Existing statistics of backup set= "Sample Backup Set 03" destination= "Local-1": Data area compressed size: 8.68MB, Data area uncompressed size: 9.41MB, Data area file count: 31, Retention area compressed size: 0B, Retention area uncompressed size: 0B, Retention area file count: 0, Dedupe saving compressed size: 4.57MB, Dedupe saving uncompressed size: 9.41MB
[doInfo] Recalculated statistics of backup set= "Sample Backup Set 03" destination= "Local-1": Data area compressed size: 8.68MB, Data area uncompressed size: 9.41MB, Data area file count: 31, Retention area compressed size: 0B, Retention area uncompressed size: 0B, Retention area file count: 0, Dedupe saving compressed size: 4.84MB, Dedupe saving uncompressed size: 9.41MB
[doInfo] The statistics of backup set= "Sample Backup Set 03" destination= "Local-1" is correct.
[doLogProgress] Saving encrypted backup file index to 1641347569071/blocks/2022-01-05-16-52-38 at destination Local-1...
[doInfo] Saving encrypted backup file index to 1641347569071/blocks/2022-01-05-16-52-38 at destination Local-1...
[doDetail] Data integrity check on backup set= "Sample Backup Set 03" destination= "Local-1" is completed
[doLogProgress] Data integrity check on backup set= "Sample Backup Set 03" destination= "Local-1" is completed
[doEnd][INFO] Finished data integrity check on backup set "Sample Backup Set 03(1641347569071)", "Local-1(1641353833383)", crc disabled, rebuild index disabled
[doInfo] Completed data integrity check on backup set "Sample Backup Set 03(1641347569071)", "Local-1(1641353833383)", crc disabled, rebuild index disabled
```

## Appendix K How to Create a Free Trial Account

Users can create a free trial account when they login to Backup247 Advanced Client (B247PRO) for the first time. Please ensure that the following requirements are met before creating your trial account:

- A valid email address which will be used for receiving notices. A welcome message will also be sent upon creation of the account which specifies the User Setting and Quota set for backup in B247B247CBS.

While here are the limitations of a trial account:

- The Free Trial button will only be displayed once, when the user login for the first time. If you cannot create a free trial account kindly contact your backup service provider.
- Only alphanumeric characters and selected special characters, A to Z, 0 to 9, @, - and \_ , are allowed to be used for the Login name. While there may be some limitations on password complexity and age which is determined by your backup service provider. Please contact your backup service provider for further details.
- The add-on modules available and quota size are determined by your backup service provider.
- The trial account period is also determined by your backup service provider. Please contact your backup service provider for details.

### NOTE

The Free Trial Registration option may not be available. This depends on the settings of your backup service provider. Please contact your backup service provider for more information.

Follow the steps below to create a Free Trial backup account in Backup247 Advanced Client (B247PRO) .

1. Select (2).

```
Login Menu (No configuration files found)
-----
(1). Login
(2). Free Trial
(3). Quit
-----
Your Choice: 2
```

2. Configure the backup server setting.

```
Backup Server URL : 10.90.10.11
Port : 80
Protocol? (1) Http (2) Https : 1
Enable Proxy (Y/N) ? n
```

3. Enter your login name, password and email address.

```
Register Trial User
Login Name : trial
```

```
Password : *****  
Re-Enter password : *****  
Email address : name@email.com  
  
Please wait while verifying user account with server...  
  
Your trial account (trial) has been created on server  
(10.90.10.11:80).  
New configuration file has been created
```

4. Once trial account is created the Main Menu will be displayed.

```
Main Menu  
-----  
(1). List Backup Sets  
(2). Delete Backup Set  
(3). Export Backup Set Settings to XML  
(4). Import Backup Set Settings from XML  
(5). Generate new Backup Set Settings Template  
(6). Change Language [English]  
(7). Update Profile Settings  
(8). Quit  
-----  
Your Choice:
```

5. After creating the trial account, you need to check several things:

- The expiry date of the trial account, which determines when it will be suspended.
- The Language which will be used for sending reports.
- And the Timezone, this is to ensure that your backup schedule will run at the correct time.

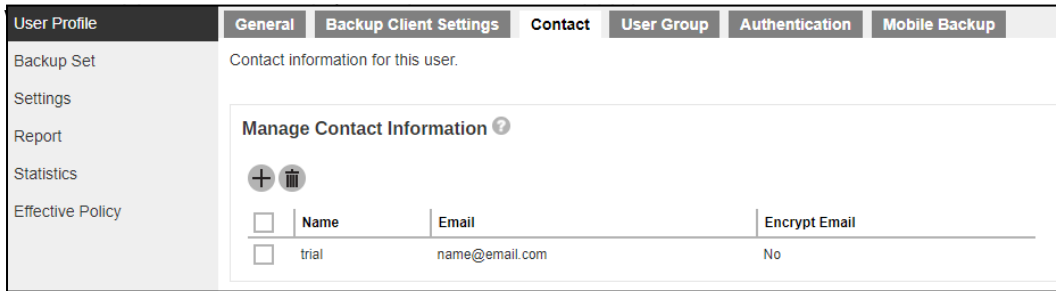
You can check this by logging in to B247B247CBS, go to **Backup / Restore > User > User Profile > General**. For more information, please refer to the B247CBS User's Guide.

User Profile	General	Backup Client Settings	Contact	User Group
Backup Set	<b>Suspend At</b>			
Settings	<input type="text" value="04-02-2022"/> (dd-mm-yyyy)			
Report	<b>Status</b>			
Statistics	<input checked="" type="radio"/> Enable <input type="radio"/> Suspended <input type="radio"/> Locked			
Effective Policy	<b>Upload Encryption Key</b>			
	<input checked="" type="checkbox"/> Upload encryption key after running backup for recovery			
	<b>Language</b>			
	<input type="text" value="English"/> ▼			
	<b>Timezone</b>			
	<input type="text" value="GMT+08:00 (HKT)"/> ▼			

6. You also need to check the available add-on modules and quota by going to the **Backup Client Settings** tab.

User Profile	General	Backup Client Settings	Contact	User Group	Authentication	Mobile Backup																						
Backup Set	Settings of the client backup agent for this user.																											
Settings	<b>Backup Client</b>																											
Report	<input checked="" type="radio"/> B247Pro User <input type="radio"/> B247Lite User																											
Statistics	<b>Add-on Modules</b>																											
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	(If preempted mode is enabled in policy settings, the quota settings are disabled)																											

7. Lastly, you need to verify if your contact details are correct by going to the **Contact** tab. If you



The screenshot shows the 'User Profile' page with the 'Contact' tab selected. The page title is 'Contact information for this user.' Below this is a section titled 'Manage Contact Information' with a plus icon and a trash icon. A table lists contact information for a user named 'trial'.

<input type="checkbox"/>	Name	Email	Encrypt Email
<input type="checkbox"/>	trial	name@email.com	No



## Appendix L How to Manually Upgrade Backup247 Advanced Client (B247PRO)

Before you proceed with upgrading of Backup247 Advanced Client (B247PRO) to the latest version, make sure that you have read the system requirements especially if upgrading from Backup247 Advanced Client (B247PRO) v6 or v7.

To upgrade Backup247 Advanced Client (B247PRO), follow the instructions below.

1. Uninstall the current Backup247 Advanced Client (B247PRO) version depending on how Backup247 Advanced Client (B247PRO) was installed. There are three ways to uninstall Backup247 Advanced Client (B247PRO).
  - To uninstall using **sh** script, refer to Appendix D
  - To uninstall using **rpm** script, refer to Appendix E
  - To uninstall using **dpkg** script, refer to Appendix F
2. Go to the download page of your backup service provider's website and select which type of installation method you would like to use.



3. Refer to Chapter 4 Download and Install Backup247 Advanced Client (B247PRO) to download and install the latest version of Backup247 Advanced Client (B247PRO).
  - For online installation method using either **SH**, **RPM**, or **DEB** online installer, refer to Ch. 4.1 Online Installation.
  - For offline installation method using **TAR GZ** offline installer, refer to Ch. 4.2 Offline Installation.