

# **Ahsay Cloud Backup Suite v8**

# User's Guide

Ahsay Systems Corporation Limited

11 October 2021



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# Revision History

Date	Descriptions	Type of modification
25 March 2021	Updated Ch. 1.4.2, 1.4.2.1 and 1.4.2.2; Added storage statistics calculation in Ch. 2.6; Added different run direct restore scenarios in Ch. 5.3	Modification
30 April 2021	Updated discussion on storage statistic in Ch. 2.6; Updated diagram in Ch. 5.1	Modification
18 June 2021	Added note on VM Run Direct tile in Ch. 1.4; Updated screenshot in Ch. 1.6;	New / Modification
9 August 2021	Updated windows user authentication discussion in Ch. 4.1	Modification
11 October 2021	Added how to register device in Ch. 2; Moved login instructions to Ch. 3; Added unable to login instructions in Ch. 4; Updated authentication tab in Ch. 5.3.5	New / Modification

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## 1 Overview

### 1.1 Introduction

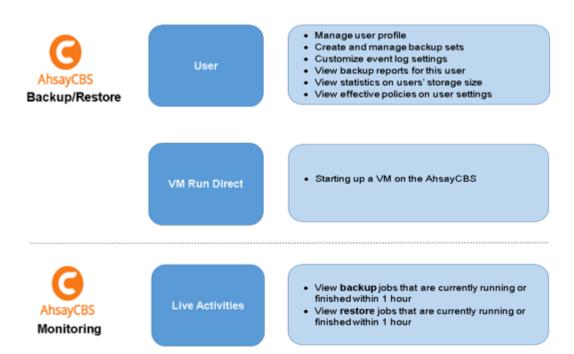
#### What is this software?

Ahsay Cloud Backup Suite v8 allows you to back up your data on the cloud. You can access the AhsayCBS server environment easily on a user web console. This is a user interface that allows you to login remotely to a backup server.

The **User** option in the main interface allows the AhsayCBS user to update user profile and manage other settings such as reports.

The **VM** Run **Direct** option allows the AhsayCBS user to restore a VM by running it directly from the backup files in the AhsayCBS. This is much faster than extracting from backup files and copying to the production storage, which can take hours to complete. This feature helps reduce disruption and downtime of your production VMs. Administrator can troubleshoot on the failed virtual machine, while users are back in production with minimal disruption.

The **Live Activities** option is a monitoring tool which allows you to view the backup jobs and restore jobs as they are running as well as to view all jobs that were run within the previous 1 hour.



### 1.2 About This Document

What is the purpose of this document?

This document aims at providing all necessary information for you to work with the AhsayCBS server at the user level to manage backup and restore jobs.

### What should I expect from this document?

After reading through this documentation, you can expect to have sufficient knowledge to perform various tasks on the AhsayCBS server. These include modifying user profile settings, monitoring the backup and restore processes real time, and running the AhsayCBS from a virtual machine directly.

#### Who should read this document?

This documentation is intended for IT professionals who need to work with AhsayCBS server at the user level.

### 1.3 Requirements for Using the AhsayCBS User Web Console

In order to use the AhsayCBS user web console, you need the following:

#### Internet connection

You need to have internet connection to access the AhsayCBS user web console.

#### Web browsers

The AhsayCBS User Web Console runs with all major browsers. Please make sure that you are using the latest version and enable pop-ups on your preferred web browsers.



### AhsayCBS login account

You need an AhsayCBS login account to access the AhsayCBS server component.

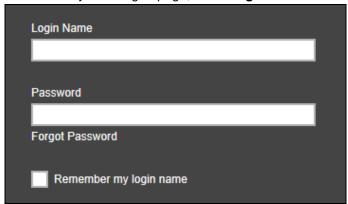
#### **NOTE**

Please contact your Ahsay backup service provider to create an AhsayCBS login account for you.

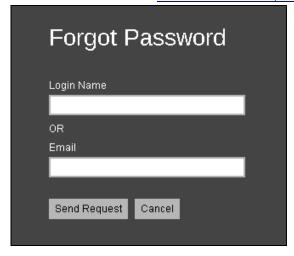
## 1.4 Resetting Your Password

If you have forgotten your password, you can perform the following steps to reset your password.

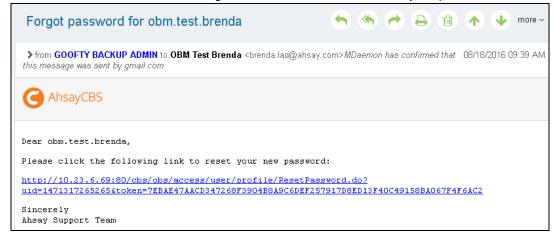
1. On the AhsayCBS Logon page, click Forgot Password.



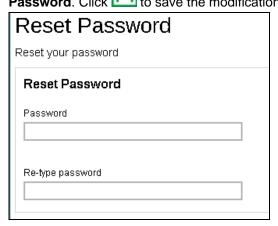
The following screen appears. Enter either your Login Name or your Email to reset the
password. Click Send Request. Ensure that you have included your e-mail address on
the Manage Contact Information upon the creation of user profile. For further details,
this will be discussed on Ch. 5.3 User Profile, Contact Tab.



3. You will receive an email containing a link. Click on the link to reset your password.



4. The Reset Password screen appears. Enter the new **Password** and then **Re-type Password**. Click to save the modification.



5. You will get the following screen confirming that your password has been changed.

Reset Password		
Reset your password		
Reset Password		
Your password has been changed.		

## 1.5 Downloading Software

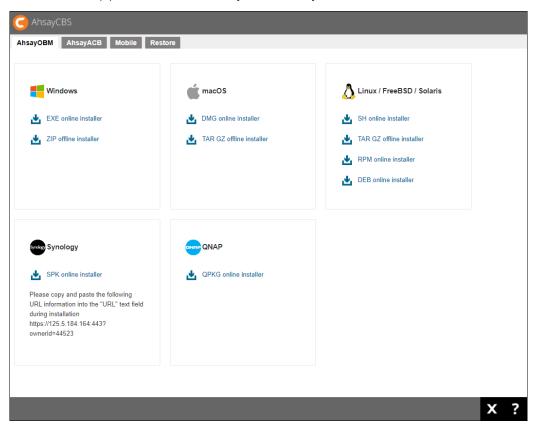
You can choose what client software you wish to download as follows:

1. On the AhsayCBS Logon page, click the downward arrow on the top right-hand corner.



2. The software download page appears. You can choose which product and which platform to download.

There are four (4) available tabs, AhsayOBM, AhsayACB, Mobile, and Restore.



#### **NOTE**

The actual options available is dependent on your backup service provider.

Client Backup Agents	Brief Description
AhsayOBM AhsayOBM	AhsayOBM is a versatile backup application that backup databases, applications, and virtual machines to local and offsite destinations.
AhsayACB AhsayACB	AhsayACB is an advanced yet easy-to-use desktop and laptop backup software for backing up files, Cloud files, Windows System backup, IBM Lotus Notes and Office 365 to local and offsite destinations.
Ahsay Mobile  Ahsay Mobile	Ahsay Mobile is an easy to use 2FA Authenticator app and backup/restore solution for Android and iOS mobile devices. It can be used for login with 2FA and can also backup photos, videos and 2FA accounts to local destination on the AhsayOBM and AhsayACB machine. It can be downloaded from the App Store and Google Play Store.

Client Restore Agent	Brief Description
AhsayOBR	AhsayOBR supports the restore of multiple backup sets; file, databases, and virtual machines, such as VMware, Hyper-V, Microsoft Exchange Database Availability Group (DAG), Microsoft Exchange Database, Microsoft Exchange Mailbox, Microsoft SQL Server, Oracle Database, Lotus Domino/Notes, MySQL, MariaDB, Windows System, Windows System State, ShadowProtect, Synology NAS Devices, Office365, Cloud File with our dedicated restore modules.

AhsayCBS also supports two (2) installation modes, online and offline installation (except for Linux (rpm), Debian/Ubuntu (deb), Synology NAS and QNAP which supports online installation only). User can download and run either one of the installers.

Below is the table of comparison between online installation and offline installation.

	Online Installation	Offline Installation
Internet	<ul> <li>It cannot be started without an internet connection.</li> <li>Clients need to have an internet connection each time an installation is run.</li> <li>If the client internet connection is interrupted or is not stable the installation may be unsuccessful.</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> <li>Once the offline installer is downloaded, the client does not require an internet connection each time an installation is run.</li> <li>The offline installer size is 80MB to 140MB depending on operating system as it contains all the necessary binary and component files</li> </ul>
Backup Server Availability	The online installer requires the backup server to be online in order to run and complete the installation.	An offline installation can be performed independently of the backup server availability.
Installation Time	<ul> <li>Takes more time as it needs to download the binary and component files (80MB to 140MB depending on operating system) each time the installation is run.</li> <li>A slow internet connection on the client machine will also result in longer installation time.</li> </ul>	Takes less time as all the necessary binary and component files are already available in the offline installer.
Version Control	Online installation ensures the latest version of the product is installed.	May need to update the product version after installation if an older offline installer is used.
Administrative Support	Need more time on the support for the installation as network factor might lead to unsuccessful installation.	Need less time as independent of network factor influence.
Deployments	<ul> <li>Suitable for single or small amount of device installations.</li> <li>Suitable for client sites with fast and stable internet connection.</li> </ul>	<ul> <li>Suitable for multiple or mass device installations.</li> <li>Suitable for client sites with metered internet connections.</li> </ul>

3. Download the executable and install the product in the usual way.

## 1.6 Changing the Language

You can change the language of AhsayCBS anytime, whether before or after you have logon to the system.

#### **NOTE**

If the language you want is not available, please contact your backup service provider for assistance.

The available languages are:

0

Vietnamese

- 0 Arabic 0 0 Basque Catalan Chinese (Simplified) Chinese (Traditional) Czech 0 Danish Dutch English (default) 0 **Finnish** O French 0 German Greek Modern Hebrew Hungarian 0 Indonesian Italian 0 Japanese 0 0 Korean 0 Lithuanian Norwegian Polish Portuguese (Brazilian) 0 Portuguese (Portugal) Russian Slovenian Spanish 0 Thai Swedish 0 Turkish
- 1. On the AhsayCBS Logon page, click the downward arrow on the upper right-hand side.



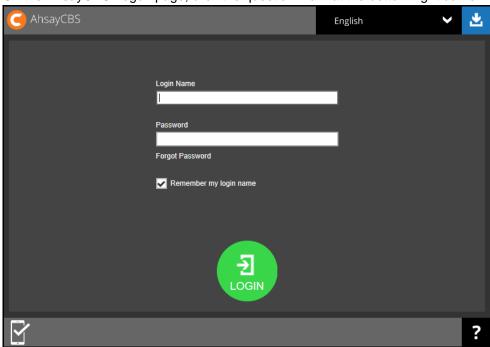
2. A list of available language is displayed for your choice.



## 1.7 Invoking Online Help

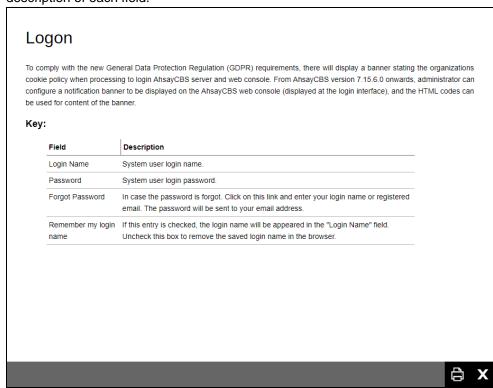
You can invoke the online help if you have problems logging in to the AhsayCBS server.

1. On the AhsayCBS Logon page, click the question mark at the bottom right corner.



2. The online help for the topic "Logon" appears.

It contains detailed description of each field on the logon screen and gives a brief description of each field.



3. You can print the online help by clicking at the bottom right corner. To exit, click X.

## 2 Register Device for 2FA in AhsayCBS

Upon logging in to AhsayCBS for the first time with two-factor authentication (2FA) enabled, you are required to register a device that will be used for 2FA to proceed with the login.

Starting with AhsayCBS v8.5.4.20 and above, there are four types of authenticator apps that can be used for 2FA, which are:

- Ahsay Mobile or branded Mobile app
- Microsoft Authenticator
- Google Authenticator
- Third party authenticators

The authenticator app that will be available depends on the settings made by your backup service provider.

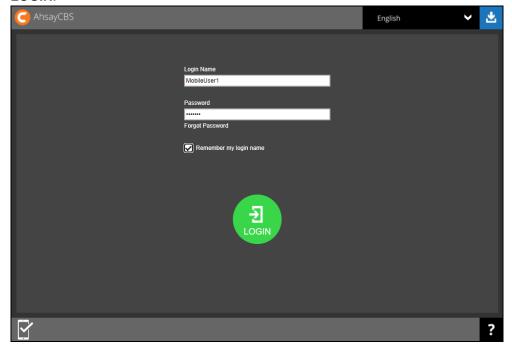
Instructions on how to register your device for 2FA will be discussed in detail for each authenticator app in the succeeding sub-chapters. First follow these login steps to register your device for 2FA then refer to the sub-chapter which cover the details of the registration for the authenticator app that you are using.

 Login to the AhsayCBS User Web Console at https://<IP AhsayCBS Server>:443/

#### **NOTE**

Contact your backup service provider for the URL to connect to the web console if necessary.

 Enter the Login Name and Password of your AhsayOBM/AhsayACB account then click LOGIN.



3. To set up your two-factor authentication, click to proceed with setting up your 2FA.

## New Ahsay Mobile App, Free of Charge!

#### Keep Hackers Off

All hackers delete backup data after compromising a machine. Use Two-Factor Authentication (2FA) to keep hackers off your backup data and turn ransomware harmless.



**→** 

#### NOTE

This screen may not be displayed, this is dependent on the settings made by your backup service provider.

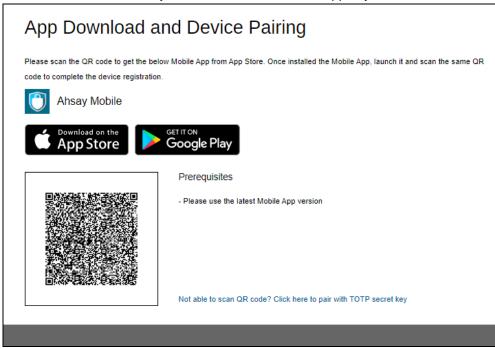
- 4. Follow the steps in the sub-chapter which covers the authenticator app that you are using:
  - Ahsay Mobile or branded Mobile app
  - Microsoft Authenticator
  - Google Authenticator
  - Third party authenticators

#### NOTE

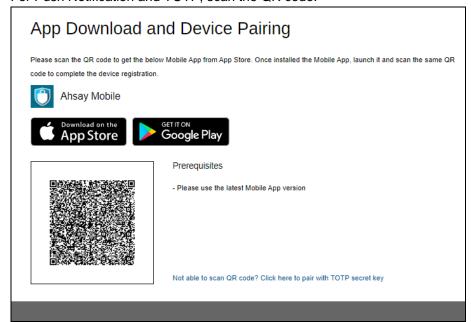
The actual option available is dependent on your backup service provider.

# 2.1 Register device for 2FA using Ahsay Mobile or branded Mobile app

1. Download and install Ahsay Mobile or branded Mobile app in your device.



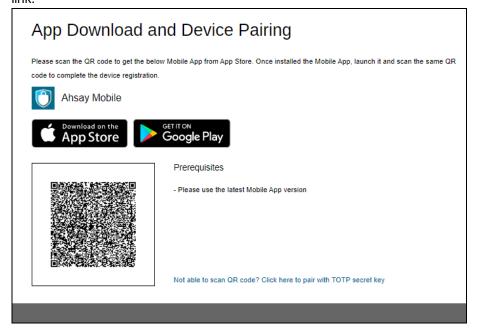
- 2. Pair your mobile device with AhsayCBS. Ahsay Mobile can be configured to support two 2FA modes which are:
  - Push Notification and TOTP (default)
  - ► TOTP only
  - For Push Notification and TOTP, scan the QR code.



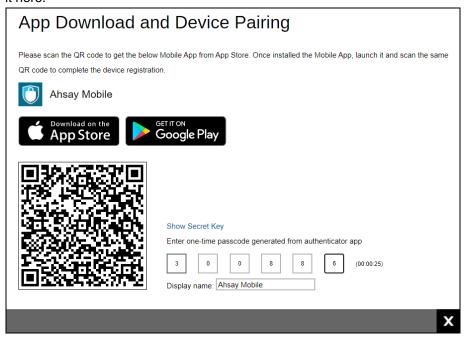
This is a sample of the Ahsay Mobile app installed on a mobile device named "Galaxy A70".



► For TOTP only, click the Not able to scan QR code? Click here to pair with TOTP secret key link.



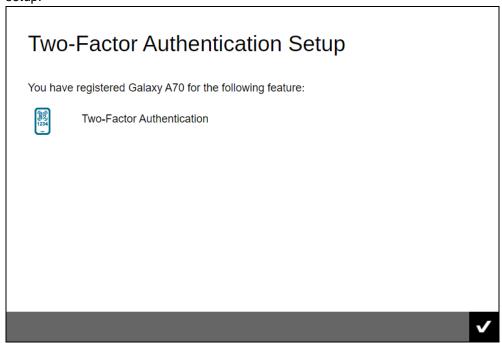
Scan the QR code. A one-time passcode will be generated in Ahsay Mobile, enter it here.



This is a sample of the one-time passcode generated in Ahsay Mobile.

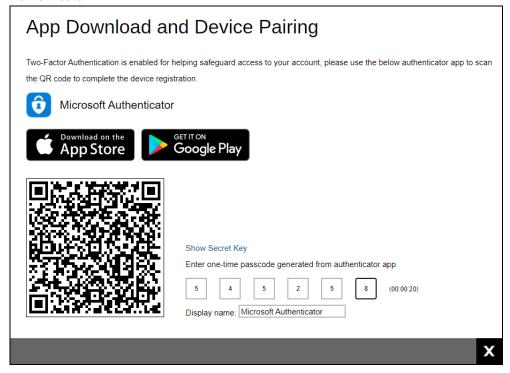


3. When pairing is completed, the screen below will be displayed. Click to finish the setup.

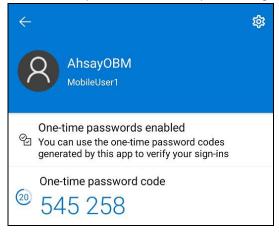


## 2.2 Register device for 2FA using Microsoft Authenticator

- 1. Download and install Microsoft Authenticator app in your device.
- Scan the QR code and enter the one-time passcode generated in Microsoft Authenticator.



This is a sample of the one-time passcode generated in Microsoft Authenticator.

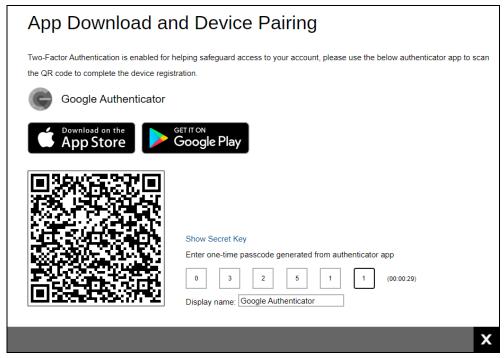


3. When pairing is completed, the screen below will be displayed. Click to finish the setup.



## 2.3 Register device for 2FA using Google Authenticator

- 1. Download and install Google Authenticator app in your device.
- 2. Scan the QR code and enter the one-time passcode generated in Microsoft Authenticator.



This is a sample of the one-time passcode generated in Google Authenticator.



3. When pairing is completed, the screen below will be displayed. Click to finish the setup.

# **Two-Factor Authentication Setup**

You have registered Google Authenticator for the following feature:

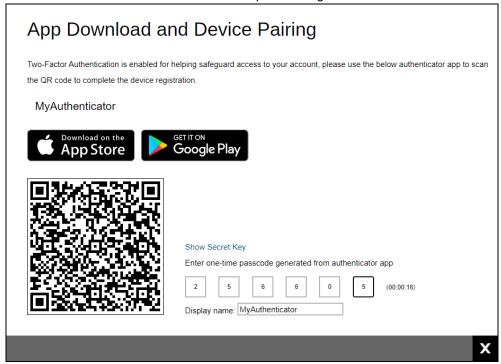


Two-Factor Authentication

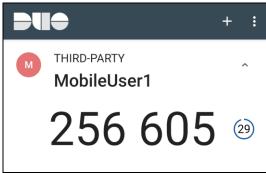
## 2.4 Register device for 2FA using Third party authenticators

For **Third Party authenticators**, the Display name is dependent on the settings made by your backup service provider. For this type, you can use the authenticator app of your choice. You will know that it is a third parry authenticator if the Display name is not one of these three: Ahsay Mobile, Microsoft Authenticator and Google Authenticator. In our example the Display name is "MyAuthenticator", which means that it is a third party authenticator and you can use any third party TOTP authenticator app that you want, e.g. LastPass, Duo, Authy, Microsoft Authenticator, Google Authenticator etc.

- 1. Download and install the authenticator app of your choice in your device.
- 2. Scan the QR code and enter the one-time passcode generated in the authenticator app.



This is a sample of the one-time passcode generated in a third party authenticator, in this case Duo was used.



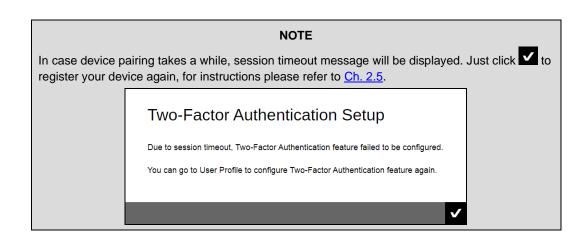
3. When pairing is completed, the screen below will be displayed. Click to finish the setup.

# **Two-Factor Authentication Setup**

You have registered MyAuthenticator for the following feature:



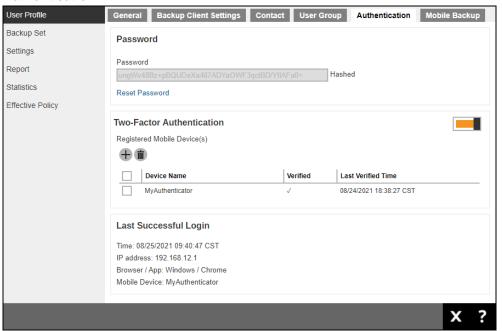
Two-Factor Authentication



## 2.5 Register additional device/app for 2FA

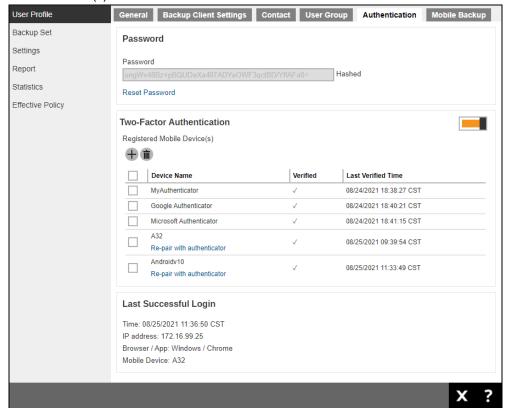
If you want to register an additional device and/or app for 2FA you may do so by following the instructions below:

1. Go to Backup/Restore > User > User Profile > Authentication > Two-Factor Authentication.



- 2. Click then follow the instructions discussed in the previous chapters on how to register your device depending on the authenticator app that you will be using:
  - Ahsay Mobile or branded Mobile app
  - Microsoft Authenticator
  - Google Authenticator
  - Third party authenticators

3. After successful registration, the device and/or app will be listed under Registered Mobile Device(s).



#### **NOTE**

If several authenticator apps are registered for an account and one of those apps is Ahsay Mobile, by default a <u>login request</u> will be sent to login with 2FA. If there are two devices registered using Ahsay Mobile, then both devices will receive the login request.

## 3 Logging in to AhsayCBS User Web Console

Starting with AhsayCBS v8.5.0.0, you will find a new feature introduced with this latest version which is the Two-Factor Authentication. With this new feature, there are several scenarios that will be encountered for login. Login steps for the different scenarios will be discussed in this chapter.

- Login to AhsayCBS without 2FA
- Login to AhsayCBS with 2FA using authenticator app
- Login to AhsayCBS with 2FA using Twilio

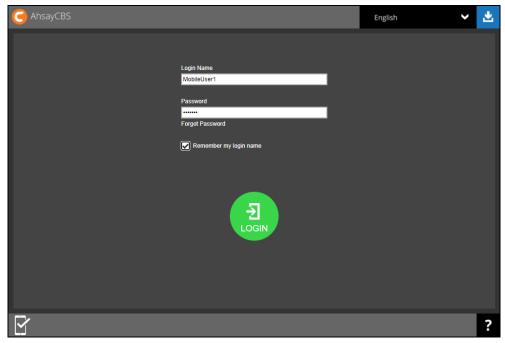
## 3.1 Login to AhsayCBS without 2FA

To login to AhsayCBS without two-factor authentication, please follow the steps below:

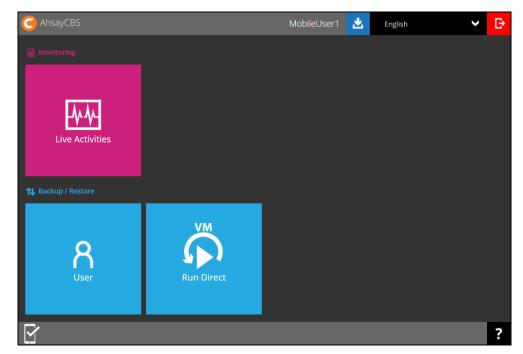
 Login to the AhsayCBS User Web Console at https://<IP AhsayCBS Server>:443/

# NOTE Contact your backup service provider for the URL to connect to the web console if necessary.

2. Enter the Login Name and Password of your AhsayOBM/AhsayACB account then click **LOGIN**.



- 3. After successful login, the following screen will appear with the available options:
  - Live Activities for monitoring of backup and restore activities
  - User for backup and restore
  - Run Direct for backup and restore
  - Download able to download the following products: AhsayOBM, AhsayACB, Mobile, and AhsayOBR
  - Language for multiple selection of languages
  - Logout exit from the AhsayCBS Web Console
  - Online Help able to check brief descriptions and instructions of each module



#### **NOTE**

The VM Run Direct tile may not be available. Please contact your backup service provider for more information.

## 3.2 Login to AhsayCBS with 2FA using authenticator app

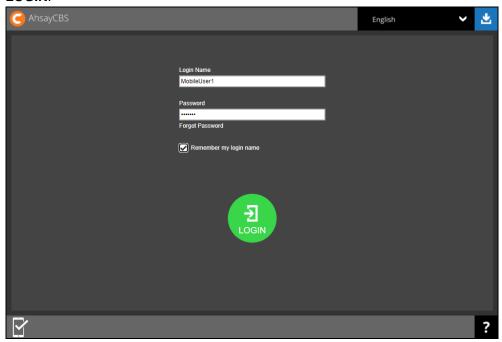
For subsequent logins to AhsayCBS with two-factor authentication, please follow the steps below:

 Login to the AhsayCBS User Web Console at https://<IP AhsayCBS Server>:443/

#### **NOTE**

Contact your backup service provider for the URL to connect to the web console if necessary.

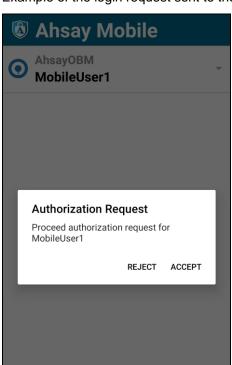
 Enter the Login Name and Password of your AhsayOBM/AhsayACB account then click LOGIN.



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

Push notification is the default 2FA mode. Accept the login request on Ahsay Mobile to complete the login.





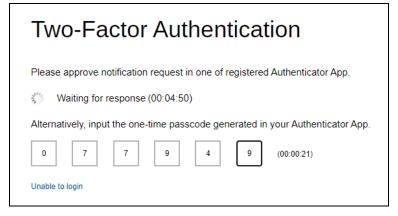
**1** 

黑

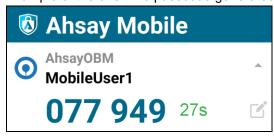
Example of the login request sent to the Ahsay Mobile app.

#### ▶ TOTP

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



Example of the one-time passcode generated in Ahsay Mobile.

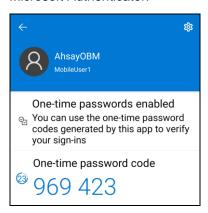


### TOTP only

Enter the one-time passcode generated by the authenticator app to complete the login.



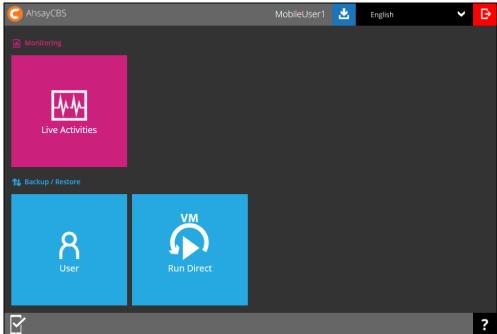
Example of the one-time passcode generated in the third party authenticator app Microsoft Authenticator.



#### NOTE

Please refer to Chapter 4 or the Ahsay Mobile App User Guide for Android and iOS – Appendix A: Troubleshooting Login if you are experiencing problems logging in to AhsayCBS User Web Console with Two-Factor Authentication using Ahsay Mobile app or other third party authenticator app.

4. After successful login, the following screen will appear. For the details of the available options in the main screen, please refer to the description in <a href="Ch. 3.1">Ch. 3.1</a>.



### NOTE

The VM Run Direct tile may not be available. Please contact your backup service provider for more information.

## 3.3 Login to AhsayCBS with 2FA using Twilio

For AhsayOBM/AhsayACB user accounts using Twilio, please follow the steps below:

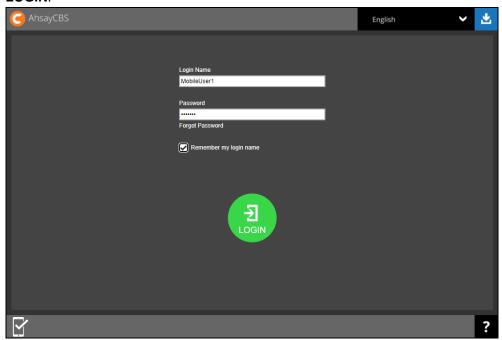
1. Login to the AhsayCBS User Web Console at

https://<IP\_AhsayCBS\_Server>:443/

#### NOTE

Contact your backup service provider for the URL to connect to the web console if necessary.

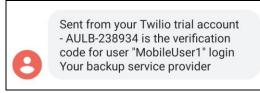
2. Enter the Login Name and Password of your AhsayOBM/AhsayACB account then click **LOGIN**.

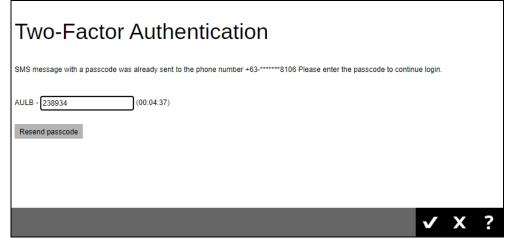


3. Select your phone number.

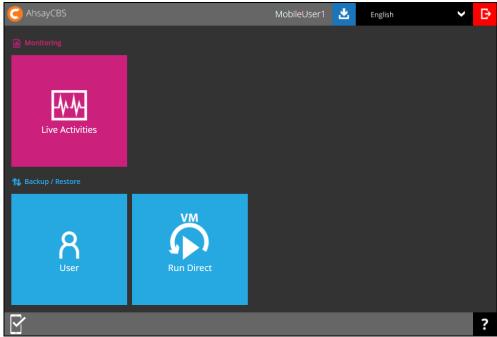


4. Enter the passcode and click v to login.





5. After successful login, the following screen will appear. For the details of the available options in the main screen, please refer to the description in <a href="Ch. 3.1">Ch. 3.1</a>.



### NOTE

The VM Run Direct tile may not be available. Please contact your backup service provider for more information.

## 4 Unable to Login to AhsayCBS with 2FA

In case you have trouble logging in please refer to the three scenarios for instructions:

- Registered a recovery number in Ahsay Mobile app
- Did not register a recovery number in Ahsay Mobile app
- Using third party authenticator app

## 4.1 Registered a recovery number in Ahsay Mobile app

If you have registered a recovery number in your Ahsay Mobile app, then there are two scenarios for this situation:

- Still have the device but unable to login
- Lost the device
- If you still have the device but unable to login, you can perform the authentication recovery procedure. Click the Unable to login link.

## Two-Factor Authentication

Please approve notification request in one of registered Authenticator App.



Waiting for response (00:03:57)

Authenticate with one-time password

Unable to login

Click your device on the list.

# **Authentication Recovery**

Please select one authenticator to perform recovery.



Galaxy A70

Unable to login/Do not have any Authenticator App(s)

Enter the recovery number that you registered and click

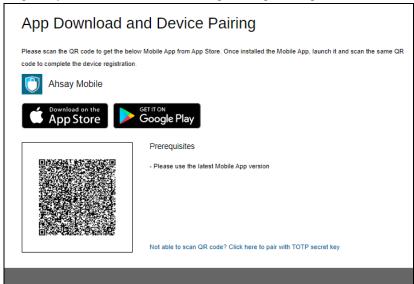
Send SMS Verification code

Authentication Recovery		
Please enter the first few digits of "Galaxy A70"(************************************	75) for recovery. It will	be discarded after the recovery
Please fill in the recovery phone number		
Argentina (+54) ▼	123456789	75
*This phone number will be used for account security and recovery only Send SMS Verification code	r. Please be reminded that st	andard SMS charge will be applied.

Enter the verification code sent to your device and click **2** to proceed.

Authentication Recovery	
You have selected Galaxy A70 and it w	vill be discarded after recovery is completed.
Verification code  YVYQ - 115643 (00:04:44)  Resend SMS Verification code	

Register your device to be able to login using 2FA again.



If you have lost the device, the authentication recovery procedure will not work until your new device is installed with a replacement SIM card. Since you will need to enter the verification code that will be sent to the recovery number that you registered in Ahsay Mobile. So please contact your backup service provider instead.



## 4.2 Did not register a recovery number in Ahsay Mobile

If you have not registered a recovery number in Ahsay Mobile, please contact your backup service provider.



## 4.3 Using third party authenticator app

If you are using a third party authenticator app, please contact your backup service provider.



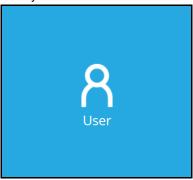
# 5 Managing Your AhsayCBS User Account

# 5.1 Login to AhsayCBS

Login to the AhsayCBS user web console according to the instruction provided in section Logging in to AhsayCBS User Web Console.

# 5.2 Managing AhsayCBS Backup User

To manage your AhsayCBS backup user account, simply click the **User** icon from your AhsayCBS environment.



You can perform the following operations on your own user account:

- Manage your user profile settings, e.g. New Password, Language, Timezone, Contact Information.
- Customize event log settings, which is supported on AhsayOBM/ AhsayACB clients installed on Windows platform only.
- View backup or restore reports for different time periods.
- View usage statistics by selecting destination, backup set, and period.
- View details of policies and settings on users, backup sets, GUIs, default values, preempted values, preempted backup sets, and mobile. The settings and the availability of this feature is dependent on your backup service provider.
- Register mobile device for two-factor authentication.
- View mobile device registered for mobile backup.

### 5.3 User Profile

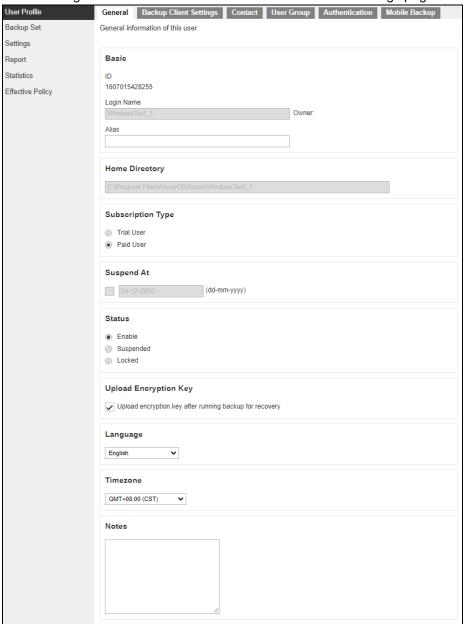
User Profile tab contains your user backup account settings information, subscribed modules backup quota, subscription type, contact information, user group information, two-factor authentication settings and registered mobile device for mobile backup.

Among all the above information, you can modify user backup account settings information, contact information and registered mobile device for two-factor authentication. However, for the subscribed modules backup quota, subscription type, and user group information, as the setting was done when the user account was created, the settings cannot be modified by the user. While the registered mobile device for mobile backup and its backup destination can only be viewed here.

There are six (6) tabs under User Profile, each of which is described below:

#### 5.3.1 General Tab

The following shows the General tab under the User Profile settings page.



There are several groups of settings under the **General** tab, and they are described below.

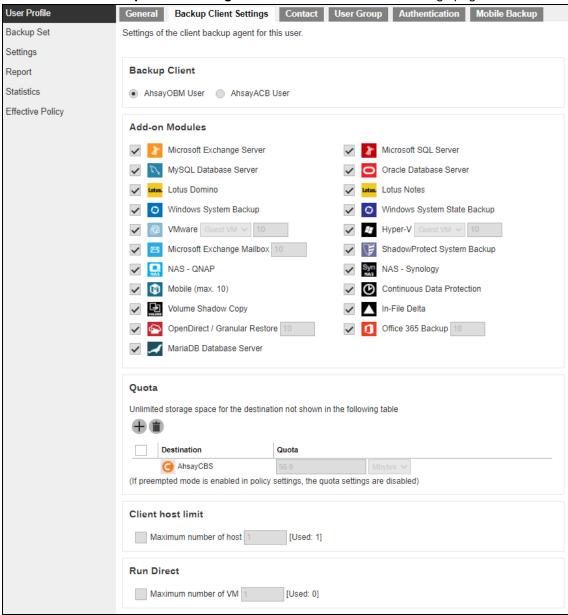
Section	Description	
Basic	There are three (3) elements in the Basic section, which are the following:	
	<ul> <li>ID of the backup user, this is system generated and cannot be changed.</li> </ul>	
	<ul> <li>Login Name of the backup user, defined by the service provider which cannot be changed.</li> </ul>	
	<ul> <li>Alias is another name for the backup user which can be modified.</li> </ul>	
Home Directory	This is the path where your backup data is stored on AhsayCBS backup destination.	
	This was set when your account was created and cannot be modified by the user.	
Subscription Type	There are two (2) subscription types: <b>Trial User</b> and <b>Paid User</b> . Trial users are subject to automatic removal after the trial period. Paid users do not have such restrictions.	
	This was set when your account was created and cannot be modified by the user. If you need to change it, please contact your backup service provider.	
Suspend At	This shows the date when a trial user account is scheduled to be suspended.	
	This was set when your account was created and cannot be modified by the user. If you need to update it, please contact your backup service provider.	
Status	There are three (3) user account statuses: <b>Enable</b> , <b>Suspended</b> , and <b>Locked</b> . The <b>Locked</b> status refers to account lockout rules. For example, when the user has three (3) consecutive unsuccessful login attempts, the user account will be locked.	
	This was set when your account was created and cannot be modified by the user. If you need to change it, please contact your backup service provider.	
Upload Encryption Key	To enable or disable this feature please contact your backup service provider for support. The encryption key file will be uploaded to the backup server when a backup run.	
	If you forget the encryption key, please contact your backup service provider for support.	
Language	Select your preferred language for all email reports.	
Timezone	Select the time zone of the backup user.	
Notes	A field for the AhsayCBS user to add notes.	

## NOTE

The **Mobile Backup** tab will only be visible if Mobile Add-on Module is enabled.

# 5.3.2 Backup Client Settings Tab

This shows the Backup Client Settings tab under the User Profile settings page.



There are several groups of settings under the **Backup Client Settings** tab, and they are described below.

Section	Description	
Backup Client	There are two (2) types of backup user accounts: <b>AhsayOBM</b> and <b>AhsayACB</b> .	
	This was set when your account was created and cannot be modified by the user. If you need to change it, please contact your backup service provider.	
Add-on Modules	The backup client comes with add-on modules.	
	These add-on modules were set when the user account was created and cannot be modified by the user. If you need to change the add-on modules, please contact your backup service provider.	
Quota	List all the predefined and standard destinations associated with the user account and the backup quota of predefined destination for the user account can be set.	
	The quota of standard destination was set when your account was created and cannot be modified by the user. If you need to change it, please contact your backup service provider.	
Client Host Limit	This is for your backup service provider to set the maximum number of host machine for your backup user account.	
	This field cannot be changed by the user. If you need to update this field, please contact your backup service provider.	
Run Direct	This allows the user to select the maximum number of VMs to be restored by running them directly from the backup files on the AhsayCBS.	
	This field cannot be changed by the user. If you need to update this field, please contact your backup service provider.	

#### **Add-on Modules**

The following table shows all the add-on modules available under the **Backup Client Settings** tab. The backup of these add-on modules is supported by the AhsayOBM client. For some of the add-on modules, their backup are also supported by the AhsayACB client.

#### **NOTE**

- The File and Cloud File Backup types are available by default for both AhsayACB and AhsayOBM. As a result, they do not need to be added and are not included in the Add-on Modules section of the Backup Client Settings tab.
- There is no limit to number of Cloud file backup sets per AhsayOBM and AhsayACB account.

The following table shows the name of the add-on modules, what it is used for, whether it is available in AhsayOBM client or AhsayACB client, and reference materials you can refer to for more information.

Add-on Module	Reference	AhsayOBM	AhsayACB
Microsoft Exchange Server	Backup and restore of Microsoft Exchange Server.  Refer to the following link for how to use Microsoft Exchange Database Server with AhsayOBM client:  Ahsay Online Backup Manager v8 Microsoft Exchange Database Backup and Restore Guide	<b>~</b>	X
Microsoft SQL Server	Backup and restore of Microsoft SQL Server.  Refer to the following link for how to use Microsoft SQL Server with AhsayOBM client:  Ahsay Online Backup Manager v8 Microsoft SQL Server Backup and Restore Guide	>	×
MySQL Database Server	Backup and restore of MySQL Database Server.  Refer to the following link for how to use MySQL Database for the Windows platform with AhsayOBM client:  Ahsay Online Backup Manager v8 MySQL Database Backup and Restore for Windows  Refer to the following link for how to use MySQL Database for the Linux platform with AhsayOBM client:  Ahsay Online Backup Manager v8 MySQL Database Backup and Restore for Linux (CLI)	<b>√</b>	X
Oracle Database Server	Backup and restore of Oracle Database Server.  Refer to the following link for how to use Oracle Database for the Windows platform with AhsayOBM client:  Ahsay Online Backup Manager v8 Oracle Database Backup and Restore for Windows  Refer to the following link for how to use Oracle Database for the Linux platform with AhsayOBM client:  Ahsay Online Backup Manager v8 Oracle	✓	×

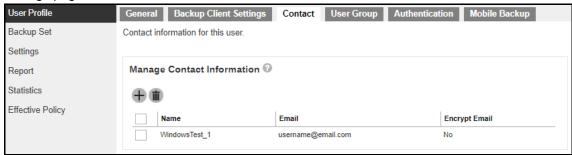
	Database Backup and Restore for Linux (CLI)		
	Ahsay Online Backup Manager v8 Oracle		
	Database Backup and Restore for Linux (GUI)		
Lotus Domino	Backup and restore of Lotus Domino.	<b>√</b>	Х
Lotus Notes	Backup and restore of Lotus Notes.	✓	✓
Windows System Backup	Backup and restore of Windows System Backup.  Refer to the following link for how to use Windows System Backup with AhsayOBM and AhsayACB clients:  Ahsay Online Backup Manager v8 Microsoft System Backup and Restore Guide	<b>√</b>	<b>√</b>
Windows System State Backup	Backup and restore of Windows System State Backup.  Refer to the following link for how to use Windows System State Backup with AhsayOBM client:  Ahsay Online Backup Manager v8 Microsoft System State Backup and Restore Guide	✓	х
VMware	Backup and restore of VMware guest virtual machines.  Refer to the following link for how to use VMware VCenter/ESXi with AhsayOBM client:  Ahsay Online Backup Manager v8 VMware vCenter/ESXi Backup and Restore Guide	✓	х
Hyper-V	Backup and restore of Hyper-V guest virtual machines.  Refer to the following link for how to use Microsoft Hyper-V with AhsayOBM client:  Ahsay Online Backup Manager v8 Microsoft Hyper-V Backup and Restore Guide	<b>√</b>	X
Microsoft Exchange Mailbox	Backup and restore of Microsoft Exchange Mailbox.  Refer to the following link for how to use Microsoft Exchange 2007/2010/2013 (MAPI) Mailbox with AhsayOBM client:  Ahsay Online Backup Manager v8 Microsoft Exchange 2007/2010/2013 (MAPI) Mail-Level Backup & Restore Guide  Refer to the following link for how to use Microsoft Exchange 2013/2016/2019 (EWS) Mailbox with AhsayOBM client:  Ahsay Online Backup Manager v8 Microsoft Exchange 2013/2016/2019 (EWS) Mail Level Backup & Restore Guide	<b>√</b>	X
Shadow Protect System Backup	Backup and restore of Shadow Protect System image (requires Shadow Protect).	1	×

NAS - QNAP	Refer to the following link for how to use the ShadowProtect System Backup with AhsayOBM client:  Ahsay Online Backup Manager v7 StorageCraft ShadowProtect System Backup & Restore Guide  Backup and restore of file on QNAP NAS devices.  Refer to the following link for how to use the QNAP NAS with AhsayOBM client:  Ahsay Online Backup Manager v8 Quick Start Guide for QNAP NAS  Refer to the following link for a list of QNAP hardware compatible with AhsayOBM:  FAQ: Ahsay Hardware Compatibility List (HRL) for AhsayOBM on QNAP NAS (8018)	<b>√</b>	X
NAS - Synology	Backup and restore of file on Synology NAS devices.  Refer to the following link for how to use the Synology NAS with AhsayOBM client:  Ahsay Online Backup Manager v8 Quick Start Guide for Synology NAS  Refer to the following link for a list of Synology hardware compatible with AhsayOBM:  FAQ: Ahsay Hardware Compatibility List (HRL) for AhsayOBM on Synology NAS (8017)	<b>√</b>	X
Mobile	Backup and restore of Mobile data (iOS and Android).  Refer to the following links for instructions on using the Ahsay Mobile for Android and iOS platforms.  Ahsay Mobile Getting Started Guide for Mobile Backup  Ahsay Mobile Getting Started Guide for 2FA  Ahsay Mobile User Guide for Android and iOS	✓	✓
Continuous Data Protection	A backup will be made whenever there is a change (between 1 min to 12-hour intervals). Applies to File backup sets on Windows platform.	<b>√</b>	<b>√</b>
Volume Shadow Copy	Volume Shadow Copy to support open file backups on Windows platform.	<b>√</b>	<b>√</b>
In-File Delta	When enabled only the changes since the last backup job is backed up.	✓	<b>√</b>
OpenDirect / Granular Restore	For OpenDirect and Granular Restore.  Refer to the following link for instructions on using OpenDirect / Granular Restore.  AhsayACB v8 Quick Start Guide for Windows  Ahsay Online Backup Manager v8 Quick Start	1	х

Office 365 Backup	Ahsay Online Backup Manager v8 Microsoft Hyper-V Backup and Restore Guide Ahsay Online Backup Manager v8 VMware vCenter/ESXi Backup and Restore Guide  Backup and restore of mailboxes and files of Office 365 including the One Drive, Personal Site, Public Folders, and Site Collections.  Refer to the following link for instructions on using Office 365.  Ahsay Online Backup Manager v8 User Guide for Office365 Backup & Restore for Windows  Ahsay Online Backup Manager User Guide for Office365 Backup & Restore for Mac AhsayACB v8 User Guide for Office 365 for Windows  AhsayACB v8 User Guide for Office 365 for Mac AhsayACB v8 User Guide - Office365 Run on Server (Agentless) Backup and Restore Guide	<b>√</b>	<b>√</b>
MariaDB Database Server	Backup and restore of MariaDB Database Server.  Refer to the following link for how to use MariaDB Database for the Windows platform with AhsayOBM client:  Ahsay Online Backup Manager v8 MariaDB Database Backup and Restore for Windows  Refer to the following link for how to use MariaDB Database for the Linux platform with AhsayOBM client:  Ahsay Online Backup Manager v8 MariaDB Database Backup and Restore for Linux (CLI)	✓	X

### 5.3.3 Contact Tab

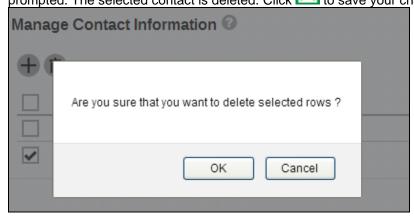
You can add your contact information here to receive backup or restore reports. You can also delete your contact information here. The following shows the **Contact** tab under the **User Profile** settings page.



To add your contact information, click in the middle of the screen. Enter your Name, Email, Address, Company, Website, Phone1, Phone2, then click at the bottom right corner of the screen. A new contact is added.

Name	
User Name	
Email	
username@email.com	
Encrypt Email	
Address	
1/F, Business Plazza, Central, HK	
Company	
Company Name	
Website	
Phone 1	
Phone 2	

To delete a contact information, check the box next to the contact information you want to delete, then click in the middle of the screen. Click OK to delete the contact when prompted. The selected contact is deleted. Click to save your changes.



## 5.3.4 User Group Tab

The following shows the **User Group** tab under the **User Profile** settings page. It shows the user group your user account belongs to. This is set when your account was created and cannot be modified.



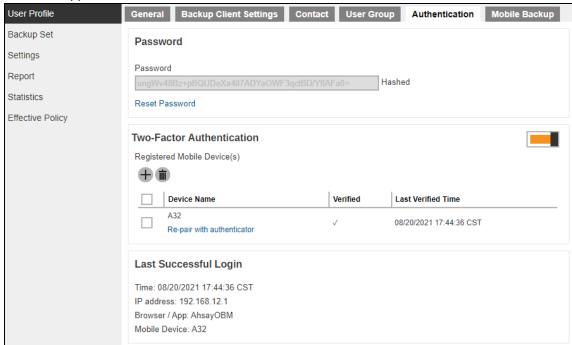
### **NOTE**

Please remember to click after modification to save the changes. Otherwise the modification will be lost after quitting the setting page.

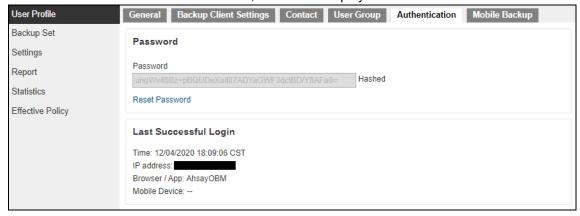
#### 5.3.5 Authentication Tab

The Authentication tab allows the User to add additional layer of security to their backup user accounts. This tab allows resetting of password and enables the Two-Factor Authentication (2FA). Please contact your service provider for more details on this feature.

This view applies when two-factor authentication is enabled for the user account.



If two-factor authentication is not enabled, this will be displayed instead.



There are several groups of settings under the **Authentication** tab, and they are described below:

Section	Description	
Password	There are two (2) elements in the Password section, which are the following:	
	<ul> <li>Password in hashed format defined by the service provider which cannot be changed.</li> </ul>	
	Reset Password allows the backup user to change the password.	
Two-Factor Authentication	Allows the user to add mobile device(s) that will be used for two-factor authentication. It displays the device name, whether it has been verified or not and the last verified time and date.	

This will only be visible if two-factor authentication is enabled for the user account. The Re-pair with authenticator will only be available if Ahsay Mobile is used as the authenticator app. If the registered device used for 2FA was damaged, lost or missing; the backup content of the device can be migrated to the new device by using AhsayOBM/AhsayACB. For instructions on how to do this please refer to the Ahsay Mobile User Guide for Android and iOS. Once the migration is finished, the new device must be re-paired with the Ahsay Mobile app to enable sign-in using push notification and disable the one in the original device. Please contact your backup service provider for details. Last Successful There are four (4) elements in the Last Successful Login section, which are the following: Login **Time**, this is the date and time the backup user last logged in, this changes every time the user logs in. IP address used to log in, which cannot be changed. Browser / App used to log in. If browser, the operating system, and browser used will be displayed. If app, either AhsayOBM or AhsayACB will be displayed. Mobile Device, the name of the mobile device used to log in.

 To reset the password, click Reset Password. Enter the new password twice and click to save.



- To add a mobile device for two-factor authentication, follow the instructions below:
  - 1. Enable Two-Factor Authentication by sliding the switch to the right.



2. Click the button.



- 3. The following screen that will be displayed will depend on the settings made by your backup service provider. Follow the instructions discussed in Chapter 2 on how to register your device depending on the authenticator app that you will be using:
  - Ahsay Mobile or branded Mobile app
  - Microsoft Authenticator
  - Google Authenticator
  - Third party authenticators

## 5.3.6 Mobile Backup Tab

The Mobile Backup tab allows the User to view the mobile device(s) that has been registered for mobile backup and the corresponding backup destination. To add a mobile device use AhsayOBM or AhsayACB.

For more information on how to do this please refer to the following guides:

AhsayOBM Quick Start Guide, AhsayACB Quick Start Guide, Ahsay Mobile Getting Started Guide for Mobile Backup and Ahsay Mobile User Guide



# 5.4 Settings

The **Settings** page allows the user to log the optional events, besides AhsayOBM/ AhsayACB logs, to the Windows event log.

#### **NOTE**

This feature is supported on AhsayOBM/AhsayACB clients installed on Windows platform only.

# Windows event log

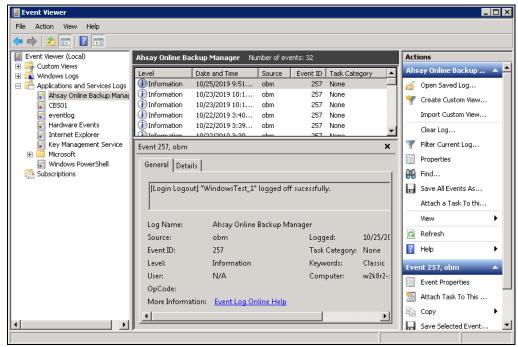
The following shows the options on the **Settings** page.



There are two groups of settings under the **Settings** tab, and they are described below.

Setting	Description
Log Type	There are three (3) log types available: <b>Error</b> , <b>Warning</b> , and <b>Info</b> . You can select any combinations of the 3 log types, and the messages will be logged in the Windows event log.
Log Option	Select the log option by which the particular action will be captured in the Windows event log. Currently there are eight (8) different log options that can be selected: <b>Profile</b> , <b>Backup</b> , <b>Restore</b> , <b>Service</b> (CDP & Scheduler), <b>Software Update</b> , <b>Report</b> , <b>Utilities</b> , and <b>Login/Logout</b> .

The events are logged in the Windows event log and can be viewed from the Windows Event Viewer:

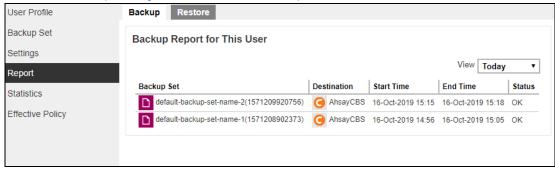


# 5.5 Report

The **Report** tab allows you to check the **Backup** and **Restore** report of both backup and restore jobs proceeded in agent-based (AhsayOBM/ AhsayACB/ AhsayOBR) and agentless (AhsayCBS User Web Console) type.

## 5.5.1 Backup Reports

1. A list of backup reports for this AhsayCBS user can be found on the **Backup** tab. Click on the desired report to get more details on the report.



2. Click the **Download report** button at the bottom to download the complete report in PDF format. The backup report will be available around 15 to 20 minutes after a backup job has finished.

# Backup Report

Backup Set default-backup-set-name-2(1571209920756)

Job 16-Oct-2019 15:15:48

Time 16-Oct-2019 15:15:49 - 16-Oct-2019 15:18:30

Status OK

New Files\* 10 [ 93.19k / 124.46k ( 25% ) ]

 New Directories
 4

 New Links
 0

 Updated files\*
 0

 Attributes Changed Files\*
 0

 Deleted Files\*
 0

Deleted Files 0

Deleted Directories 0

Deleted Links 0

Moved Files 0

Download report

3. A full version of the backup report appears. You can view the detailed backup set settings on this report.

<sup>\*</sup> Unit = No of files [Total zipped size / Total unzipped size (compression ratio)]



# Full Backup report

# Backup Job Summary

User	trialuser
Backup Set	default-backup-set-name-2 (1571209920756)
Destination	AhsayCBS (AhsayCBS)
Data Size	93k
Retention Size	0
Backup Quota	500M
Remaining Quota	499.61M
Backup Job	2019-10-16-15-15-48
Job Status	ок
Start - End	10/16/2019 15:15:48 - 10/16/2019 15:18:30
IP Address	10.16.10.14 (w2k8r2-std)
New Files *	10 (93.2k)
New Directories	4
New Links	0
Updated Files *	0 (0)
Attributes Changed Files *	0 (0)
Deleted Files *	0 (0)
Deleted Directories	0
Deleted Links	0
Moved Files *	0 (0)

<sup>\*</sup> No. of files (size)

# Backup Set Settings

Field	Value
Backup Source	[C\Users\Administrator\Documents\AhsayACB_UserGuideforWindows_version7.docx][C\Users\Administrator\Documents\AhsayCBS_version7_UserGuide.docx][C\Users\Administrator\Documents\AlertMesageTwo.png][C\Users\Administrator\Documents\AlertMesageTwo.png][C\Users\Administrator\Documents\AlertMesageTwo.png][C\Users\Administrator\Documents\BackupSet_2018.docx][C\Users\Administrator\Documents\File snapshot testing1.txt][C\Users\Administrator\Documents\SpreadSheet_x_151.xlsx][C\Users\Administrator\Documents\SpreadSheet_x_152.xlsx][C\Users\Ad
Filter	[Enabled: No]
Backup Schedule	[Computer Name: ][Daily: [Name: Backup Schedule, Time: 20: 0, Type: , Duration: -1, Retention Policy: Yes]][Weekly: ][Monthly: ][Custom: ]
Continuous Data Protection	[Enabled: No]
In-File Delta	[Enabled: Yes, Default Type: I, Block Size: -1, Minimum Size = 26214400, Maximum No. of Delta = 100, Delta Ratio = 50, Weekly: [], Monthly: [, Da y: 0, Criteria: Friday, Day of selected months in yearly variations: First]
Retention Policy	[Type: Simple, Period: 7, Unit: Day(s)]
Command Line Tool	
Reminder	[Computer Name: w2k8r2-std]
Bandwidth Control	[Enabled: No, Mode: Independent, Bandwidth Control: ]
Others	[Remove temporary files after backup: Yes][Follow Link: Yes][Volume Shadow Copy: Yes][File Permissions: Yes][Compression Type: Fast (Compressed size larger than normal)]

# Backup Logs

No.	Type	Timestamp	Log
1	start	2019/10/16 15:15:48	Start [ AhsayOBM v8.3.0.30 ]
2	info	2019/10/16 15:15:51	Using Temporary Directory C:\Users\Administrator\temp\1571209920756\OBS81571210087052
3	info	2019/10/16 15:15:59	Start running pre-commands
4	info	2019/10/16 15:15:59	Finished running pre-commands
5	info	2019/10/16 15:16:07	Start creating Shadow Copy Set
6	info	2019/10/16 15:16:21	Shadow Copy Set successfully created
7	info	2019/10/16 15:17:30	Start validating the presence and size of backup data in destination "AhsayCBS"
8	info	2019/10/16 15:17:30	File: "1571209920756/blocks/2019-10-16-15-15-48/0/000000.bak", Size: 95,424, OK
9	info	2019/10/16 15:17:30	Finished validating the presence and size of backup data in destination "AhsayCBS"
10	info	2019/10/16 15:17:31	Deleting Shadow Copy snapshot for volume "\\?5ba986a0-fd04-11e6-8291-806e6f6e6963\"
11	info	2019/10/16 15:17:31	Deleting Shadow Copy snapshot for volume "Cı\"
12	info	2019/10/16 15:17:42	Start running post-commands
13	info	2019/10/16 15:17:42	Finished running post-commands

# Backup Files

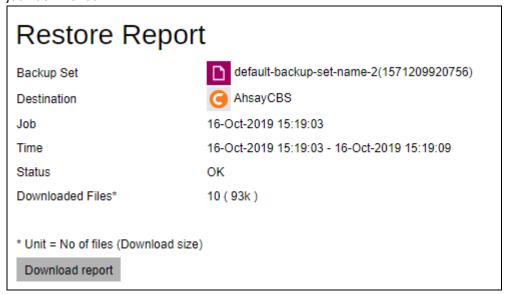
No.	Type	Dirs/Files	Size	Last Modified
1	new	C:\	12k / 12k (0%)	10/15/2019 10:23
2	new	Ci\Users	4k / 4k (0%)	02/27/2017 23:53
3	new	Ci\Users\Administrator	8k / 8k (0%)	09/27/2019 07:56
4	new	Ci\Users\Administrator\Documents	16k / 16k (0%)	10/15/2019 10:10
5	new	$Ci\Users\Administrator\Documents\Ahsay ACB\_UserGuide for Windows\_version 7. docx$	12k / 14k (17%)	07/10/2018 17:24
6	new	Ci\Users\Administrator\Documents\AhsayCBS_version7_UserGuide.docx	12k / 14k (17%)	07/10/2018 17:24
7	new	Ci\Users\Administrator\Documents\AlertMessageOne.png	2k / 2k (0%)	02/28/2019 12:10
8	new	Ci\Users\Administrator\Documents\AlertMessageTwo.png	2k / 2k (0%)	02/28/2019 12:10
9	new	Ci\Users\Administrator\Documents\BackupSet_2018.docx	12k / 14k (17%)	07/10/2018 17:24
10	new	Ci\Users\Administrator\Documents\BackupSet_2019.docx	12k / 14k (17%)	07/10/2018 17:24
11	new	C:\Users\Administrator\Documents\File snapshot testing.txt	256 / 7k (96%)	12/17/2018 14:27
12	new	C:\Users\Administrator\Documents\File snapshot testing1.txt	256 / 7k (96%)	01/15/2019 10:12
13	new	C:\Users\Administrator\Documents\SpreadSheet_x_152.xlsx	19k / 23k (15%)	03/18/2019 15:11
14	new	C:\Users\Administrator\Documents\SpreadSheet_x_151.xlsx	19k / 23k (15%)	03/18/2019 15:11

## 5.5.2 Restore Reports

1. A list of restore reports for this AhsayCBS user can be found on the **Restore** tab. Click on the desired report to get more details on the report.

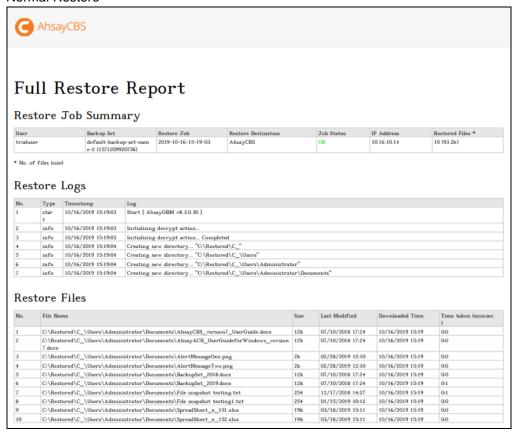


 Click the **Download report** button at the bottom to download the complete report in PDF format. The restore report will be available around 15 to 20 minutes after a restore iob has finished.

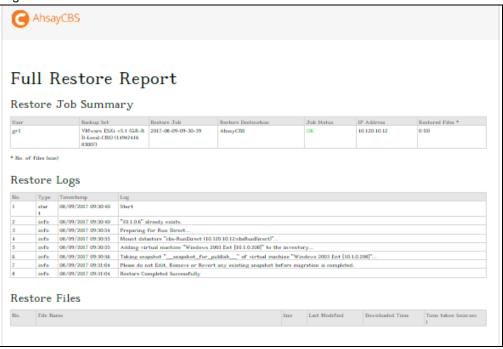


3. A full version of the restore report appears. You can view the detailed backup set settings on this report.

#### i. Normal Restore



## ii. Run Direct Restore without Auto Migration.



#### iii. Run Direct with Auto Migration



#### **NOTE**

OpenDirect restore of file backup sets or granular restore of files from VMware and Hyper-V backup sets performed using Windows File Explorer will not generate any restore reports on AhsayCBS. Restore reports are only available when the restore is performed directly through AhsayOBM /AhsayACB/ AhsayOBR or on agentless Office 365 and Cloud File backups.

## 5.6 Statistics

You can generate a graph of storage statistics for the user by modifying a few factors such as the backup destination, backup set and the period of the backup.

The statistics shows the storage capacity of different backup sets on different dates. Only restorable files in the data and retention area for each backup set are included in the calculation of storage statistics.

Storage statistics of a backup set are updated every time the following functions are run:

- Backup job
- Data Integrity Check (DIC)
- Periodic Data Integrity Check (PDIC)
- Space Freeing Up
- Delete Backup Data

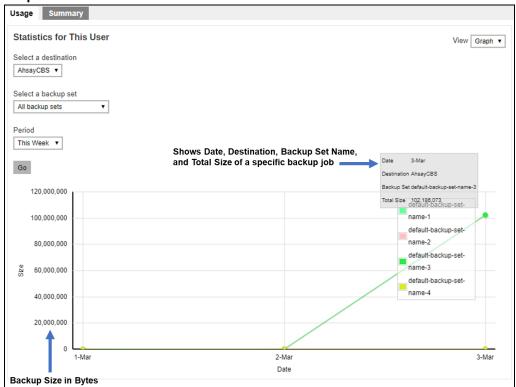
#### <u>Usage</u>

The following options are configurable for generating statistics in your desirable view.

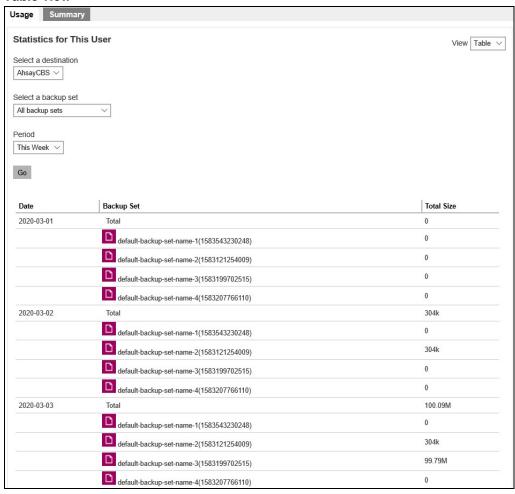
- Select a destination select the backup destination of your choice
- Select a backup set you can choose a specific backup set or all backup sets
- Period select the period of time during which backups were performed
- View you can choose a view, graph or table



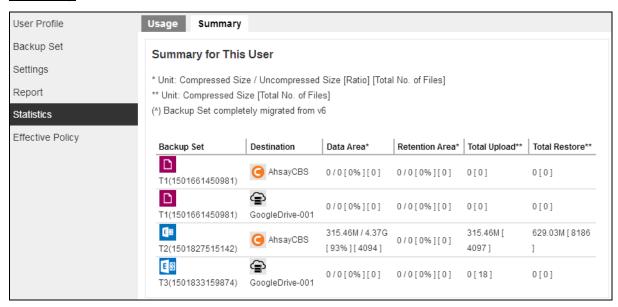
## **Graph view**



#### Table view



## **Summary**



There are 4 columns showing the following information of each backup set.

#### Data Area

Data Area*
0/0[0%][0]
0/0[0%][0]
315.46M / 4.37G
[93%][4094]
0/0[0%][0]

### Format:

[Compressed Size] / [Uncompressed Size] [Compression Ratio in %] [Number of files]

Example: 315.46M / 4.37G [93%] [4094]

The data interpreted as the backup set has 4094 files in the data area; the files compressed, and uncompressed sizes are 315.64M and 4.37G respectively; the compression ratio is 93%.

#### Retention Area

Retention Area**
0/0[0%][0]
4.12M/4.12M[0%][12]
0/0[0%][0]
0/0[0%][0]
0/0[0%][0]
34.12M/234.07M[86%][239]

#### Format:

[Compressed Size] / [Uncompressed Size] [Compression Ratio in %] [Total number of files]

**Example:** 34.12M / 234.07M [86%] [239]

The data interpreted as the backup set has 239 files in the retention area; the files compressed, and uncompressed sizes are 34.12M and 234.07M respectively; the compression ratio is 86%.

### **Total Upload**

Total Upload*				
0[0]				
1.19G [183]				
4M [20]				
181.02M [706]				
21.06M [78]				
789.86M [683]				

#### Format:

[Compressed Size] [Total number of files]

**Example:** 4M [20]

There is a total of 20 files sized of 4M uploaded for this backup set.

The Total Upload is computed by adding up all the New Files, New Directories, New Links, Uploaded Files, Attributed Changed Files, Deleted Files, Deleted Directories, Deleted Links and Moved Files.

# **Total Restore**

Total Restore*		
0[0]		
612.2M[92]		
0[0]		
0[0]		
25.12M[36]		
4.48G [1044]		

## Format:

[Compressed Size] [Total number of files]

**Example:** 612.2M [92]

There is a total of 92 files sized of 612.2M restored from this backup set.

# 5.7 Effective Policy

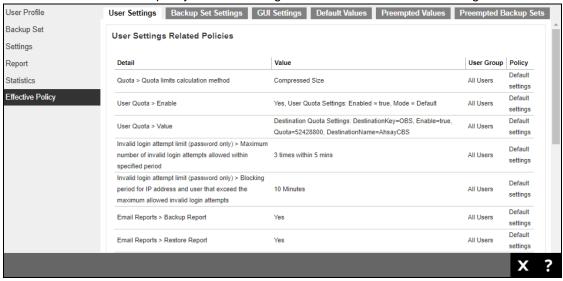
#### NOTE

Effective Policy tab may be hidden depending on the configuration your backup service provider made.

There are six (6) tabs containing different groups of policy, and they are described below.

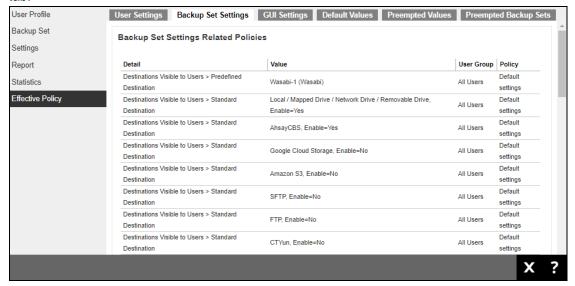
### **User Settings Tab**

You can see the effective policy on user settings for this user on the User Settings tab.



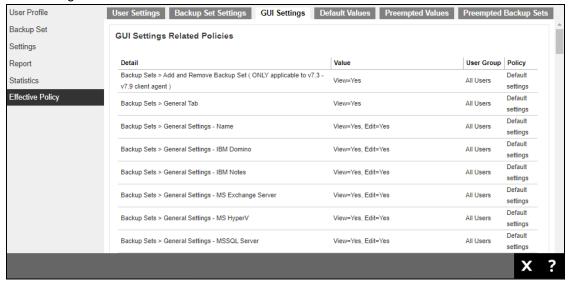
## **Backup Set Settings Tab**

You can see the effective policy on backup set settings for this user on the Backup Set Settings tab.



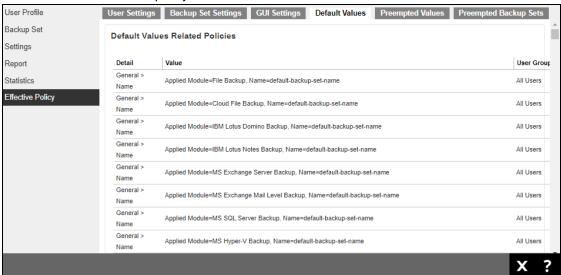
### **GUI Settings Tab**

You can see the effective policy on AhsayOBM or AhsayACB GUI settings for this user on the GUI Settings tab.



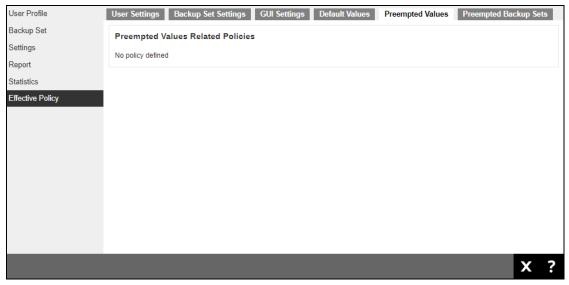
### **Default Values Tab**

You can see the effective policy on default values for this user on the Default Values tab.



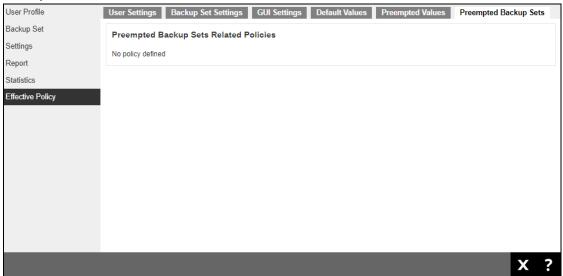
## **Preempted Values Tab**

You can see the effective policy on preempted values for this user on the Preempted Values tab.



# **Preempted Backup Sets Tab**

You can see the effective policy on preempted backup sets for this user on the Preempted Backup Sets tab.



# **6 Monitoring Live Activities**

# 6.1 Managing Live Activities

- 1. Login to AhsayCBS user web console according to the instruction provided in section Logging on to AhsayCBS User Web Console.
- 2. To manage your backup and restore live activities, simply click the Live Activities icon from your AhsayCBS environment.



You can perform the following operations on your own user account:

- View the status of an agent based and agentless backup job that is currently running. Once a backup job is completed, the entry will be immediately removed from the Live Activities.
- View the status of an agent based and agentless restore job that is currently running. Once a restore job is completed, the entry will be immediately removed from the Live Activities.

#### NOTE

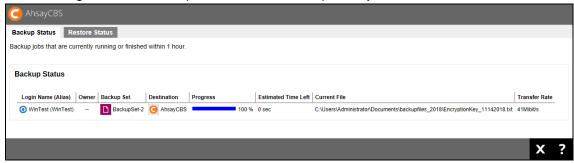
If there are any backup and restore jobs which are unexpectedly terminated or crashed the job status should automatically clear after 72 hours.

# 6.2 Backup Status

The **Backup Status** tab allows you to monitor the live activities of backup jobs running in both agent-based (AhsayOBM/ AhsayACB) and agentless (AhsayCBS User Web Console) type.

Available Restore Jobs Can Be Monitored by Live Activities						
Backup Type	AhsayOBM	AhsayACB	Ahsay Mobile			
File Backup	✓	✓	NA			
Cloud File Backup	<b>√</b>	<b>√</b>	NA			
IBM Lotus Domino Backup	✓	NA	NA			
IBM Lotus Notes Backup	✓	✓	NA			
MS Exchange Server Backup	✓	NA	NA			
MS Exchange Mail Level Backup	✓	NA	NA			
MS SQL Server Backup	✓	NA	NA			
MS Windows System Backup	✓	✓	NA			
MS Windows System State Backup	✓	NA	NA			
MS Hyper-V Backup	✓	NA	NA			
MySQL Backup	✓	NA	NA			
Office 365 Backup	✓	✓	NA			
Oracle Database Server	✓	NA	NA			
ShadowProtect System Backup	✓	NA	NA			
VMware Backup	✓	NA	NA			
Synology NAS Backup	✓	NA	NA			
QNAP NAS Backup	✓	NA	NA			
MariaDB Backup	✓	NA	NA			

The following shows the backup status of a live backup activity



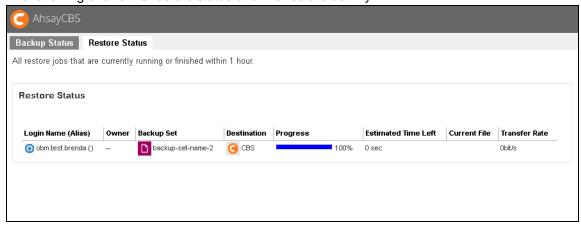
# 6.3 Restore Status

The **Restore Status** tab allows you to monitor the live activities of restore jobs running in both agent-based (AhsayOBM/ AhsayACB/ AhsayOBR) and agentless (AhsayCBS User Web Console) type.

Restore Type		Ahsay OBM	Ahsay ACB	Ahsay OBR	Ahsay Mobile
File	Normal Restore	✓	✓	✓	NA
	OpenDirect Restore	Х	Х	Х	NA
Cloud File	Cloud File Backup		✓	✓	NA
IBM Lotus	IBM Lotus Domino Backup		NA	✓	NA
IBM Lotus	Notes Backup	✓	✓	✓	NA
MS Excha	nge Server Backup	✓	NA	✓	NA
MS Excha Backup	MS Exchange Mail Level Backup		NA	✓	NA
MS SQL S	erver Backup	✓	NA	✓	NA
MS Windo	ows System Backup	✓	✓	✓	NA
MS Windo Backup	MS Windows System State Backup		NA	✓	NA
MS Hyper-V	Normal Restore	✓	NA	✓	NA
i iypei-v	Run Direct Restore	✓	NA	✓	NA
	Granular Restore with AhsayOBM File Explorer	✓	NA	<b>√</b>	NA
	Granular Restore with Windows File Explorer	х	NA	х	NA
MS SQL S	erver Backup	✓	NA	✓	NA
MySQL Ba	ackup	✓	NA	✓	NA
Office 365	Office 365 Backup		✓	✓	NA
Oracle Da	Oracle Database Server		NA	✓	NA
ShadowP Backup	ShadowProtect System Backup		NA	✓	NA
VMware	Normal Restore	✓	NA	✓	NA

	Run Direct Restore	✓	NA	✓	NA
	Granular Restore with AhsayOBM File Explorer	<b>√</b>	NA	<b>√</b>	NA
	Granular Restore with Windows File Explorer	х	NA	Х	NA
Synology NAS Backup		✓	NA	NA	NA
QNAP NAS Backup		✓	NA	NA	NA
MariaDB Backup		✓	NA	✓	NA

The following shows the restore status of a live restore activity.



#### NOTE

OpenDirect restore of file backup sets or granular restore from VMware and Hyper-V backup sets performed using Windows File Explorer will not show up on the [Restore Status] tab in Live Activities. This only applies to the restore performed directly through AhsayOBM/AhsayACB/AhsayOBR or AhsayCBS User Web Console.

# 7 Managing Backup Set

Since all the steps in <u>creating a backup set</u>, <u>running a backup job</u>, and <u>restoring a backup</u> are generic, follow these links for detailed instructions for Office 365 and Cloud File.

#### Agent-based

#### **Cloud File**

- AhsayACB v8 User Guide Cloud File Backup & Restore for Windows
- AhsayACB v8 User Guide Cloud File Backup & Restore for Mac
- AhsayOBM v8 User Guide Cloud File Backup & Restore for Windows
- AhsayOBM v8 User Guide Cloud File Backup & Restore for Mac

#### Office 365

- AhsayACB v8 User Guide Office365 Backup & Restore for Windows
- AhsayACB v8 User Guide Office365 Backup & Restore for Mac
- AhsayOBM v8 User Guide Office365 Backup & Restore for Windows
- AhsayOBM v8 User Guide Office365 Backup & Restore for Mac

## **Agentless**

Cloud File - Cloud File Run on Server (Agentless) Backup and Restore Guide

Office 365 - Office 365 Run on Server (Agentless) Backup and Restore Guide

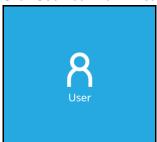
The links above will redirect you to the user guides of Office 365 and Cloud File and from there it will discuss the two (2) options of <u>creating a backup set</u>, <u>running a backup job</u>, and <u>restoring a backup</u> which are through AhsayCBS User Web Console (Agentless) and AhsayACB/AhsayOBM (Agent-based).

# 7.1 Create Backup Set (Generic Steps)

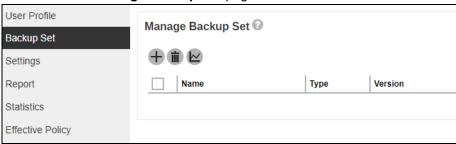
You can use your AhsayCBS user account to create backup sets and complete the remaining part of the process on the backup client for setting up the encryption type and/or encryption key. In some cases, you may need to create backup sets first before you install a backup client on the client machine.

To add a new backup set, do the following:

- 1. Login to the AhsayCBS user web console according to the instruction provided in section Logging in to AhsayCBS User Web Console.
- 2. Click **User** icon from AhsayCBS environment.



3. Click on the Manage Backup Set page.



- 4. Enter the **Name** of the new backup set and select the backup set type from the **Backup** set type dropdown box. The choices for backup set types are:
  - File BackupIBM Lotus Notes Backup
- IBM Lotus Domino Backup
- MS Exchange Mail Level Backup
- MS Exchange Server Backup
- MS Hyper-V Backup
- MS SQL Server Backup

MySQL Backup

- MS Windows System Backup
- Oracle Database Server Backup
- MariaDB Backup
- MS Windows System State Backup
- ShadowProtect System Backup

- Cloud File Backup
- VMware Backup
- Office 365 Backup

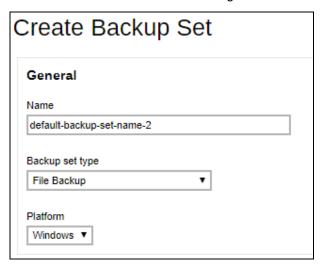
Also select the operating system used for the backup client from the **Platform** dropdown box. The choices for the platform are:

WindowsMacLinux

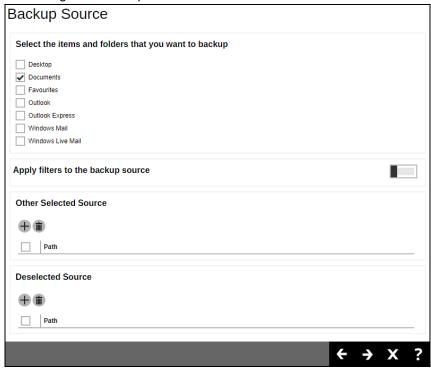
The Linux platform option also applies to backup sets running under FreeBSD, QNAP and Synology.

Once the backup set creation process is completed on the backup client, the value for the platform will be updated accordingly. For QNAP the platform value is QTS, for Synology the platform value is DSM and for FreeBSD the platform value is FreeBSD.

In our example, the new File backup set running on Windows is called default-backup-set-name-2. Click at the bottom right corner of the screen to continue.



Specify the backup source for the new backup set. The content of the Backup Source
page differs depending on the backup set type you have chosen. Below is an example
of creating a file backup set on Windows.



There are three (3) ways to select file(s) and/or folder(s) for back up:

i. Select folder(s) to back up all files in the folder(s).

Select the items and folders that you want to backup	)
Desktop	
<b>✓</b> Documents	
Favourites	
Outlook	
Outlook Express	
Windows Mail	
Windows Live Mail	

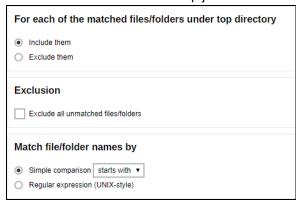
ii. Use the filter to specify file(s) and/or folder(s) that will be included in the back up.

Turn on **Apply filters to the backup source** and click + to create a filter.

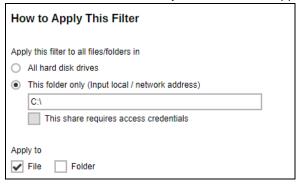
	-
Apply filters to the backup source	
<b>+ •</b>	
Name	

Enter the Name of the filter. Click + to specify the Matching pattern.

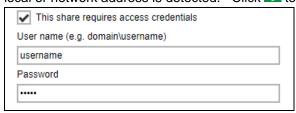
Select from the options below. In this example, all files that starts with the letter "s" will be included in the backup job.



Select whether you would like to apply the filter to all files and/or folders in all hard disk drives or to a specific folder only. If 'This folder only' is selected, enter the local / network address that you would like to apply the filter to.



If 'This share requires access credentials' is checked, enter the **User name** and **Password** of the local or network drive. This checkbox will only be enabled if a local or network address is detected. Click to add the filter.

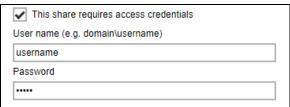


- iii. Specify the source folder or network drive where the file(s) and folder(s) for back up are located. Network drive support has been enhanced which will allow users to access different network drives not limited to Windows-based backup source. This enhancement will support:
  - Network drives with different login credentials instead of limited to Windows User Authentication login or network drives without login credential.
  - Network drives without the need for them to be setup first on Windows.
  - Network drives as Backup Source (including filter), Backup Destination and Restore Location (Original or Alternate).

Click tunder Other Selected Source. Enter the Local Path / Network Address.



If 'This share requires access credentials' is checked, enter the **User name** and **Password** of the local or network drive. This checkbox will only be enabled if a local or network address is detected.

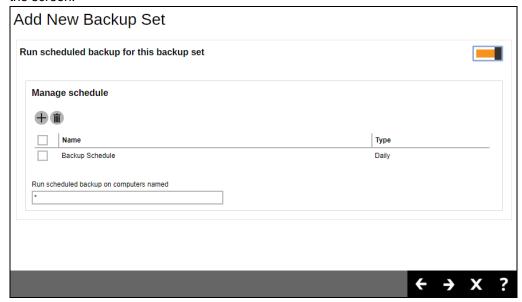


Click to add the selected source. You may add multiple source folder and/or network drive by doing the steps above until all the source folders and/or network drives are added.

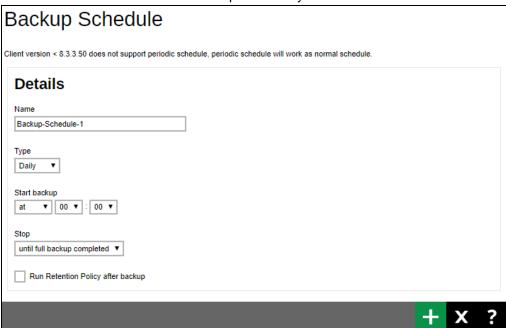
You may also specify a source which would be excluded from the backup job by clicking the under **Deselected Source** instead. Steps are the same as with Other Selected Source.

Click at the bottom right corner of the screen to continue.

6. By default, the **Run scheduled backup for this backup set** option is enabled. There is already a backup schedule created which is scheduled to run daily at 8pm. This may be edited, or you may opt to create a new backup schedule by clicking in the middle of the screen.



Enter the information of the new backup schedule you want to add.



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



Weekly – the day of the week and the time of the day or interval in minutes/hours when the backup job will run.



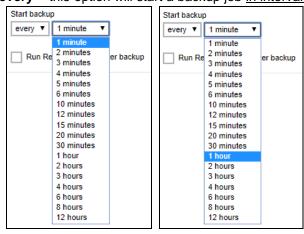
Monthly – the day of the month and the time of that day which the backup job will run.



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



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



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



Periodic backup schedule runs <u>every 4 hours Monday to Friday</u> during business hours while the normal backup schedule runs at <u>21:00 or 9:00</u> <u>PM on Saturday and Sunday</u> during weekend non-business hours.

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

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

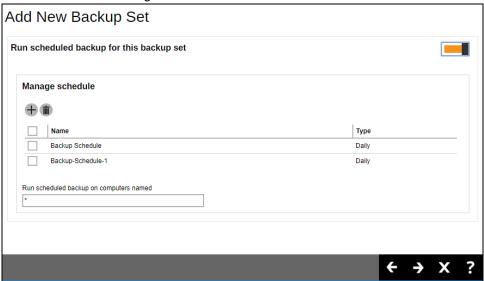
For example, if a backup has 100GB file size which will take approximately 15 hours to complete on your environment, but you set the "stop" after 10 hours, the file will be partially backed up and cannot be restored. The next backup will upload the files from scratch again.

The partially backed up data will have to be removed by running the Data Integrity Check.

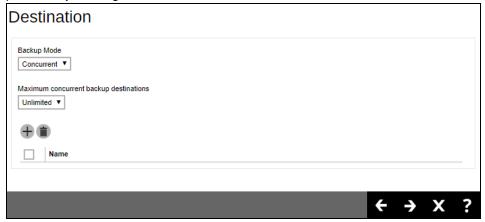
As a general rule, it is recommended to review this setting regularly as the data size on the backup machine may grow over time

- Run Retention Policy after backup if enabled, the AhsayOBM will run a retention policy job to remove files from the backup destination(s) which have exceeded the retention policy after performing a backup job.
- Click at the bottom right corner of the screen to continue.
- The new backup schedule, Backup-Schedule-1 in our example, can be seen under the Manage schedule list.

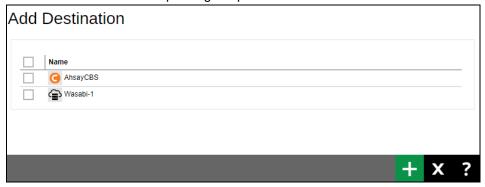
Click at the bottom right corner of the screen to continue.



- 7. Add a new backup destination for this backup set. By default, Sequential is selected. From the Backup Mode dropdown box, select either Sequential or Concurrent. In our example, we selected Concurrent as the backup set has more than one backup destination.
  - Add a Standard Destination or Predefined Destination set by your backup service provider by clicking the in the left side of the screen.



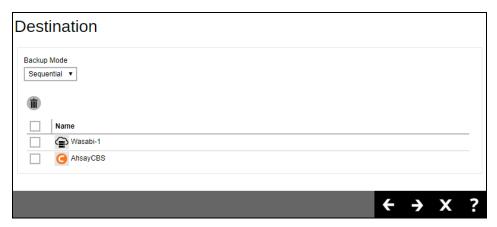
 Select your desired destination, it could be one or both displayed destinations. Tick the checkbox and click the plus sign to proceed.



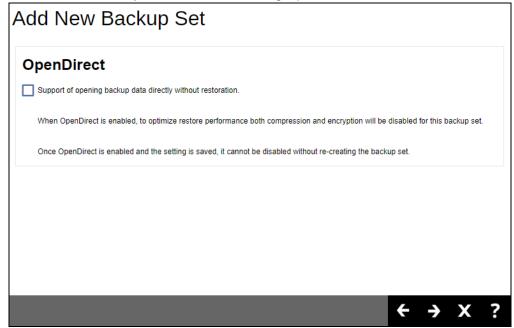
### **NOTE**

You can choose the Standard Destination which is the AhsayCBS. However, if there are other backup destinations which are already configured by your backup service provider, you can still add them as one of your destinations.

The Standard and Predefined Destinations have been successfully added.



- Click at the bottom right corner of the screen to continue.
- 8. Click the checkbox if you want to restore using OpenDirect.



9. Enter the Windows User Authentication information. This is needed for backup sets with backup schedule enabled and/or network shared drive selected as a temporary folder, backup source or backup destination. Enter the domain name and user name for AhsayOBM to access the network location.

For the user name, the local account or a Microsoft account may be used. The Microsoft account is supported for AhsayOBM installed on Microsoft Windows version 8, 8.1 and 10.

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

Example using a local account.

Vindow	s User Authentication	
Domain Na	ne (e.g. mycompany.com) / Ho	st Name
domain_na	me.com	
Jser name		
Administrat	or	

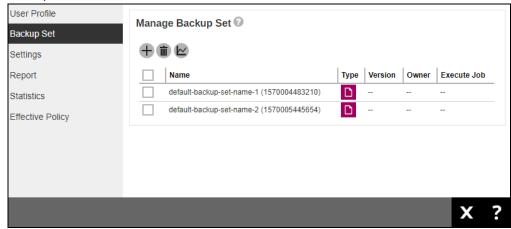
or

Example using a Microsoft account.

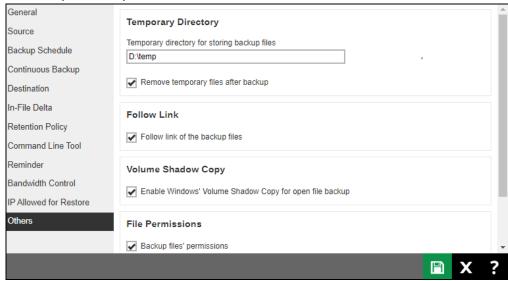
Vindows	User Authentication	1
Domain Nam	e (e.g. mycompany.com) / He	ost Name
domain_nar	ne.com	
User name		

Click at the bottom right corner of the screen to continue.

10. A new backup set called **default-backup-set-name-2** is created and can be seen in the backup set list.

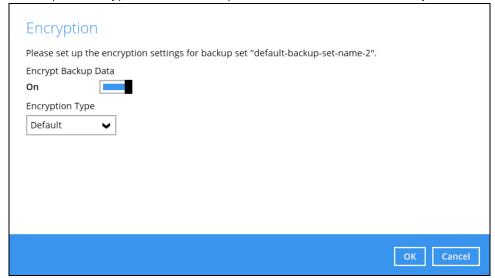


11. Click on the backup set and select **Others**, enter the path of the **Temporary Directory**. For example D:\temp



Click at the bottom right corner of the screen to save.

12. Go to your backup client, in this case we are using AhsayOBM, to complete the setup of the backup set by configuring the encryption settings. Once logged in, you will be asked to set up the encryption for the backup set, in this case **default-backup-set-name-2**.



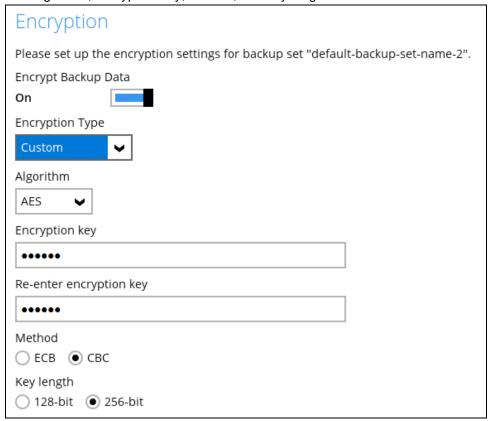
• By default, the Encrypt Backup Data option is enabled. The Encryption Type selected is Default which provides the most secure protection with an encryption key preset by the system.



Select from one of the three Encryption Type options:

- Default an encryption key with 44 alpha numeric characters will be randomly generated by the system
- User password the encryption key will be the same as the login password of your AhsayOBM at the time when this backup set is created. Please be reminded that if you change the AhsayOBM login password later, the encryption keys of the backup sets previously created with this encryption type will remain unchanged.

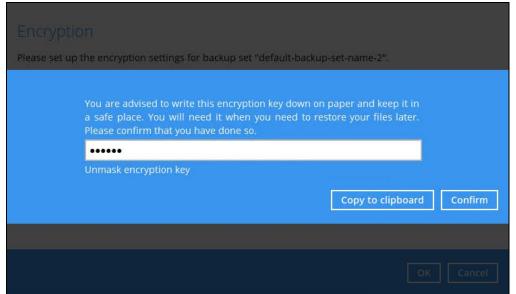
 Custom – you can customize your encryption key, where you can set your own algorithm, encryption key, method, and key length.



**Note:** For best practice on managing your encryption key, refer to the following Wiki article.

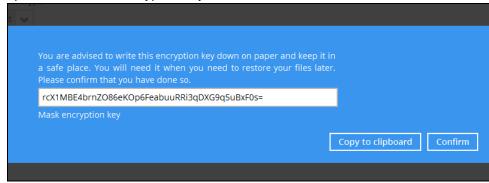
http://wiki.ahsay.com/doku.php?id=public:8015 faq:best practices for managing\_encryption\_key

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

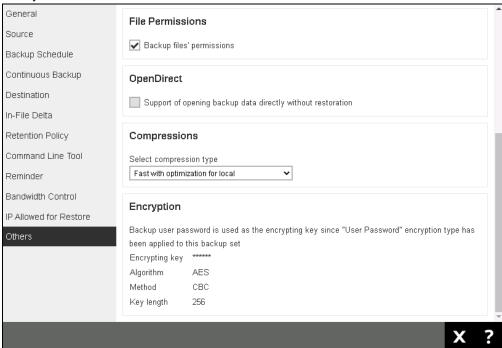


The pop-up window has the following three options to choose from:

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



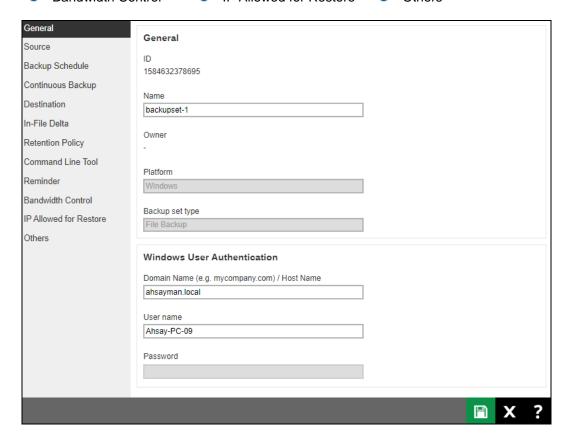
- Copy to clipboard Click to copy the encryption key, then you can paste it in another location of your choice.
- Confirm Click to exit this pop-up window and save the encryption settings.
- This completes the setup of the backup set and can be seen under Encryption in AhsayCBS user web console.



# 7.2 Manage Backup Set

Click the backup set name you want to manage from the **Backup Set** tab. It is sub divided into the following tabs:

General
 Source
 Backup Schedule
 Continuous Backup
 Destination
 In-File Delta
 Retention Policy
 Command Line Tool
 Reminder
 Bandwidth Control
 IP Allowed for Restore
 Others



# 7.3 Run a Backup Job

# Run an Agent-based Backup using AhsayOBM / AhsayACB

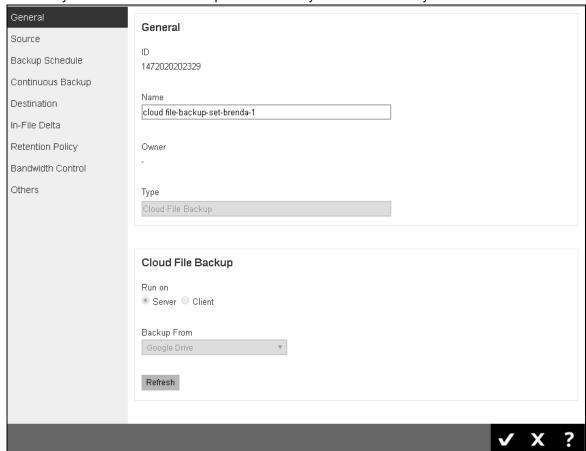
Except for Cloud File Backup and Office 365 Backup which you can run an agentless backup in AhsayCBS, all other backup modules require you to perform backup and restore using your client backup agent (AhsayOBM or AhsayACB).

For details on creating backup job using AhsayOBM or AhsayACB, refer to the backup module's User Guide which can be downloaded on the User's Guide download page.

# Run an Agentless Backup using AhsayCBS User Web Console (for Cloud File and Office 365 Backup only)

There are two types of backup set, **Cloud File Backup** and **Office 365 Backup**, which can run agentless backup using AhsayCBS user web console. These two (2) types of backup set can be created either on the AhsayCBS server, or the AhsayOBM or AhsayACB client and they can be both client-driven and server-driven.

When you create a new backup set with the **Type** being **Cloud File Backup**, you have a choice of whether to run the backup on the **Server** or on the **Client**. Please make sure that you choose **Server** if you want to run the backup from the AhsayCBS server directly.



### **Backup Destination for Run-on-Server Backup Set**

For **Office 365 Backup** and **Cloud File Backup** sets created in **Run-on-Server** backup type, the available backup destinations are AhsayCBS and Predefined Destinations, only one of these destinations can be selected. For more information on the Predefined Destinations, please contact your backup service provider.

# 7.4 Restore a Backup (Non-Run Direct Restore)

As opposed to Run Direct Restore where you can instantly restore a VM by running it directly from the backup files in the backup destination. Non-Run Direct restore is the traditional type of restore where you can restore the backed-up data to the original location, or an alternate location based on your choice.

## Restore using AhsayOBM / AhsayACB (Agent-based restore)

Except for Cloud File Backup and Office 365 which you can run an agentless restore in AhsayCBS (refer to the steps below), all other backup modules require you to perform restore using your client backup agent (AhsayOBM or AhsayACB).

## Restore using AhsayCBS User Web Console (Agentless restore)

There are two (2) types of backup sets that can be restored through the AhsayCBS User Web Console, **Cloud File Backup** and **Office 365 Backup**, provided that the backup set was created to **Run on Server**.

# 8 Run Direct Restore

### 8.1 Introduction

#### What is Run Direct?

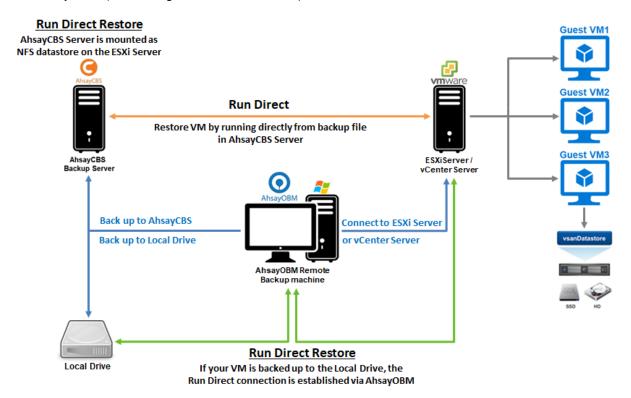
Run Direct is a feature that is supported by AhsayCBS v8.1, which helps reduce disruption and downtime of your production VMs.

Unlike normal VM restore procedure where a VM is extracted from backup files and copied to the production storage, which can take hours to complete. Restore with Run Direct can instantly power up a VM by running it directly from the backup files in the backup destination so that the VM can be put into production.

#### How does Run Direct work?

When a Run Direct restore is performed, the backup destination is mounted as an NFS datastore from the VMware host, where the VM is run directly from the backup files.

The backup destination can either be the AhsayCBS server or a local drive that can connect with AhsayOBM. Initiating a Run Direct from the AhsayCBS (also known as agentless restore) will trigger a connection directly with the VMware host (ESXi server and direction shown in orange indicator below), while initiating the same action on the AhsayOBM requires the connection to route through the AhsayOBM (shown in green indication below).



The restored virtual machine, at this stage (e.g. before the restore is finalized) is in a read-only state to preserve its integrity. All changes made to the virtual disks (e.g. operation within the guest virtual machine) are stored separately in transaction logs stored on the NFS datastore or the original datastore, depending on the setting selected. These changes are discarded when Run Direct is stopped, where the restored VM will be removed and all changes will be discarded, or the changes will be consolidated with the original virtual machine data when the restore is finalized.

# Finalizing a VM Recovery (Migrating VM to permanent location)

To finalize recovery of a VM, you will still need to migrate it to a permanent location on the VMware host. The following steps are taken when you finalize a Run Direct restore:

# **VMware Snapshot**

A VMware snapshot is created for the VM

# **Copying Files**

Backup files from the NFS datastore are copied to the production datastore on the VMware host.

# **Copying Changes**

Changes made to the VM after the snapshot creation are moved to the new location.

## **Data Consolidation**

The VM is temporarily suspended to consolidate the changes made after the snapshot creation.

## **Resume VM**

After all changes are consolidated, the VM is resumed.

## **Dismount NFS datastore**

The NFS datastore is dismounted.

### NOTE

For vCenter VM backup set, provided that the vMotion feature of the vCenter set is working properly, the VM will not be suspended during the data consolidation.

### **Non-Run Direct Restore**

Run Direct restore gives you the convenience of quickly restoring the VM by running it directly from the backup files in the backup destination, however, if you wish to restore the VM permanently to a location of your choice first before accessing the backup files, you should perform a Non-Run Direct restore instead. Refer to Restoring a Backup (Non-Run Direct Restore) for instructions.

# **Run Direct Requirements & Best Practices**

To utilize the Run Direct feature, ensure that the following requirements are met:

### Backup Destination Requirement

When a Run Direct restore is performed, the backup destination containing the guest VM files is mounted on the VMware host as NFS datastore.

Ensure that the following requirements are met by the backup destination of the VMware VM backup set:

- Destination Type of the backup destination must be set to a Single storage destination.
- Destination must be accessible to the VMWare host.
- Destination must have sufficient disk space available for the Run Direct restore. There should be 1.5 x total provisioned size of all VMs selected for backup.
- For Run Direct restore of 1 VM with provisioned size of 100GB, there should be 150GB (e.g. 1.5 x 100GB) of free space available in the Destination.

### No compression and Encryption

Data backed up to a Run Direct enabled destination is not compressed or encrypted to optimize restore performance as Run Direct will make the VM restored by running the data directly from the backup files in the backup destination.

### Restore to Alternate Location

- When performing a Run Direct restore to Alternate Location, only one VM can be selected per restore session.
- Consider creating separate VMware VM backup set for each VM that you intend to perform Run Direct restore (e.g. VMs that you may restore to alternate location).

# 8.2 Run Direct Restore Options

Run Direct restore gives you the convenience and flexibility of quickly restoring the VM by running it directly from the backup files in the backup destination, however, you may still wish to migrate the VM permanently afterward. There are 3 Run Direct Restore options you can choose from as explained below.

Option 1: Perform Run Direct Only

This option allows you to power up the VM instantly by running it directly from the backup files, but it won't be migrated to any permanent location on VMware host. Leave the **Auto migrate after Run Direct is running** checkbox unchecked in step 6 under <a href="Performing a Run Direct Restore on VM">Performing a Run Direct Restore on VM</a> below if you wish to go for this option.

Option 2: Perform Run Direct + Auto Migration

This option allows you to power up the VM instantly by running it directly from the backup files. While you can now access the Run Direct restored VM, it will also be migrated automatically to a permanent location on the original VMware host, another datastore of the original VMware host or another VMware host. Make sure the **Auto migrate after Run Direct is running** checkbox is checked in step 6 under <u>Performing a Run Direct Restore on VM</u> below if you wish to go for this option.

Option 3: Perform Run Direct + Manual Migration

This option allows you to power up the VM instantly by running it directly from the backup files. While you can now access the Run Direct restored VM, you will have to manually migrate the VM to a permanent location on the original VMware host, another datastore of the original VMware host or another VMware host. Leave the **Auto migrate after Run Direct is running** checkbox unchecked in step 6 under <u>Performing a Run Direct Restore on VM</u> below if you wish to go for this option. When the Run Direct restore is completed, you can initiate a Manual Migration any time. Refer to step 8 below for relevant instructions.

### NOTE

If perform Run Direct only without migration, any changes made to the VM during the Run Direct power up process will be lost when the VM is powered down.

If perform Run Direct with auto or manual migration, any changes made to the VM during the Run Direct power up process will be consolidated with the original virtual machine data once the migration has been completed successfully.

# 8.3 Performing a Run Direct Restore on VM

AhsayCBS v8.5.0.118 or above now supports backup and restore of VMware VMs stored on vSAN datastore. With this development, there are now several scenarios for restoring VMs using Run Direct.

The restoration steps for the four scenarios will be discussed below:

- Restore backup from VMFS datastore to VMFS datastore
- Restore backup from VMFS datastore to vSAN datastore
- Restore backup from vSAN datastore to vSAN datastore
- Restore backup from vSAN datastore to VMFS datastore

# 8.3.1 Restore a backup from VMFS datastore to VMFS datastore

1. Login to AhsayCBS user web console according to the instruction provided in section Logging on to AhsayCBS User Web Console.

#### NOTE

Before you can start Run Direct, you must have a VMware backup set created in the AhsayOBM client. Please refer to the Ahsay Online Backup Manager v8 VMware vCenter/ESXi Backup & Restore Guide for information on how to create the backup set. In addition, you must also run a successful backup on the VMware backup set before you can perform restore from Run Direct.

2. Click the VM Run Direct icon from your AhsayCBS environment.



3. Click from the Run Direct page to start a new Run Direct session.



4. Select the **Backup Set** from the dropdown box of VMware backup set you have created. In our example, the backup set is called **VMFS Run Direct Backup Set**. Click to

continue.



5. Select the backup job to restore from the **Restore file of job** dropdown box. In our example, there are two virtual machines. Check the box next to the one on which we will perform a restore, **Lubuntu12x**.



- 6. Select the location to restore your virtual machine. They are found under **Restore** virtual machine to on the **Start Run Direct** page.
  - Select Original Location to restore the VM to its original EXSi host and datastore.



Select Alternate Location to restore the VM to a different VMware host and a different datastore. Alternatively, you can also restore to the same VMware host but to a different datastore.

# NOTE

If you select Alternate Location, you will see an additional option Overwrite existing files.



Configure the following options according to your restore requirements.

Start Run Direct
Restore virtual machines to
Original Location
Alternate Location
Auto migrate after Run Direct is running
Auto power on after Run Direct is running
☑ Use existing storage as VM working directory to improve performance
Overwrite existing files

### Auto migrate after Run Direct is running

Select this option if you want to auto migrate the virtual machine to a permanent location on the original VMware host, another VMware host, or same VMware host but another datastore, depending on whether you have chosen **Original Location** or **Alternate Location** to restore your VM.

Auto power on after Run Direct is running

Select this option to power up the virtual machine automatically, after Run Direct is running for the VM.

Use existing storage as VM working directory to improve performance

Select this option to enhance performance of the restored VM.

Overwrite existing files (Alternate Location only)

Select this option to overwrite existing files when restoring to a different VMware host or a different datastore.

Click to proceed when you are done with the settings.

7. This step only applies if you selected **Alternate Location**, you need to enter the VMware host and access information of where you would like the VM to be restored to. Otherwise skip to Step 9.

For restoration to another VMware ESXi host, select **VMware vCenter 5.5 / 6 / 6.5 / 6.7 / 7** as **Version**, then enter the **Username**, **Password**, **Host**, and **Port** of the new host.

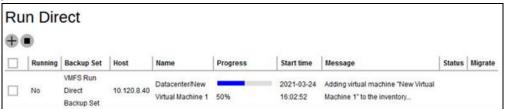


8. Specify the Name, Inventory Location, Host/Cluster, Resource Pool, and Storage for the alternate location.

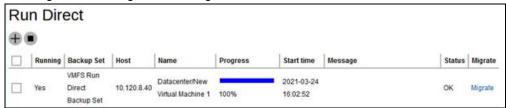


Click to start the restore.

9. The **Run Direct** page appears, showing the status message of the Run Direct restore job.

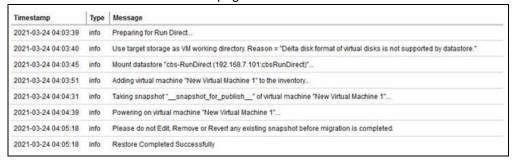


If your Run Direct is successful, you get a message similar to the following, with Status showing OK and Progress showing 100%.



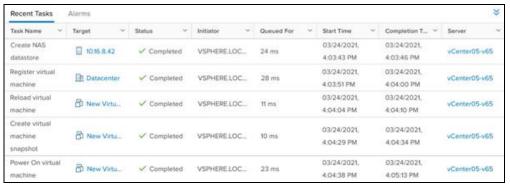
## Restore log messages on AhsayCBS

Click on the item on the Run Direct page.



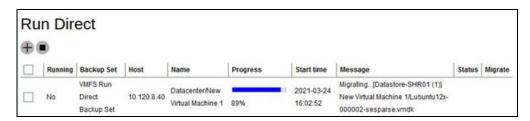
# Restore log messages on the VMware vSphere Client

Open your VMware vSphere Client and you will see the following messages from the Recent Tasks section.

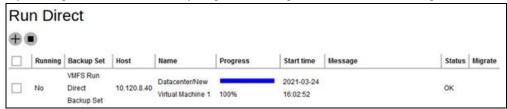


10. If you did not enable the **Auto Migrate after Run Direct is running** option in step 6, but still wish to migrate VM to a permanent location of your choice, click on the **Migrate** button as shown.





If your migration is successful, you get a message similar to the following.



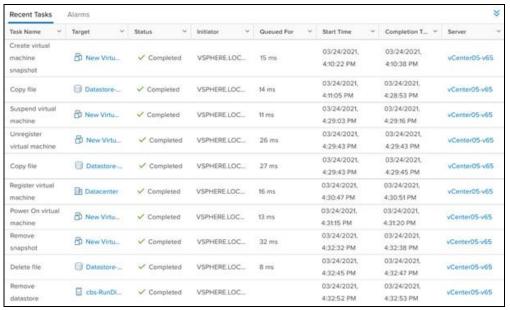
# Restore log messages on AhsayCBS

Click on the restore item on the Run Direct page to see the restore log messages.

Timestamp	Type	Message
2021-03-24 04:09:47	info	Start manual migration
2021-03-24 04:09:49	info	Loading information
2021-03-24 04:10:24	info	Taking snapshot "snapshot_for_migrate" of virtual machine "New Virtual Machine 1"
2021-03-24 04:10:42	info	Migrating[Datastore-SHR01 (1)] New Virtual Machine 1/Lubuntu12x-000001-sesparse.vmdk
2021-03-24 04:11:01	info	Migrating[Datastore-SHR01 (1)] New Virtual Machine 1/Lubuntu12x-000001.vmdk
2021-03-24 04:11:07	info	Migrating[Datastore-SHR01 (1)] New Virtual Machine 1/Lubuntu12x-flat.vmdk
2021-03-24 04:28:58	info	Migrating[Datastore-SHR01 (1)] New Virtual Machine 1/Lubuntu12x.vmdk
2021-03-24 04:29:05	info	Suspending virtual machine "New Virtual Machine 1"
2021-03-24 04:29:22	info	Loading information
2021-03-24 04:29:44	info	Removing virtual machine "New Virtual Machine 1" from the inventory
2021-03-24 04:29:45	info	Migrating[Datastore-SHR01 (1)] New Virtual Machine 1/Lubuntu12x.nvram
2021-03-24 04:29:51	info	Migrating[Datastore-SHR01 (1)] New Virtual Machine 1/Lubuntu12x vmsd
2021-03-24 04:29:57	info	Migrating[Datastore-SHR01 (1)] New Virtual Machine 1/Lubuntu12x vmx
2021-03-24 04:30:01	info	Migrating[Datastore-SHR01 (1)] New Virtual Machine 1/Lubuntu12x.vmxf
2021-03-24 04:30:02	info	Migrating[Datastore-SHR01 (1)] New Virtual Machine 1/Lubuntu12x-79064c22.vms
2021-03-24 04:30:31	info	Migrating[Datastore-SHR01 (1)] New Virtual Machine 1/Lubuntu12x-000002-sesparse.vmdk
2021-03-24 04:30:37	info	Migrating[Datastore-SHR01 (1)] New Virtual Machine 1/Lubuntu12x-000002.vmdk
2021-03-24 04:30:41	info	Migrating[Datastore-SHR01 (1)] New Virtual Machine 1/Lubuntu12x-Snapshot1.vmsn
2021-03-24 04:30:42	info	Migrating[Datastore-SHR01 (1)] New Virtual Machine 1/Lubuntu12x-Snapshot2.vmsn
2021-03-24 04:30:48	info	Adding virtual machine "New Virtual Machine 1" to the inventory
2021-03-24 04:31:16	info	Powering on virtual machine "New Virtual Machine 1"
2021-03-24 04:31:23	info	Removing snapshot "snapshot_for_migrate" from virtual machine "New Virtual Machine 1"
2021-03-24 04:32:33	info	Removing snapshot "snapshot_for_publish" from virtual machine "New Virtual Machine 1"
2021-03-24 04:32:54	info	Unmount datastore "cbs-RunDirect"
2021-03-24 04:32:57	info	Restore Completed Successfully

## Restore log messages on the VMware vSphere Client

Open your VMware vSphere Client and you will see the following messages from the Recent Tasks section.



11. Click X to exit when finished.

# 8.3.2 Restore a backup from VMFS datastore to vSAN datastore

1. Login to AhsayCBS user web console according to the instruction provided in section Logging on to AhsayCBS User Web Console.

### NOTE

Before you can start Run Direct, you must have a VMware backup set created in the AhsayOBM client. Please refer to the Ahsay Online Backup Manager v8 VMware vCenter/ESXi Backup & Restore Guide for information on how to create the backup set. In addition, you must also run a successful backup on the VMware backup set before you can perform restore from Run Direct.

2. Click the VM Run Direct icon from your AhsayCBS environment.



3. Click from the **Run Direct** page to start a new Run Direct session.

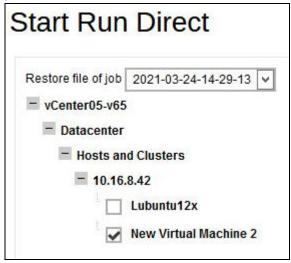


4. Select the **Backup Set** from the dropdown box of VMware backup set you have created. In our example, the backup set is called **VMFS Run Direct Backup Set**. Click to continue.



5. Select the backup job to restore from the **Restore file of job** dropdown box. In our example, there are two virtual machines. Check the box next to the one on which we will

perform a restore, New Virtual Machine 2.



6. Select the location to restore your virtual machine. They are found under **Restore virtual machine to** on the **Start Run Direct** page.

Select **Alternate Location** to restore the VM to a different VMware host and a different datastore. Alternatively, you can also restore to the same VMware host but to a different datastore.

#### **NOTE**

If you select Alternate Location, you will see an additional option Overwrite existing files.

,	Start Run Direct
	Restore virtual machines to
	Original Location
	Alternate Location
	Auto migrate after Run Direct is running
	✓ Auto power on after Run Direct is running
	☑ Use existing storage as VM working directory to improve performance
	✓ Overwrite existing files

Configure the following options according to your restore requirements:

Auto migrate after Run Direct is running

Select this option if you want to auto migrate the virtual machine to a permanent location on the original VMware host, another VMware host, or same VMware host but another datastore, depending on whether you have chosen **Original Location** or **Alternate Location** to restore your VM

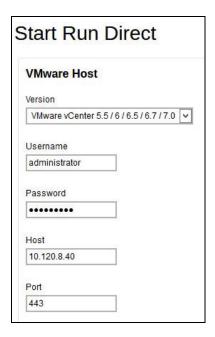
Auto power on after Run Direct is running

Select this option to power up the virtual machine automatically, after Run Direct is running for the VM.

- Use existing storage as VM working directory to improve performance
   Select this option to enhance performance of the restored VM.
- Overwrite existing files (Alternate Location only)
   Select this option to overwrite existing files when restoring to a different VMware host or a different datastore.

Click to proceed when you are done with the settings.

7. Enter the VMware host and access information of where you would like the VM to be restored to. Select VMware vCenter 5.5 / 6 / 6.5 / 6.7 / 7 as Version, then enter the Username, Password, Host, and Port of the new host.

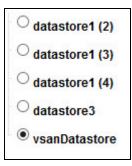


8. Enter a new **Name** for the VM, then **Browse** to modify the **Host/Cluster** and **Storage** settings to select the datastore.



Select the Host / Cluster and Storage.



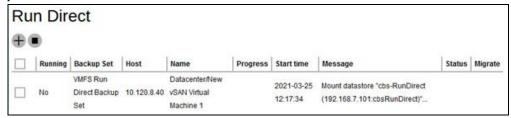


#### **NOTE**

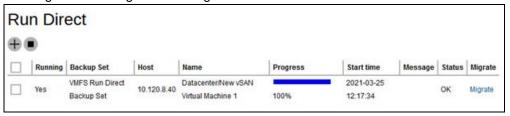
It is important to select the vSAN Host/Cluster as well as the vSAN datastore for the storage.

Click to start the restore.

9. The **Run Direct** page appears, showing the status message of the Run Direct restore job.

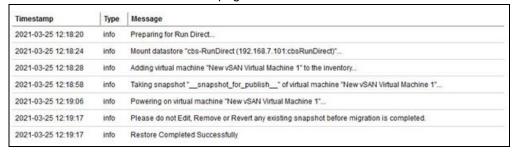


If your Run Direct is successful, you get a message similar to the following, with Status showing OK and Progress showing 100%.



### Restore log messages on AhsayCBS

Click on the item on the Run Direct page.



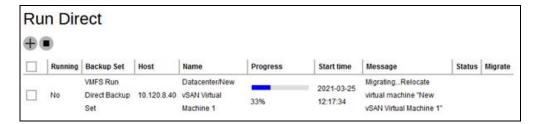
### Restore log messages on the VMware vSphere Client

Open your VMware vSphere Client and you will see the following messages from the Recent Tasks section.

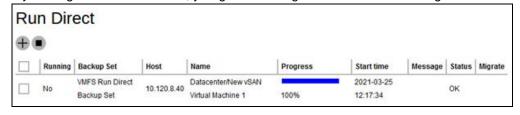


10. If you did not enable the Auto Migrate after Run Direct is running option in step 6, but still wish to migrate VM to a permanent location of your choice, click on the Migrate button as shown.



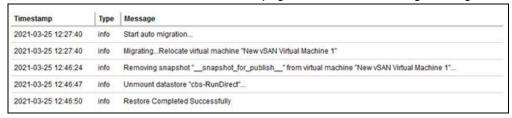


If your migration is successful, you get a message similar to the following.



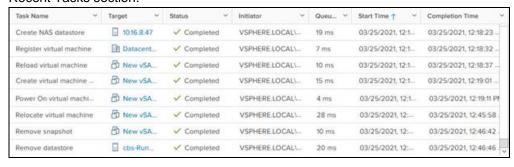
### Restore log messages on AhsayCBS

Click on the restore item on the Run Direct page to see the restore log messages.



# Restore log messages on the VMware vSphere Client

Open your VMware vSphere Client and you will see the following messages from the Recent Tasks section.



11. Click X to exit when finished.

# 8.3.3 Restore a backup from vSAN datastore to vSAN datastore

1. Login to AhsayCBS user web console according to the instruction provided in section Logging on to AhsayCBS User Web Console.

### NOTE

Before you can start Run Direct, you must have a VMware backup set created in the AhsayOBM client. Please refer to the <a href="Ahsay Online Backup Manager v8 VMware">Ahsay Online Backup Manager v8 VMware</a> vCenter/ESXi Backup & Restore Guide for information on how to create the backup set. In addition, you must also run a successful backup on the VMware backup set before you can perform restore from Run Direct.

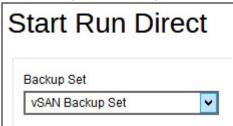
2. Click the VM Run Direct icon from your AhsayCBS environment.



3. Click from the Run Direct page to start a new Run Direct session.



4. Select the **Backup Set** from the dropdown box of VMware backup set you have created. In our example, the backup set is called **vSAN Backup Set**. Click to continue.



 Select the backup job to restore from the Restore file of job dropdown box. In our example, the virtual machine is named Ubuntu 12.04 LTS. Check the box next to it.



6. Select the location to restore your virtual machine. They are found under **Restore** virtual machine to on the **Start Run Direct** page.

Select to restore the VM to its **Original Location**.

Sta	art Run Direct
Re •	store virtual machines to Original Location Alternate Location

7. Configure the following options according to your restore requirements.

Start Run Direct	
Restore virtual machines to	
Original Location	
Alternate Location	
Auto migrate after Run Direct is running	
✓ Auto power on after Run Direct is running	
☑ Use existing storage as VM working directory to improve performance	

Auto migrate after Run Direct is running

Select this option if you want to auto migrate the virtual machine to a permanent location on the original VMware host, another VMware host, or same VMware host but another datastore, depending on whether you have chosen **Original Location** or **Alternate Location** to restore your VM.

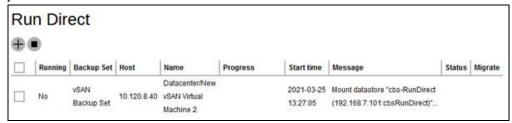
Auto power on after Run Direct is running

Select this option to power up the virtual machine automatically, after Run Direct is running for the VM.

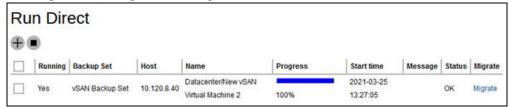
Use existing storage as VM working directory to improve performance
 Select this option to enhance performance of the restored VM.

Click to start the restore.

8. The **Run Direct** page appears, showing the status message of the Run Direct restore job.



If your Run Direct is successful, you get a message similar to the following, with Status showing OK and Progress showing 100%.



# Restore log messages on AhsayCBS

Click on the item on the Run Direct page.

Timestamp	Type	Message
2021-03-25 01:27:55	info	Preparing for Run Direct
2021-03-25 01:27:58	info	Mount datastore "cbs-RunDirect (192.168.7.101:cbsRunDirect)"
2021-03-25 01:28:03	info	Adding virtual machine "New vSAN Virtual Machine 2" to the inventory
2021-03-25 01:28:41	info	Taking snapshot "snapshot_for_publish" of virtual machine "New vSAN Virtual Machine 2"
2021-03-25 01:28:49	info	Please do not Edit, Remove or Revert any existing snapshot before migration is completed.
2021-03-25 01:28:49	info	Restore Completed Successfully

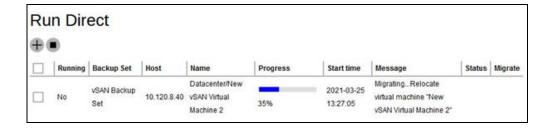
## Restore log messages on the VMware vSphere Client

Open your VMware vSphere Client and you will see the following messages from the Recent Tasks section.

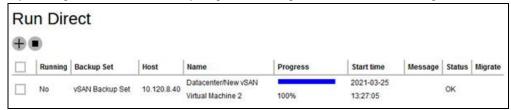


 If you did not enable the Auto Migrate after Run Direct is running option in step 6, but still wish to migrate VM to a permanent location of your choice, click on the Migrate button as shown.



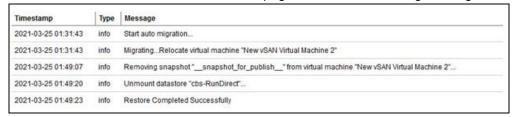


If your migration is successful, you get a message similar to the following.



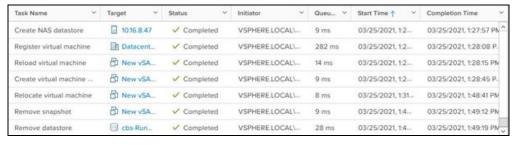
### Restore log messages on AhsayCBS

Click on the restore item on the Run Direct page to see the restore log messages.



#### Restore log messages on the VMware vSphere Client

Open your VMware vSphere Client and you will see the following messages from the Recent Tasks section.



10. Click X to exit when finished.

## 8.3.4 Restore a backup from vSAN datastore to VMFS datastore

1. Login to AhsayCBS user web console according to the instruction provided in section Logging on to AhsayCBS User Web Console.

#### NOTE

Before you can start Run Direct, you must have a VMware backup set created in the AhsayOBM client. Please refer to the Ahsay Online Backup Manager v8 VMware vCenter/ESXi Backup & Restore Guide for information on how to create the backup set. In addition, you must also run a successful backup on the VMware backup set before you can perform restore from Run Direct.

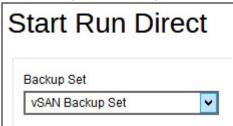
2. Click the VM Run Direct icon from your AhsayCBS environment.



3. Click from the **Run Direct** page to start a new Run Direct session.



4. Select the **Backup Set** from the dropdown box of VMware backup set you have created. In our example, the backup set is called **vSAN Backup Set**. Click to continue.



Select the backup job to restore from the Restore file of job dropdown box. In our example, the virtual machine is named Ubuntu 12.04 LTS. Check the box next to it.



6. Select the location to restore your virtual machine. They are found under **Restore virtual machine to** on the **Start Run Direct** page.

Select **Alternate Location** to restore the VM to a different VMware host and a different datastore. Alternatively, you can also restore to the same VMware host but to a different datastore.

#### NOTE

If you select Alternate Location, you will see an additional option Overwrite existing files.

Start Run Direct	
	Restore virtual machines to
	Original Location
	Alternate Location
	Auto migrate after Run Direct is running
	☑ Auto power on after Run Direct is running
	☑ Use existing storage as VM working directory to improve performance
	✓ Overwrite existing files

Configure the following options according to your restore requirements:

Auto migrate after Run Direct is running

Select this option if you want to auto migrate the virtual machine to a permanent location on the original VMware host, another VMware host, or same VMware host but another datastore, depending on whether you have chosen **Original Location** or **Alternate Location** to restore your VM

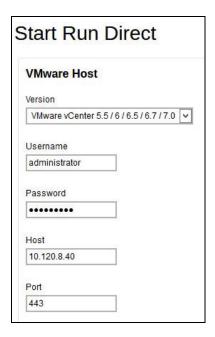
Auto power on after Run Direct is running

Select this option to power up the virtual machine automatically, after Run Direct is running for the VM.

- Use existing storage as VM working directory to improve performance
   Select this option to enhance performance of the restored VM.
- Overwrite existing files (Alternate Location only)
   Select this option to overwrite existing files when restoring to a different VMware host or a different datastore.

Click to proceed when you are done with the settings.

7. Enter the VMware host and access information of where you would like the VM to be restored to. Select VMware vCenter 5.5 / 6 / 6.5 / 6.7 / 7 as Version, then enter the Username, Password, Host, and Port of the new host.



8. Enter a new **Name** for the VM, then **Browse** to modify the **Host/Cluster** and **Storage** settings to select the datastore.



Select the Host / Cluster and Storage.



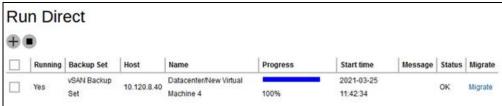


Click to start the restore.

9. The **Run Direct** page appears, showing the status message of the Run Direct restore job.

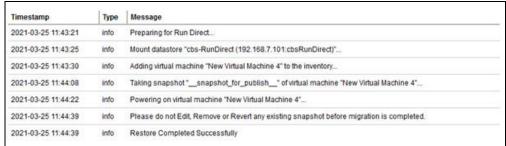


If your Run Direct is successful, you get a message similar to the following, with Status showing OK and Progress showing 100%.



## Restore log messages on AhsayCBS

Click on the item on the Run Direct page.



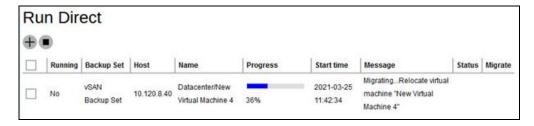
#### Restore log messages on the VMware vSphere Client

Open your VMware vSphere Client and you will see the following messages from the Recent Tasks section.

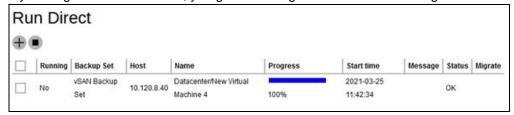


10. If you did not enable the Auto Migrate after Run Direct is running option in step 6, but still wish to migrate VM to a permanent location of your choice, click on the Migrate button as shown.



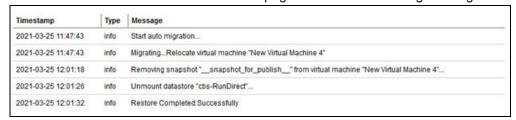


If your migration is successful, you get a message similar to the following.



#### Restore log messages on AhsayCBS

Click on the restore item on the Run Direct page to see the restore log messages.



# Restore log messages on the VMware vSphere Client

Open your VMware vSphere Client and you will see the following messages from the Recent Tasks section.



11. Click X to exit when finished.

# 9 Contacting Ahsay

# 9.1 Technical Assistance

To contact Ahsay support representatives for technical assistance, visit the Partner Portal: <a href="https://www.ahsay.com/partners/">https://www.ahsay.com/partners/</a>

Also use the Ahsay Wikipedia for resource such as Hardware Compatibility List, Software Compatibility List, and other product information: <a href="https://wiki.ahsay.com/">https://wiki.ahsay.com/</a>

# 9.2 Documentation

Documentations for all Ahsay products are available at:

https://www.ahsay.com/jsp/en/home/index.jsp?pageContentKey=ahsay\_downloads\_document ation\_guides

You can send us suggestions for improvements or report on issues in the documentation, by contacting us at:

https://www.ahsay.com/jsp/en/contact/kbQuestion.jsp

Please specify the specific document title as well as the change required/suggestion when contacting us.

# **Appendix**

# Appendix A Set Backup Destination on AhsayOBM for Backup Sets Created on AhsayCBS User Web Console

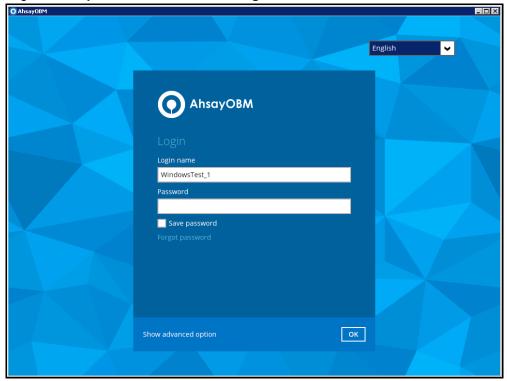
You need to read the instructions below only if you:

- > Have created a backup set on AhsayCBS User Web Console; AND
- Selected the backup set to Run on Client (if you are running Office 365 Backup and Cloud File Backup Set); AND
- Have not selected any Predefined Destination in the backup creation process on the AhsayCBS User Web Console

-OR-

Have selected a Predefined Destination in the backup creation process on AhsayCBS User Web Console but wish to add additional backup destination other than the predefined destination.

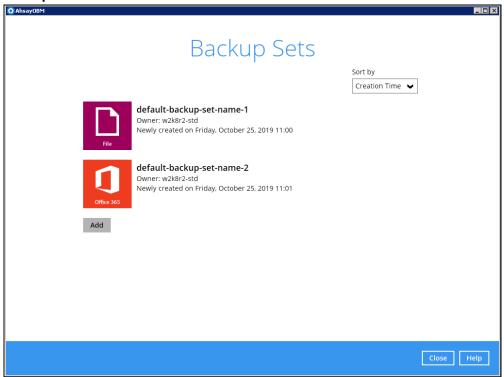
1. Login to AhsayOBM with user account **Login name** and **Password**.



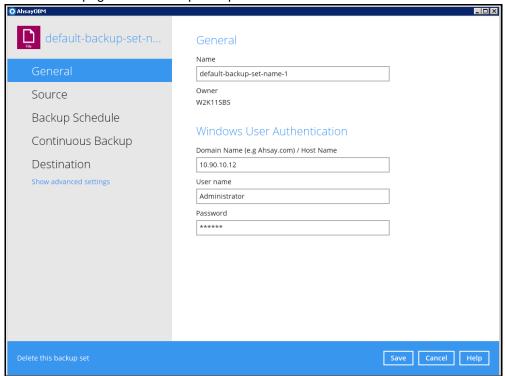
2. Click the **Backup Sets** button to open the backup sets.



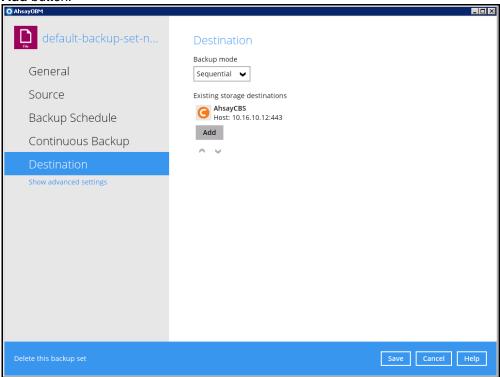
3. Select the backup set you want. In our example, the backup set is called **default-backup-set-name-1**.



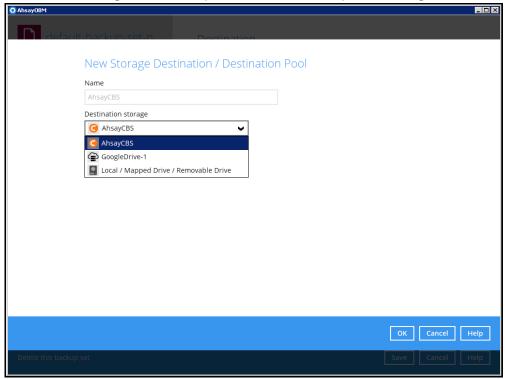
4. The General page of the backup set opens.



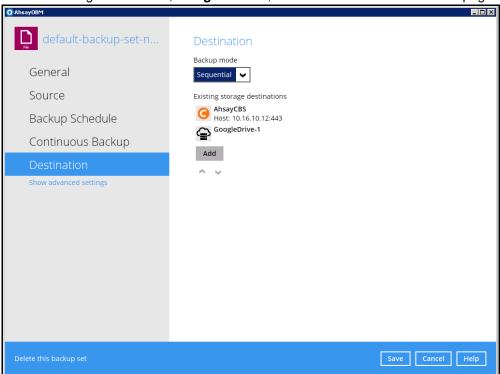
5. Go to the **Destination** page. You can add extra storage destinations here. Click the **Add** button.



6. Add a new destination on the New Storage Destination / Destination Pool. Select the **Destination storage** from the dropdown list. In our example, it is **GoogleDrive-1**.



7. The new storage destination, **GoogleDrive-1**, can be seen on the Destination page.



8. Click on **Save** to save the modification.