

AhsayCBS v8.5 New Features Datasheet

Ahsay Systems Corporation Limited
22 October 2021

Revision History

Date	Descriptions	Version
26 January 2021	<ul style="list-style-type: none"> Initial draft Added support for the Two-Factor Authentication feature on AhsayOBR Added support for the two types of authentications using Ahsay Mobile; and support to configure two 2FA modes 	8.5.0.63
19 April 2021	<ul style="list-style-type: none"> Added supported version for Oracle (Oracle 18c) Added support backup and restore on VMware vSAN 	8.5.0.127
18 June 2021	<ul style="list-style-type: none"> Enhanced v6 to v8 Backup Set Data Migration New AhsayCBS Download Page Layout Added support for installations on Debian 10 and macOS Big Sur on Intel and ARM M1 CPU Relocation of Mobile Backup feature Added support for changing of Mobile Backup Destination 	8.5.2.0
18 June 2021	Added support for customization of AhsayOBM/AhsayACB Free Trial and Save Password options	8.5.2.35
22 October 2021	<ul style="list-style-type: none"> Added support for building customized installers for multiple System users Added support for more concurrent installer build on ACP New Two-Factor Authentication features added Added Mobile Backup feature and supported file types Added support for Synology DSM 7 to install AhsayOBM v8.5.4.86 using workaround 	8.5.4.86

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Introduction

















This v8.5 New Features Datasheet is designed to highlight some of the major features and enhancements on the AhsayCBS v8.5. This document is intended for System Administrators running earlier versions of AhsayCBS.

The following table is an overview with brief description of the new features available in AhsayCBS, AhsayOBM, AhsayACB, AhsayOBR v8.5 (or above), and Ahsay Mobile.

Feature	Description
Two-factor Authentication (2FA)	Extra layer of security to prevent an unauthorized user from logging in to AhsayCBS, AhsayOBM, AhsayACB and AhsayOBR.
Mobile Backup	Mobile backup and restore of photos and videos using Ahsay Mobile to AhsayOBM/AhsayACB machine. If required, the local backup of the photos and videos can be backed up to a Cloud destination by using a separate File backup set on AhsayOBM/AhsayACB.

The following table shows the supported features for each product running on different types of Operating System:

Product	Operating System (OS)		Features	
			Two-Factor Authentication (2FA)	Mobile Backup
 AhsayCBS	   		✓	✗
 AhsayOBM	Windows		✓	✓
	macOS		✓	✓
	Linux GUI		✓	✓
	Linux CLI		✗	✗
	FreeBSD		✗	✗
	NAS Synology		✗	✗
	NAS QNAP		✗	✗

 AhsayACB	Windows			
	macOS			
 AhsayOBR	Windows			
	macOS			
	Linux GUI			

Two-Factor Authentication (2FA)

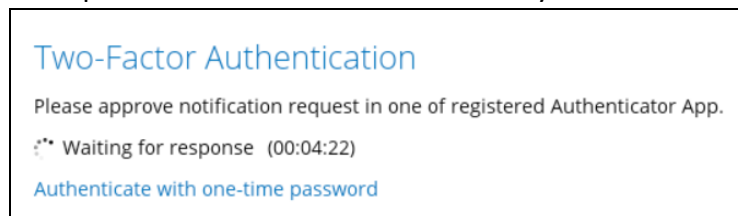
The new enhanced Two-Factor Authentication (2FA) in v8.5 (or above) will provide additional Two-Factor Authentication security options to secure login to **AhsayCBS**, **AhsayOBM**, **AhsayACB** and **AhsayOBR** to cater for different requirements of each customer.

Key Features

- Supported for system users; AhsayCBS Admin, Sub-Admin, and Read-only Admin account types
- Supported for AhsayOBM and AhsayACB user paid and trial accounts
- Two-Factor Authentication (2FA) using Ahsay Mobile which supports:

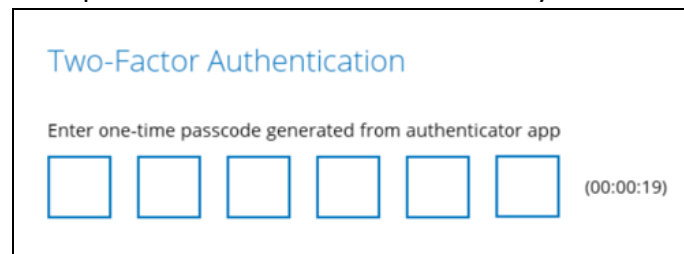
- Push Notification

Example of the 2FA alert screen on AhsayOBM for Push Notification 2FA



- TOTP (Time-based One-Time Password)

Example of the 2FA alert screen on AhsayOBM for TOTP 2FA



Ahsay Mobile can be configured to supports two 2FA modes:

- Push Notification and TOTP (default); or
- TOTP only
- Two-Factor Authentication (2FA) using third-party TOTP (Time-based One-Time Password) Authenticator apps that provide time-based one-time password. A few examples are:
 - Google Authenticator
 - Microsoft Authenticator
 - LastPass Authenticator

- Supports multiple mobile devices registered for the Two-Factor Authentication (2FA) per account
- Each system or user account can support authentication using multiple mobile devices with different Authenticator apps

Example:

- Mobile device 1 – using Ahsay Mobile
 - Mobile device 2 – using Google Authenticator
 - Mobile device 3 – using Microsoft Authenticator etc.
- Starting with v8.5.4.86, Two-Factor Authentication (2FA) recovery options are added that allow users to perform authentication recovery in case they were not able to accept the push notification request on the Ahsay Mobile and/or cannot obtain a TOTP code from the Ahsay Mobile.



For more details on how to perform authentication recovery, please refer to **Appendix A: Troubleshooting Login** of the following guide:

[Ahsay Mobile App v8 User Guide for Android and iOS](#)

- Supports “Re-pair with Authenticator” feature to allow re-pairing of a new device with Ahsay Mobile in case the original or registered device used for the 2FA was damaged or lost.



Starting with v8.5 (or above), the Two-Factor Authentication (2FA) feature will replace Twilio and the Twilio feature will be desupported. Twilio and Two-Factor Authentication (i.e., Ahsay Mobile Authenticator and third-party TOTP Authenticator) cannot be used at the same time. Once the Twilio setup is turned off in v8.5 (or above), this feature is automatically deleted and cannot be reverted.

Requirements

In order to log in using the Two-Factor Authentication (2FA), the following requirements must be satisfied:

For AhsayCBS/AhsayOBM/AhsayACB/AhsayOBR



- ▶ AhsayCBS v8.5 (or above) must be installed.
- ▶ AhsayCBS must be connected to the internet.
- ▶ AhsayOBM/AhsayACB/AhsayOBR v8.5 (or above) must be installed.
- ▶ AhsayOBM/AhsayACB/AhsayOBR v8.5 (or above) must be connected to AhsayCBS.
- ▶ To use the Two-Factor Authentication (2FA) with **https** protocol, a valid SSL certificate from a trusted CA must be installed on AhsayCBS. Otherwise, you will have to use **http** instead, which means all AhsayOBM and AhsayACB users with Two-Factor Authentication (2FA) enabled will need to connect to AhsayCBS using **http** as well.
- ▶ The firewall on the AhsayCBS machine must be configured to allow outbound connections to the Push Notification Server **pns.ahsay.com** via port 80 and 443. Failure to do so will prevent you from using Push Notification feature on the Ahsay Mobile for the Two-Factor Authentication (2FA).
- ▶ The Two-Factor Authentication (2FA) must be enabled on AhsayCBS system, AhsayOBM and/or AhsayACB user accounts.

For Ahsay Mobile

- ▶ A mobile device with the Ahsay Mobile and/or a TOTP Authenticator App such as Google or Microsoft Authenticator installed is available for the Two-Factor Authentication (2FA). Although only one authenticator app is needed for the 2FA, several authenticator apps may be used.

Example: AhsayOBM/AhsayACB can register and use both Ahsay Mobile and Google Authenticator.

- ▶ **Android and iOS version Supported**

OS	Description
 android	For Android mobile device, the Android version must be Android 8 (or above).
 iOS	For iOS mobile device, the iOS version must be iOS 12 (or above).

- ▶ A supported mobile device with Ahsay Mobile and/or a third-party TOTP Authenticator app must be installed.
- ▶ The Ahsay Mobile or a third-party TOTP Authenticator app must be registered with AhsayCBS/AhsayOBM/AhsayACB.
- ▶ The mobile device must have a valid mobile service and able to receive SMS notifications.
- ▶ The mobile device must have a functioning camera for QR code scanning for the Two-Factor Authentication (2FA) registration.
- ▶ To use push notification for the Two-Factor Authentication (2FA) with Ahsay Mobile, the mobile device must have an internet connection.

Limitations

- ⦿ Not supported on API system users.
- ⦿ For Replication, the Two-Factor Authentication (2FA) is not available for both sending and receiving.
- ⦿ For Redirector, the Two-Factor Authentication (2FA) is not available for both hosting and joining.
- ⦿ Not supported in AhsayOBM, AhsayACB and AhsayOBR pre-v8.5.
- ⦿ Not supported in AhsayOBM and AhsayOBR running on the following platforms:
 - ▶ Linux CLI
 - ▶ FreeBSD
 - ▶ Synology NAS
 - ▶ QNAP NAS

Setting up Two-Factor Authentication (2FA)

To enable Two-Factor Authentication (2FA) on AhsayCBS:

1. The Mobile Authentication option must be set up first. For more details, refer to **Chapter 7.1.6.1 Enable Mobile Authentication in AhsayCBS**
2. To enable Two-Factor Authentication on AhsayCBS, refer to **Chapter 7.1.6.2 Enable Two-Factor Authentication of AhsayOBM/AhsayACB user accounts**

of the following guide:

[AhsayCBS v8 Administrator's Guide](#)

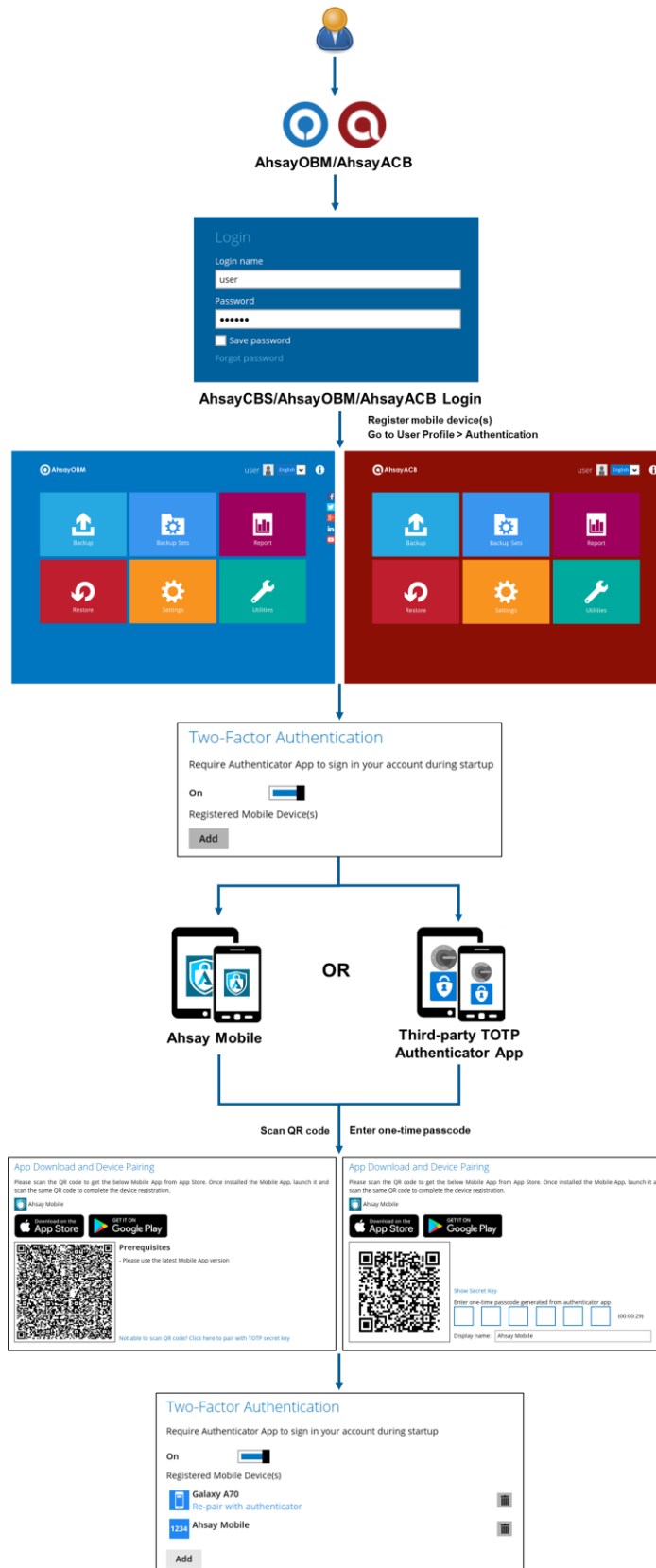
Two-Factor Authentication (2FA) Registration

The following diagram illustrates the registration of mobile device(s) for the Two-Factor Authentication (2FA) on AhsayCBS, AhsayOBM, and AhsayACB.

AhsayCBS

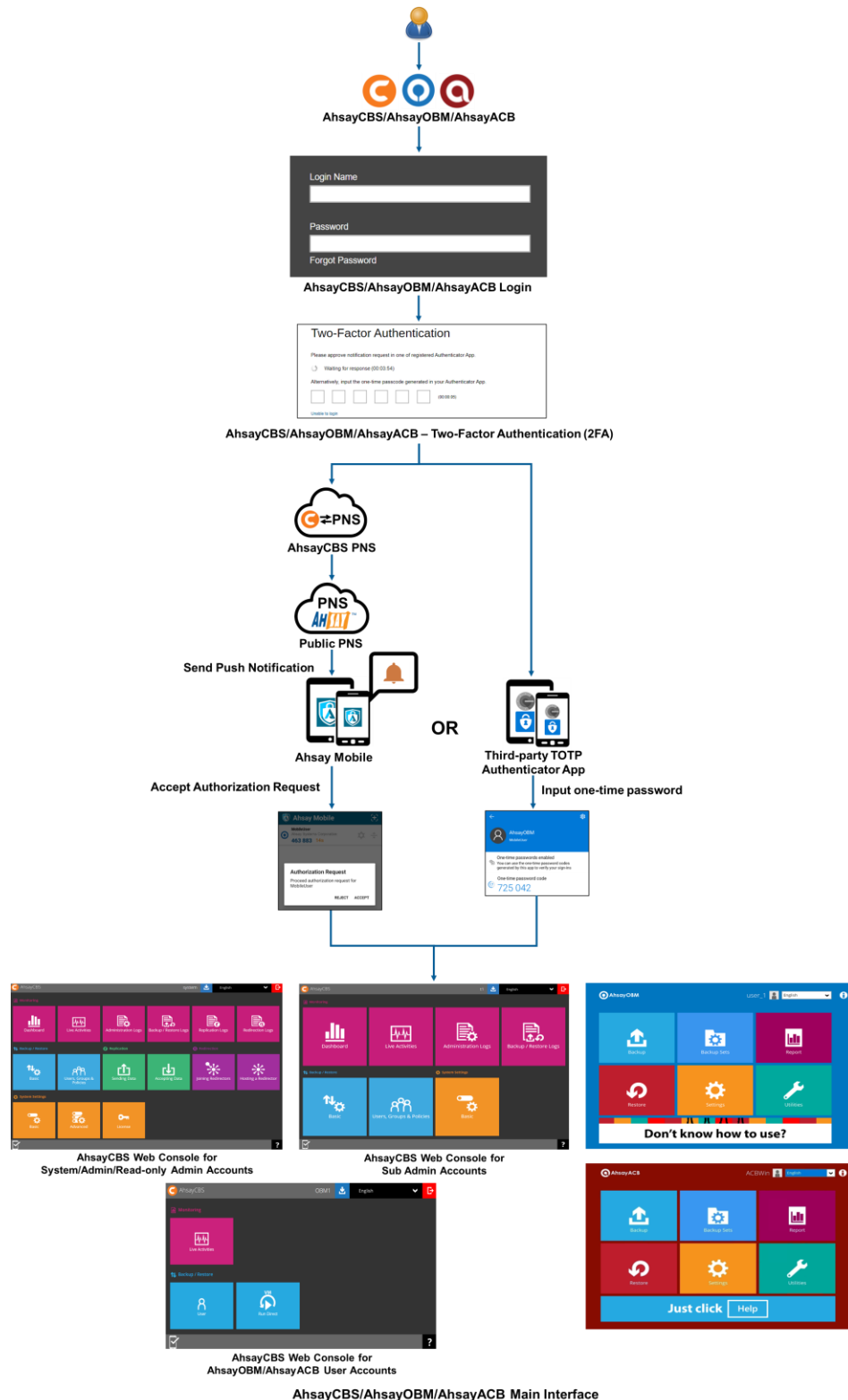


AhsayOBM/AhsayACB



How it works?

The following diagram illustrates the login process to AhsayCBS/AhsayOBM/AhsayACB v8.5 (or above) with the Two-Factor Authentication (2FA) enabled for the account.



1. When starting up AhsayCBS/AhsayOBM/AhsayACB, you will first enter the Login Name and Password.
2. The selection of the Two-Factor Authentication (2FA) such as **Ahsay Mobile** or **TOTP Authenticator** will be displayed.
3. If the Ahsay Mobile Authenticator is selected:
 a Push Notification will be sent to the Ahsay Mobile to either accept or reject the authorization request to log in to AhsayCBS/AhsayOBM/AhsayACB.

If the TOTP Authenticator is selected:
 a one-time password will be generated in the TOTP Authenticator app which must be entered to AhsayCBS/AhsayOBM/AhsayACB to log in.
4. If the Ahsay Mobile Authenticator is selected:
 After accepting the authorization request, the AhsayCBS/AhsayOBM/AhsayACB landing page will be displayed.

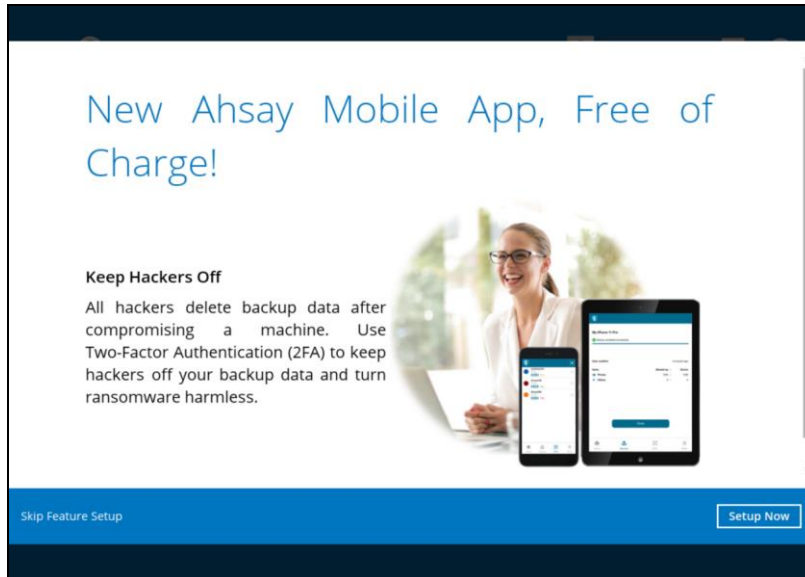
If the TOTP Authenticator is selected:
 After entering the generated one-time password to AhsayCBS/AhsayOBM/AhsayACB, the AhsayCBS/AhsayOBM/AhsayACB landing page will be displayed.

Initial login to AhsayOBM/AhsayACB v8.5 (or above) after new installation

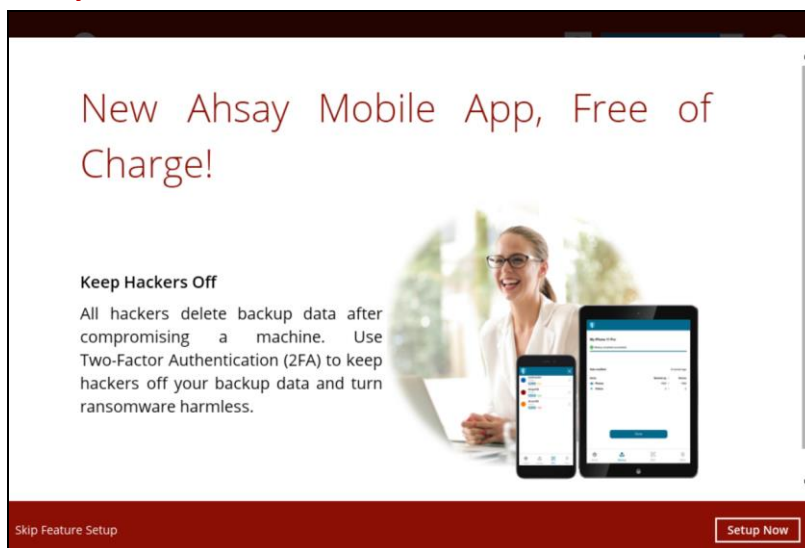
Without Ahsay Mobile Add-on Module

On the initial login to AhsayOBM/AhsayACB v8.5 (or above) without the Ahsay Mobile Add-on Module enabled for the AhsayOBM/AhsayACB user account, the following screen will be displayed. This is where you can choose to set up the Two-Factor Authentication (2FA) by clicking **Setup Now** or set it up later on by selecting **Skip Feature Setup**.

AhsayOBM



AhsayACB

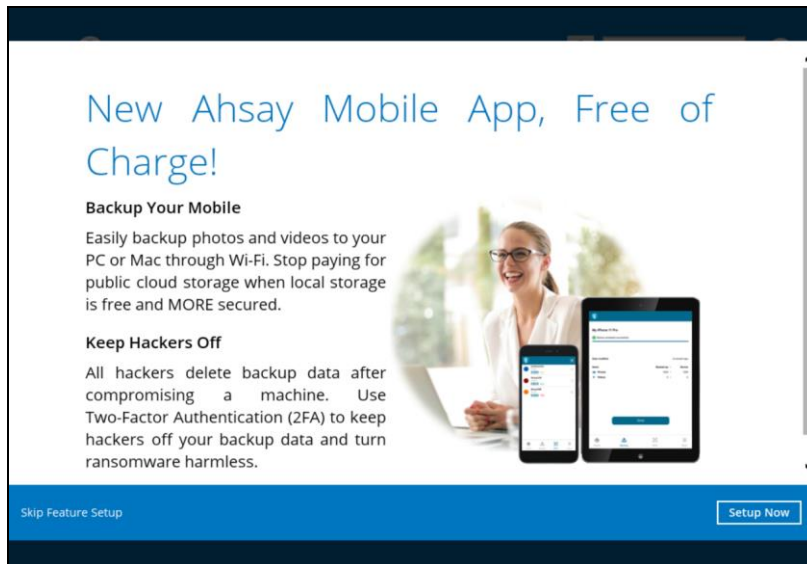


The images and texts will only be customized by branding the AhsayOBM or AhsayACB.

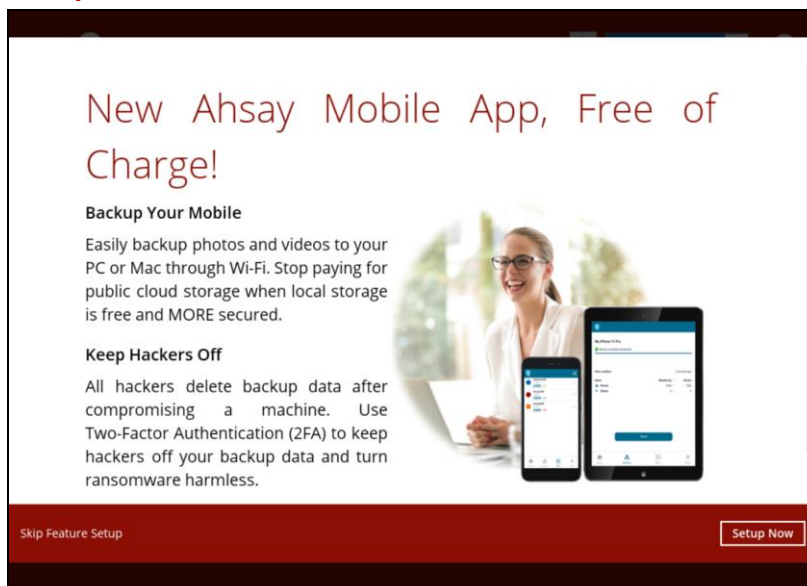
With Ahsay Mobile Add-on Module

On the initial login to AhsayOBM/AhsayACB v8.5 (or above) with the Ahsay Mobile Add-on Module enabled for the AhsayOBM/AhsayACB user account, the following screen will be displayed. This is where you can choose to set up the Two-Factor Authentication (2FA) and Mobile backup by clicking **Setup Now** or set it up later on by selecting **Skip Feature Setup**.

AhsayOBM



AhsayACB



The images and texts will only be customized by branding the AhsayOBM or AhsayACB.

For complete instructions on the Two-Factor Authentication (2FA) and Mobile backup setup, please refer to the following guides:

Ahsay Mobile

- [Ahsay Mobile App v8 User Guide for Android and iOS](#)

AhsayOBM

- [AhsayOBM v8 Quick Start Guide for Windows](#)
- [AhsayOBM v8 Quick Start Guide for macOS](#)

AhsayACB

- [AhsayACB v8 Quick Start Guide for Windows](#)
- [AhsayACB v8 Quick Start Guide for macOS](#)

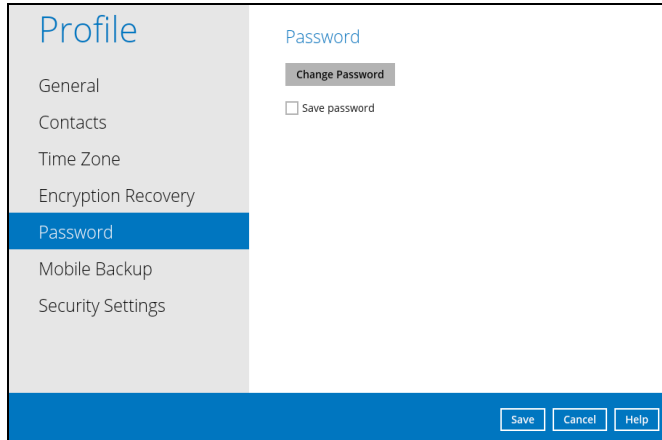
AhsayOBR

- [AhsayOBR v8 User Guide for Windows](#)
- [AhsayOBR v8 User Guide for macOS](#)
- [AhsayOBR v8 User Guide for Linux \(GUI\)](#)

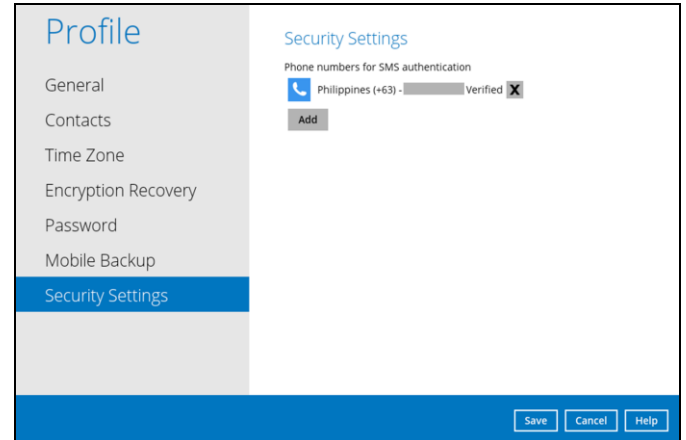
AhsayOBM/AhsayACB v8.5 (or above) Profile Page Legacy Layout

For AhsayOBM/AhsayACB user account(s) with Twilio enabled, the AhsayOBM/AhsayACB **Profile** page will display the **Password** and **Security Settings** tabs for backward compatibility.

AhsayOBM

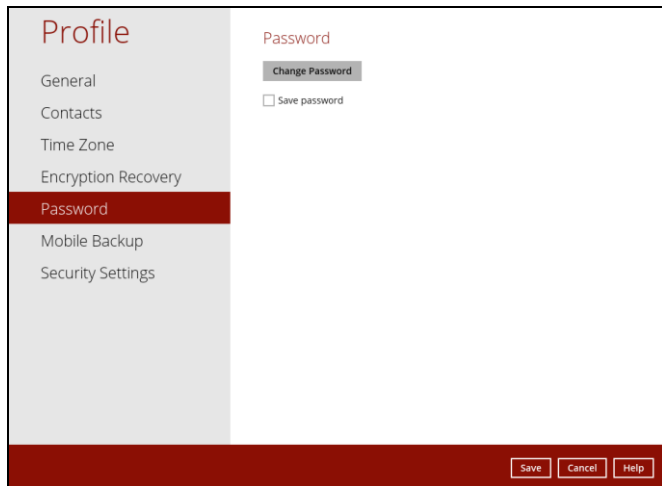


The screenshot shows the AhsayOBM Profile page with the 'Password' tab selected. The left sidebar lists 'General', 'Contacts', 'Time Zone', 'Encryption Recovery', 'Password' (highlighted), 'Mobile Backup', and 'Security Settings'. The main content area is titled 'Password' and contains a 'Change Password' button and a 'Save password' checkbox. At the bottom are 'Save', 'Cancel', and 'Help' buttons.

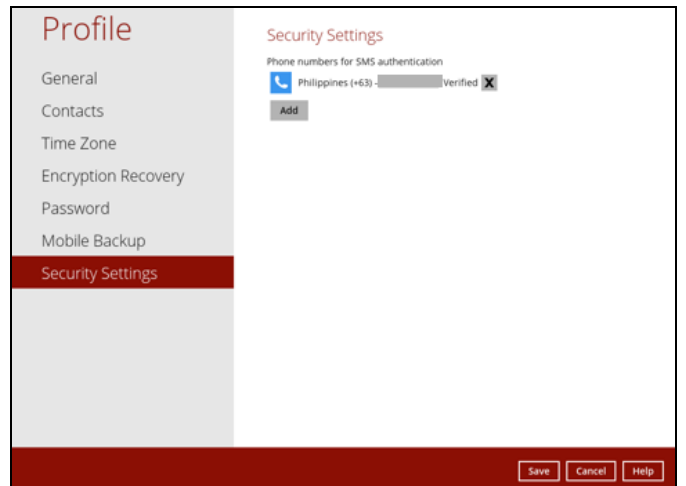


The screenshot shows the AhsayOBM Profile page with the 'Security Settings' tab selected. The left sidebar is identical to the previous screenshot, but 'Security Settings' is highlighted. The main content area is titled 'Security Settings' and shows 'Phone numbers for SMS authentication' with a Twilio icon, a phone number 'Philippines (+63) - [redacted]', and a 'Verified' status with a close icon. An 'Add' button is present. At the bottom are 'Save', 'Cancel', and 'Help' buttons.

AhsayACB



The screenshot shows the AhsayACB Profile page with the 'Password' tab selected. The left sidebar lists 'General', 'Contacts', 'Time Zone', 'Encryption Recovery', 'Password' (highlighted), 'Mobile Backup', and 'Security Settings'. The main content area is titled 'Password' and contains a 'Change Password' button and a 'Save password' checkbox. At the bottom are 'Save', 'Cancel', and 'Help' buttons.

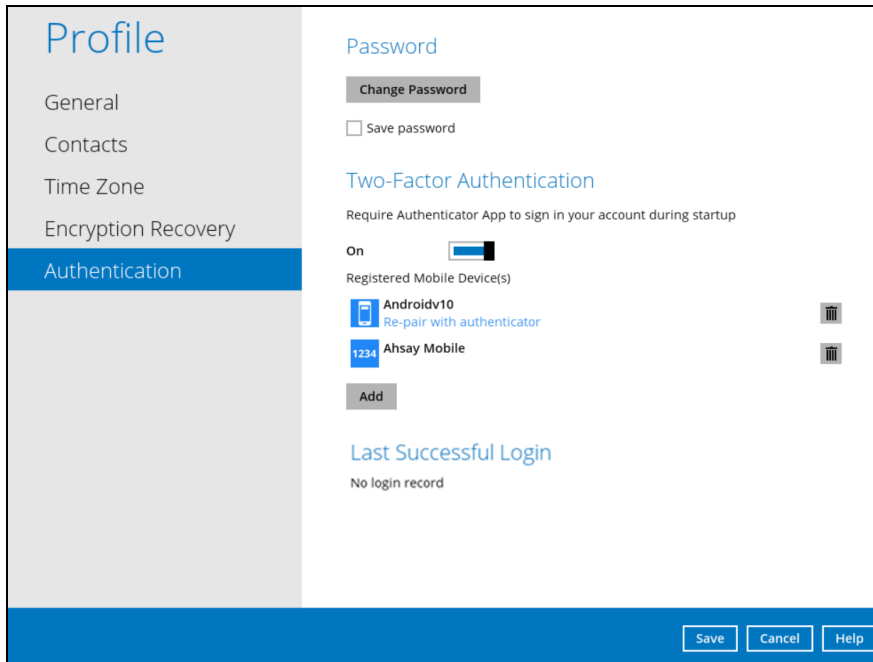


The screenshot shows the AhsayACB Profile page with the 'Security Settings' tab selected. The left sidebar is identical to the previous screenshot, but 'Security Settings' is highlighted. The main content area is titled 'Security Settings' and shows 'Phone numbers for SMS authentication' with a Twilio icon, a phone number 'Philippines (+63) - [redacted]', and a 'Verified' status with a close icon. An 'Add' button is present. At the bottom are 'Save', 'Cancel', and 'Help' buttons.

AhsayOBM/AhsayACB v8.5 (or above) Profile Page New Layout

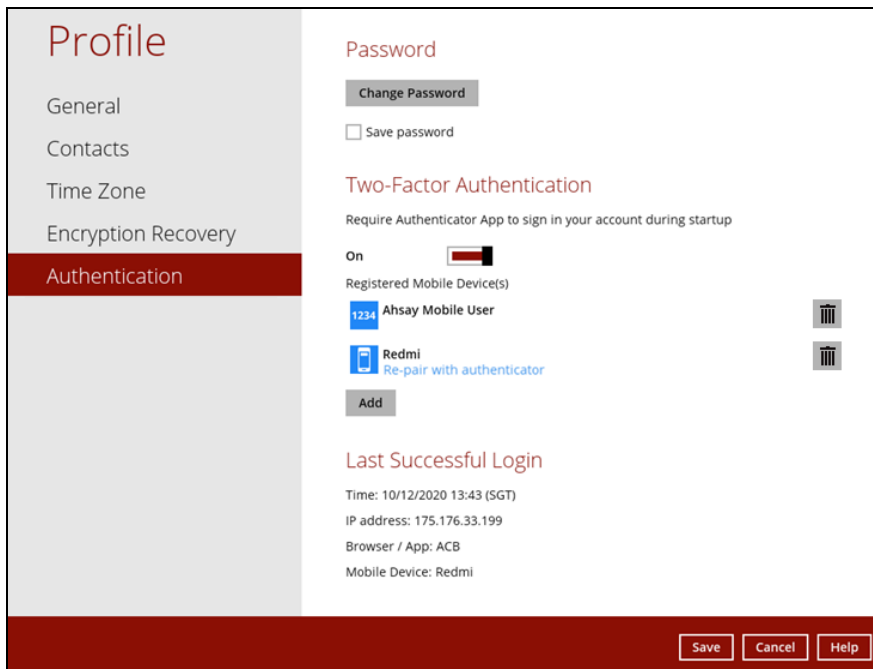
If the Twilio is not used, then on the AhsayOBM/AhsayACB **Profile** page, the following screen will be displayed. The **Password** is included into the **Authentication** tab along with Two-Factor Authentication settings, which displays and manages the registered mobile device(s) for the Two-Factor Authentication once setup.

AhsayOBM



The screenshot shows the AhsayOBM Profile page. On the left is a sidebar with the following menu items: Profile, General, Contacts, Time Zone, Encryption Recovery, and Authentication (which is highlighted in blue). The main content area is titled 'Profile' and contains three sections: 'Password' with a 'Change Password' button and a 'Save password' checkbox; 'Two-Factor Authentication' with a toggle set to 'On', a requirement to use an authenticator app, and a list of registered mobile devices including 'Androidv10' and 'Ahsay Mobile', each with a 'Re-pair with authenticator' link and a delete icon; and 'Last Successful Login' showing 'No login record'. At the bottom right are 'Save', 'Cancel', and 'Help' buttons.

AhsayACB



The screenshot shows the AhsayACB Profile page. The sidebar is identical to the AhsayOBM version, with 'Authentication' highlighted in red. The main content area is titled 'Profile' and contains three sections: 'Password' with a 'Change Password' button and a 'Save password' checkbox; 'Two-Factor Authentication' with a toggle set to 'On', a requirement to use an authenticator app, and a list of registered mobile devices including 'Ahsay Mobile User' and 'Redmi', each with a 'Re-pair with authenticator' link and a delete icon; and 'Last Successful Login' showing detailed login information: 'Time: 10/12/2020 13:43 (SGT)', 'IP address: 175.176.33.199', 'Browser / App: ACB', and 'Mobile Device: Redmi'. At the bottom right are 'Save', 'Cancel', and 'Help' buttons.

Mobile Backup

Mobile devices such as smartphones and tablets have become one of the primary tools in managing electronic files. With its diverse functionalities, it can already be used as almost a portable computer which helps people work with their important files with ease by the palm of their hand.

To provide customers with improved mobile backup solution, **Ahsay Mobile** is introduced in v8.5 (or above) which replaces the existing **AhsayMOB** that was supported in pre-v8.5. Users with existing AhsayMOB installed will still be able to use the AhsayMOB app but is no longer available for new users to download the app from Google Play Store or App Store. New users should use the Ahsay Mobile.

Licensing

The new Ahsay Mobile licenses will be listed under **Mobile** Add-on Modules which are free of charge, and each license key is assigned an unlimited quota.

The **Mobile** Add-on Modules are required by an AhsayOBM/AhsayACB user if they are using the Ahsay Mobile app for Android and iOS backups. If the Ahsay Mobile app is only used for the Two-Factor Authentication (2FA) purposes, then the Mobile license modules are not required.

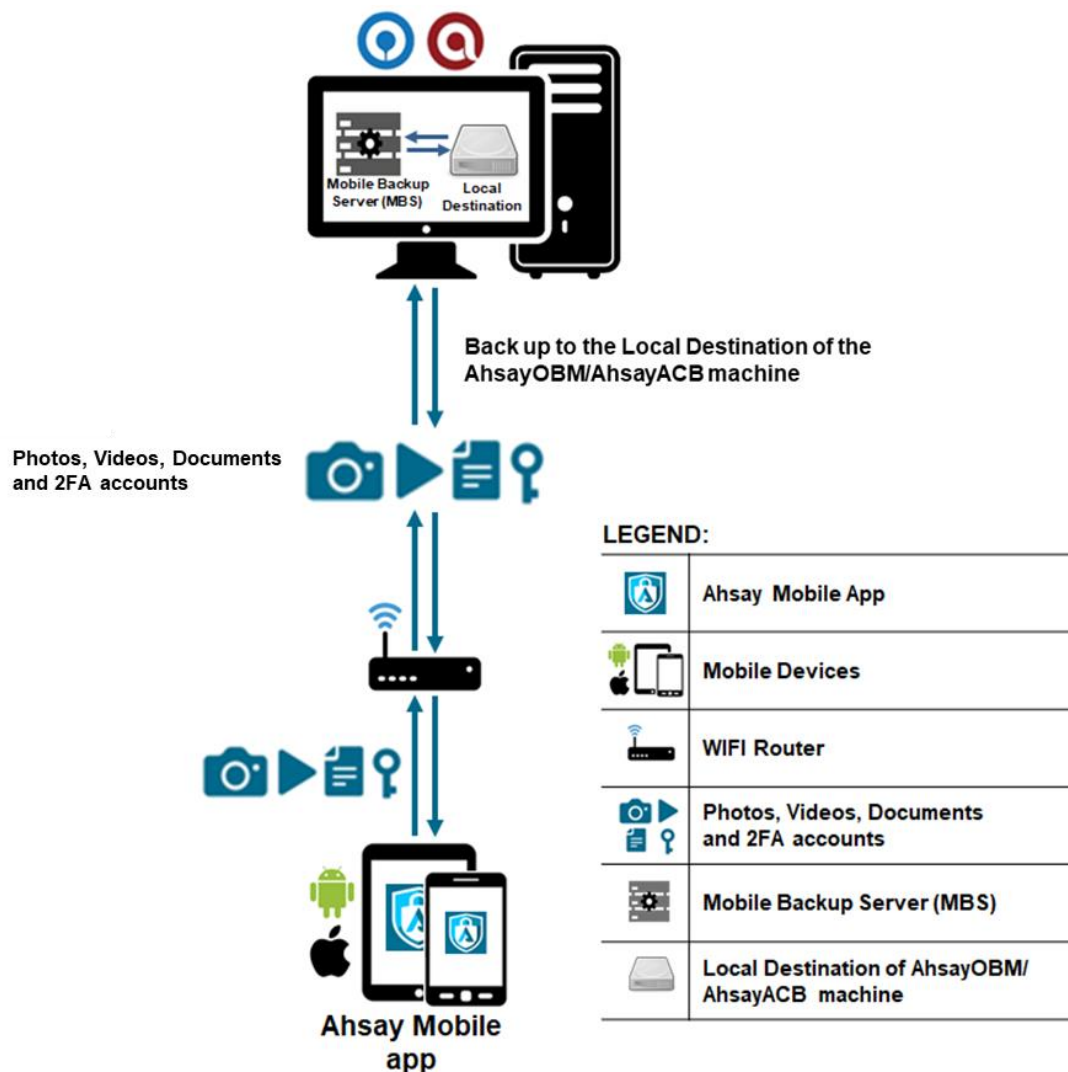
Client Add-on Modules	Quota	Used	Available
Microsoft Exchange Mailbox (Per Mailbox)	2000	1520	480
Hyper-V / VMware (Per Guest VM)	4000	260	3740
Hyper-V / VMware (Per Socket)	4000	0	4000
NAS - Synology / NAS - QNAP	2010	11	1999
Mobile	Unlimited	0	Unlimited
Office 365	4000	111	3889
OpenDirect / Granular Restore	2000	0	2000


If the license key already contains AhsayMOB licenses before upgrade to v8.5 (or above), then these licenses are listed as **Mobile (Legacy)** after v8.5 (or above) to distinguish them from Ahsay Mobile licenses.

Client Add-on Modules	Quota	Used	Available
Microsoft Exchange Mailbox (Per Mailbox)	2000	1520	480
Hyper-V / VMware (Per Guest VM)	4000	260	3740
Hyper-V / VMware (Per Socket)	4000	0	4000
NAS - Synology / NAS - QNAP	2010	11	1999
Mobile (Legacy)	2000	0	2000
Mobile	Unlimited	0	Unlimited
Office 365	4000	111	3889
OpenDirect / Granular Restore	2000	0	2000

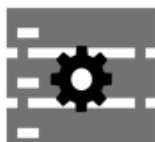
System Architecture

The Ahsay Mobile is connected to the local network of the AhsayOBM/AhsayACB machine via a Wi-Fi router to back up and restore photos, videos, documents and 2FA accounts that are stored primarily on the local destination of the AhsayOBM/AhsayACB machine.



 The [Mobile Backup Server \(MBS\)](#) is a component of the AhsayOBM/AhsayACB machine that manages the backup and restore of the Ahsay Mobile.

Mobile Backup Server (MBS)










Starting with AhsayCBS v8.5 (or above), the **Mobile Backup Server (MBS)** will be utilized to handle mobile backup and restore of Ahsay Mobile. It is an integral part of AhsayOBM and AhsayACB located in the “mbs” folder which can be found inside the AhsayOBM/AhsayACB folder.

Once a mobile device installed with Ahsay Mobile is successfully registered for mobile backup with AhsayOBM/AhsayACB, the MBS will be automatically activated. Afterwards, it will automatically start whenever the AhsayOBM/AhsayACB services are restarted or when the AhsayOBM/AhsayACB machine is rebooted or powered on. The MBS will be deactivated when all mobile devices are deregistered from the mobile backup settings and the AhsayOBM/AhsayACB services are restarted.

Key Features

- ▶ Supports backup and restore of photos, videos, documents and 2FA accounts from Ahsay Mobile to AhsayOBM/AhsayACB machine and/or Cloud destination
- ▶ Supports Multiple Restore options such as:
 - ▶ Restore to **Original location** on your registered mobile device - Android and iOS
 - ▶ Restore to **Alternate mobile device**. It could be on the same or opposite mobile Operating System:
 - Same mobile Operating System** – Android to Android / iOS to iOS
 - Cross mobile Operating System** – Android to iOS / iOS to Android

- ▶ Supported File Types



Backup Source		Android Devices  android	iOS Devices  iOS
Photos		.jpg, .png, .bmp, .gif, .tif, HEIF and HEIC	
Videos		.mp4, .mkv, .mov, .avi, .flv and HEVC	
Documents		.doc, .docx, .xls, .xlsx, .ppt, .pptx, .pdf and .txt	<i>Not supported</i>
Audio		.m4a, .mmr, .aac, .silk, .opus, .mp3, .flac and .wav.	<i>Not supported</i>
NOTE: Audio files will be covered in the document backup.			
2FA accounts		AhsayCBS/AhsayOBM/AhsayACB/AhsayOBR 2FA accounts	

- ▶ Supports viewing of backup data saved in the mobile backup destination by using file explorer

Requirements

In order to back up and/or restore using Ahsay Mobile, the following requirements must be satisfied:

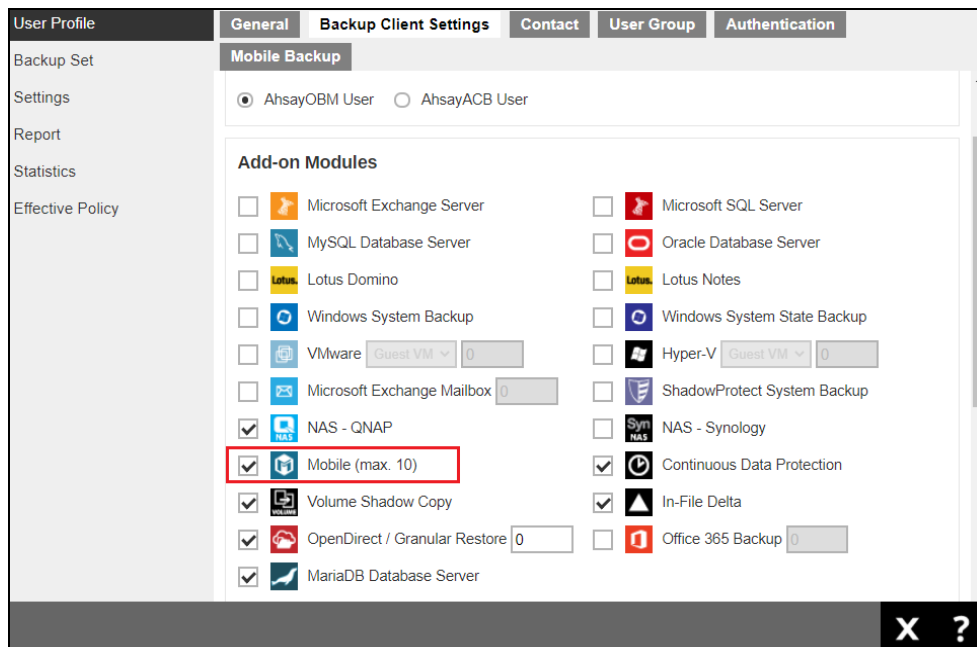
- ▶ Mobile license Add-on Module is free of charge
- ▶ Each AhsayCBS license key supports unlimited mobile license quota
- ▶ Mobile licenses are calculated on a per mobile device basis
- ▶ **Android and iOS version Supported**

OS	Description
 android	For Android mobile device, the Android version must be Android 8 (or above).
 iOS	For iOS mobile device, the iOS version must be iOS 12 (or above).

▶ Mobile Add-on Module

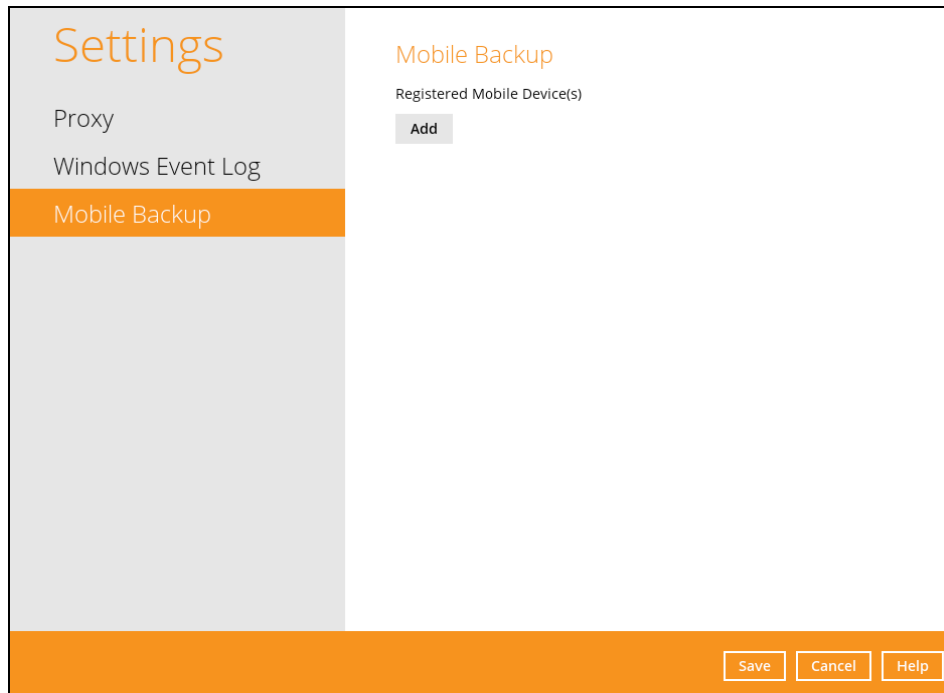
AhsayOBM/AhsayACB requires the **Mobile** Add-on Module enabled to support mobile backups. The **Mobile Backup** tab will be only shown on AhsayOBM/AhsayACB if the Mobile Add-on Module is enabled on the AhsayOBM/AhsayACB user account.

Example: An AhsayOBM user account with **Mobile** add-on module enabled.



NOTE: The Mobile Add-on Module is only for mobile backup and is not required when using Ahsay Mobile for Two-Factor Authentication (2FA).


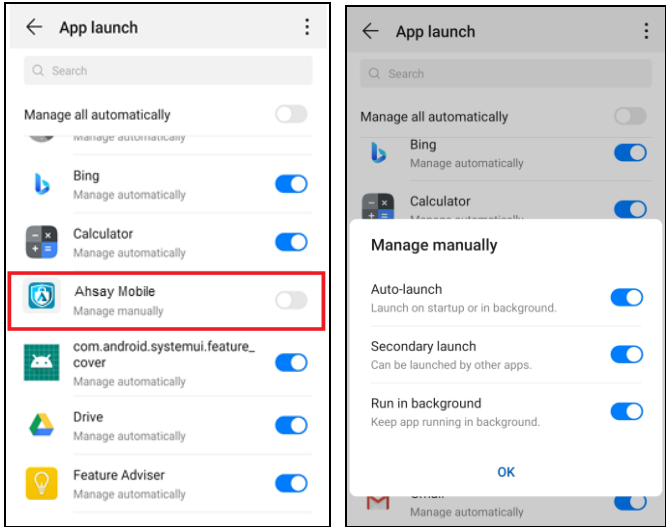

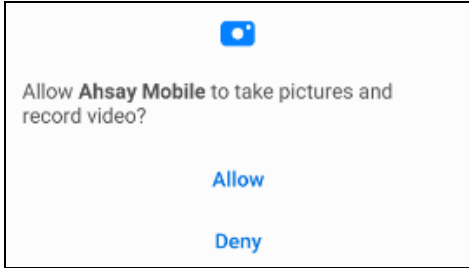

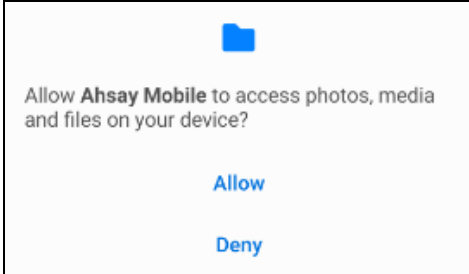
Below is an example of the AhsayOBM/AhsayACB GUI with **Mobile** add-on module enabled on the AhsayOBM/AhsayACB user account.







▶ Permission Requirements

In order for the Ahsay Mobile to access the contents on your Android/iOS devices, ensure to **Allow** these requests when prompted to grant access permission on the first launch of Ahsay Mobile.

Android Devices

Permission		Android Devices	
		 android	
Auto-Launch and Run in Background			
Camera			
Read / Write External Storage			

iOS Devices

Permission		iOS Devices  iOS	
Camera		<div> <p>"Ahsay Mobile" Would Like to Access the Camera</p> <p>Ahsay Mobile wants to use camera to scan QR code</p> <div> Don't Allow OK </div> </div>	
Face ID			
Photo Library		<div> <p>"Ahsay Mobile" Would Like to Access Your Photos</p> <p>Ahsay Mobile wants to use photo library for backup</p> <div> Don't Allow OK </div> </div>	

🔗 Network Settings

Ensure that the Ahsay Mobile is connected to the same local Wi-Fi network as the AhsayOBM/AhsayACB machine. Otherwise, this will prevent Ahsay Mobile from performing mobile backup and/or restore.

The following port ranges will be used by the Mobile Backup Server (MBS) for the request of Ahsay Mobile.

AhsayOBM

- ▶ **TCP Port:** 54000 (default) to 54099
- ▶ **UDP Port:** 54200 (default) to 54299
- ▶ **Protocol:** HTTP

AhsayACB

- ▶ **TCP Port:** 55000 (default) to 55099
- ▶ **UDP Port:** 55200 (default) to 55299
- ▶ **Protocol:** HTTP

If the default port is already used by other applications or services, then the MBS will automatically acquire another port. For example on AhsayOBM machine, the default TCP


port is 54000. If this port is in use, then the MBS will automatically acquire another port from the port range (e.g., **TCP port:** 54001, 54002, 54003 – 54099) until an available port is found.



The actual **TCP** and **UDP Ports** will be displayed on AhsayOBM/AhsayACB when pairing a mobile device for mobile backup.

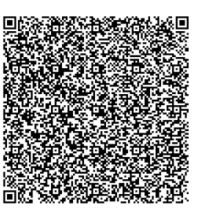
AhsayOBM

App Download and Device Pairing

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

 Ahsay Mobile



Prerequisites


- Please use the latest Mobile App version
- Please make sure below 2 ports are not blocked by any Firewall settings
TCP Port: 54000
UDP Port: 54200



[Not able to scan QR code? Click here to pair with TOTP secret key](#)

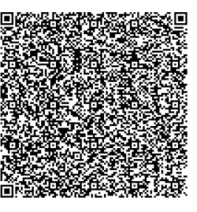
AhsayACB

App Download and Device Pairing

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

 Ahsay Mobile



Prerequisites

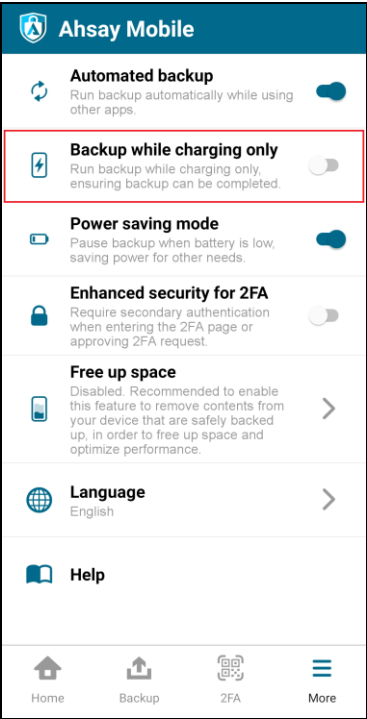
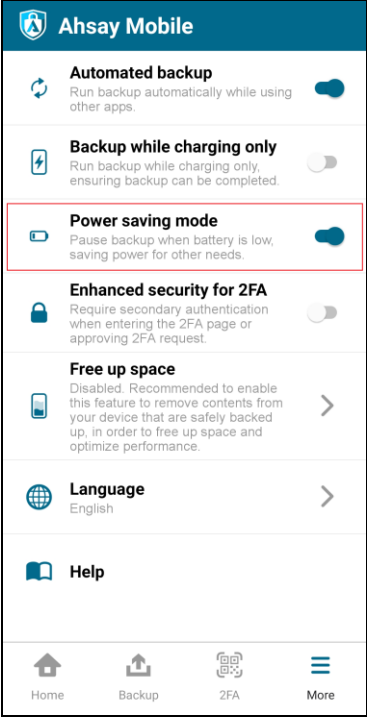
- Please use the latest Mobile App version
- Please make sure below 2 ports are not blocked by any Firewall settings
TCP Port: 55000
UDP Port: 55200

[Not able to scan QR code? Click here to pair with TOTP secret key](#)





Ensure that AhsayOBM/AhsayACB and Ahsay Mobile are connected to the same Wi-Fi or have the same connection. Otherwise, the mobile backup and/or restore will not work.

Battery Requirements

Settings	Description
<p>Backup while charging only</p>	 <p>If the <u>Backup while charging only</u> feature is enabled, the mobile device should be connected to a power source to resume backup. This feature is disabled by default.</p>
<p>Power saving mode</p>	 <p>The <u>Power saving mode</u> feature is enabled by default. When enabled, a backup and/or restore is unable to be performed if the battery level is less than 30%.</p>

Limitations

- ➡ Mobile backup is not supported in AhsayCBS and AhsayOBM running on the following platforms:
 - ▶ Linux CLI
 - ▶ FreeBSD
 - ▶ Synology NAS
 - ▶ QNAP NAS
- ➡ The maximum number of mobile devices that can be paired with AhsayOBM/AhsayACB user account for mobile backup is 10.

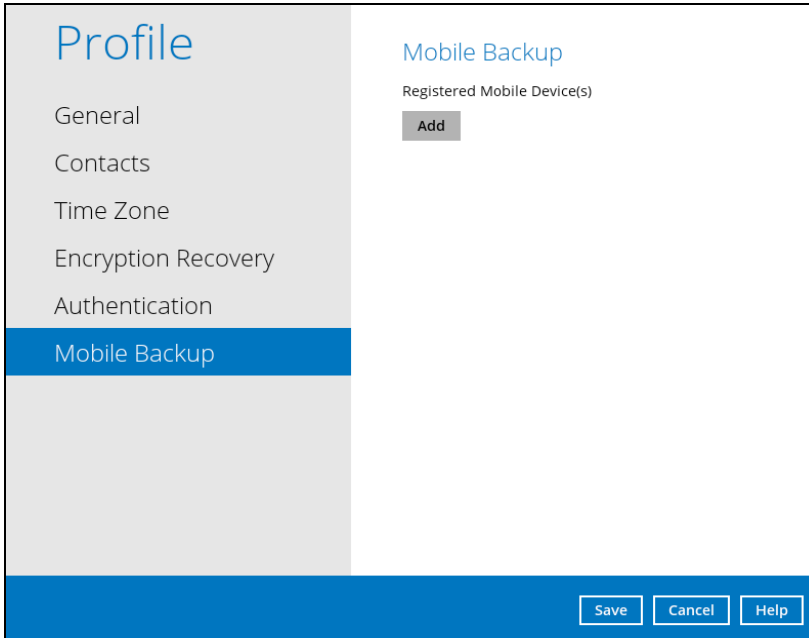
Android Devices  android	iOS Devices  iOS
<ul style="list-style-type: none"> ▶ Document backup is only supported for documents stored in the internal storage of the Android device. ▶ Backup of HEIC and HEVC file types are not supported. 	<ul style="list-style-type: none"> ▶ Backup of photos and videos synchronized from iTunes are not supported due to iOS limitations. ▶ Document backup is not supported.
<ul style="list-style-type: none"> ▶ Restore of HEIF and HEVC file types are supported in Android devices. However, a third-party app is needed to view these file types on the Android device. 	<ul style="list-style-type: none"> ▶ EXIF (Exchangeable Image File Format) metadata of photos and videos media files are not retained after a restore, except the latest modified date and time.
	<ul style="list-style-type: none"> ▶ Due to limitation, the removed items from Free up space will remain in the “Recently Deleted” folder for up to 40 days. It is highly recommended to manually clear the folder to release storage space.
For both Android and iOS Devices	
<ul style="list-style-type: none"> ▶ Backup and/or restore can only be performed if the mobile device is connected to the same local Wi-Fi network as the AhsayOBM/AhsayACB machine. ▶ Backup of photos, videos and documents are only supported if these files can be opened by the mobile device’s built-in application. 	

- ▶ Backup and/or restore can be performed if the battery level is **NOT** lower than 30%, unless the Power saving mode feature is disabled.
- ▶ The current release does not support backup/restore of multiple snapshots. Only the latest backup snapshot is available to be restored.
- ▶ Earlier versions than v1.6.0 of Ahsay Mobile does not support folder-by-folder or item-by-item restore. Only the complete set of backed-up photos and/or videos are available to be restored.
- ▶ The timestamp of photos and videos media files are not retained after a restore.

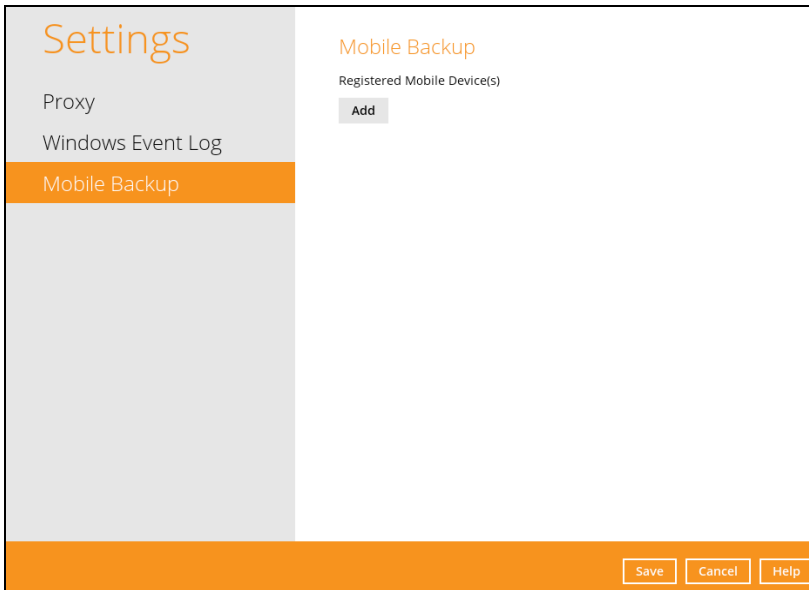
Mobile Backup Relocation

Starting with AhsayOBM/AhsayACB v8.5.2.0 (or above), the Mobile Backup feature was relocated from the Profile to the Settings module.

Example: AhsayOBM pre-v8.5.2.0 Profile Page Layout



Example: AhsayOBM v8.5.2.0 (or above) Settings Page Layout



To know more about the Mobile Backup tab Relocation, please refer to the [AhsayCBS v8.5.2 New Features Supplemental document](#).

Change Mobile Backup Destination

AhsayOBM/AhsayACB v8.5.2.0 (or above) now offers the feature to change the mobile backup destination.

This feature includes the following options:

Same Machine

This option allows users to change their mobile backup destination to a new location in the same local machine used for mobile backup.

New Machine

This option allows users to change their mobile backup destination to a new machine.



For further details about this feature, please refer to the [AhsayCBS v8.5.2 New Features Supplemental document](#).

Ahsay Mobile app branding for v8.5

NOTE: While the Ahsay Mobile app fully supports branding, however during the initial rollout phases of version 8.5.x, the branding of Ahsay Mobile app can only be done by Ahsay. If partners are interested in branding the Ahsay mobile app, they must engage Ahsay professional services.



Ahsay Mobile Branding Service

To engage our professional services for Ahsay Mobile branding, please contact our sales team to obtain a service quotation by email at sales-kb@ahsay.com or call our International Sales Hotline +852 3580 8091.

Ahsay Mobile Customization supports the following primary files to be modified:

• File customization

- Application images – images used for icons and other graphics within the various application screens
- Application icons – icons shown on the Home screen for both iOS and Android mobile devices wherein each OS type will have different specifications for customization
- Splash screen (for iOS mobile device) – the first screen displayed when launching the application
- Adverts – Ads that can be customized by the user's preference and by language

• Colors

- Colors dictionary are defined in the colors.json file. This is a major component in the Ahsay Mobile Customization.

• Localization

- Ahsay Mobile can support four (4) languages which are customizable by the user for translation (i.e., Base (English), Chinese – China, Chinese – Hong Kong SAR and Chinese – Taiwan)



For more information on the specifications needed for Ahsay Mobile branding, please refer to the following document:

[Ahsay Mobile Image Specifications](#)

Requirements

The following materials must be submitted by the partner to Ahsay for branding of their Ahsay mobile application:

- ▶ Image files and icons with your branding:
 - Application images
 - Application icons
 - Splash screen (iOS)
 - Colors dictionary
 - Localization
 - Adverts
- ▶ Organization Information
 - Organization ID and Organization Name for your Apple Business Account
 - Mobile application description
 - Keywords to be used for searching of the mobile application
 - Support URL



For further details, please refer to **Chapter 12.8 Ahsay Mobile Branding** of the following guide:

[AhsayCBS v8 Administrator's Guide](#)

v6 to v8 Migration

Starting from AhsayCBS v8.5.2.0 (or above), the v6 to v8 backup set data migration has been enhanced to run in a separate process. This data migration was originally included in the AhsayCBS Java process. Thus, the data migration job will not utilize the Java memory resources of the AhsayCBS Java process, as the data migration thread will run in its own independent Java process using its own dedicated Java memory setting. Furthermore, the backup set data migration job will not affect the performance or stability of the AhsayCBS service even a crashed data migration job occurs. In case the data migration job where to hang or become unresponsive, the system administrator can terminate the process from the Operating System.

As it is now a separate process, it is easier to allocate resources and to monitor the status of the data migration job. By default, the memory for the data migration is set to 1024 MB Java memory. However, the Java memory allocation can be customized by the system administrator.

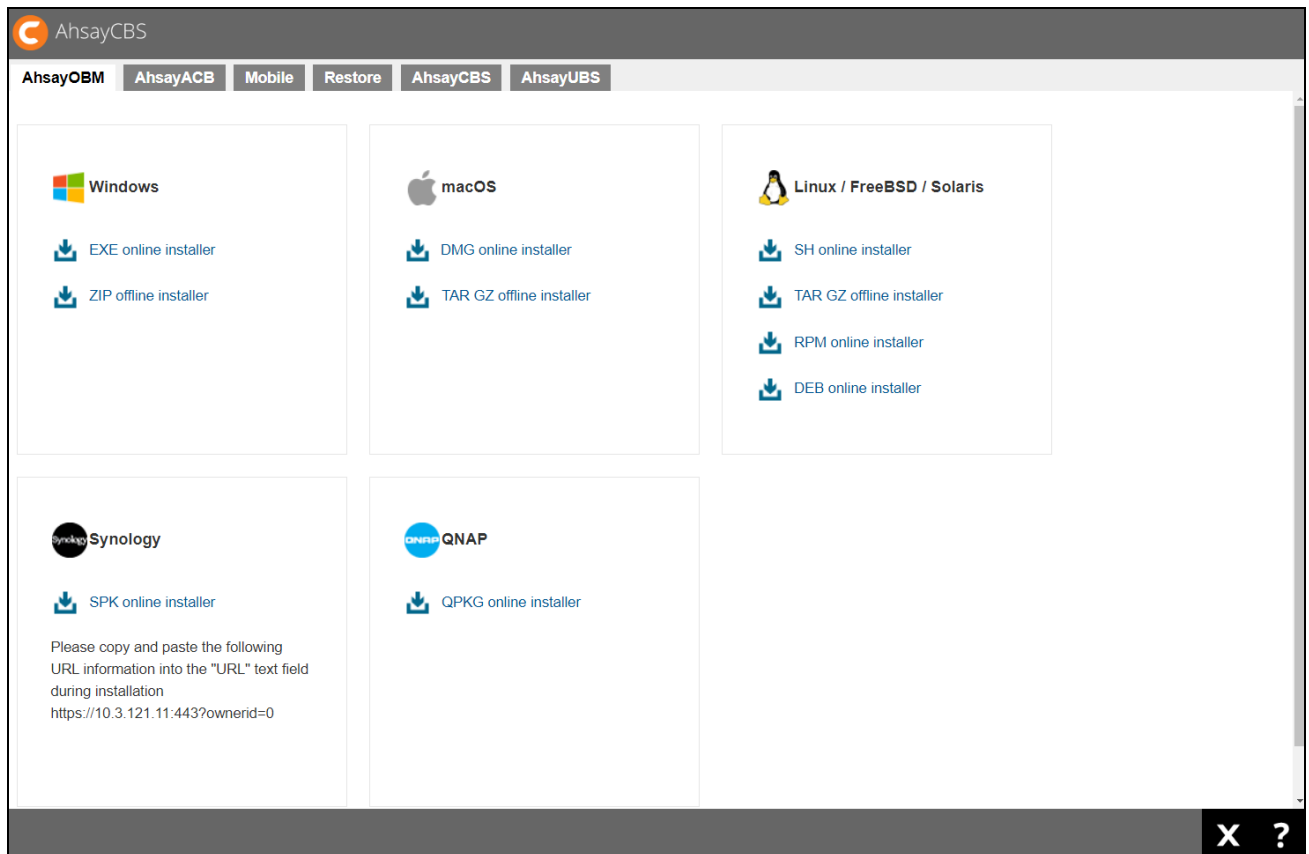


A detailed summary on this feature can be found in the [AhsayCBS v8.5.2 New Features Supplemental document](#) or **Chapter 8.1.3 Backup Data Migration** of the [AhsayCBS v8 Administrator's Guide](#).

AhsayCBS Download Page New Layout

With the release of AhsayCBS v8.5.2.0 (or above), the layout of the installer download page has been improved for better clarity with the supported installer type listed.

Example of the new AhsayCBS Download Page Layout



NOTE: Both the **AhsayCBS** and **AhsayUBS** tabs are only displayed when logged in to the AhsayCBS web console using an Admin or Read-only Admin account types.



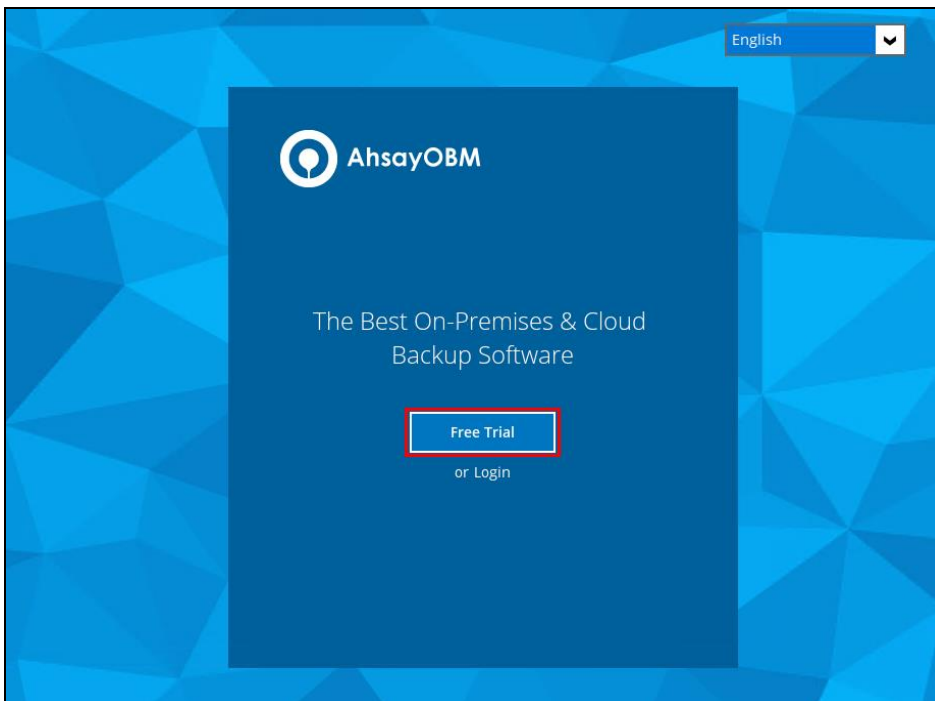
For more details about the new AhsayCBS Download Page Layout as well as the AhsayCBS Download Page Customization (i.e., Hiding of the download tab, download platform and installer links), please refer to the [AhsayCBS v8.5.2 New Features Supplemental document](#).

Customization of AhsayOBM/AhsayACB Free Trial and Save Password options

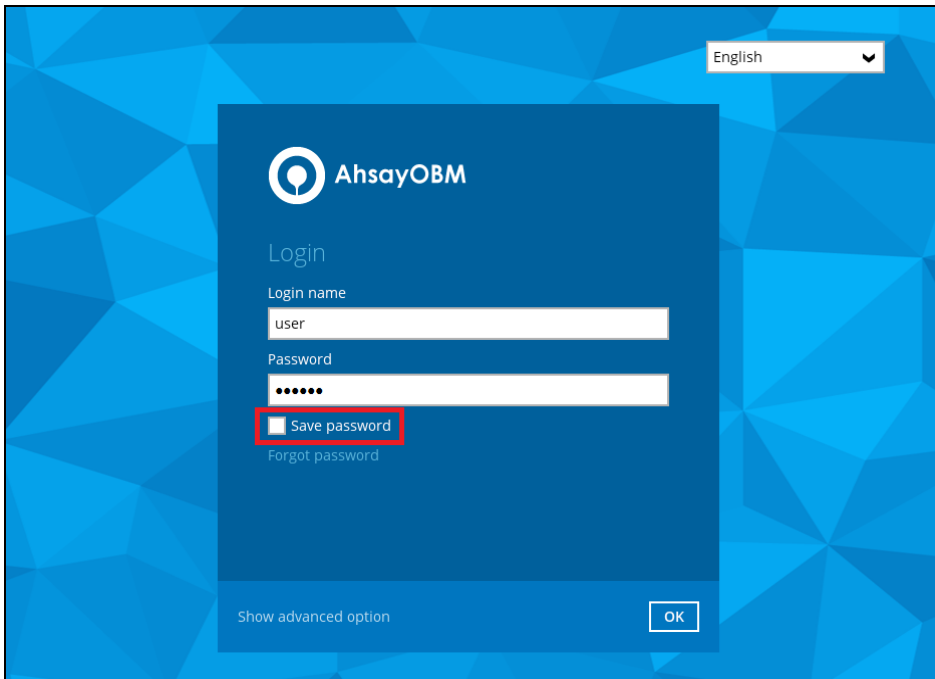
Starting with AhsayCBS v8.5.2.35 (or above), there are two additional features that can be customized on the AhsayOBM/AhsayACB GUI. These features are the **Free Trial** registration and **Save password** options.

The Free Trial registration option can now be either displayed (default) or hidden from the startup page. While the Save password option can also be either displayed or hidden from the login page and/or in the **Profile > Authentication** page according to the preference of the Managed Service Provider (MSP).

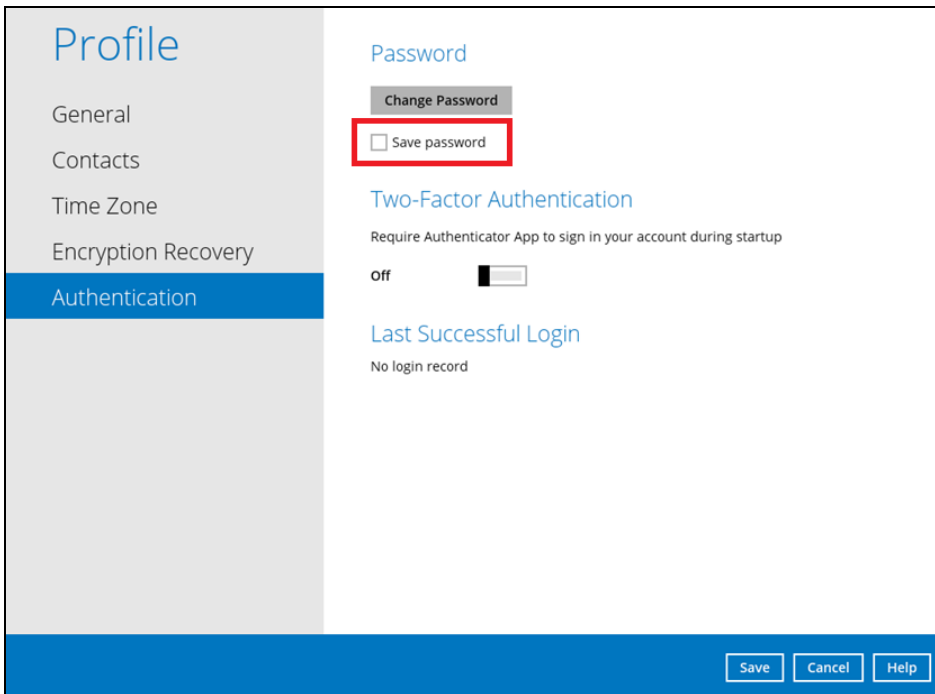
Example of the Free Trial option on the AhsayOBM Startup Page



Example of the Save password option on the AhsayOBM Login Page



Example of the Save password option on the AhsayOBM Profile Page




For more details, please refer to the [AhsayCBS v8.5.2.35 Customization of AhsayOBM/AhsayACB Free Trial and Save Password options Datasheet](#).

Support Installation on Debian 10 and macOS Big Sur on Intel and ARM M1 CPU

Debian 10

AhsayCBS v8.5.2.0 (or above) and AhsayOBM v8.5.2.0 (or above) installations on Debian 10 are now supported.

macOS Big Sur on Intel and ARM M1 CPU

AhsayOBM/AhsayACB v8.5.2.0 (or above) supports installation on macOS Big Sur and ARM M1 CPU. For macOS on ARM M1 CPU, Rosetta 2 must be installed that allows to run Intel-based applications.



Additional information can be found in the [AhsayCBS v8.5.2 New Features Supplemental document](#).

Support Oracle 18c and Oracle 19c Database

AhsayOBM offers support for Oracle 18c and 19c database backups in standalone installation.

- 🔵 **Oracle 18c** is supported starting from AhsayOBM v8.5.0.77 (or above).
- 🔵 **Oracle 19c** is supported starting from AhsayOBM v8.5.0.63 (or above).

NOTE: Oracle advanced installations such as Clusterware or RAC (Real Application Clusters), ASM (Automatic Storage Management) and Data Guard etc. are not supported.

Oracle 18c database backup is supported on the following versions of Windows Server and Linux:

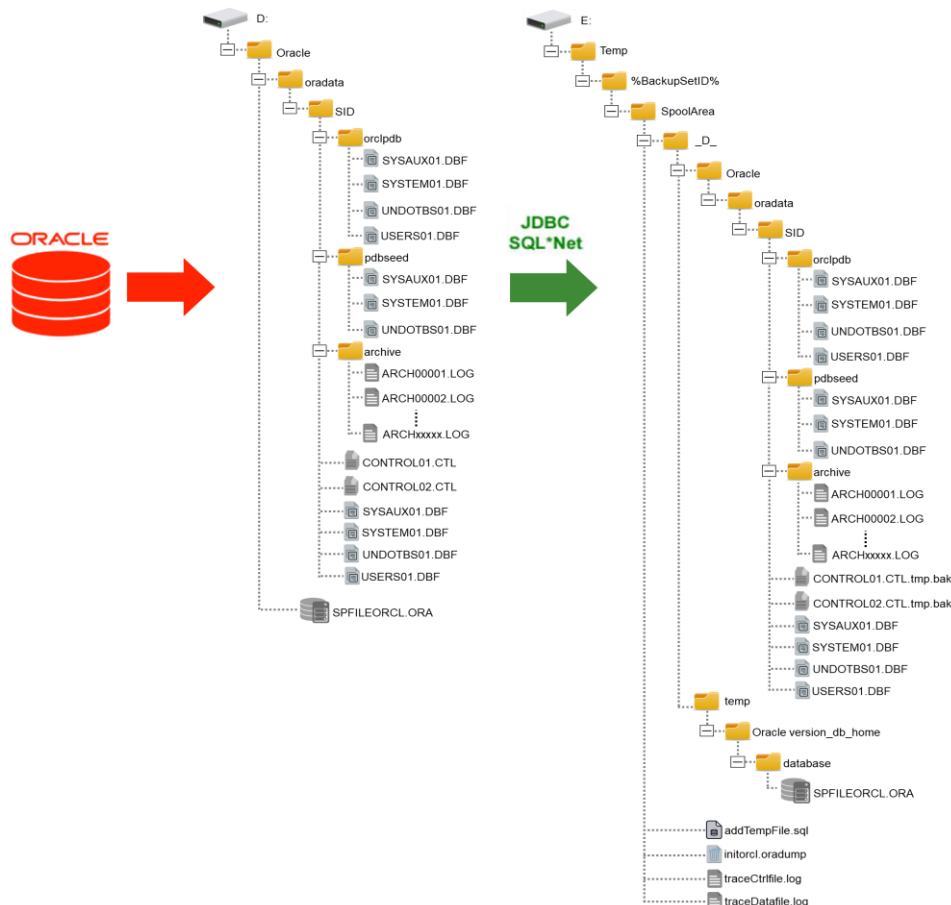
- 🔵 **Windows Server 2016**
- 🔵 **Windows Server 2012**
- 🔵 **Windows Server 2012 R2**
- 🔵 **Red Hat Enterprise Linux 6.4 and 7 (or above)**

Oracle 19c database backup is supported on the following versions of Windows Server and Linux:

- 🔵 **Windows Server 2022***
- 🔵 **Windows Server 2019**
- 🔵 **Windows Server 2016**
- 🔵 **Windows Server 2012 R2**
- 🔵 **Red Hat Enterprise Linux 7 and 8 (or above)**

** Supported from AhsayOBM v8.5.4.80 (or above)*


AhsayOBM v8.5 (or above) uses a spooling method to make a consistent snapshot of the database(s) for Oracle database backup. Below is the overview of the spooling method of Oracle database during backup for Windows:




The **temporary directory folder** will be used by AhsayOBM for each Oracle database backup as the storage of the following:

- ▶ The spooled Oracle database(s) and archived log files
- ▶ Any incremental or differential delta files generated

Therefore, it is strongly advised that the temporary directory folder is **located on a local drive with enough free disk space** to store the spooled databases and archived log files.

 The temporary directory folder should not be on the location of the Oracle Home drive.

The calculation of disk space required on the drive where the temporary directory folder is located is as follows:


 (Total Database Size * Delta Ratio) * number of backup destinations = **Minimum Free Space Required**

For example:

If the default Delta ratio is 50% for in-file delta, and if the total Oracle database size is 1TB and there is only one backup destination, the minimum free space needed on the drive where the temporary directory folder is located = 1.5TB:

1TB = Total Oracle database size

500GB = Total maximum size of incremental or differential delta files generated

 For more details, please refer to the following guides:
[AhsayOBM v8 User Guide - Oracle Backup and Restore Guide for Windows](#)
[AhsayOBM v8 User Guide - Oracle Database Backup and Restore for Linux \(GUI\)](#)
[AhsayOBM v8 User Guide - Oracle Database Backup and Restore for Linux \(CLI\)](#)

Support MariaDB Database version 10

AhsayOBM v8.5 (or above) offers support for MariaDB database versions **10, 10.1, 10.2, 10.3, 10.4, 10.5** and **10.6**.

NOTE: AhsayOBM must be installed on MariaDB database server.

The backup of MariaDB is supported on the following versions of Windows, Windows Server and Linux:

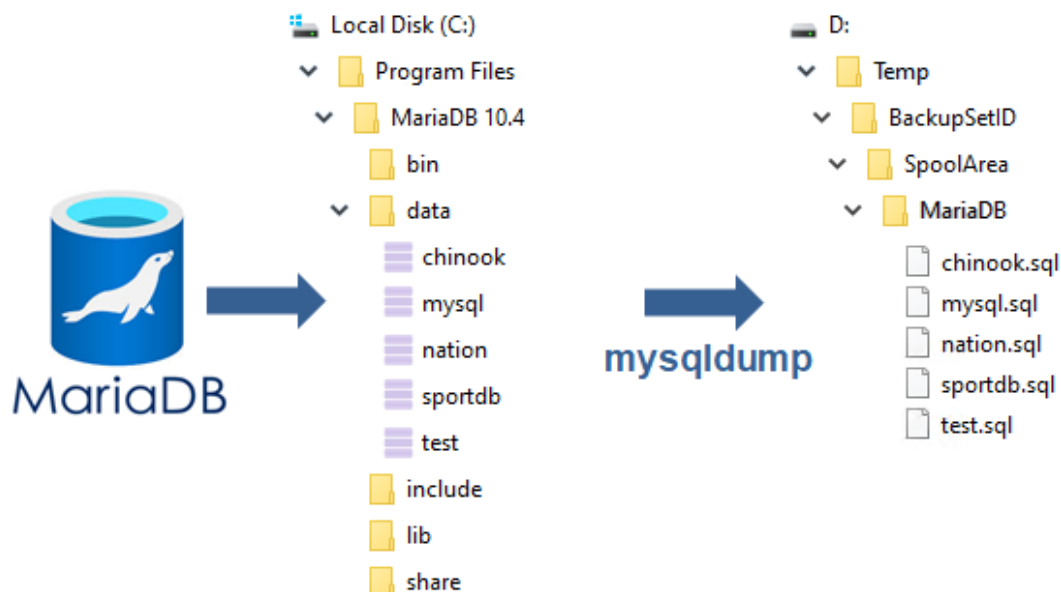
- ▶ **Windows Server 2019**
- ▶ **Red Hat Enterprise Linux 7 and 8**
- ▶ **Windows Server 2016**
- ▶ **CentOS 7 and 8**
- ▶ **Windows Server 2012 R2**
-
- ▶ **Windows Server 2008 R2 and 2008**
-
- ▶ **Windows 10, 8 and 7**
-

AhsayOBM v8.5 (or above) uses a spooling method to make a consistent snapshot of the database(s) for MariaDB database backup. The database files (.sql) will be spooled to the temporary directory folder using the **mysqldump** utility.

The *mysqldump* utility is installed on the MariaDB database server.

Example: The default location of the *mysqldump* utility for MariaDB v10.4 is: *C:\Program Files\MariaDB 10.4\bin*

Below is the overview of the spooling method of MariaDB database during backup for Windows:



The **temporary directory folder** will be used by AhsayOBM for each MariaDB database backup as the storage of the following:

- ▶ Database files (.sql)
- ▶ Any incremental or differential delta files generated

Therefore, it is strongly advised that the temporary directory folder is **located on a local drive with enough free disk space** to store the spooled database files.

The calculation of disk space required on the drive where the temporary directory folder is located is as follows:



(Total Database Size * Delta Ratio) * number of backup destinations = **Minimum Free Space Required**

For example:

If the default Delta ratio is 50% for in-file delta, and if the total MariaDB database size is 100GB and there is only one backup destination, the minimum free space needed on the drive where the temporary directory folder is located = 150GB:

100GB = Total MariaDB database size

50GB = Total maximum size of incremental or differential delta files generated



For more details, please refer to the following guides:

[AhsayOBM v8 User Guide - MariaDB Database Backup and Restore for Windows](#)

[AhsayOBM v8 User Guide - MariaDB Database Backup and Restore for Linux \(CLI\)](#)

Backup Report Selection

On the previous versions i.e., AhsayOBS v6, AhsayCBS v7 and pre-AhsayCBS v8.5, there were only two options available for email notifications for backup reports: **no reports** or **all reports**. When email notifications for backup reports is enabled, this can cause mailboxes of the AhsayCBS administrators or Managed Service Providers (MSP) to be overloaded with email notifications, especially when they manage hundreds or thousands of backups per day.

While for end users, they may not want to be bothered with daily backup email notifications when their backups are running smoothly. They only want to be notified if there are problems with the backup job, so they could take corrective action(s).

On the AhsayCBS v8.5 (or above), the email notification for backup reports settings have been enhanced to allow a selection of specific types of email notifications which the AhsayCBS administrators, Managed Service Providers (MSP), or their client would like to receive.

However, the default email notification settings for backup reports is still **All reports** on:

- ➊ New installations of AhsayCBS v8.5 (or above)
- ➋ All versions of AhsayOBS v6, AhsayCBS v7, and pre-AhsayCBS v8.5 which are upgraded to AhsayCBS v8.5 (or above)

The enhanced email notification settings for backup report consists of three (3) options:

- ▶ **No reports**
No email notifications and backup reports will be sent to the contact email address of the backup user account.
- ▶ **All reports**
All email notifications and backup reports will be sent to the contact email address of the backup user account. This is the default backup report option on the new AhsayCBS v8.5 (or above) after installation when upgraded from v6, v7, and pre-v8.5.
- ▶ **Specific reports**
This option enables the AhsayCBS administrators or Managed Service Providers (MSP) to only select specific backup report(s) that they would like to receive email notification for.



The backup report settings will only affect the email notifications. If the user would like to see the details for the backup reports that are not selected on the **specific reports** option, they can either log in to the AhsayCBS web console or AhsayOBM/AhsayACB client machine to check the details for these backup reports.

The following table shows the description of each backup report type.

Backup Report	Description	
Backup Errors	Backup jobs that encounter any type of error(s) during backup process.	
Backup quota exceeded	Storage Quota Exceeded When the current storage usage has exceeded the storage quota defined on the backup destination(s) for the AhsayOBM/AhsayACB user account.	License Module Quota Exceeded When the current license quota usage has exceeded the allocated quota on the following Add-on Modules for the AhsayOBM/AhsayACB user account. AhsayOBM: <ul style="list-style-type: none"> • VMware • Hyper-V • MS Exchange Mailbox • Office 365 • OpenDirect / Granular Restore AhsayACB: <ul style="list-style-type: none"> • Office 365 • OpenDirect / Granular Restore
Backup warnings	Warnings When the backup job encounters any type of warning(s) during the backup process.	User interrupted When the user stops or terminated the backup job before it is completed.
Backup successful	OK When the backup job is completed successfully which involves the following actions: <ul style="list-style-type: none"> • new files and/or folders • updated files • updated file permissions • moved files and/or folders • deleted files and/or folders 	OK (no files backed up) When the backup job is completed successfully but without backed up files or changes in the backup source.

For further details on the email notification settings for **specific report(s)**, refer to the following examples.

Scenario 1

Email Reports

☒ Backup Report

☐ All reports
 ☒ Specific report(s):

☒ Backup Errors
 ☒ Backup quota exceeded

☒ Storage Quota Exceeded
 ☒ License Module Quota Exceeded

☒ Backup warnings

☒ Warnings
 ☒ User interrupted

☐ Backup successful

☐ OK
 ☐ OK (no files backed up)

RESULT: Only email notifications for the following backup reports will be sent to the contact email address, and **no email notifications will be sent for successful backups:**

- Backup Errors
- Backup quota exceeded (Storage and License Module Quota Exceeded)
- Backup warnings (Warnings and User interrupted)

Scenario 2

Email Reports

☒ Backup Report

☐ All reports
 ☒ Specific report(s):

☒ Backup Errors
 ☒ Backup quota exceeded

☒ Storage Quota Exceeded
 ☒ License Module Quota Exceeded

☐ Backup warnings

☒ Warnings
 ☐ User interrupted

☒ Backup successful

☒ OK
 ☒ OK (no files backed up)

RESULT: Email notifications for all backup reports **except for user interrupted** backups will be sent to the contact email address, as the backup user(s) is already aware of the backup job status which is “Backup Interrupted by User”, since they have stopped the backup job themselves.

VMware ESXi/vCenter VDDK API Changes

Due to issues encountered on some VMware ESXi/vCenter setups with the latest VMware VDDK 7 API implemented from AhsayOBM v8.3.4.0 onwards on VDDK mode backup set, these have been found to cause problems on AhsayOBM related to both backup and restore.

For more details, refer to the following link:

<https://communities.vmware.com/t5/Virtual-Disk-Development-Kit/VixDiskLib-Open-fails-in-VDDK-7-0-using-a-vmPath-in-the-vmxSpec/m-p/1846640>

Starting from v8.5, Ahsay has decided to **temporarily revert to VDDK 6 API** until the VDDK 7 API bug is addressed by VMware. Until further notice, **VDDK 6 API** will be used for:

- ▶ all new installations of AhsayOBM v8.5 (or above); and
- ▶ AhsayOBM upgrades from v6, v7, or pre-v8.5 to AhsayOBM v8.5 (or above)

Affected existing AhsayOBM versions with VDDK 7 API:

- ▶ AhsayOBM v8.3.4.0 to v8.3.6.x

Affected VMware versions:

- ▶ VMware ESXi/vCenter v6, v6.5, v6.7, and v7 backup sets running in **VDDK backup mode**.

Action required to fix this problem:

- ▶ Partners with clients with VMware VDDK mode backup sets on the affected AhsayOBM versions are strongly advised to immediately upgrade to AhsayOBM v8.5 (or above).

Once AhsayOBM is upgraded to v8.5 (or above), the existing VMware ESXi/vCenter backup jobs will resume running without any further configuration or intervention.

v8.5 Backup and Restore on VMware vSAN

With the release of AhsayOBM v8.5, users are now provided with a wider backup and restore coverage since VMware VMs stored in vSAN datastore is now supported using the VMware vCenter option on the VMware backup set.

Users may now:

- ▶ Back up VMs stored in VMFS or vSAN datastore
- ▶ Restore VMs to VMFS or vSAN datastore

There are several supported scenarios for restoration of VMs which apply to both normal and Run Direct restore:

▶ **From vSAN backup source (vCenter) to vSAN restore destination**

The VM that is backed up is stored in vSAN datastore in the vCenter and will be restored to vSAN datastore on the vCenter.

▶ **From vSAN backup source (vCenter) to VMFS restore destination**

The VM that is backed up is stored in vSAN datastore in the vCenter and will be restored in VMFS datastore on the vCenter.

▶ **From VMFS backup source (vCenter/ESXi) to vSAN restore destination**

The VM that is backed up is stored in VMFS datastore either in the vCenter or another ESXi host on the vCenter and will be restored in vSAN datastore on the vCenter.



Additional information can be found in the [v8.5 Backup and Restore on VMware vSAN Datasheet](#).

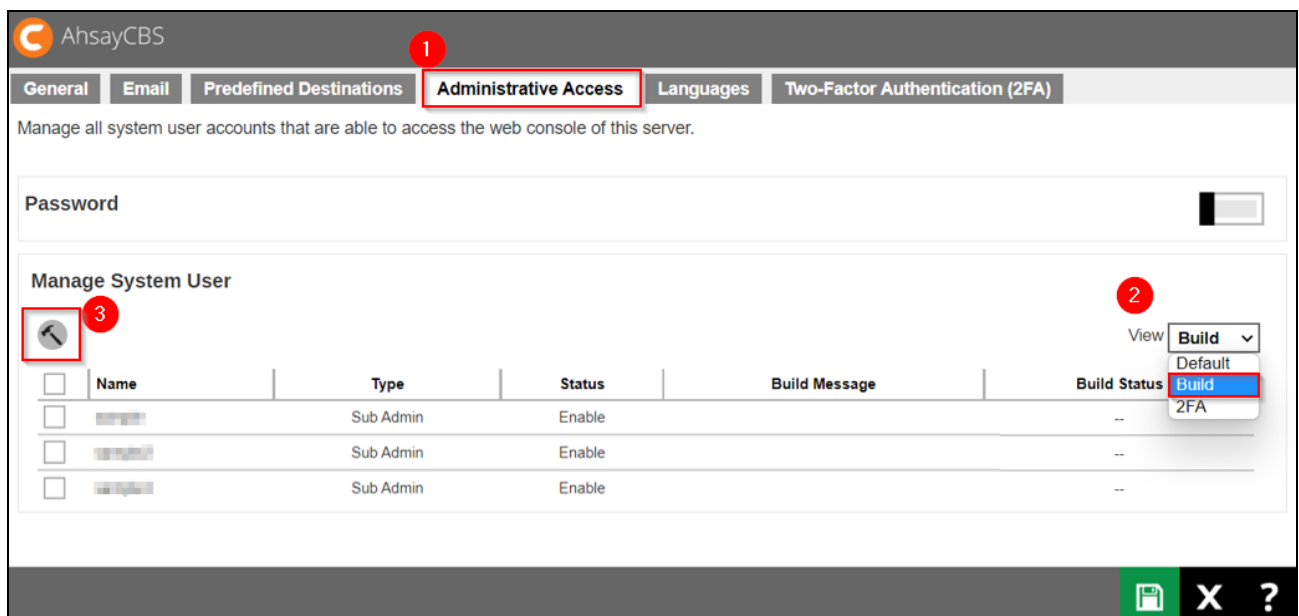
Support to Build Branded Client Installers by Batch for Multiple System Users

When upgrading AhsayCBS to a later version with customization, branded AhsayOBM/AhsayACB installers are required to be rebuilt before it can be downloaded from the AhsayCBS web console or be used for auto-update of branded clients. Thus, when having multiple system users (e.g., 30 sub admin accounts for 30 different branding), building of the client installers will be a time-consuming process.

Starting with v8.5.4.86, AhsayCBS supports building of branded AhsayOBM/AhsayACB installers simultaneously for multiple system users. This option is applicable for both Admin and Sub Admin account types.

This can be performed by going to **System Settings > Basic > Administrative Access** on the AhsayCBS web console.

Below is an example of the Administrative Access page for building client installers.



Manage all system user accounts that are able to access the web console of this server.

Manage System User

Name	Type	Status	Build Message	Build Status
...	Sub Admin	Enable		--
...	Sub Admin	Enable		--
...	Sub Admin	Enable		--

Build Status: Build (selected), Default, 2FA



For more information, please refer to **Chapter 12.5 Build the AhsayOBM/AhsayACB Installers for your Resellers** of the following guide:

[AhsayCBS v8 Administrator's Guide](#)

Support More Concurrent Installer Build on Ahsay Customization Portal

The Ahsay Customization Portal (ACP) comes with a new enhancement that allows the queue to process up to four concurrent installers simultaneously for AhsayCBS or Client installers.

When there is a new release and the customer started to build installer, the following is expected on the latest ACP enhancement:

- ▶ Faster installer building process
- ▶ Reduced waiting time to receive the installer built

Workaround to support Synology DSM 7 in running AhsayOBM v8.5.4.86

For AhsayCBS v8.5.4.86, there is a workaround that allows users to install AhsayOBM v8.5.4.86 on Synology DSM 7.

This workaround applies to the AhsayCBS base release (v8.5.4.86) with or without a newer hotfix. If the AhsayCBS installed is earlier than v8.5.4.86, then the AhsayCBS must be upgraded first to v8.5.4.86.

While for branded AhsayCBS or branded Sub Admin sites, rebuilding of client installer is required before performing the workaround.



For more information on how to perform workaround for AhsayOBM v8.5.4.86 to run on Synology DSM 7, please refer to the following KB article:

[FAQ: AhsayOBM v8.5.4.86+ workaround to support Synology DSM 7](#)