

Online-Backup.dk v9

Office 365 Backup & Restore Guide for MacOS

Ahsay Systems Corporation Limited

25 January 2022

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Revision History

Date	Descriptions	Version
25 January 2022	▪ Ch. 4 – added migrate data	9.1.0.0

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1 Overview

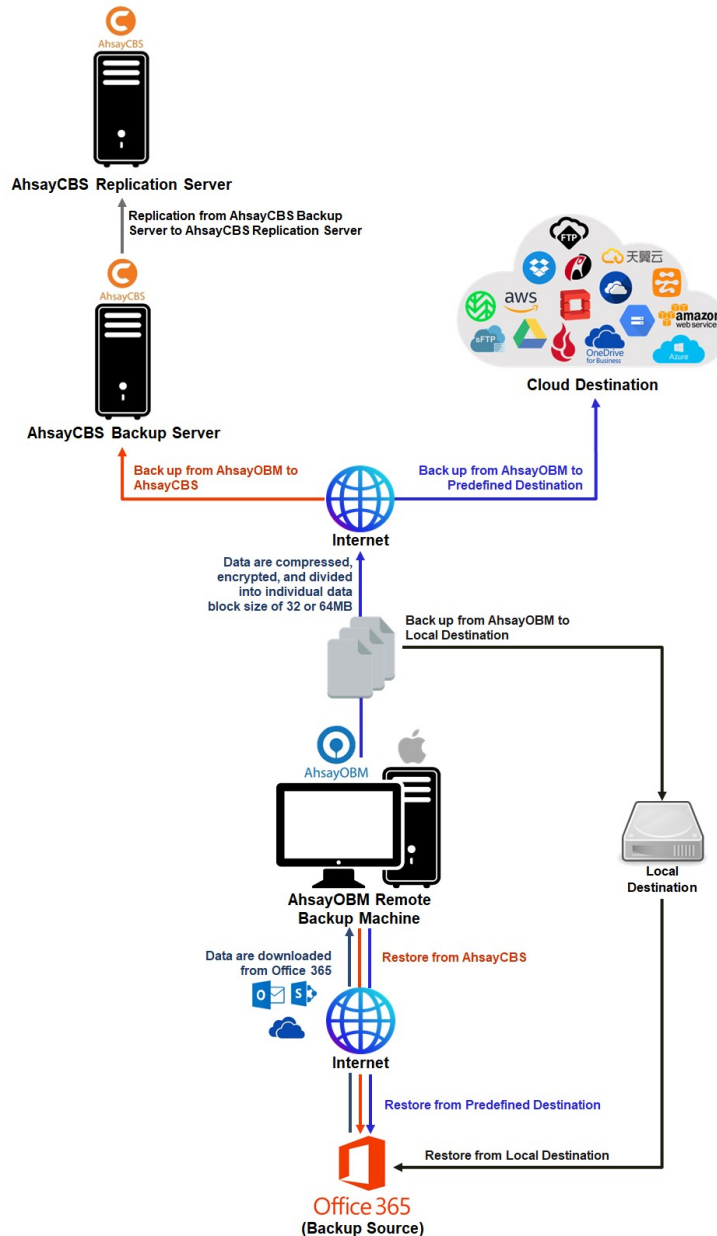
1.1 What is this software?

Ahsay brings you specialized client backup software, namely AhsayOBM, to provide a set of tools to protect your Office 365 user accounts. This includes backup and recovery of individual emails, contacts, calendars and other mail items in your Office 365 Outlook, files on OneDrive and SharePoint, with snapshots / versioning, and retention policy to protect even items that you may have accidentally deleted from your Office 365 user account.

1.2 System Architecture

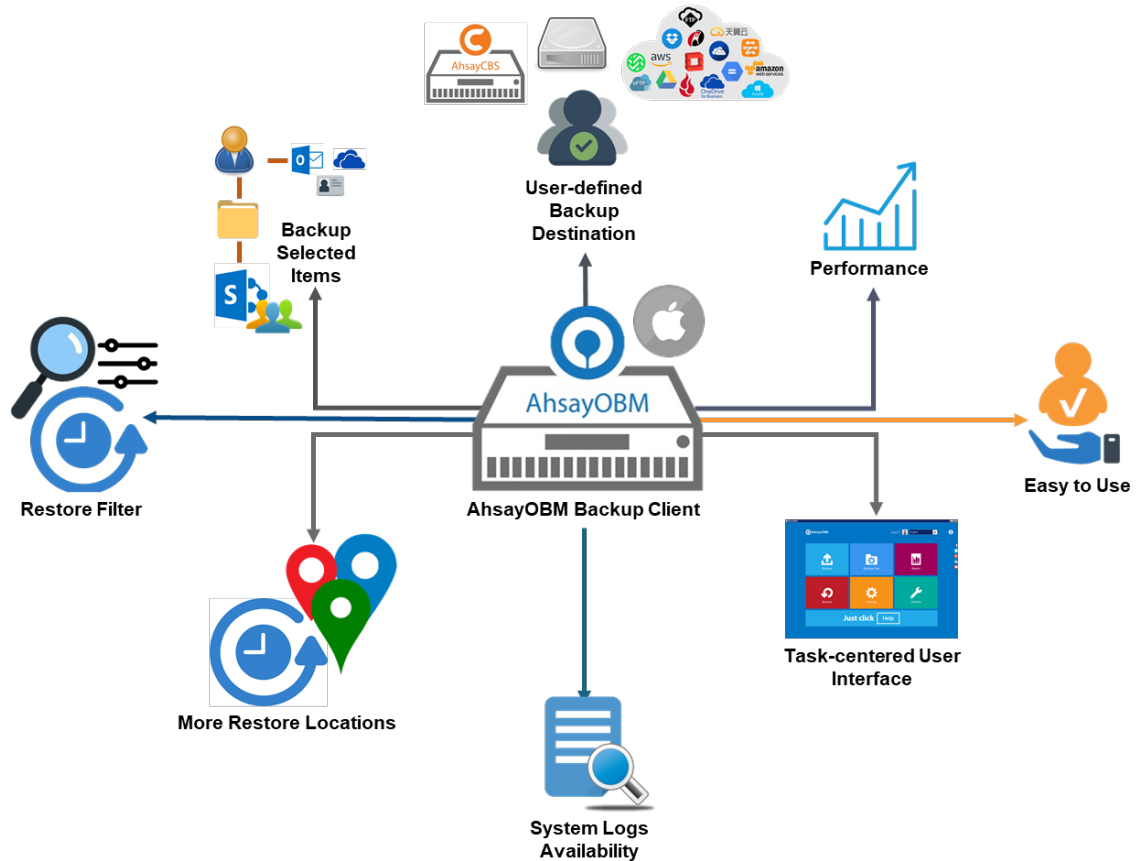
Below is the system architecture diagram illustrating the major elements involved in the backup process among the Office 365 service, AhsayOBM and AhsayCBS.

In this user guide, we will focus on the software installation, as well as the end-to-end backup and restore process using the AhsayOBM (Agent-based).



1.3 Why should I use AhsayOBM Run on Client (Agent-based) solution to back up my Office 365 data?

We are committed to bringing you a comprehensive Office 365 backup solution with AhsayOBM. Below are some key areas where we can help to make your backup experience a better one.



User-defined Backup Destination

Backup users have more options in assigning a backup destination (i.e. AhsayCBS, Cloud or Predefined destinations, and standard and local destination).

Performance

Agent-based backup is performed on a physical machine or computer with resources that is dedicated for backup and restore operations. Once the backup client is deployed on the machine, the user have more control on the hardware which affects the overall backup and restore performance.

The introduction of the Change Key API has significantly improved backup performance for both Full and Incremental backup jobs, which means backup sets with large number of Office 365 accounts each incremental backup can be completed within hours.

Easy to Use

Agent-based backup solution has a traditional backup approach that is well understood by most administrators and end users who would only need minimal effort and time to understand the backup and/or restore operations.

Task-centered User Interface

Agent-based backup solution make it a good option for users to have more control on the individual backup/restore and resources management.

System Logs Availability

System logs for data integrity check and space freeing up results is accessible for the end users and can be reviewed anytime. Unlike with the agentless backup where system logs will only be available upon request from the backup service provider.

More Restore Locations

Agent-based backup offers you three (3) restore locations such as the local machine, original location (or the cloud storage where you backed up them), and alternate location (which is through the same cloud storage but on a different folder).

Restore Filter

Agent-based backup has a restore filter feature which allows users to easily search directories, files, and/or folders to restore.

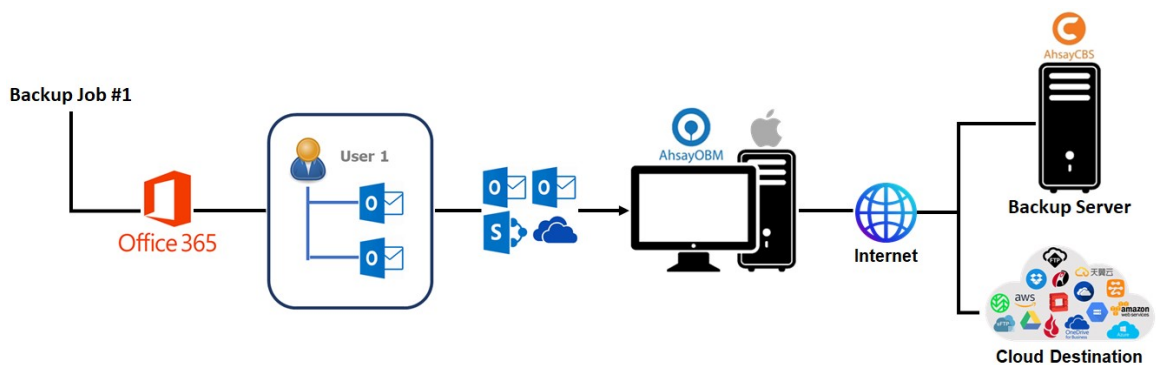
Fast and Efficient

We understand that backup could be a time and resources consuming process, which is why AhsayOBM is designed with advanced technologies to make backup a fast and efficient process.

We also understand that you may wish to run backup at a specified time interval of your choice, that's why we also allow you to set your own backup schedules so that you can take full control of the time when to perform backup.

- **Multi-threading** – this technology utilizes the computing power of multiple CPU cores for creating multiple backup and restore threads to produce fast backup and restore performance.

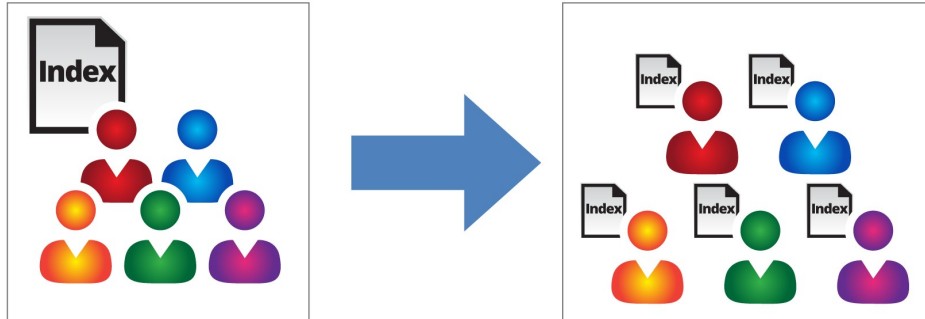
Backup job uses a maximum of 4 concurrent threads.



As shown the technology translate into a total of 4 concurrent threads.

- **Index File Structure** – The index file structure has been re-designed to improve the backup and restore performance.

Each Office 365 user will have its own individual index file instead of a single index file for all users within the backup set.



This new design eliminates any potential I/O performance bottlenecks when the index files are updated during each backup job, which can occur when using single index file structure for multi-thread concurrent backup.

- **Block Level Incremental Backup** – this technology breaks down the backup files into multiple blocks and only the changed blocks will be backed up each time.

Backup of Selected Items

To back up the Office 365 user accounts, the backup resources can be user level, site collection level and even item level.

- Flexible backup options:
 - Only select the required users, specific site collection or items for backup.
- Flexible restore options:
 - Restore all the users or just one user or restore the whole site collection or just one site or restore the whole user contents or just one item.

Restore items to the original location or an alternate location.

High Level of Security

We understand your Office 365 users may contain sensitive information that requires to be protected, that is why your backup data will be encrypted with the highest level of security measure.

- **Un-hackable Encryption Key** – to provide the best protection to your backup data, you can turn on the encryption feature which will be default encrypt the backup data locally with AES 256-bit truly randomized encryption key.
- **Encryption Key Recovery** – Furthermore, we have a backup plan for you to recover your encryption key in case you have lost it. You backup service provider can make it mandatory for you to upload the encryption key to the centralized management console, the encryption key will be uploaded in hashed format and will only be used when you request for a recovery.

Centralized Management Console

















Our enriched features on the centralized web console offers you a one-stop location for monitoring and managing your backup and restore. Below is an overview of what you can do with it. For more details regarding the setup and operations of the centralized management console, refer to the [AhsayCBS v9 User's Guide](#) for details.

- Create/ update/ delete backup set
- Restore backup set
- Configure user settings
- Configure backup settings
- View and download backup and restore reports
- Monitor backup and restore live activities
- Monitor storage statistic

Cloud Destinations Backup

To offer you with the highest flexibility of backup destination, you can now back up Office 365 user to a wide range of cloud storage destinations. Utilizing cloud destination backup gives you an extra layer of protection in the event of a local drive corruption, where you will still be able to retrieve data from the cloud destination.

Below is a list of supported cloud destinations.

	Aliyun		Microsoft Azure
	CTYun		Microsoft OneDrive
	Amazon S3		Microsoft OneDrive for Business
	AWS S3 Compatible Cloud Storage		Rackspace
	Wasabi		OpenStack
	Backblaze		Dropbox
	Google Cloud Storage		FTP
	Google Drive		SFTP

Differences between a Run-on-Client and Run-on-Server Backup Set

The following table summarizes the differences in backup options available for a Run on Server or Run on Client, and the tool to use (client agent or user web console) when performing a backup and restore:

Features/Functions	Run on Client Office 365 Backup Set	Run on Server Office 365 Backup Set
General Settings	✓	✓
Backup Source	✓	✓
Backup Schedule	✓	✓
Destination	AhsayCBS, Predefined Destinations, Standard and Local	AhsayCBS and Predefined Destinations only
Multiple Destinations	✓	✗
Deduplication	AhsayOBM	✓
Retention Policy	✓	✓
Command Line Tool	AhsayOBM	✗
Reminder	AhsayOBM / AhsayACB for Windows only	✗
Bandwidth Control	✓	✓
IP Allowed for Restore	✓	✗
System Logs of Data Integrity Check and Space Freeing Up	✓	✗
Other	✓	✓
To Run a Backup	AhsayOBM / AhsayACB	AhsayCBS User Web Console only
To Run a Restore	AhsayOBM / AhsayACB / AhsayOBR	AhsayCBS User Web Console only

Aside from backup options, the table below shows other operations that can be performed using web console and client agent:

Features/Functions	Run on Client Office 365 Backup Set	Run on Server Office 365 Backup Set
Data Integrity Check	✓	✓
Space Freeing Up	✓	✗
Delete Backup Data	✓	✓
Decrypt Backup Data	✓	✗

NOTE:

For more details on the Run on Server backup option, please refer to the following guides:
[AhsayCBS v9 User Guide – Office 365 Run on Server \(Agentless\) Backup and Restore Guide](#)

1.4 Why should I use AhsayOBM to backup/restore my Office 365 domain?

You may be wondering why you need to use AhsayOBM to backup/restore your Office 365. Well, people assume that Microsoft is responsible for backing up everything from your calendars and your emails to your files in SharePoint and OneDrive. As the backups performed by Microsoft are to provide a system wide recovery rather than to facilitate the recovery of individual items for the end user.

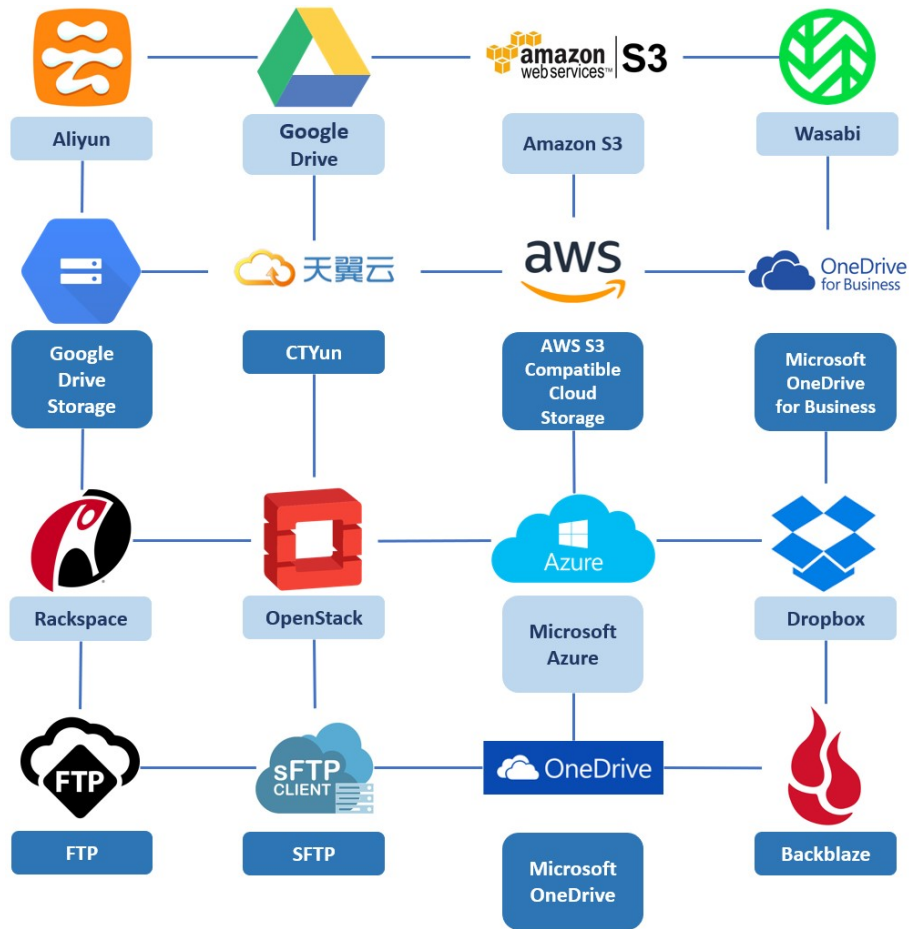
Let's take a look at some of the Microsoft's Office 365 backup capabilities and limitations

- Microsoft is only responsible for the Office 365 infrastructure and uptime of the cloud and apps with Office 365. So, if you are relying on Microsoft to protect your organization from data loss, your data and organization are at high risk if you do not implement additional data protection. These are some of the scenarios that Microsoft is responsible for on their cloud platform:
 - Hardware Failure
 - Software Failure
 - Natural Disaster
 - Power Outage
- On the other hand, Microsoft is not responsible in any of these scenarios, and you have to face the harsh reality that there's no guarantee a complete and speedy restore incase these happens:
 - Accidental Data Deletion (Human error)
 - Malicious Attacks
 - Viruses/Malware
- Microsoft has a retention policy for mailbox and public folder that are only up to 14 days to 30 days. To support this, please refer to this article for more information: [Microsoft: Overview of retention policy](#).
- Microsoft has set the same limitations for SharePoint Online and OneDrive. It only stores deleted items for a period of 93 days, once you exceed the retention period, the data is gone indefinitely.
- End users do not have control over what were backed up and what can be restored.
- End users have no direct access to their backup data of their Office 365 domains/accounts.

Now, let's check the capabilities of AhsayOBM for Office 365

- AhsayOBM ensures protection from data loss, ensuring that all information in your Office 365 environment are protected to avoid disruptions to day-to-day operations.
- We offer fully flexible retention policy that can be configured by days, weekly, monthly, quarterly, years compare to Microsoft's limited retention period which is 14 to 30 days only.
- Using AhsayOBM, end user has access or control over items that will be backed up or restore, whether it is individual item, calendar entries, notes or even corrupted mailbox and more.

- AhsayOBM also provides multiple backup destinations from your Office 365 to your local machine, to any of our supported cloud destinations, and to our AhsayCBS Server.



- Flexible restore is also a key feature of AhsayOBM that is designed to have multiple restore options.

Local Machine	Restore your data to your local computer where the AhsayOBM is running. Note: This option applies to restore of items such as files, images, video, music and more from OneDrive and not items from Outlook mailbox.
Original Location	Restore your data to the original Office 365 account.
Alternate Location	Restore your data to an alternate location of another Office 365 account on the same domain.
Alternate Office 365 Account	Restore your data to an alternate Office 365 that has a different domain.

- Ahsay has automated backups and manual (on demand) backups. You are also able to check the restore and backup status with corresponding backup and restore reports.

1.5 About This Document

What is the purpose of this document?

This document aims at providing all necessary information for you to get started with setting up your system for Office 365 backup and restore, followed by step-by-step instructions on creating backup set, running backup job and restoring backed up data, using AhsayOBM.

The document can be divided into 3 main parts.

Part 1: Preparing for Office 365 Backup & Restore

Requirements

Requirements on hardware & software for installation

Best Practices and Recommendations

Items recommended to pay attention to before backup and restore

Part 2: Performing Office 365 Backup

Logging in to Client Agent

Log in to AhsayOBM

Creating a Backup Set

Create a backup set using AhsayOBM

Running a Backup Set

Run a backup set using AhsayOBM

Part 3: Restoring Office 365 Backup

Restoring a Backup Set using AhsayOBM

Restore a backup using AhsayOBM

What should I expect from this document?

After reading through this documentation, you can expect to have sufficient knowledge to set up your system to backup Office 365 on AhsayOBM, as well as to carry out an end-to-end backup and restore process.

Who should read this document?

This documentation is intended for backup administrators and IT professionals who are responsible for the Office 365 backup and restore.

2 Preparing for Backup and Restore

2.1 Hardware Requirement

To achieve the optimal performance when AhsayOBM is running on your machine, refer to the following article for the list of hardware requirements.

[FAQ: Ahsay Hardware Requirement List \(HRL\) for version 9.1 or above](#)

2.2 Software Requirement

Make sure the operating system where you have the Office 365 installed is compatible with the AhsayOBM. Refer to the following article for the list of compatible operating systems and application versions.

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

2.3 AhsayOBM Installation

For agent-based backup and restore, make sure that the latest version of AhsayOBM is installed on your computer with Internet access for connection to your Office 365 account.

User should also stay up-to-date when newer version of AhsayOBM is released. To get our latest product and company news through email, please subscribe to our mailing list.

http://www.ahsay.com/jsp/en/home/subscribe_mail_list.jsp

2.4 AhsayOBM License Requirements

AhsayOBM licenses are calculated on a per device basis:

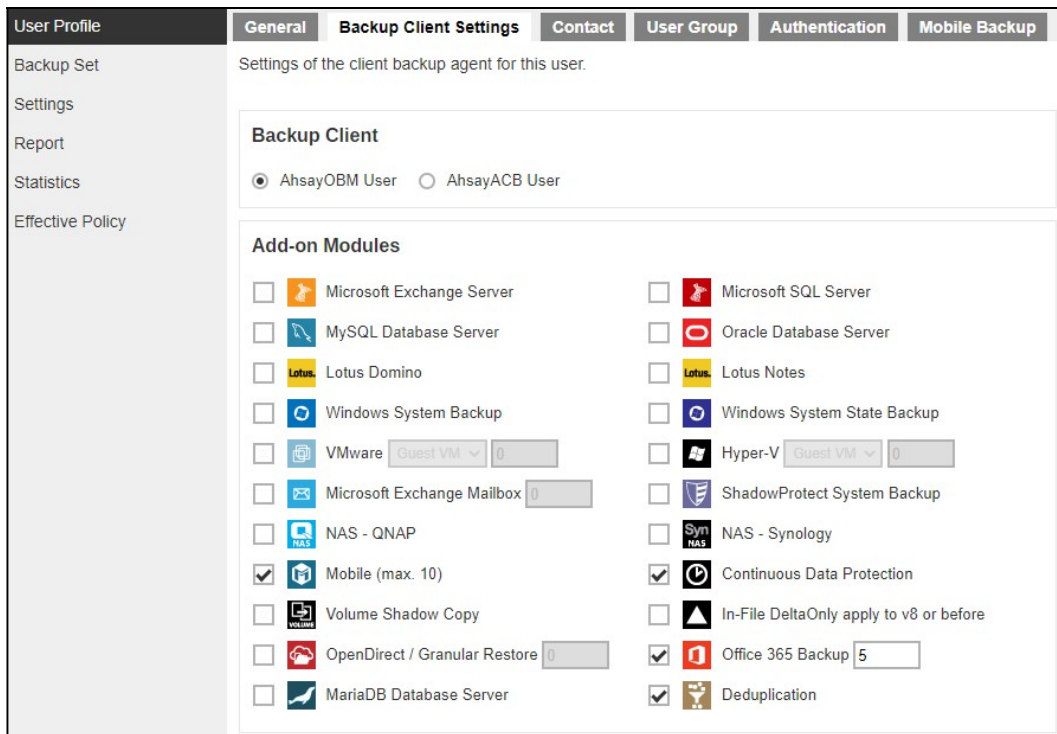
- i. To back up users with one (1) backup client computer
Example: If one AhsayOBM is installed then, one AhsayOBM license is required.
- ii. To back up users with multiple backup client computers, the number of AhsayOBM licenses required is equal to the number of devices.
Example: If there are ten (10) users to be backed-up across three (3) backup client computers, then 3 AhsayOBM licenses are required.

Please contact your backup service provider for more details.

2.5 Add-on Module Requirements

Make sure that the Office 365 Backup feature has been enabled as an add-on module in your AhsayOBM user account and there is enough Office 365 Backup license quota to cover the backup of your users.

Please contact your backup service provider for more details. Below is a sample screen shot of an AhsayOBM User with an add-on module of Office 365 with 5 licenses.



The Ahsay licenses for the Office 365 module are calculated by the number of unique licensed or unlicensed Office 365 user accounts. If same Office 365 account is backed up on multiple backup sets with an AhsayOBM user account would be counted as one Office 365 license.

- Each licensed or unlicensed Office 365 user account selected for backup requires one Office 365 license.
- Each Equipment Mailbox, Room Mailbox, or Shared Mailbox selected for backup requires one Office 365 license.
- If just only SharePoint Sites under the Site Collections and/or files of folders under Public Folder are selected for backup, this requires zero Office 365 license but a minimum of one Office 365 license is needed to perform a backup. The Office 365 license is only needed to start the backup but it will not be counted as used license.

However, if any items from either Outlook, Items from OneDrive, or Personal Sites under Users are selected for backup, the Office 365 license count will be calculated based on the number of the user account selected.

For more detailed examples about the Office 365 license requirement and usage, refer to [Appendix A: Example Scenarios for Office 365 License Requirement and Usage](#).

2.6 Access for AhsayCBS User Web Console

It is now possible to perform agentless backup and restore, which can be done via the AhsayCBS User Web Console without using the AhsayOBM client agent. In order to access the User Web Console, make sure you have Internet connection and a web browser installed on your computer or mobile device.

2.7 Backup Quota Requirement

Make sure that your AhsayOBM user account has sufficient quota assigned to accommodate the storage of the Office 365 users for the new backup set and retention policy. Please contact your backup service provider for more details.

To get an accurate estimate of the backup quota requirement, it is recommended to check the actual usage of the Office 365 Organization in the Microsoft 365 Admin Centre. Please refer to this link: [Appendix I: How to view Item count and Storage used in Microsoft 365 Admin Center](#)

2.8 Public Folder Backup

A licensed Exchange Administrator or a licensed user with Public Folder permission is required. Otherwise, you will not be able to access the public folder to select items for backup or restore.

2.9 SharePoint Site Backup

To be able to back up Personal Sites and/or SharePoint Sites, ensure that you use Hybrid Authentication when creating a backup set. Due to the current limitation with Microsoft API, Modern Authentication is currently not suitable for backup sets with Personal Sites and/or SharePoint Sites selected. As backup and restore of SharePoint metadata are not fully supported.

2.10 Java Heap Size

The default Java setting heap 2048M, is sufficient for Office 365 backups based on the default 4 concurrent backup threads.

The Java heap size should only be increased if the number of current backup threads is increased as more backup threads is expected to consume more memory. But this does not guarantee that the overall backup speed will be faster since there will be an increased chance of throttling.

As the value of 4 concurrent backup threads is found to be the optimal setting for Office 365 backups, to ensure best backup performance, minimal resource usage, and lowest probability of throttling of Ahsay backup requests by Microsoft Office 365.

For more detailed information on how to increase the backup thread, please refer to this link: [Appendix H: How to Increase the Number of Concurrent Backup Threads](#).

2.11 Office 365 License Requirements

Office 365 Subscription Plan

The following subscription plans with Office 365 email services are supported to run backup and restore on AhsayOBM or AhsayCBS User Web Console.

Office 365 Business	Office 365 Business Essentials
Office 365 Business Premium	Office 365 Enterprise E1
Office 365 Enterprise E3	Office 365 Enterprise E4
Office 365 Enterprise E5	Office 365 Education

- **Office 365 Subscription**

Make sure your Office 365 subscription with Microsoft is active in order to enjoy all privileges that come along with our backup services. If your account has expired, renew it with Microsoft as soon as possible so that you can continue enjoy the Office 365 backup services provided by Ahsay.

When your account is expired, depending on your role, certain access restrictions will be applied to your account. Refer to the URL below for more details

[Microsoft Office 365 Subscription Status](#)

2.12 Office 365 Permission Requirements

The basic permissions required by an Office user account for authentication of an Office 365 backup set is as follows:

- **Global Admin Role**

Starting with AhsayOBM v8.3.6.0 or above, the Office 365 account used for authentication must have Global Admin Role, since Modern Authentication will be used.

This is to ensure that the authorization configuration requirements will be fulfilled (e.g. connect to Microsoft Azure AD to obtain the App Access Token). To assign the role, please refer to [Ch. 2.12.1](#).

- **Term Store Administrator Role**

The Term Store Administrator Role may be required for backup and restore of SharePoint items. To assign the role, please refer to [Ch. 2.12.2](#).

- A member of **Discovery Management** security group

The **Discovery Management** security group must be assigned the following roles. To assign the role, please refer to [Ch. 2.12.3](#).

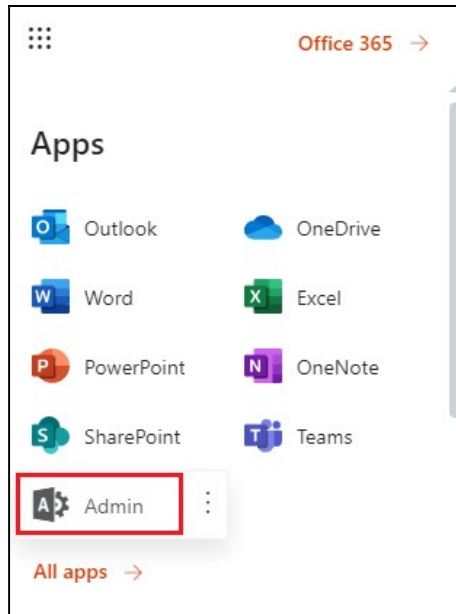
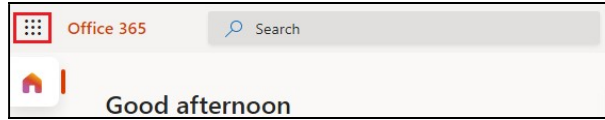
- ApplicationImpersonation
- Legal Hold
- Mailbox Import Export
- Mailbox Search
- Public Folders

Otherwise, proceed to grant all necessary permissions to the Office user account as shown in the following chapters [2.12.1](#), [2.12.2](#), [2.12.3](#), [2.12.4](#), and [2.12.5](#).

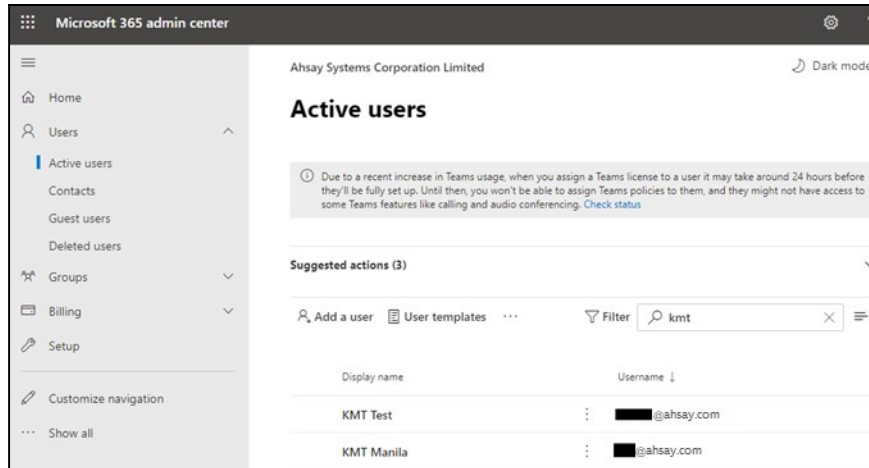
2.12.1 Assigning Global Admin Role to Accounts

To assign the Global Admin role to accounts, follow the steps below:

- i. Click the App launcher in the upper left side then click **Admin** to go to the Microsoft 365 admin center.



- ii. In the Microsoft 365 admin center, on the left panel click **Users**. Find the user you want to assign the Global Admin role and select **Manage roles**.



KM [Redacted Name]

[Reset password](#) [Block sign-in](#) [Delete user](#)

[Account](#) [Devices](#) [Licenses and Apps](#) [Mail](#) [OneDrive](#)

Username
[Redacted]@ahsay.com
[Manage username](#)

Last sign-in
No attempts in last 30 days
[View last sign-in](#)

Sign-out ⓘ
Sign-out of all Office 365 sessions.
[Initiate sign-out](#)

Groups
[Manage groups](#)

Roles
No administrator access
[Manage roles](#)

- iii. In the Manage roles window, select **Admin center access** then check the box beside **Global admin**. Click **Save Changes** to save the role you assigned.

Manage roles

Admin roles give users permission to view data and complete tasks in admin centers. Give users only the access they need by assigning the least-permissive role.

[Learn more about admin roles](#)

User (no admin center access)

Admin center access

Global readers have read-only access to admin centers, while Global admins have unlimited access to edit all settings. Users assigned other roles are more limited in what they can see and do.

Exchange admin ⓘ

Global admin ⓘ

Global reader ⓘ

Helmdesk admin ⓘ

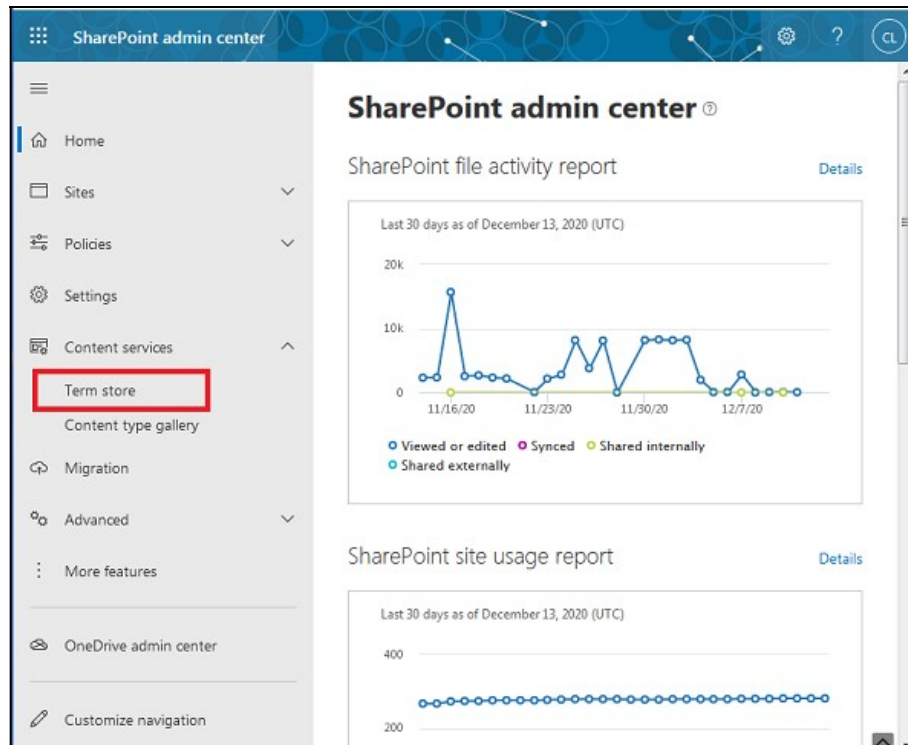
[Save changes](#)

⚠ Your org has more than 100 global admins. Global admins are attacked twice as often as other accounts, so you should have fewer than 5. To protect data and devices, assign a limited role instead. [See global admins.](#)

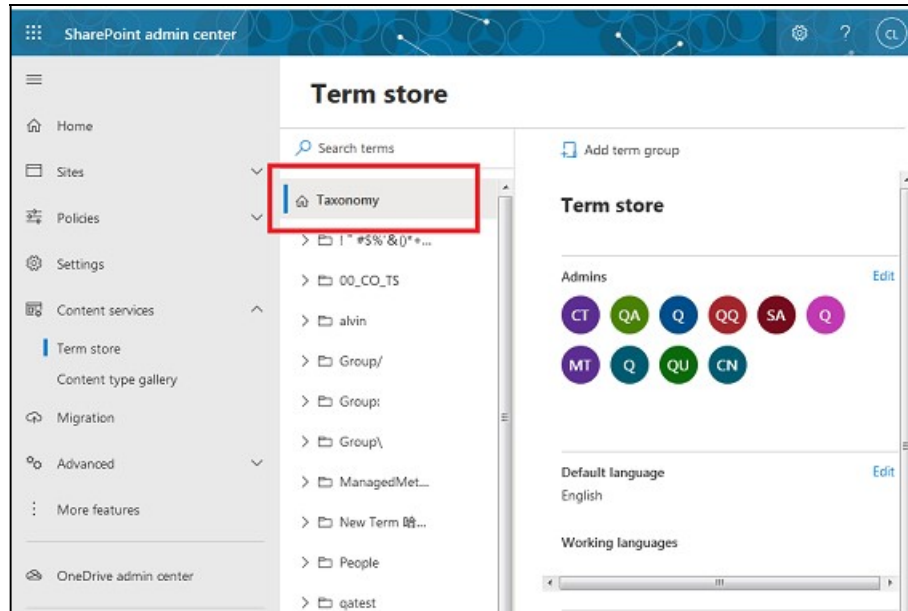
2.12.2 Granting Term Store Administrator Role

To add Term Store Administrator role to the Office 365 user account used to authenticate the Office 365 backup set.

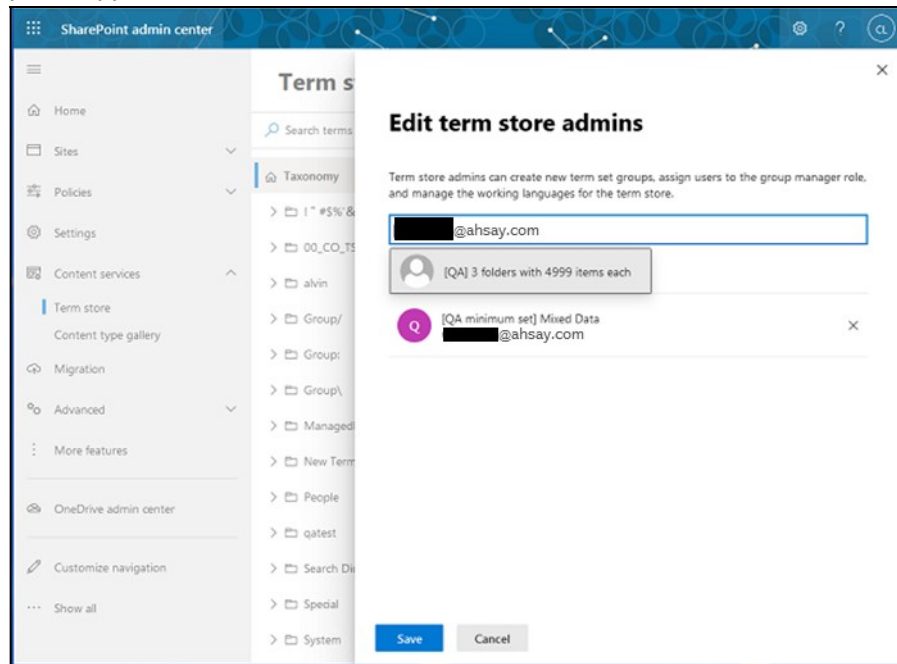
- i. In the SharePoint admin center, under **Content services**, click **Term store**.



- ii. In the tree view pane on the left, select the **Taxonomy**.



iii. In the Term store page, for Admins, select Edit. The **Edit term store admins** panel appears.

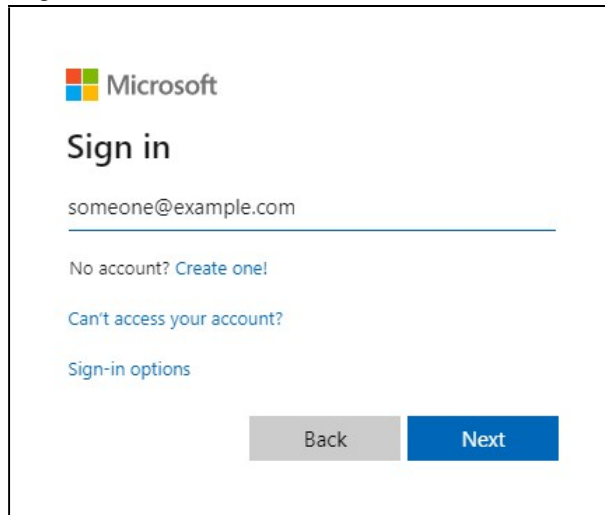


iv. Enter the names or email addresses of the Office 365 user who you want to add as term store admins. Select Save.

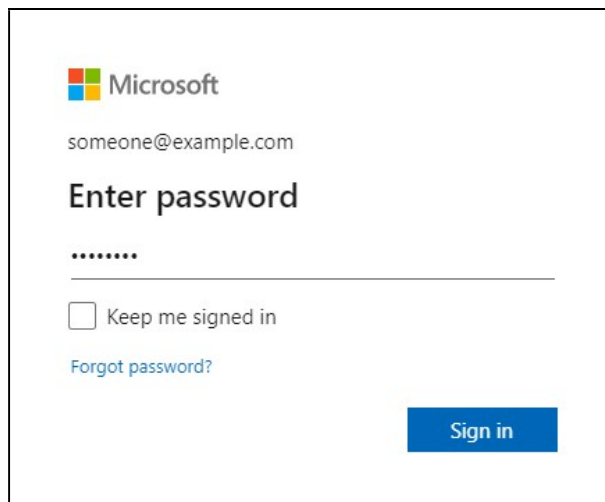
2.12.3 Granting Permission Discovery Management Group

This permission allows users added under the **Members** section of the **Discovery Management** group (refer to [Ch. 2.12.4](#) for setup) to back up and/or restore user item(s) not only for their own account, but also the accounts of other users in the same **Members** section.

- i. Open <https://outlook.office365.com/ecp>
- ii. Log in to the **Office 365** as an account administrator.

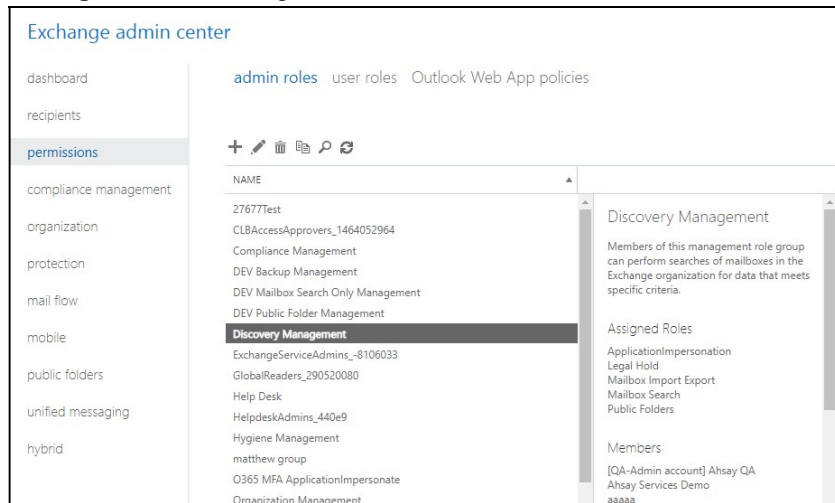


The image shows a Microsoft sign-in page. At the top left is the Microsoft logo. Below it, the text "Sign in" is displayed. A text input field contains the email address "someone@example.com". Below the input field are three links: "No account? Create one!", "Can't access your account?", and "Sign-in options". At the bottom right, there are two buttons: a grey "Back" button and a blue "Next" button.



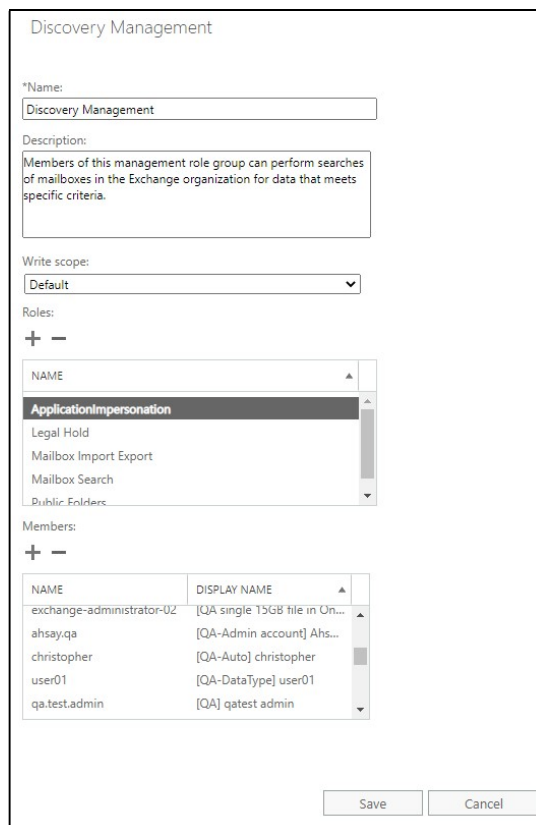
The image shows a Microsoft "Enter password" screen. At the top left is the Microsoft logo. Below it, the email address "someone@example.com" is displayed. The main heading is "Enter password". Below this is a password input field with a masked password ".....". Below the password field is a checkbox labeled "Keep me signed in". Below the checkbox is a link "Forgot password?". At the bottom right, there is a blue "Sign in" button.

iii. Select the **permissions** menu on the left, then double click on **Discovery Management** on the right.



iv. Click the **+** icon under the **Roles** section. These are the following roles:

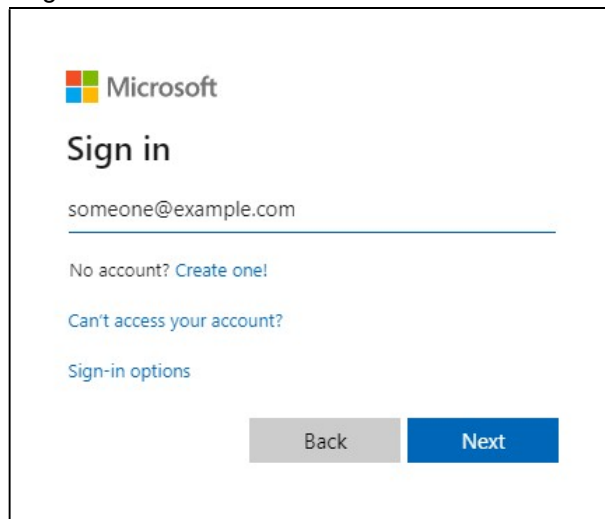
- ApplicationImpersonation
- Legal Hold
- Mailbox Import Export
- Mailbox Search
- Public Folders



v. Click **Save** to confirm and exit the setting.

2.12.4 Granting Permission to Accounts for Creating Backup Set

- i. Open <https://outlook.office365.com/ecp>
- ii. Log in to the **Office 365** as an account administrator.



Microsoft

Sign in

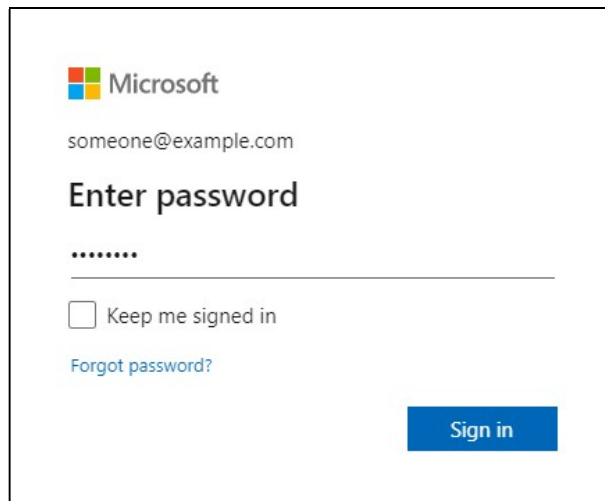
someone@example.com

No account? [Create one!](#)

[Can't access your account?](#)

Sign-in options

Back Next



Microsoft

someone@example.com

Enter password

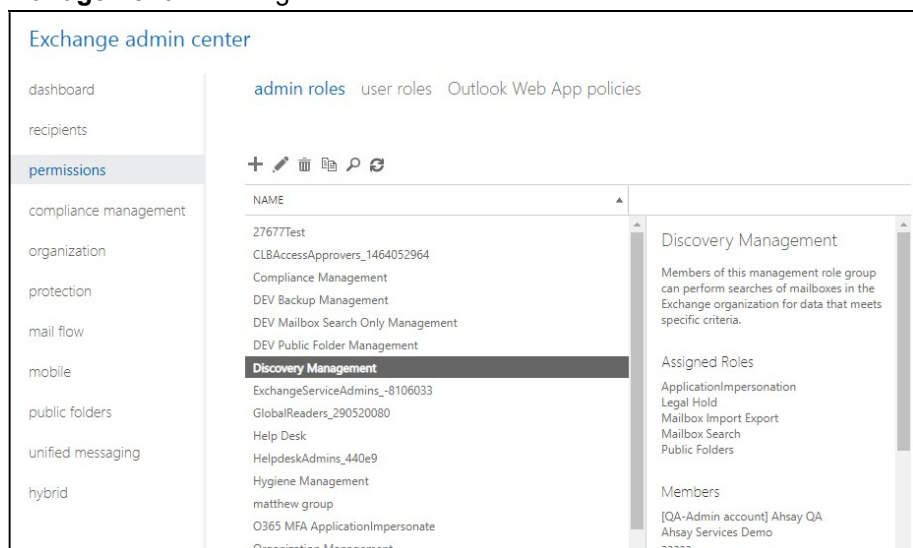
.....

Keep me signed in

[Forgot password?](#)

Sign in

- iii. Select the **permissions** menu on the left, then double click on **Discovery Management** on the right.



Exchange admin center

admin roles user roles Outlook Web App policies

permissions

NAME	
27677Test	
CLBAccessApprovers_1464052964	
Compliance Management	
DEV Backup Management	
DEV Mailbox Search Only Management	
DEV Public Folder Management	
Discovery Management	
ExchangeServiceAdmins_-8106033	
GlobalReaders_290520080	
Help Desk	
HelpdeskAdmins_440e9	
Hygiene Management	
matthew group	
O365 MFA ApplicationImpersonate	
Organization Management	

Discovery Management

Members of this management role group can perform searches of mailboxes in the Exchange organization for data that meets specific criteria.

Assigned Roles

- ApplicationImpersonation
- Legal Hold
- Mailbox Import Export
- Mailbox Search
- Public Folders

Members

- [QA-Admin account] Ahsay QA
- Ahsay Services Demo
- aaaaa

- iv. You can now add users to this group. Click the + icon under the **Members** section.

Discovery Management

*Name:

Description:

Write scope:

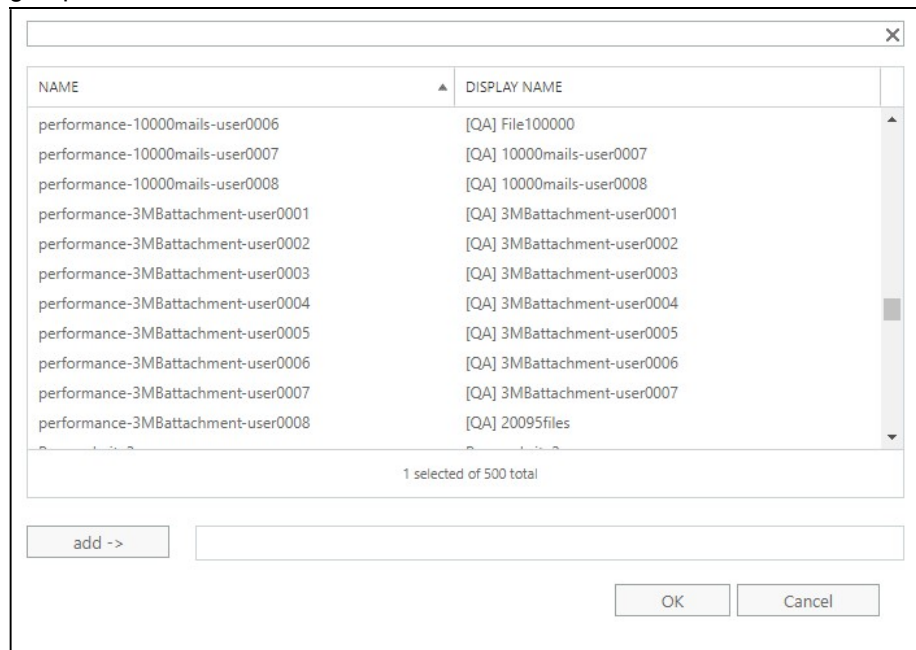
Roles:
+ -

NAME
ApplicationImpersonation
Legal Hold
Mailbox Import Export
Mailbox Search
Public Folders

Members:
+ -

NAME	DISPLAY NAME
exchange-administrator-02	[QA single 15GB file in On...
ahsay.qa	[QA-Admin account] Ahs...
christopher	[QA-Auto] christophe
user01	[QA-DataType] user01
qa.test.admin	[QA] qatest admin

- v. Look for the username(s) of the account that you would like to add permission for, then click **add** > **OK** to add the corresponding user(s) to the permission group.



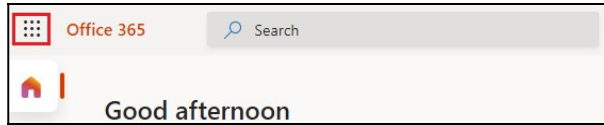
- vi. Click **Save** to confirm and exit the setting.

2.12.5 Granting Permission to restore all share link types to alternate location in Office 365

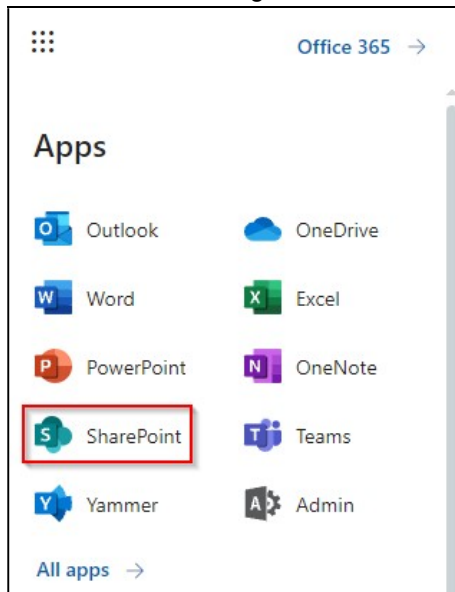
To successfully restore all share link types to alternate location of the same organization in Office 365, follow the settings below:

- ⦿ Allowing anonymous users to access application pages

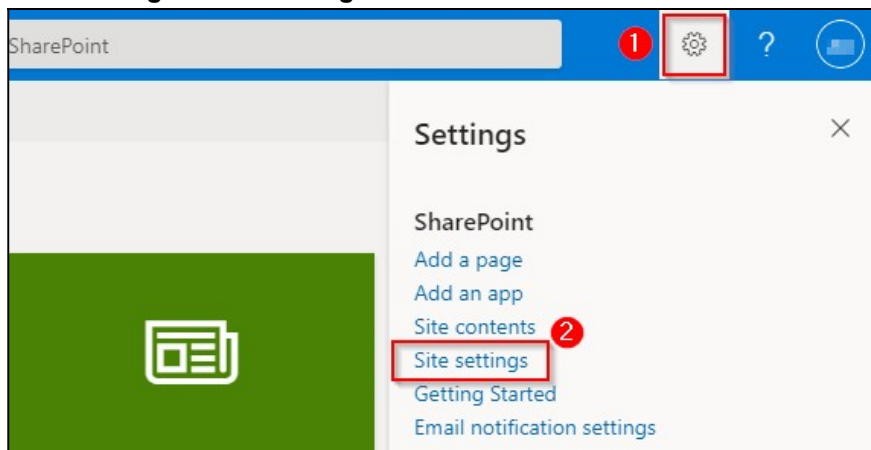
- i. Click the App launcher in the upper left side.



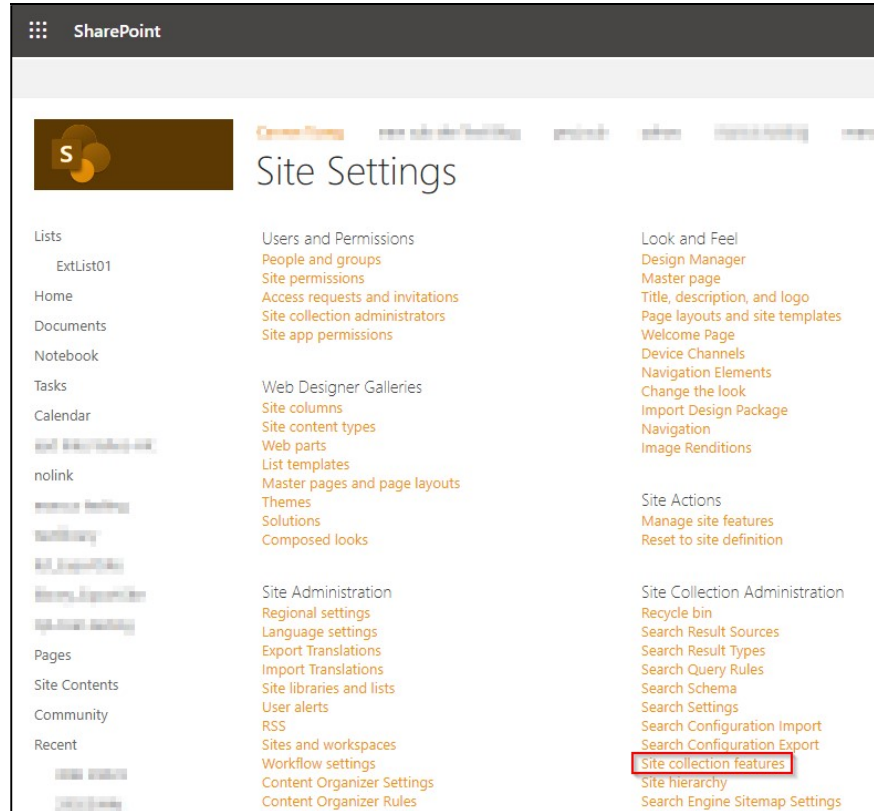
- ii. Click **SharePoint** to go to the SharePoint page.



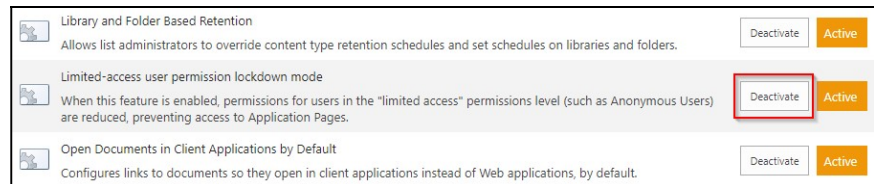
- iii. Click **Settings > Site Settings**.



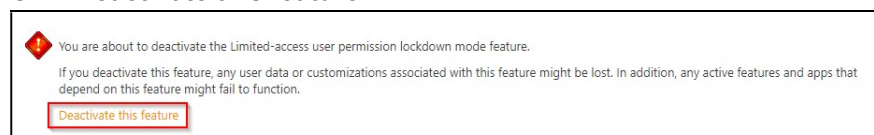
iv. Under Site Collection Administration, click **Site collection features**.



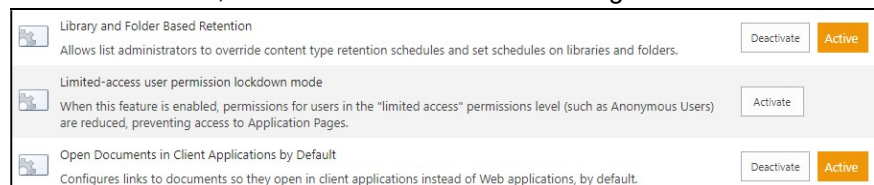
v. Scroll down and look for “**Limited-Access user permission lockdown mode**”, click the **Deactivate** button.



vi. Click **Deactivate this feature**.

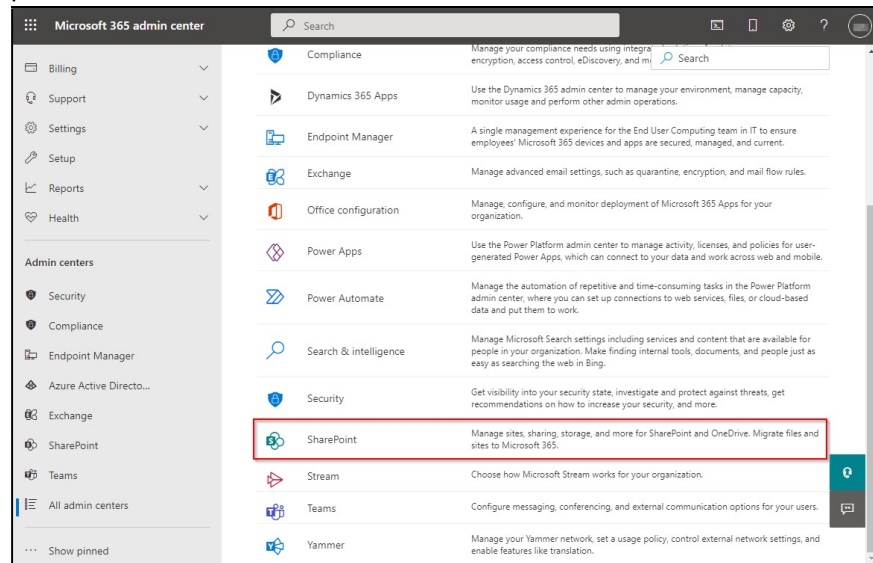


Once deactivated, the Deactivate button will no longer be available.

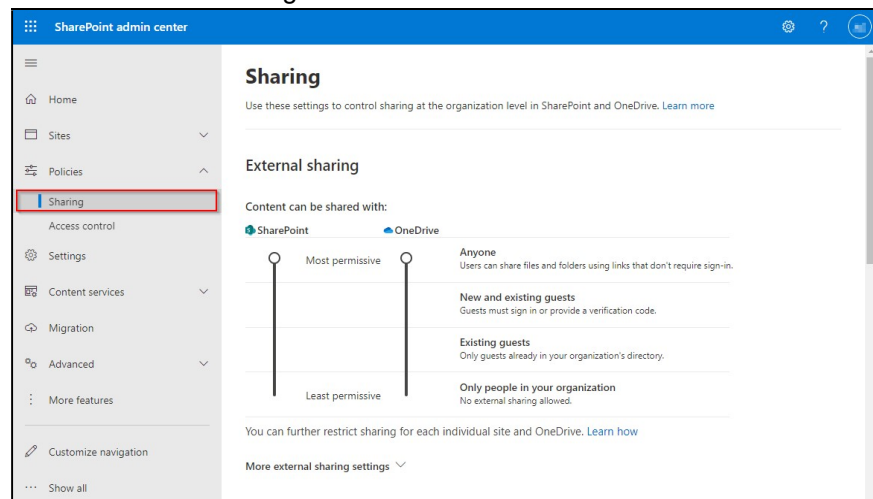


⦿ Allowing sharing to external users

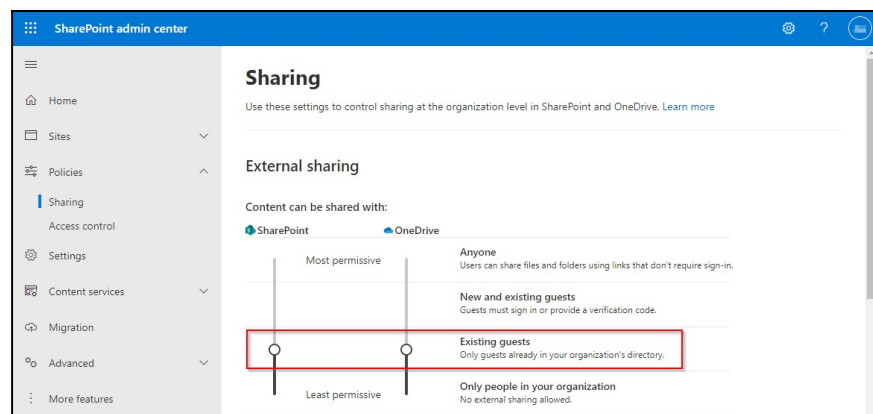
i. Go to your Microsoft 365 Admin Center > All admin centers > in the right pane select SharePoint.



ii. Go to Policies > Sharing.



iii. Under External sharing, the button must be in line with “Existing guests” and click **Save**.



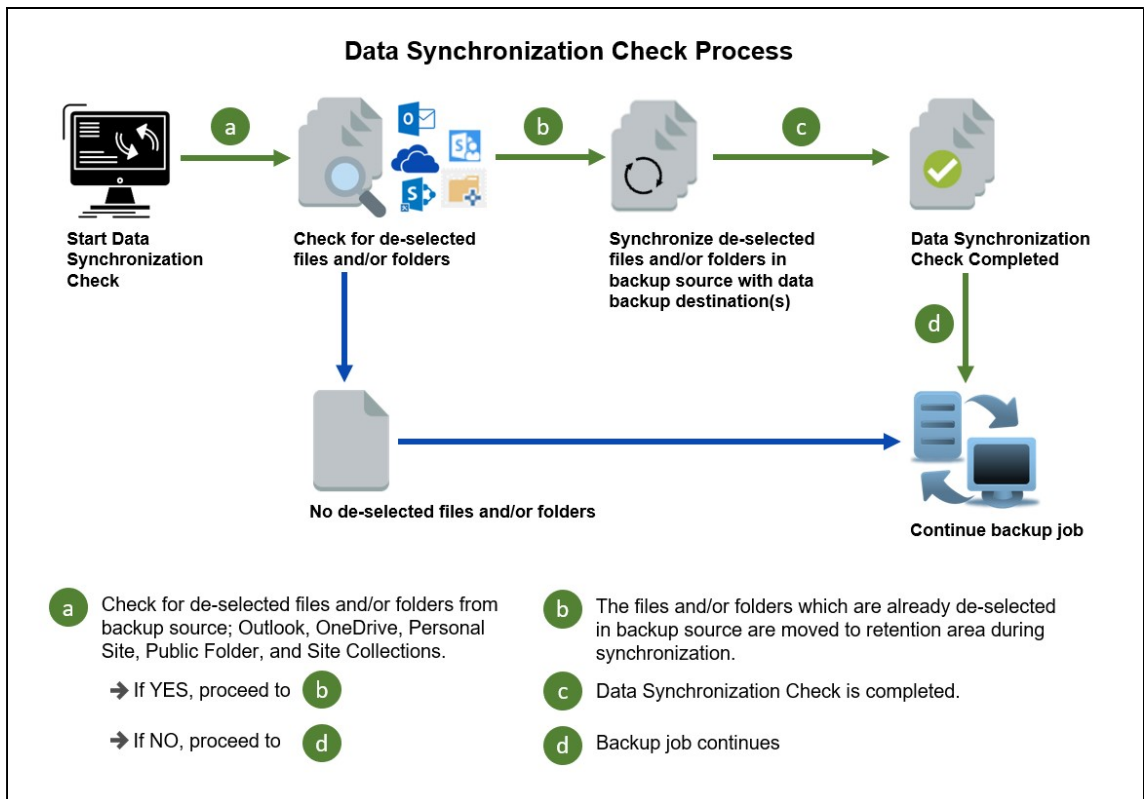
2.13 Data Synchronization Check (DSC) Setup

To compensate for the significant backup performance increase, there is a tradeoff made by the Change Key API, which skips the checking of de-selected files in the backup source, which over time can result in a discrepancy between the items or files/folders selected in the backup sources and the those in the backup destination(s). However, the Change Key API will continue to check for de-selected Office 365 user accounts or Site Collections. Un-selected individual Office 365 user accounts or Site Collections detected during a backup job and will be automatically moved to retention area.

To overcome this, it is necessary in some cases to run a Data Synchronization Check (DSC) periodically. The DSC is similar to a regular Office 365 Change Key API backup job but with the additional checking and handling of de-selected files and/or folders in the backup source. So that it will synchronize the data in the backup source and backup destination(s) to avoid data build-up and the freeing up of storage quota.

Here are the pros and cons of performing the data synchronization check.

	Enabled	Disabled
Backup time	<p>Since data synchronization check is enabled, it will only run on the set interval. For example, the default number of interval is 60 days.</p> <p>The backup time for the data synchronization job will take longer than the usual backup as it is checking the de-selected files and/or folders in the backup source and data in backup destination(s).</p>	<p>As data synchronization check is disabled, the backup time will not be affected.</p>
Storage	<p>Management of storage quota will be more efficient as it will detect items that are de-selected and moved it to retention and will be removed after it exceeds the retention policy freeing up the storage quota.</p>	<p>Management of storage quota will be less efficient even though files and/or folders are already de-selected from the backup source, these files will remain in the data area of backup destination(s).</p>



NOTE

To setup the Data Synchronization Check (DSC), refer to this [Appendix G: Setting the Data Synchronization Check \(DSC\)](#)

2.14 Authentication

To comply with Microsoft's product roadmap for Office 365, Basic Authentication (Authentication using Office 365 login credentials) will no longer be utilized. Instead, all new Office 365 backup sets created will use either Modern Authentication or Hybrid Authentication.

By second half of 2021, it will be a mandatory requirement for organizations still using Basic Authentication or Hybrid Authentication to migrate to Modern Authentication.

Modern Authentication provides a more secure user authentication by using app token for authentication aside from using the Office 365 login credentials. In order to use Modern Authentication, the Office 365 account is registered under Global region and the Office 365 backup is configured to use Global region. As both Germany and China region do not support Modern Authentication.

Existing backup sets using Basic Authentication created prior to AhsayOBM v8.3.6.0 can be migrated to Hybrid Authentication or Modern Authentication. However, once the authentication process is completed, the authentication can never be reverted back to Basic Authentication. For more information on how to migrate to Hybrid Authentication or Modern Authentication, please refer to [Appendix J: Migrating Authentication of Office 365 Backup Set](#). After the upgrade to AhsayOBM v9.0.0.0, the backup and restore process of existing Office 365 backup sets still using Basic Authentication will not be affected during this transition period since Modern Authentication is not yet enforced by Microsoft.

In order to migrate existing backup sets to Hybrid Authentication or Modern Authentication, there are two (2) methods:

- The first method is the Office 365 account used for the backup set is assigned as the Global Admin role.
- The second method is the Office 365 account used for the backup set is an ordinary account. When changing the settings of the backup set, the user can ask an Office 365 Global Admin account to log in their credentials first to authorize the migration of authentication. **This only needs to be done once per backup set.**

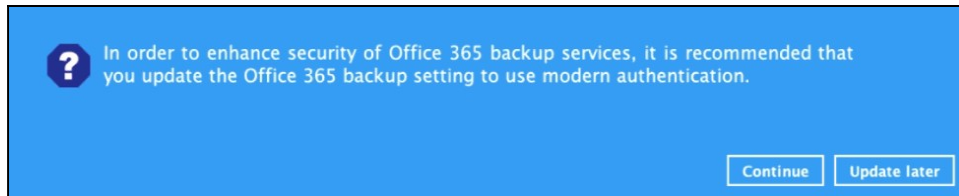
NOTE

Please note that Modern Authentication with enabled security in Azure Active Directory (AD) will be made default if there is zero-usage on any Office 365 organization.

To check the current authentication being used in your Office 365 backup set, see criteria below:

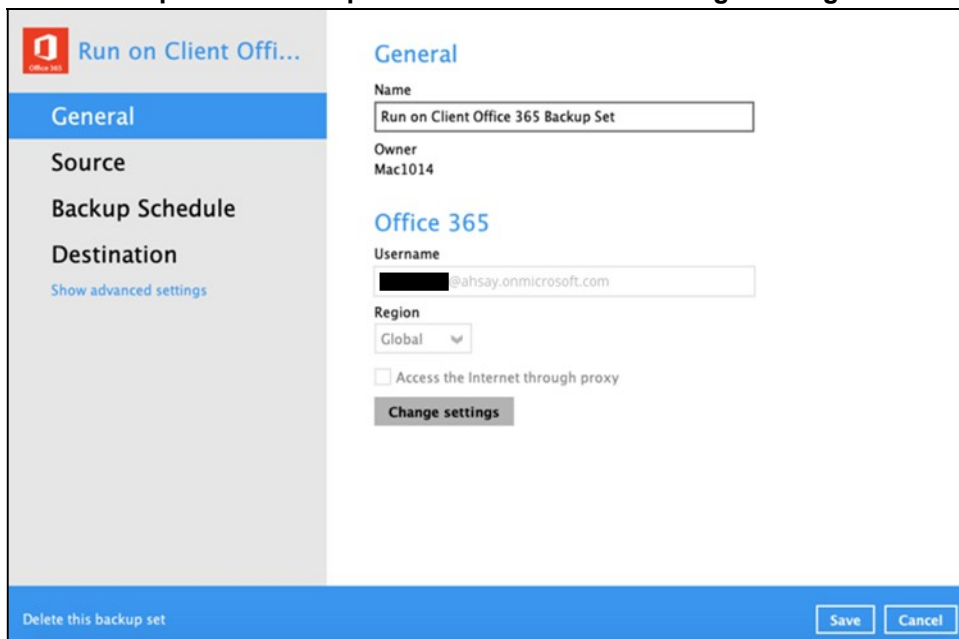
- ▶ Basic Authentication

If you click on the backup set and the following pop up message is displayed, then the backup set is using Basic Authentication.

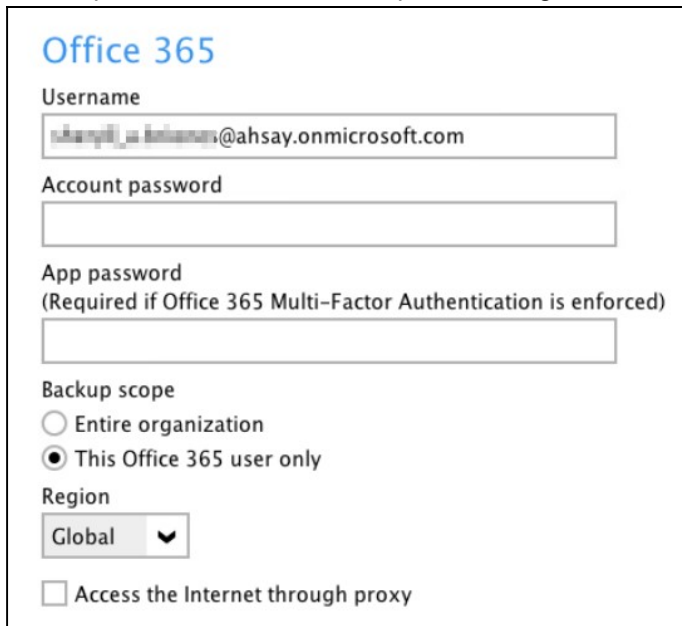


- ▶ Modern Authentication

Go to **Backup Sets > backup set name > General > Change settings.**



In the Office 365 credentials page, if the region is Global and the Username exists but has no password, then the backup set is using Modern Authentication.

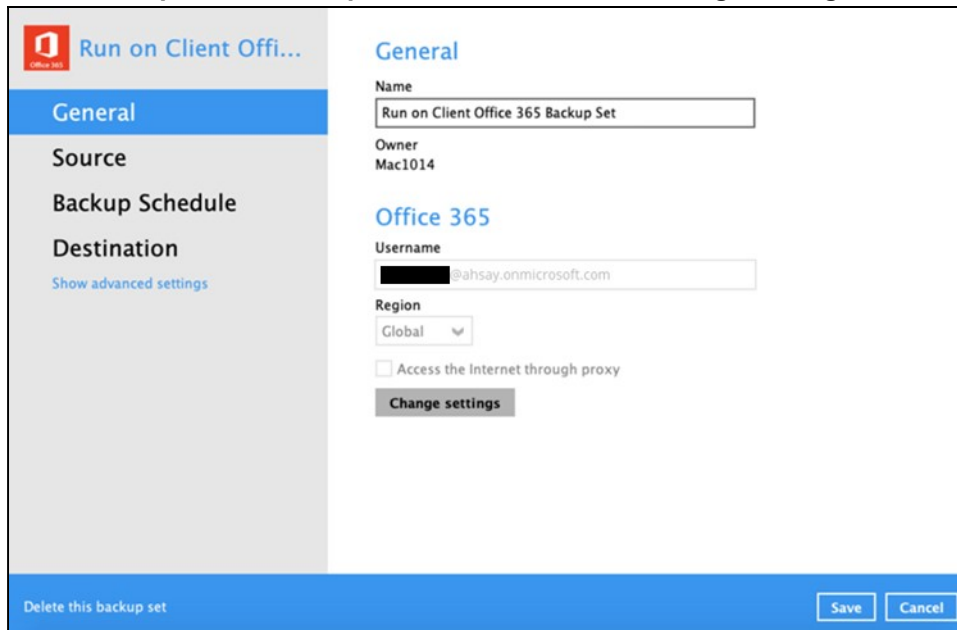


The screenshot shows the Office 365 credentials configuration page. It includes fields for Username (filled with 'example@ahsay.onmicrosoft.com'), Account password, and App password. Below these are radio buttons for Backup scope: 'Entire organization' and 'This Office 365 user only' (selected). A Region dropdown menu is set to 'Global', and there is an unchecked checkbox for 'Access the Internet through proxy'.

• Hybrid Authentication

There is no pop up authentication alert.

Go to **Backup Sets > backup set name > General > Change settings.**



The screenshot shows the 'General' settings for a backup set named 'Run on Client Office 365 Backup Set'. The left sidebar lists 'General', 'Source', 'Backup Schedule', and 'Destination'. The main area shows the Name, Owner (Mac1014), and Office 365 credentials (Username: 'example@ahsay.onmicrosoft.com', Region: 'Global'). There is an unchecked checkbox for 'Access the Internet through proxy' and a 'Change settings' button. At the bottom, there is a 'Delete this backup set' link and 'Save' and 'Cancel' buttons.

In the Office 365 credentials page, if the region is Global and the Username and Account password exist, then the backup set is using Hybrid Authentication.

Office 365

Username

Account password

App password
(Required if Office 365 Multi-Factor Authentication is enforced)










Backup scope
 Entire organization
 This Office 365 user only

Region













Access the Internet through proxy

2.15 Supported Services

Below are the supported services of Office 365 Backup module. It is also specified in the table some services that are currently not yet supported by the Office 365 Backup module.

Office 365			
Services	Supported?	Services	Supported?
 Outlook		 Yammer	
 OneDrive		 Microsoft Stream	
 Personal Site		 Power BI	
 Site Collections		 Microsoft Power Apps	
 Microsoft Teams			

Below are the supported Outlook Mailbox types of Office 365 Backup.

 Outlook Mailbox			
Item	Supported?	Item	Supported?
Archive Mailbox		Distribution Group	
Dynamic Distribution Group		Equipment Mailbox	
Office 365 Group		Public Folder	
Public Folder Mailbox		Room Mailbox	
Security Group		Shared Mailbox	
User Mailbox			

Notes

1 For backing up Public Folder, a licensed Exchange Administrator or a licensed user with Public Folder permission is required

Below are the items that you can back up or restore from an Outlook mailbox.



Item	Supported?	Item	Supported?
Archive		Calendar	
Clutter		Companies	
Contacts		Conversation History	
Deleted Items		Drafts	
External Contacts		GAL Contacts	
Inbox		Journal	
Junk Emails		Notes	
Organizational Contacts		Outbox	
PeopleCentricConversation Buddies		PersonMetaData	
Recipient Cache		RS Feeds	
Search Folders		Sent Items	
Social Activity Notifications		Sync Issues	
Tasks		Trash	

Note

AhsayOBM supports the folders types which are shown in the Outlook Web Access (OWA), except the Conversation History because it is not related to mail objects.

Below are the items that you can back up or restore from OneDrive.



Item	Supported?	Item	Supported?
Folders		Files	
Access Permissions		Albums	
Recycle Bin		Tag	

Below are the Site Collections/Personal Site items that you can back up or restore from an Office 365 backup set.

 Site Collections / Personal Site			
Item	Supported?	Item	Supported?
Announcements		Assets Libraries	
Bright Banner		Calendar	
Contacts		Custom Lists	
Data Connection Libraries		Discussion Boards	
External Lists		Form Libraries	
General Settings	1	Import Spreadsheets	
Issue Tracking		Links	
Look and Feel	2	Manage Site Features	
Newsfeed		Permissions and Management	3
Picture and Libraries		Report Libraries	
Site Collection Features		Site Page	
Survey		Version History	3
Wiki / Page Libraries			

Notes	
1	For the General Settings, only the List Name can be restored.
2	For the Look and Feel, only the Title can be restored.
3	For the Version History and Permissions and Management, the backup and restore are supported for OneDrive files and SharePoint documents (Document Library) only.

Below are the SharePoint Site Collections template that you can back up or restore from an Office 365 backup set.

SharePoint Site Level Collection			
Item	Supported?	Item	Supported?
Team Site		Team Site (Classic Experience)	
Blog		Project Site	
Developer Site		Community Site	
Document Center		eDiscovery Center	
Records Center		Business Intelligence Center	
Compliance Policy Center		Enterprise Search Center	
Community Portal		Basic Search Center	
Visio Process Repository		Enterprise Wiki	
Publishing Portal		Modern Communication Site	
Modern Team Sites			

Below is the Site Column Type that you can back up or restore from an Office 365 backup set.






Item	Supported?	Item	Supported?
CalendarFolderType		CalendarItemType	
ContactItemType		ContactsFolderType	
DistributionListType		FolderType	
MeetingCancellation MessageType		MeetingMessageType	
MeetingRequestMessa geType		MeetingResponseMess ageType	
MessageType		PostItemType	
SearchFolderType		TasksFolderType	
TaskType		UserConfigurationType	

Below are the items from the Public Folder that you can backup and restore from an Office 365 backup set.

Public Folders			
Item	Supported?	Item	Supported?
Folders		Files	

2.16 Maximum Supported File Size

The following table shows the maximum supported file size per item for backup and restore of each service.

Service	Maximum File Size
 Outlook with or without attachments (applies to User mailbox, Room mailbox, Shared mailbox, Equipment mailbox)	150 MB
 Public Folders with or without attachments	150 MB
 OneDrive	8 GB
 Personal Site	8 GB
 Site Collections	8 GB

2.17 Limitations

2.17.1 Ahsay Limitations

▶ Modern Authentication

- ⦿ Modern Authentication is only supported for Office 365 account that is registered in Global region and the Office 365 backup is configured to use Global region.
- ⦿ Migration to Modern Authentication is not supported on an Office 365 account without a Global Admin role; or during the migration process, the Office 365 account used to authenticate the migration does not have Global Admin role.
- ⦿ Backup and restore of the site features setting for SharePoint Site Collection and/or Personal Site using Modern Authentication is not supported.
- ⦿ Due to limitations in Microsoft API, when using Modern Authentication, backup and restore of SharePoint Web Parts and Metadata are not fully supported.
- ⦿ Backup sets using Modern Authentication do not support backup of external content types (through the linkage from selected lists).
- ⦿ Backup sets using Modern Authentication do not support backup and restore of the following:
 - Some list settings, currently known as Survey Options on survey list.
 - Feature setting for SharePoint Site and Personal Site.

▶ SharePoint

- ⦿ Document Libraries, List Items and their default Column Types will be supported, excluding customized Apps and SharePoint App Store applications.
- ⦿ Most of site lists will be supported, except for certain list types that will be skipped to restore due to API limitation, for example is Microfeed in Classic Team Site.
- ⦿ Site logos will NOT be restored, it is suggested revisiting the site setting page and manually add the missing images if necessary.
- ⦿ User-defined workflow templates will NOT be supported for backup and restore.
- ⦿ Recycle Bin will NOT be supported for backup and restore.
- ⦿ Most of Site level settings will NOT be restored, except for those essential to support the successful restore of the backup items e.g. Manage Site Feature / Site Collection Feature.
- ⦿ Most of List level settings (including List view) will NOT be restored, except for those essential to support the successful restore of backup items, e.g. item checkout settings. Following restore, it is suggested revisiting the relevant settings if necessary. This may affect list column ordering and visibility after restoring.
- ⦿ Restoring External Data column is NOT supported if external content type has been deleted via SharePoint Designer.

- ⦿ Restoring of multiple Value of managed metadata column when the key name (column name) contains space is NOT supported.
- ⦿ Restoring of list with local managed metadata column to alternate location is NOT supported.
- ⦿ The restore of SharePoint documents or folders with the following characters: / \ | * : " < > in item name to a Windows local computer is not supported. As Windows does not support these characters for either a file or folder name.
- ⦿ Restoring Newsfeed items in **Modern Team Site** will not publish the items to Homepage automatically, user will need to navigate to **Site Content > Page Library**> click on each individual news item and "Post" the news one by one manually.
 - Backup User (except for Global Admin) may not have permission to back up the site collection even if he/she can view it in the backup source tree. FOR EACH site collection, the user can backup it only if he/she is assigned as a site admin of that site collection.
 - If the user is assigned as site admin of the root level site collection only, he/she is not automatically added as site admin of other site collection under that root level site collection (i.e. If user is to backup specific site collection under the root, he/she has to be added as site admin of that specific site collection under the root also).
 - For site collection that can be viewed by user in the source tree which he/she is not yet assigned as a site administrator:
 - when user expand the node of that site collection, access denied error pop up will be given.
 - when user tick such site collection to backup, access denied error will be given in the backup log.

▶ OneDrive

- ⦿ Backup and restore of file share links will be supported for OneDrive and SharePoint Documents only, and only for restore to the same Office 365 organization.
- ⦿ Backup and restore of all versions will be supported for **OneDrive and SharePoint Documents** only, except for ".aspx" files.

▶ Outlook

- ⦿ **Online Archive Mailbox** will NOT be supported for backup and restore.
- ⦿ For Outlook mail item, after using restore to original location to overwrite a mail item (and hence id of the mail id is changed), then
 - In the backup source tree of the same backup set:
 - the original ticked item still use the old mail id to reference and becomes red item.
 - there is another item (with the latest mail id) created for that mail item

User will need to deselect the red item and tick the mail item again in the backup source tree in order to do the next backup properly. As per development team, the issue will not be handled as user's selected source should not be modified by system.

▶ Restore to Alternate location

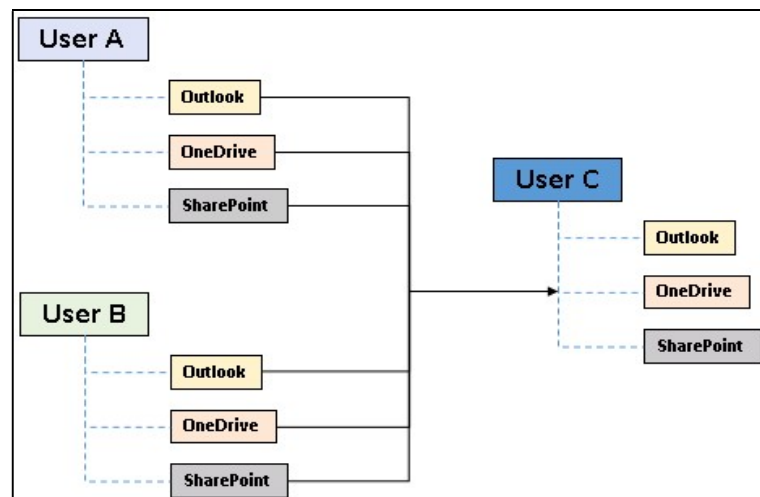
- ◉ Only administrator account or user account with administrative authority can restore backup items to an alternate location.
- ◉ If you are trying to restore item(s) from one user to an alternate location user, AhsayOBM will restore the item(s) to their respective destination folder(s) with the same name as the original folder(s).

Example: Item from Outlook of User-A will be restored to the Outlook of the alternate location User-B; Item from SharePoint of User-A will be restored to the SharePoint of the alternate location User-B.

- ◉ Restore of item(s) in public folder to an alternate location public folder is not supported.

Example: Restore of item(s) in public folder from User-A to alternate location User-B is not supported.

- ◉ When restoring to alternate location, data type "Person or Group" will not be restored. Following restore, it is suggested revisiting the relevant settings if necessary. This also affects "Assigned To" column values of some list templates (e.g. Tasks list), and "Target Audience" column values of some list templates (e.g. Content and Structure Reports).
- ◉ If you are trying to restore item(s) from several users to an alternate location user, AhsayOBM will restore the item(s) to their respective destination folder(s) in alternate location user with the same name as the original folder(s).



Example: Item from Outlook of User-A and User-B will be restored to the Outlook of the alternate location User-C.

▶ Restore to Alternate Office 365 account

If you are trying to restore item(s) from multiple Office 365 user account to an alternate Office 365 user account, AhsayOBM can only restore one Office 365 user account at a time.

▶ Restore to Alternate Organization

- ◉ Restoring of document library (including OneDrive) items 'Share Link' to alternate organization will trigger a warning message.
- ◉ Skip to restore **People and groups** and **Site permissions** to alternate origination.

▶ Restore data to a destination user which has a different language

If you are trying to restore the item to a destination user which has a different language setting than the original user, AhsayOBM will restore item(s) to their respective destination folder based on the translation listed below.

For folders such as 'Calendar' or 'Notes', a new folder 'Calendar' or 'Notes' will be created.

For folders in OneDrive and SharePoint, a new folder will be created.

▶ Restore existing documents in checked-out status

Restoring of existing documents in **checked out** status is supported only when the user who has **checked out** the file is the same user who is performing the restore.

Backup source (English)	Action	Destination User with Chinese as default language settings
Inbox	Merge	收件箱
Outbox	Merge	寄件匣
Sent Items	Merge	寄件備份
Deleted Items	Merge	刪除的郵件
Drafts	Merge	草稿
Junk E-Mail	Merge	垃圾電郵
Calendar	Create new folder	Calendar
Notes	Create new folder	Notes
OneDrive Folder	Create new folder	OneDrive Folder
SharePoint Folder	Create new folder	SharePoint Folder

2.17.2 Microsoft Limitations

▶ Exchange Online

For more detailed information on the limitations of Exchange Online, please refer to this Microsoft article, [Exchange Online Limits](#). These are some of the limitations that will be discussed in the Exchange Online Limits article:

- ◉ Address book
- ◉ Mailbox storage
- ◉ Capacity alerts
- ◉ Mailbox folder
- ◉ Message
- ◉ Receiving and sending
- ◉ Retention
- ◉ Distribution group

- ◉ Journal, Transport, and Inbox rule
- ◉ Moderation
- ◉ Exchange ActiveSync

▶ **OneDrive**

For more detailed information on the limitations of OneDrive, please refer to this Microsoft article, [OneDrive Limits](#). These are some of the limitations that will be discussed in the OneDrive Limits article:

- ◉ File name and path lengths
- ◉ Thumbnails and previews
- ◉ Number of items to be synced
- ◉ Information rights management
- ◉ Differential sync
- ◉ Libraries with specific columns
- ◉ Windows specific limitations

▶ **SharePoint**

For more detailed information on the limitations of SharePoint Online, please refer to this Microsoft article, [SharePoint Online Limits](#). These are some of the limitations that will be discussed in the SharePoint Online article:

◉ Limits by plan

Feature	Office 365 Business Essentials or Business Premium	Office 365 Enterprise E1, E3, or E5, or SharePoint Online Plan 1 or 2	Office 365 Enterprise F1
Total storage per organization ^{1, 2}	1 TB plus 10 GB per license purchased	1 TB plus 10 GB per license purchased ³	1 TB ³
Max storage per site collection ⁴	25 TB	25 TB	25 TB ⁵
Site collections per organization	1 million ⁶	1 million ⁶	1 million
Number of users	Up to 300	1- 500,000 ⁷	1- 500,000 ⁷

- ◉ Service limits for all plans, such as: items in lists and libraries, file size and file path length, moving and copying across site collections, sync, versions, SharePoint groups, managed metadata, subsites, etc.

2.18 Best Practices and Recommendations

The following are some best practices or recommendations we strongly recommend you follow before you start any Office 365 backup and restore.

Temporary Directory Folder Location (For backup and restore running on AhsayOBM only)

Temporary directory folder is used by AhsayOBM for storing backup set index files and any incremental or differential backup files generated during a backup job. To ensure optimal backup/restoration performance, it is recommended that the temporary directory folder is set to a local drive with sufficient free disk space.

Performance Recommendations

Consider the following best practices for optimized performance of the backup operations:

- Enable schedule backup jobs when system activity is low to achieve the best possible performance.
- Perform test restores periodically to ensure your backup is set up and performed properly. Performing recovery test can also help identify potential issues or gaps in your recovery plan. It is important that you do not try to make the test easier, as the objective of a successful test is not to demonstrate that everything is flawless. There might be flaws identified in the plan throughout the test and it is important to identify those flaws.

Set Backup Destination

After creating the backup set-in Run-on **Client** mode on AhsayCBS user web console, please remember to login AhsayOBM to set the backup destination if you want the backup destination to be Local/ Mapped Drive/ Removable Drive.

Backup Destination

To provide maximum data protection and flexible restore options for agent-based backup, it is recommended to configure:

- At least one offsite or cloud destination
- At least one local destination for fast recovery

However, for Agentless Cloud storage there may be an impact on the backup performance.

Log in AhsayOBM

After modifying the backup schedule setting of the **Run on Client** backup set on AhsayCBS user web console, please remember to log in to the AhsayOBM client once to synchronize the changes immediately.

Periodic Backup Schedule

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

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

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

◉ Authentication

Although Microsoft has moved the enforcement date for Modern Authentication from end of 2020 to the second half of 2021, since this new authentication is already available, it is recommended that backup sets be migrated to Modern Authentication. All newly created Office 365 backup sets on AhsayOBM v9.0.0.0 or above will automatically use Modern Authentication.

However, due to the current limitation with Microsoft API, Modern Authentication is currently not suitable for backup sets with Personal Sites and/or SharePoint Sites selected. As a temporary workaround, Office 365 backup sets which require backup of Personal Sites and/or SharePoint Sites selected should be migrated to Hybrid Authentication until the issue has been resolved by Microsoft.

◉ Large number of Office 365 users to Backup

In general, we recommend that each Office 365 backup set does not contain more than 2000 Office 365 users, to ensure a daily incremental backup job completes within 24 hours assuming that only small incremental daily changes will be made on the backup set.

However, the actual number of Office 365 users in a backup set may vary depending on the total number of Outlook, OneDrive, and SharePoint items, as well as the total size of these items. The actual number of Office 365 users in a backup set could be considerably less or could be more than 2000.

For details on the actual item count and size of Office 365 user, it is recommended to check in the Microsoft 365 Admin Centre, please refer to [Appendix I: How to view Item count and Storage used in Microsoft 365 Admin Center](#).

Also, by splitting up all the users into separate backup sets, the more backup sets, the faster the backup process can achieve.

It is also a requirement that for every split backup sets should have its own unique user account for authentication to minimize the probability of throttling from Microsoft.

Example: If there are 10 split backup sets, then there should be 10 unique user accounts for authentication.

For more detailed example, refer to [Appendix B: Example for backup large numbers of Office 365 users](#).

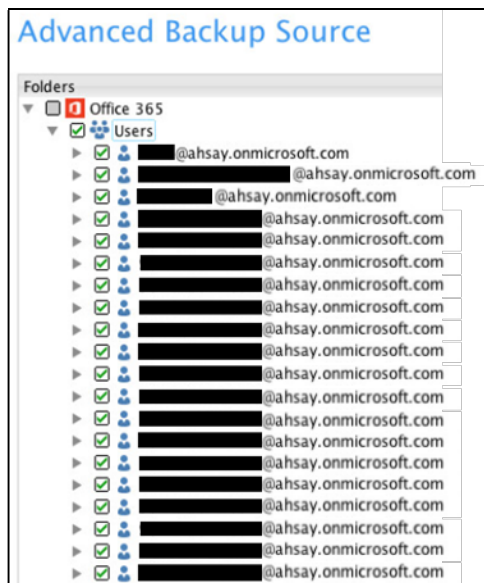
Concurrent Backup Thread

The value of 4 concurrent backup threads is found to be the optimal setting for Office 365 backups, to ensure best backup performance, minimal resource usage, and lowest probability of throttling of Ahsay backup requests by Microsoft Office 365.

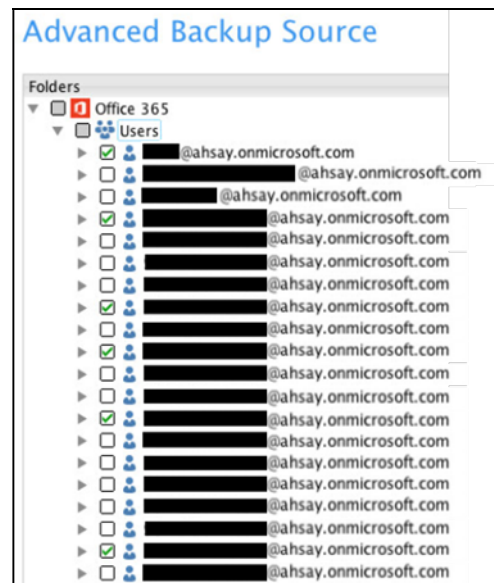
Backup Source

For Office 365 backup sets there are two approaches for backup source selection. Below are the sample screenshots of the selection All Office 365 users and Selective 365 user.

All Office 365 users



Selective Office 365 user



All Office 365 users

If you tick the “Users” checkbox, all of the sub Office 365 user accounts will automatically be selected.

Selective Office 365 user

If you tick selective Office 365 user accounts, you will notice that the “Users” checkbox is highlighted with gray color. This indicates that not all the users are selected.

These are the Pros and Cons when selecting a backup source from all Office 365 users and selective Office 365 user.

	All Office 365 users	Selective Office 365 user
Backup Set Maintenance	The Admin does not need to manage the backup set, i.e. to select or unselect use when an Office 365 user account was added or removed, the changes are automatically updated in the backup source.	The Admin will have to select or unselect users manually when an Office 365 user account was added or removed, as the changes are not automatically updated in the backup source this can be very time consuming. If an Office 365 user account is removed from the domain and

		<p>the admin forgets to unselect the Office 365 user account from the backup source, then this will cause a warning that the user does not exist.</p> <p>For more details on the backup set maintenance, please see, Appendix E: Example Scenario for Backup Set Maintenance</p>
Office 365 License	<p>The backup user account must have additional Office 365 license modules assigned to cover any increases Office 365 users. Otherwise, if additional users are added without sufficient modules, then this will cause backup quota exceeded warning and additional users will not be backed up.</p> <p>For more details on the computation on the required license, please see, Appendix A: Example Scenarios for Office 365 License Requirement and Usage</p>	<p>This will allow the admin to easily control or manage the number of license modules used for the backup set.</p>
Backup Time	<p>All Office 365 user accounts will be backed up. This means the initial of full backup job will take longer, any subsequent incremental backup will take longer.</p>	<p>Only selective Office 365 user accounts will be backed up. This will mean the initial of full backup job will be faster, any subsequent incremental backup will be faster.</p>
Storage	<p>As all Office 365 user accounts are backed up, more storage will be required.</p>	<p>As only selective Office 365 user accounts will be backed up, the backup set will require relatively less storage.</p>

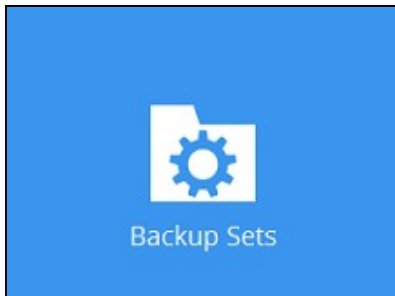
3 Creating an Office 365 Backup Set

Basic Authentication will not be utilized anymore. Instead, there are two types of authentication that can be used in creating a backup set namely [Modern Authentication](#) or [Hybrid Authentication](#).

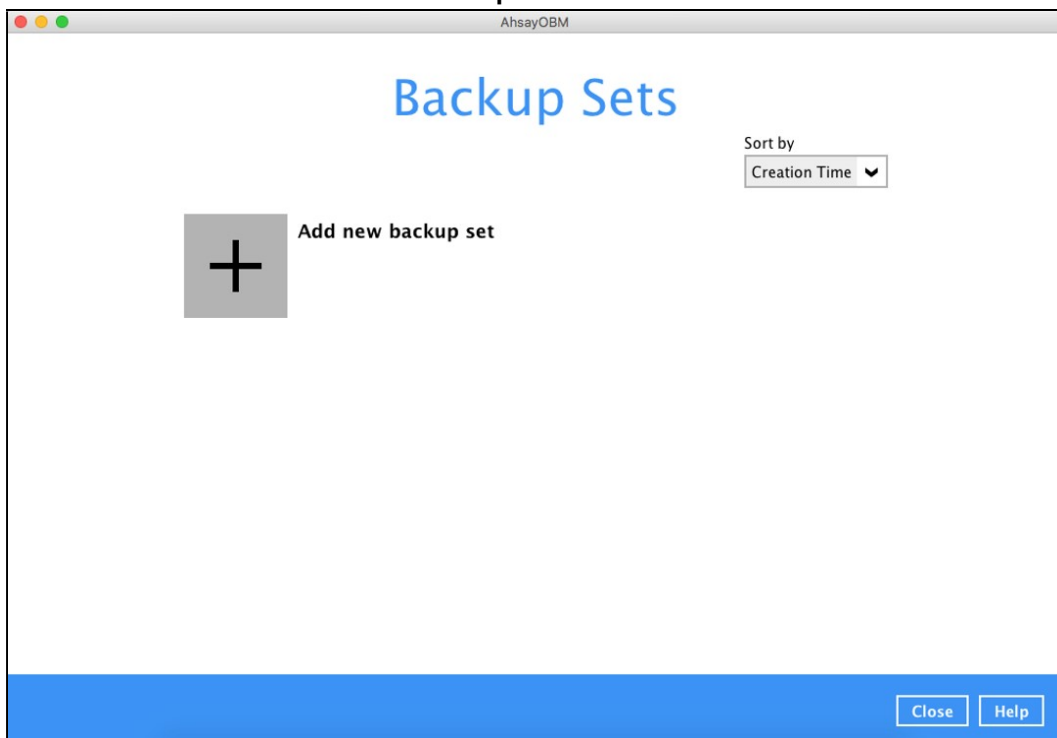
1. Log in to AhsayOBM.

For instructions on how to do this please refer to [Chapter 7](#) of the AhsayOBM v9 Quick Start Guide for Mac.

2. In the AhsayOBM main interface, click **Backup Sets**.

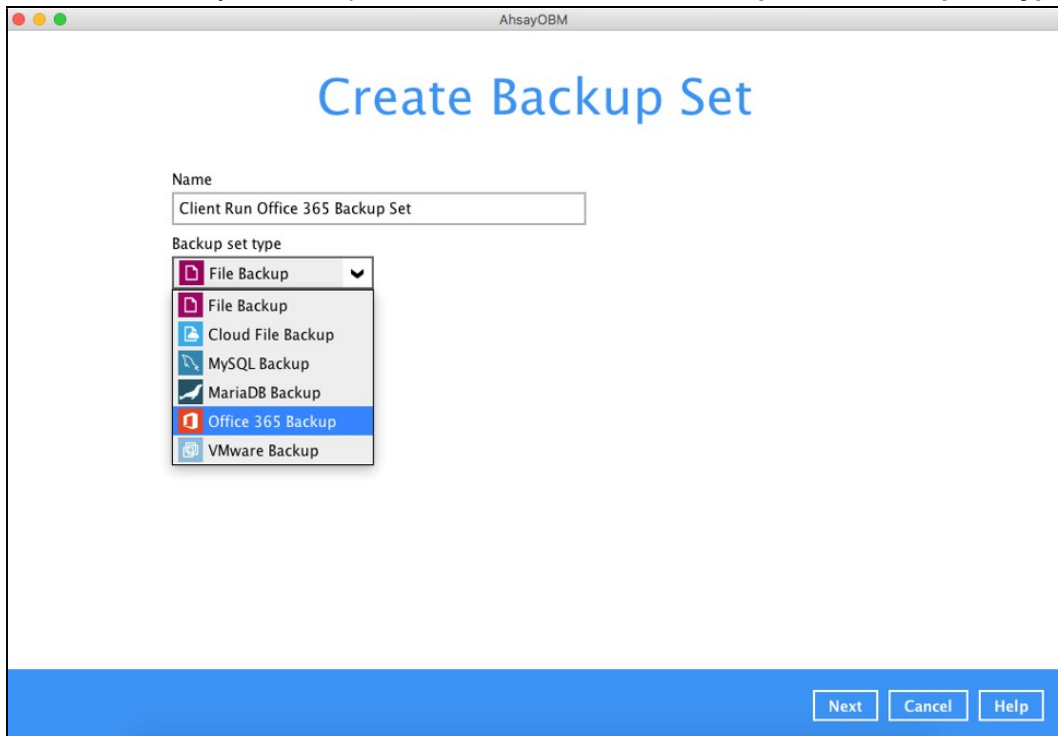


3. Click the "+" icon next to **Add new backup set**.



- This step will determine if the backup set created will use Modern Authentication or Hybrid Authentication.

Enter a **Name** for your backup set and select **Office 365 Backup** as the **Backup set type**.



AhsayOBM

Create Backup Set

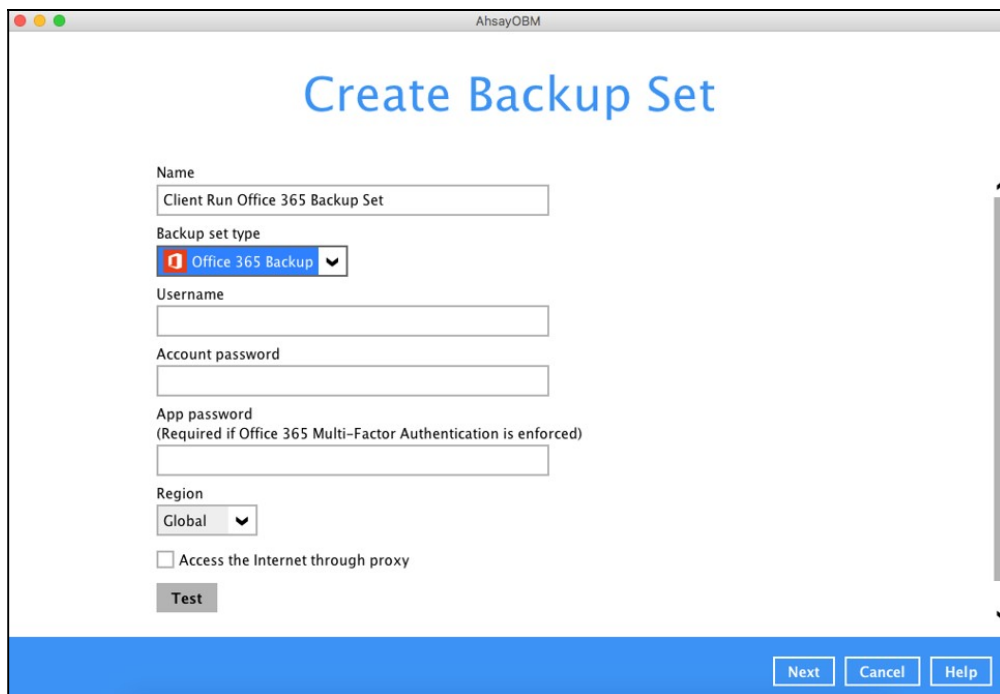
Name
Client Run Office 365 Backup Set

Backup set type

- File Backup
- File Backup
- Cloud File Backup
- MySQL Backup
- MariaDB Backup
- Office 365 Backup**
- VMware Backup

Next Cancel Help

- For **Modern Authentication**, leave the **Username** and **Account password** blank and click **Test**.



AhsayOBM

Create Backup Set

Name
Client Run Office 365 Backup Set

Backup set type
Office 365 Backup

Username
[Empty]

Account password
[Empty]

App password
(Required if Office 365 Multi-Factor Authentication is enforced)
[Empty]

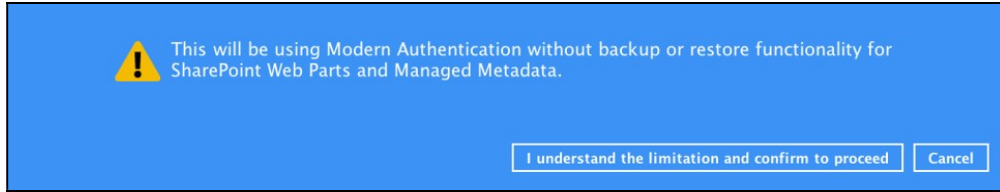
Region
Global

Access the Internet through proxy

Test

Next Cancel Help

Click **I understand the limitation and confirm to proceed**.



- For **Hybrid Authentication**, enter the **Username**, **Account password** and select the **Region**. If MFA is enforced, also enter the **App password**. Then click **Test**.

AhsayOBM

Create Backup Set

Name
Client Run Office 365 Backup Set

Backup set type
Office 365 Backup

Username
csv-manila@ahsay.onmicrosoft.com

Account password
•••••

App password
(Required if Office 365 Multi-Factor Authentication is enforced)

Region
Global

Access the Internet through proxy

Test

Next Cancel Help

The following screens will only be displayed if MFA is enforced, otherwise proceed to [Step 5](#).

Enter the code sent to your mobile device and click **Verify**.

Office 365 Multi-Factor Authentication

A sms is sent to your mobile device, please type in the code shown in the sms message

048473

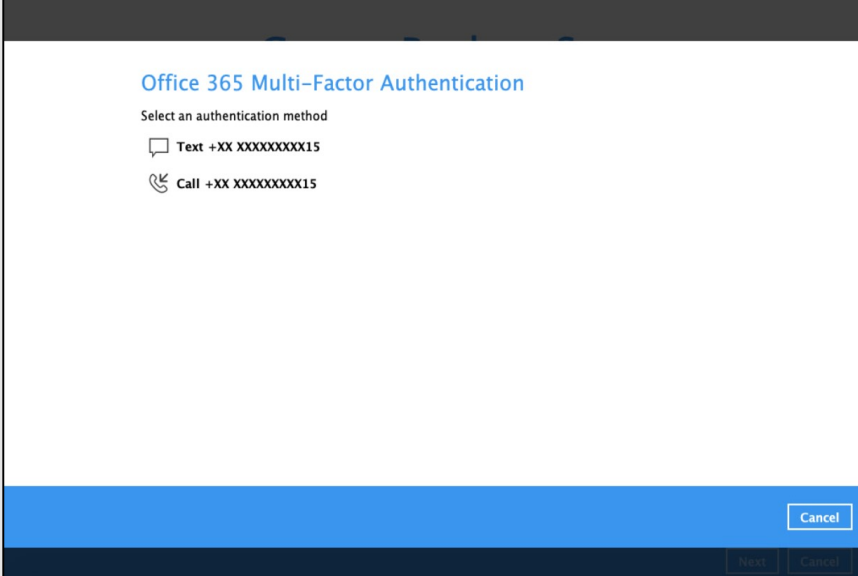
Use another method to authenticate

Verify Cancel

Next Cancel

or

If you clicked **Use another method to authenticate** link, select between Text or Call.



Office 365 Multi-Factor Authentication

Select an authentication method

Text +XX XXXXXXXXXXX15

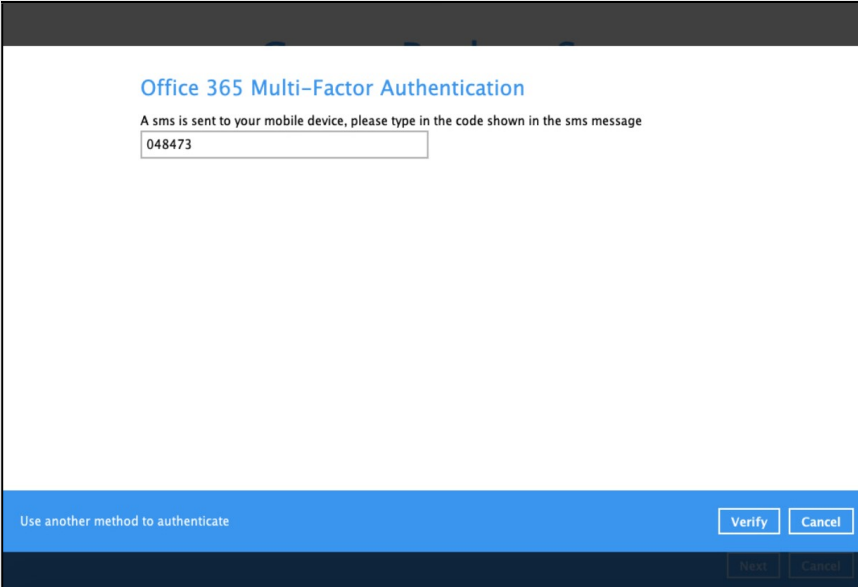
Call +XX XXXXXXXXXXX15

Cancel

Next Cancel

This screenshot shows the 'Office 365 Multi-Factor Authentication' selection screen. It has a white background with a blue header bar. The title 'Office 365 Multi-Factor Authentication' is in blue. Below it, the text 'Select an authentication method' is in black. There are two radio button options: 'Text +XX XXXXXXXXXXX15' and 'Call +XX XXXXXXXXXXX15'. At the bottom, there is a blue bar with a 'Cancel' button on the right. Below the blue bar, there are 'Next' and 'Cancel' buttons.

- If Text is selected, enter the code sent to your mobile device and click **Verify** to proceed.



Office 365 Multi-Factor Authentication

A sms is sent to your mobile device, please type in the code shown in the sms message

048473

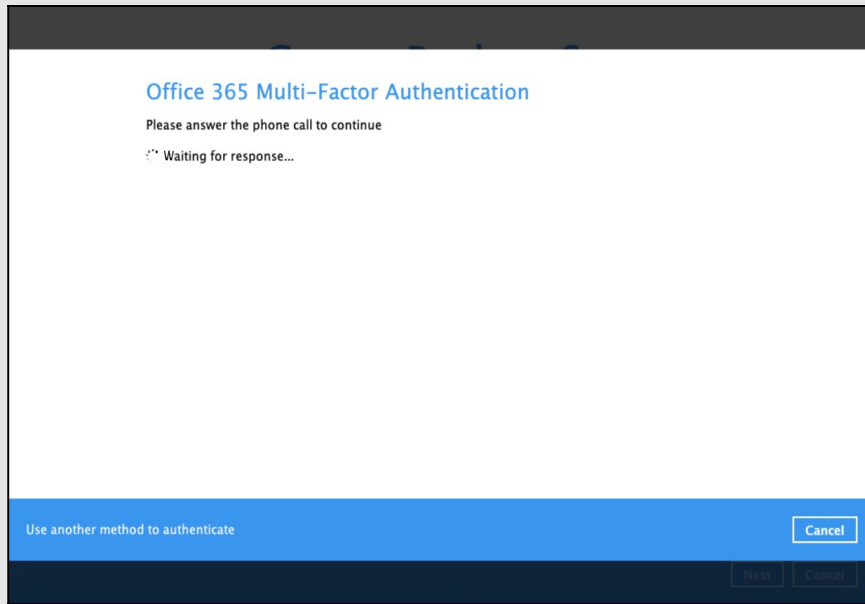
Use another method to authenticate

Verify Cancel

Next Cancel

This screenshot shows the verification screen for Office 365 Multi-Factor Authentication. It has a white background with a blue header bar. The title 'Office 365 Multi-Factor Authentication' is in blue. Below it, the text 'A sms is sent to your mobile device, please type in the code shown in the sms message' is in black. There is a text input field containing the code '048473'. At the bottom, there is a blue bar with the text 'Use another method to authenticate' on the left and 'Verify' and 'Cancel' buttons on the right. Below the blue bar, there are 'Next' and 'Cancel' buttons.

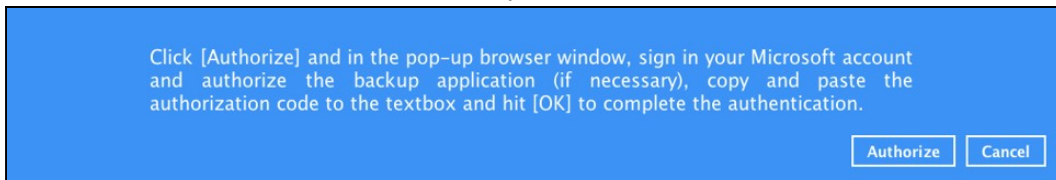
- If Call is selected, you will receive a call from a third-party app. From there follow the instructions to proceed with the authentication.



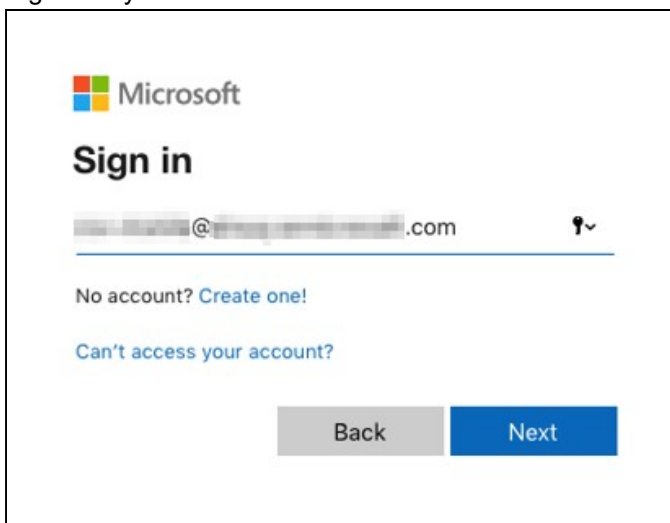
NOTE

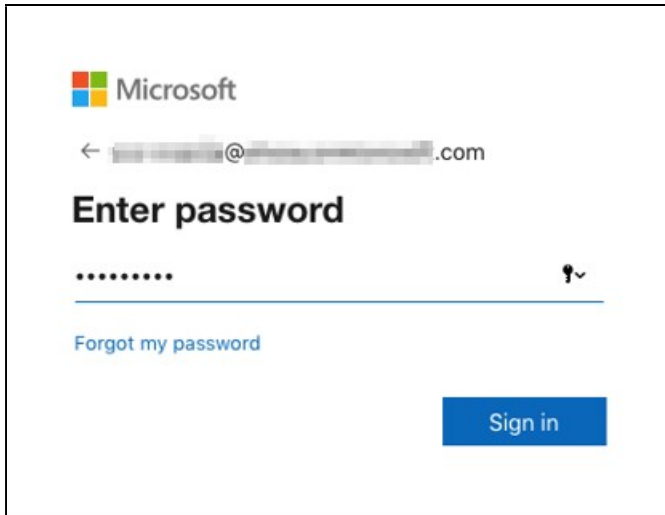
- The App password is only required if the MFA status of an Office 365 account is enforced.
- If the MFA of the Office 365 user account will be enabled later on, it is highly advisable to login to AhsayOBM and re-authenticate the Office 365 user account's credential using the MFA App password. Otherwise the scheduled backups of the Office 365 backup set will stop working.

5. Click **Authorize** to start the authentication process.



Sign in to your Microsoft account.






Microsoft

← [redacted]@[redacted].com

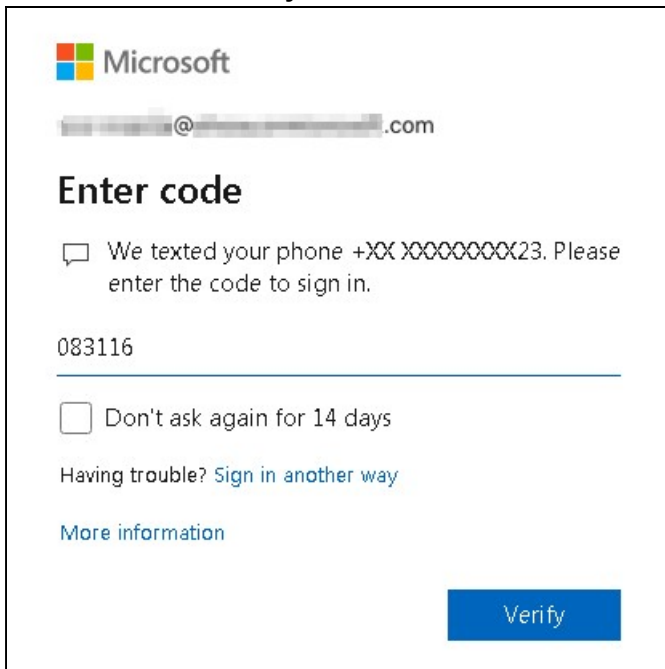
Enter password

..... 

[Forgot my password](#)

[Sign in](#)

If MFA is enforced for the Office 365 user account used to authenticate the backup set, enter the code and click **Verify**.



Microsoft

[redacted]@[redacted].com

Enter code

We texted your phone +XX XXXXXXXXXX23. Please enter the code to sign in.

083116

Don't ask again for 14 days

Having trouble? [Sign in another way](#)

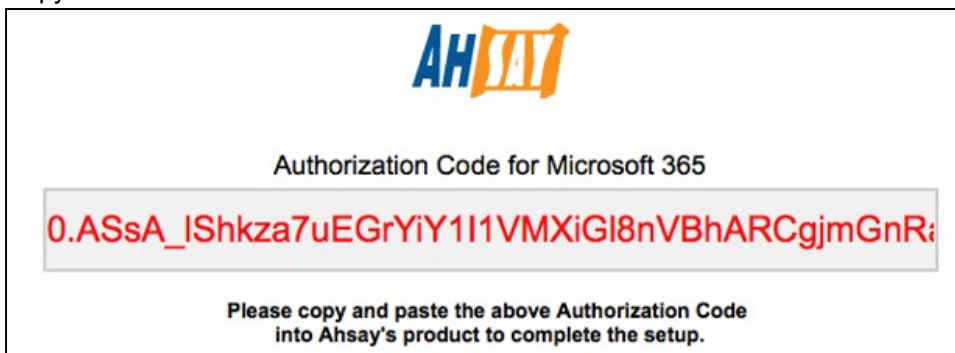
[More information](#)

[Verify](#)

NOTE

The verification code is only required if the MFA status of an Office 365 account is enforced.

Copy the authorization code.



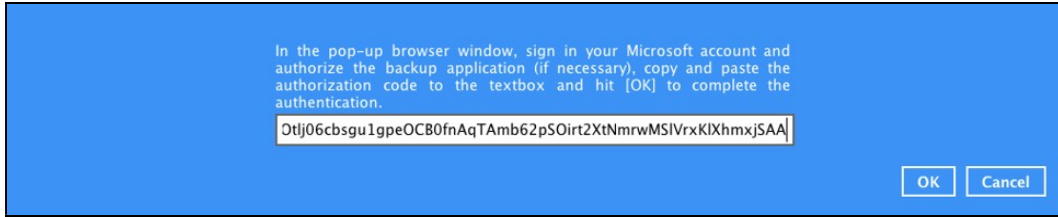
AHSAY

Authorization Code for Microsoft 365

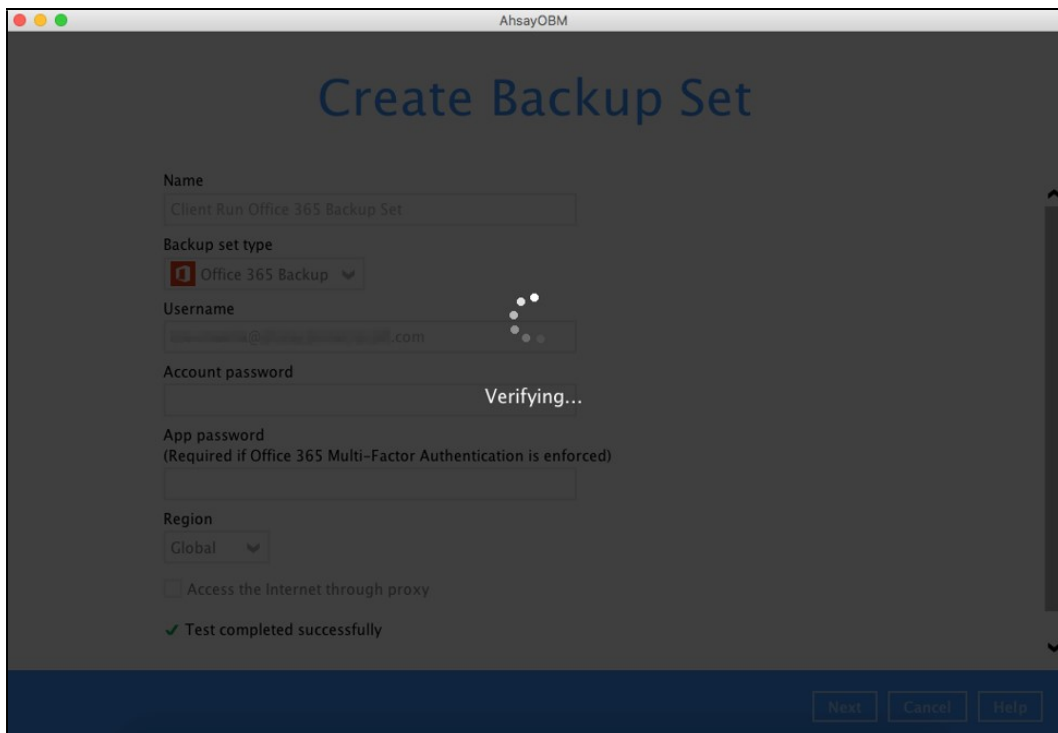
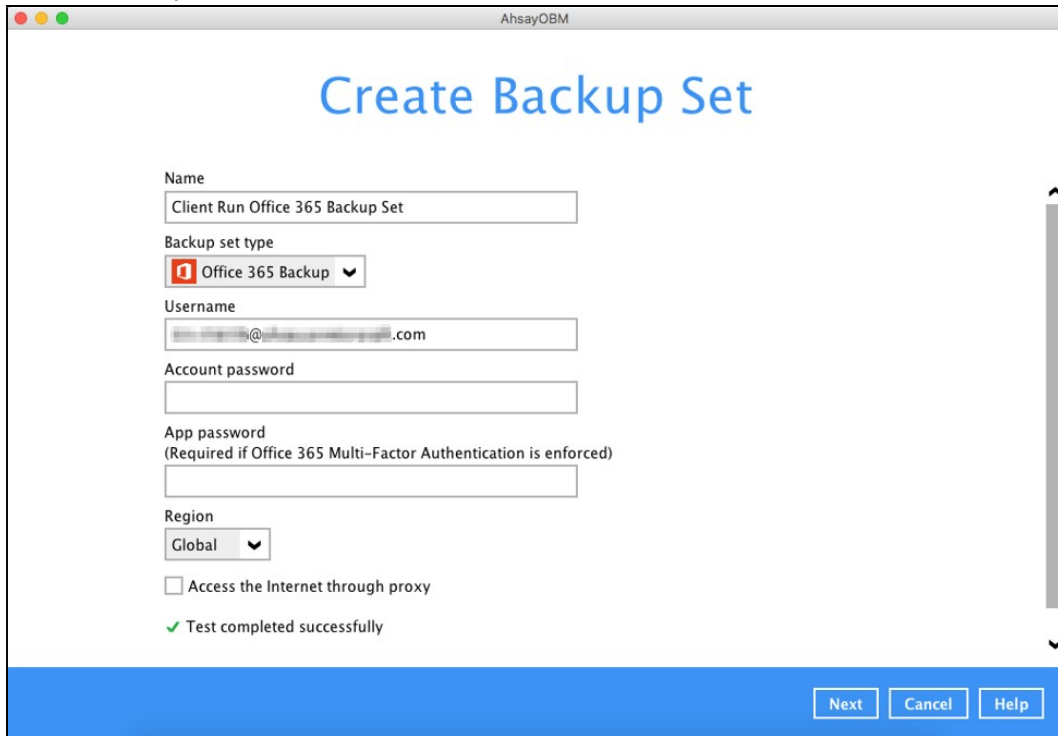
0.ASSa_IShkza7uEGrYiY111VMXiGI8nVBhARCgjmGnRi

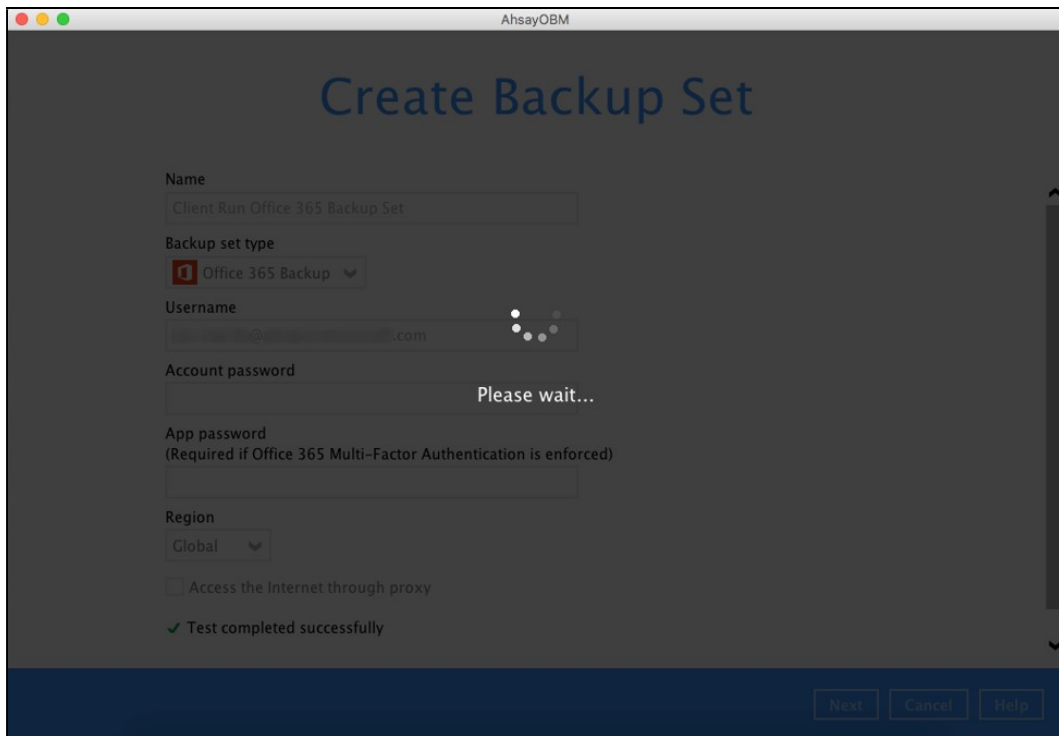
Please copy and paste the above Authorization Code into Ahsay's product to complete the setup.

Go back to AhsayOBM and paste the authorization code. Click **OK** to proceed.

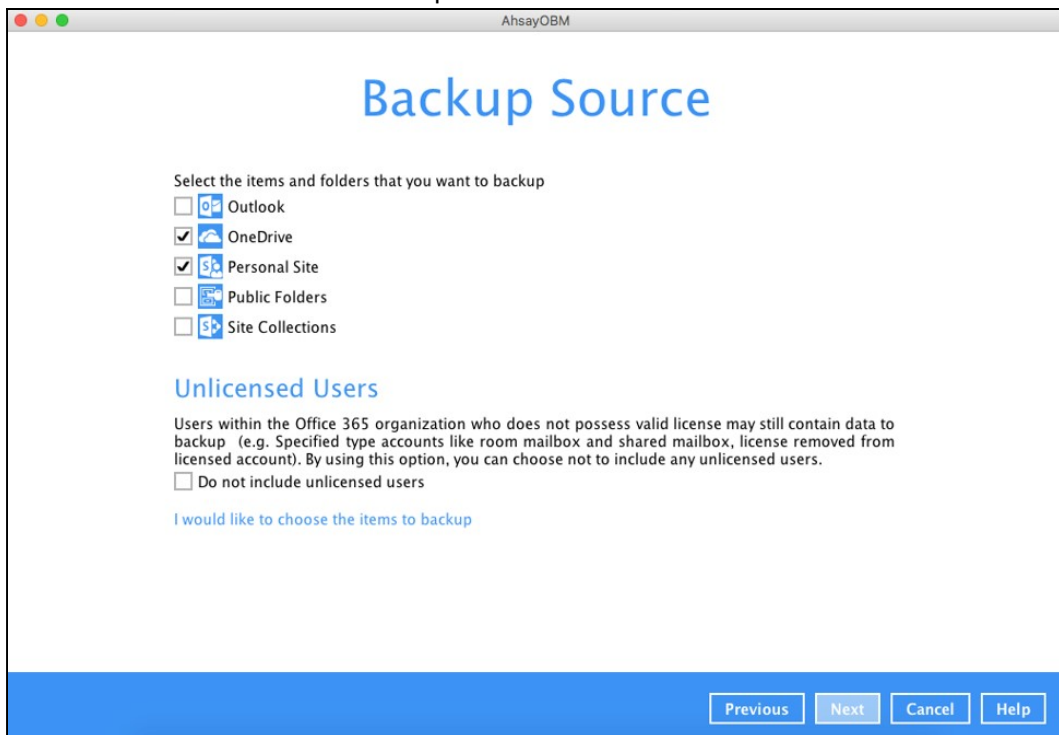


Test completed successfully shows when the validation is successful. Click **Next** to proceed to the next step.

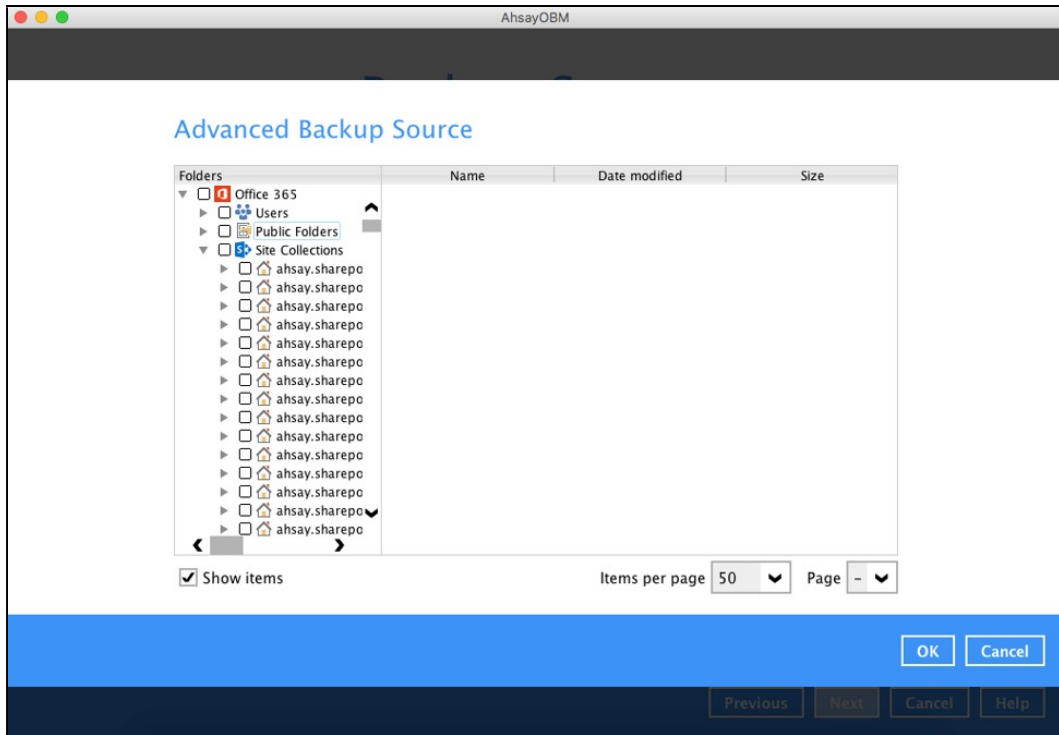




6. In the **Backup Source** menu, select the desired Outlook, OneDrive, Personal Site, Public Folders or Site Collections for backup.

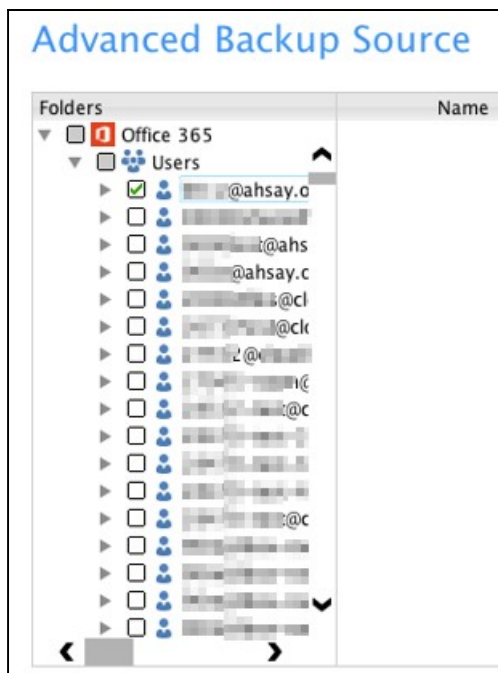


Or click **I would like to choose the files to backup** to choose the detailed files to back up. Enable the **Show files** checkbox at the bottom left corner if you would like to choose individual items for backup.



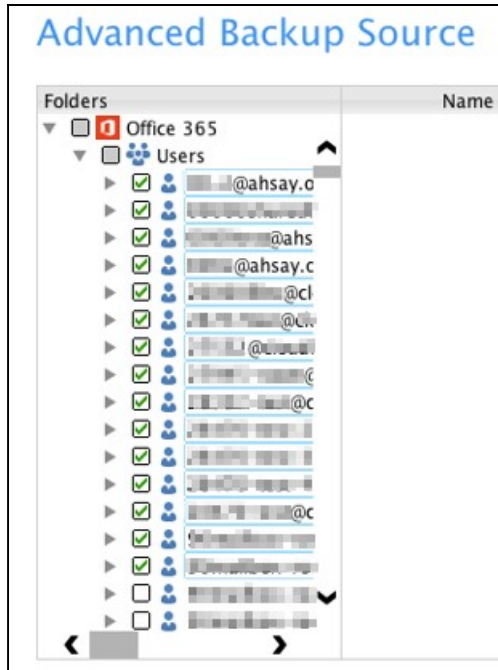
If you will select a large number of items to backup, like 1000 items, you need to click on these 1000 items to select/deselect them individually. Now there is a shortcut that you can use to lessen the burden of selecting/deselecting every 1000 item. You can select/deselect all 1000 items at once by using the Shift key. As an example, we will only show how to do this by selecting only 15 users which would fit in our screen. Follow the steps below on how to do this:

- i. Select the first user.



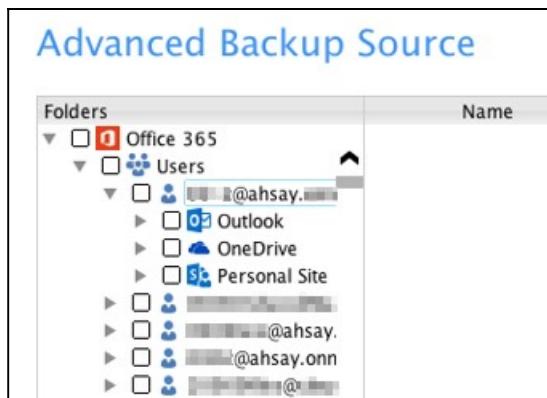
- ii. Scroll down to the 15th user.

- iii. Hold the Shift key then click the 15th user. All the 15 users are now selected.

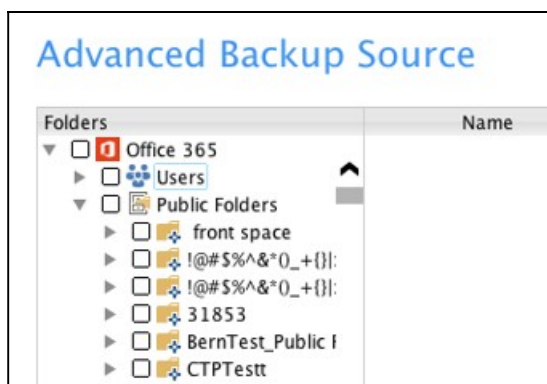


Below are example screenshots for the Users, Public Folders, and Site Collections.

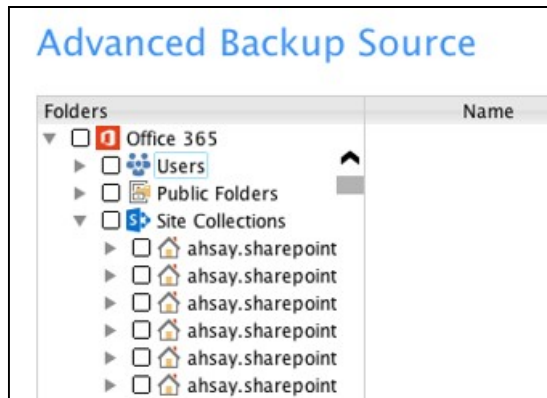
- Users: include Outlook, OneDrive and Personal Sites



- Public Folders: include public folders

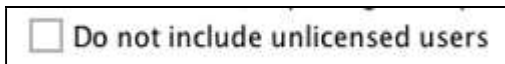


- Site Collections: include Personal Sites and Site Collections



Click **OK** when you are done with the selection to proceed.

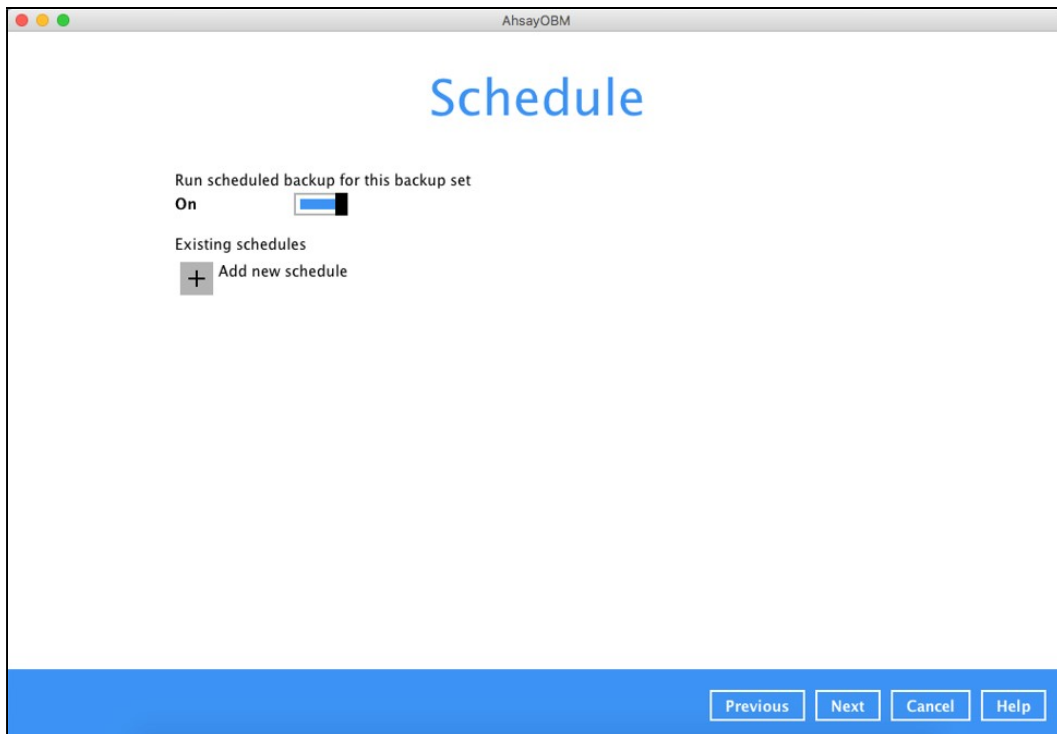
You also have the option not to include unlicensed users in the backup by ticking the **Do not include unlicensed users** checkbox.



Click **Next** to continue.

7. In the Schedule menu, configure a backup schedule for backup job to run automatically at your specified time interval.

Slide the on/off button to turn on this feature, then click **Add new schedule** to add a new schedule.



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

AhsayOBM

New Backup Schedule

Name
Daily-1

Type
Daily

Start backup
at 13 : 46

Stop
until full backup completed

Run Retention Policy after backup

OK Cancel Help

Previous Next Cancel Help

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

New Backup Schedule

Name
Daily-1

Type
Daily

Start backup
at 18 : 00

Stop
until full backup completed

Run Retention Policy after backup

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

New Backup Schedule

Name
Weekly-1

Type
Weekly

Backup on these days of the week
 Sun Mon Tue Wed Thu Fri Sat

Start backup
at 19 : 00

Stop
until full backup completed

Run Retention Policy after backup

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

New Backup Schedule

Name
Monthly-1

Type
Monthly

Backup on the following day every month
 Day 1
 Last Sunday

Start backup at
20 : 00 on the selected days

Stop
until full backup completed

Run Retention Policy after backup

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

New Backup Schedule

Name
Custom-1

Type
Custom

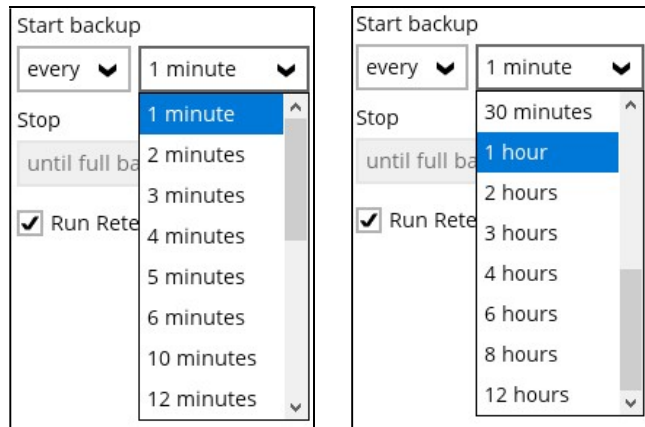
Backup on the following day once
2022 December 31

Start backup at
21 : 00

Stop
until full backup completed

Run Retention Policy after backup

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



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

Figure 1.1

Figure 1.2

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

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

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

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

For example, if a backup set 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.

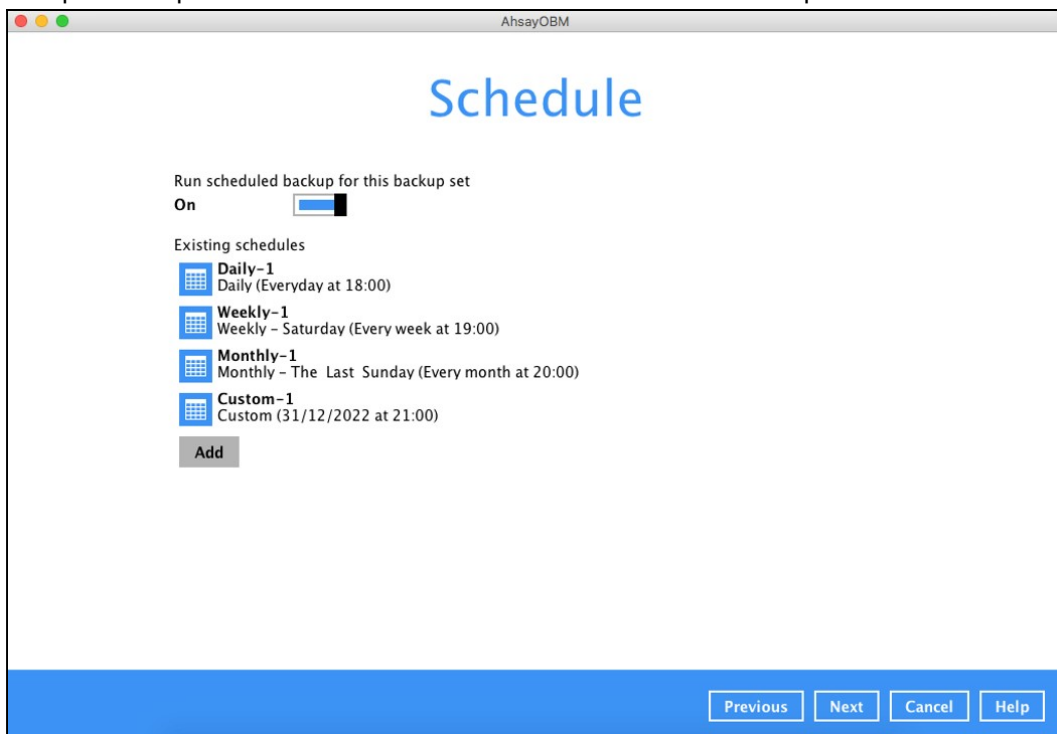
The partially backed up data will have to be removed by running the data integrity check.

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

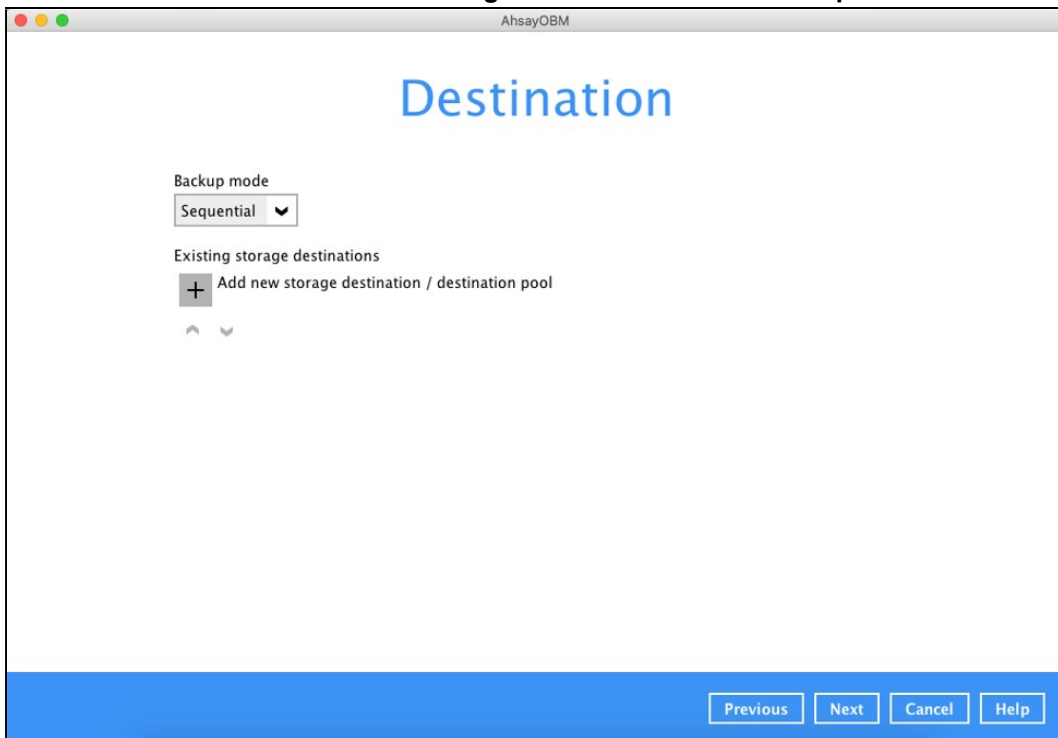
- **Run Retention Policy after backup** – if enabled, the AhsayOBM will run a retention policy job to remove files from the backup destination(s) which have exceeded the retention policy after performing a backup job.

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

Multiple backup schedules can be created. Click the **Next** button to proceed.



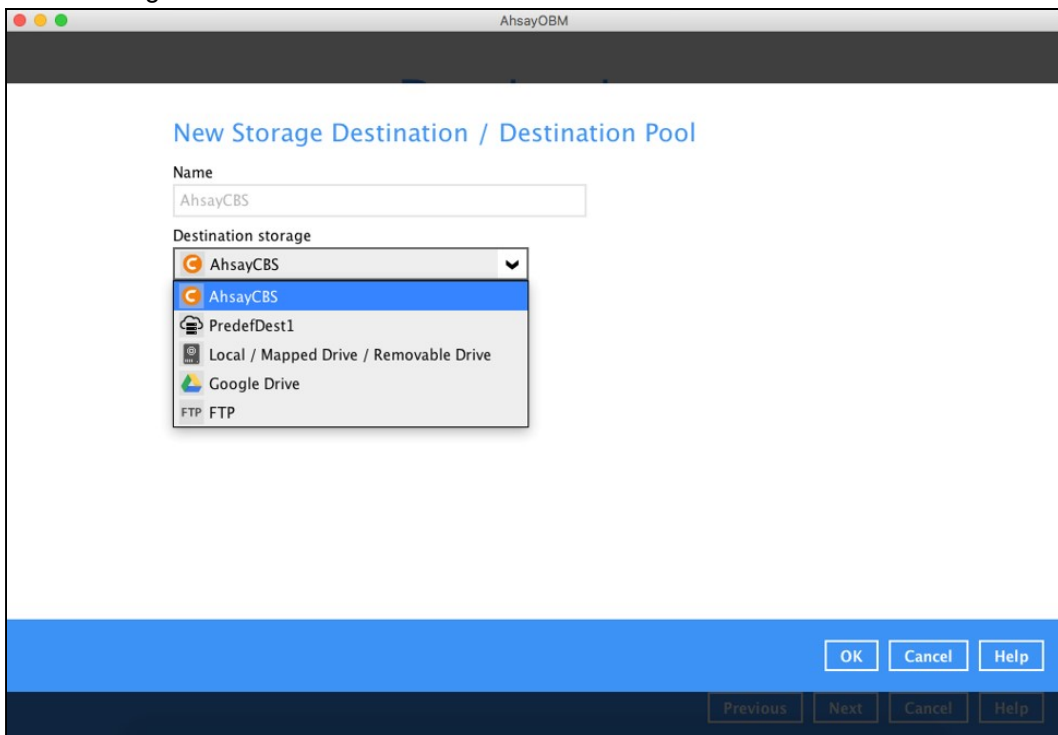
8. In the **Destination** menu, select a backup destination where the backup data will be stored. Click the “+” icon next to **Add new storage destination / destination pool**.



NOTE

For more details on Backup Destination, refer to the following Wiki article for details:
[FAQ: Frequently Asked Questions on Backup Destination](#)

Select storage destinations.



You can choose a storage combination of Local/Mapped Drive/Removable Drive or Cloud storage. Click **OK** to proceed when you are done with the settings.

- If you have chosen the **Local / Mapped Drive / Removable Drive** option, click **Change** to browse to a directory path where backup data will be stored.

AhsayOBM

New Storage Destination / Destination Pool

Name
Local-1

Destination storage
Local / Mapped Drive / Removable Drive

Local path
/Users/admin/Documents/Backup Change

Test

OK Cancel Help

Previous Next Cancel Help

Click **Test** to validate the path.

AhsayOBM

New Storage Destination / Destination Pool

Name
Local-1

Destination storage
Local / Mapped Drive / Removable Drive

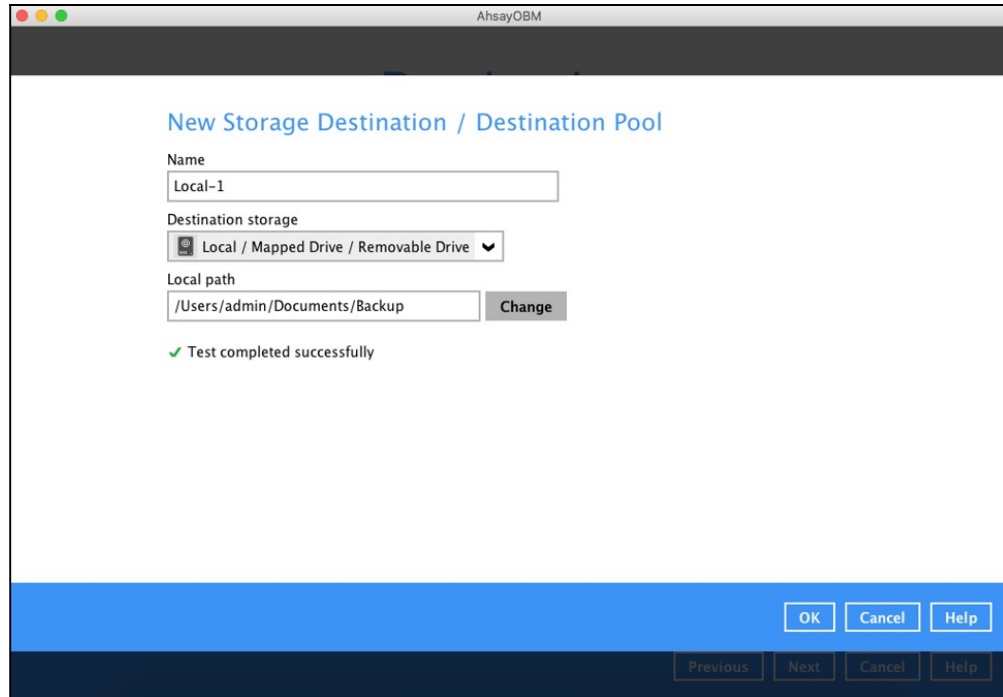
Local path
/Users/admin/Documents/Backup Change

:** Testing access to destination...

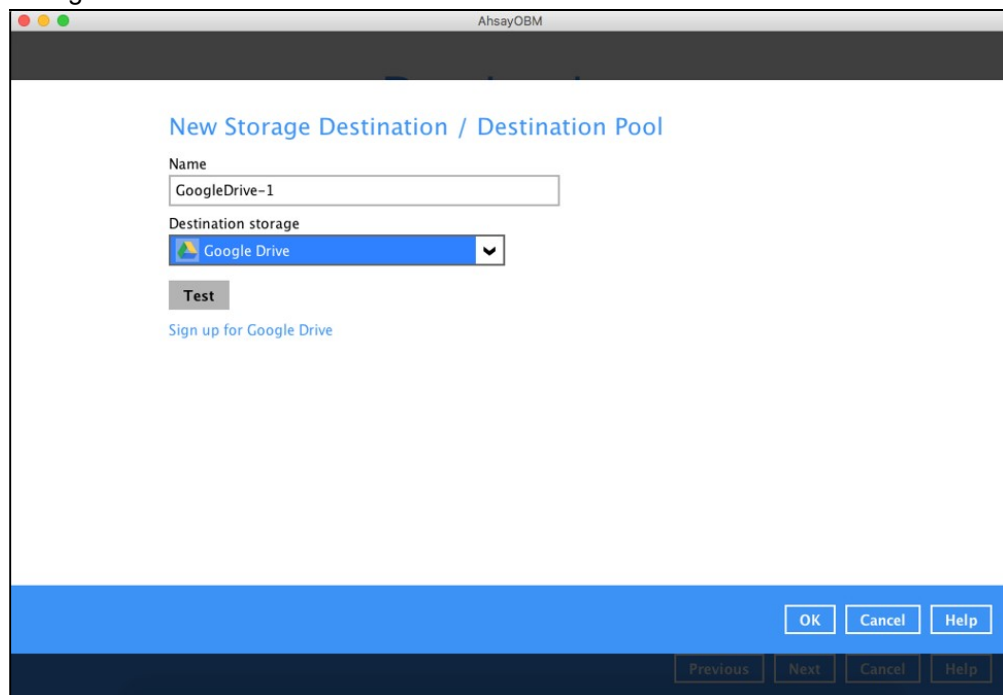
OK Cancel Help



Previous Next Cancel Help

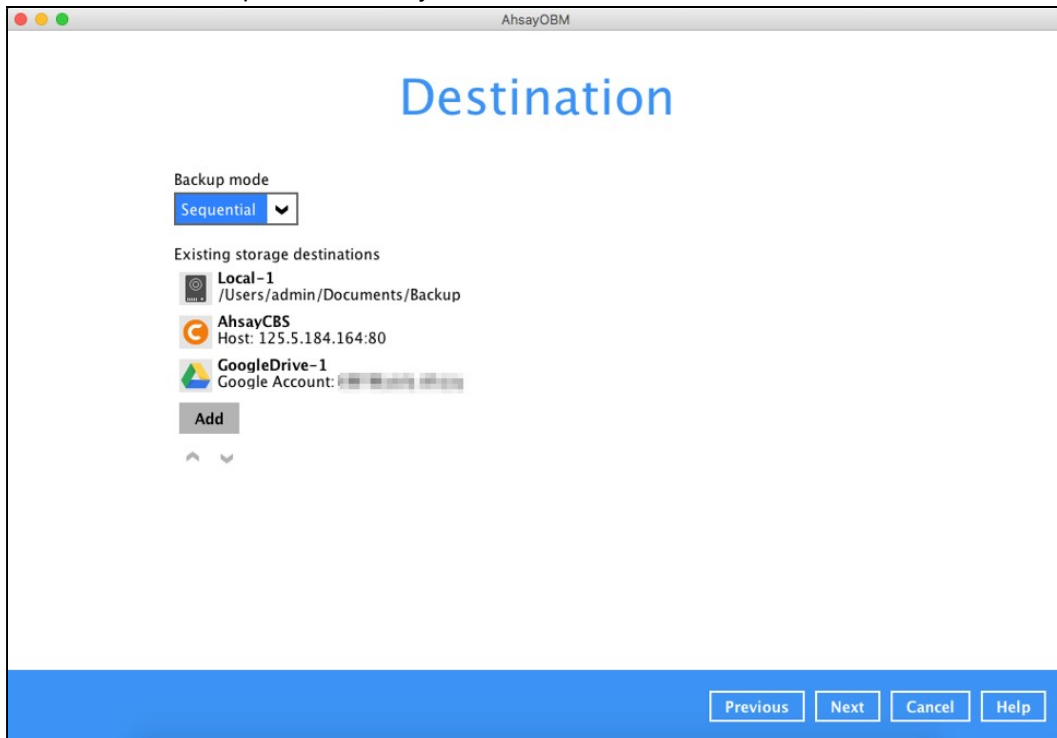
Test completed successfully shows when the validation is done.



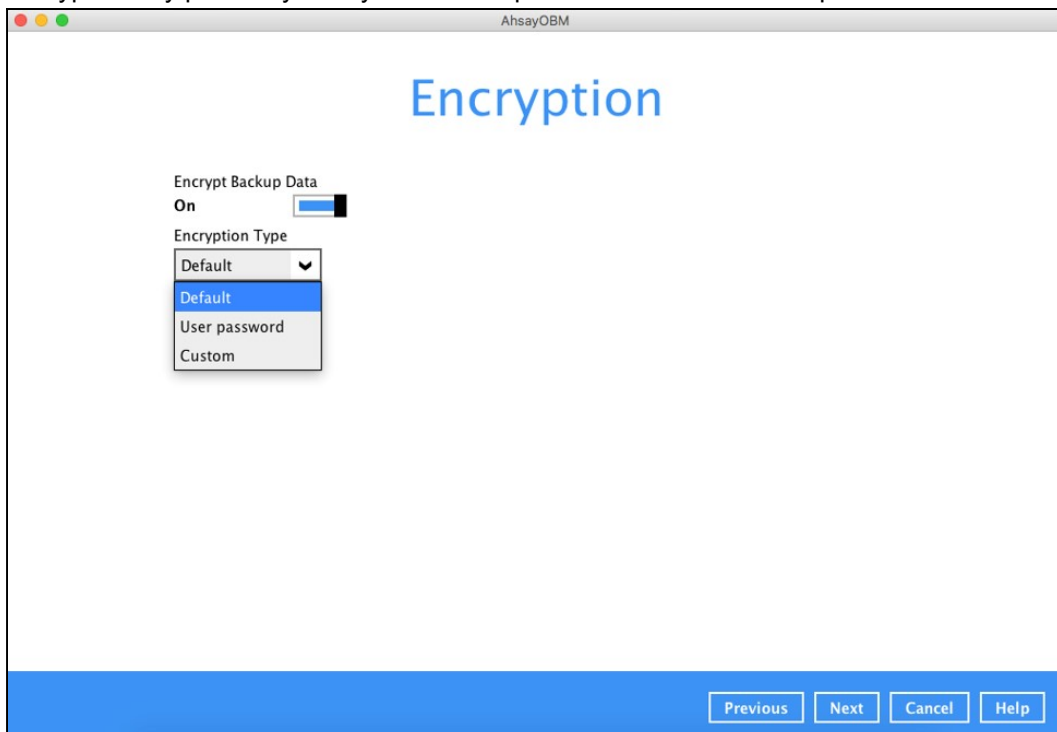
- If you have chosen the Cloud Storage, click **Test** to log in to the corresponding cloud storage service.



You can add multiple storage destinations. The backup data will be uploaded to all the destinations you have selected in the order you added them. Press the   icon to alter the order. Click **Next** to proceed when you are done with the selection.



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



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

- **Default** – an encryption key with 44 alpha numeric characters will be randomly generated by the system
- **User password** – the encryption key will be the same as the login password of your AhsayOBM at the time when this backup 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.

Encryption

Encrypt Backup Data
On

Encryption Type
Custom ▼

Algorithm
AES ▼

Encryption key
.....

Re-enter encryption key
.....

Method
 ECB CBC

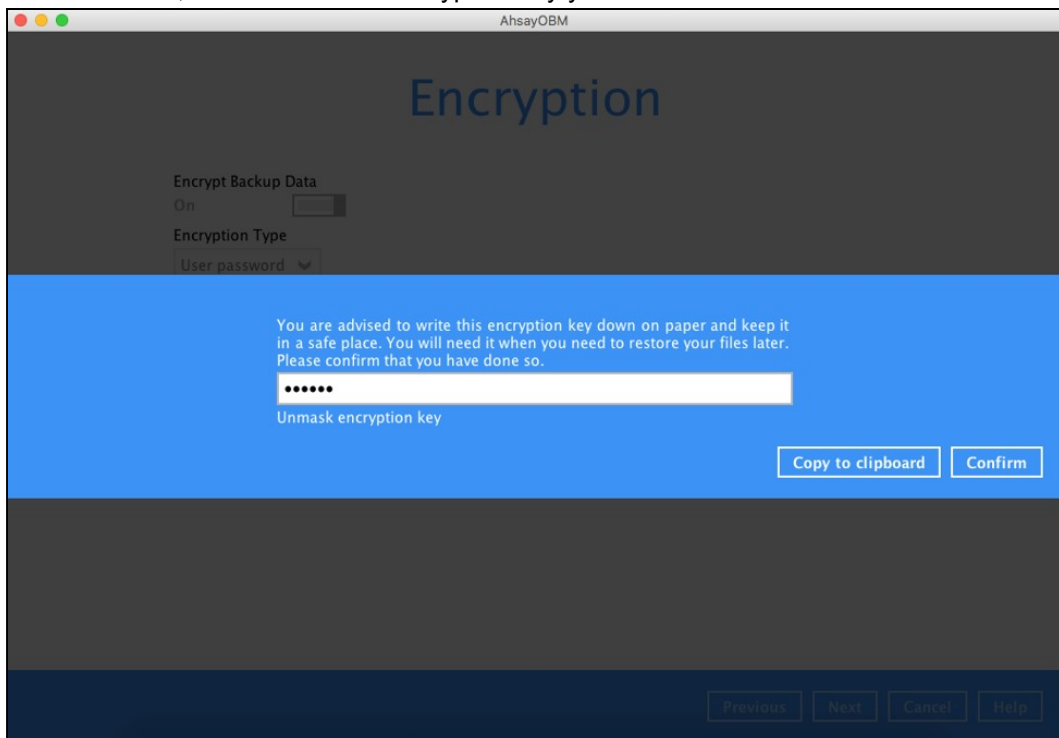
Key length
 128-bit 256-bit

NOTE

For best practice on managing your encryption key, refer to the following Wiki article.
[FAQ: Best practices for managing encryption key on AhsayOBM or AhsayACB?](#)

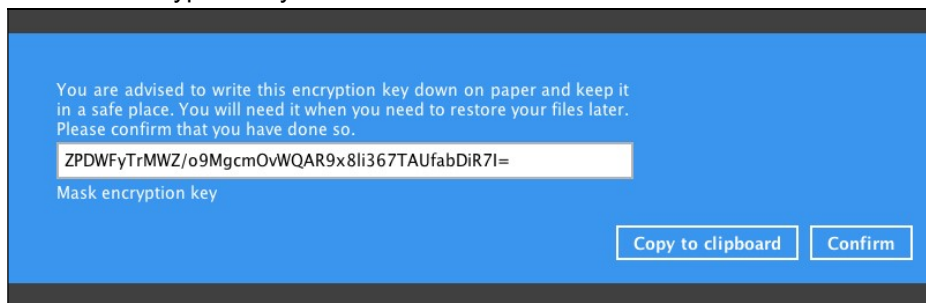
Click **Next** when you are done setting.

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



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

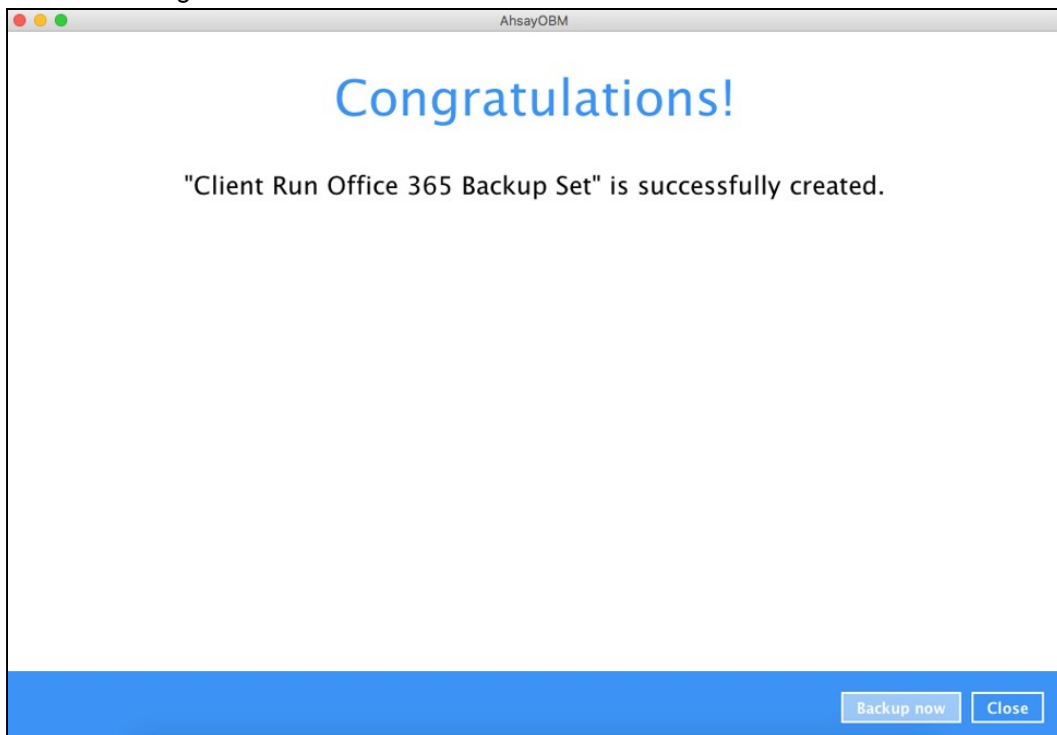
- **Unmask encryption key** – The encryption key is masked by default. Click this option to show the encryption key.



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

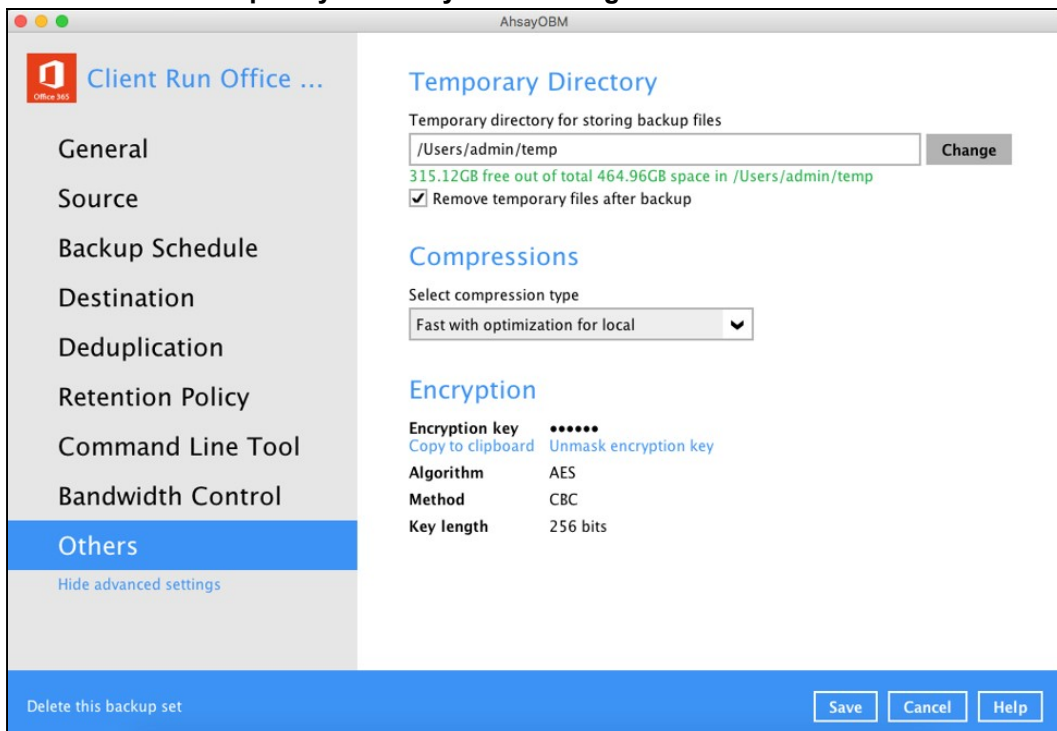
Click **Next** to create the backup set.

11. The following screen is displayed when the new Office 365 backup set is created successfully. Click Close to go back to main screen.



12. Based on [Best Practices and Recommendations](#), it is highly recommended to change the Temporary Directory. Select another location with sufficient free disk space other than /Users/admin//temp.

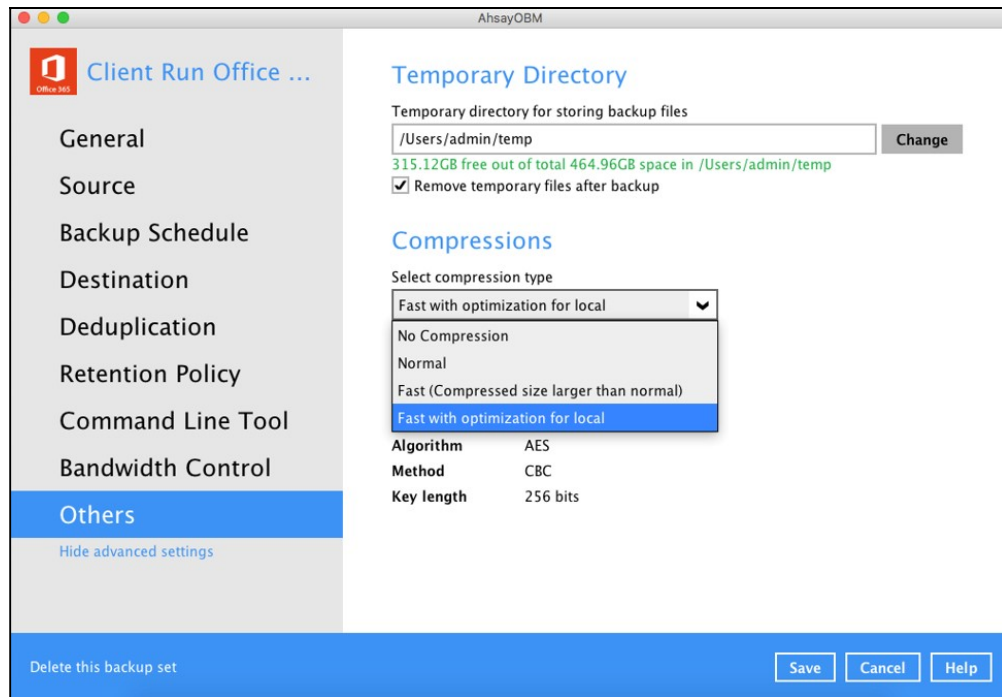
Go to **Others > Temporary Directory**. Click **Change** to browse for another location.



13. Optional: Select your preferred **Compression** type. By default, the compression is Fast with optimization for local.

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

- No Compression
- Normal
- Fast (Compressed size larger than normal)
- Fast with optimization for local



4 Running Backup Job

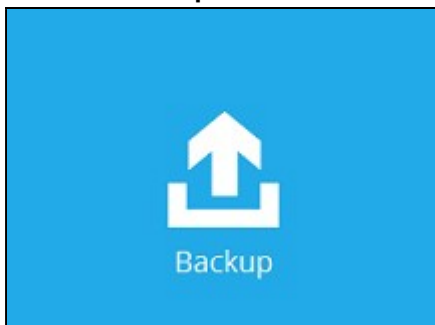
For an overview of the backup process, please refer to [Chapter 11](#) in the AhsayOBM v9 Quick Start Guide for Mac

To start a backup, follow the steps below:

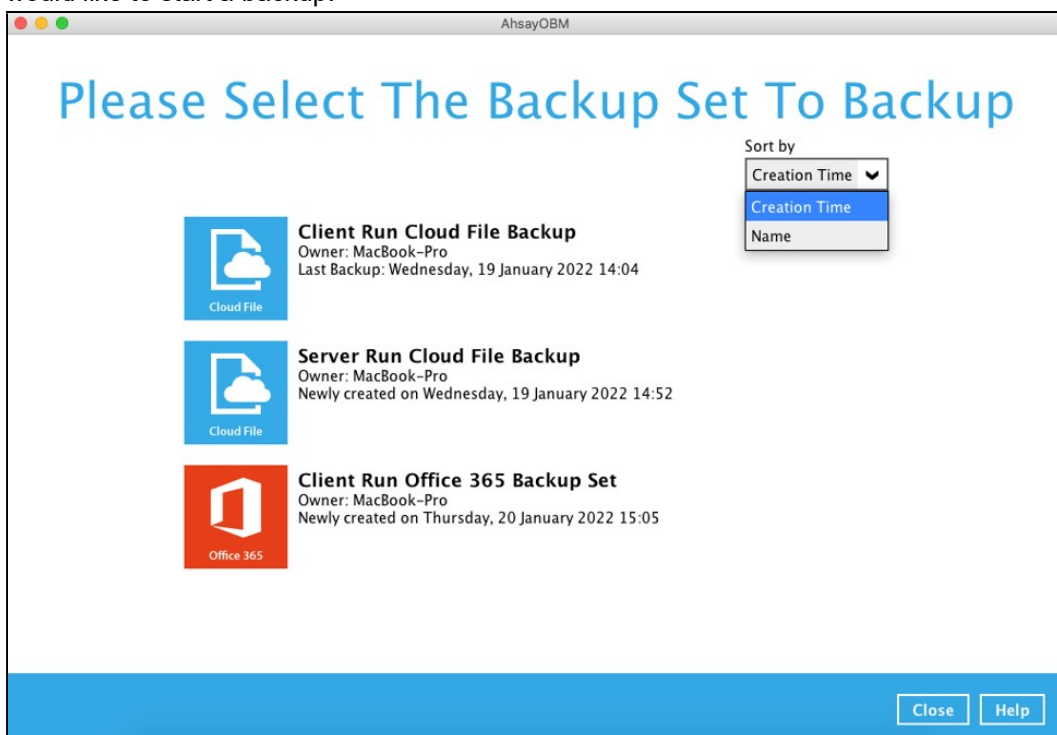
1. Log in to AhsayOBM.

For instructions on how to do this please refer to [Chapter 7](#) of the AhsayOBM v9 Quick Start Guide for Mac.

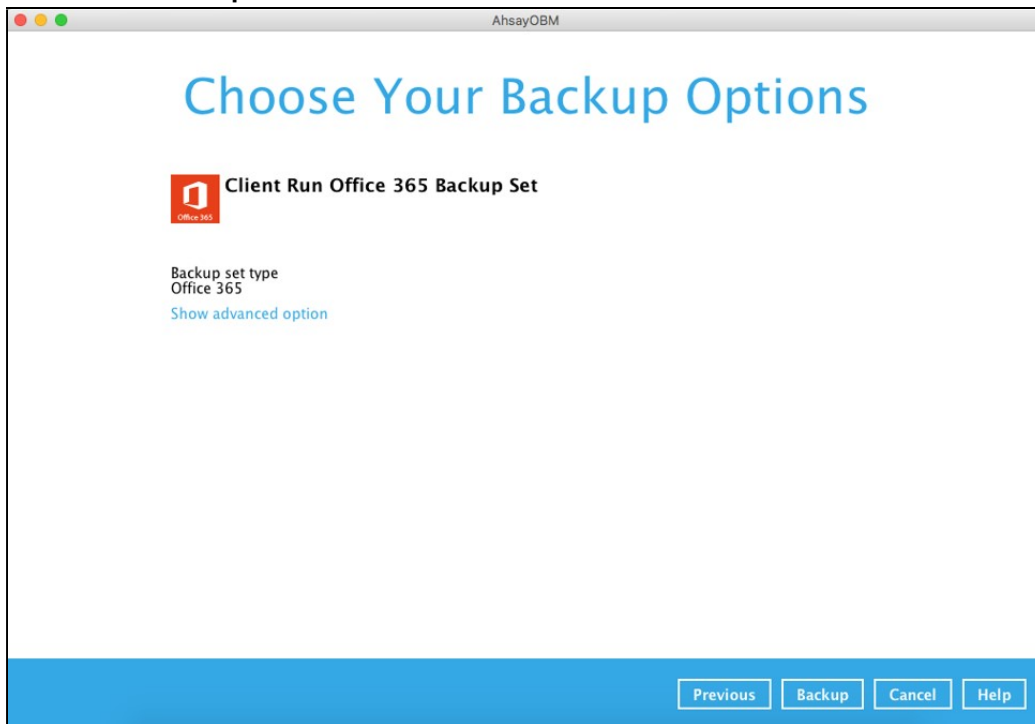
2. Click the **Backup** icon on the main interface of AhsayOBM.



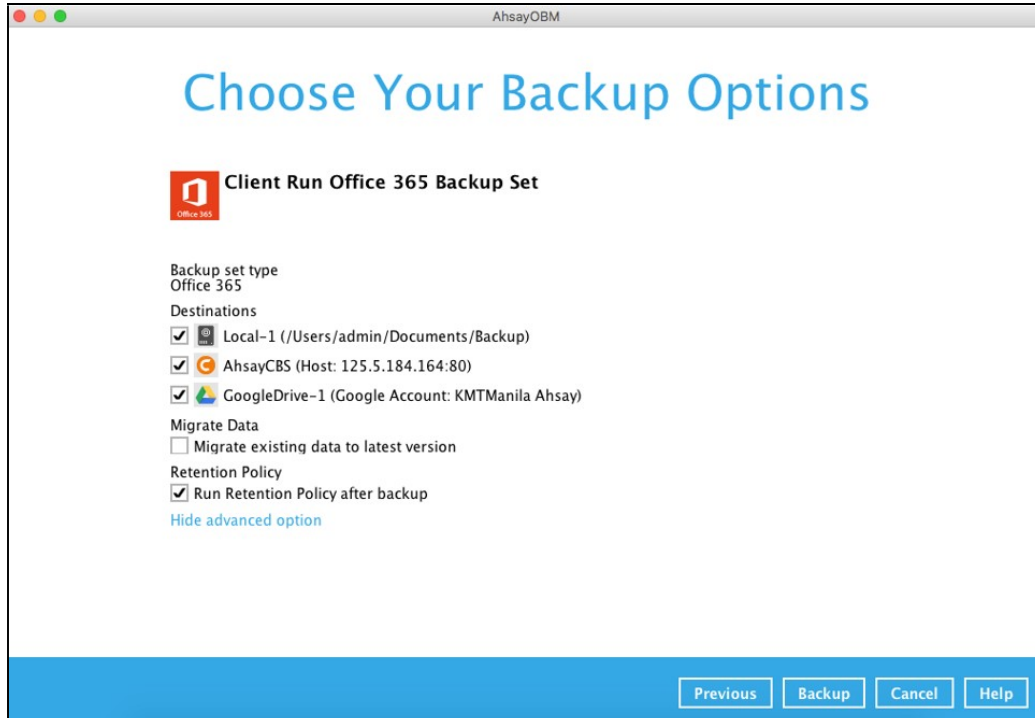
3. Backup sets can be sorted by Name or by Creation Time. Select the backup set which you would like to start a backup.



4. If you would like to modify the Destinations, Migrate Data and Retention Policy settings, click **Show advanced option**.



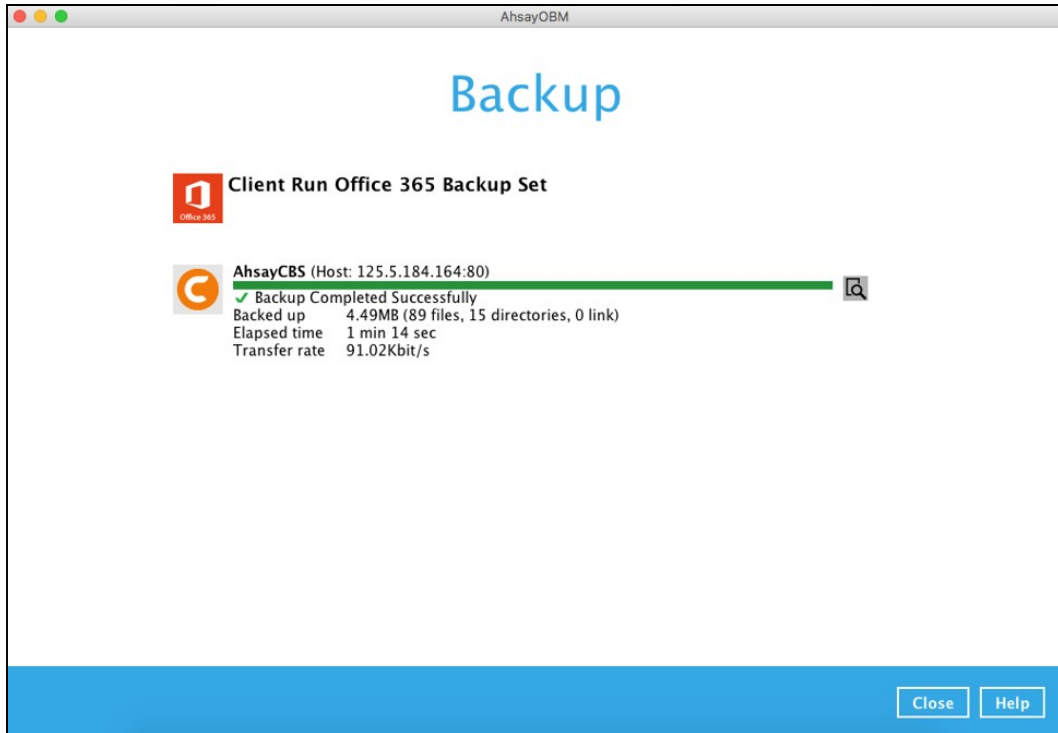
5. When advanced options are shown, it is recommended that you tick the checkbox next to **Run Retention Policy after backup** in the Retention Policy section at the bottom. This will help you save hard disk quota in the long run.




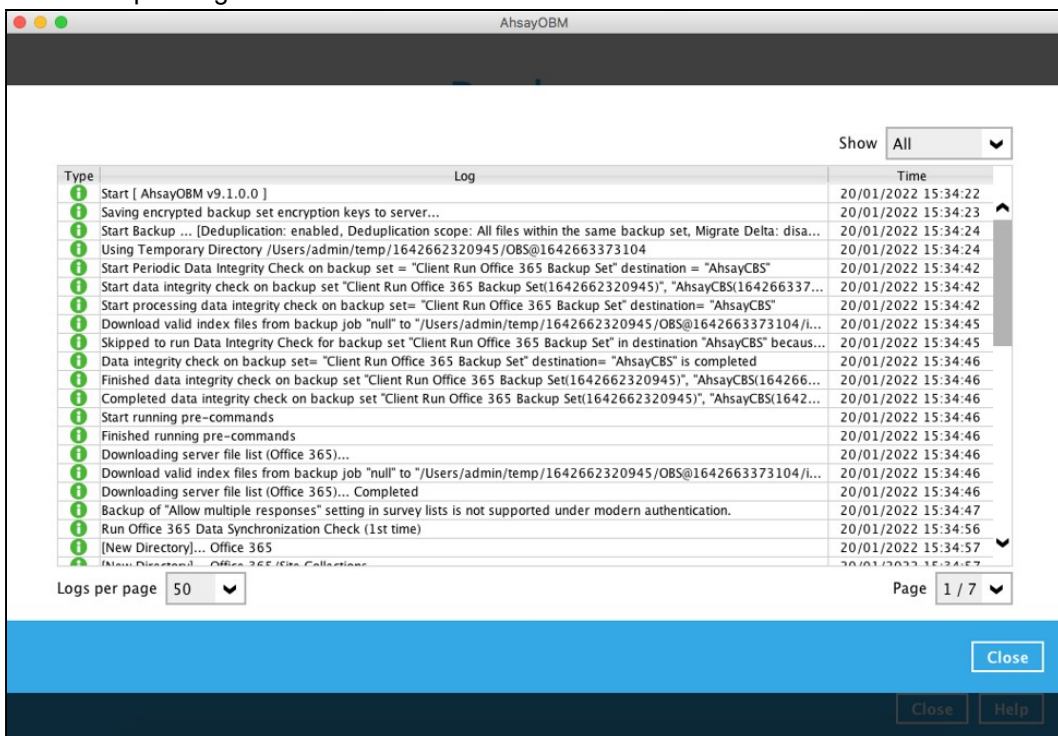
NOTE

The Migrate Data option will only be displayed if Deduplication is enabled for the backup set. When the Migrate Data option is enabled, the existing data will be migrated to the latest version during a backup job. Backup job(s) for backup sets with Migrate Data enabled may take longer to finish. For more information about this feature, refer to [AhsayCBS v9 New Features Supplemental document](#).

- Click **Backup** to start the backup and wait until the backup is finished.

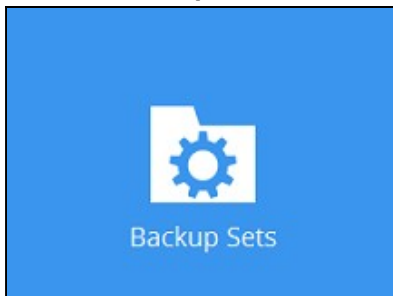


- Check the log of your backup by clicking this icon . It will show you the log of your backup with corresponding date and time.

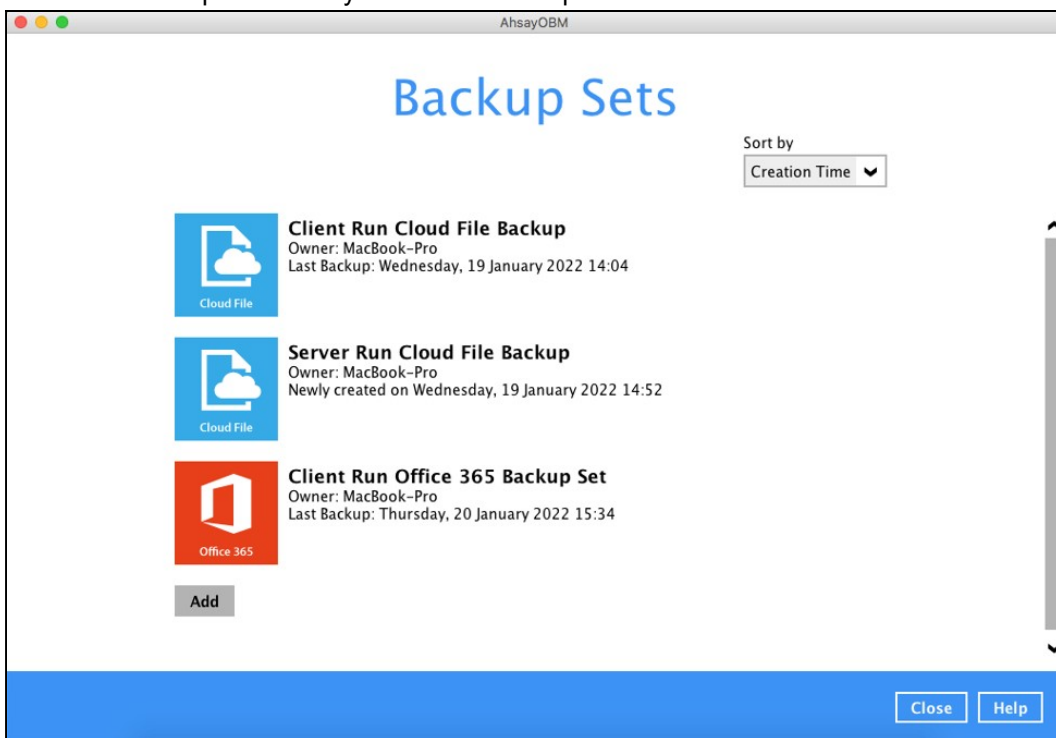


AhsayOBM supports Office 365 backup of individual account(s) which is not authenticated with Office 365 Admin account or without Admin permissions. To change the settings, follow the instructions below:

1. Click the **Backup Sets** icon on the AhsayOBM main interface.



2. Select the backup set which you would like to update.



3. Click the **Change settings** button.

The screenshot shows the 'Client Run Office 365 Backup Set' configuration window in the AhsayOBM application. The window has a sidebar on the left with tabs for 'General', 'Source', 'Backup Schedule', and 'Destination'. The 'General' tab is selected. The main area is titled 'General' and contains the following fields and options:

- Name:** Client Run Office 365 Backup Set
- Owner:** MacBook-Pro
- Office 365 Username:** [Redacted]@[Redacted].com
- Region:** Global (dropdown menu)
- Access the Internet through proxy
- Change settings** button

At the bottom of the window, there is a blue bar with the text 'Delete this backup set' on the left and 'Save', 'Cancel', and 'Help' buttons on the right.

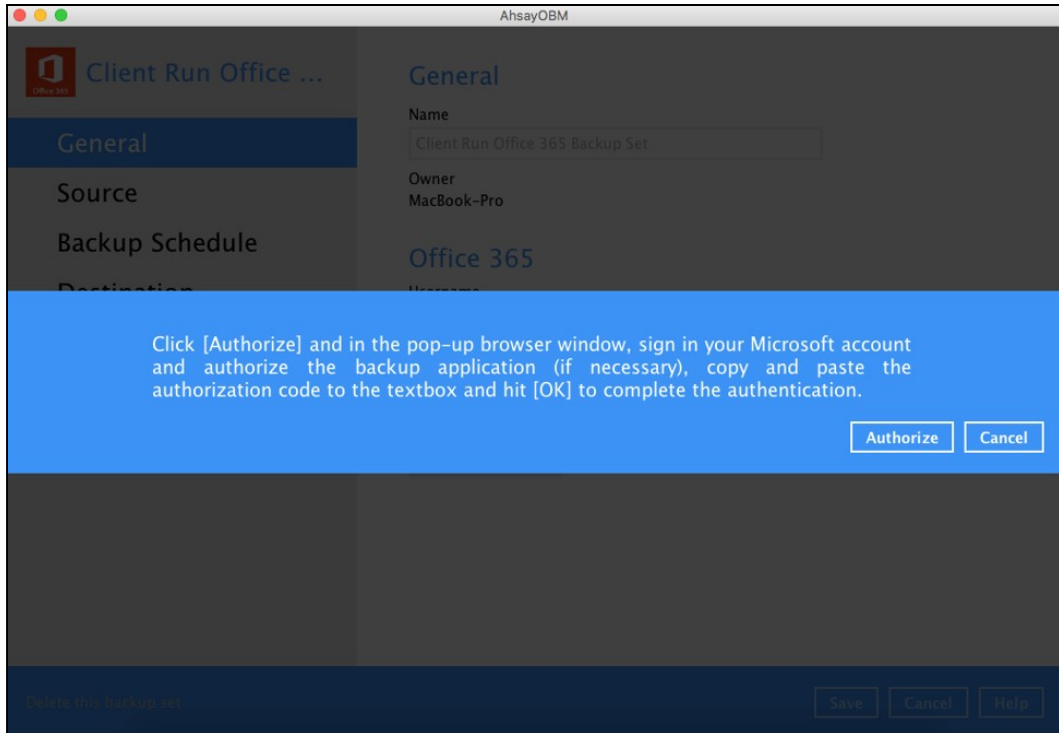
4. "This Office 365 user only" is the configured backup scope by default. Select from the two (2) options, then click **Next** to proceed.

The screenshot shows the 'Client Run Office 365 Backup Set' configuration window in the AhsayOBM application, now on the 'Office 365' tab. The main area contains the following fields and options:

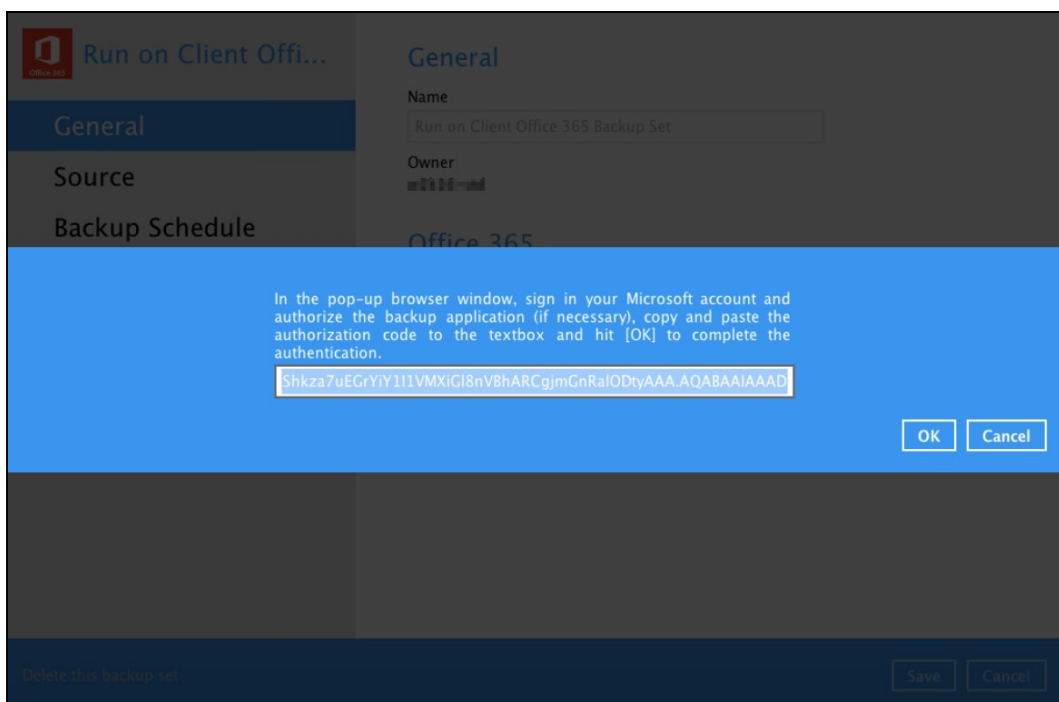
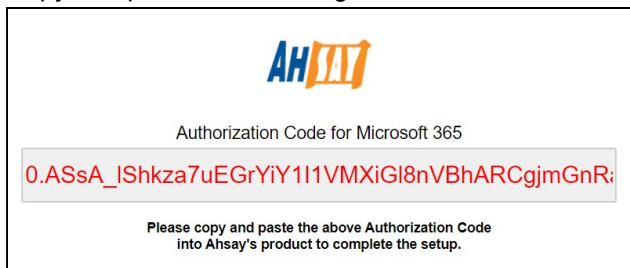
- Office 365 Username:** [Redacted]@[Redacted].com
- Account password:** [Redacted]
- App password:** [Redacted] (Required if Office 365 Multi-Factor Authentication is enforced)
- Backup scope:** Radio buttons for 'Entire organization' and 'This Office 365 user only'. The 'This Office 365 user only' option is selected and highlighted with a red box.
- Region:** Global (dropdown menu)
- Access the Internet through proxy
- Next**, **Cancel**, and **Help** buttons

At the bottom of the window, there is a blue bar with the text 'Delete this backup set' on the left and 'Save', 'Cancel', and 'Help' buttons on the right.

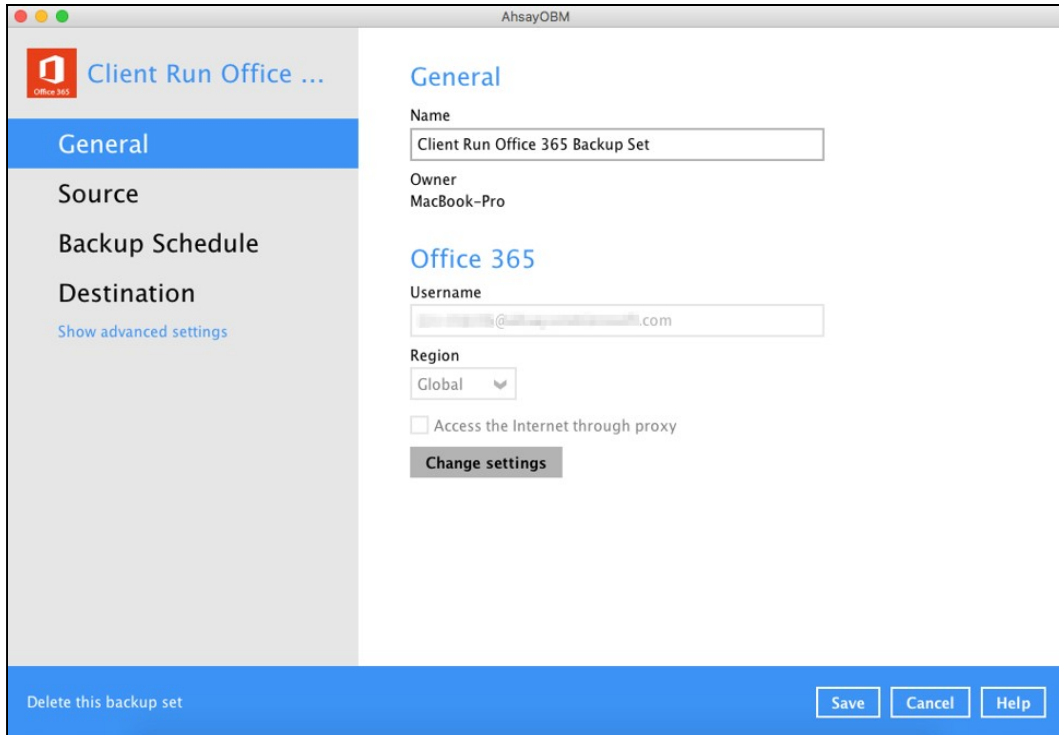
5. When the following pop-up window is displayed, click **Authorize**.



6. Copy and paste the following authorization code to AhsayOBM, then click **OK** to continue.



7. Click **Save** to apply the settings.



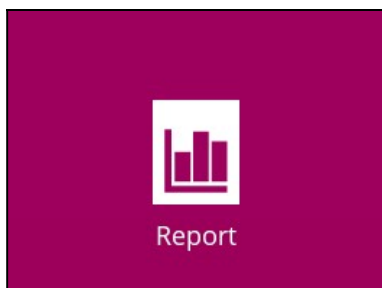
The screenshot shows the 'Client Run Office 365 Backup Set' configuration window in AhsayOBM. The window has a sidebar on the left with the following menu items: 'General' (selected), 'Source', 'Backup Schedule', and 'Destination'. Below the sidebar is a 'Show advanced settings' link. The main content area is titled 'General' and contains the following fields and options:

- Name:** Client Run Office 365 Backup Set
- Owner:** MacBook-Pro
- Office 365 Username:** [Redacted]@[Redacted].com
- Region:** Global (dropdown menu)
- Access the Internet through proxy
- Change settings** button

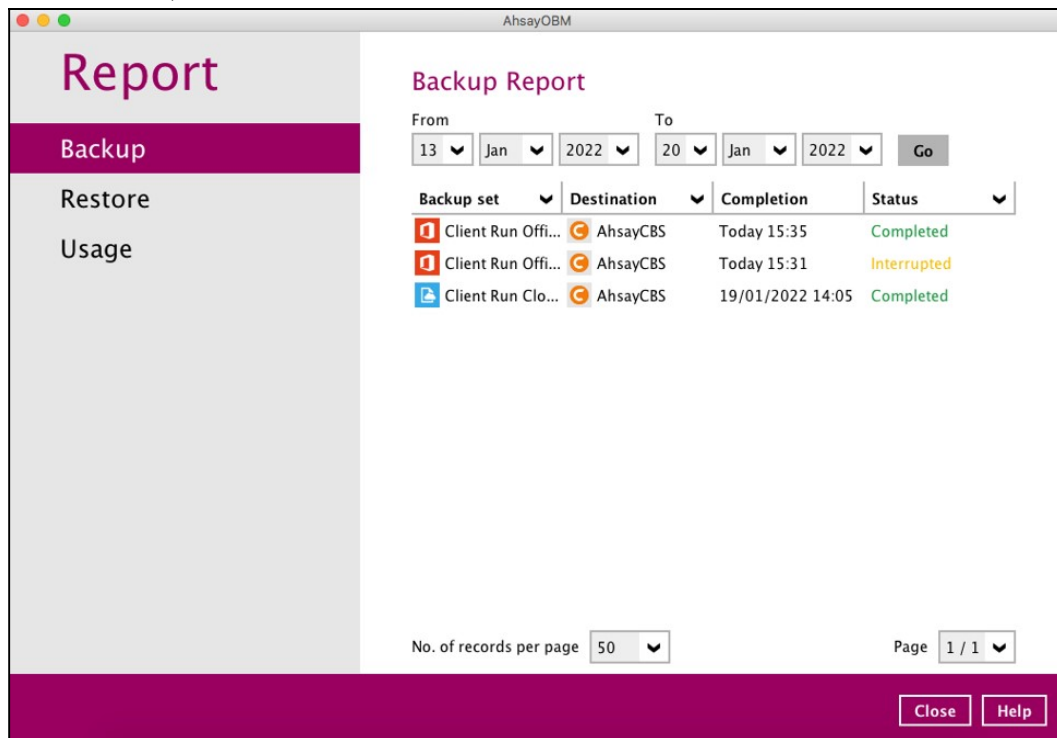
At the bottom of the window, there is a blue bar with the text 'Delete this backup set' on the left and three buttons: 'Save', 'Cancel', and 'Help' on the right.

View Report

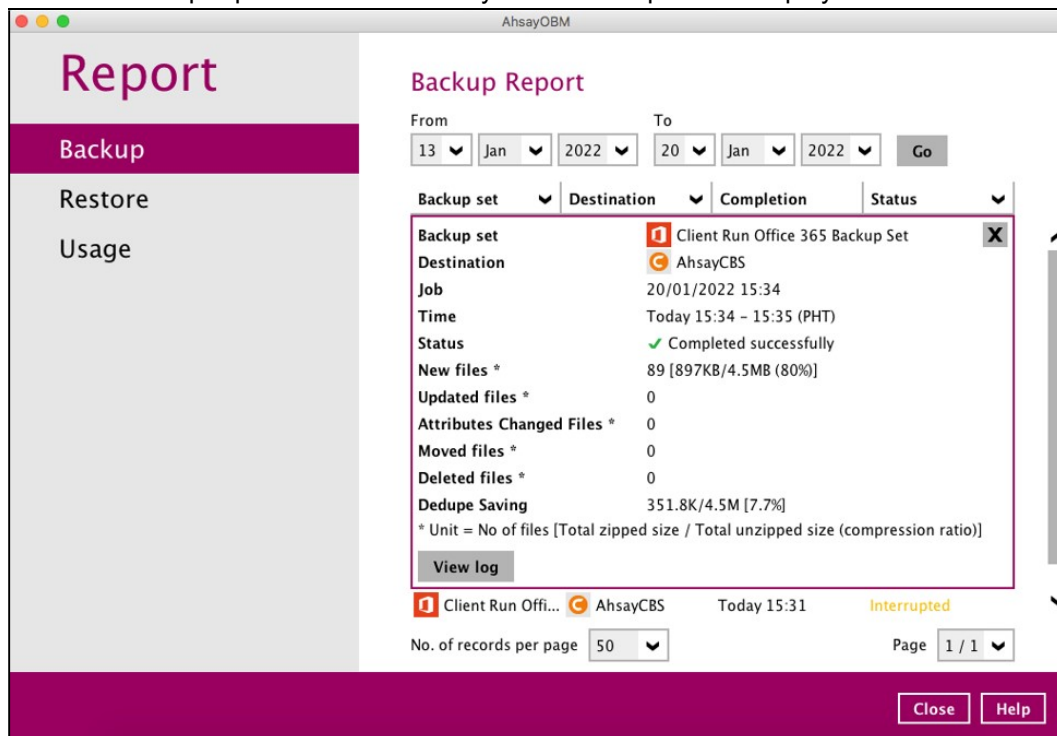
To view the backup report(s), go back to the AhsayOBM main interface, then click **Report > Backup**.



In the Backup Report screen, you can see the backup set with corresponding destination, completion date and time, and status.



Click the backup report and the summary of the backup will be displayed.



You can also click **View Log**; this will redirect you to the log summary of your backup.

You can also search for backup reports from a specific date. For example, we have the **From** date which is, **13 Jan 2022** and the **To** date which is, **18 Jan 2022**. Click the **Go** button to generate the available reports.

If this is a valid range of dates, then backup report(s) will be displayed unless there were no backup running on the specified dates. A message of **No records found** will also be displayed.

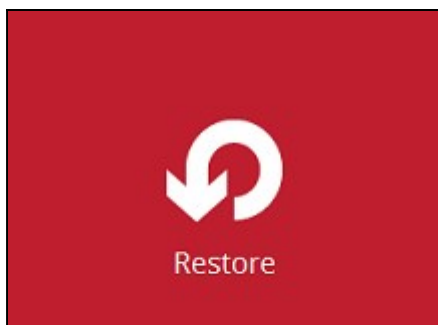
5 Restoring Office 365 Backup Set

Follow the instructions below to restore the Office 365 backup to either the original location where you back them up or other users' account under the same Office 365 account.

1. Log in to AhsayOBM.

For instructions on how to do this please refer to [Chapter 7](#) of the AhsayOBM v9 Quick Start Guide for Mac.

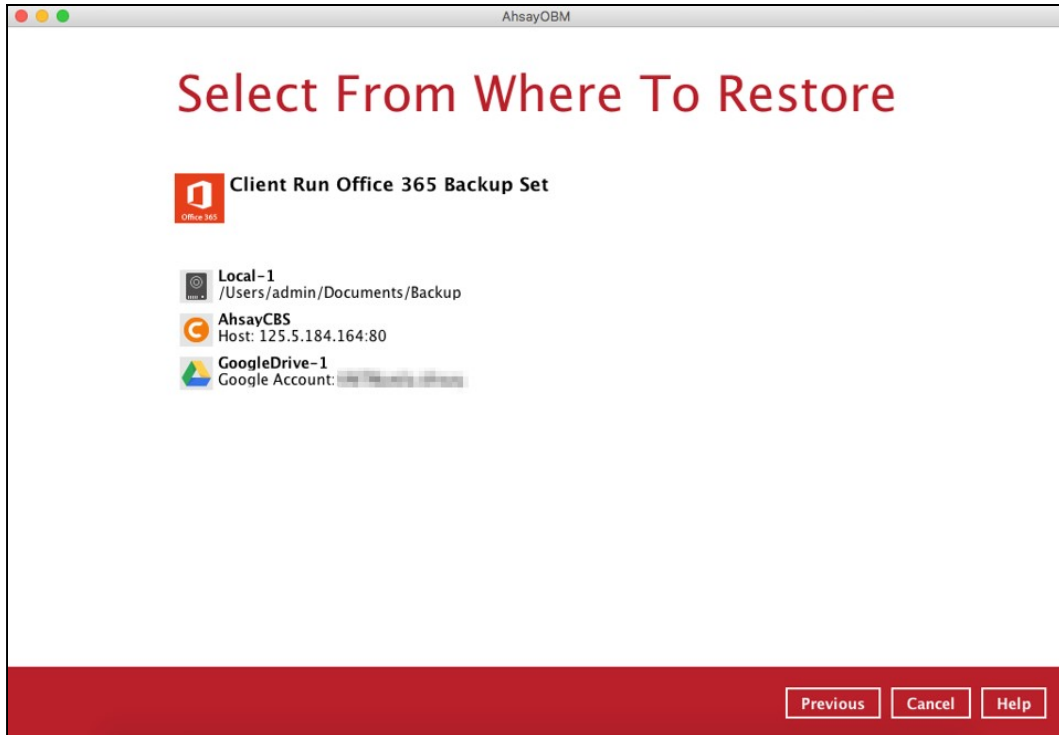
2. Click the **Restore** icon on the main interface of AhsayOBM.



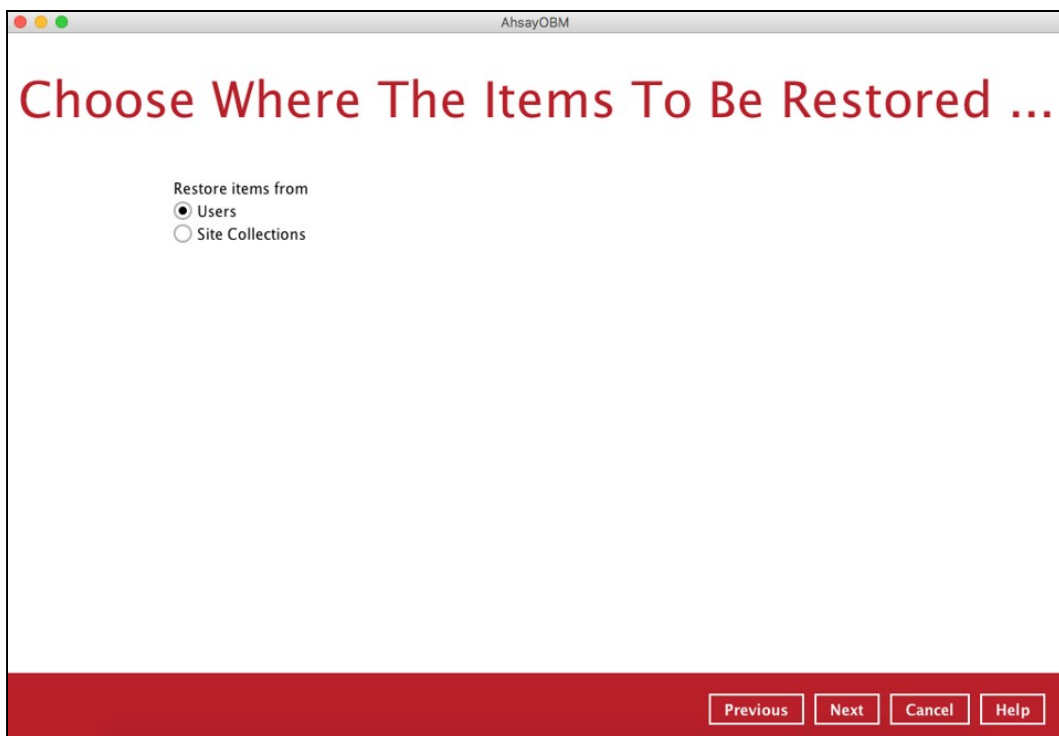
3. Select the backup set that you would like to restore.



4. Select the backup destination that you would like to restore items from.

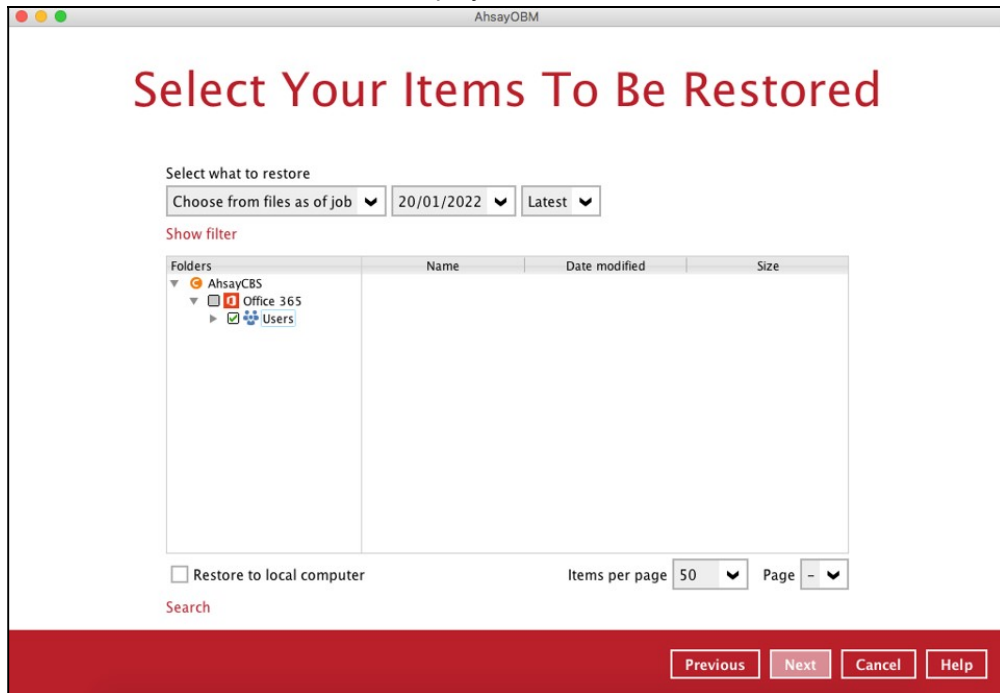


5. Select to restore from **Users** or **Site Collections**. Click **Next** to continue.

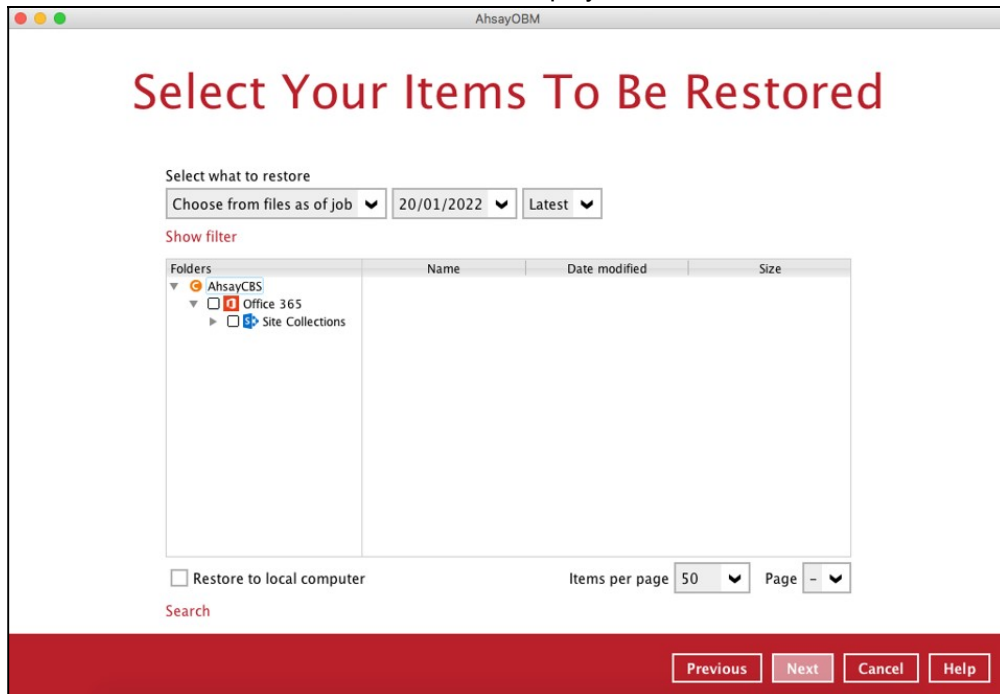


6. Select the item(s) you would like to restore. You can also choose to restore backed up file from a specific backup job of your choice using the **Select what to restore** drop-down menu at the top.

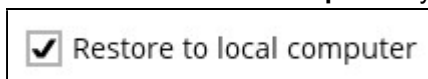
- For Users, this will be the screen displayed.



- For Site Collections, this will be the screen displayed.



Tick **Restore to local computer** if you want to restore the backup data to the local drive.



If you want to search for directories, files, folders and mails to be restored, click **Search** to use the restore filter.

For Office 365, these items can be searched from Users and Site Collections.

- For Users, you can search for **Files**, **Folders**, and **Mails**.
- For Site Collections, you can search for **Directories** and **Files**.

For more information on how to use the restore filter please refer to [Chapter 13.3](#) of the AhsayOBM v9 Quick Start Guide for Mac.

For more detailed examples using the restore filter, refer to [Appendix C: Example Scenarios for Restore Filter using AhsayOBM](#).

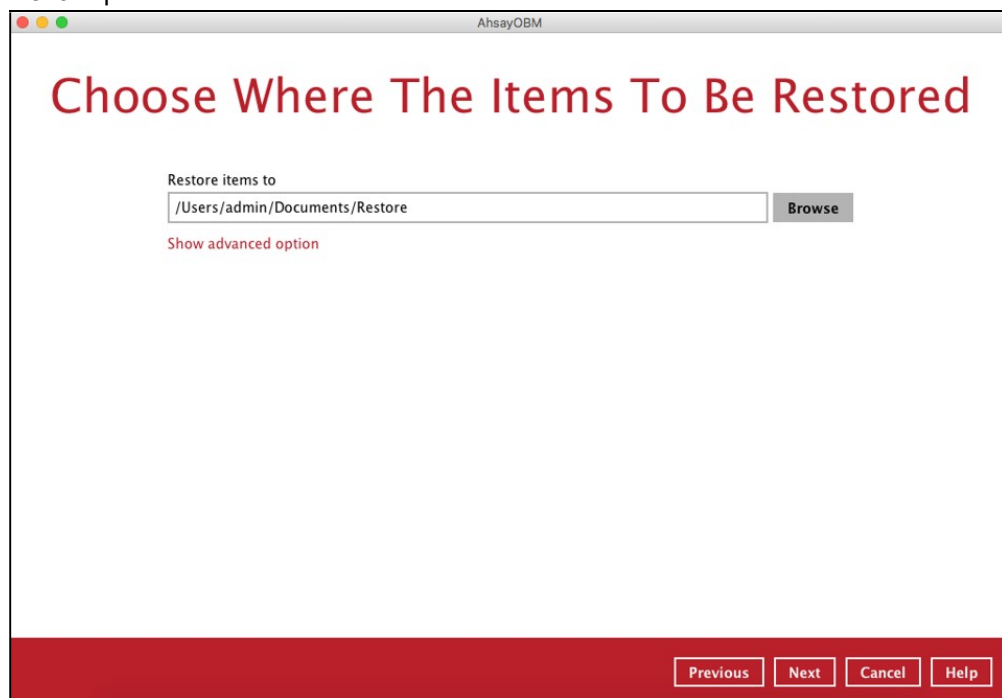
Click **Next** to proceed when you are done with the selection.

7. The window that will be displayed will depend where the items will be restored from and on the restore destination selected. Here are the four options:

- [Local machine](#)
- [Original location](#)
- [Alternate location](#)
- [Alternate Office 365 account](#)

-
- Local machine

Click the **Browse** button to select a path where you want the items to be restored on your local machine. Make sure it has enough space to accommodate your restoration. Click **Next** to proceed.



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



Choose Where The Items To Be Restored

Restore items to
/Users/admin/Documents/Restore **Browse**

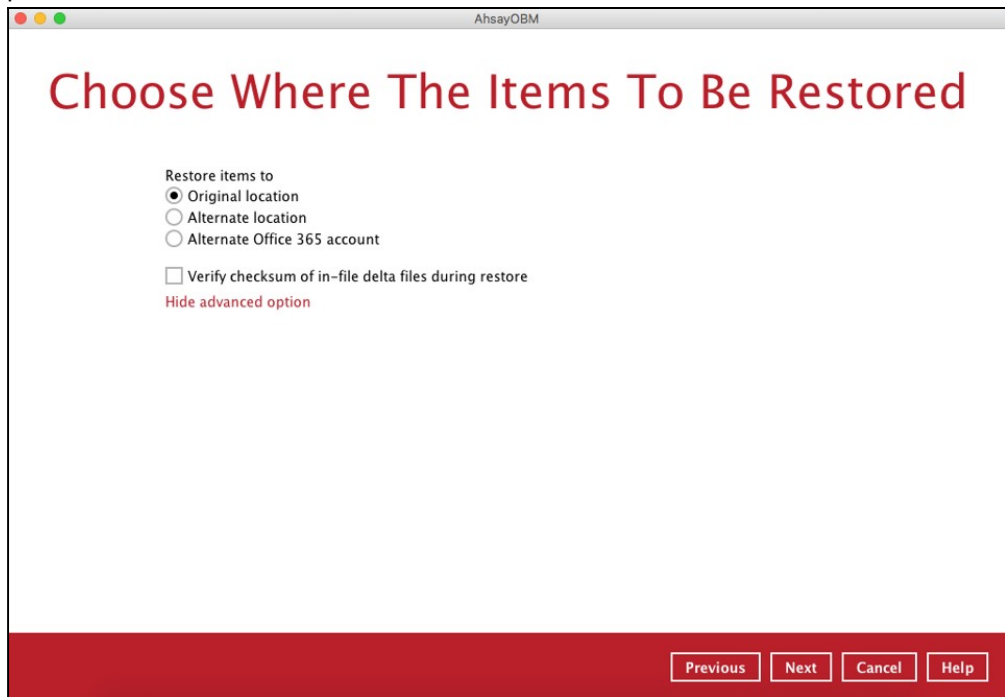
Verify checksum of in-file delta files during restore
[Hide advanced option](#)

Verify checksum of in-file delta files during restore

By enabling this option, the checksum of in-file delta files will be verified during the restore process. This will check the data for errors during the restore process and create a data summary of the in-file delta files which will be included in the report.

Original location

- If you chose to restore items from Users, this will be the screen displayed. Select **Original location** to restore data to the original Office 365 account. Click **Next** to proceed.



Choose Where The Items To Be Restored

Restore items to

Original location
 Alternate location
 Alternate Office 365 account

Verify checksum of in-file delta files during restore
[Hide advanced option](#)

Previous **Next** **Cancel** **Help**

- If you chose to restore items from Site Collections, this will be the screen displayed. Select **Original location** and **Mode**. Click **Next** to proceed.

AhsayOBM

Choose Where The Items To Be Restored

Restore items to

- Original location
- Alternate location
- Alternate Office 365 account

Mode

- Overwrite when exist
- Overwrite when exist
- Skip when exist

Previous Next Cancel Help

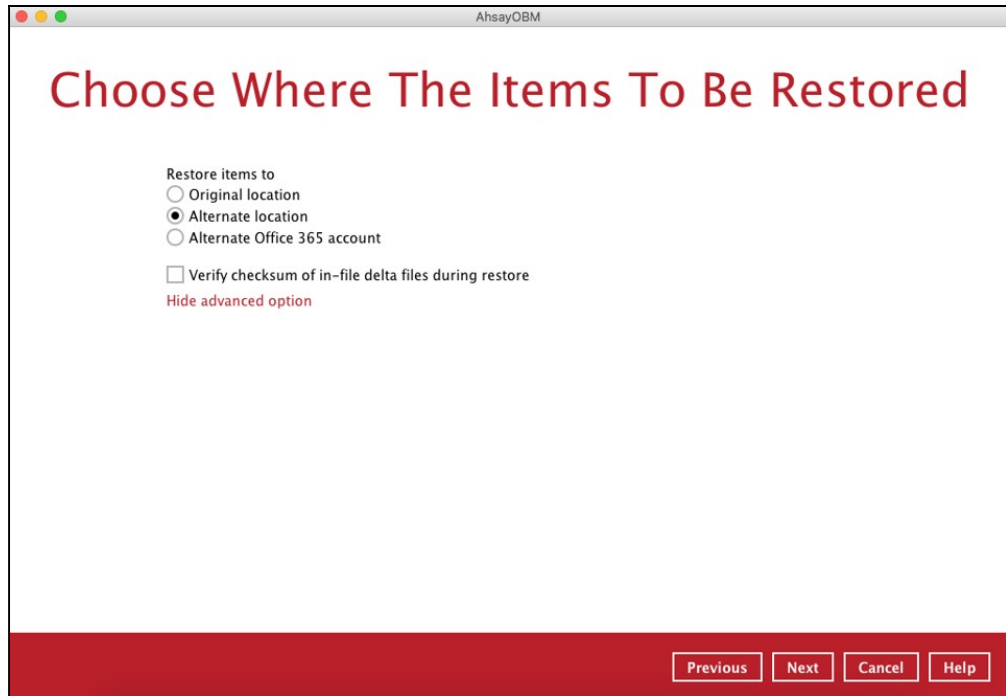
- Overwrite when exist – if the item that you want to restore is already in the location, choosing this option will overwrite the existing item.
- Skip when exist – if the item that you want to restore is already in the location, choosing this option will skip the restoration of the existing item.

NOTE

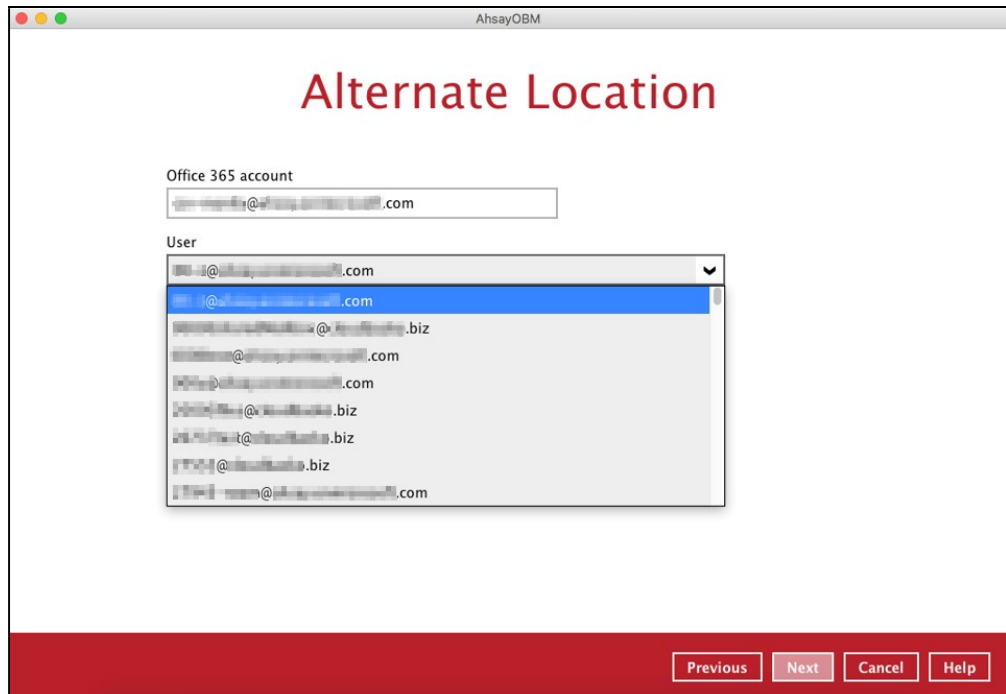
Mode will only be displayed if Site Collections is selected to restore items from.

• Alternate location

- If you chose to restore items from Users, this will be the screen displayed. Select **Alternate location** to restore to another Office 365 account on the same domain. Click **Next**.



Select the alternate Office 365 account then click **Next**.



- If you chose to restore items from Site Collections, this will be the screen displayed. Select **Alternate location** and **Mode** then click **Next**.

AhsayOBM

Choose Where The Items To Be Restored

Restore items to

- Original location
- Alternate location
- Alternate Office 365 account

Mode

Overwrite when exist

Verify checksum of in-file delta files during restore

Hide advanced option

Previous Next Cancel Help

Click **Change** to select the alternate site.

AhsayOBM

Alternate Location

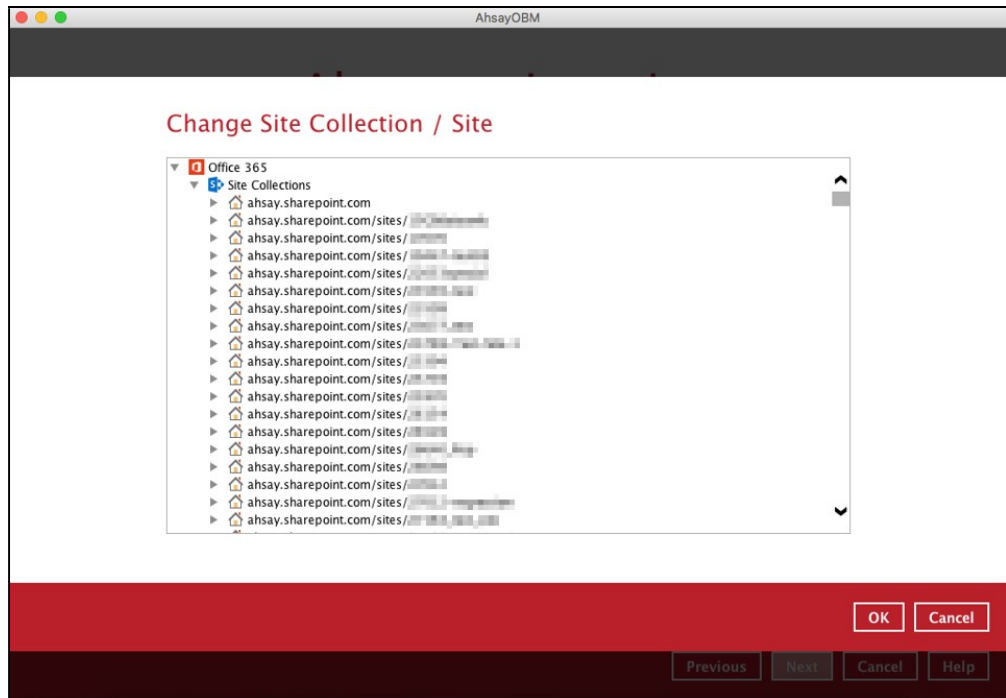
Office 365 account

Site Collection / Site

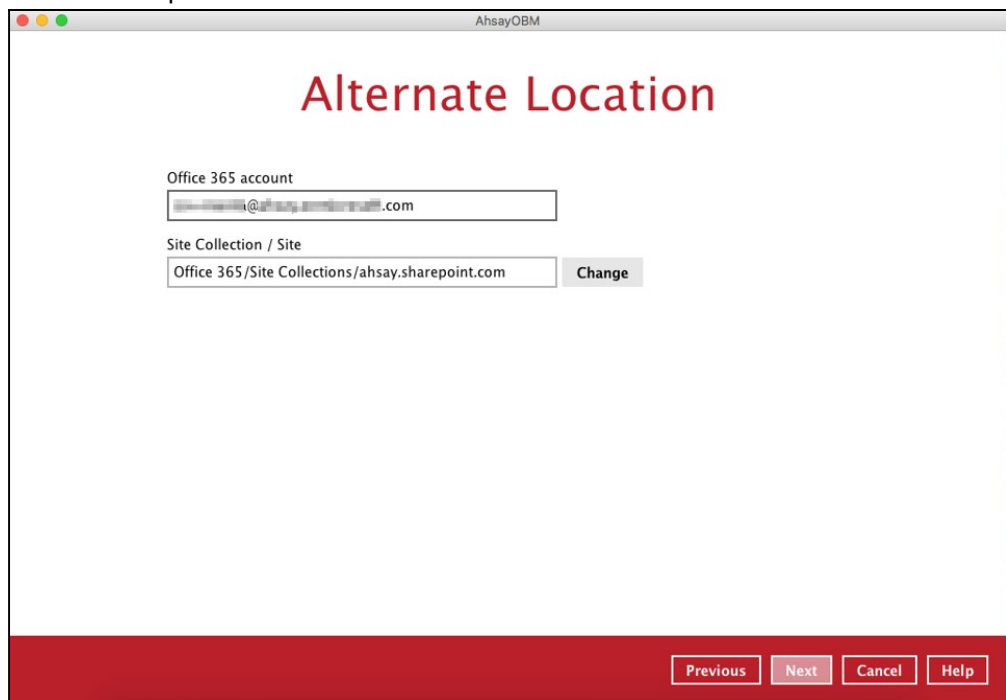
Change

Previous Next Cancel Help

Click **OK** once done with the selection.



Click **Next** to proceed.



▶ Alternate Office 365 account

- ◉ If you chose to restore items from Users, this will be the screen displayed. Select **Alternate Office 365 Account** to restore to another Office 365 account on a different domain. Enter the **Username**, **Account password**, **App password** (if MFA is enforced) and **Region**. Click **Test** to validate account.

AhsayOBM

Choose Where The Items To Be Restored

Restore items to

- Original location
- Alternate location
- Alternate Office 365 account

Username

Account password

App password
(Required if Office 365 Multi-Factor Authentication is enforced)

Region
Global ▼

Access the Internet through proxy

Verify checksum of in-file delta files during restore

Once account is validated, click **Next**.

AhsayOBM

Choose Where The Items To Be Restored

Restore items to

- Original location
- Alternate location
- Alternate Office 365 account

Username

Account password

App password
(Required if Office 365 Multi-Factor Authentication is enforced)

Region
Global ▼

Access the Internet through proxy

Test completed successfully

Verify checksum of in-file delta files during restore

Select the **User**. Then click **Next** to proceed.

AhsayOBM

Alternate Location

Office 365 account
[email address].com

User
[email address].com
[email address].biz
[email address].com
[email address].biz
[email address].biz
[email address].biz
[email address].com

Previous Next Cancel Help

- If you chose to restore items from Site Collections, this will be the screen displayed. Select **Alternate Office 365 Account** then enter the **Username**, **Account password** and **App password** (if MFA is enforced). Select the **Region** and **Mode**. Click **Test** to validate account.

AhsayOBM

Choose Where The Items To Be Restored

Restore items to
 Original location
 Alternate location
 Alternate Office 365 account

Username
[email address].com

Account password
.....

App password
(Required if Office 365 Multi-Factor Authentication is enforced)
[]

Region
Global

Access the Internet through proxy

Test

Mode
[]

Previous Next Cancel Help

Once account is validated, click **Next**.

Choose Where The Items To Be Restored

Restore items to

- Original location
- Alternate location
- Alternate Office 365 account

Username
[masked]@[masked].com

Account password
.....

App password
(Required if Office 365 Multi-Factor Authentication is enforced)

Region
Global

Access the Internet through proxy

✓ Test completed successfully

Mode
[dropdown]

Previous Next Cancel Help

Click **Change** to select the site.

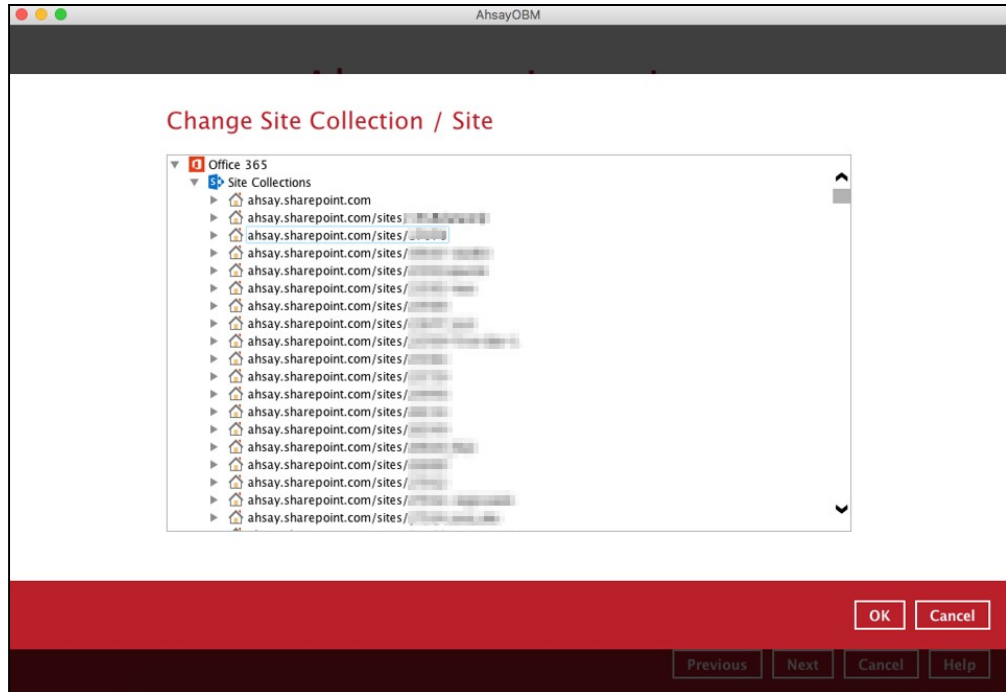
Alternate Location

Office 365 account
[masked]@[masked].com

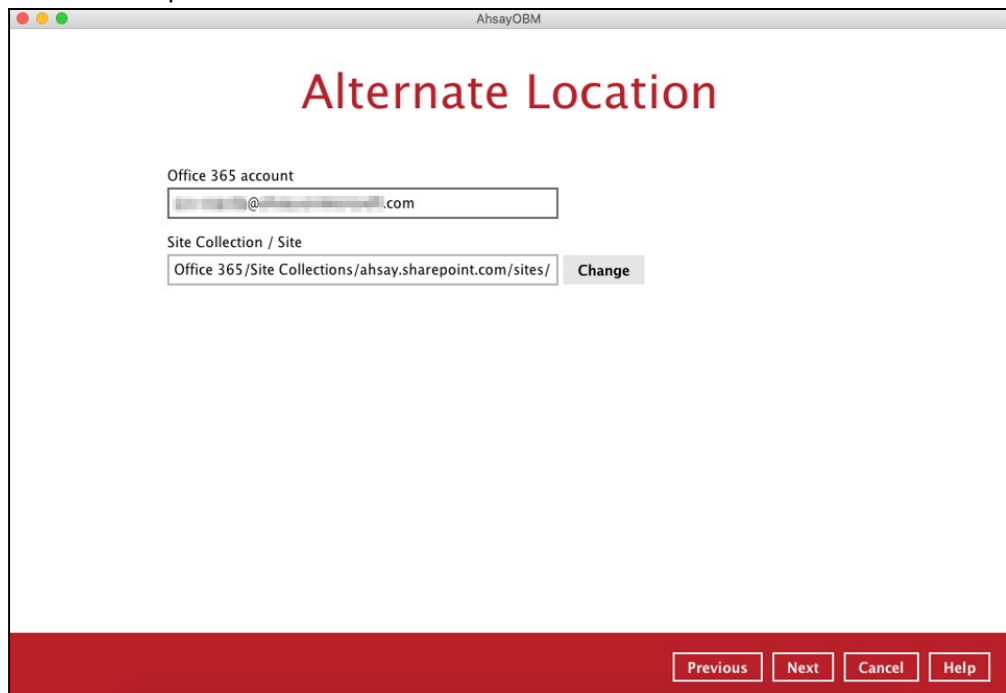
Site Collection / Site
[input field] Change

Previous Next Cancel Help

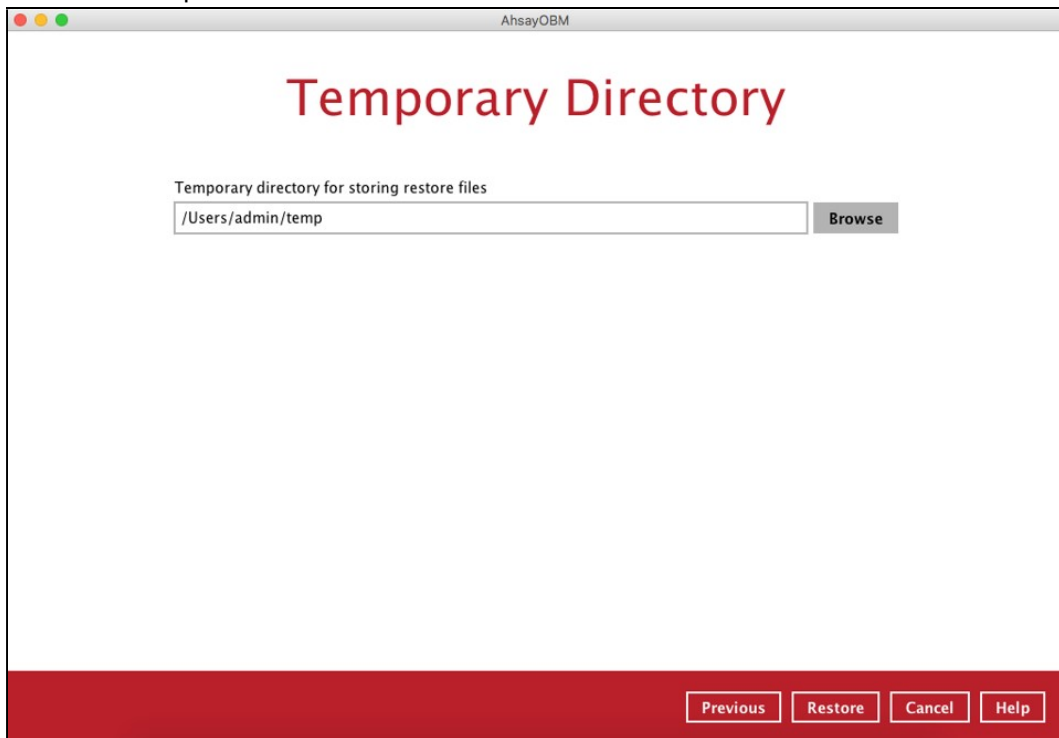
Click **OK** once done with the selection.



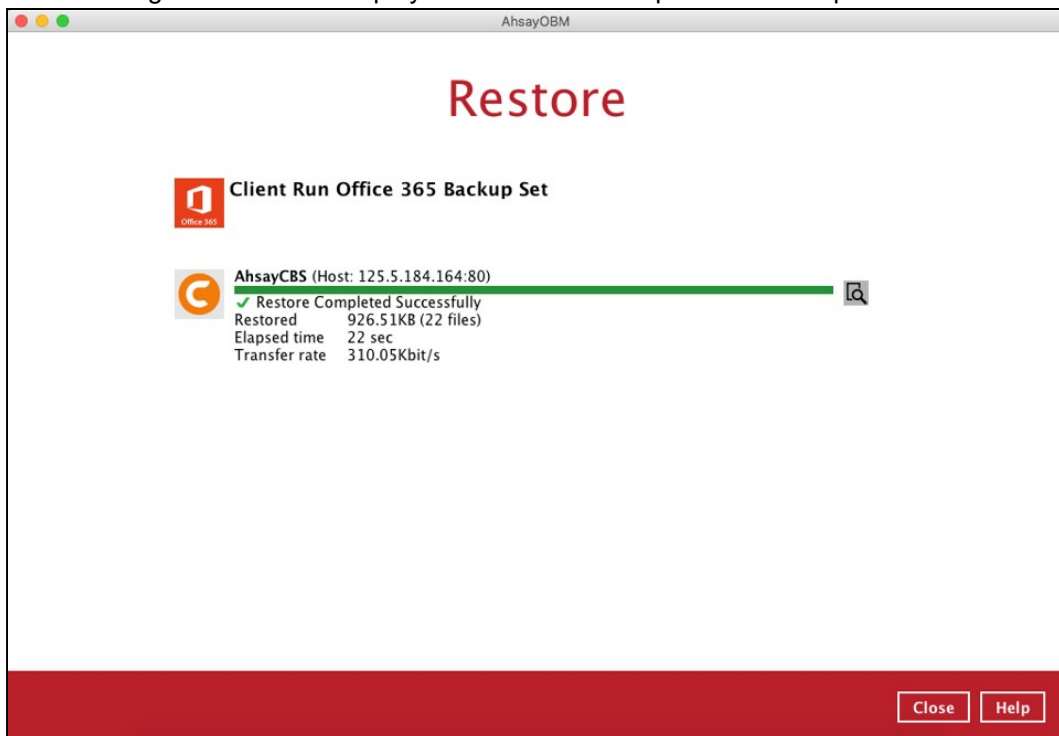
Click **Next** to proceed.




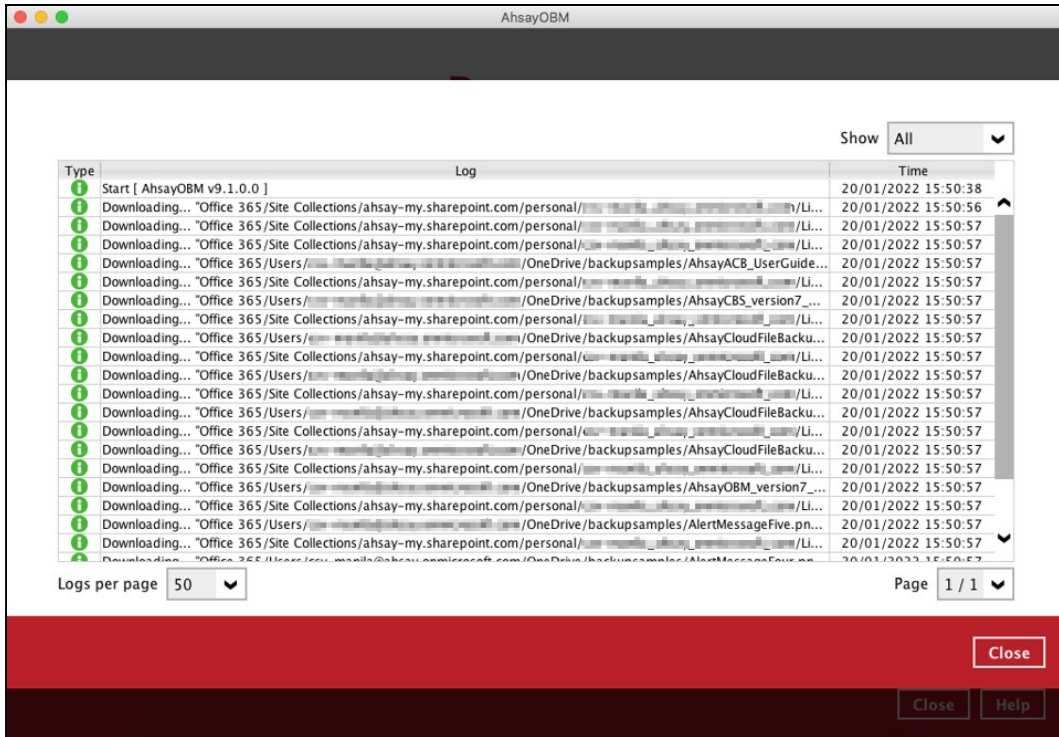
8. Select the temporary directory for storing temporary files. Then click the **Restore** button to start the restoration process.



9. The following screen will be displayed after the restore process is complete.



Click the  to show the restoration log.



The screenshot shows the AhsayOBM application window with a restoration log displayed. The log table has three columns: Type, Log, and Time. The log entries are as follows:

Type	Log	Time
Start	[AhsayOBM v9.1.0.0]	20/01/2022 15:50:38
Downloading...	"Office 365/Site Collections/ahsay-my.sharepoint.com/personal/.../Li...	20/01/2022 15:50:57
Downloading...	"Office 365/Site Collections/ahsay-my.sharepoint.com/personal/.../Li...	20/01/2022 15:50:57
Downloading...	"Office 365/Site Collections/ahsay-my.sharepoint.com/personal/.../Li...	20/01/2022 15:50:57
Downloading...	"Office 365/Users/.../OneDrive/backupsamples/AhsayACB_UserGuide...	20/01/2022 15:50:57
Downloading...	"Office 365/Site Collections/ahsay-my.sharepoint.com/personal/.../Li...	20/01/2022 15:50:57
Downloading...	"Office 365/Users/.../OneDrive/backupsamples/AhsayCBS_version7_...	20/01/2022 15:50:57
Downloading...	"Office 365/Site Collections/ahsay-my.sharepoint.com/personal/.../Li...	20/01/2022 15:50:57
Downloading...	"Office 365/Users/.../OneDrive/backupsamples/AhsayCloudFileBacku...	20/01/2022 15:50:57
Downloading...	"Office 365/Site Collections/ahsay-my.sharepoint.com/personal/.../Li...	20/01/2022 15:50:57
Downloading...	"Office 365/Users/.../OneDrive/backupsamples/AhsayCloudFileBacku...	20/01/2022 15:50:57
Downloading...	"Office 365/Site Collections/ahsay-my.sharepoint.com/personal/.../Li...	20/01/2022 15:50:57
Downloading...	"Office 365/Users/.../OneDrive/backupsamples/AhsayCloudFileBacku...	20/01/2022 15:50:57
Downloading...	"Office 365/Site Collections/ahsay-my.sharepoint.com/personal/.../Li...	20/01/2022 15:50:57
Downloading...	"Office 365/Users/.../OneDrive/backupsamples/AhsayCloudFileBacku...	20/01/2022 15:50:57
Downloading...	"Office 365/Site Collections/ahsay-my.sharepoint.com/personal/.../Li...	20/01/2022 15:50:57
Downloading...	"Office 365/Users/.../OneDrive/backupsamples/AhsayOBM_version7_...	20/01/2022 15:50:57
Downloading...	"Office 365/Site Collections/ahsay-my.sharepoint.com/personal/.../Li...	20/01/2022 15:50:57
Downloading...	"Office 365/Users/.../OneDrive/backupsamples/AlertMessageFive.pn...	20/01/2022 15:50:57
Downloading...	"Office 365/Site Collections/ahsay-my.sharepoint.com/personal/.../Li...	20/01/2022 15:50:57

At the bottom of the log window, there are controls for "Logs per page" (set to 50) and "Page" (set to 1 / 1). A red bar at the bottom of the window contains "Close" and "Help" buttons.

6 Contacting Ahsay

6.1 Technical Assistance

To contact Ahsay support representatives for technical assistance, visit the following website:
<https://www.ahsay.com/jsp/en/contact/kbQuestion.jsp>

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

6.2 Documentation

Documentations for all Ahsay products are available at:
https://www.ahsay.com/jsp/en/home/index.jsp?pageContentKey=ahsay_downloads_documentation_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: Example Scenarios for Office 365 License Requirement and Usage

Scenario No. 1: Backing up Office 365 user accounts in multiple backup sets

The required Office 365 licenses are calculated by the number of Office 365 user accounts that you want to backup.

Example No. 1: To back up one (1) Office 365 user account on multiple backup sets, only one Office 365 license is needed.

Backup Set Name	Office 365 User Account
Backup Set A	user01@company-office365.com
Backup Set B	user01@company-office365.com
Backup Set C	user01@company-office365.com

Example No. 2: To back up two (2) Office 365 user accounts on multiple backup sets, two Office 365 licenses are needed.

Backup Set Name	Office 365 User Account
Backup Set A	user01@company-office365.com
	user02@company-office365.com
Backup Set B	user01@company-office365.com
Backup Set C	user02@company-office365.com

Example No. 3: To back up three (3) Office 365 user accounts on multiple backup sets, two Office 365 licenses are needed.

Backup Set Name	Office 365 User Account
Backup Set A	user01@company-office365.com
	user02@company-office365.com
	user03@company-office365.com
Backup Set B	user01@company-office365.com
	user02@company-office365.com
Backup Set C	user03@company-office365.com

Scenario No. 2: Backing up SharePoint Sites (not Personal Sites) under Site collections in multiple backup sets.

The required Office 365 license is zero, but a minimum of one (1) Office 365 add-on module license is needed to start the backup.

Example No. 1: To back up one (1) SharePoint site under Site Collection, only one (1) Ahsay Office 365 license is needed.

Backup Set Name	SharePoint Site
Backup Set A	companyoffice365.sharepoint.com/Finance
Backup Set B	companyoffice365.sharepoint.com/Finance
Backup Set C	companyoffice365.sharepoint.com/Finance

Example No. 2: To back up any number of SharePoint sites under Site Collection, only one (1) Ahsay Office 365 license is needed.

Backup Set Name	SharePoint Site
Backup Set A	companyoffice365.sharepoint.com/Finance
	companyoffice365.sharepoint.com/SupportTeam
	companyoffice365.sharepoint.com/Engineering
Backup Set B	companyoffice365.sharepoint.com/Finance
Backup Set C	companyoffice365.sharepoint.com/Finance
	companyoffice365.sharepoint.com/SupportTeam
	companyoffice365.sharepoint.com/Engineering

Scenario No. 3: Backing up files and/or folders under Public Folder in multiple backup sets.

The required Office 365 license is zero, but a minimum of one (1) Office 365 add-on module license is needed to start the backup.

Example No. 1: To back up files and/or folders under Public Folder, only one (1) Ahsay Office 365 license is needed.

Backup Set Name	Files and/or Folders
Backup Set A	Folder01 <ul style="list-style-type: none"> ○ microsoftword01.docx ○ powerpointpresentation01.pptx ○ spreadsheet01.xls ○ notepad01.txt ○ picture01.jpg ○ picture02.jpg
Backup Set B	Folder01 <ul style="list-style-type: none"> ○ microsoftword01.docx ○ powerpointpresentation01.pptx ○ spreadsheet01.xls ○ notepad01.txt ○ picture01.jpg ○ picture02.jpg
	Folder02
	Folder03
Backup Set C	Folder01 <ul style="list-style-type: none"> ○ microsoftword01.docx ○ powerpointpresentation01.pptx ○ spreadsheet01.xls ○ notepad01.txt ○ picture01.jpg ○ picture02.jpg
	Folder02
	Folder03 <ul style="list-style-type: none"> ○ microsoftword02.docx ○ powerpointpresentation02.pptx ○ spreadsheet02.xls ○ notepad02.txt ○ picture05.jpg ○ picture06.jpg

Scenario No. 4: Backing up Office 365 User Accounts, files and/or folders under Public Folder, and SharePoint sites under Site Collections in multiple backup sets.

The required Office 365 license will depend on the number of unique Office 365 accounts.

Example No. 1: To back up three (3) Office 365 user account, files and/or folders under Public Folder, and SharePoint sites under Site Collections on multiple backup sets, three (3) Office 365 licenses are needed.

Backup Set Name	Office 365 User Account, SharePoint Site, and Files and/or Folders
Backup Set A	user01@company-office365.com
Backup Set B	user01@company-office365.com
	user02@company-office365.com
	companyoffice365.sharepoint.com/Finance
	companyoffice365.sharepoint.com/SupportTeam
Backup Set C	user01@company-office365.com
	user02@company-office365.com
	Folder01 <ul style="list-style-type: none"> ○ microsoftword01.docx ○ powerpointpresentation01.pptx ○ spreadsheet01.xls ○ notepad01.txt ○ picture01.jpg ○ picture02.jpg
Backup Set D	user01@company-office365.com
	user02@company-office365.com
	user03@company-office365.com
	Folder01 <ul style="list-style-type: none"> ○ microsoftword01.docx ○ powerpointpresentation01.pptx ○ spreadsheet01.xls ○ notepad01.txt ○ picture01.jpg ○ picture02.jpg
	companyoffice365.sharepoint.com/Finance
	companyoffice365.sharepoint.com/SupportTeam

Scenario No. 5: Backing up Office 365 User Accounts and Share Mailbox Accounts.

The required Office 365 license will depend on the number of unique Office 365 accounts.

Example No. 1: To back up three (3) Office 365 user account and three (3) Shared mailbox accounts, six (6) Office 365 licenses are needed.

Backup Set Name	Office 365 User Account and Shared Mailbox Accounts
Backup Set A	user01@company-office365.com
	user02@company-office365.com
	user03@company-office365.com
	sharedmailbox01@test-office365.com
	sharedmailbox02@test-office365.com
	sharedmailbox03@test-office365.com

Appendix B: Example for backup of large numbers of Office 365 users

Example: 10,000 Office 365 users needed to be backup. Since the maximum number of Office 365 users per backup set is 2,000, there are 2 options available. There are further options, but this will involve a large number of backup sets and maintenance of these backup sets will be practical.

- Option 1 - 5 Backup Sets, each has 2,000 Office 365 Users
- Option 2 - 10 Backup Sets, each has 1,000 Office 365 Users

Option 1 – 5 Backup Sets, each has 2,000 Office 365 Users

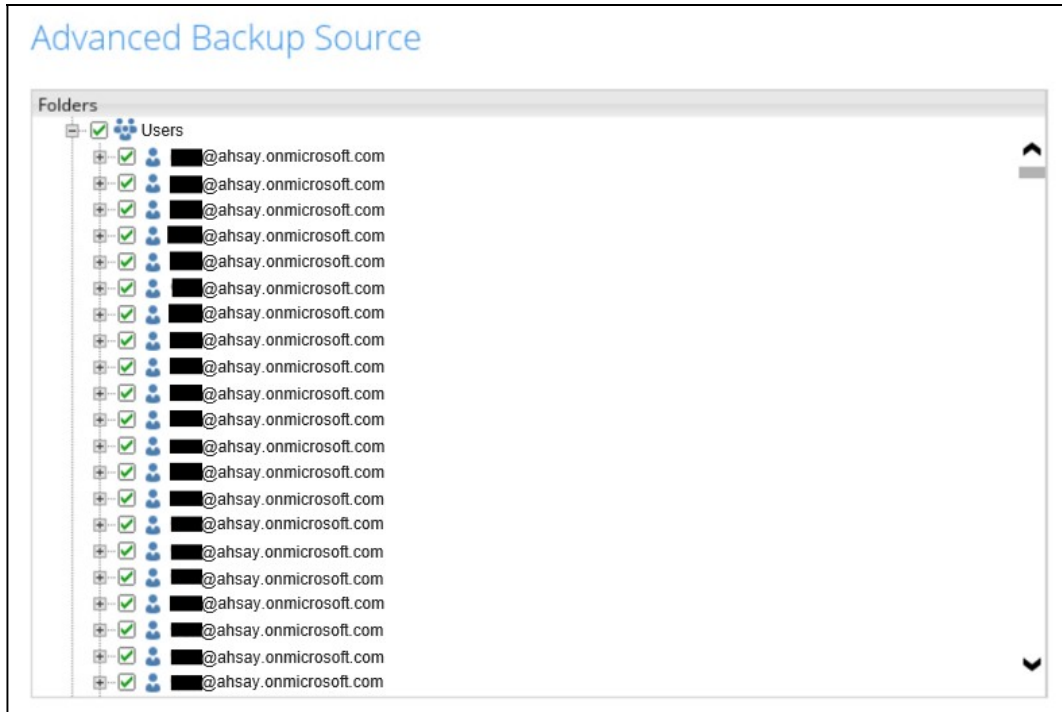
Backup Set Name	User Number
Backup -Set-1	No.1 – 2000
Backup -Set-2	No.2001 – 4000
Backup -Set-3	No. 4001 – 6000
Backup -Set-4	No. 6001 – 8000
Backup -Set-5	No. 8001 – 10000

Option 2 – 10 Backup Sets, each has 1,000 Office 365 Users

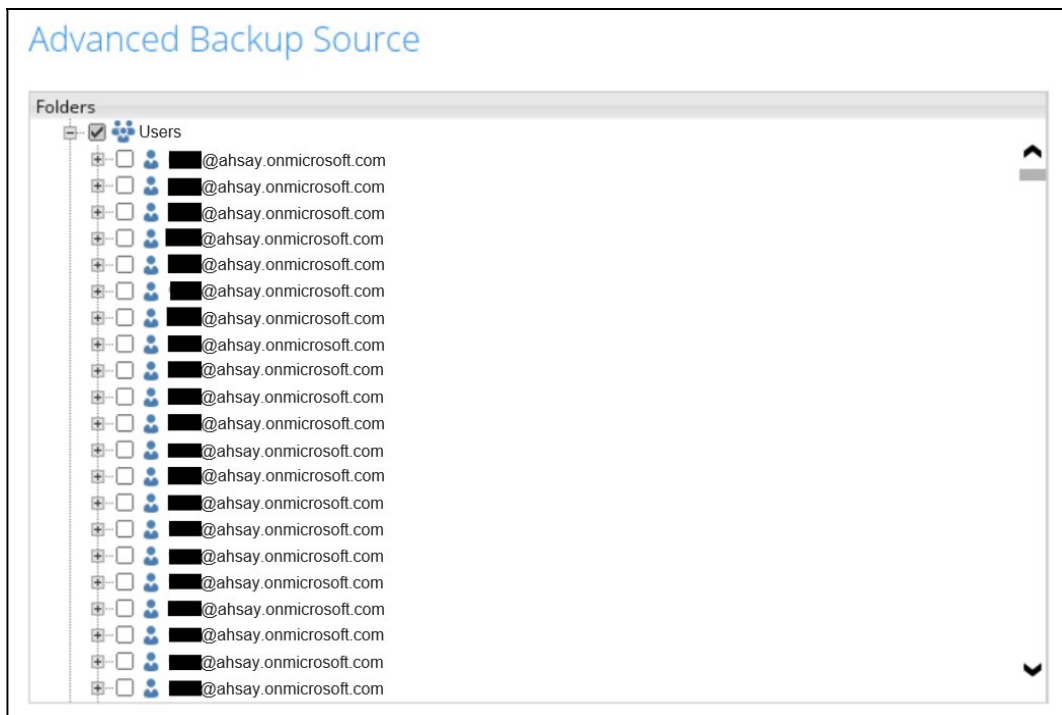
Backup Set Name	User Number
Backup -Set-1	No.1 – 1000
Backup -Set-2	No.1001 – 2000
Backup -Set-3	No. 2001 – 3000
Backup -Set-4	No. 3001 – 4000
Backup -Set-5	No. 4001 – 5000
Backup -Set-6	No. 5001 – 6000
Backup -Set-7	No. 6001 – 7000
Backup -Set-8	No. 7001 – 8000
Backup -Set-9	No. 8001 – 9000
Backup -Set-10	No. 9001 – 10000

If Option 2 was selected, for the last backup set, Backup -Set-10, follow the instructions on how to select the Office 365 users. Doing these steps will ensure that additional Office 365 users will be automatically included in the backup set.

1. On the backup source, tick the checkbox for the root selection. This will select all the Office 365 users.



2. Deselect the first 9000 Office 365 users.



Appendix C: Example Scenarios for Restore Filter using AhsayOBM

Scenario No. 1: Items from Users

Example No. 1: Restore filter setting from an Office 365 user account's outlook inbox

Location:	Office 365/Users/abc@ahsay.onmicrosoft.com/Outlook/Inbox
Search subfolders:	True
Kind:	Mail – Subject
Type:	Contains
Pattern:	Office 365 changes
Match Case:	True

The screenshot shows the 'Search' dialog box in AhsayOBM. The 'Look in' field is set to 'Office 365/Users/[redacted]@ahsay.onmicrosoft.com/Outlook/Inbox'. The 'Search subfolders' checkbox is checked. The 'Kind' is set to 'Mail - Subject', 'Type' is 'contains', and 'Pattern' is 'Office 365 changes'. The 'Match case' checkbox is also checked. Below the search criteria is a table with columns for Name, In Folder, Size, and Date modified. At the bottom, there are controls for 'Items per page' (set to 50) and 'Page' (set to -). The dialog has a red footer bar with 'OK', 'Cancel', and 'Help' buttons, and a dark grey bar below it with 'Previous', 'Next', 'Cancel', and 'Help' buttons.

Search

Look in

Office 365/Users/[REDACTED]@ahsay.onmicrosoft.com/Outlook/Inbox Change

Search subfolders

Kind

Mail - Subject

Type

contains

Pattern

Office 365 changes

Match case

Searching ...

Stop

Name	In Folder	Size	Date modified
------	-----------	------	---------------

Items per page 50

Page -

OK Cancel Help

Previous Next Cancel Help

Search

Look in

Office 365/Users/[REDACTED]@ahsay.onmicrosoft.com/Outlook/Inbox Change

Search subfolders

Kind

Mail - Subject

Type

contains

Pattern

Office 365 changes

Match case

Search

Name	In Folder	Size	Date modified
<input checked="" type="checkbox"/> Weekly digest: Office 365 changes	Office 365/Users/[REDACTED]@ahsay.onmicrosoft.com/	68k	10/11/2017 04:07
<input checked="" type="checkbox"/> Weekly digest: Office 365 changes	Office 365/Users/[REDACTED]@ahsay.onmicrosoft.com/	61k	02/13/2018 15:45
<input checked="" type="checkbox"/> Weekly digest: Office 365 changes	Office 365/Users/[REDACTED]@ahsay.onmicrosoft.com/	63k	10/11/2017 04:07
<input checked="" type="checkbox"/> Weekly digest: Office 365 changes	Office 365/Users/[REDACTED]@ahsay.onmicrosoft.com/	66k	10/17/2017 01:14
<input checked="" type="checkbox"/> Weekly digest: Office 365 changes	Office 365/Users/[REDACTED]@ahsay.onmicrosoft.com/	60k	10/24/2017 00:58
<input checked="" type="checkbox"/> Weekly digest: Office 365 changes	Office 365/Users/[REDACTED]@ahsay.onmicrosoft.com/	58k	11/01/2017 00:19
<input checked="" type="checkbox"/> Weekly digest: Office 365 changes	Office 365/Users/[REDACTED]@ahsay.onmicrosoft.com/	59k	11/10/2017 02:07
<input checked="" type="checkbox"/> Weekly digest: Office 365 changes	Office 365/Users/[REDACTED]@ahsay.onmicrosoft.com/	65k	11/21/2017 00:28
<input checked="" type="checkbox"/> Weekly digest: Office 365 changes	Office 365/Users/[REDACTED]@ahsay.onmicrosoft.com/	61k	11/21/2017 00:28
<input checked="" type="checkbox"/> Weekly digest: Office 365 changes	Office 365/Users/[REDACTED]@ahsay.onmicrosoft.com/	57k	02/13/2018 15:45

Items per page 50

Page 1 / 2

OK Cancel Help

Previous Next Cancel Help

Explanation:

All mails under Office 365/Users/abc@ahsay.onmicrosoft.com/Outlook/Inbox that has a subject and contains 'Office 365 changes' with match case set to true will be included upon performing search.

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

The restore filter setting includes the Search subfolder and Match case set to true. This means that the filter will include all available subfolders in the Outlook Inbox upon searching. And it will strictly search only the specified pattern and case which is the 'Office 365 changes'.

Example No. 2: Restore filter setting from an Office 365 user account's OneDrive

Location:	Office 365/Users/abc@ahsay.onmicrosoft.com/OneDrive
Search subfolders:	True
Kind:	Files and Folders
Type:	Exact
Pattern:	testBigFile-backup
Match Case:	True

The screenshot shows the 'Search' dialog box in OneDrive. The 'Look in' field is set to 'Office 365/Users/[redacted]@ahsay.onmicrosoft.com/OneDrive'. The 'Search subfolders' checkbox is checked. The 'Kind' is set to 'Files and Folders', 'Type' is 'exact', and 'Pattern' is 'testBigFile-backup'. The 'Match case' checkbox is also checked. Below the search criteria is a table with columns for Name, In Folder, Size, and Date modified. At the bottom, there are controls for 'Items per page' (set to 50) and 'Page' (set to -). A red bar at the bottom contains 'OK', 'Cancel', and 'Help' buttons. Below the red bar, there are 'Previous', 'Next', 'Cancel', and 'Help' buttons.

Search

Look in
Office 365/Users/[redacted]@ahsay.onmicrosoft.com/OneDrive Change

Search subfolders

Kind: Files and Folders | Type: exact | Pattern: testBigFile-backup Match case

Searching ... Stop

Name	In Folder	Size	Date modified
------	-----------	------	---------------

Items per page: 50 | Page: -

OK Cancel Help

Previous Next Cancel Help

Search

Look in
Office 365/Users/[redacted]@ahsay.onmicrosoft.com/OneDrive Change

Search subfolders

Kind: Files and Folders | Type: exact | Pattern: testBigFile-backup Match case

Search

Name	In Folder	Size	Date modified
<input checked="" type="checkbox"/> testBigFile-backup	Office 365/Users/[redacted]@ahsay.onmicrosoft.com/OneDrive		

Items per page: 50 | Page: 1 / 1

OK Cancel Help

Previous Next Cancel Help

Explanation:

All files and folders under Office 365/Users/abc@ahsay.onmicrosoft.com/OneDrive that has the exact pattern of 'testBigFile-backup' with match case set to true will be included upon performing search.

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

The restore filter setting includes the Search subfolder and Match case set to true. This means that the filter will include all available subfolders in OneDrive upon searching. And it will strictly search only the specified pattern and case which is the 'testBigFile-backup'.

Example No. 3: Restore filter setting from an Office 365 user account's personal site

Location:	Office 365/Users/abc@ahsay.onmicrosoft.com/Personal Site
Search subfolders:	True
Kind:	Files and Folders
Type:	contains
Pattern:	ppp
Match Case:	True

The screenshot shows a search dialog box with the following settings:

- Look in:** Office 365/Users/[redacted]@ahsay.onmicrosoft.com/Personal Site
- Search subfolders:**
- Kind:** Files and Folders
- Type:** contains
- Pattern:** ppp
- Match case:**

A search button is visible below the filters. Below the search button is a table with the following headers:

Name	In Folder	Size	Date modified
------	-----------	------	---------------

At the bottom of the dialog, there are controls for "Items per page" (set to 50) and "Page" (set to -). At the very bottom, there are buttons for "OK", "Cancel", and "Help".

Search

Look in

Office 365/Users/[redacted]@ahsay.onmicrosoft.com/Personal Site Change

Search subfolders

Kind

Files and Folders

Type

contains

Pattern

ppp

Match case

Searching ...

Stop

Name	In Folder	Size	Date modified
------	-----------	------	---------------

Items per page 50

Page -

OK Cancel Help

Previous Next Cancel Help

Search

Look in

Office 365/Users/[redacted]@ahsay.onmicrosoft.com/Personal Site Change

Search subfolders

Kind

Files and Folders

Type

contains

Pattern

ppp

Match case

Search

Name	In Folder	Size	Date modified
<input checked="" type="checkbox"/> ppp.pptx	Office 365/Users/[redacted]@ahsay.onmicrosoft.com/Personal Site/D101_Lists and Librari...	35k	08/29/2018 15:53
<input checked="" type="checkbox"/> ppp.pptx	Office 365/Users/[redacted]@ahsay.onmicrosoft.com/Personal Site/D101_Lists and Librari...	35k	08/29/2018 16:23
<input checked="" type="checkbox"/> ppp.pptx	Office 365/Users/[redacted]@ahsay.onmicrosoft.com/Personal Site/D101_Lists and Librari...	35k	08/29/2018 18:28
<input checked="" type="checkbox"/> ppp.pptx	Office 365/Users/[redacted]@ahsay.onmicrosoft.com/Personal Site/D101_Lists and Librari...	35k	08/29/2018 16:54
<input checked="" type="checkbox"/> ppp.pptx	Office 365/Users/[redacted]@ahsay.onmicrosoft.com/Personal Site/D101_Lists and Librari...	36k	08/29/2018 17:03
<input checked="" type="checkbox"/> ppp.pptx	Office 365/Users/[redacted]@ahsay.onmicrosoft.com/Personal Site/D101_Lists and Librari...	36k	08/29/2018 18:16
<input checked="" type="checkbox"/> ppp.pptx	Office 365/Users/[redacted]@ahsay.onmicrosoft.com/Personal Site/D101_Lists and Librari...	36k	08/29/2018 18:19

Items per page 50

Page 1 / 1

OK Cancel Help

Previous Next Cancel Help

Explanation:

All personal site under Office 365/Users/abc@ahsay.onmicrosoft.com/Personal Site that has the pattern that contains with 'ppp' with match case set to true will be included upon performing search.

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

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

Scenario No. 2: Items from Site Collections

Example No. 1: Restore filter setting from Site Collections

Location:	Office 365/Site Collections
Search subfolders:	True
Kind:	Files and Directories
Type:	Starts With
Pattern:	A
Match Case:	True

Search

Look in
Office 365/Site Collections Change

Search subfolders

Kind: Files and Directories ▼ Type: starts with ▼ Pattern: A Match case

Search

Name	In Folder	Size	Date modified
------	-----------	------	---------------

Items per page: 50 ▼ Page: - ▼

OK Cancel Help

Previous Next Cancel Help

Search

Look in

Office 365/Site Collections

Change

Search subfolders

Kind

Files and Directories

Type

starts with

Pattern

A

Match case

Searching ...

Stop

Name	In Folder	Size	Date modified
------	-----------	------	---------------

Items per page

50

Page

-

OK

Cancel

Help

Previous

Next

Cancel

Help

Search

Look in

Office 365/Site Collections

Change

Search subfolders

Kind

Files and Directories

Type

starts with

Pattern

A

Match case

Search

Name	In Folder	Size	Date modified
<input checked="" type="checkbox"/> AB922B82-8406-4E49-B17B-9057BDF09503	Office 365/Site Collections/D901_ahsay.sharepoint.com...		
<input checked="" type="checkbox"/> AlternateMediaPlayer.xaml	Office 365/Site Collections/D901_ahsay.sharepoint.com...	35k	09/29/2018 17:01
<input checked="" type="checkbox"/> AudioPreview.png	Office 365/Site Collections/D901_ahsay.sharepoint.com...	13k	09/29/2018 17:01

Items per page

50

Page

1 / 1

OK

Cancel

Help

Previous

Next

Cancel

Help

Explanation:

All SharePoint sites under Office 365/Site Collections that has the pattern that starts with 'A' with match case set to true will be included upon performing search.

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

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

Example No. 2: Restore filter setting from Public Folders

Location:	Office 365/Public Folders
Search subfolders:	True
Kind:	Files and Folders
Type:	Ends With
Pattern:	t
Match Case:	True

The screenshot shows the Windows Search dialog box with the following settings:

- Look in:** Office 365/Public Folders (with a **Change** button)
- Search subfolders**
- Kind:** Files and Folders (dropdown menu)
- Type:** ends with (dropdown menu)
- Pattern:** t (text input field)
- Match case**
- Search** button
- Table with columns: Name, In Folder, Size, Date modified
- Items per page: 50 (dropdown menu)
- Page: - (dropdown menu)
- Buttons: **OK**, **Cancel**, **Help** (on a red bar)
- Buttons: **Previous**, **Next**, **Cancel**, **Help** (on a dark bar)

Search

Look in

Office 365/Public Folders Change

Search subfolders

Kind

Files and Folders

Type

ends with

Pattern

t

Match case

Searching ...

Stop

Name	In Folder	Size	Date modified
------	-----------	------	---------------

Items per page 50

Page -

OK Cancel Help

Previous Next Cancel Help

Search

Look in

Office 365/Public Folders Change

Search subfolders

Kind

Files and Folders

Type

ends with

Pattern

t

Match case

Search

Name	In Folder	Size	Date modified
<input checked="" type="checkbox"/> Pub-Test	Office 365/Public Folders		

Items per page 50

Page 1 / 1

OK Cancel Help

Previous Next Cancel Help

Explanation:

All files and folders under Office 365/Public Folders that has the pattern that ends with 't' with match case set to true will be included upon performing search.

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

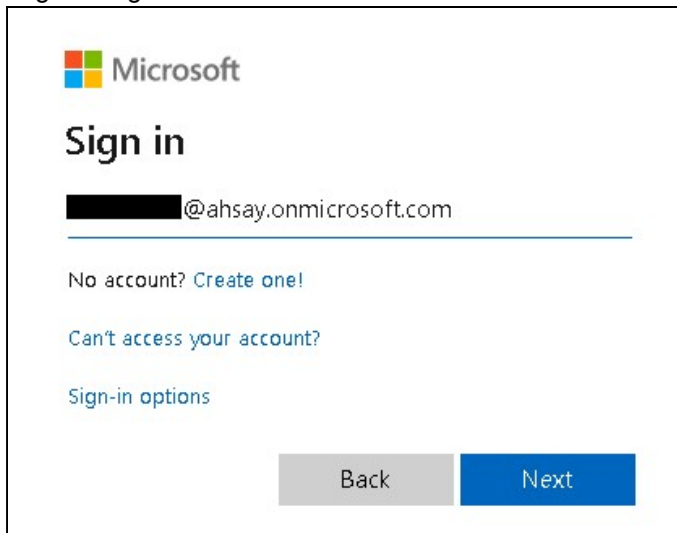
The restore filter setting includes the Search subfolder and Match case set to true. This means that the filter will include all available subfolders in Public Folder upon searching. And it will strictly search only the specified pattern and case which ends with 't'.

Appendix D: Setting Multi-Factor Authentication (MFA) in Microsoft 365 Admin Center

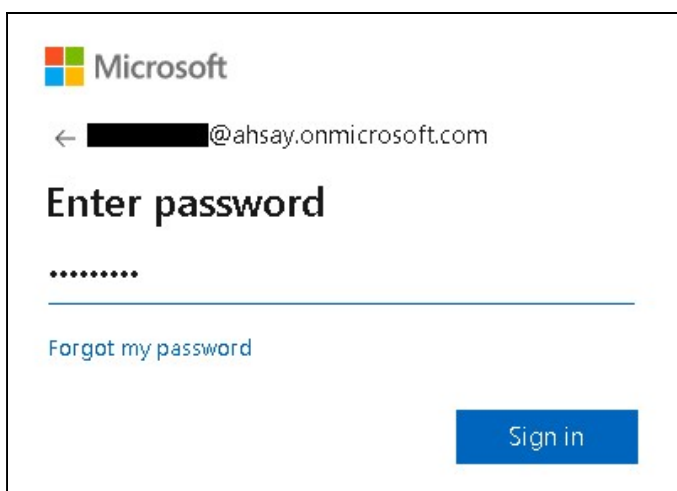
What is Multi-Factor Authentication (MFA)? It is an authentication method wherein a user will be granted an access only after successfully presenting two or more evidence or proof of personal information or identification. It also adds a second layer of security to users upon logging in.

To enable MFA of any Office 365 user accounts, follow the steps below:

1. Login using an Office 365 Administrator credentials.

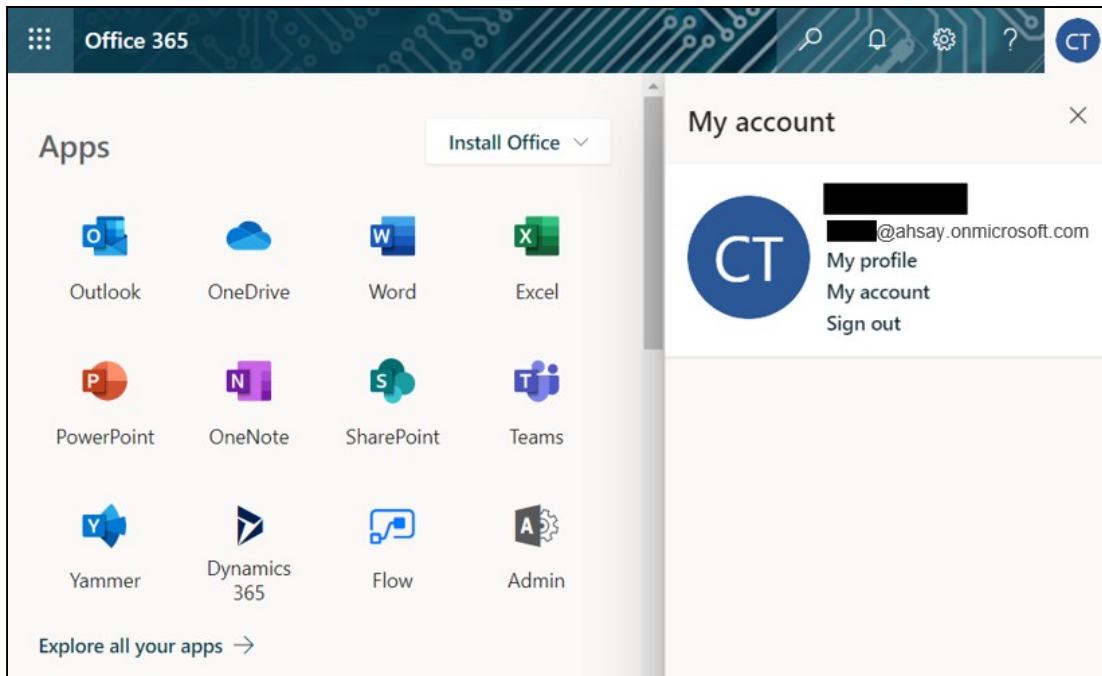
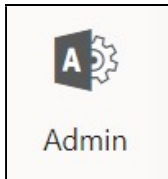


The screenshot shows the Microsoft sign-in interface. At the top left is the Microsoft logo. Below it, the text "Sign in" is displayed in a large, bold font. Underneath, there is a text input field containing a redacted email address followed by "@ahsay.onmicrosoft.com". Below the input field, there are three links: "No account? Create one!", "Can't access your account?", and "Sign-in options". At the bottom right, there are two buttons: a grey "Back" button and a blue "Next" button.

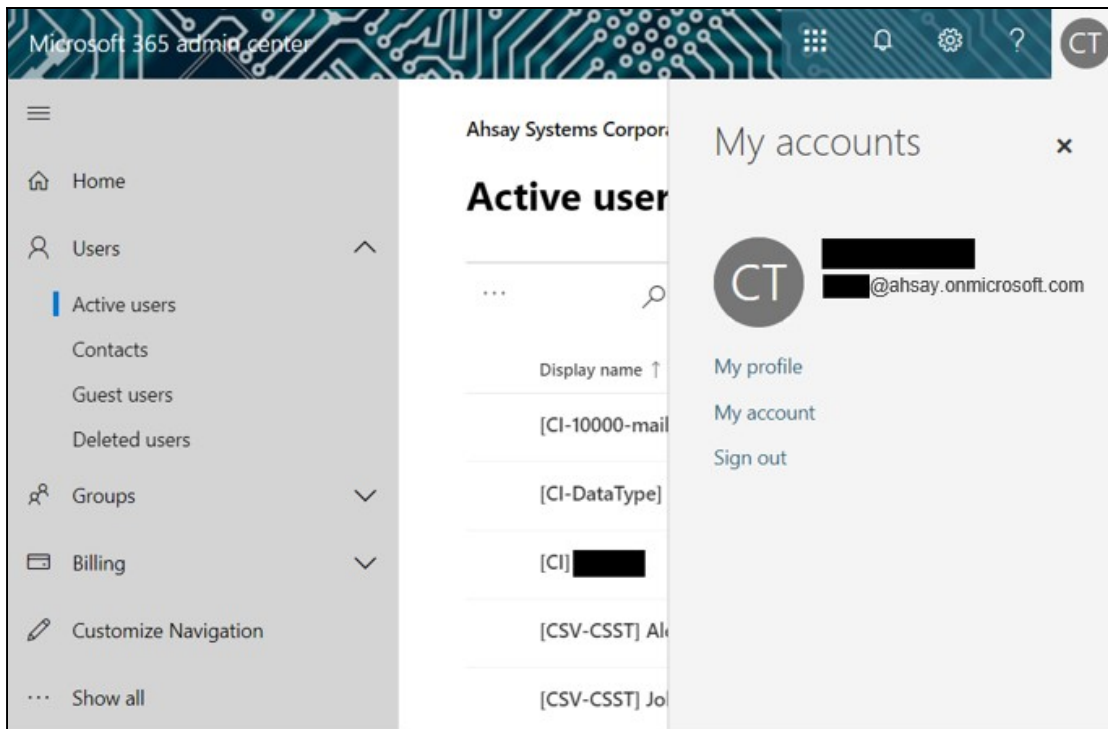


The screenshot shows the Microsoft "Enter password" page. At the top left is the Microsoft logo. Below it, there is a back arrow icon followed by a redacted email address and "@ahsay.onmicrosoft.com". The text "Enter password" is displayed in a large, bold font. Below this, there is a password input field with a series of dots representing the password. Below the input field, there is a link that says "Forgot my password". At the bottom right, there is a blue "Sign in" button.

2. Click the **Admin Center** icon.

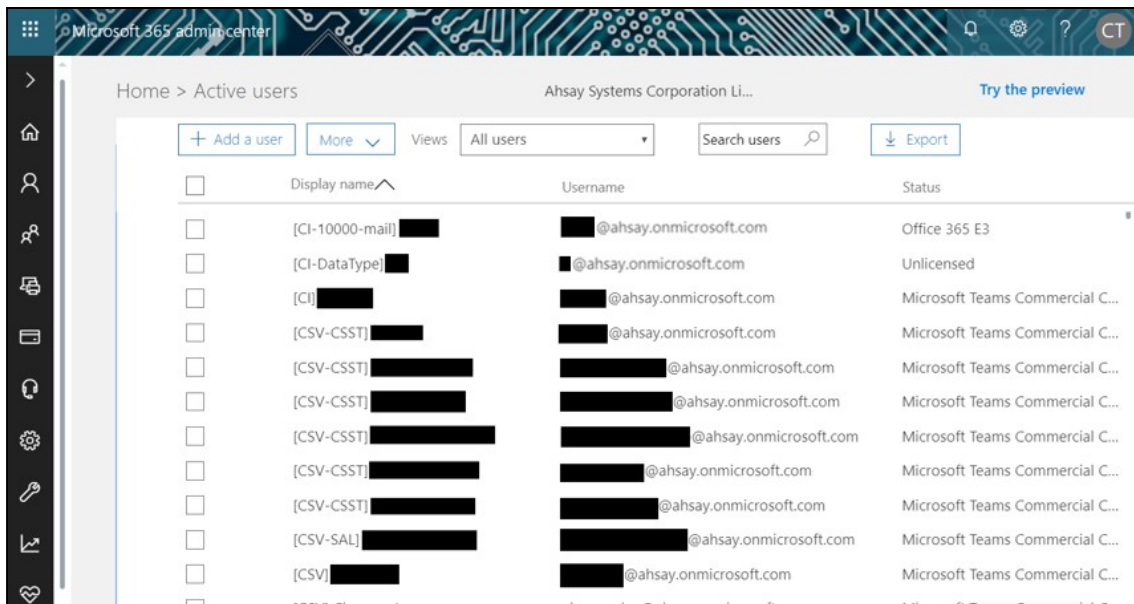


3. Go to **Users** and select the **Active users** from the list.

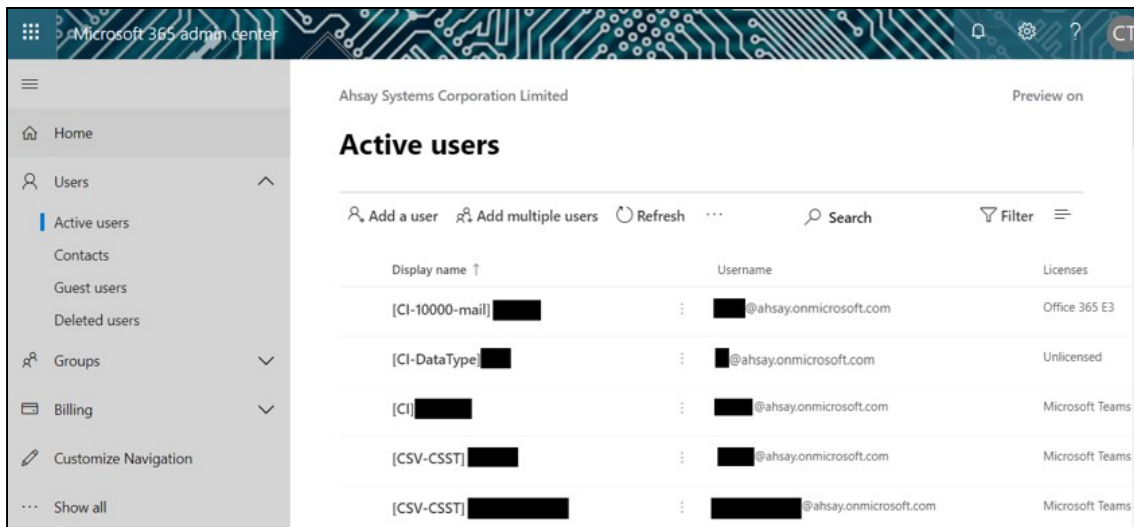


4. There are two (2) modes of viewing the Active users.

Classic Mode – This is the default mode upon entering the Active users screen.



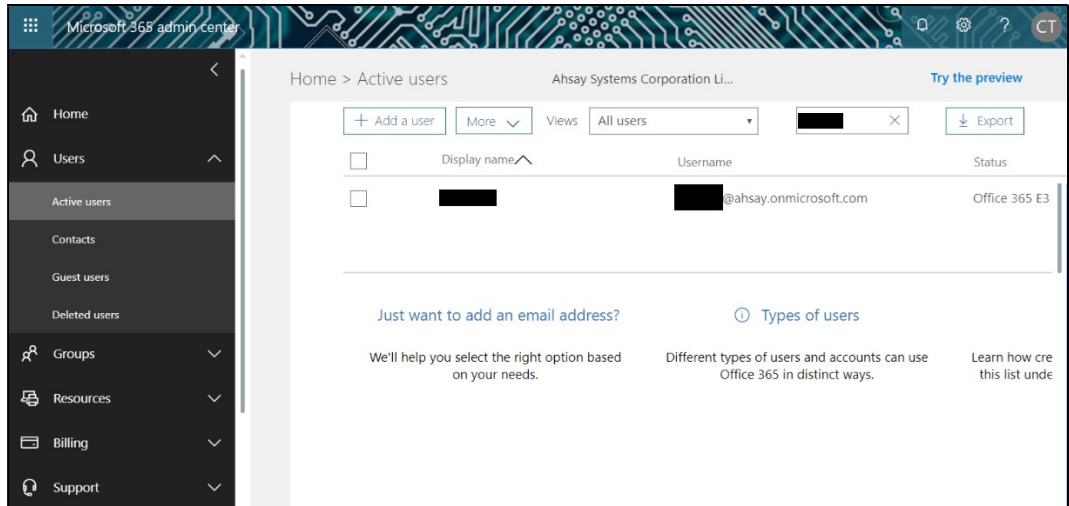
Preview Mode – This is a new feature in the Office 365 Admin Center that offers simplification to manage your Microsoft 365 and Office 365 services. It also has all the capabilities of the classic mode.



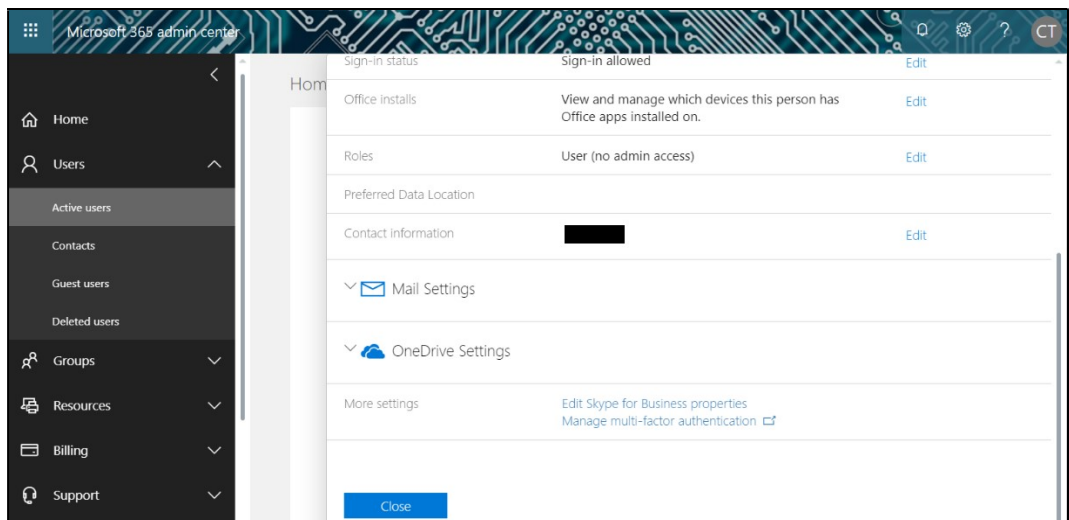
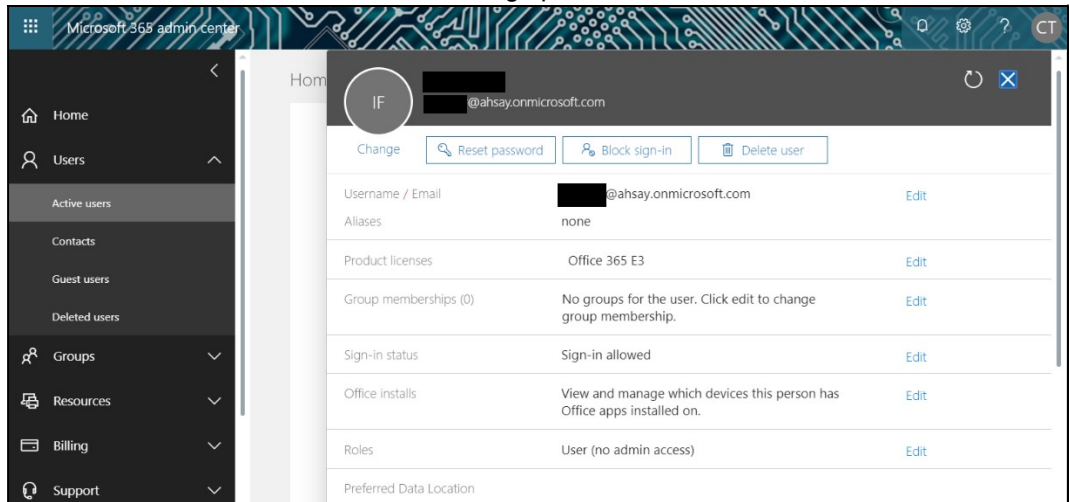
5. To go to the Multifactor Authentication screen, below are the steps for classic and preview mode.

For the Classic Mode:

- Search and select an Office 365 user account. The user's information will be displayed.



- In the lower part of the user's information screen, look for the **Manage multi-factor authentication** link. It is in the More settings portion.



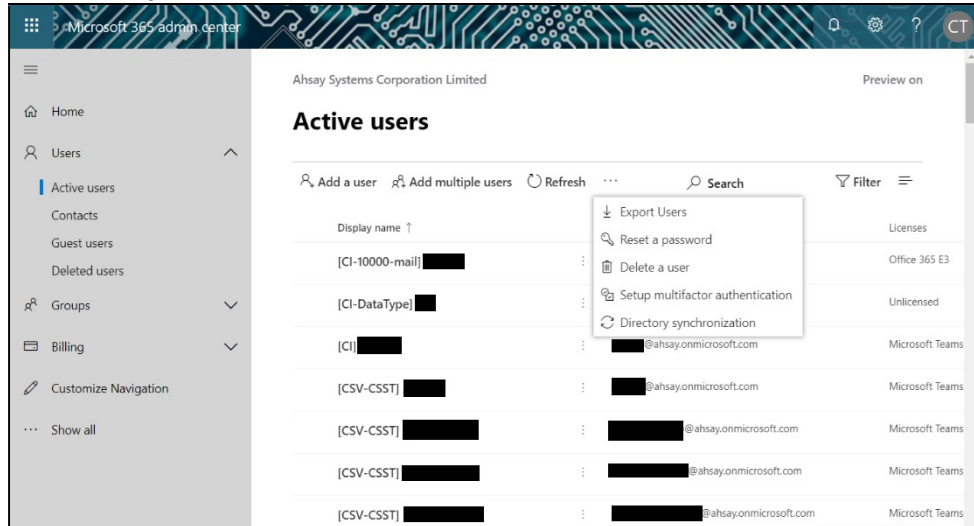
More settings	Edit Skype for Business properties Manage multi-factor authentication
---------------	--

For the Preview Mode:

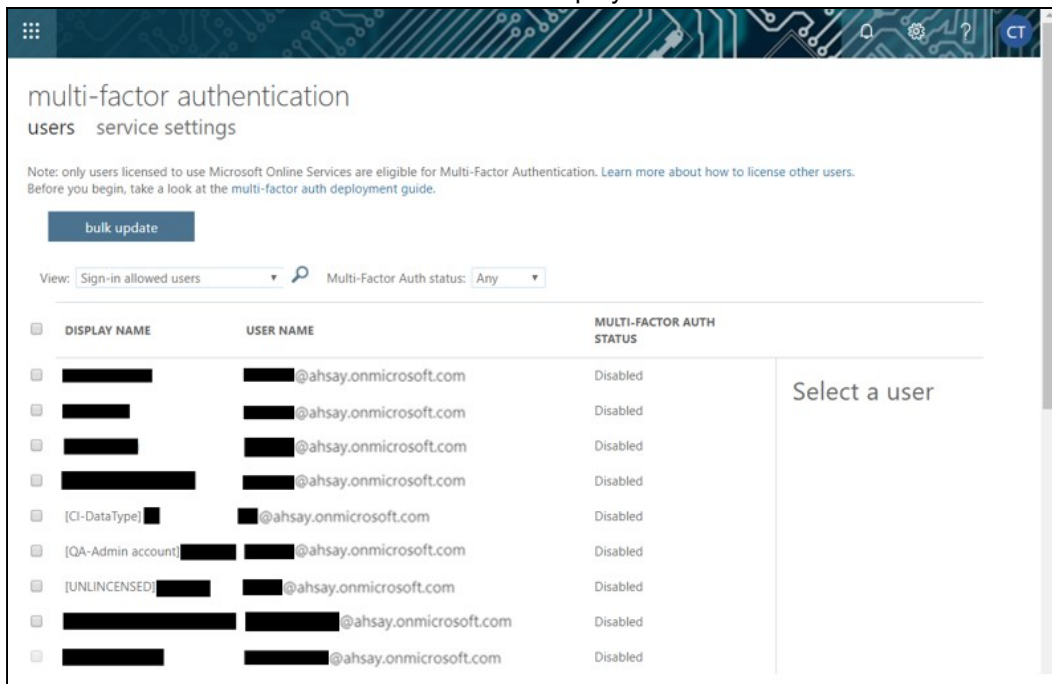
- In the Active users screen, click the [...] ellipses.



- Select **Setup multifactor authentication** from the list.

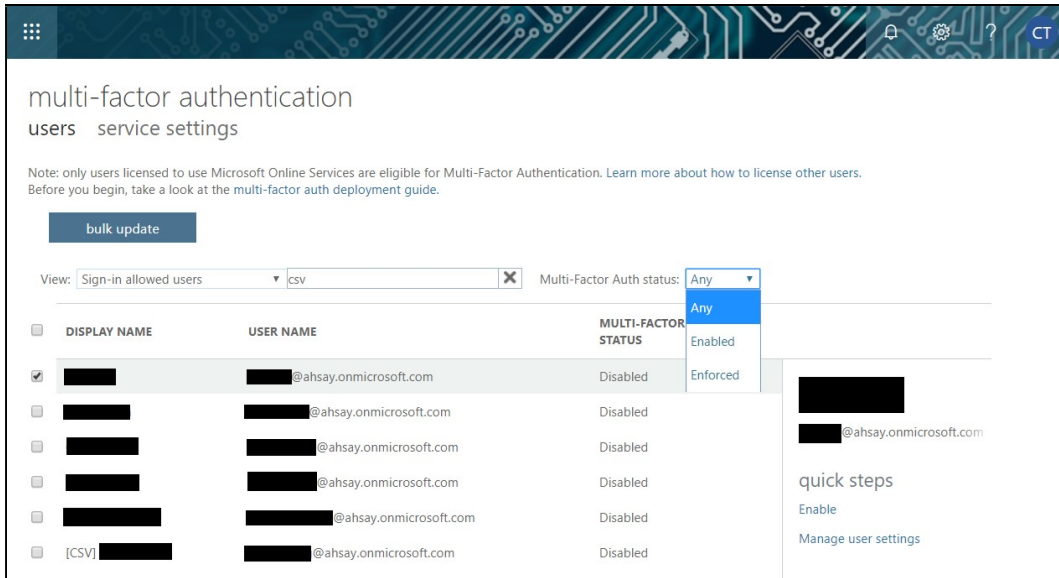


6. The multi-factor authentication screen will be displayed.



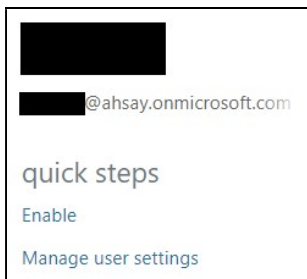
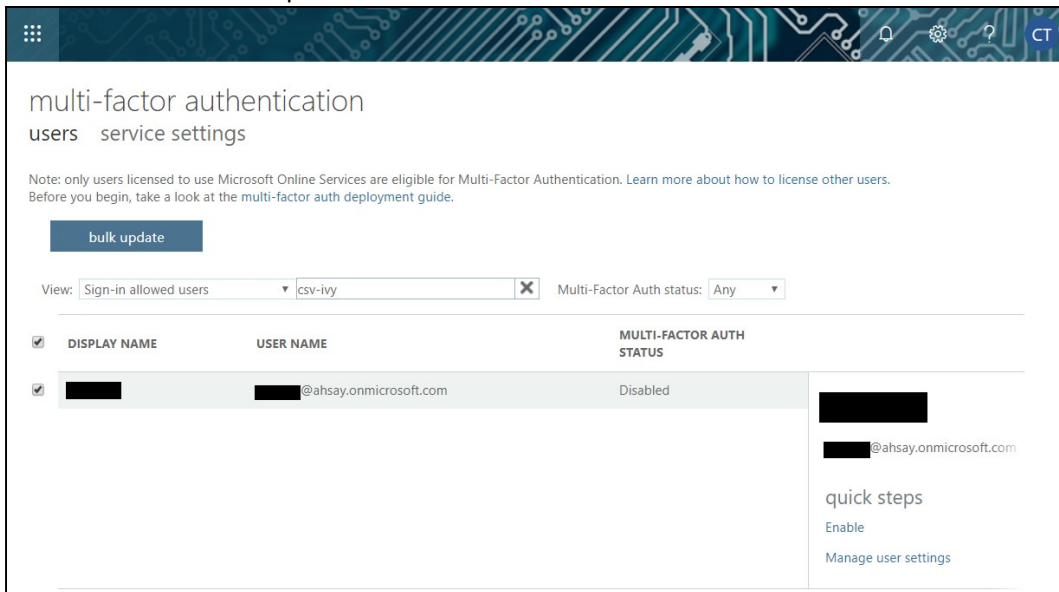
Note: The two (2) modes will go to the same screen.

7. You can search and select one or more Office 365 user accounts. There is also a drop-down list available for multi-factor authentication status namely, **Disabled**, **Enabled**, and **Enforced**.

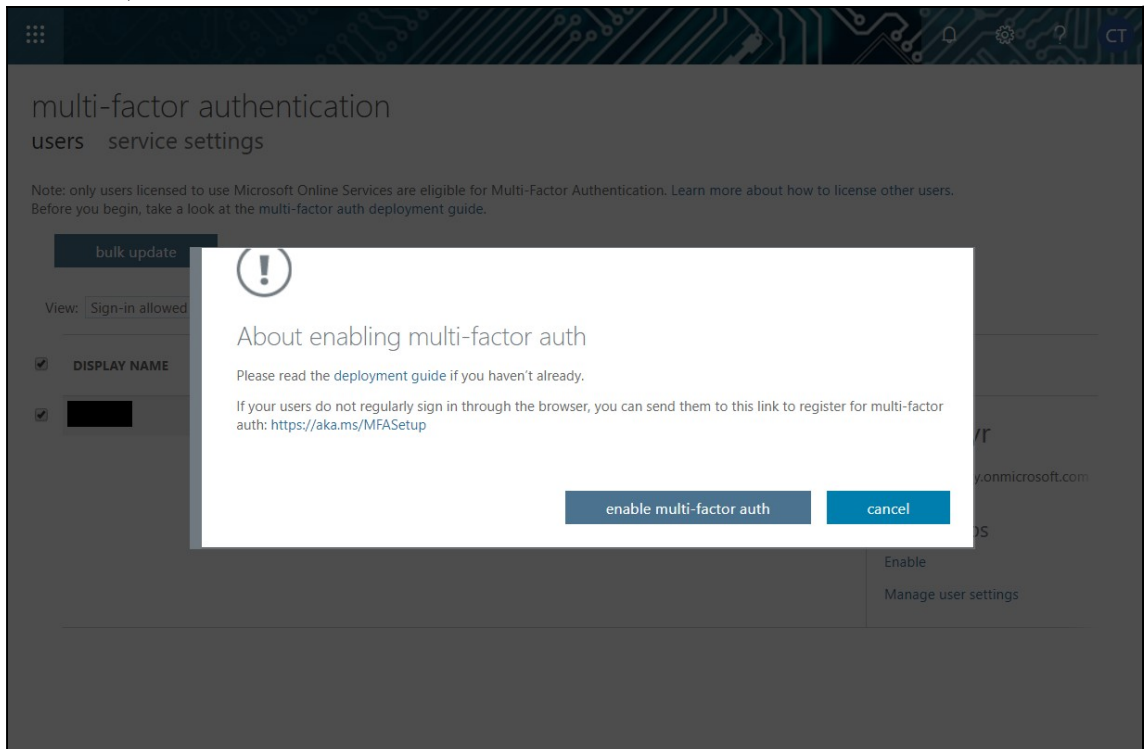


- Disabled – This status refers to the users who are not yet enrolled in the MFA. This is the default status.
- Enabled – This status refers to the users who are enrolled in the MFA, but changes have not yet taken effect.
- Enforced – This status refers to the users who are enrolled in the MFA has completed the registration process.

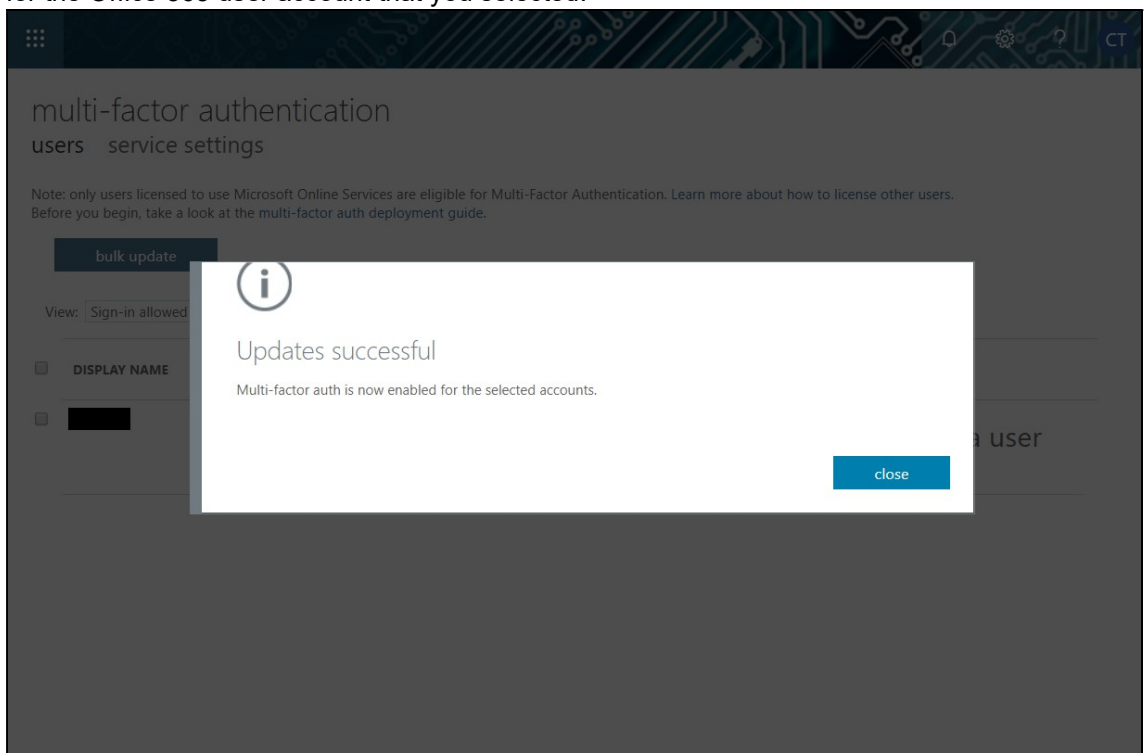
8. Upon selecting a user, on the right side of the screen it will show you a link to enable the MFA. Click the **Enable** link to proceed.




9. A warning message will be displayed. Click the **enable multi-factor auth** button to proceed. Otherwise, click the **cancel** button to abort.



10. If you select enable multi-factor auth, the screen below shows the successful enabling of MFA for the Office 365 user account that you selected.



11. To finish the setup for the MFA, login using the MFA enabled Office 365 user account.

 Microsoft

Sign in


██████████@ahsay.onmicrosoft.com

No account? [Create one!](#)

[Can't access your account?](#)

Sign-in options

[Back](#) [Next](#)

 Microsoft

← ██████████@ahsay.onmicrosoft.com


Enter password

.....

[Forgot my password](#)

[Sign in](#)

12. Upon logging in, there will be a message that will require you to provide more information to keep your account safe. Click **Next** to proceed.

 Microsoft

██████████@ahsay.onmicrosoft.com

More information required

Your organization needs more information to keep your account secure

[Use a different account](#)

[Learn more](#)

[Next](#)

13. The **Additional security verification** screen will be displayed. Select one (1) option you want for the security of your account. You can choose from the three (3) options, **Authentication phone**, **Office phone**, and **Mobile app**.

Microsoft

Additional security verification

Secure your account by adding phone verification to your password. [View video to know how to secure your account](#)

Step 1: How should we contact you?

Authentication phone ▼

Select your country or region ▼

Phone number can contain only the digits 0-9, dash, space, period and parentheses.

Method

Send me a code by text message

Call me

Next

Your phone numbers will only be used for account security. Standard telephone and SMS charges will apply.

©2019 Microsoft Legal | Privacy

- Authentication phone
 - Enter valid mobile number.
 - Select a method
 - Send me a code by text message
 - Call me

Microsoft

Additional security verification

Secure your account by adding phone verification to your password. [View video to know how to secure your account](#)

Step 1: How should we contact you?

Authentication phone ▼

Philippines (+63) ▼

Method

Send me a code by text message

Call me

Next

Your phone numbers will only be used for account security. Standard telephone and SMS charges will apply.

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- Office phone – This option is disabled. Please ask your administrator if you need to update your office phone number.

Microsoft

Additional security verification

Secure your account by adding phone verification to your password. [View video to know how to secure your account](#)

Step 1: How should we contact you?

Office phone

Select your country or region Extension

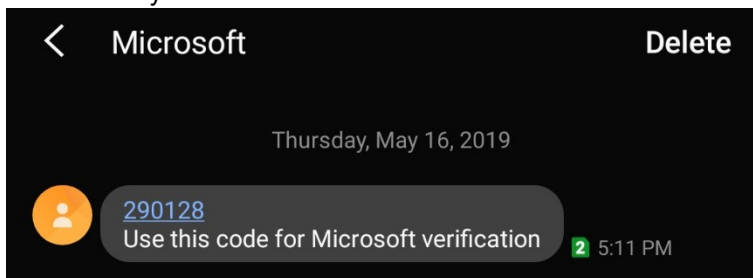
Contact your admin if you need to update your office number. Do not use a Lync phone.

[Next](#)

Your phone numbers will only be used for account security. Standard telephone and SMS charges will apply.

©2019 Microsoft Legal | Privacy

- Mobile app
 - Select which option you like upon using the mobile app
 - Receive notifications for verification
 - Use verification code
14. If you have selected the first option which is the **Authentication phone** with a method of **Send me a code by text**, you will receive a text message containing the verification code. Ensure that you have indicated a valid mobile number.



Microsoft

Additional security verification

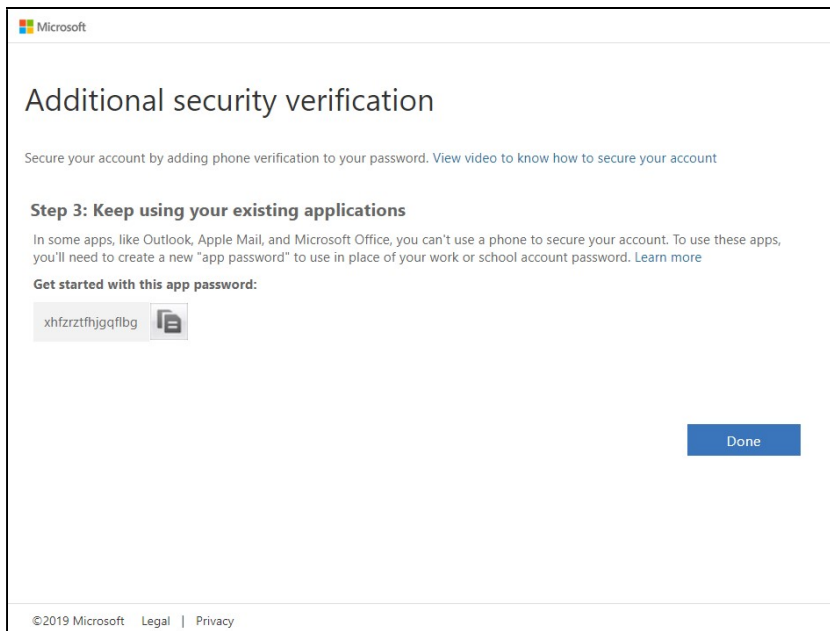
Secure your account by adding phone verification to your password. [View video to know how to secure your account](#)

Step 2: We've sent a text message to your phone at + [redacted]

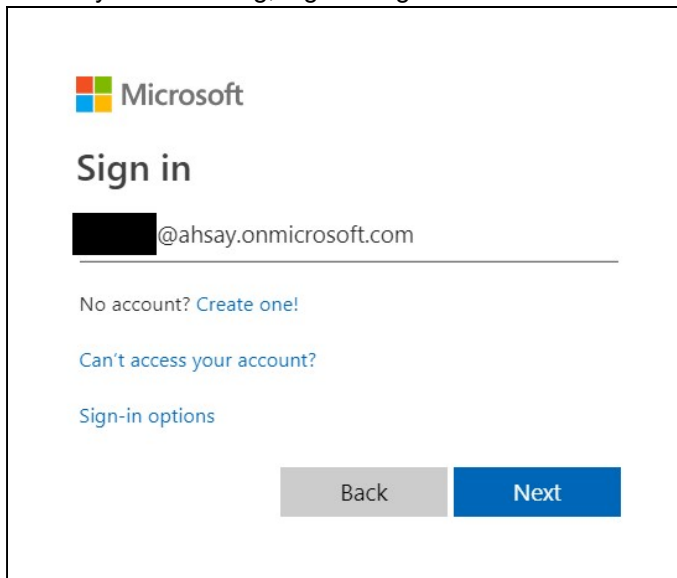
When you receive the verification code, enter it here

[Cancel](#) [Verify](#)

©2019 Microsoft Legal | Privacy



15. To verify if it's working, login using the MFA enabled Office 365 user account.



16. Upon logging in, there will be a message that will require you to provide the code that have been sent to your personal mobile number. Click **Verify** to proceed.



██████████@ahsay.onmicrosoft.com

Enter code

🗨 We texted your phone +XX XXXXXXXXX79. Please enter the code to sign in.

Code _____


Having trouble? [Sign in another way](#)

[More information](#)

Verify

< Microsoft Delete

Thursday, May 16, 2019

 [501311](#)
Use this code for Microsoft verification 📧 5:23 PM



██████████@ahsay.onmicrosoft.com

Enter code

🗨 We texted your phone +XX XXXXXXXXX79. Please enter the code to sign in.

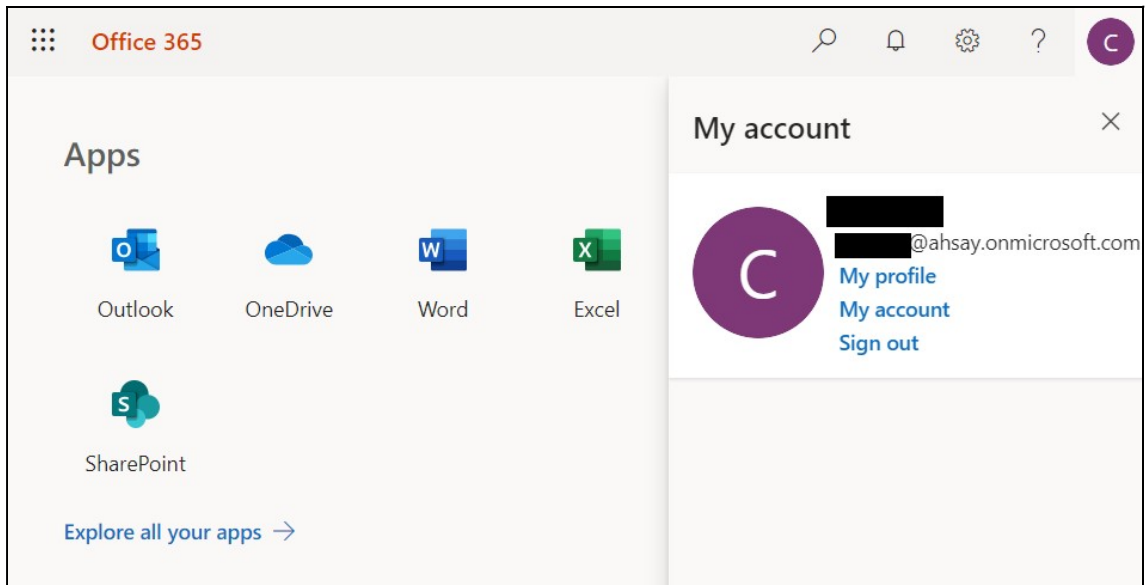
501311 _____

Having trouble? [Sign in another way](#)

[More information](#)

Verify

17. After the verification process, the screen will be automatically redirected to the Office 365 Main screen.

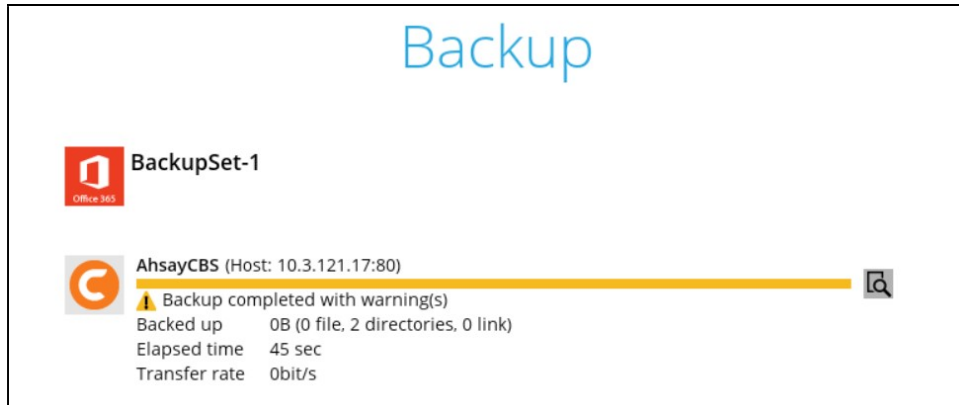


Appendix E: Example Scenario for Backup Set Maintenance

Scenario: Office 365 user account does not exist warning message

This is the sample warning message if the user does not exist. If a user is removed from the domain and the Admin did not manually unselect the user from the backup source, then during backup job there will be a warning that the user does not exist. The warning will appear on the backup log.

Backup job is completed with warning(s). Check the backup log for the warning message.



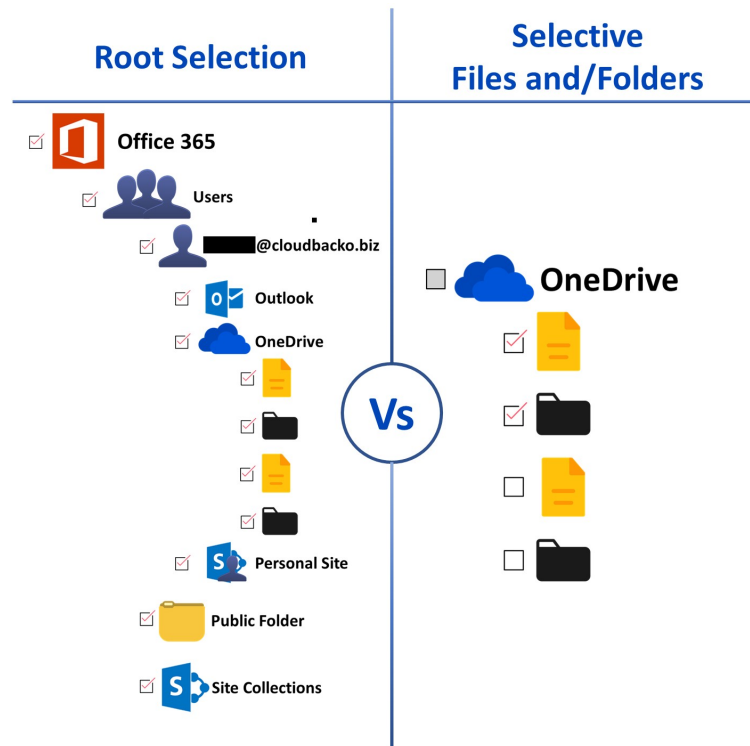
Backup log contains a warning message.



Type	Log	Time
i	Start [AhsayOBM v9.1.0.0]	01/21/2022 12:13:01
i	Saving encrypted backup set encryption keys to server...	01/21/2022 12:13:01
i	Start Backup ... [Deduplication: enabled, Deduplication scope: All files within the same backup set, Migrate Delta: disabled]	01/21/2022 12:13:09
i	Using Temporary Directory C:\Users\user\obm\temp\1642737748856\OBS@1642737969529	01/21/2022 12:13:09
i	Start running pre-commands	01/21/2022 12:13:18
i	Finished running pre-commands	01/21/2022 12:13:18
i	Downloading server file list (Office 365)...	01/21/2022 12:13:18
i	Download valid index files from backup job "null" to "C:\Users\user\obm\temp\1642737748856\OBS@1642737969529\in...	01/21/2022 12:13:18
i	Downloading server file list (Office 365)... Completed	01/21/2022 12:13:18
i	Run Office 365 Data Synchronization Check (1st time)	01/21/2022 12:13:36
i	[New Directory]... Office 365	01/21/2022 12:13:37
i	[New Directory]... Office 365/Users	01/21/2022 12:13:37
w	Backup source "Office 365/Users/...' does not exist !	01/21/2022 12:13:38
i	Start validating the presence and size of backup data in destination "AhsayCBS"...	01/21/2022 12:13:41
i	This backup job has no backup data in destination "AhsayCBS"	01/21/2022 12:13:41
i	Finished validating the presence and size of backup data in destination "AhsayCBS"	01/21/2022 12:13:41

Appendix F: Example Scenario for Data Synchronization Check (DSC) with sample backup logs

Selection of root folder vs Selective files and/folders

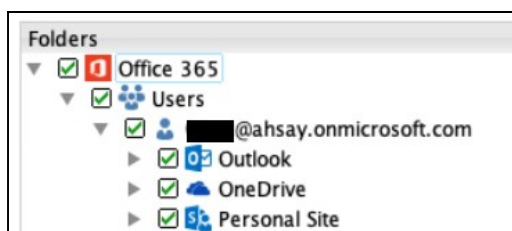
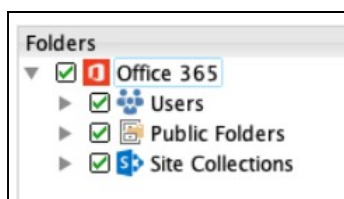


Root Selection

Selecting the root folder automatically selects all the files and/or folders under all Office 365 user accounts including the Public Folder and Site Collections. On the comparison image above, the checkbox for the root folder "Office 365" is ticked.

Data synchronization check is not required when using root selection backed up. As during a backup job any deleted files in the backup source will be automatically move to retention area.

Below is a sample screenshot of the backup source with root selection.



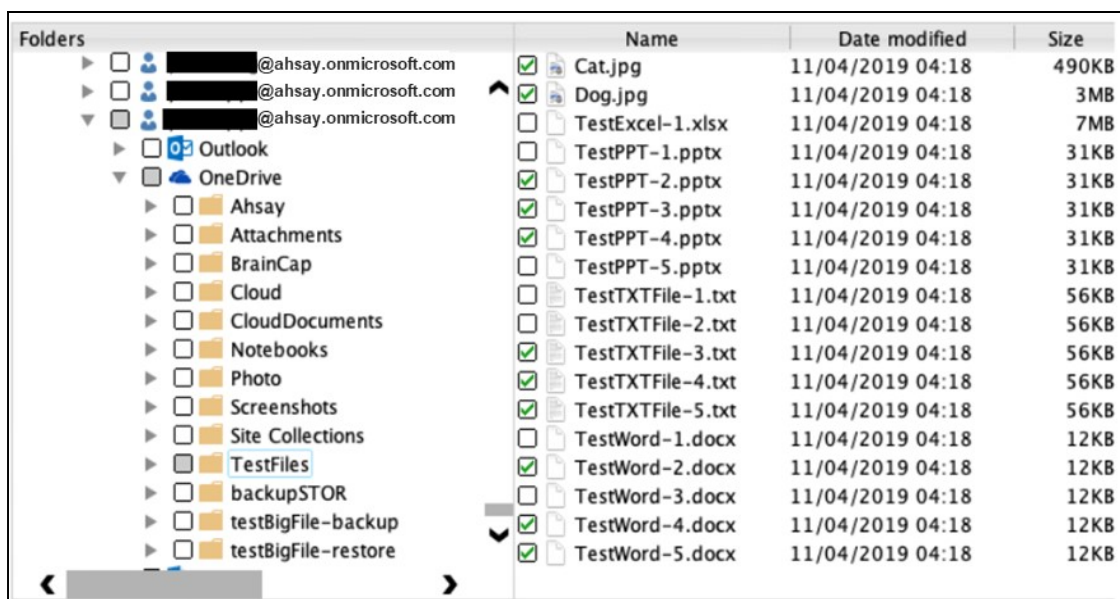
Selective Files and/or Folders

When the root folder is not selected, and the files and/or folders are selected individually. If the files and/or folders are subsequently un-selected from the backup source. The backup job will not pick up the changes of the de-selected files and/or folders, they will not be moved the retention area but remain in the data area. In the long run this could result in a build-up of data in the backup destinations(s).

On the comparison image above, the “OneDrive” checkbox is greyed out because there are only one file and one folder selected.

Data synchronization check is highly recommended to perform to synchronize de-selected files and/folders in the backup source with the backup destination(s). This will ensure that there will be no data build up on the backup destination(s).

Below is the sample screenshot of the backup source with selective files and/or folders.

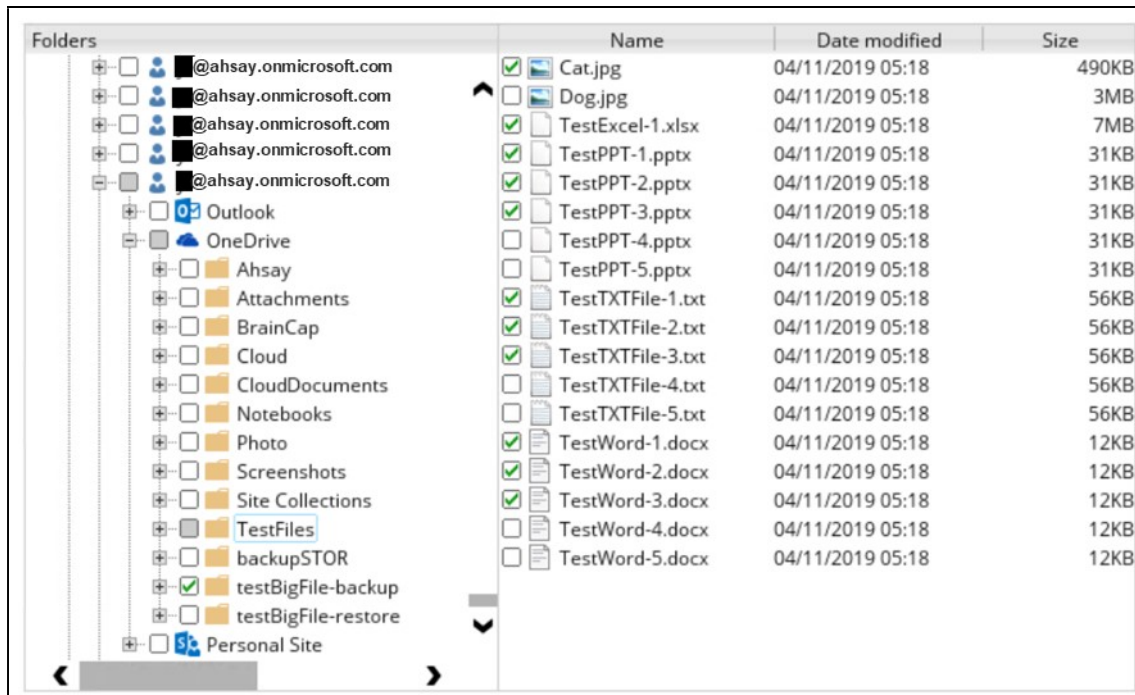


Folders	Name	Date modified	Size
<input type="checkbox"/> @ahsay.onmicrosoft.com	<input checked="" type="checkbox"/> Cat.jpg	11/04/2019 04:18	490KB
<input type="checkbox"/> @ahsay.onmicrosoft.com	<input checked="" type="checkbox"/> Dog.jpg	11/04/2019 04:18	3MB
<input type="checkbox"/> @ahsay.onmicrosoft.com	<input type="checkbox"/> TestExcel-1.xlsx	11/04/2019 04:18	7MB
<input type="checkbox"/> Outlook	<input type="checkbox"/> TestPPT-1.pptx	11/04/2019 04:18	31KB
<input checked="" type="checkbox"/> OneDrive	<input checked="" type="checkbox"/> TestPPT-2.pptx	11/04/2019 04:18	31KB
<input type="checkbox"/> Ahsay	<input checked="" type="checkbox"/> TestPPT-3.pptx	11/04/2019 04:18	31KB
<input type="checkbox"/> Attachments	<input checked="" type="checkbox"/> TestPPT-4.pptx	11/04/2019 04:18	31KB
<input type="checkbox"/> BrainCap	<input type="checkbox"/> TestPPT-5.pptx	11/04/2019 04:18	31KB
<input type="checkbox"/> Cloud	<input type="checkbox"/> TestTXTFile-1.txt	11/04/2019 04:18	56KB
<input type="checkbox"/> CloudDocuments	<input type="checkbox"/> TestTXTFile-2.txt	11/04/2019 04:18	56KB
<input type="checkbox"/> Notebooks	<input checked="" type="checkbox"/> TestTXTFile-3.txt	11/04/2019 04:18	56KB
<input type="checkbox"/> Photo	<input checked="" type="checkbox"/> TestTXTFile-4.txt	11/04/2019 04:18	56KB
<input type="checkbox"/> Screenshots	<input checked="" type="checkbox"/> TestTXTFile-5.txt	11/04/2019 04:18	56KB
<input type="checkbox"/> Site Collections	<input type="checkbox"/> TestWord-1.docx	11/04/2019 04:18	12KB
<input type="checkbox"/> TestFiles	<input checked="" type="checkbox"/> TestWord-2.docx	11/04/2019 04:18	12KB
<input type="checkbox"/> backupSTOR	<input type="checkbox"/> TestWord-3.docx	11/04/2019 04:18	12KB
<input type="checkbox"/> testBigFile-backup	<input checked="" type="checkbox"/> TestWord-4.docx	11/04/2019 04:18	12KB
<input type="checkbox"/> testBigFile-restore	<input checked="" type="checkbox"/> TestWord-5.docx	11/04/2019 04:18	12KB

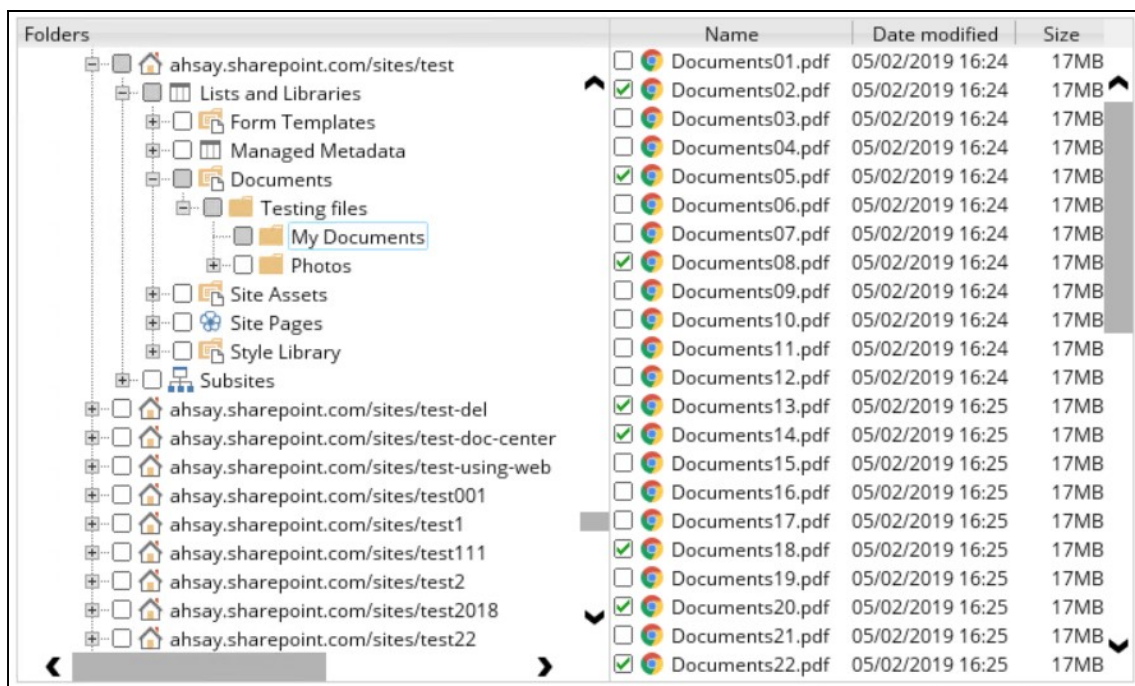
Only selected files and/or folders are selected in OneDrive. Also, the Office 365 user account is greyed out as this indicates that not all items are selected.

NOTE: Selective Files and/or Folders only applies to files and/or folders under Outlook, OneDrive, Personal Site, Public Folders, and Site Collections. This is **NOT** applicable for User Level.

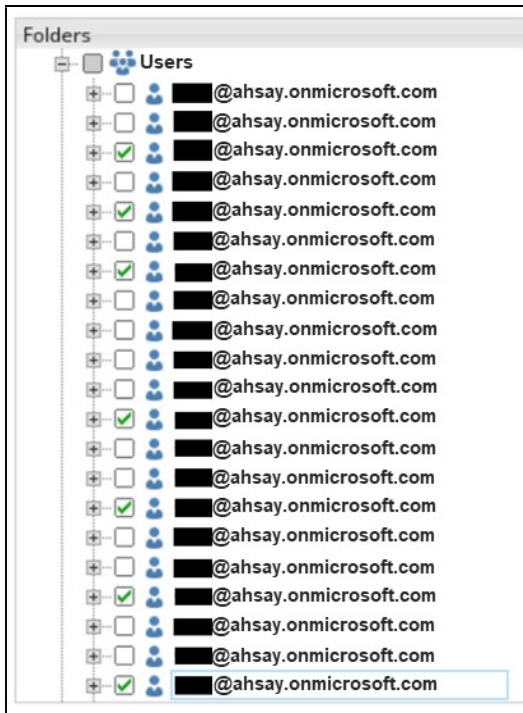
This is an example of selective files and/folders from OneDrive.



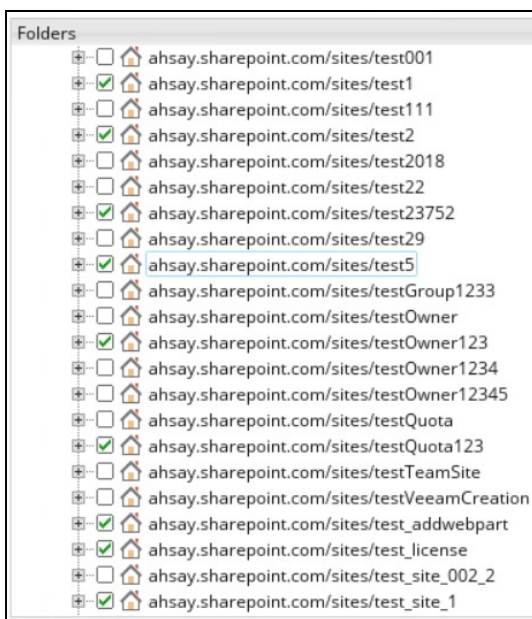
This is an example of selective files and/folders from Site Collections.



This is an example of a selective files and/or folders per user level which is not applicable as Data Synchronization Check only works for deselected files and/or folders that will be moved to retention area.



This is also an example of selective files and/or folders per Site Collections.



On the sample backup log, it shows that data synchronization check is enabled and runs for the first time.

Type	Log	Time
✔	Start data integrity check on backup set "Client Run Office 365 Backup Set(1642662320945)", "AhsayCBS(164266337...	20/01/2022 15:34:42
✔	Start processing data integrity check on backup set= "Client Run Office 365 Backup Set" destination= "AhsayCBS"	20/01/2022 15:34:42
✔	Download valid index files from backup job "null" to "/Users/admin/temp/1642662320945/OBS@1642663373104/i...	20/01/2022 15:34:45
✔	Skipped to run Data Integrity Check for backup set "Client Run Office 365 Backup Set" in destination "AhsayCBS" becaus...	20/01/2022 15:34:45
✔	Data integrity check on backup set= "Client Run Office 365 Backup Set" destination= "AhsayCBS" is completed	20/01/2022 15:34:46
✔	Finished data integrity check on backup set "Client Run Office 365 Backup Set(1642662320945)", "AhsayCBS(164266...	20/01/2022 15:34:46
✔	Completed data integrity check on backup set "Client Run Office 365 Backup Set(1642662320945)", "AhsayCBS(1642...	20/01/2022 15:34:46
✔	Start running pre-commands	20/01/2022 15:34:46
✔	Finished running pre-commands	20/01/2022 15:34:46
✔	Downloading server file list (Office 365)...	20/01/2022 15:34:46
✔	Download valid index files from backup job "null" to "/Users/admin/temp/1642662320945/OBS@1642663373104/i...	20/01/2022 15:34:46
✔	Downloading server file list (Office 365)... Completed	20/01/2022 15:34:46
✔	Backup of "Allow multiple responses" setting in survey lists is not supported under modern authentication.	20/01/2022 15:34:47
✔	Run Office 365 Data Synchronization Check (1st time)	20/01/2022 15:34:56
✔	[New Directory]... Office 365	20/01/2022 15:34:57
✔	[New Directory]... Office 365/Site Collections	20/01/2022 15:34:57
✔	[New Directory]... Office 365/Users	20/01/2022 15:34:58

On the sample backup log, it shows the countdown until the next data synchronization check which is in five (5) days.

Type	Log	Time
✔	Start [AhsayOBM v9.1.0.0]	26/01/2022 10:35:26
✔	Saving encrypted backup set encryption keys to server...	26/01/2022 10:35:27
✔	Start Backup ... [Duplication: enabled, Deduplication scope: All files within the same backup set, Migrate Delta: disa...	26/01/2022 10:35:28
✔	Using Temporary Directory /Users/admin/temp/1642662320945/OBS@1642663373104	26/01/2022 10:35:28
✔	Start running pre-commands	26/01/2022 10:35:50
✔	Finished running pre-commands	26/01/2022 10:35:50
✔	Downloading server file list (Office 365)...	26/01/2022 10:35:50
✔	Download valid index files from backup job "2022-01-26-10-31-10" to "/Users/admin/temp/1642662320945/OBS...	26/01/2022 10:35:50
✔	Download valid index files from backup job "2022-01-26-10-31-10" to "/Users/admin/temp/1642662320945/OBS...	26/01/2022 10:35:51
✔	Download valid index files from backup job "2022-01-26-10-31-10" to "/Users/admin/temp/1642662320945/OBS...	26/01/2022 10:35:52
✔	Downloading server file list (Office 365)... Completed	26/01/2022 10:35:52
✔	Backup of "Allow multiple responses" setting in survey lists is not supported under modern authentication.	26/01/2022 10:35:53
✔	Office 365 Data Synchronization Check will be run after 5 day(s)	26/01/2022 10:36:03
✔	Downloading server file list (.....@.....com)...	26/01/2022 10:36:06
✔	Downloading server file list (.....@.....com)... Completed	26/01/2022 10:36:06
✔	Reading backup source from@.....com...	26/01/2022 10:36:07
✔	Backup E-mail Account:@.....com	26/01/2022 10:36:07

On the sample backup log, it shows the countdown is done and data synchronization check is running.

Type	Log	Time
✔	The statistics of backup set= "Client Run Office 365 Backup Set" destination= "AhsayCBS" is correct.	26/01/2022 10:26:35
✔	Data integrity check on backup set= "Client Run Office 365 Backup Set" destination= "AhsayCBS" is completed	26/01/2022 10:26:38
✔	Finished data integrity check on backup set "Client Run Office 365 Backup Set(1642662320945)", "AhsayCBS(164266...	26/01/2022 10:26:38
✔	Completed data integrity check on backup set "Client Run Office 365 Backup Set(1642662320945)", "AhsayCBS(1642...	26/01/2022 10:26:38
✔	Start running pre-commands	26/01/2022 10:26:38
✔	Finished running pre-commands	26/01/2022 10:26:38
✔	Downloading server file list (Office 365)...	26/01/2022 10:26:38
✔	Download valid index files from backup job "2022-01-20-15-34-03" to "/Users/admin/temp/1642662320945/OBS...	26/01/2022 10:26:39
✔	Download valid index files from backup job "2022-01-20-15-34-03" to "/Users/admin/temp/1642662320945/OBS...	26/01/2022 10:26:39
✔	Download valid index files from backup job "2022-01-20-15-34-03" to "/Users/admin/temp/1642662320945/OBS...	26/01/2022 10:26:39
✔	Downloading server file list (Office 365)... Completed	26/01/2022 10:26:39
✔	Backup of "Allow multiple responses" setting in survey lists is not supported under modern authentication.	26/01/2022 10:26:41
✔	Run Office 365 Data Synchronization Check	26/01/2022 10:26:49
✔	Downloading server file list (.....@.....com)...	26/01/2022 10:26:53
✔	Downloading server file list (.....@.....com)... Completed	26/01/2022 10:26:53
✔	Reading backup source from@.....com...	26/01/2022 10:26:54
✔	Backup E-mail Account:@.....com	26/01/2022 10:26:54

On the sample backup log, it shows that data synchronization check is disabled.

Type	Log	Time
i	Start [AhsayOBM v9.1.0.0]	26/01/2022 10:31:29
i	Saving encrypted backup set encryption keys to server...	26/01/2022 10:31:29
i	Start Backup ... [Deduplication: enabled, Deduplication scope: All files within the same backup set, Migrate Delta: disa...	26/01/2022 10:31:30
i	Using Temporary Directory /Users/admin/temp/1642662320945/OBS@1642663373104	26/01/2022 10:31:30
i	Start running pre-commands	26/01/2022 10:31:52
i	Finished running pre-commands	26/01/2022 10:31:52
i	Downloading server file list (Office 365)...	26/01/2022 10:31:52
i	Download valid index files from backup job "2022-01-26-10-25-47" to "/Users/admin/temp/1642662320945/OBS...	26/01/2022 10:31:52
i	Download valid index files from backup job "2022-01-26-10-25-47" to "/Users/admin/temp/1642662320945/OBS...	26/01/2022 10:31:53
i	Download valid index files from backup job "2022-01-26-10-25-47" to "/Users/admin/temp/1642662320945/OBS...	26/01/2022 10:31:53
i	Downloading server file list (Office 365)... Completed	26/01/2022 10:31:53
i	Backup of "Allow multiple responses" setting in survey lists is not supported under modern authentication.	26/01/2022 10:31:54
i	Office 365 Data Synchronization Check is disabled (Debug option - Office365.DSCInterval = -1)	26/01/2022 10:32:03
i	Downloading server file list (.....@.....com)...	26/01/2022 10:32:07
i	Downloading server file list (.....@.....com)... Completed	26/01/2022 10:32:07
i	Reading backup source from@.....com...	26/01/2022 10:32:08
i	Backup E-mail Account:@.....com	26/01/2022 10:32:08

Appendix G: Setting the Data Synchronization Check (DSC)

Data Synchronization Check (DSC) is enabled by default and will run every 60 days.

Assumption: AhsayOBM Installation path is `/Users/admin/Applications/AhsayOBM.app`

To disable the data synchronization check, follow the instructions below:

1. Make sure there are no active backup or restore job running.
2. Close AhsayOBM UI.
3. Stop the Ahsay Online Backup Manager services and check if the scheduler service has stopped running using the command highlighted in **red**.

```
#sudo /Applications/AhsayOBM.app/bin/StopScheduler.sh

Password:

#ps -ef|grep java
#501 5721 5705 0 9:02PM ttys000 0:00.00 grep java
```

4. Using the terminal, go to AhsayOBM installation path. Use the command highlighted in **red**.

```
#cd /Applications/AhsayOBM.app
```

5. Open the **cb.opt** file using the command highlighted in **red**. Enter the password for logging in to your Mac when prompted.

```
#sudo vim cb.opt

#Password:
```

6. The following scripts will show.

```
#Print out default values of new backup set to a XML file
# Location: [WORKING_DIR]\DefaultBkupsetProfile.xml
com.ahsay.obc.core.action.GetUserPolicyCmd.debug=

# Print out debug messages for restore/decrypt
# Location: [WORKING_DIR]\DownloadFileSetTree.log
com.ahsay.obc.core.rset.file.DownloadFileSetTree.debug=

# Print out the decrypt list from OBS to restore to a XML file
# Location:
[RESTORE_DESTINATION]\DownloadFileSetTree_[RESTORE_JOB_ID].xml
com.ahsay.obc.core.rset.file.DownloadFileSetTree.SaveXML=
```

7. Press **I** to be able to insert a new line and add this line, `Office365.DSCInterval=-1`.
A value of `-1` indicates data synchronization check is disabled.

```
Office365.DSCInterval=-1
-- INSERT --
```

Press **Esc + :wq!** to save the changes made.

8. To check if the new line is added, use the commands highlighted in **red**.


```
#cat cb.opt
```

9. Start the Ahsay Online Backup Manager services and check if the scheduler service is running using the command highlighted in red.

```
#sudo /Applications/AhsayOBM.app/bin/Scheduler.sh
```

Password:

```
#ps -ef|grep java
```

```
0 5735 1 0 9:05PM ttys000 0:02.07
/Applications/AhsayOBM.app/jvm/bin /java -Xms128m -Xmx768m -
Djava.library.path=. -cp ../cbs.jar cbs
/Applications/AhsayOBM.app 501 5741 5705 0 9:05PM ttys000
0:00.00 grep java
```

To check if the data synchronization check is enabled, follow the instructions below:

1. Using the terminal, go to AhsayOBM installation path. Use the command highlighted in red.

```
#cd /Applications/AhsayOBM.app
```

2. Open the **cb.opt** file using the command highlighted in red.

```
#cat cb.opt
```

3. Look for this line, *Office365.DSCInterval=xx*.

Note:

If **xx** is a positive value this indicates the data synchronization check is enabled and represents the interval number of days until the next run of data synchronization check.

-OR-

If the interval value is not -1.

To adjust the interval number of days, follow the instructions below:

1. Make sure there are no active backup or restore job running.
2. Close AhsayOBM UI.
3. Stop the Ahsay Online Backup Manager services and check if the scheduler service has stopped running using the command highlighted in red.

```
#sudo /Applications/AhsayOBM.app/bin/StopScheduler.sh

Password:

#ps -ef|grep java
#501 5721 5705 0 9:02PM ttys000 0:00.00 grep java
```

4. Using the terminal, go to AhsayOBM installation path. Use the command highlighted in red.

```
#cd /Applications/AhsayOBM.app
```

5. Open the **cb.opt** file using the command highlighted in red. Enter the password for logging in to your Mac when prompted.

```
#sudo vim cb.opt

#Password:
```

6. The following scripts will show.

```
#Print out default values of new backup set to a XML file
# Location: [WORKING_DIR]\DefaultBkupsetProfile.xml
com.ahsay.obc.core.action.GetUserPolicyCmd.debug=

# Print out debug messages for restore/decrypt
# Location: [WORKING_DIR]\DownloadFileSetTree.log
com.ahsay.obc.core.rset.file.DownloadFileSetTree.debug=

# Print out the decrypt list from OBS to restore to a XML file
# Location:
[RESTORE_DESTINATION]\DownloadFileSetTree_[RESTORE_JOB_ID].xml
com.ahsay.obc.core.rset.file.DownloadFileSetTree.SaveXML=

Office365.DSCInterval=60
```

7. Change the interval number by pressing I.

For example:

Current interval: *Office365.DSCInterval=60*

```
Office365.DSCInterval=60
-- INSERT --
```

Updated interval: *Office365.DSCInterval=10*

```
Office365.DSCInterval=-10
-- INSERT --
```

Explanation:

On the current interval, the number of days is 60. While, the updated interval, the number of days is reduced to 10.

WARNING!

If the interval value is 0, *Office365.DSCInterval=0*, then the Data Synchronization Check (DSC) will run for every backup job.

Press **Esc + :wq!** to save the changes made.

8. To check if the new line is added, use the commands highlighted in red.

```
#cat cb.opt
```

9. Start the Ahsay Online Backup Manager services and check if the scheduler service is running using the command highlighted in red.

```
#sudo /Applications/AhsayOBM.app/bin/Scheduler.sh
```

Password:

```
#ps -ef|grep java
```

```
0 5735 1 0 9:05PM ttys000 0:02.07
/Applications/AhsayOBM.app/jvm/bin /java -Xms128m -Xmx768m -
Djava.library.path=. -cp ../cbs.jar cbs
/Applications/AhsayOBM.app 501 5741 5705 0 9:05PM ttys000
0:00.00 grep java
```

Appendix H: How to Increase the Number of Concurrent Backup Threads

Assumption: AhsayOBM Installation path is `/Users/admin/Applications/AhsayOBM.app`

To increase the number of concurrent backup threads, follow the instructions below:

1. Make sure there are no active backup or restore job running.
2. Close AhsayOBM UI.
3. Stop the Ahsay Online Backup Manager services and check if the scheduler service has stopped running using the command highlighted in **red**.

```
#sudo /Applications/AhsayOBM.app/bin/StopScheduler.sh

Password:

#ps -ef|grep java
#501 5721 5705 0 9:02PM ttys000 0:00.00 grep java
```

4. Using the terminal, go to AhsayOBM installation path. Use the command highlighted in **red**.

```
#cd /Applications/AhsayOBM.app
```

5. Open the **afc.opt** file using the command highlighted in **red**. Enter the password for logging in to your Mac when prompted.

```
#sudo vim afc.opt

#Password:
```

6. The following scripts will show.

```
#com.ahsay.afc.adt.Queue.debug=

#com.ahsay.afc.adt.Queue.info=

#com.ahsay.afc.bfs.AccessManager.debug=
```

7. Press **I** to be able to insert a new line and add this line,
`obx.core.backup.file.BackupResourceManager.maxConcurrentSubCmd=xx`.
A **xx** value indicates the number of threads. Minimum thread is 1.

```
obx.core.backup.file.BackupResourceManager.maxConcurrentSubCmd=8
-- INSERT --
```

NOTE

Increasing the number of concurrent backup threads does not guarantee that the overall backup speed will be faster since there will be an increased chance of throttling by Microsoft Office 365.

Press **Esc + :wq!** to save the changes made.

8. To check if the new line is added, use the commands highlighted in red.

```
#cat afc.opt
```

9. Start the Ahsay Online Backup Manager services and check if the scheduler service is running using the command highlighted in red.

```
#sudo /Applications/AhsayOBM.app/bin/Scheduler.sh
```

```
Password:
```

```
#ps -ef|grep java
```

```
0 5735 1 0 9:05PM ttys000 0:02.07
```

```
/Applications/AhsayOBM.app/jvm/bin /java -Xms128m -Xmx768m -
```

```
Djava.library.path=. -cp ../cbs.jar cbs
```

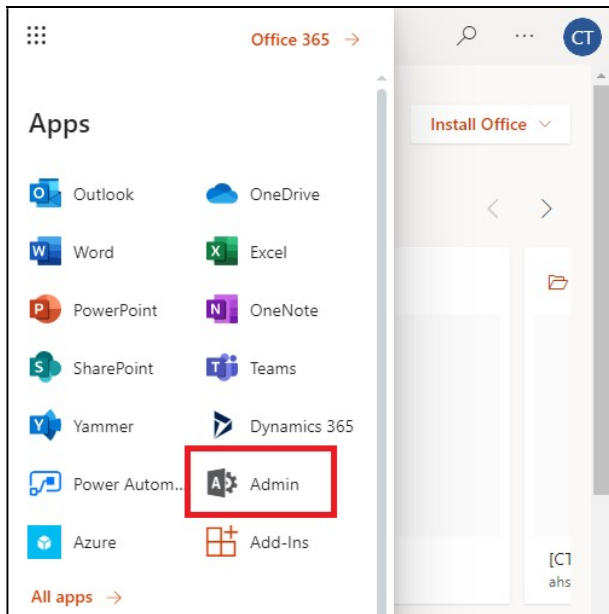
```
/Applications/AhsayOBM.app 501 5741 5705 0 9:05PM ttys000
```

```
0:00.00 grep java
```

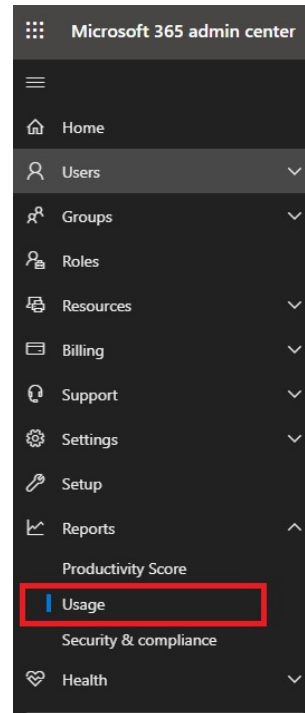
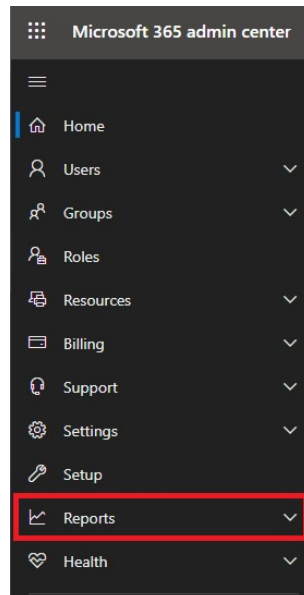
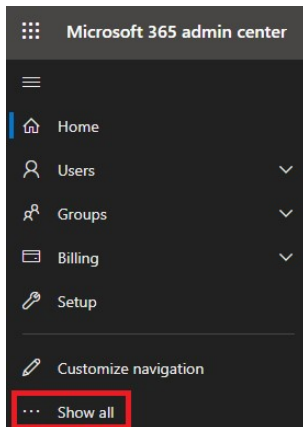
Appendix I: How to view Item count and Storage used in Microsoft 365 Admin Center

To view the item count and storage size of Office 365 user account based on the usage for Exchange (Outlook), OneDrive, and SharePoint, follow the instructions below:

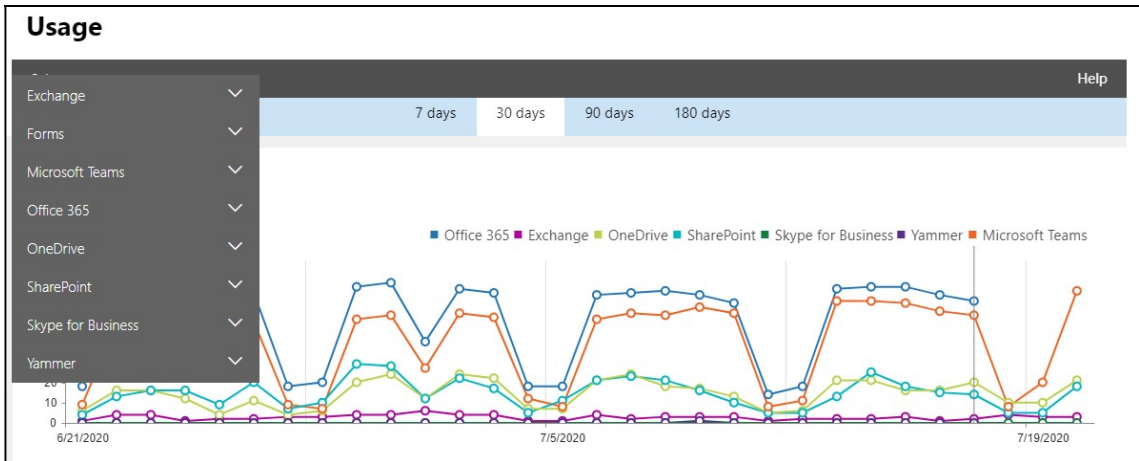
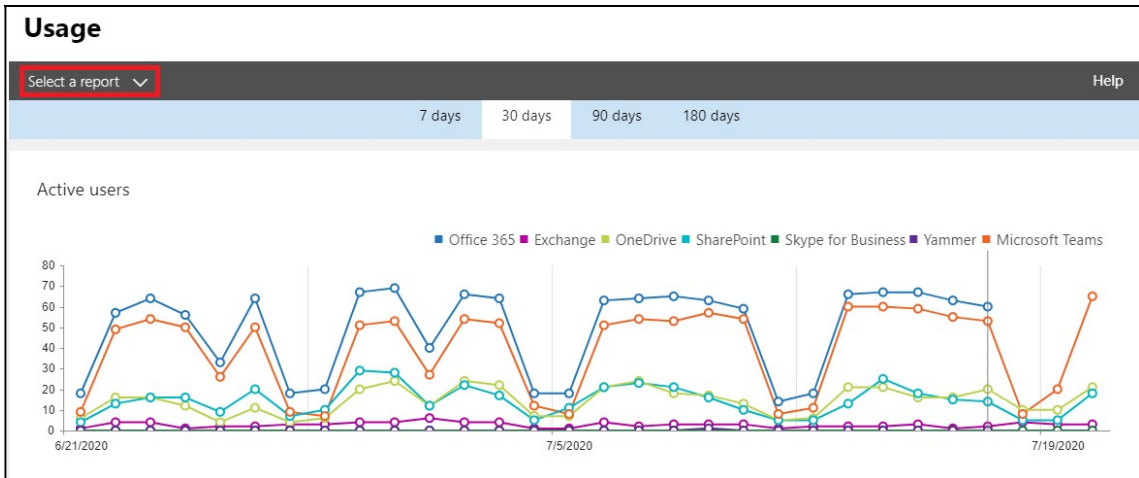
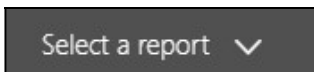
1. Log in to the Office 365 (<https://login.microsoft.com>).
2. Go to Microsoft 365 admin center.



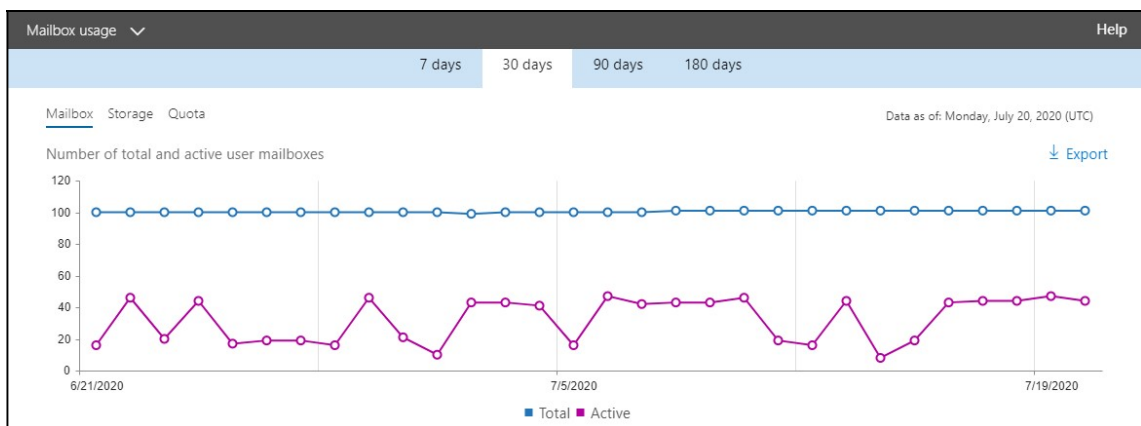
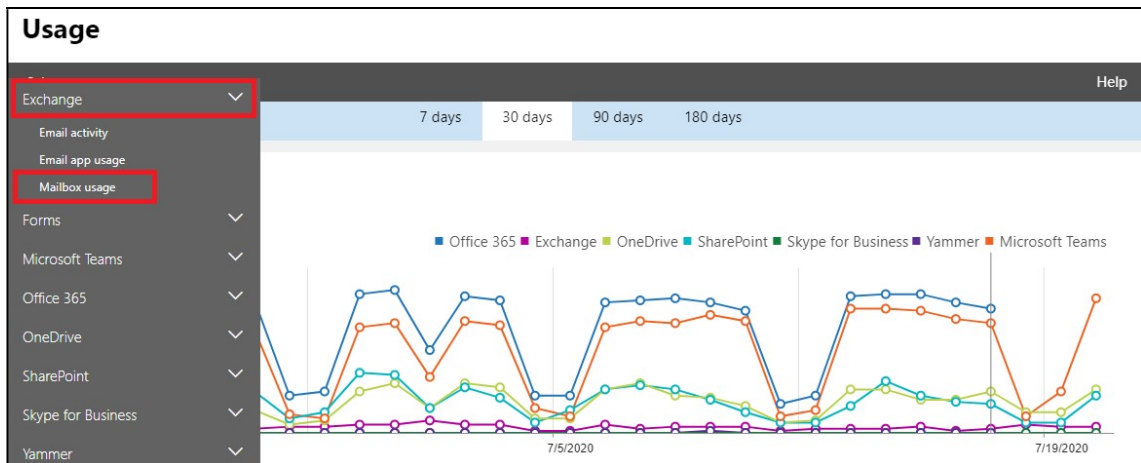
3. On the Microsoft 365 admin center, click **Show all** then click the dropdown arrow for the **Reports** and select **Usage**.



4. On the Usage screen, select a report you want to view.



5. For Exchange, go to Mailbox usage.

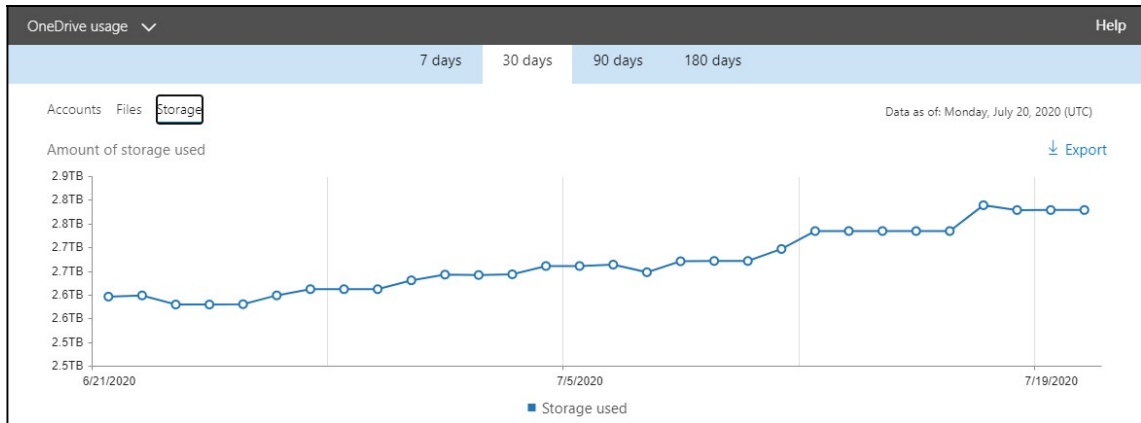
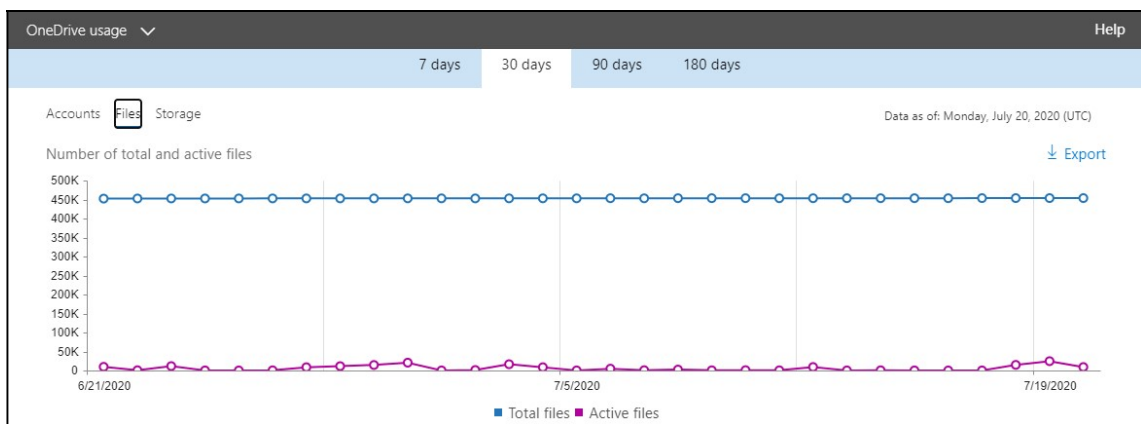
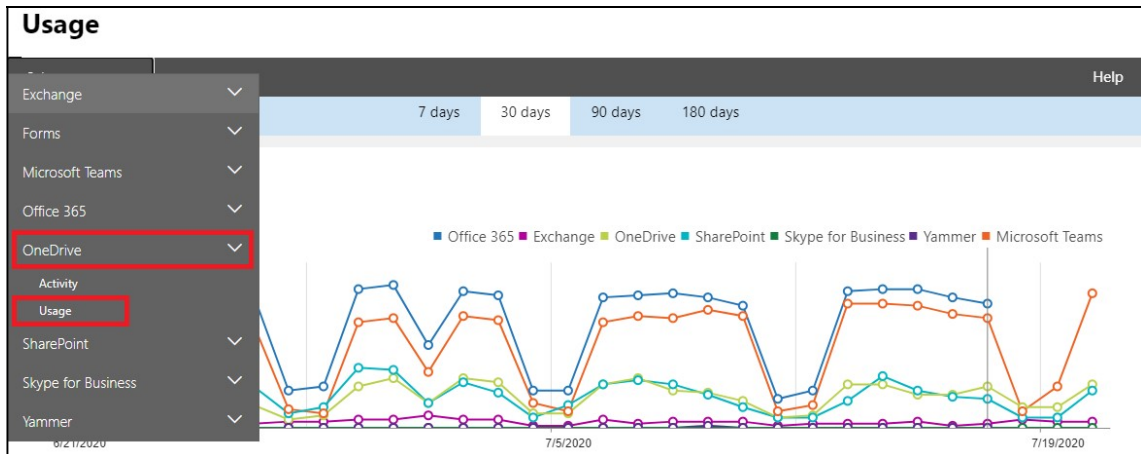


Highlighted columns are, Item count and Storage used (MB).

- ▶ **Item count** – number of mailbox items in Outlook per Office 365 user account
- ▶ **Storage used (MB)** – storage used in MB size per Office 365 user account

Username	Last activity date (UTC)	Item count	Storage used (MB)	Quota status
@ahsay.onmicrosoft.com		9,597	1,383	Good (under limits)
@ahsay.onmicrosoft.com		9,607	1,383	Good (under limits)
@ahsay.onmicrosoft.com		9,634	1,383	Good (under limits)
@ahsay.onmicrosoft.com		9,597	1,383	Good (under limits)
@ahsay.onmicrosoft.com		9,597	1,383	Good (under limits)
@ahsay.onmicrosoft.com		9,585	1,384	Good (under limits)

6. For OneDrive, go to Usage

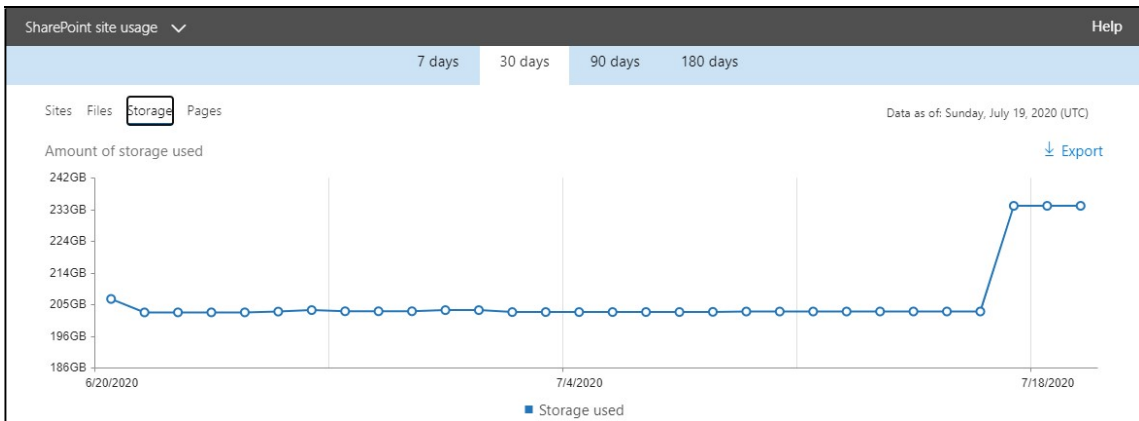
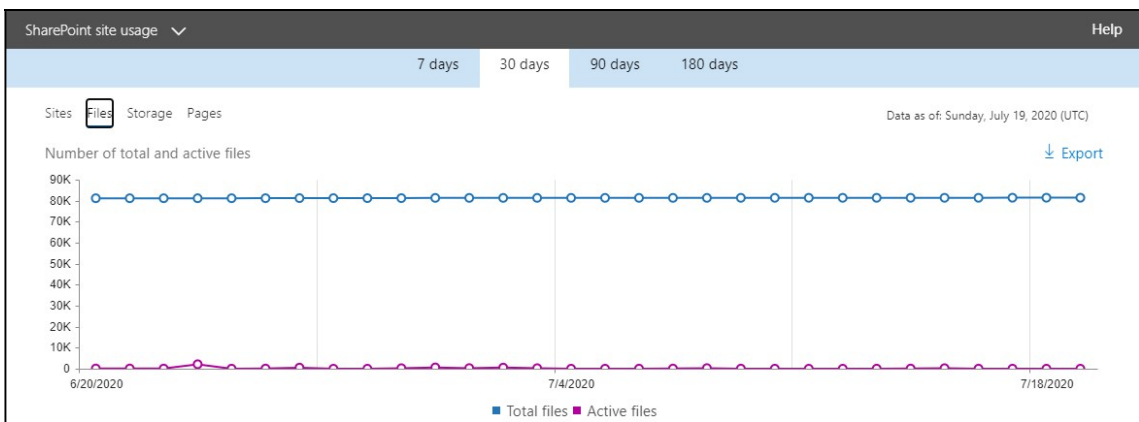
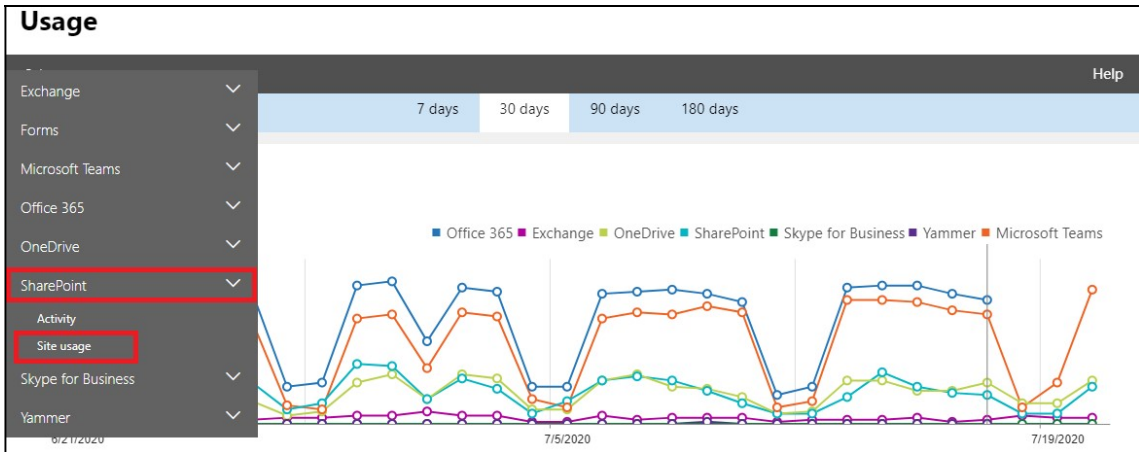


Highlighted columns are, Files and Storage used (MB).

- **Files** – number of files in OneDrive per Office 365 user account
- **Storage used (MB)** – storage used in MB size per Office 365 user account

URL	Owner principal name	Last activity date (UTC)	Files	Active files	Storage used (MB)
https://ahsay-my.sharepoint.com/personal/...@ahsay.onmicrosoft.com	...@ahsay.onmicrosoft.com	Tuesday, July 14, 2020	8	48	52
https://ahsay-my.sharepoint.com/personal/...@ahsay.onmicrosoft.com	...@ahsay.onmicrosoft.com	Monday, February 17, 2020	11,021	0	5,697
https://ahsay-my.sharepoint.com/personal/...@ahsay.onmicrosoft.com	...@ahsay.onmicrosoft.com	Tuesday, July 14, 2020	0	29	2
https://ahsay-my.sharepoint.com/personal/...@ahsay.onmicrosoft.com	...@ahsay.onmicrosoft.com	Monday, July 20, 2020	28,226	694	47,882
https://ahsay-my.sharepoint.com/personal/...@ahsay.onmicrosoft.com	...@ahsay.onmicrosoft.com	Tuesday, July 07, 2020	32	226	45

7. For **SharePoint**, go to **Site usage**.



Highlighted columns are, Files and Storage used (MB).

- **Files** – number of files in SharePoint per Office 365 user account
- **Storage used (MB)** – storage used in MB size per Office 365 user account

Site URL	Site owner principal name	Last activity date (UTC)	Files	Active files	Storage used (MB)	Page views
https://ahsay.sharepoint.c...	@ahsay.onmicrosoft.com	Monday, June 15, 2020	7	0	3	0
https://ahsay.sharepoint.c...	@ahsay.onmicrosoft.com	Thursday, February 13, 2020	6	0	2	0
https://ahsay.sharepoint.c...	@ahsay.onmicrosoft.com	Friday, October 04, 2019	4	0	2	0
https://ahsay.sharepoint.c...	@ahsay.onmicrosoft.com	Sunday, October 06, 2019	5	0	2	0
https://ahsay.sharepoint.c...	@ahsay.onmicrosoft.com	Thursday, July 16, 2020	8	1	10	7
https://ahsay.sharepoint.c...	@ahsay.onmicrosoft.com	Thursday, February 06, 2020	6	0	3	0

Appendix J: Migrating Authentication of Office 365 Backup Set

Existing backup sets are suggested to use Modern Authentication. This will ensure that moving forward, there will be no backup and restore issues to be encountered once Microsoft implements its product roadmap for Modern Authentication. This only needs to be done once per Office 365 user account.

Existing Office 365 backup sets may have been created using an ordinary Office 365 account or an Office 365 account with the Global Admin role. The following are the required Office 365 account that must be used to authorize the migration of authentication of the existing Office 365 backup set:

- When migrating to Hybrid Authentication, any type of Office 365 account may be used to authorize the migration of authentication.
- When migrating to Modern Authentication, if the existing Office 365 backup set was created using an ordinary Office 365 account, an Office 365 Global Admin account is required to be used to login their credentials to authorize the migration of authentication.

The following are the two (2) migration scenarios:

- [Basic Authentication to Hybrid Authentication](#)
- Basic Authentication to Modern Authentication
 - [using an ordinary Office 365 account](#)
 - [using an Office 365 account with Global Admin role](#)

NOTE

Due to the current limitation with Microsoft API, Modern Authentication is currently not suitable for backup sets with Personal Sites and/or SharePoint Sites selected. As a temporary workaround, for Office 365 backup sets which require backup of Personal Sites and/or SharePoint Sites selected, these backup sets are suggested to use the Hybrid Authentication until the issue has been resolved by Microsoft.

To migrate a backup set from **Basic Authentication to Hybrid Authentication**, follow the instructions below:

1. Log out all Office 365 account(s) on the default browser before starting the migration of backup set.
2. In the AhsayOBM main interface, click **Backup Sets**.



3. Select the backup set that you want to migrate to Hybrid Authentication.

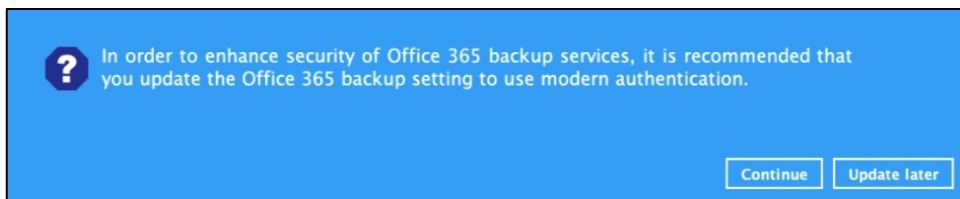



Backup Sets

Sort by
Creation Time ▼

 **Run on Client Office 365 Backup Set**
Owner: Mac1014
Newly created on Wednesday, 16 September 2020 16:36

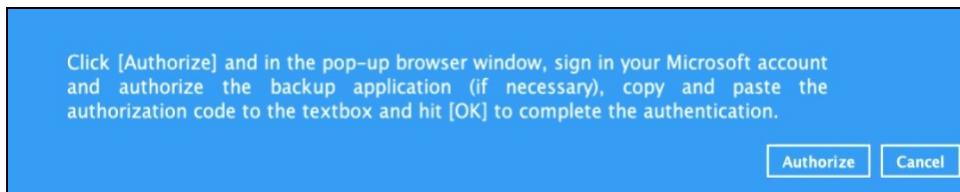
4. Click **Continue**.



 In order to enhance security of Office 365 backup services, it is recommended that you update the Office 365 backup setting to use modern authentication.

[Continue](#) [Update later](#)

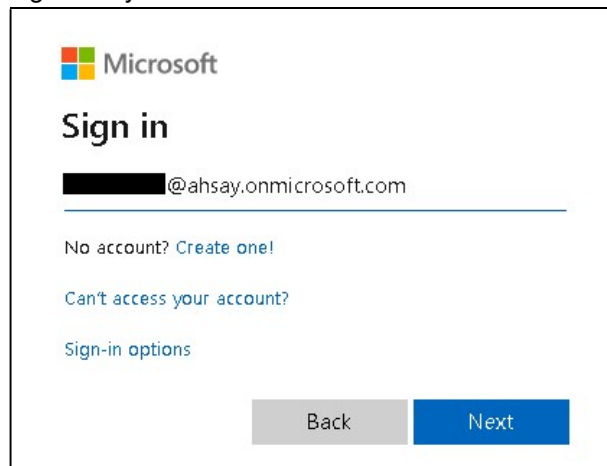
5. Click **Authorize**.




Click [Authorize] and in the pop-up browser window, sign in your Microsoft account and authorize the backup application (if necessary), copy and paste the authorization code to the textbox and hit [OK] to complete the authentication.

[Authorize](#) [Cancel](#)

6. Sign in to your Microsoft account.



 Microsoft

Sign in

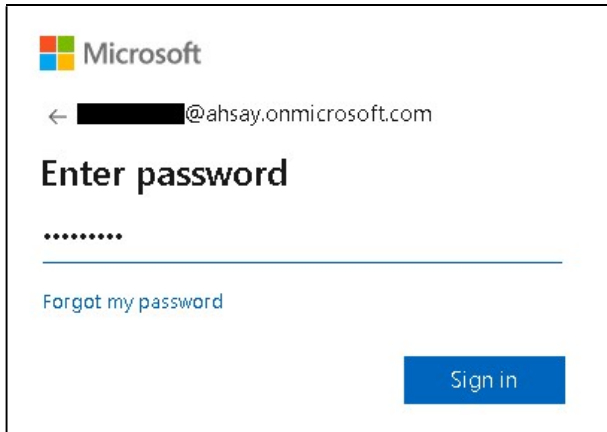
██████████@ahsay.onmicrosoft.com

No account? [Create one!](#)

[Can't access your account?](#)

[Sign-in options](#)

[Back](#) [Next](#)



Microsoft

← [redacted]@ahsay.onmicrosoft.com

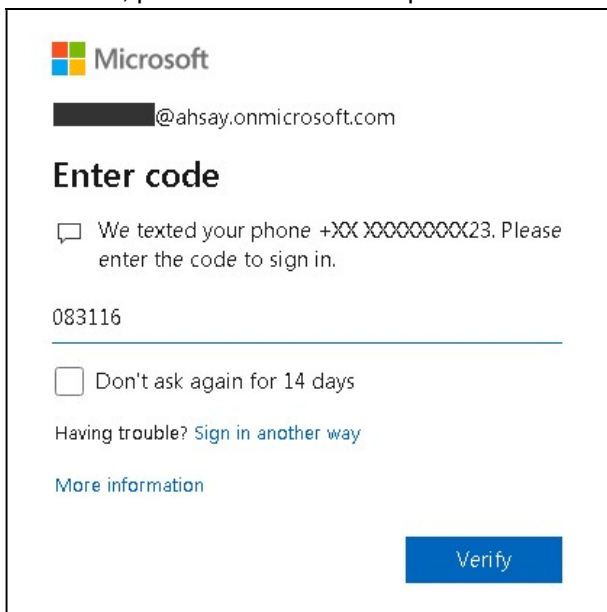
Enter password

.....

[Forgot my password](#)

[Sign in](#)

7. If MFA is enforced, enter the verification code sent to your mobile device and click **Verify**. Otherwise, proceed to the next step.



Microsoft

[redacted]@ahsay.onmicrosoft.com

Enter code

We texted your phone +XX XXXXXXXXXX23. Please enter the code to sign in.

083116

Don't ask again for 14 days

Having trouble? [Sign in another way](#)

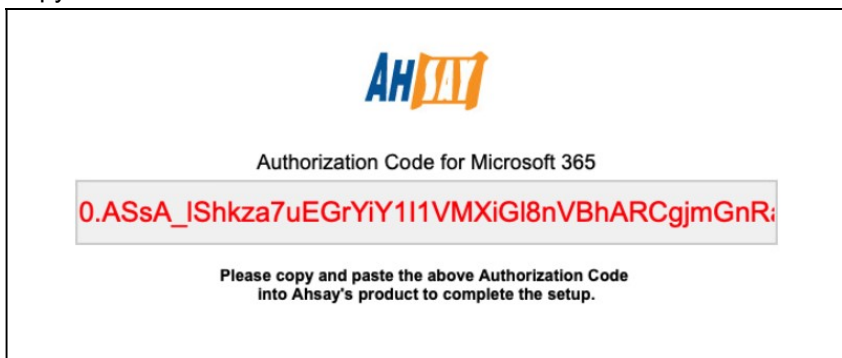
[More information](#)

[Verify](#)

NOTE

The verification code is only required if the MFA status of an Office 365 account is enforced.

8. Copy the authorization code.



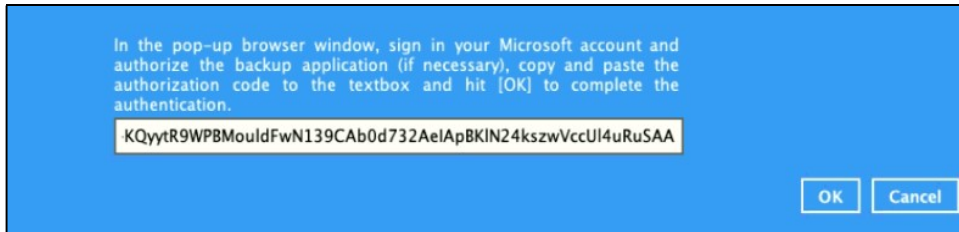
AHSAY

Authorization Code for Microsoft 365

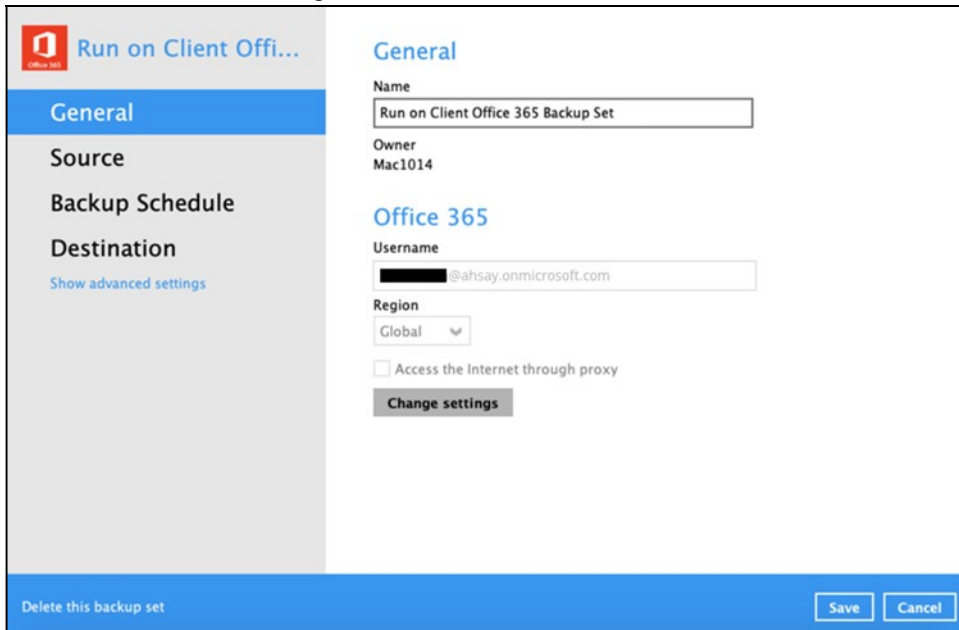
0.ASsA_IShkza7uEGrYiY1I1VMXiGI8nVBhARCgjmGnR:

Please copy and paste the above Authorization Code into Ahsay's product to complete the setup.

- Go back to AhsayOBM and paste the authorization code. Click **OK** to proceed.

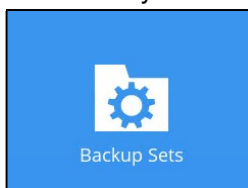


- Click **Save** to finish the migration.



To migrate a backup set from **Basic Authentication to Modern Authentication using an ordinary Office 365 account**, follow the instructions below:

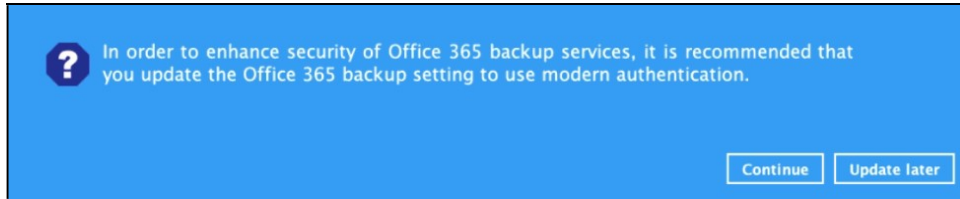
- Log out all Office 365 account(s) on the default browser before starting the migration of backup set.
- In the AhsayOBM main interface, click **Backup Sets**.



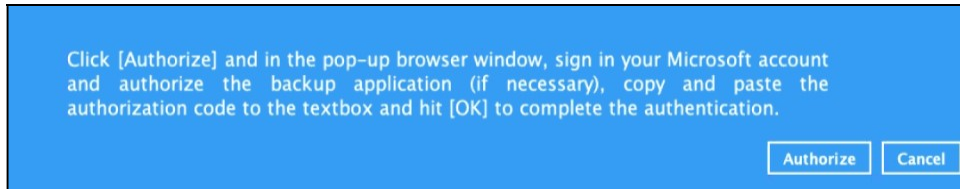
- Select the backup set that will be migrated.



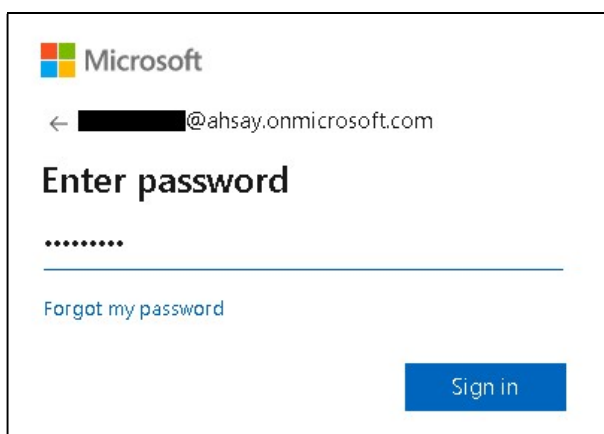
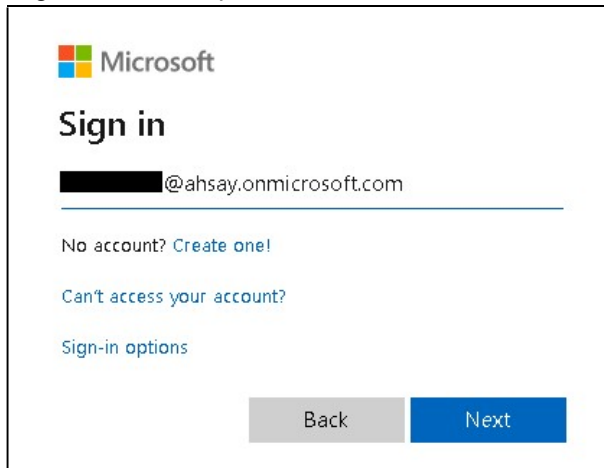
4. Click **Continue**.



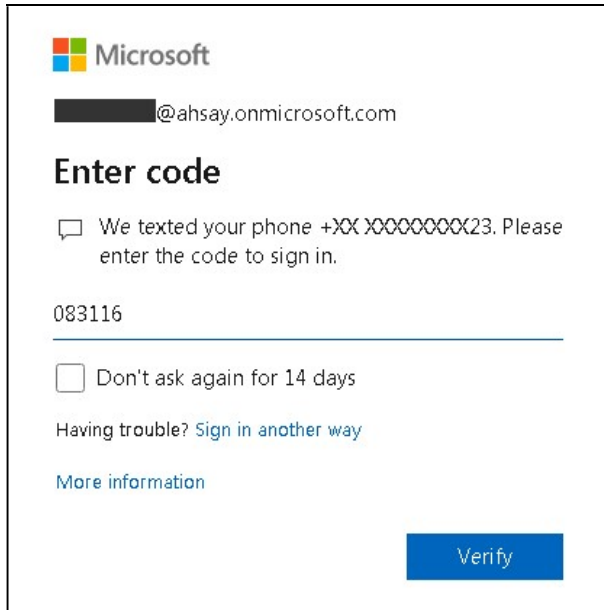
5. Click **Authorize**.



6. Ask your administrator to sign in using an Office 365 account with Global Admin role in order to migrate the backup set.



7. If MFA is enforced, enter the verification code sent to your mobile device and click **Verify**. Otherwise, proceed to the next step.



Microsoft

██████████@ahsay.onmicrosoft.com

Enter code

We texted your phone +XX XXXXXXXXXXX23. Please enter the code to sign in.

083116

Don't ask again for 14 days

Having trouble? [Sign in another way](#)

[More information](#)

Verify

NOTE

The verification code is only required if the MFA status of an Office 365 account is enforced.

8. Copy the authorization code.



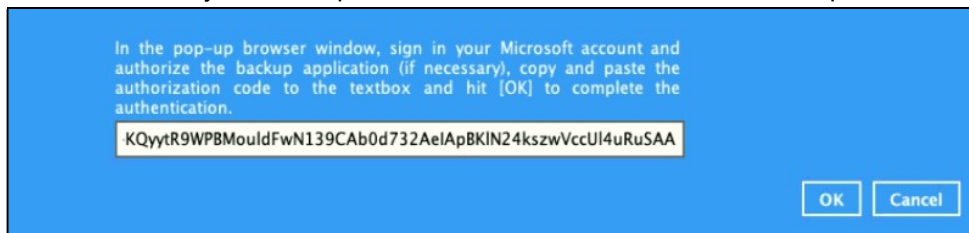
AHSAY

Authorization Code for Microsoft 365

0.ASsA_IShkza7uEGrYiY1I1VMXiGI8nVBhARCgjmGnR:

Please copy and paste the above Authorization Code into Ahsay's product to complete the setup.

9. Go back to AhsayOBM and paste the authorization code. Click **OK** to proceed.



In the pop-up browser window, sign in your Microsoft account and authorize the backup application (if necessary), copy and paste the authorization code to the textbox and hit [OK] to complete the authentication.

KQyvtR9WPBMouldFwN139CAb0d732AelApBKIN24kszwVccUl4uRuSAA

OK Cancel

10. Click **Save** to finish the migration.

Run on Client Office 365 Backup Set

General

Name
Run on Client Office 365 Backup Set

Owner
Mac1014

Office 365

Username
[redacted]@ahsay.onmicrosoft.com

Region
Global

Access the Internet through proxy

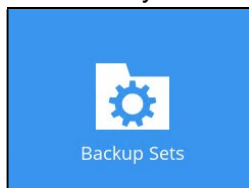
Change settings

Delete this backup set

Save Cancel

To migrate a backup set with **Basic Authentication to Modern Authentication using an Office 365 account with a Global Admin role**, follow the steps below:

1. Log out all Office 365 account(s) on the default browser before starting the migration of backup set.
2. In the AhsayOBM main interface, click **Backup Sets**.




3. Select the backup set that will be migrated.

Backup Sets

Sort by
Creation Time

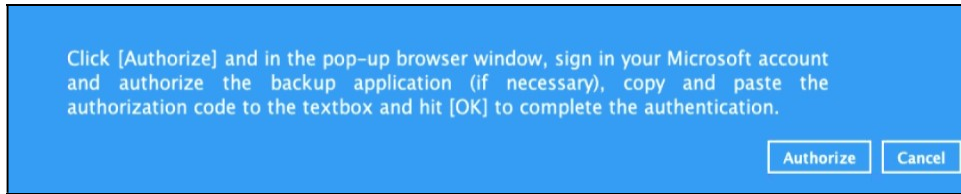
 **Run on Client Office 365 Backup Set**
Owner: Mac1014
Newly created on Wednesday, 16 September 2020 16:36

4. Click **Continue**.

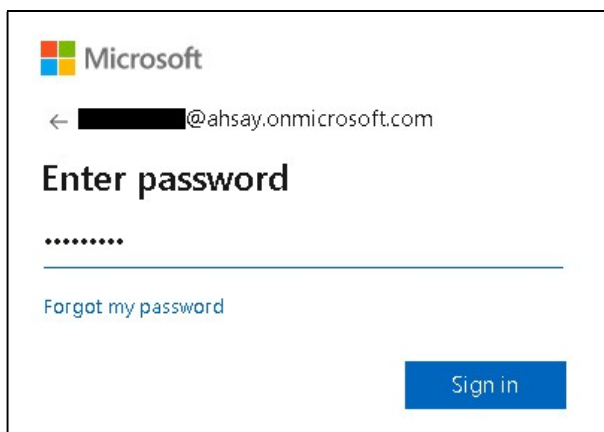
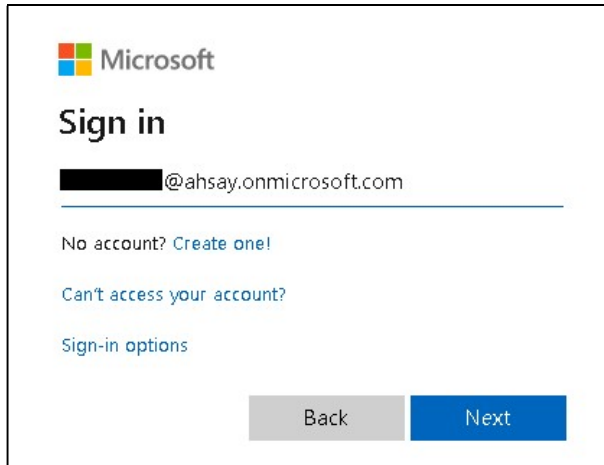
 In order to enhance security of Office 365 backup services, it is recommended that you update the Office 365 backup setting to use modern authentication.

Continue Update later

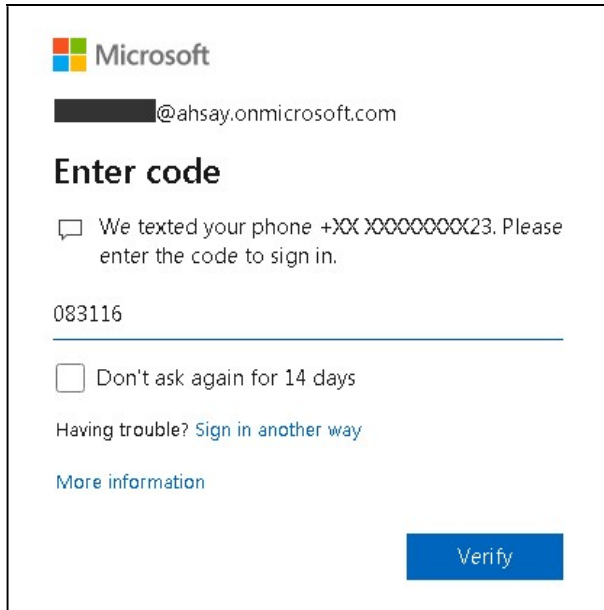
5. Click **Authorize**.



6. Sign in to your account.



7. If MFA is enforced, enter the verification code sent to your mobile device and click **Verify**. Otherwise, proceed to the next step.



Microsoft

██████████@ahsay.onmicrosoft.com

Enter code

We texted your phone +XX XXXXXXXXXXX23. Please enter the code to sign in.

083116

Don't ask again for 14 days

Having trouble? [Sign in another way](#)

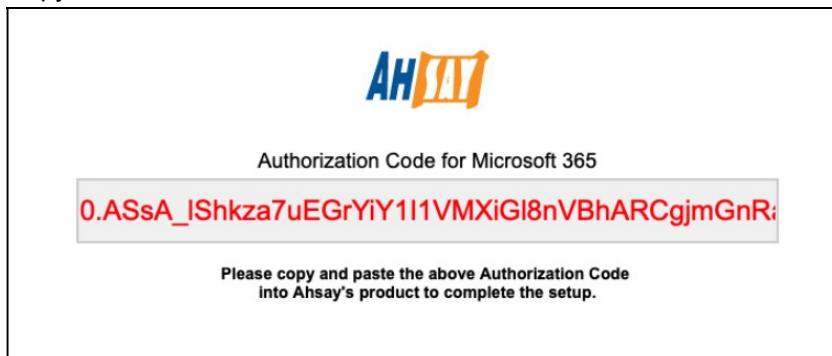
[More information](#)

Verify

NOTE

The verification code is only required if the MFA status of an Office 365 account is enforced.

8. Copy the authorization code.



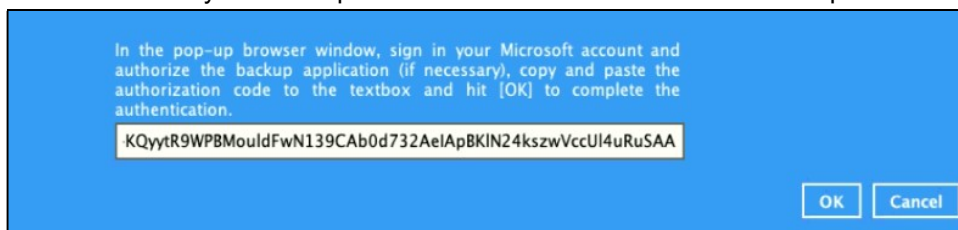
AHSAY

Authorization Code for Microsoft 365

0.ASsA_IShkza7uEGrYiY1I1VMXiGI8nVBhARCgjmGnR:

Please copy and paste the above Authorization Code into Ahsay's product to complete the setup.

9. Go back to AhsayOBM and paste the authorization code. Click **OK** to proceed.



In the pop-up browser window, sign in your Microsoft account and authorize the backup application (if necessary), copy and paste the authorization code to the textbox and hit [OK] to complete the authentication.

KQyvtR9WPBMouldFwN139CAb0d732AelApBKIN24kszwVccUl4uRuSAA

OK Cancel

10. Click **Save** to finish the migration.

Run on Client Office 365 Backup Set

General

Source

Backup Schedule

Destination

[Show advanced settings](#)

General

Name
Run on Client Office 365 Backup Set

Owner
Mac1014

Office 365

Username
[redacted]@ahsay.onmicrosoft.com

Region
Global

Access the Internet through proxy

Change settings

[Delete this backup set](#) **Save** **Cancel**

Appendix K: How to Change the Office 365 Authentication

After upgrading to AhsayOBM v9.0.0.0 or above, all newly created Office 365 backup sets will automatically start using Modern Authentication. However, if the user has selected Personal Sites and/or SharePoint Sites for Office 365 backup, this will not be possible on an Office 365 backup set using Modern Authentication due to limitations with Microsoft API. To resolve this issue, a change from Modern Authentication to Hybrid Authentication is needed. Please refer to Chapters [2.16.1](#) and [2.16.2](#) for the complete list of backup and restore limitations using Modern Authentication.

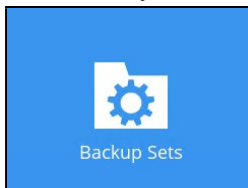
Once the backup and restore of SharePoint Web Parts and Metadata is fully supported using Modern Authentication, Office 365 backup sets using Hybrid Authentication can be changed back to Modern Authentication.

The following are the two (2) types of authentication change:

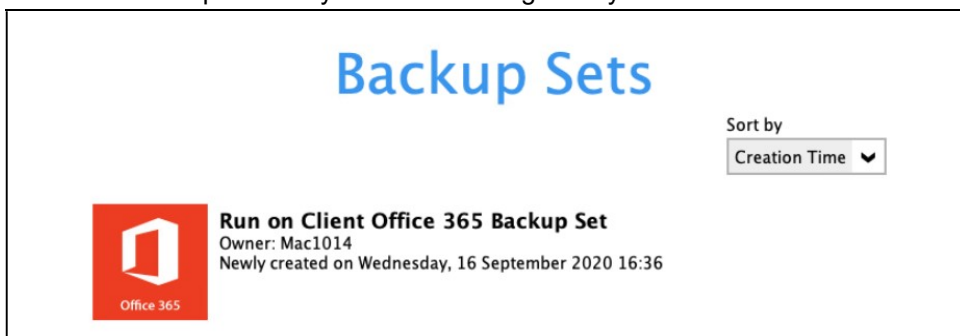
- [Modern Authentication to Hybrid Authentication](#)
- [Hybrid Authentication to Modern Authentication](#)

To change the authentication from **Modern Authentication to Hybrid Authentication**, follow the instructions below:

1. Logout all Office 365 account on the default browser before starting the authentication change of the backup set.
2. In the AhsayOBM main interface, click **Backup Sets**.



3. Select the backup set that you want to change to Hybrid Authentication.



4. In the Backup Set Settings, click **Change settings** under the Office 365 screen.

The screenshot shows a settings window titled "Run on Client Office 365 Backup Set". On the left is a sidebar with menu items: "General" (selected), "Source", "Backup Schedule", and "Destination". Below "Destination" is a link "Show advanced settings". The main content area is divided into two sections: "General" and "Office 365". The "General" section includes fields for "Name" (Run on Client Office 365 Backup Set) and "Owner" (Mac1014). The "Office 365" section includes fields for "Username" (redacted @ahsay.onmicrosoft.com), "Region" (Global), and a checkbox for "Access the Internet through proxy". A "Change settings" button is located below the Office 365 section. At the bottom of the window, there is a "Delete this backup set" link and "Save" and "Cancel" buttons.

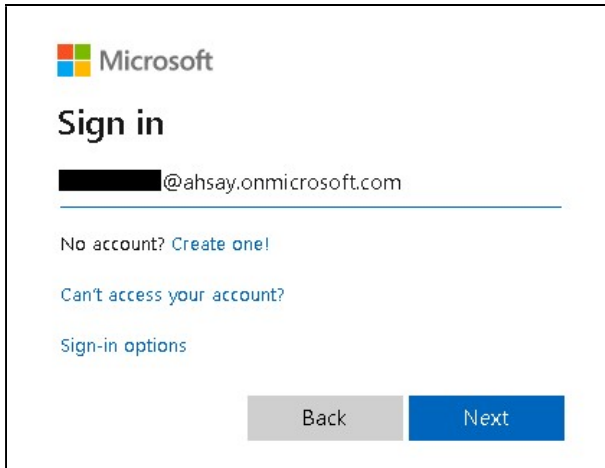
5. In the Office 365 credentials page, **input the Office 365 login account and password** then click **Next**.

The screenshot shows the "Office 365" credentials page. It has a title "Office 365" and several input fields: "Username" (redacted @ahsay.onmicrosoft.com), "Account password" (highlighted with a red box), "App password (Required if Multi-Factor Authentication is enforced)", "Region" (Global), and a checkbox for "Access the Internet through proxy".

6. Click **Authorize** to start the authentication change process.

The screenshot shows a blue dialog box with the following text: "Click [Authorize] and in the pop-up browser window, sign in your Microsoft account and authorize the backup application (if necessary), copy and paste the authorization code to the textbox and hit [OK] to complete the authentication." At the bottom right are "Authorize" and "Cancel" buttons.

7. Sign in to your account.



Microsoft

Sign in

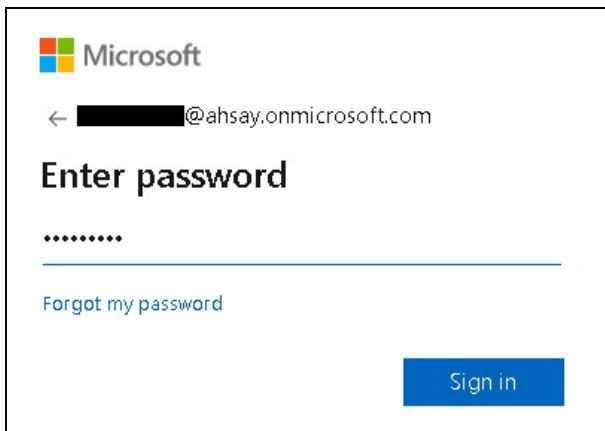
██████████@ahsay.onmicrosoft.com

No account? [Create one!](#)

[Can't access your account?](#)

[Sign-in options](#)

[Back](#) [Next](#)



Microsoft

← ██████████@ahsay.onmicrosoft.com

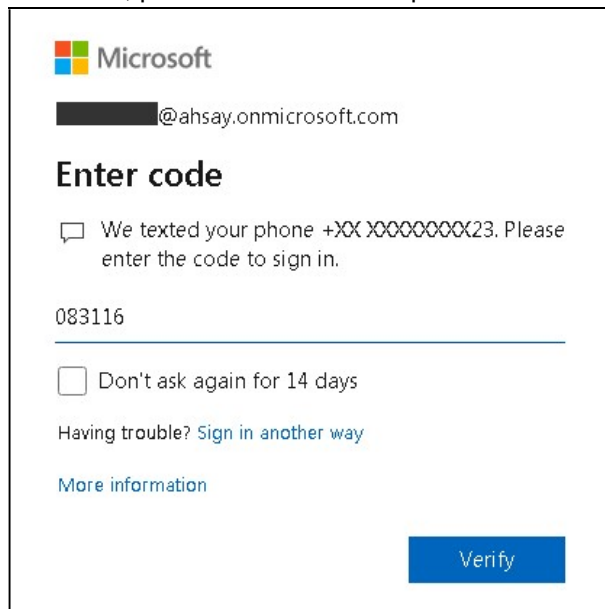
Enter password

.....

[Forgot my password](#)

[Sign in](#)

8. If MFA is enforced, enter the verification code sent to your mobile device and click **Verify**. Otherwise, proceed to the next step.



Microsoft

██████████@ahsay.onmicrosoft.com

Enter code

We texted your phone +XX XXXXXXXXX23. Please enter the code to sign in.

083116

Don't ask again for 14 days

Having trouble? [Sign in another way](#)

[More information](#)

[Verify](#)

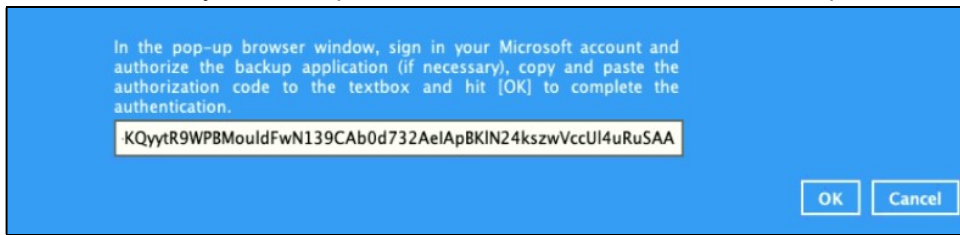
NOTE

The verification code is only required if the MFA status of an Office 365 account is enforced.

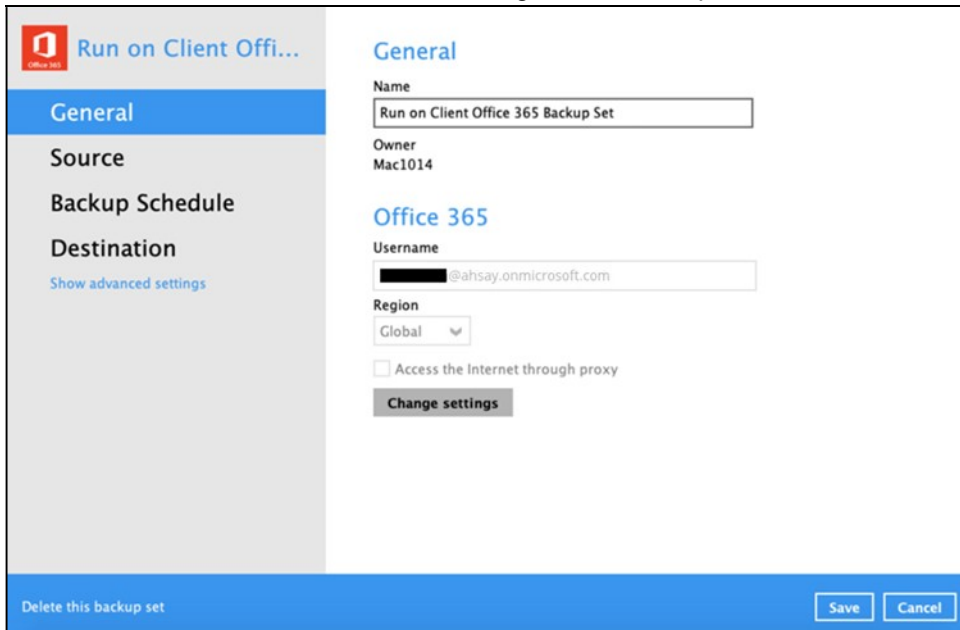
9. Copy the authorization code.



10. Go back to AhsayOBM and paste the authorization code. Click **OK** to proceed.

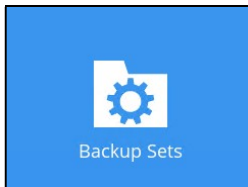


11. Click **Save** to finish the authentication change of the backup set.

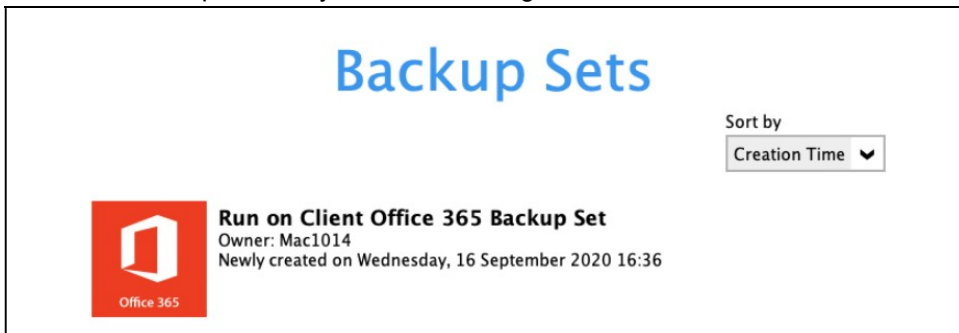


To change the authentication from **Hybrid Authentication to Modern Authentication**, follow the instructions below:

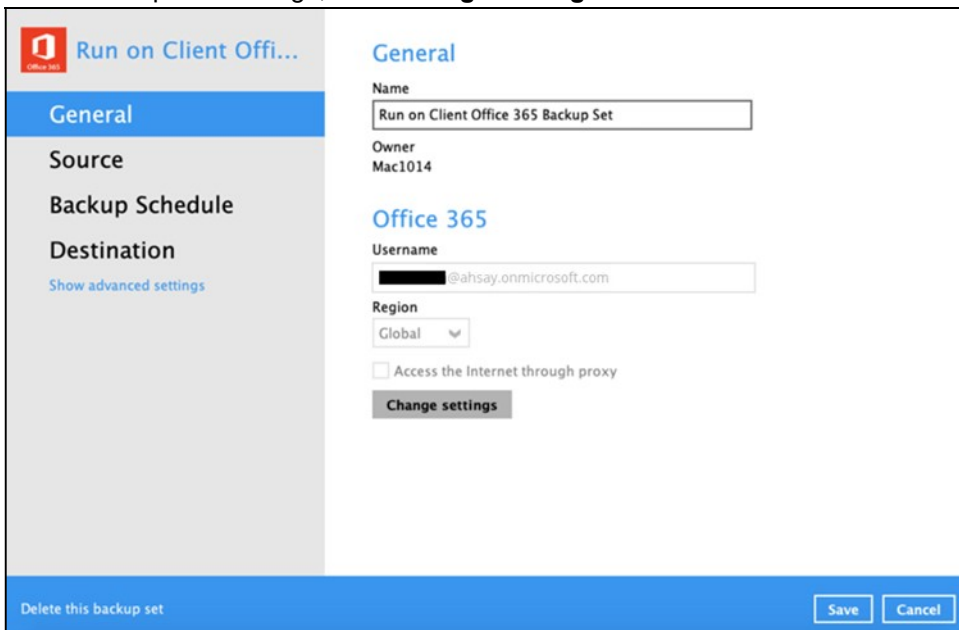
1. Logout all Office 365 account on the default browser before starting the authentication change of the backup set.
2. In the AhsayOBM main interface, click **Backup Sets**.



3. Select the backup set that you want to change to Modern Authentication.



4. In the Backup Set Settings, click **Change settings** under the Office 365 screen.



5. In the Office 365 credentials page, **remove the Account password** then click **Next**.

Office 365

Username
[redacted]@ahsay.onmicrosoft.com


Account password
[redacted]

App password
(Required if Multi-Factor Authentication is enforced)

Region
Global

Access the Internet through proxy


6. Click **I understand the limitation and confirm to proceed**.

 This will be using Modern Authentication without backup or restore functionality for SharePoint Web Parts and Managed Metadata.

7. Click **Authorize** to start the authentication change process.

Click [Authorize] and in the pop-up browser window, sign in your Microsoft account and authorize the backup application (if necessary), copy and paste the authorization code to the textbox and hit [OK] to complete the authentication.

8. Sign in to your account.

 Microsoft

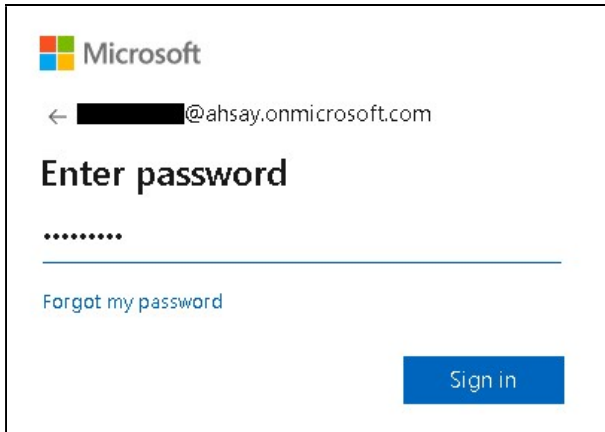
Sign in

[redacted]@ahsay.onmicrosoft.com

No account? [Create one!](#)

[Can't access your account?](#)

Sign-in options



Microsoft

← [redacted]@ahsay.onmicrosoft.com

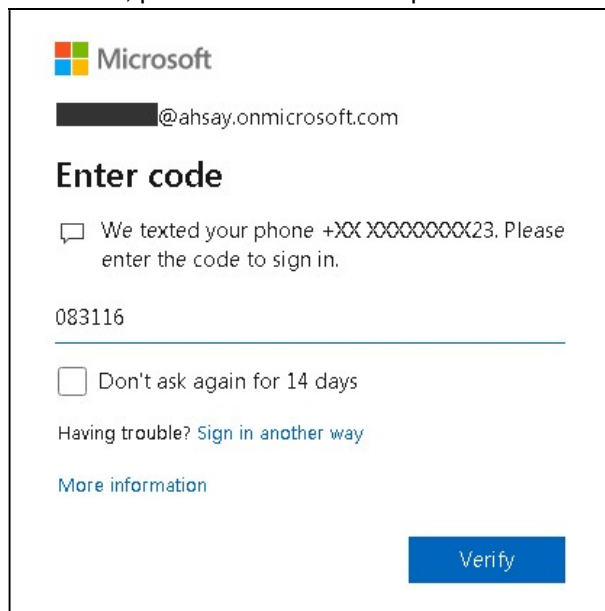
Enter password

.....

[Forgot my password](#)

[Sign in](#)

9. If MFA is enforced, enter the verification code sent to your mobile device and click **Verify**. Otherwise, proceed to the next step.



Microsoft

[redacted]@ahsay.onmicrosoft.com

Enter code

We texted your phone +XX XXXXXXXXXX23. Please enter the code to sign in.

083116

Don't ask again for 14 days

Having trouble? [Sign in another way](#)

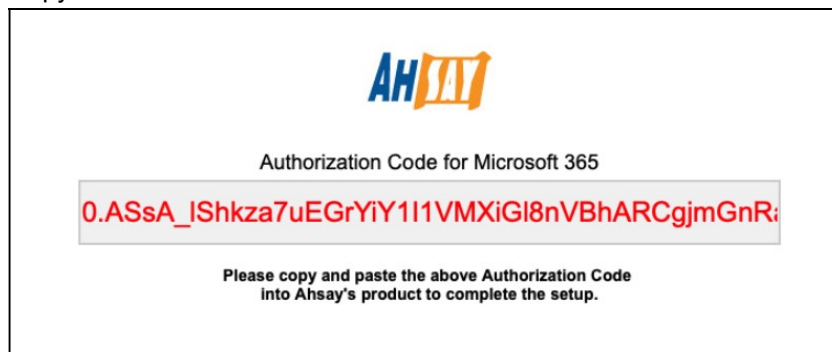
[More information](#)

[Verify](#)

NOTE

The verification code is only required if the MFA status of an Office 365 account is enforced.

10. Copy the authorization code.



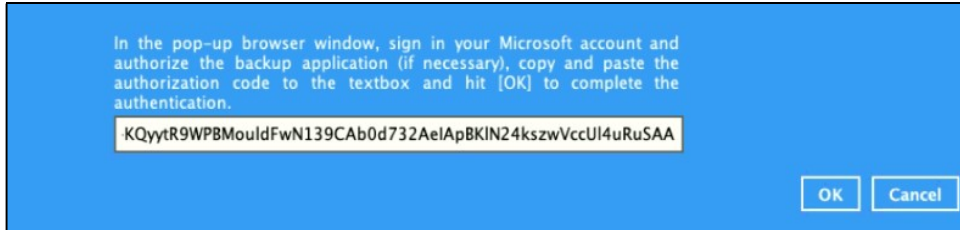
AHSAI

Authorization Code for Microsoft 365

0.ASsA_IShkza7uEGrYiY1I1VMXiGI8nVBhARCgjmGnR:

Please copy and paste the above Authorization Code into Ahsay's product to complete the setup.

11. Go back to AhsayOBM and paste the authorization code. Click **OK** to proceed.



12. Click **Save** to finish the authentication change of the backup set.

