Office 365 Backup Set (Exchange Online, SharePoint Online & Data in OneDrive)

AhsayOBM allows you to backup all users' data in an Office 365 domain with the Office 365 Backup Module. This module provides a set of tools to backup and restore individual emails, contacts, calendars and other mail items in Office 365 Outlook, files on OneDrive and SharePoint, with snapshots / versioning, and retention policy.

System Architecture

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

Agentless

No need to install AhsayOBM. The AhsayCBS backup server connects to the Office 365 directly through the Internet.

Agent-based

The latest version of AhsayOBM is installed on the remote backup machine which is connected to Office 365 and AhsayCBS backup server through internet.

Requirements

Hardware Requirement

To achieve the optimal performance when AhsayOBM is running on your machine, refer to this article for the list of hardware requirements: Ahsay Hardware Requirement List (HRL)

Software Requirement

Make sure the operating system where you have the Office 365 installed is compatible with the

AhsayOBM. Refer to this article for the list of compatible operating systems and application versions: Ahsay Software Compatibility List (SCL)

Antivirus Exclusion Requirement

To optimize performance of AhsayOBM on Windows, and to avoid conflict with your antivirus software, refer to the following Wiki article the list of processes and directory paths that should be added to all antivirus software white-list / exclusion list: Suggestion on antivirus exclusions to improve performance of Ahsay software on Windows

> The bJW.exe process is automatically added to Windows Defender exclusion list for Windows 10 and 2016, and 2019 during installation / upgrade via installer or upgrade via AUA.

Other Requirements

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.

Office 365 Add-on Module Requirement

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.

Below is a sample screen shot of an AhsayOBM User with an add-on module of Office 365 with 20 licenses.

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

If you are trying to backup SharePoint Sites under the Site Collections and/or files or folders under Public Folder, only one Office 365 license module is required.

However, If you are trying to backup Items from Outlook, Items from OneDrive, Personal Sites under Users, the Office 365 license count will be calculated based on the number of the user account selected.

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.

AhsayOBM Licenses

AhsayOBM licenses are calculated on a per device basis:

Agent-based

1. To backup users with one (1) backup client computer
   Example: If one AhsayOBM is installed then, one AhsayOBM license is required.

1. To backup 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 with three (3) backup client computers, then 3 AhsayOBM licenses are required.

Agentless

1. To backup users using AhsayCBS User Web Console, one AhsayOBM license is required.

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.

Continuous Backup Module

The Continuous backup add-on module is required if would like to enable the continuous backup feature.

Java Heap Size

The default Java heap size setting for AhsayOBM is 2048 MB / 2.048 GB. To avoid any inconveniences and ensure smooth operation when performing Office 365 backup, it is highly recommended to allot extra memory.

Below is the table for the memory requirement:

Per OneDrive Account	100 MB
Per SharePoint Site Collection	150 MB

The memory requirement is dependent on the number of OneDrive or SharePoint Site Collections selected for backup. The Java heap size to be configured should not exceed 2/3 of the RAM available, to allow sufficient resources for the operating system.

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 Status

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

Granting Permission to Accounts for Creating Backup Set

Before the Office 365 account administrator or other accounts can create a backup set, the administrator has to grant permission to the account(s) which are going to create backup set. The account must be a member of the following security groups:

- Discovery Management
- Public Folder Management

Follow the steps below to grant permission to user account.

- Open https://outlook.office365.com/ecp
- Login to the Office 365 admin center as an account administrator.

![Office 365 logo]

Work or school account

someone@example.com

••••••••

☐ Keep me signed in

Sign in   Back

Can't access your account?

- Select the permissions menu on the left, then double click on Discovery Management or Public Folder Management on the right.
  ![×]
- You can now add users to this group. Click the + icon under the Members section.
  ![×]
- 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.
  ![×]
- Click Save to confirm and exit the setting.

Granting Permission for Application Impersonation & Mail Search

This permission allows users added under the Members section of the Discovery Management group (refer to the previous section 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. To grant permission for this feature, you have to add the Application Impersonation & Mail Search role by following the steps below.

- Open https://outlook.office365.com/ecp
- Login to the Office 365 admin center as an account administrator.

Office 365

Work or school account

someone@example.com

••••••••

☐ Keep me signed in

Sign in   Back

Can't access your account?

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

- Click the + icon under the Role section.

- Select the ApplicationImpersonation&MailSearch role, then click the add button. Click OK afterward.

- Click Save to confirm and exit the setting.

Granting Permission for SharePoint Global Admin

The Global Admin permission allow SharePoint account to list other account's Personal Site and OneDrive in the backup source tree. So before using AhsayOBM to create backup set, please ensure the SharePoint account has already owned the permission in order to apply AhsayOBM to back up and/or restore user item(s) not only for their own account, but also the accounts of other users.

- Open https://outlook.office365.com/owa to sign in Office 365 as a global admin or SharePoint admin.
- Click [grid icon] in the upper-left and choose Admin to open the Office 365 admin center.

- In the left pane, choose Admin Centers > SharePoint.

- Check the box of the site collection you want to grant Global Admin and click Owners to choose Manage Administrators.

- Add Global Admin in the Site Collection Administrators box.

✕

manage administrators

Primary Site Collection Administrator

Specify the administrator for this site collection. Only one user login can be provided; security groups are not supported.

User name:

Company Administrator;

Site Collection Administrators

Site Collection Administrators are given full control over all Web sites in the site collection. They may also receive site use confirmation mail. Enter users separated by semicolons.

[QA-Admin account] Ahsay QA; [QA-Auto] eeyore; qa-room-a0540 ; qasharepoint; SharePoint Service Administrator; svccplt02; testlist; [UNLINCENSED] qa-test; global administrator 17987;

OK   Cancel

- Click OK to confirm.

Supported Office 365 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.

Service	Supported?
Outlook	✔
OneDrive	✔
SharePoint	✔
Teams	✕
Yammer	✕
Stream	✕
Power BI	✕
Power	✕
Apps	✕

Outlook (Exchange Online)

Outlook Mailbox Items

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

Item	Supported?
User mailbox	✔
Room Mailbox	✔
Public Folder	✔
Equipment Mailbox	✔
Public Folder Mailbox	✔
Shared Mailbox	✔

Folders in a Mailbox

Below are the folders in a mailbox that you can backup or restore from an Outlook mailbox.

Folder	Supported?
Inbox	✔
RSS Feeds	✔
Drafts	✔
Junk Email	✔
Sent Items	✔
Tasks	✔
Deleted Items	✔
Calendar	✔
Archive	✔
Contacts	✔
Notes	✔

OneDrive

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

Item	Supported?
Folders	✔
Files	✔
Access Permissions	✔
Albums	✔
Recycle Bin	✕
Tags	✕

SharePoint Online

Items

Below are the SharePoint items that you can backup or restore from an Office 365 backup set.

Item	Supported?
Lists and Libraries	✔
Subsites	✔

Site Level Collection

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

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

Site Column Type

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

Item	Supported?
Single line of text	✔
Number (1, 1.0, 100)	✔
Date and Time	✔
Choice (menu to choose from)	✔
Yes / No (checkbox)	✔

Public Folder

Items

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

Item	Supported?
Folders	✔
Files	✔

Limitations

1. AhsayOBM and AhsayCBS User Web Console currently do not support Office 365 user accounts with enabled Multi-Factor Authentication (MFA). If you are trying to backup Office 365 user accounts with MFA enabled, you have to disable it.

2. Restore filter using AhsayCBS User Web Console is not yet supported.

3. 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.

4. Restore to Local Machine is not supported using AhsayCBS User Web Console. It is only available using AhsayOBM.

5. 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 of 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.

6. 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 of 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.

7. Only administrator account or user account with administrative authority can restore backup items to an alternate location.

8. 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.

9. 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.

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

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.

Login AhsayOBM

After modifying the backup schedule setting or Continuous Backup setting of the Run on Client backup set on AhsayCBS user web console, please remember to login to the AhsayOBM client once to synchronize the changes immediately.

Large Amount of Users to Backup

It is recommended to divide the users into multiple backup sets. By default, the Office 365 backup module can back up a maximum of 4 users concurrently (4 concurrent backup threads), while backing up a maximum of 4 items concurrently per user (4 concurrent backup threads). Therefore, each backup set supports a maximum of 4×4=16 backup threads at a time. By splitting up all users into separate backup sets, the more backup sets running concurrently, the faster the backup process can be completed.

Example Scenarios for Number of Users to Backup

Example No. 1

There are 1000 users needed to be backup, you can divide 200 users into one backup set.

Backup Set Name	User Number
Backup -Set-1	No.1 – 200
Backup -Set-2	No.201 – 400
Backup -Set-3	No.401 – 600
Backup -Set-4	No.601 – 800
Backup -Set-5	No.801 – 1000

If there are new users added, you can create new backup set for the new users.

Example No. 2

There are 1000 users needed to be backup, you can divide users into backup sets in alphabetic order.

Backup Set Name	User Name Start with
Backup -Set-1	A – E
Backup -Set-2	F – J
Backup -Set-3	K – O
Backup -Set-4	P – T
Backup -Set-5	U – Z

> If there are new users added, you can divide the new users into the original backup sets by the corresponding alphabetic order.

Documentation

- Office 365 Backup and Restore Guide for Windows
- Office 365 Backup and Restore Guide for Mac

FAQs

- Do AhsayOBM / ACB support move file for Office 365 Exchange Online backup set
- How do I increase the number of scheduled concurrent agentless Cloud File and Office 365 Exchange backup jobs on my AhsayCBS server

Issues

- java.lang.OutOfMemoryError: Java heap space error when performing an Office 365 backup
- Error=[ExchangeStandardFolder.getOrdinal] Invalid ID (Office365 Exchange online backup)

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