AH Ahsay Backup

Ahsay Online Backup Manager v7 Microsoft Exchange 2016 Mail Level Backup & Restore Guide

Ahsay Systems Corporation Limited

3 November 2017

A wholly owned subsidiary of Ahsay Backup Software Development Company Limited HKEx Stock Code: 8290

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1 Overview

1.1 Introduction

This user guide aims at providing detailed information for backing up and restoring individual mail items and public folder items stored in Microsoft Exchange Server 2016 with AhsayOBM, also known as the Mail Level backup.

Mail Level Backup must be utilized in conjunction with full Information Store Backup as Mail Level backup for Microsoft Exchange Server is not designed to fully protect an Exchange Server, but to facilitate easy backup and fast restoration of individual emails, contacts, calendars or public folder, etc.

AhsayOBM supports standalone backup option and Database Availability Group (DAG) backup option for Exchange server Mail Level backup. From version 7.15.0.0 onwards, AhsayOBM supports Mail Level backup and restore of Exchange Server 2016 by installing either on the Exchange server 2016 hosting the database or on the remote backup machine.

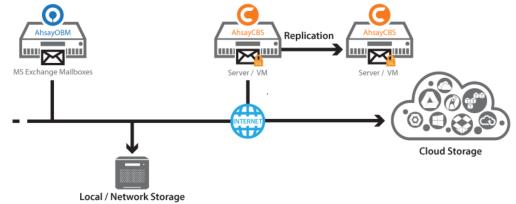
1.2 What is this software?

Ahsay brings you specialized client backup software, namely AhsayOBM, to provide a set of tools to protect your mailboxes and public folders on Microsoft Exchange Server 2016. This includes backup and recovery of individual emails, contacts, calendars and other mail items in your mailboxes and public folders, with snapshots / versioning, and retention policy to protect even email that you may have accidentally deleted from your Exchange 2016 mailboxes or public folders.

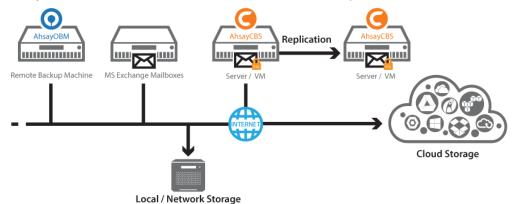
1.3 System Architecture

Below is the system architecture diagram illustrating the major elements involved in the backup process among the Microsoft Exchange Server 2016, AhsayOBM and AhsayCBS.

1. AhsayOBM v7.15.0.0 or above installed on Exchange Server 2016.

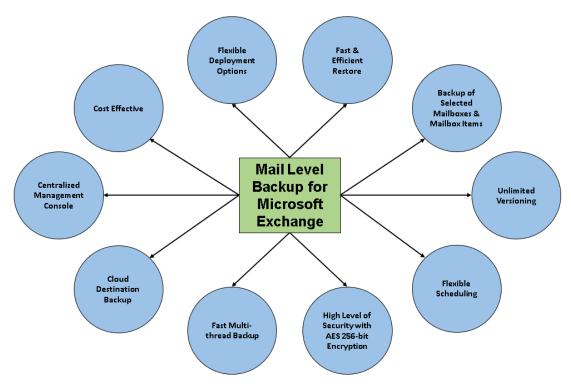


2. AhsayOBM v7.15.0.0 or above installed on Remote Backup Machine.



1.4 Why should I use AhsayOBM to back up my Exchange 2016 Mailboxes and Public Folders?

We are commutted to bringing you a comprehensive Exchange 2016 Mail Level backup solution with AhsayOBM. Below are some key areas we can help make your backup experience a better one.



1. Fast and Efficient Restore

We understand that restore could be a time and resources consuming process, which is why AhsayOBM is designed with advanced technologies to make restore a fast and efficient process by restore individual mail items without the need to restore the whole Exchange database.

2. Backup of Selected Mailboxes & Mailbox Items

The backup resources can be mailbox level, folder level and even item level, so backup job can be specified to mail items.

3. Unlimited Versioning

You may wish to run backup job for different version of exchange server, so AhsayOBM provides backup and restore option for exchange server 2007/2010/ 2013/2016 to fulfill your requirement.

4. Flexible Scheduling

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.

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

5. High Level of Security with AES 256-bit Encryption

We understand your Exchange mail objects 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.

6. Fast Multi-thread Backup

This technology utilizes the computing power of multiple CPU cores for creating multiple backup and restore threads to produce fast backup and restore performance.

7. Cloud Destination Backup

To offer you with the highest flexibility of backup destination, you can now back up mail objects to a wide range of cloud storage destinations. Below is a list of supported cloud destinations.

Aliyun (阿里云) *	CTYun (中国 电信天翼云)*	Amazon S3	Amazon Cloud Drive
Google Cloud Storage	Google Drive	OneDrive	Microsoft OneDrive / OneDrive for Business
Rackspace	OpenStack	Microsoft Azure	Dropbox
FTP	SFTP	AWS S3 Compatible Cloud Storage	

Cloud backup gives you two major advantages:

- Cloud Backup for Extra Protection you can back up your Office 365 mail objects to a cloud destination of your choice. Utilizing cloud 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.
- Eliminate Hardware Investment with the increasingly affordable cloud storage cost, you can deploy on cloud platform and utilize cloud storage as your centralized data repository, or simply expand your cloud storage as a backup destination without having to invest on hardware.

Note

Cloud destination backup applies only to agent-based backup sets. The backup destination is restricted to AhsayCBS for all agentless backup sets.

8. 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, whether you are a system administrator or backup user. 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 <u>AhsayCBS User's Guide</u> for details.

- Oreate backup set
- Configure user settings
- Configure backup settings
- View and download backup and restore reports
- Monitor backup and restore live activities

9. Cost Effective

For backup and restore on exchange server, there is no need to install operating system or AhsayOBM on an extra machine.

For backup and restore on remote backup machine, there requires only one AhsayOBM license

10. Flexible Deployment Options

From version 7.15.0.0 onwards, AhsayOBM supports Mail Level backup and restore of Exchange Server 2016 by installing either on the Exchange server 2016 hosting the database or on the remote backup machine.

1.5 About This Document

1.5.1 Document Main Part

The document can be divided into 3 main parts.

Part 1: Preparation for Exchange 2016 Mail Level Backup & Restore

Requirements

Requirements on AhsayOBM, Exchange Server 2016 and Windows Operating Svstem

Supported Backup Source & Limitation Supported backup source of Exchange Server 2016 and limitation

Best Practice and Recommendation Items recommended to pay attention to before backup and restore

Part 2: Perform Mail Level Backup and Restore for Microsoft Exchange 2016 on Exchange Server

Standalone Backup Option

Create Mail Level backup set, run Mail Level backup job and restore Mail Level backup

Database Availability Group (DAG) Backup Option Create Mail Level backup set, run Mail Level backup job and restore Mail Level backup

Part 3: Perform Mail Level Backup and Restore for Microsoft Exchange 2016 on Remote Backup Machine

Standalone Backup Option

Create Mail Level backup set, run Mail Level backup job and restore Mail Level backup

Database Availability Group (DAG) Backup Option

Create Mail Level backup set, run Mail Level backup job and restore Mail Level backup

1.5.2 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 make Mail Level backup of Exchange Server 2016 on AhsayOBM, as well as to carry out an end-to-end backup and restore process.

1.5.3 Who should read this document?

This documentation is intended for backup administrators and IT professionals who are responsible for the Exchange Server 2016 Mail Level backup and restore.

2 Preparation for Backup and Restore

2.1 Requirement

You are strongly recommended to configure or check all the settings below to confirm all the requirements are met before you proceed with the Exchange Mail Level backup and restoration.

2.1.1 Software Requirement

Refer to the following article for the list of compatible operating systems and application versions.

FAQ: Ahsay Software Compatibility List (SCL) for version 7.3 or above

2.1.2 AhsayOBM Installation

AhsayOBM v7.15.0.0 or above must be installed either on the Exchange Server 2016 hosting the database or on the remote backup machine.

2.1.3 Microsoft Exchange Mailbox Add-On Module

One Microsoft Exchange Mailbox license is required for the backup each user mailbox.

Make sure the Microsoft Exchange Mailbox feature has been enabled as an add-on module in your AhsayOBM user account and there is sufficient Microsoft Exchange Mailbox license quota to cover the backup of your mailboxes.

Please contact your backup service provider for more details.

User Profile	General	Backup Client Settings Contact					
Backup Set	Settings of the client backup agent for this user.						
Settings							
Report	Backup C	lient					
Statistics	AhsayOB	M User 💿 AhsayACB User					
Effective Policy	Add-on M	odules					
	✓ []8	Microsoft Exchange Server					
	N	MySQL Database Server					
	V Lotus.	Lotus Domino					
	O	Windows System Backup					
		VMware Guest VM V					
	✓ E8	Microsoft Exchange Mailbox 20					
	JVM	NAS					
		Volume Shadow Copy					
		In-File Delta					
	E	Office 365 Exchange Online Backup 0					

2.1.4 AhsayOBM Licenses

AhsayOBM licenses are calculated on a per device basis.

1. For backup of mailboxes on a standalone Microsoft Exchange 2016 Server, one AhsayOBM license is required.

2. For backup of mailboxes on a Microsoft Exchange Server 2016 DAG setup, the number of AhsayOBM licenses required is equal to the number of members (nodes) in the DAG. For example, if there are three members then three AhsayOBM licenses are required.

Please contact your backup service provider for more details

2.1.5 Backup Quota Requirement

Make sure that your AhsayOBM user account has sufficient storage quota assigned to accommodate the storage of additional Exchange mailbox and public folder items for the new mail level backup set.

Please contact your backup service provider for more details.

2.1.6 Temporary Directory Folder

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

2.1.7 Scheduled Backup for Exchange Server in Data Availability Group (DAG) Option

Scheduled backup is required if you choose to back up in DAG option on Exchange server as AhsayOBM on all DAG members will base on the scheduled backup time to start backup on all the individual DAG member at the same time.

- A DAG backup cycle is considered complete only when scheduled backup on all DAG members have been carried out. An email report will be generated when a complete DAG backup cycle is taken place.
- 2. Please keep in mind that manual backup will only be considered as individual Mail Level backup, and therefore will not be counted as part of the DAG backup cycle.

However, for backup and restore on the remote backup machine, as the operation for single node can be done either manually or automatically, scheduled backup is not required.

2.1.8 Mailbox Role

Ensure all nodes have mailbox role. This can be checked by accessing the Exchange admin center (EAC).

Exchange admin ce	enter	
recipients	servers databases database availability groups virtual directories	certificates
permissions		
compliance management	1 P 8	
organization	NAME SERVER ROLES VERSION	
protection	W2K16-XCH2K16 Mailbox Version 15.1 (Build 669	W2K16-XCH2K16
mail flow		Mailbox Version 15.1 (Build 669.32) Enterprise
mobile		Licensed
public folders		
unified messaging		
servers		
hybrid		
tools		
	1 selected of 1 total	

2.1.9 Operating System

- 1. For AhsayOBM installed on the Exchange Server 2016, the operating system must be Windows Server 2012/ 2012 R2/ 2016 or above.
- 2. For AhsayOBM installed on the remote backup machine, the operating system must be Windows 7/ 8/ 8.1/ 10 or Windows Server 2008/ 2008 R2/ 2012/ 2012 R2/ 2016 or above.

2.1.10 Supported Exchange Server 2016 Version

MS Exchange Server 2016 Cumulative Update 4 (CU4) or above is supported.

2.1.11 Windows User Account Permission

Windows User account used for the backup must be a member of the following security groups.

- Discovery Management (including ApplicationImpersonation and Mailbox Search)
- Organization Management
- Public Folder Management

Active Directory Users and Computers							- 🗆 X
File Action View Help ← → 2 □	ba	ickup1 12. 12 Pri	operties			? ×	
Active Directory Users and Computers [w2k1 Active Directory Users and Computers [w2k1 Saved Queries X2k16.local Builtin Computers Domain Controllers ForeignSecurityPrincipals Managed Service Accounts Simicrosoft Exchance Security Groups	Varr A A A A A A A A A A A A A A A A A A	General Addr Remote control Member Of Member of: Name Discovery Manu Domain Users Organization Ma	Re Dial-i agement anagement	mote Desktop S in Em Active Directo x2k16.local/k x2k16.local/L x2k16.local/L	rironment ry Domain Servic licrosoft Exchang sers licrosoft Exchang	ge Security G ge Security G	otion account for administering the computer/doma ers in this group can have their passwords replice ers of this group are permitted to publish certific
		Public Folder M	anagement Remove		licrosoft Exchang	ge Security 6	ers of this group that are domain controllers may account managed by the system. ers in this group cannot have their passwords rep lated administrators of the domain rkstations and servers joined to the domain main controllers in the domain main guests main users
	Le L	Primary group: Set Primary Gr	oup you	ere is no need to	change Primary clients or POSIX	group unless <-compliant	sated administrators of the enterprise ers of this group can perform administrative acti- ers of this group are Read-Only Domain Controll ers in this group can modify group policy for the n account for quest access to the computer/dom
	sja SK		OK	Cancel	Apply	Help	ers of this group can perform administrative active

2.1.12 Enabling Mailbox

Windows user account must have an Exchange Server mailbox. Refer to the URL below for more information: <u>http://support.microsoft.com/kb/275636/en-us</u>.

Enterprise Office 365				backup1 12. 12 🝷 📍
Exchange admin ce	nter			
recipients	mailboxes gro	ups resourc	es contacts shared migra	tion
permissions				
compliance management	+- 🖍 🖮 P 🕃			
organization	DISPLAY NAME	MAILBOX TYPE	EMAIL ADDRESS	
organization	Administrator	User	Administrator@x2k16.local	
protection	backup ba. admin	User	backupadmin@x2k16.local	backup1 12. 12
	backup1 12. 12	User	backup1@x2k16.local	User mailbox
mail flow	baxter STL. STL	User	baxter@x2k16.local	backup1@x2k16.local Title:
mobile	bk b. b	User	bk@x2k16.local	Office:
TIODIC .	c 1. c1	User	c1@x2k16.local	Work phone:
public folders	jalin li	User	jalin.li@x2k16.local	
	operator1 OP. OP1	User	operator1@x2k16.local	Phone and Voice
unified messaging	steve SP. SPL	User	steve@x2k16.local	Features
	t1 1. t	User	t1@x2k16.local	Unified Messaging: Disabled
servers	yuk I. ch	User	yuk@x2k16.local	Enable
hybrid				Mobile Devices Disable Exchange ActiveS
tools		1 selecte	d of 11 total	

Refer to the following article from Microsoft for more details on how to check if an account is mailbox enabled and how to enable it:

https://technet.microsoft.com/en-us/library/jj991919(v=exchg.160).aspx

2.1.13 Backup Source Requirement

Ensure "**Hide from address lists**" is unchecked for all the mailboxes, otherwise the mailbox will not be shown in the backup source.

backup1 12. 12		
 general maibox usage contact information organization email address maibox features member of MaiTip maibox delegation 	First name: backup1 Initials: 12 Last name: 12 *Name: backup1 12. 12 *Alas: backup1 12. 12 *Alas: backup1 *User logon name: backup1 *User logon name: *User logon	
	Hide from address lists More options	Þ

2.1.14 Port Configuration

As Exchange Server 2016 use EWS API, please ensure **port 443** is configured to allow communication between AhsayOBM and Exchange Server 2016.

2.1.15 Exchange related Windows Services

Ensure all MS Exchange related services have been started, particularly the **MS Exchange Information Store.**

To verify this setting, launch the **Services** menu by clicking **Start** then typing "Services" in the search box. All Exchange related services should be started by default, in case if it is not, turn it on by right clicking the item and then select **Start**.

File Action View	w Help		
🗇 🏟 🛅 🗐	🗟 🗟 🛛 📅 🖉 🖬 🕨 🖬 🕪		
😩 Services (Local)	Services (Local)		
	Microsoft Exchange Information	Name	Desc /
	Store	Microsoft Exchange IMAP4	Prov
		Microsoft Exchange IMAP4 Backend	Prov
	Stop the service Restart the service Description: Manages the Microsoft Exchange Information Store. This includes mailbox databases and public folder databases. If this service is stopped, mailbox databases and public folder	Microsoft Exchange Information Store	Man
		A Microsoft Exchange Load Generator Monitoring Agent	Mon
		A Microsoft Exchange Load Generator Remote Agent	Enab
		A Microsoft Exchange Mailbox Assistants	Perfc
		A Microsoft Exchange Mailbox Replication	Proc
		A Microsoft Exchange Mailbox Transport Delivery	This
		Microsoft Exchange Mailbox Transport Submission	This
		Microsoft Exchange Migration Workflow	Proc
	databases on this computer are unavailable. If this service is disabled.	C Microsoft Exchange POP3	Prov
	any services that explicitly depends on it will fail to start.	Microsoft Exchange POP3 Backend	Prov
		A Microsoft Exchange Replication	The
		G Microsoft Exchange RPC Client Access	Man
		<	>

2.1.16 MS Exchange Databases

Ensure the MS Exchange Mailbox and Public Folder databases are mounted. This can be verified by Exchange Management Shell or Exchange Admin Center (EAC).

• Type the following command in the Exchange Management Shell.

Get-MailboxDatabase								
🙀 Machine: w2k16-xch2k16.x2k16.local				_		×		
[PS] C:\Windows\system32> <mark>Get-MailboxDatabase</mark> Creating a new session for implicit remoting of "Get-MailboxDatabase" command								
Name	Server	Recovery	Replicati	Lon⊤yp	e			
Mailbox Database 0998420039 Mailbox Database 20171017	W2K16-XCH2K16 W2K16-XCH2K16	False False	None None					

Exchange Admin Center (EAC)

Exchange admin center								
recipients	servers dat	abases data	base availability gr	oups virtu	al directories	certificates		
permissions								
compliance management	+ 🖍 🖮 🔎	e						
organization	NAME	ACTIVE ON SER	SERVERS WITH COPIES	STATUS 🔺	BAD COPY CO			
protection	Mailbox Datab Mailbox Datab	W2K16-XCH2K	W2K16-XCH2K16 W2K16-XCH2K16	Mounted Mounted	0	Mailbox Database 0998420039		
mail flow	Malibox Datab	WZK10*ACHZK	W2R10-ACH2R10	Wounted	Ū	Servers		
						W2K16-XCH2K16		
mobile						Database copies Mailbox Database 0998420039\W2K16-XCH2K16		
public folders						Active Mounted Copy queue length: 0		
unified messaging						Content index state: FailedAndSuspended		
servers								
hybrid								
tools								

2.1.17 Windows PowerShell 5.1 Engine

Ensure the Windows PowerShell 5.1 Engine is installed.

To install the feature:

- 1. Navigate to Server Manager > Manage, then select Add Roles and Features.
- 2. On the Select installation type screen, select Role-based or feature-based installation.
- 3. Select the target server.
- 4. On the **Select features** screen, go to the **Features** option, check the box next to **Windows PowerShell 5.1 Engine**.

📥 Add Roles and Features Wizard		- 🗆 X
Select features		DESTINATION SERVER w2k16-xch2k16.x2k16.local
Before You Begin	Select one or more features to install on the selected server.	
Installation Type	Features	Description
Server Selection	SMTP Server	Windows PowerShell enables you to
Server Roles	SNMP Service	automate local and remote Windows administration. This task-based
Features	Telnet Client (Installed) TFTP Client	command-line shell and scripting
Confirmation	VM Shielding Tools for Fabric Management	language is built on the Microsoft .NET Framework. It
Results	WebDAV Redirector Windows Biometric Framework	includes hundreds of built-in
	▷ ✓ Windows Defender Features (Installed)	commands and lets you write and
	Windows Identity Foundation 3.5 (Installed) Windows Internal Database	distribute your own commands and scripts.
	 Windows Internal Database Windows PowerShell (3 of 5 installed) 	
	Windows PowerShell 5.1 (Installed)	
	 Windows PowerShell 2.0 Engine (Installed) Windows PowerShell Desired State Configurati 	
	Windows PowerShell ISE (Installed)	
	Windows PowerShell Web Access Mindows Process Activation Service (2 of 3 installe	
	Windows Search Service	
	Windows Server Backup	
	, , , , , , , , , , , , , , , , , , , ,	
	< Previous Next	> Install Cancel

2.1.18 .Net Framework 4.6.2 Features

Ensure **.Net Framework 4.6.2 Features** is installed. Please refer to the following URL for detailed information: <u>https://technet.microsoft.com/en-us/library/aa996719(v=exchg.160).aspx</u>

This feature can be enabled by accessing **Server Manager > Dashboard > Manage > Add Roles and Features Wizard > Feature Page**.

L	Add Roles and Features Wizard	_ _ X
Select features Before You Begin Installation Type Server Selection Server Roles Features Confirmation Results	Add Roles and Features Wizard Select one or more features to install on the selected server. Features INET Framework 3.5 Features (Installed) Background Intelligent Transfer Service (BITS) BitLocker Drive Encryption BitLocker Network Unlock BranchCache Client for NFS Data Center Bridging Enhanced Storage Failover Clustering (Installed) Group Policy Management 	DESTINATION SERVER w12x-7-23.qa25.ahsay.com
	✓ Ink and Handwriting Services (Installed) ☐ Internet Printing Client ☐ IP Address Management (IPAM) Server ✓ III	
-	< Previous Next	> Install Cancel

2.2 Supported Source

Below is the supported backup & restore source for Mail Level backup and restore of Exchange Server 2016.

Mailbox Level					
Item Supported? Item Supported?					
User mailbox	\checkmark	Room Mailbox	\checkmark		
Public Folder	\checkmark	Equipment Mailbox	\checkmark		
Public Folder Mailbox	√	Shared Mailbox	✓		

Exchange Server 2016 can backup and restore the whole mailboxes.

Exchange Server 2016 can back up and restore the folders and items of folder belong to the mailboxes.

Folder Level					
Item Supported? Item Support					
Inbox	\checkmark	RSS Feeds	\checkmark		
Drafts	√	Junk Email	✓		
Sent Items	√	Tasks	✓		
Deleted Items	√	Calendar	✓		
Archive	√	Contacts	✓		
Notes	√				

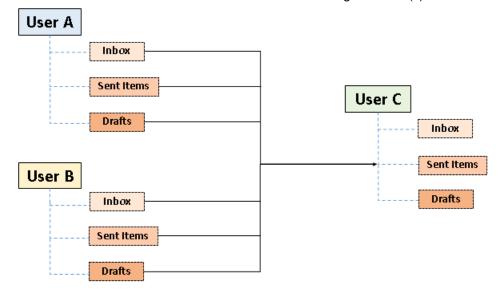
2.3 Limitation

For backup and restoration of Exchange 2016 Mail Level backup set, there is some limitation:

1. If you are trying to restore item(s) from one mailbox to an alternate location mailbox, AhsayOBM will restore the item(s) to their respective destination folder(s) with the same name of the original folder(s).

Example: Item from "Inbox" folder of Mailbox-A will be restored to the "Inbox" folder of the alternate location Mailbox-B; Item from "Drafts" folder of Mailbox-A will be restored to the "Drafts" folder of the alternate location Mailbox-B.

2. If you are trying to restore item(s) from several mailboxes to an alternate location mailbox, AhsayOBM will restore the item(s) to their respective destination folder(s) in



alternate location mailbox with the same name of the original folder(s).

Example: Item from "Inbox" folder of Mailbox-A, Mailbox-B and Mailbox-C will be restored to the "Inbox" folder of the alternate location Mailbox-D.

- 3. Restore of the mailbox items or public folder items is only supported if the according mailbox or public folder exists.
- 4. Only Alternate Location is supported for restore items to other domain.
- 5. Restore of public folder item(s) to an alternate location mailbox is not supported.

Example: Restore of public folder items from Mailbox-A to alternate location Mailbox-B is not supported.

- 6. Public Folder Mailboxes are supported for backup and restore of Office 365 Exchange Online Backup, but individual public folder mailbox cannot be selected and all the public folder mailboxes would be backed up and restored by selecting the according Public Folder.
- 7. If you are trying to restore the mailbox item to a destination mailbox which has a different language setting than the original mailbox, AhsayOBM will restore mailbox item(s) to their respective destination folder based on the translation listed below.

Backup source (English)	Action	Destination mailbox 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

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

Calendar	Create new folder	Calendar
Notes	Create new folder	Notes

2.4 Best Practice and Recommendation

The following are some best practices or recommendations we strongly recommend you to follow before you start any Exchange Server 2016 Mail Level backup and restore.

Distributed Backup Solution

For multiple or mass backup sets needed to run for mail level backup of exchange server, AhsayOBM can be installed on several remote backup machine to run backup job of different backup sets simultaneously as distributed backup solution.

• Performance Recommendations

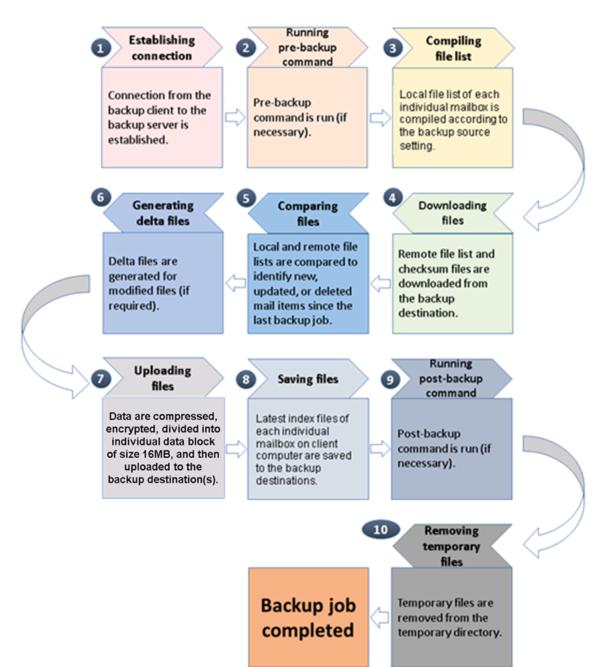
Consider the following best practices for optimized performance of the backup operations:

- Schedule backup jobs when system activity is 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's 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.
- Mail Level Backup must be utilized in conjunction with full Information Store Backup to fully protect an Exchange Server.
- For large amount of mailboxes to backup, it is recommended to divide the mailboxes into several backup sets.

Example: There are 100 mailboxes needed to be backup, so you can divide No. 1 to 20 to be badkup-set-1, No. 21 to 40 to be backup-set-2, No. 41 to 60 to be backup-set-3; No. 61 to 80 to be backup-set-4; No. 81 to 100 to be backup-set-5.

3 Overview of MS Exchange Mail Level Backup Process

The following steps are performed during an Exchange Mail Level backup job:



4 Perform Mail Level Backup and Restore for Microsoft Exchange 2016 (Exchange Server)

4.1 Standalone Backup Option

4.1.1 Create Mail Level Backup Set

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



- 2. Create a new backup set by clicking the "+" icon next to Add new backup set.
- 3. Select the Backup set type as **MS Exchange Mail Level Backup.** The system will automatically detect and select the Exchange Server version, make sure the version selected is correct.
 - Name your new backup set.
 - Enter the IP address of Exchange server 2016
 - Enter the username and password of the Windows user account used for backup.
 - Check the "Access the Internet through proxy" if required. Then click Next to proceed.

AhsayOBM	-		×
Create Backup Set			
Name MS Exchange 2016 Mail Level Backup Backup set type Common Microsoft Exchange Server 2016 Host hostname Username			
username Password Access the Internet through proxy Test	ext Cancel	Не	, V

4. In the **Backup Source** menu, select the mails from Mailboxes or public folders for backup. You can click to expand the according mailbox or public folder to select which mail folder to back up. You can also click **Show mails** to select individual mail to back up. Click **Next** to proceed when you are done.

M	Backu	p Sou	rce	_	
Folders □ ○ ○ ○ Mailboxes □ ○ ○ △ Administrator@x2 □ ○ △ Administrator@x2 □ ○ △ Administrator@x2 □ ○ △ Administrator@x2 □ ○ △ bloxx2k16.local □ □ ○ ↓ jalin.li@x2k16.local □ □ ○ ↓ jalin.li@x2k16.local □ □ ○ ↓ jalin.li@x2k16.local □ □ ○ □ Deleted Items □ □ ○ □ Sent Items □ □ ○ □ □ ○ □ asks □ □ ○ □ □ ∞ x2k16.local □ □ ○ □ □ □ w2xk16.local □ □ ○ □ □ □ w2xk16.local □ □ ○ □ □ w2xk16.local □ □ ○ □ □ w2xk16.local	e	Screenshot	10/19/2017 16:42	Size 14k 1M 15k	
Show mails		ltems p	er page 50 🗸	Page 1/1 ♥	
			Previous	Next Cancel	Help

5. In the Schedule menu, you can configure a backup schedule for backup job to run automatically at your specified time interval. Click **Add** to add a new schedule, then click **Next** to proceed when you are done.

Schedule	
Run scheduled backup for this backup set On Existing schedule Backup Schedule Daily (Everyday at 22:00) Add	
Previous Next	t Cancel Help

Note: By default, a daily backup scheduled for 22:00 is created automatically.

6. In the Destination menu, select a backup destination where the backup mail will be stored. Click the "+" icon next to Add new storage destination / destination pool.

Destination	
Backup mode Sequential Existing storage destinations Add new storage destination / destination pool	
	Previous Next Cancel Help

7. Select the destination type and destination storage, then click **OK** to proceed.

O Ahsay0BM

New Storage Destination / Destination Pool
Name
CBS
Туре
Single storage destination
O Destination pool
Destination storage
G CBS
OK Cancel Help

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_ 🗆 🗙

8. Click **Next** on the Destination menu page to proceed.

💽 AhsayOBM				_ 🗆 🗵
		Destination		
	Backup mode Sequential Existing storage destinations CBS Host: 10.3.1.8:443 Add			
	~ v			
			Previous Next Cancel	Help

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.

	Encryptio	n
Encrypt Backup Data On		
Encryption Type		
Default		
User password		
Custom		

- 10. 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 set is created. Please be reminded that if you change the AhsayOBM login password later, the encryption keys of the backup sets previously created with this encryption type will remain unchanged.

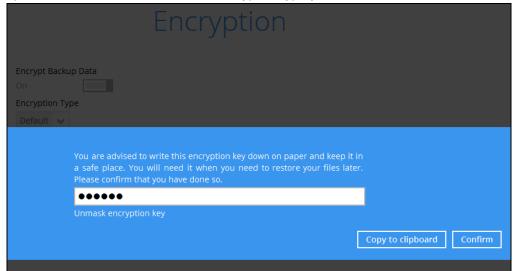
Custom – you can customize your encryption key, where you can set your own algorithm, encryption key, method and key length.

Encryp	otion
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 KB article: <u>Best Practices for Managing Encryption Key on AhsayOBM or AhsayCBS</u> <u>Version 7</u>

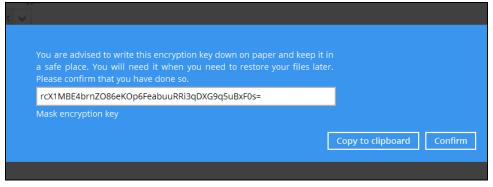
Click Next when you are done.

11. If you have enabled the Encryption Key feature in the previous step, the following popup window shows, no matter which encryption type you have selected.



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

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

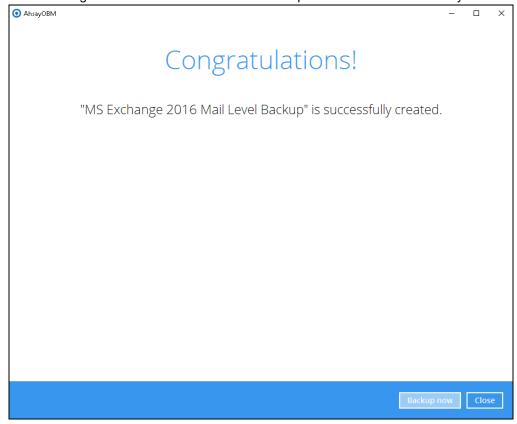


- Copy to clipboard Click to copy the encryption key, then you can paste it in another location of your choice.
- > **Confirm** Click to exit this pop-up window and proceed to the next step
- 12. Enter the Windows login credentials for user authentication. Click Next to proceed.

Windows User Authentication
Domain Name (e.g. Ahsay.com) / Host Name
ga17.ahsay.com
User name
username
Password

Note

The Windows User Authentication interface will show only if scheduled backup is enabled and set successfully.



13. The following screen shows when the new backup set is created successfully.

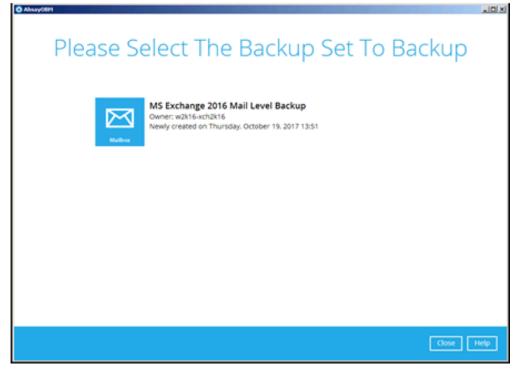
14. Click **Backup now** to start a backup immediately, or you can run a backup job later by following the instructions in <u>Run Mail Level Backup Job</u>

4.1.2 Run Mail Level Backup Job

- 1. Log in to AhsayOBM.
- 2. Click the Backup icon on the main interface of AhsayOBM.



3. Select the backup set which you would like to start a backup for.



4. If you would like to modify the In-File Delta type, Destinations and Retention Policy settings, click **Show advanced option**.

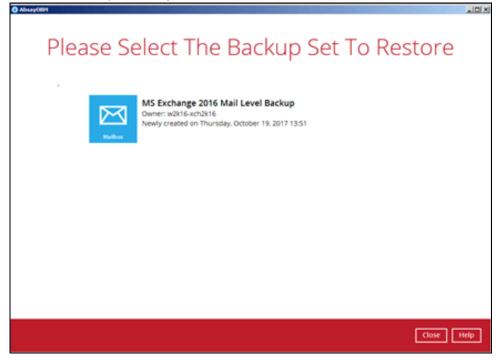
 AhsayOBM 		-		×
	Choose Your Backup Options			
	MS Exchange 2016 Mail Level Backup			
	Madem			
	Backup set type Microsoft Exchange Mailbox Show advanced option			
	Previous Backup Ca	ancel	Help	р
🗿 AhsayOBM		-		×
 AhsayOBM 		-		×
 AhsayOBM 	Choose Your Backup Options	_		×
 AhsayOBM 	Choose Your Backup Options	_		×
AhsayOBM	MS Exchange 2016 Mail Level Backup	-		×
AhsayOBM	MS Exchange 2016 Mail Level Backup Backup set type Microsoft Exchange Mailbox In-File Delta type	-		×
AhsayOBM	MS Exchange 2016 Mail Level Backup Backup set type Microsoft Exchange Mailbox	_		×
AhsayOBM	MS Exchange 2016 Mail Level Backup Backup set type Microsoft Exchange Mailbox In-File Delta type UII Differential O Incremental	_		×
AhsayOBM	MS Exchange 2016 Mail Level Backup Backup set type Microsoft Exchange Mailbox In-File Delta type O Full O Differential	_		×
AhsayOBM	MS Exchange 2016 Mail Level Backup Backup set type Microsoft Exchange Mailbox In-File Delta type Full Differential O Incremental Destinations	-		×
AhsayOBM	MS Exchange 2016 Mail Level Backup Backup set type Microsoft Exchange Mailbox In-File Delta type Pull Differential Incremental Destinations Incremental Destinations Image: AbsayCB5 (Host: 10.16.10.12:443) Retention Policy	_		×
AhsayOBM	MS Exchange 2016 Mail Level Backup Backup set type Microsoft Exchange Mailbox In-File Delta type Full Differential O Inferential O estinations C AhsayCBS (Host: 10.16.10.12:443) Retention Policy Retention Policy after backup	_		×
AhsayOBM	MS Exchange 2016 Mail Level Backup Backup set type Microsoft Exchange Mailbox In-File Delta type Full Differential O Inferential O estinations C AhsayCBS (Host: 10.16.10.12:443) Retention Policy Retention Policy after backup	-		×
AhsayOBM	MS Exchange 2016 Mail Level Backup Backup set type Microsoft Exchange Mailbox In-File Delta type Full Differential O Inferential O estinations C AhsayCBS (Host: 10.16.10.12:443) Retention Policy Retention Policy after backup	-		×
AhsayOBM	MS Exchange 2016 Mail Level Backup	ancel		

5. Click **Backup** to start the backup.

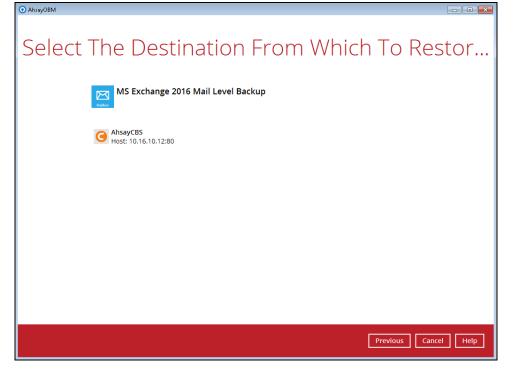


4.1.3 Restore Mail Level Backup

- 1. In the AhsayOBM main interface, click the **Restore** icon.
- 2. Select the backup set that you would like to restore mail from.



3. Select the backup destination that contains the mail(s) that you would like to restore.



4. Click to expand the menu tree to select which mailbox to restore. You can also select mail item(s) from a specific backup job or all mail items that you have backed up to

estore. Click Next to proceed.	
AhsayOBM	- 🗆 ×
Select Your Mail Objects To Be Re	stored
Sciect rour mail objects to be he	
Select what to restore	
Choose from files as of job V 10/25/2017 V Latest V	
Choose from files as of job Choose from ALL files	
CHOOSE ITOITI ALL TITES From Subject Received S G AhsayCBS □ □ □ □ □ □ □	iize 14k
	17k 1M
🗄 🗔 🍰 backup1@x2k1 🗔 🖃 yuk@x2k16.l Re: Relay this messa 10/20/2017 11:54	10M
□ 🚽 Inbox □ 🖃 t1@x2k16.loc Help with Exchange 10/20/2017 17:19	11k
Items per page 50 V Page	1/1 🗸
Previous	Next Cancel Help

5. Select to restore the mail to their Original mailbox, or to an Alternate mailbox.

• Restore to Original Mailbox

Select the Original location option, then press Next to proceed.

AhsayOBM		- 🗆 X
Choose Where	e The Mail Objects To	Be Restor
Restore mail objects t	0	
O Alternate location	Administrator@x2k16.local	~
	Previous	Next Cancel Help

restore. Click Next to proceed.

Restore to Alternate Mailbox

You can choose to restore mailbox item(s) to another mailbox in the same Exchange server. Select the **Alternate location** option and the desired mailbox destination, then press **Next** to proceed.

In addition, you can also restore mailbox item(s) to a different Exchange server of the same version. In this case, the restoration should be triggered by the AhsayOBM on the destination Exchange server.

• AhsayOBM		- 🗆 X
Choose Wher	e The Mail Objects To Be F	Restor
Restore mail objects t	0	
 Alternate location 	Administrator@x2k16.local	
	Administrator@x2k16.local	
	backup1@x2k16.local	
	backupadmin@x2k16.local	
	baxter@x2k16.local	
	bk@x2k16.local	
	c1@x2k16.local	
	jalin.li@x2k16.local	
	operator1@x2k16.local	1
	Previous	Cancel Help

Please refer to the Limitation part to check the limitation of restore process.

6. Select the temporary directory for storing temporary files, such as delta files when they are being merged, click **Restore** to start the restoration.

AhsayOBM			-		×
	Temporary Directory				
	Temporary directory for storing restore files				
	C:\Users\Administrator\.obm\temp	Browse			
	Previous	estore C	ancel	Help	D

7. The following screen with the text **Restore Completed Successfully** shows when the restoration is completed.

 AhsayOBM 				-		×
		Restore				
× N N	MS Exchange 201	6 Mail Level Backup				
G	AhsayCBS (Host: 10.1 Restore Complete Estimated time left Restored Elapsed time Transfer rate	d Successfully	(Ctrl) - G			
			C	Close	Help	P

4.2 Database Availability Group (DAG) Backup Option

4.2.1 Create Mail Level Backup Set

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

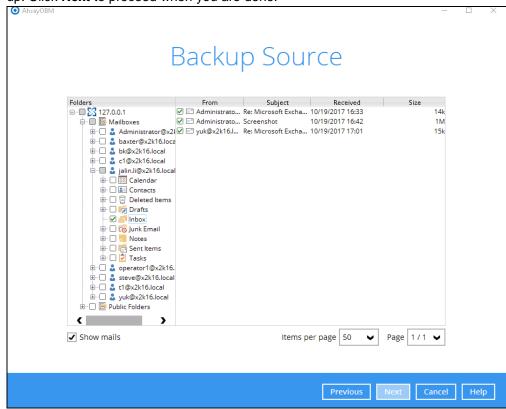


- 2. Create a new backup set by clicking the "+" icon next to Add new backup set.
- 3. Select the Backup set type as **MS Exchange Mail Level Backup.** The system will automatically detect and select the Exchange Server version, make sure the version selected is correct.
 - Name your new backup set.
 - Enter the IP address of all the DAG Member Server.
 - Enter the username and password of the Windows user account used for backup.
 - Check the "Access the Internet through proxy" if required. Then click Next to proceed.

0	AhsayOBM	_ 🗆 X
	Create Backup Set	
	Name	
	MS Exchange 2016 Mail Level Backup (DAG)	
	Backup set type	
	📨 MS Exchange Mail Level Backup 🛛 👻	
	Version	
	Microsoft Exchange Server 2016 (DAG) 🖌	
	Host (DAG Member Server)	
	IP Address of DAG Member Server	
	IP Address of DAG Member Server	
	Add	
	Username	
	username	
	Password	
	•••••	
	Access the Internet through proxy	
	Test	
	Next Can	cel Help

4. In the **Backup Source** menu, select the mails from Mailboxes or public folders for backup. You can click to expand the according mailbox or public folder to select which





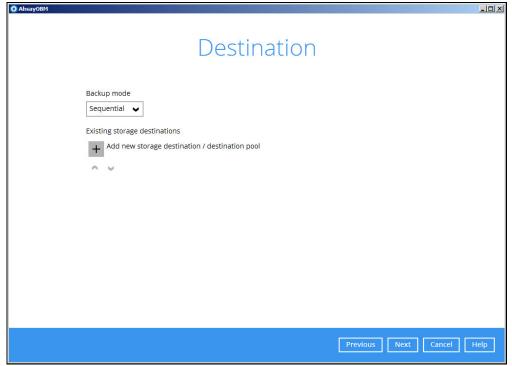
mail folder to back up. You can also click **Show mails** to select individual mail to back up. Click **Next** to proceed when you are done.

5. In the Schedule menu, you can configure a backup schedule for backup job to run automatically at your specified time interval. Click **Add** to add a new schedule, then click **Next** to proceed when you are done.

© AhsayOBM	
	Schedule
Run scheduled backup for this backu On Existing schedules Backup Schedule Daily (Everyday at 22:00) Add	ıp set
	Previous Next Cancel Help

Note: By default, a daily backup scheduled for 22:00 is created automatically.

6. In the Destination menu, select a backup destination where the backup mail will be stored. Click the "+" icon next to **Add new storage destination / destination pool**.



7. Select the destination type and destination storage, then click **OK** to proceed.

💽 AhsayOBM				
	New Storage Destination / Destination Pool			
	Name			
	CBS			
	Туре			
	 Single storage destination 			
	O Destination pool			
	Destination storage			
	CBS			
	l	ок с	ancel	Help
				пер

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8. Click **Next** on the Destination menu page to proceed.

O AhsayOBM			
	Desti	nation	
CBS	al 💌		
~ V			
		Previou	us Next Cancel Help

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.

	Encryption	
Encrypt Backup Data On		
Encryption Type		
Default 🗸 🗸		
Default		
User password		
Custom		

- 10. 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 set is created. Please be reminded that if you change the AhsayOBM login password later, the encryption keys of the backup sets previously created with this encryption type will remain unchanged.

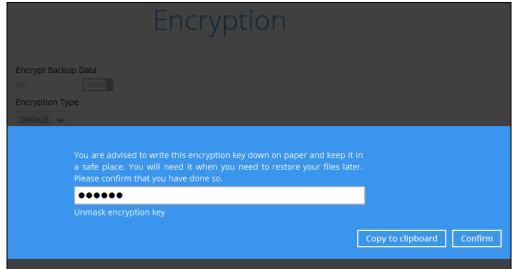
Custom – you can customize your encryption key, where you can set your own algorithm, encryption key, method and key length.

Encrypt	ion
Encrypt Backup Data On Custom V Algorithm AES V	
Encryption key	7
Re-enter encryption key	7
Method ECB CBC Key length 128-bit 256-bit	-1.

Note: For best practice on managing your encryption key, refer to the following KB article: <u>Best Practices for Managing Encryption Key on AhsayOBM or AhsayCBS</u> <u>Version 7</u>

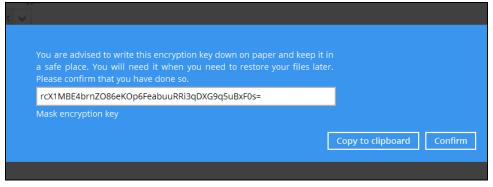
Click Next when you are done setting.

11. If you have enabled the Encryption Key feature in the previous step, the following popup window shows, no matter which encryption type you have selected.



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

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



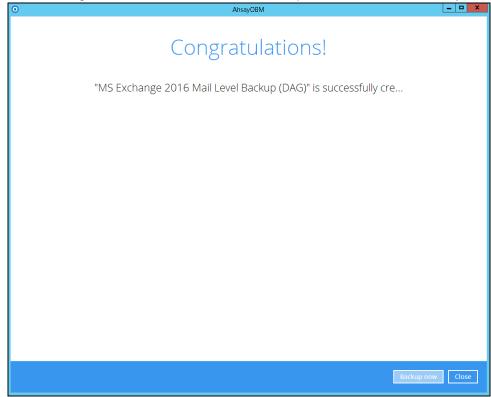
- Copy to clipboard Click to copy the encryption key, then you can paste it in another location of your choice.
- > **Confirm** Click to exit this pop-up window and proceed to the next step
- 12. Enter the Windows login credentials for user authentication. Click Next to proceed.

Windows User Authentication	
Domain Name (e.g Ahsay.com) / Host Name qa17.ahsay.com	
User name	
username	
Password	

Note

The Windows User Authentication interface will show only if scheduled backup is enabled and set successfully.

13. The following screen shows when the new backup set is created successfully.



14. Click **Backup now** to start a backup immediately, or you can run a backup job later by following the instructions in <u>Run Mail Level Backup Job</u>

4.2.2 Run Mail Level Backup Job

As mentioned in the <u>Requirement</u> part, scheduled backup is required if choose to back up in DAG option on Exchange server as AhsayOBM on all DAG members will base on the scheduled backup time to start backup on all the individual DAG member at the same time. So the process of manual restore will not be stated detailed here.

Please refer to the <u>Scheduled Backup for Exchange Server in Data Availability Group (DAG)</u> <u>Option</u> for details.

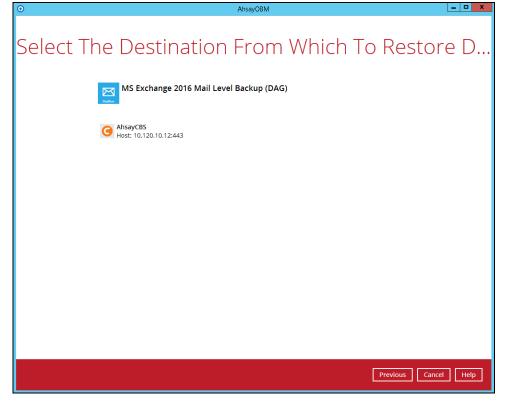
4.2.3 Restore Mail Level Backup

.

- 1. In the AhsayOBM main interface, click the **Restore** icon.
- 2. Select the backup set that you would like to restore mail from.

Please Select The Backup Set To Resto	re
. MS Exchange 2016 Mail Level Backup (DAG) Owner: xch2016mbx02 Last Backup: Wednesday. October 25, 2017 13:57	
0	se Help

3. Select the backup destination that contains the mail(s) that you would like to restore.



4. Click to expand the menu tree to select which mailbox to restore. You can also select mail item(s) from a specific backup job or all mail items that you have backed up to

restore.	Click	Next	to	proceed.
----------	-------	------	----	----------

•	AhsayOBM	x
Sel	ect Your Mail Objects To Be Restored	
	Select what to restore	
	Choose from files as of job V 10/25/2017 V Latest V	
	Folders To Subject Sent Size	
	Items per page 50 V Page 1 / 1	
	Previous Next Cancel He	elp

5. Se

 AhsayOBM 	-		nen press Nex		-
Choc	ose Wher	e The M	ail Objec	ts To B	e Rest
	Restore mail object				
	 Original locatior Alternate location 	n Administrator@x2k16.I	ocal		¥
				Previous N	lext Cancel

0

You can choose to restore mailbox item(s) to another mailbox in the same Exchange server. Select the **Alternate location** option and the desired mailbox destination, then press **Next** to proceed.

In addition, you can also restore mailbox item(s) to a different Exchange server of the same version. In this case, the restoration should be triggered by the AhsayOBM on the destination Exchange server.

• AhsayOBM Choos	e Where	e The Mail Objects To Be	Restor
	Restore mail objects t Original location	o Administrator@x2k16.local	~
	0	Administrator@x2k16.local	^
		backup1@x2k16.local	
		backupadmin@x2k16.local	
		baxter@x2k16.local	
		bk@x2k16.local	
		c1@x2k16.local	
		jalin.li@x2k16.local	
		operator1@x2k16.local	÷
		Previous Next	Cancel Help

Please refer to the Limitation part to check the limitation of restore process.

6. Select the temporary directory for storing temporary files, such as delta files when they are being merged, click **Restore** to start the restoration.

AhsayOBM			-		×
	Temporary Directory				
	Temporary directory for storing restore files				
	C:\Users\Administrator\.obm\temp	Browse			
	Previous	Restore	Cancel	Hel	р

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7. The following screen with the text **Restore Completed Successfully** shows when the restoration is completed.

0	AhsayOBM	_ _ ×
	Restore	
Marker	MS Exchange 2016 Mail Level Backup (DAG)	
6	AhsayCBS (Host: 10.120.10.12:443) Restore Completed Successfully Estimated time left 0 sec Restored 0 (0 file) Elapsed time 11 sec Transfer rate 0 bit/s 	- G
		Close Help

5 Perform Mail Level Backup and Restore for Microsoft Exchange 2016 (Remote Backup Machine)

5.1 Standalone Backup Option

5.1.1 Create Mail Level Backup Set

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



- 2. Create a new backup set by clicking the "+" icon next to **Add new backup set**.
- 3. Select the Backup set type as **MS Exchange Mail Level Backup**.
 - Select Microsoft Exchange Server version as Microsoft Exchange Server 2016.
 - Name your new backup set.
 - Enter the IP address of Exchange server 2016.
 - Enter the username and password of the Windows user account used for backup.
 - Check the "Access the Internet through proxy" if required. Then click Next to proceed.

AhsayOBM	- 🗆 X
Create Backup Set	
Name MS Exchange 2016 Mail Level Backup	Ŷ
Backup set type Image: MS Exchange Mail Level Backup	
Version Microsoft Exchange Server 2016	
Host hostname	
Username username	
Password	
Access the Internet through proxy	
	~
	Next Cancel Help

4. In the **Backup Source** menu, select the mails from Mailboxes or public folders for backup. You can click to expand the according mailbox or public folder to select which mail folder to back up. You can also click **Show mails** to select individual mail to back up. Click **Next** to proceed when you are done.

• AhsayOBM		
	Backup Source	
Folders ⇒ Olders ⇒ St 10.16.10.37 ⇒ St Mailboxes ⇒ AdministratorQ ⇒ backup1@x2k1t ⊕ B Contacts ⊕ B Contact	From Subject Received Size □ jaln.l@x2k1 Microsoft Exchange 10/19/2017 16:32 14k □ jul@x2k16.l Re: Microsoft Exchange 10/19/2017 17:01 17k □ 1 (1 @x2k16.loc Re: Relay this messa 10/19/2017 17:22 11M □ jul@x2k16.loc Re: Relay this messa 10/20/2017 17:24 10M □ jul@x2k16.loc Re: Relay this messa 10/20/2017 17:54 10M □ tl@x2k16.loc Help with Exchange 10/20/2017 17:19 11k	
☑ Show mails	Items per page 50 V Page 1 / 1 V	
	Previous Next	Cancel Help

5. In the Schedule menu, you can configure a backup schedule for backup job to run automatically at your specified time interval. Click **Add** to add a new schedule, then

click Next to	proceed when	you are done.

O AhsayOBM	
S	chedule
Run scheduled backup for this backup set On Existing schedules Backup Schedule Daily (Everyday at 22:00) Add	
	Previous Next Cancel Help

Note: By default, a daily backup scheduled for 22:00 is created automatically.

6. In the Destination menu, select a backup destination where the backup mail will be stored. Click the "+" icon next to **Add new storage destination / destination pool**.

O AhsayOBM		×
	Destination	
	Backup mode Sequential Existing storage destinations Add new storage destination / destination pool	
	Previous Next Cancel Help	

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7. Select the destination type and destination storage, then click **OK** to proceed.

New Storage Destination / Destination Pool	
Name	
CBS	
Туре	
Single storage destination	
ОК	Cancel Help
	CBS Type Single storage destination Destination pool Destination storage

8. Click **Next** on the Destination menu page to proceed.

C AhsayOBM	. 🗆 🗙
Destination	
Backup mode Sequential C CBS Host: 10.3.1.8:443	
Previous Next Cancel Help	p

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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.

	Encryption	
Encrypt Backup Data On		
Encryption Type		
Default User password		
Custom		

- 10. 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 set is created. Please be reminded that if you change the AhsayOBM login password later, the encryption keys of the backup sets previously created with this encryption type will remain unchanged.
 - Custom you can customize your encryption key, where you can set your own algorithm, encryption key, method and key length.

	Encryption
Encrypt Backup Data On	
Encryption Type	
Algorithm AES	
Encryption key	
Re-enter encryption key	
****** Method	
ECB CBC	
🔵 128-bit 💿 256-bit	

Note: For best practice on managing your encryption key, refer to the following KB article: <u>Best Practices for Managing Encryption Key on AhsayOBM or AhsayCBS</u> <u>Version 7</u>

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

11. If you have enabled the Encryption Key feature in the previous step, the following popup window shows, no matter which encryption type you have selected.

	Encryption		
Encrypt Backu On Encryption Ty	pe		
Default 🗸	You are advised to write this encryption key down on paper and keep it in a safe place. You will need it when you need to restore your files later Please confirm that you have done so.		
	•••••• Unmask encryption key	Copy to clipboard	Confirm

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.

t 🗸		
	You are advised to write this encryption key down on paper and keep it in a safe place. You will need it when you need to restore your files later Please confirm that you have done so.	
	rcX1MBE4brnZO86eKOp6FeabuuRRi3qDXG9q5uBxF0s=	
	Mask encryption key	
]	Copy to clipboard Confirm

- 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

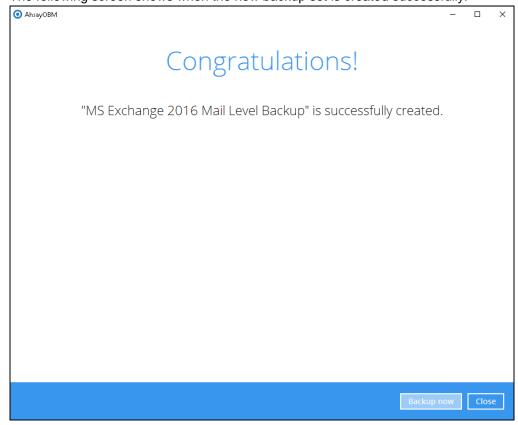
12. Enter the Windows login credentials for user authentication. Click **Next** to proceed.

AhsayOBM	-
	Windows User Authentication
	Domain Name (e.g Ahsay.com) / Host Name
	qa17.ahsay.com
	User name
	username
	Password

	Previous Next Cancel Help

Note

The Windows User Authentication interface will show only if scheduled backup is enabled and set successfully.



13. The following screen shows when the new backup set is created successfully.

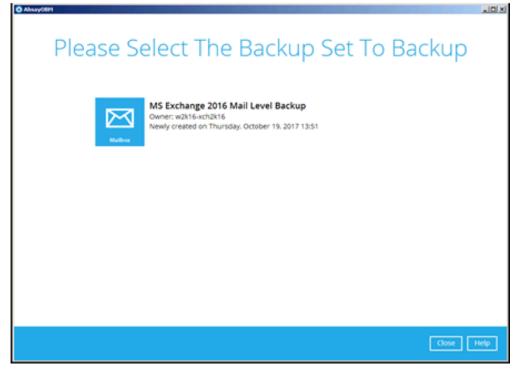
14. Click **Backup now** to start a backup immediately, or you can run a backup job later by following the instructions in <u>Run Mail Level Backup Job</u>

5.1.2 Run Mail Level Backup Job

- 1. Log in to AhsayOBM.
- 2. Click the Backup icon on the main interface of AhsayOBM.



3. Select the backup set which you would like to start a backup for.



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4. If you would like to modify the In-File Delta type, Destinations and Retention Policy settings, click **Show advanced option**.

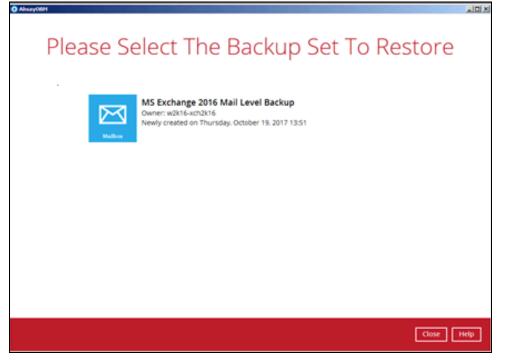
 AhsayOBM 		-		×
	Choose Your Backup Options			
	MS Exchange 2016 Mail Level Backup			
	Madem			
	Backup set type Microsoft Exchange Mailbox Show advanced option			
	Previous Backup Ca	ancel	Help	р
🗿 AhsayOBM		-		×
 AhsayOBM 		-		×
 AhsayOBM 	Choose Your Backup Options	_		×
AhsayOBM	Choose Your Backup Options	_		×
AhsayOBM	MS Exchange 2016 Mail Level Backup	-		×
AhsayOBM	MS Exchange 2016 Mail Level Backup Backup set type Microsoft Exchange Mailbox In-File Delta type	-		×
AhsayOBM	MS Exchange 2016 Mail Level Backup Backup set type Microsoft Exchange Mailbox	_		×
 AhsayOBM 	MS Exchange 2016 Mail Level Backup Backup set type Microsoft Exchange Mailbox In-File Delta type UII Differential O Incremental	_		×
AhsayOBM	MS Exchange 2016 Mail Level Backup Backup set type Microsoft Exchange Mailbox In-File Delta type O Full O Differential	_		×
AhsayOBM	MS Exchange 2016 Mail Level Backup Backup set type Microsoft Exchange Mailbox In-File Delta type Full Differential O Incremental Destinations	_		×
AhsayOBM	MS Exchange 2016 Mail Level Backup Backup set type Microsoft Exchange Mailbox In-File Delta type Pull Differential Incremental Destinations Incremental Destinations Image: AbsayCB5 (Host: 10.16.10.12:443) Retention Policy	_		×
AhsayOBM	MS Exchange 2016 Mail Level Backup Backup set type Microsoft Exchange Mailbox In-File Delta type Full Differential Confirmental Destinations Main Configure AnsayCBS (Host: 10.16.10.12:443) Retention Policy Retention Policy after backup	_		×
AhsayOBM	MS Exchange 2016 Mail Level Backup Backup set type Microsoft Exchange Mailbox In-File Delta type Full Differential Confirmental Destinations Main Configure AnsayCBS (Host: 10.16.10.12:443) Retention Policy Retention Policy after backup	-		×
AhsayOBM	MS Exchange 2016 Mail Level Backup Backup set type Microsoft Exchange Mailbox In-File Delta type Full Differential Confirmental Destinations Main Configure AnsayCBS (Host: 10.16.10.12:443) Retention Policy Retention Policy after backup	-		×
AhsayOBM	MS Exchange 2016 Mail Level Backup Backup set type Microsoft Exchange Mailbox n-File Delta type I file I	ancel		

5. Click **Backup** to start the backup.

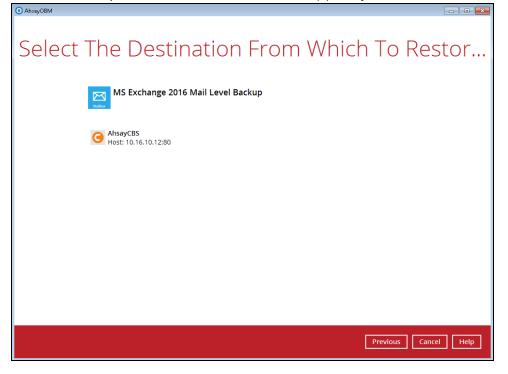


5.1.3 Restore Mail Level Backup

- 1. Restore Backed up Items to Original Exchange Server
- i. In the AhsayOBM main interface, click the **Restore** icon.
- ii. Select the backup set that you would like to restore mail from.



iii. Select the backup destination that contains the mail(s) that you would like to restore.



iv. Click to expand the menu tree to select which mailbox to restore. You can also select mail item(s) from a specific backup job or all mail items that you have backed up to



estore. Chek Next to proceed.
⊙ AhsayOBM – □ ×
Select Your Mail Objects To Be Restored
Select Tour Mail Objects To De Restored
Select what to restore
Choose from files as of job 🗸 10/25/2017 🖌 Latest 🗸
Choose from files as of job
Choose from ALL files From Subject Received Size
□ 🔤 t1@x2k16.loc Help with Exchange 10/20/2017 17:19 11k
Items per page 50 V Page 1/1 V
Previous Next Cancel Help

v. Select to restore the mail to their Original mailbox, or to an Alternate mailbox.

• Restore to Original Mailbox

Select the Original location option, then press Next to proceed.

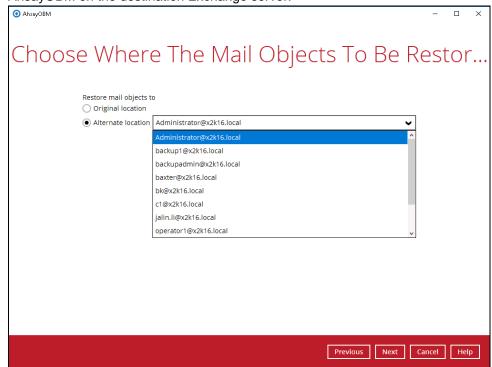
• AhsayOBM		- 🗆 X
Choose Where	e The Mail Objects To Be	e Restor
Restore mail objects to Original location	0	
O Alternate location	Administrator@x2k16.local	>
	Previous	t Cancel Help

restore. Click **Next** to proceed.

Restore to Alternate Mailbox

You can choose to restore mailbox item(s) to another mailbox in the same Exchange server. Select the **Alternate location** option and the desired mailbox destination, then press **Next** to proceed.

In addition, you can also restore mailbox item(s) to a different Exchange server of the same version. In this case, the restoration should be triggered by the AhsayOBM on the destination Exchange server.



Please refer to the Limitation part to check the limitation of restore process.

vi. Select the temporary directory for storing temporary files, such as delta files when they are being merged, click **Restore** to start the restoration.

 AhsayOBM 			-		×
	Temporary Directory				
1	Femporary directory for storing restore files				
	C:\Users\Administrator\.obm\temp	Browse			
	Previous	estore	ancel	Help	2

vii. The following screen with the text **Restore Completed Successfully** shows when the restoration is completed.

AhsayOBM			-		×
	14. T				
		Restore			
	MS Exchange 201	6 Mail Level Backup			
0	AhsayCBS (Host: 10.1	16.10.12:443)			
		a successfully			
			Close	He	lp

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2. Restore Backed up Items to Other Domain

- i. In the AhsayOBM main interface, click **Backup Sets** icon.
- ii. Select the backup set that you would like to restore mail from.

AhsayOBM		-		×
	Backup Sets			
Northered Research	Exchange 2016 mailbox Owner: w2k16-xch2k16 Last Backup: Monday. October 30. 2017 16:04			
-				
		Close	Helj	P

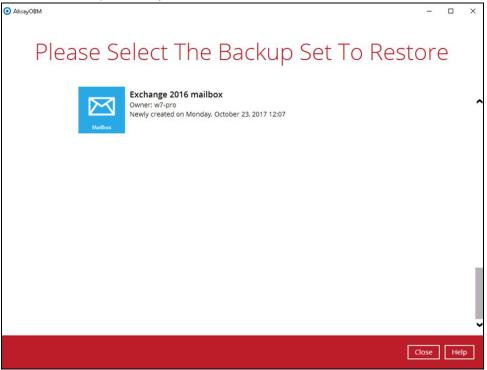
iii. Change the Host to be other domain, and also the Username and Password of user account used for restore on the other domain. Click **Save** after setting is done.

AhsayOBM				-		×
Exchange 2016 mailbox	General					^
	Name					
General	BackupSet-3					
Source	Owner					
Declaup Cehedule	w7-pro					
Backup Schedule	Microsoft Exchange Server					
Continuous Backup	Version					
Destination	Microsoft Exchange Server 2016					
Show advanced settings						
Show downeed settings	Host					
	Username					
	username					- 7
	Password					
	•••••					
	Access the Internet through proxy					
	Test					
						~
	VAGa el error i i en a vade energi en el energi				_	_
Delete this backup set		Save	Cai	ncel	He	р

iv. In the AhsayOBM main interface, click the **Restore** icon.



v. Select the backup set that you would like to restore mail from.



vi. Select the backup destination that contains the mail(s) that you would like to restore.

	– 🗆 X
Select The Destination From Whic	h To Restor
Exchange 2016 mailbox	
AhsayCBS Host: 10.16.10.12:80	
	Previous Cancel Help

vii. Click to expand the menu tree to select which mailbox to restore. You can also select mail item(s) from a specific backup job or all mail items that you have backed up to



restore. Click Next to proceed.
O AhsayOBM - C X
Select Your Mail Objects To Be Restored
Select rour mail objects ro be restored
Select what to restore
Choose from files as of job V 10/25/2017 V Latest V
Choose from files as of job
Choose from ALL files From Subject Received Size
□ 🔂 Inbox 🛛 🖾 t1@x2k16.loc Help with Exchange 10/20/2017 17:19 11k
< >>
Items per page 50 V Page 1 / 1 V
Previous Next Cancel Help

viii. Select to restore the mail to an Alternate mailbox, which would enable restore the items to the mailbox of other Exchange server. Click **Next** to proceed.

Choose Where The Mail Objects To Be Restor Restore mail objects to Original location Jalin Jalin	O AhsayOBM − □ ×
Original location	Choose Where The Mail Objects To Be Restor
	 Original location Alternate location
Previous Next Cancel Help	Previous Next Cancel Help

Please refer to the Limitation part to check the limitation of restore process.



ix. Select the temporary directory for storing temporary files, such as delta files when they are being merged, click **Restore** to start the restoration.

O AhsayOBM			-		×
	Temporary Directory				
	Temporary directory for storing restore files				
	C:\Users\Administrator\.obm\temp	Browse			
		entere C.C.	un col	Link	_
	Previous	estore C	ancel	Help	<u>'</u>

x. The following screen with the text **Restore Completed Successfully** shows when the restoration is completed.

•					_	
 AhsayOBM 				-		×
		Restore				
		RESIOLE				
r	Exchange 2016 m	ailbox				
	Asibox					
	AhsayCBS (Host: 10.1	6.10.12:80)				
(Restore Complete		۲ <u>م</u>			
	Estimated time left					
	Restored	0 (0 file)				
	Elapsed time	3 sec				
	Transfer rate	0bit/s				
			(lose	Hel	р

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5.2 Database Availability Group (DAG) Backup Option

5.2.1 Create Mail Level Backup Set

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



- 2. Create a new backup set by clicking the "+" icon next to **Add new backup set**.
- 3. Select the Backup set type as **MS Exchange Mail Level Backup.** The system will automatically detect and select the Exchange Server version, make sure the version selected is correct.
 - Select Microsoft Exchange Server version as Microsoft Exchange Server 2016 (DAG)
 - Name your new backup set.
 - Enter the IP address of all the DAG Member Server.
 - Enter the username and password of the Windows user account used for backup.
 - Check the "Access the Internet through proxy" if required. Then click Next to proceed.

0	AhsayOBM
	Create Backup Set
	Name MS Exchange 2016 Mail Level Backup (DAG) Backup set type MS Exchange Mail Level Backup
	Version Microsoft Exchange Server 2016 (DAG) 🖌 Host (DAG Member Server)
	IP Address of DAG Member Server
	Username Username Password
	Access the Internet through proxy Test
	Next Cancel Help



4. In the **Backup Source** menu, select the mails from Mailboxes or public folders for backup. You can click to expand the according mailbox or public folder to select which mail folder to back up. You can also click **Show mails** to select individual mail to back up. Click **Next** to proceed when you are done.

Alter OPM					
AhsayOBM	В	lacku	p Source		
	Folders □ Sig 10.120.6.81 □ Sig 10.120.6.81 □ Sig 10.120.6.81 □ Sig 10.120.6.81 □ Administrator@xch □ Sig 10.0x016dag.at □ Sig 10.0x016dag.at □ Sig 200 @xch16dag.at □ Calendar □ Sig 200 @xch16dag.at □ Include at the sig 200 which at the sig 200	To	Subject Sent Exchange 2016 DAG10/24/2017 11:4	2 Size 2 12k	
	Bernard Public Folders		Items per page 50	Page 1/1 revious Next Car	icel Help

5. In the Schedule menu, you can configure a backup schedule for backup job to run automatically at your specified time interval. Click **Add** to add a new schedule, then click **Next** to proceed when you are done.



Note: By default, a daily backup scheduled for 22:00 is created automatically.

6. In the Destination menu, select a backup destination where the backup mail will be stored. Click the "+" icon next to Add new storage destination / destination pool.

Destination	
Backup mode Sequential Existing storage destinations Add new storage destination / destination pool	
Previous	Next Cancel Help

7. Select the destination type and destination storage, then click **OK** to proceed.

O Ahsay0BM

New Storage Destination / Destination Pool
Name
CBS
Туре
Single storage destination
O Destination pool
Destination storage
G CBS
OK Cancel Help

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_ 🗆 🗵

8. Click **Next** on the Destination menu page to proceed.

💽 AhsayOBM				_ 🗆 🗵
		Destination		
	Backup mode Sequential Existing storage destinations CBS Host: 10.3.1.8:443 Add			
	~ v			
			Previous Next Cancel	Help

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.

	Encryption	
Encrypt Backup Data On		
Encryption Type		
Default 🗸 🗸		
Default		
User password		
Custom		

- 10. 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 set is created. Please be reminded that if you change the AhsayOBM login password later, the encryption keys of the backup sets previously created with this encryption type will remain unchanged.

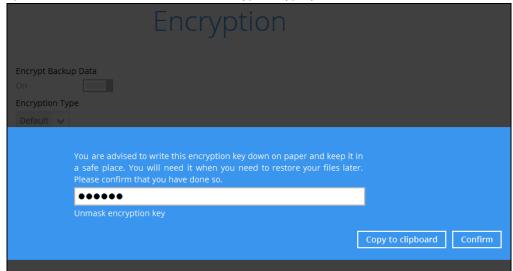
Custom – you can customize your encryption key, where you can set your own algorithm, encryption key, method and key length.

End	ryption	
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 KB article: <u>Best Practices for Managing Encryption Key on AhsayOBM or AhsayCBS</u> <u>Version 7</u>

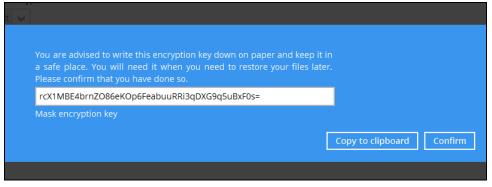
Click Next when you are done setting.

11. If you have enabled the Encryption Key feature in the previous step, the following popup window shows, no matter which encryption type you have selected.



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

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



- Copy to clipboard Click to copy the encryption key, then you can paste it in another location of your choice.
- > **Confirm** Click to exit this pop-up window and proceed to the next step
- 12. Enter the Windows login credentials for user authentication. Click Next to proceed.

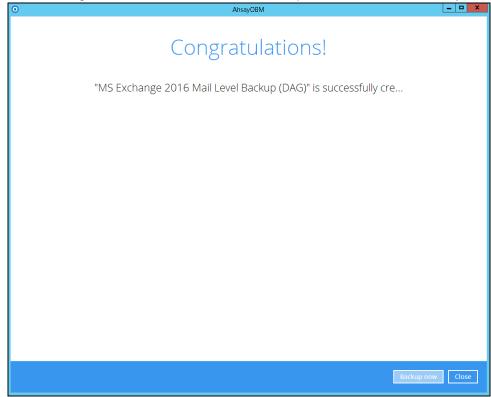
Windows User Authentication	
Domain Name (e.g Ahsay.com) / Host Name	
qa17.ahsay.com	
User name	
username	
Password	

Note

The Windows User Authentication interface will show only if scheduled backup is enabled and set successfully.



13. The following screen shows when the new backup set is created successfully.



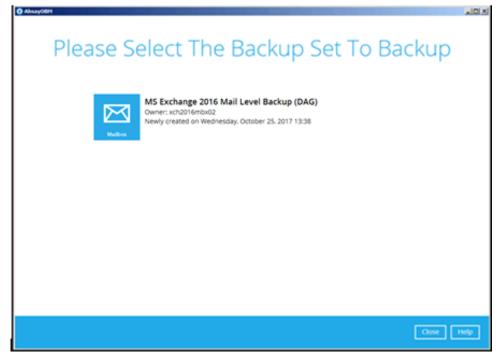
14. Click **Backup now** to start a backup immediately, or you can run a backup job later by following the instructions in <u>Run Mail Level Backup Job</u>

5.2.2 Run Mail Level Backup Job

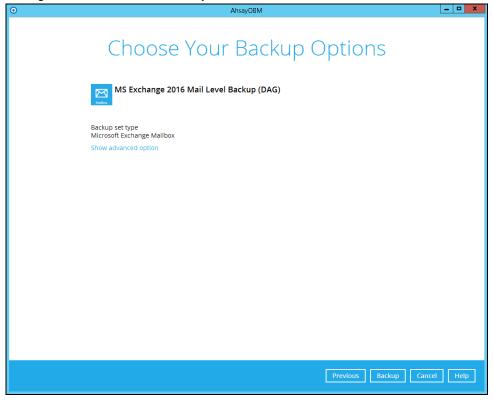
- 1. Log in to AhsayOBM.
- 2. Click the Backup icon on the main interface of AhsayOBM.

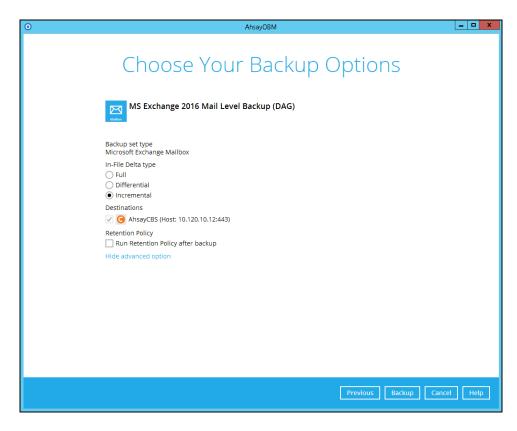


3. Select the backup set which you would like to start a backup for.



4. If you would like to modify the In-File Delta type, Destinations and Retention Policy settings, click **Show advanced option.**





5. Click **Backup** to start the backup.



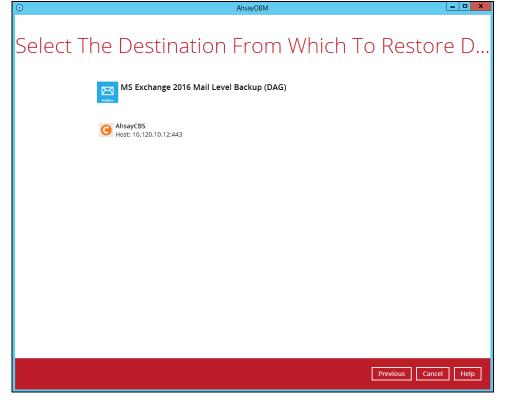
5.2.3 Restore Mail Level Backup

.

- 1. In the AhsayOBM main interface, click the **Restore** icon.
- 2. Select the backup set that you would like to restore mail from.

Please Select The Backup Set To Resto	re
MS Exchange 2016 Mail Level Backup (DAG) Owner: xch2016mbx02 Last Backup: Wednesday, October 25, 2017 13:57	
a	sse Help

3. Select the backup destination that contains the mail(s) that you would like to restore.



4. Click to expand the menu tree to select which mailbox to restore. You can also select mail item(s) from a specific backup job or all mail items that you have backed up to

(m) wi

restore.	Click	Next	to	proceed.
----------	-------	------	----	----------

0	AhsayOBM	□ X
Sele	ect Your Mail Objects To Be Restored	
	Select what to restore Choose from files as of job I0/25/2017 Latest Show filter	
	Folders To Subject Sent Size Image: Size Size Size Size Size Size Size Size	
	Items per page 90 1/1	
	Previous Next Cancel	Help

Select to restore the mail to their Original mailbox, or to an Alternate mailbox. 5.

^	5		n, then pre		- p. 0000		
 AhsayOBM 							_
Choose	e Wher	e The	Mail C	biect	s To	Be F	Rest
				J			
	Restore mail objects	to					
	 Original location 						
	O Alternate location	Administrator@x	2k16.local			~	I
1							
					Previous	Next	Cancel

0

You can choose to restore mailbox item(s) to another mailbox in the same Exchange server. Select the **Alternate location** option and the desired mailbox destination, then press **Next** to proceed.

In addition, you can also restore mailbox item(s) to a different Exchange server of the same version. In this case, the restoration should be triggered by the AhsayOBM on the destination Exchange server.

 AhsayOBM 			- 🗆 X
Choos	e Where	e The Mail Objects To Be	Restor
	Restore mail objects t	0	
	 Alternate location 	Administrator@x2k16.local	~
		Administrator@x2k16.local	^
		backup1@x2k16.local	
		backupadmin@x2k16.local	
		baxter@x2k16.local	
		bk@x2k16.local	
		c1@x2k16.local	
		jalin.li@x2k16.local	
		operator1@x2k16.local	~
		Previous	Cancel Help

Please refer to the Limitation part to check the limitation of restore process.

6. Select the temporary directory for storing temporary files, such as delta files when they are being merged, click **Restore** to start the restoration.

Image: Description of the starting restore files C:\Users\Administrator\.obm\temp	AhsayOBM			-		×
		Temporary Directory				
C:\Users\Administrator\.obm\temp		Temporary directory for storing restore files				
		C:\Users\Administrator\.obm\temp	Browse			
Previous Restore Cancel Help		Previous	Restore	ancel	Hel	p

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7. The following screen with the text **Restore Completed Successfully** shows when the restoration is completed.

•	AhsayOBM	_ _ ×
	Restore	
Madear	MS Exchange 2016 Mail Level Backup (DAG) AhsayCBS (Host: 10.120.10.12:443)	
G	✓ Restore Completed Successfully Estimated time left 0 sec Restored 0 (0 file) Elapsed time 11 sec Transfer rate 0 bit/s	,
		Close Help

.

6 Contact 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 Knowledge Base for resource such as Hardware Compatibility List, Software Compatibility List, and other product information: <u>https://wiki.ahsay.com</u>

6.2 Documentation

Documentations for all Ahsay products are available at: <u>https://www.ahsay.com/jsp/en/home/index.jsp?pageContentKey=ahsay_downloads_document</u> <u>ation_guides</u>

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.