Ahsay Backup

Ahsay Online Backup Manager v7

Microsoft Exchange 2007/2010/2013 Mail Level Backup & Restore Guide

Ahsay Systems Corporation Limited

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Revision History

Date	Descriptions	Type of modification
15 July 2016	First Draft	New
3 February 2017	Added instructions and screen shots for Encryption key handling in Ch. 4.1 & Ch. 6.2	New
5 April 2017	Added Encryption Type option in Ch. 4.1 & Ch. 6.2	New
26 Oct 2017	Ch 1.1, 2, 2.1, 2.2, 2.3, 2.4, 2.6, 2.8, 2.9, 2.11, 2.17, 3, 4.1, 6.2, 8	Updated

Table of Contents

1 Getting started 1
1.1 Introduction 1
1.2 What is this software? 1
1.3 System Architecture 1
1.4 Why should I use AhsayOBM to back up my Exchange 2007/2010/2013 Mailboxes and Public Folders? 2
1.5 About This Document 4
1.5.1 Document Main Part 4
1.5.2 What should I expect from this document? 4
1.5.3 Who should read this document? 4
2 Requirements 5
2.1 Software Requirement 5
2.2 AhsayOBM Installation 5
2.3 AhsayOBM Licenses 5
2.4 Backup Quota Requirement 5
2.5 Microsoft Exchange Mailbox Add-On Module 6
2.6 Scheduled Backup for Exchange Server in Data Availability Group (DAG) Option 6
2.7 Temporary Directory Folder 6
2.8 Backup Source 7
2.9 Mailbox Access Permission 7
2.10 Windows User Account Permission 8
2.11 Enabling Mailbox on Windows User Account 10
2.12 Remote Exchange Management Shell 11
2.13 Collaboration Data Objects (CDO) 1.2.1 11
2.14 LAN Manager Authentication Level 12
2.15 Windows PowerShell 2.0 Engine 13
2.16 MS Exchange related Windows Services 14
2.17 MS Exchange Database Status 14
2.18 IISAuthenticationMethods Setting 15
2.19 Connection to Exchange Management Shell (EMS) or Exchange Management Console (EMC) 15
2.20 .Net Framework 3.5 Features 16
3 Overview of MS Exchange Mail Level Backup Process 17
4 Performing Mail Level Backup for Microsoft Exchange 2007/2010/2013 18
4.1 Creating Mail Level Backup Set for Microsoft Exchange 2007/2010/2013 18
4.2 Running Mail Level Backup Job for Microsoft Exchange 2007/2010/2013 25
5 Performing Mail Level Restoration for Microsoft Exchange 2007/2010/2013 27
5.1 Restoring Mail Level Backup for Microsoft Exchange 2007/2010/2013 27
6 Performing Mail Level Backup for Microsoft Exchange 2010/2013 in Database Availability Group (DAG) 31
6.1 License Requirement to Back up Exchange Mailboxes in DAG environment 31
6.2 Creating Mail Level Backup Set for Microsoft Exchange 2010/2013 in Database Availability Group (DAG) 31

7 Performing Mail Level Restoration for Microsoft Exchange 2010/2013 in Database Availability Group (DAG) 38
7.1 Pre-restoration requirements 38
7.2 Restoring Mail for Exchange Server in DAG 38
8 Technical Assistance 43
9 Documentation 44

1 Getting started

1.1 Introduction

This user guide aims to provide detailed information on backing up and restoring individual mail items and public folder items stored in Microsoft Exchange Server 2007/2010/2013 with AhsayOBM using the MS Exchange mail level backup set.

An MS Exchange mail level backup must be utilized in conjunction with full Information Store backup (Exchange Database backup set), as mail level backup for Microsoft Exchange Server is not designed to fully protect an Exchange Server, but to facilitate easy and fast recovery of emails, contacts, calendars for individual mailboxes and public folder items.

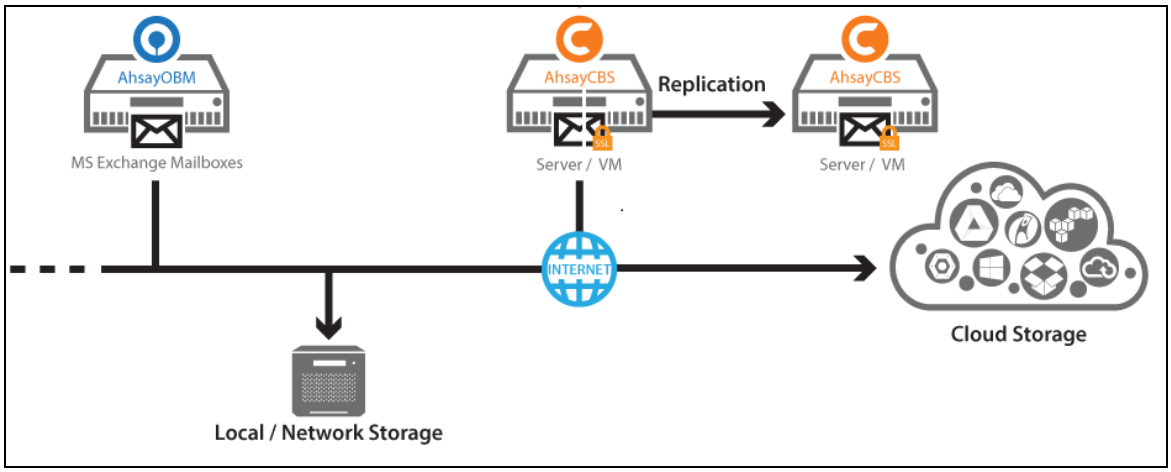
AhsayOBM supports backup of mailboxes on both MS Exchange server in backup option for Exchange Server deployed in standalone and Database Availability Group (DAG) setups.

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 2007/2010/2013. 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 2007/2010/2013 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, AhsayOBM backup client, AhsayCBS backup server, and Cloud storage.



1.4 Why should I use AhsayOBM to back up my Exchange 2007/2010/2013 Mailboxes and Public Folders?

We are committed to bringing you a comprehensive Exchange 2007/2010/2013 mail level backup solution with AhsayOBM. Below are some key areas we can help make your backup experience a better one.

Easy Setup % Professional Services

Setup is a few clicks away-our enhanced AhsayOBM v7 can be easily downloaded and installed in just a few clicks. The refined user interface also provides user-friendly instruction to guide you through installation, configuration, backup and restore. The intuitive setup procedures together with instructions in this user guide makes the software installation and operation easy even for layman users. That being said, if you do run into any problems during setup, we are here to help out. Visit the URL below for details on technical assistance.

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

Professional Services

AhsayOBM Installation and Configuration Service

If you would like to save the time of reading through this document for setup, we have introduced this service to take care of all the installation and setup for you. On top of the installation and setup services, we also have a whole series of premium after-sales services to provide you with the best user experiences possible.

Valid Maintenance

Our Valid Maintenance provides you with professional and timely customer support along the way. You are entitled to the Valid Maintenance for free during the first year of your service subscription, and recurring annual fee at 20% of your annual subscription fee.

Refer to our Professional Services webpage for further details and subscription.

Fast and Efficient

We understand that backup could be a time and resources consuming process, which is why

AhsayOBM is designed with advanced technologies to make backup a fast and efficient process.

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

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

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 AhsayCBS User's Guide for details.

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

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 MS Exchange 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.

High Level of Security

We understand your Exchange mail objects may contain sensitive information that needs 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.

1.5 About This Document

1.5.1 Document

The document is divided into two main parts.

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

Requirements
Requirements for AhsayOBM, MS Exchange Server 2007/2010/2013, and Windows Operating System.

Part 2: Perform Mail-Level Backup and Restore on MS 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

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 2007/2010/2013 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 2007/2010/2013 mail-level backup and restore.

2 Requirements

You are strongly recommended to check all the settings below before you proceed with the MS Exchange Mail Level 2007/2010/2013 backup and restore.

2.1 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

2.2 AhsayOBM Installation

The latest version of AhsayOBM must be installed on the MS Exchange Server hosting the mailbox database.

For backup of mailboxes on MS Exchange Server 2010/2013 Database Availability Group (DAG), ensure the same AhsayOBM version is installed on all member servers.

For MS Exchange Server 2010/2013, Database Availability Group (DAG) backup option is available, please refer to Performing Mail Level Backup for Microsoft Exchange 2010/2013 in Database Availability Group (DAG) for details.

2.3 AhsayOBM Licenses

AhsayOBM licenses are calculated on a per device basis.

i. For backup of mailboxes on a standalone Microsoft Exchange 2007/2010/2013 Server, one AhsayOBM license is required.

ii. For backup of mailboxes on a Microsoft Exchange Server 2010/2013 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

2.4 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.

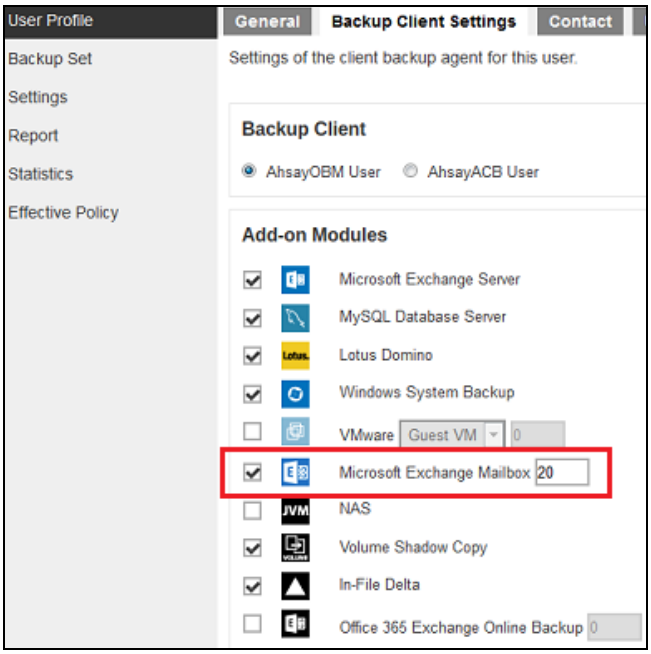
Please contact your backup service provider for more details.

2.5 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.



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

Scheduled backup is required if you choose to backup MS Exchange server 2010/2013 setup in DAG option, as AhsayOBM on all DAG members will use the scheduled backup time to start backups on all individual DAG members at the same time.

An MS Exchange server 2010/2013 DAG backup cycle is considered complete only when scheduled backup on all DAG members have been run successfully. An backup report will be generated and email to the recipients when a complete MS Exchange server 2010/2013 DAG backup cycle has taken place.

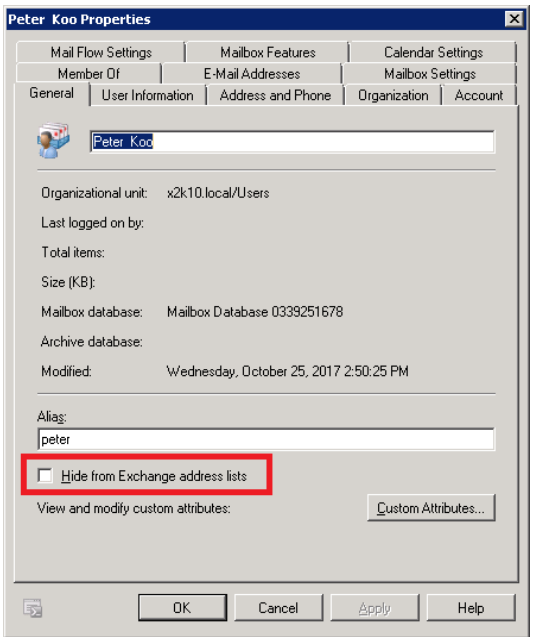
Please keep in mind that manual backup will only be considered as individual mail level backup, and therefore will not be counted as part of the DAG backup cycle.

2.7 Temporary Directory Folder

The 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, the temporary directory folder is located on a local drive with plenty of free disk space.

2.8 Backup Source

Ensure **"Hide from Exchange address list"** is unchecked for user mailboxes, otherwise the mailbox will not be visible in the AhsayOBM backup source and therefore cannot be selected for backup.



2.9 Mailbox Access Permission

The Active Directory account used to authenticate the backup must have full access to the mailboxes. To grant full access right for the account, enter the following command in Exchange Management Shell.

Open the Exchange Management Shell by clicking **Start** > **Microsoft Exchange Server** > **Exchange Management Shell**.

Exchange Server 2007

Enter the following command in Exchange Management Shell

```
Get-MailboxServer | Add-ADPermission -User "%os_username%" -
AccessRights GenericAll -ExtendedRights ms-exch-store-
admin,receive-as,send-as -InheritanceType All
```

%os_username% is the username of the operating system account for backup.

Example: granting permission to local account "system"

```
Get-MailboxServer | Add-ADPermission -User "system" -
AccessRights GenericAll -ExtendedRights ms-exch-store-
admin,receive-as,send-as -InheritanceType All
```

Other useful commands:

- To show added permission for an AD account

  ```
  Get-MailboxServer | Get-ADPermission -User "%os_username%"
  ```

  Example, to show added permission for local account "system"

  ```
  Get-MailboxServer | Get-ADPermission -User "system"
  ```

- To remove permission from an AD account

```
Get-MailboxServer | Remove-ADPermission -User "%os_username%"
- AccessRights GenericAll -ExtendedRights ms-exch-store-
admin,receive-as,send-as -InheritanceType All
```

Example, to remove permission from local account "system"

```
Get-MailboxServer | Remove-ADPermission -User "system" -
AccessRights GenericAll -ExtendedRights ms-exch-store-
admin,receive-as,send-as -InheritanceType All
```

Reboot the Exchange Server after executing the command.

Exchange Server 2010 / 2013

Enter the following command in Exchange Management Shell

```
Get-Mailbox | Add-MailboxPermission -User "%os_username%" -
AccessRights FullAccess
```

%os_username% is the username of the operating system account for backup.

Example: granting permission to local account "system"

```
Get-Mailbox | Add-MailboxPermission -User "system" -
AccessRights FullAccess
```

Other useful commands:

- Remove permission from an AD account

```
Get-Mailbox | Remove-MailboxPermission -User "%os_username%" -
AccessRights FullAccess
```

Example:

```
Get-Mailbox | Remove-MailboxPermission -User "system" -
AccessRights FullAccess
```

- To view the mailbox permission of a user

```
Get-Mailbox | Get-MailboxPermission -User "%os_username%"
```

Example:

```
Get-Mailbox | Get-MailboxPermission -User "system"
```

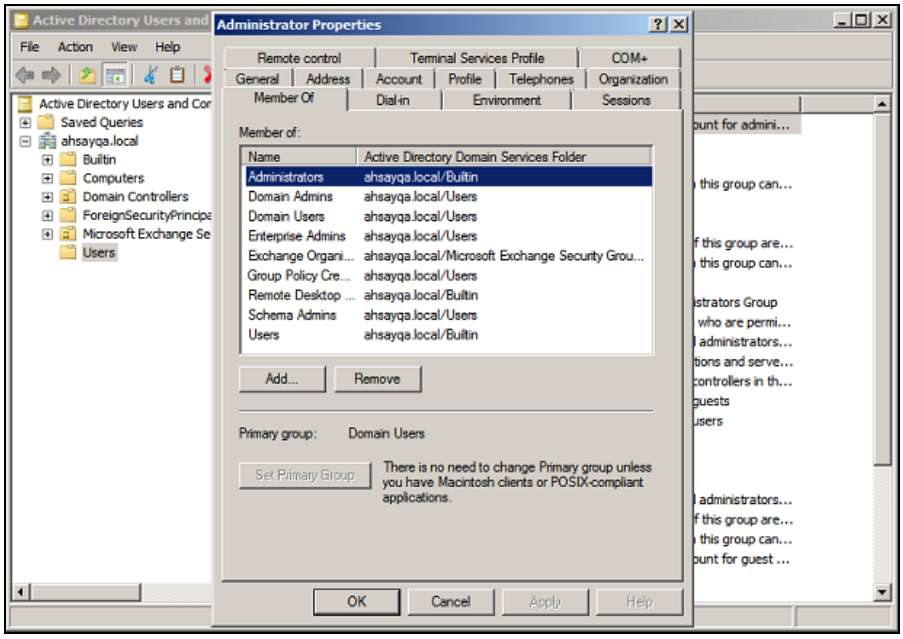
Reboot the Exchange Server after executing the command.

2.10 Windows User Account Permission

The Active Directory account used to authenticate the backup must be a member of the following security groups.

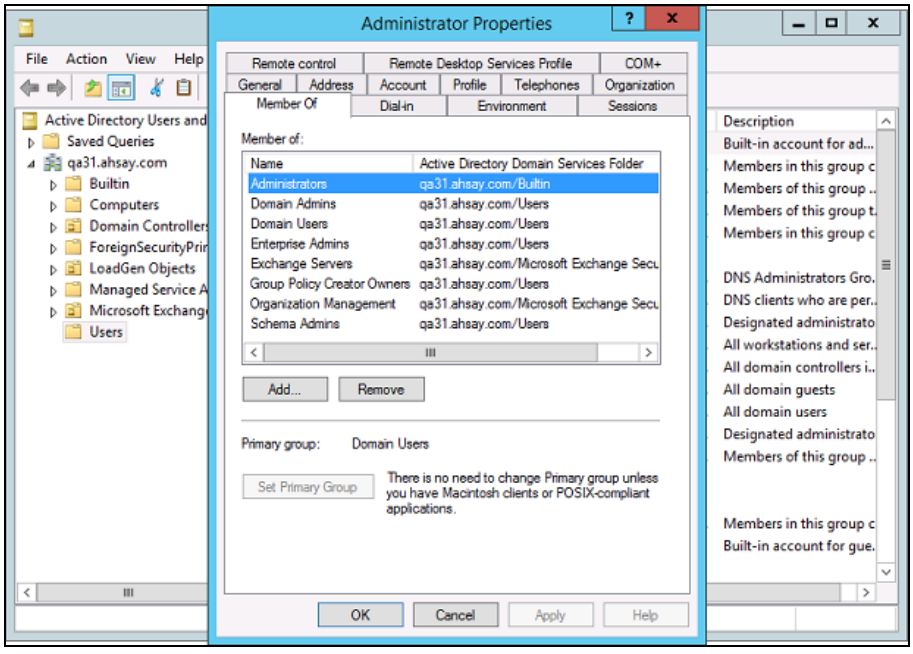
Exchange Server 2007

- Microsoft Exchange Security \ Exchange Organization Administrators
- Microsoft Exchange Security \ Exchange Servers
- Users \ Domain Admins



Exchange Server 2010 / 2013

- Microsoft Exchange Security \ Organization Management
- Users \ Administrator
- Users \ Domain Admins
- Users \ Enterprise Admins



Steps to check the current settings

1. Click **Start** > **Control Panel** > **Administrative Tools**, and then click **Active Directory Users and Computers**.
2. Browse to the organization unit containing the corresponding operating system account.
3. Right click on the user, and select **Properties**.
4. Select the **Member Of** tab to check on the membership setting.

2.11 Enabling Mailbox on Windows User Account

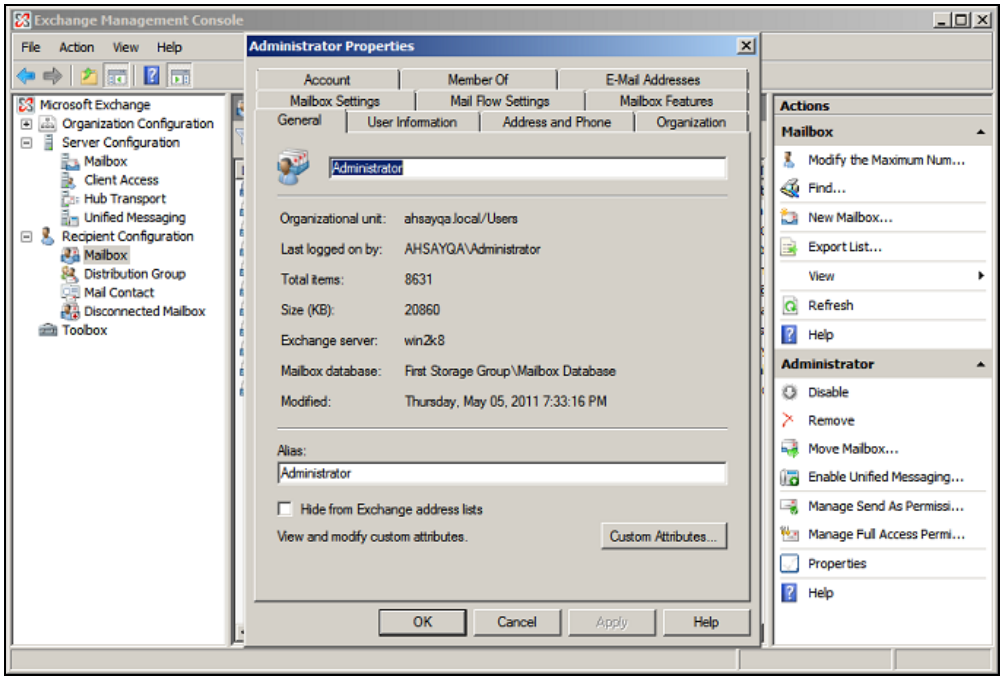
Make sure the Windows account used to authenticate the backup has a mailbox enabled.

Follow the steps below to verify.

Exchange Server 2007 / 2010

1. Click **Start** > **Microsoft Exchange Server 2007/2010**, and then **click Exchange Management Console**.
2. Click to expand the **Recipient Configuration** menu tree, and then select **Mailbox**.
3. Right click on the user and select **Properties**.
4. Select the **General** tab to check the settings.

   Make sure the **Hide from Exchange address lists** box is not checked.



***Note**: A mailbox-enabled user is a Windows Active Directory user that has one or more Exchange Server mailboxes associated with it. Refer to the URL below for more information http://support.microsoft.com/kb/275636/en-us.*

Exchange Server 2013

Refer to the following article from Microsoft for more details on how to check if an account is mailbox enabled.
https://technet.microsoft.com/en-us/library/jj991919(v=exchg.150).aspx

2.12 Remote Exchange Management Shell

For setup on MS Exchange Server 2010 / 2013, the Remote Exchange Management Shell must be enabled for the operating system account used for the backup.

Enter the following command in Exchange Management Shell to enable this feature.

```
>Set-User "%os_username%" -RemotePowerShellEnabled $True
```

Reboot the Exchange Server after executing the command.

Note: *Remote Shell in Microsoft Exchange Server enables you to manage your server running Exchange.*

2.13 Collaboration Data Objects (CDO) 1.2.1

The latest version of CDO must be installed on the Exchange Server for the mail level backup job to work properly.

Download and install the latest version CDO via the URL below. If you already have CDO installed on the Exchange Server but are not sure if it is the latest version, you are recommended to uninstall the current version and re-install via the URL below.

Exchange Server 2007 / 2010

- Exchange Server with MS Outlook 2007
  https://www.microsoft.com/en-us/download/details.aspx?id=3671
- Exchange Server without MS Outlook 2007
  https://www.microsoft.com/en-gb/download/details.aspx?id=42040

Exchange Server 2013

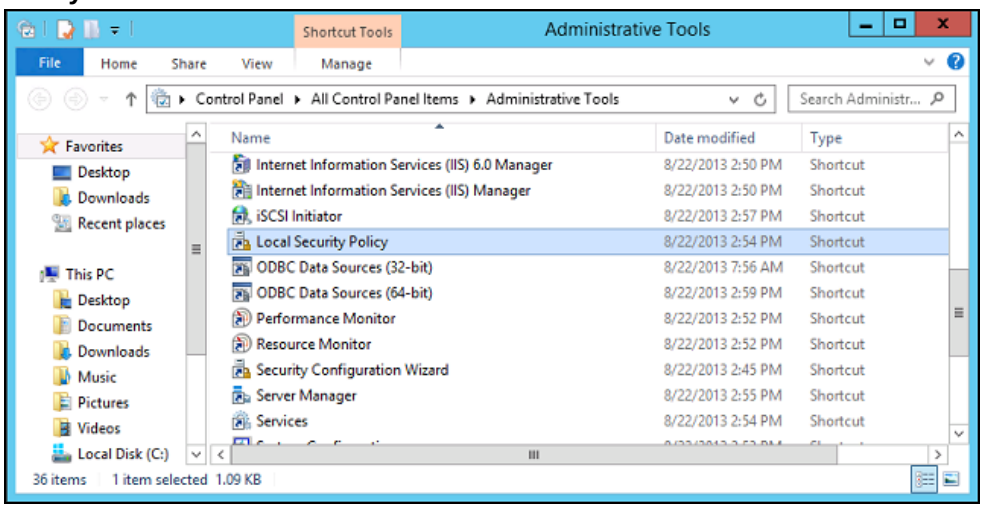
https://www.microsoft.com/en-gb/download/details.aspx?id=42040

2.14 LAN Manager Authentication Level

Exchange Server 2013

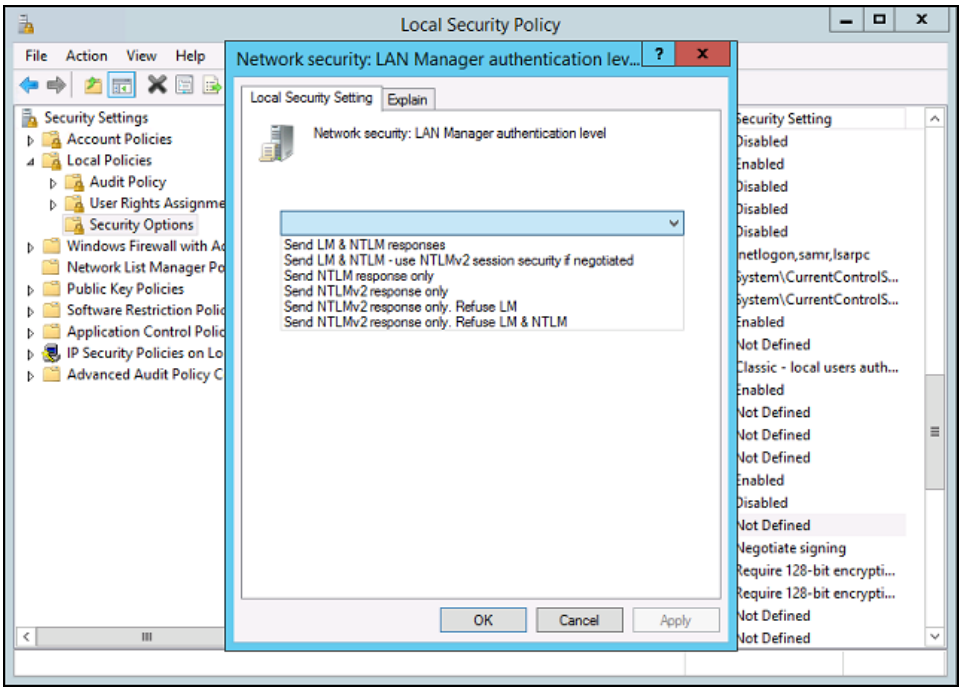
The LAN Manager Authentication level configured on the Exchange Server must be level 3 or above. Follow the steps below to check the settings.

1. Click **Start** > **Control Panel** > **Administrative Tools**, and then click **Local Security Policy.**



2. Under **Security Settings**, expand **Local Policies** > **Security Options**, then click **Network security: LAN Manager authentication level**.

3. Make sure that the setting is configured to use NTLMv2, for example:
   - Send NTLMv2 response only
   - Send NTLMv2 response only. Refuse LM
   - Send NTLMv2 response only. Refuse LM & NTLM



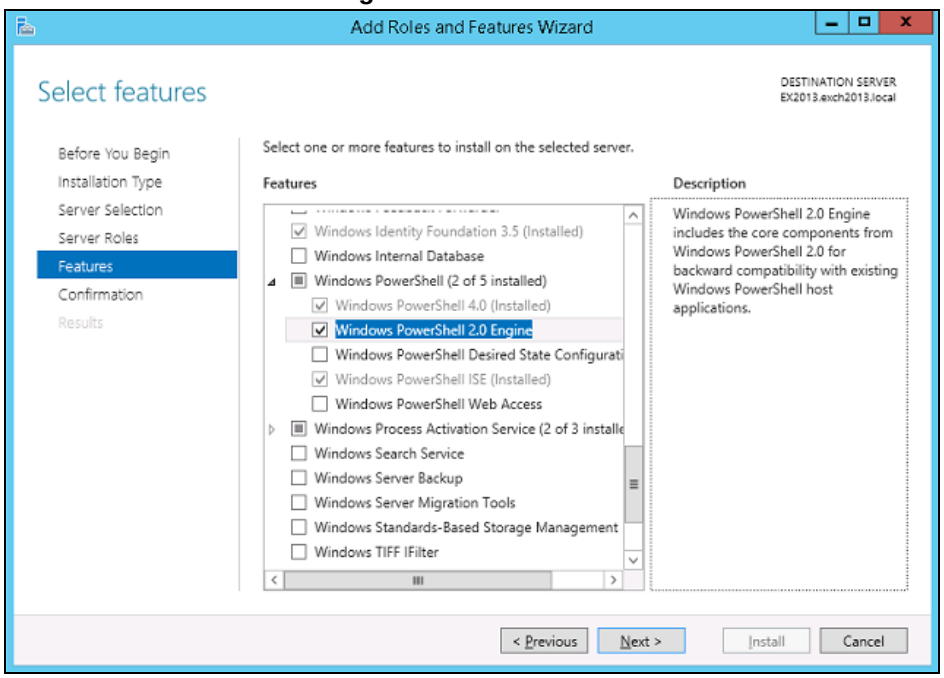
2.15 Windows PowerShell 2.0 Engine

Make sure the Windows PowerShell 2.0 Engine is installed.

Exchange Server 2013

To install the feature:

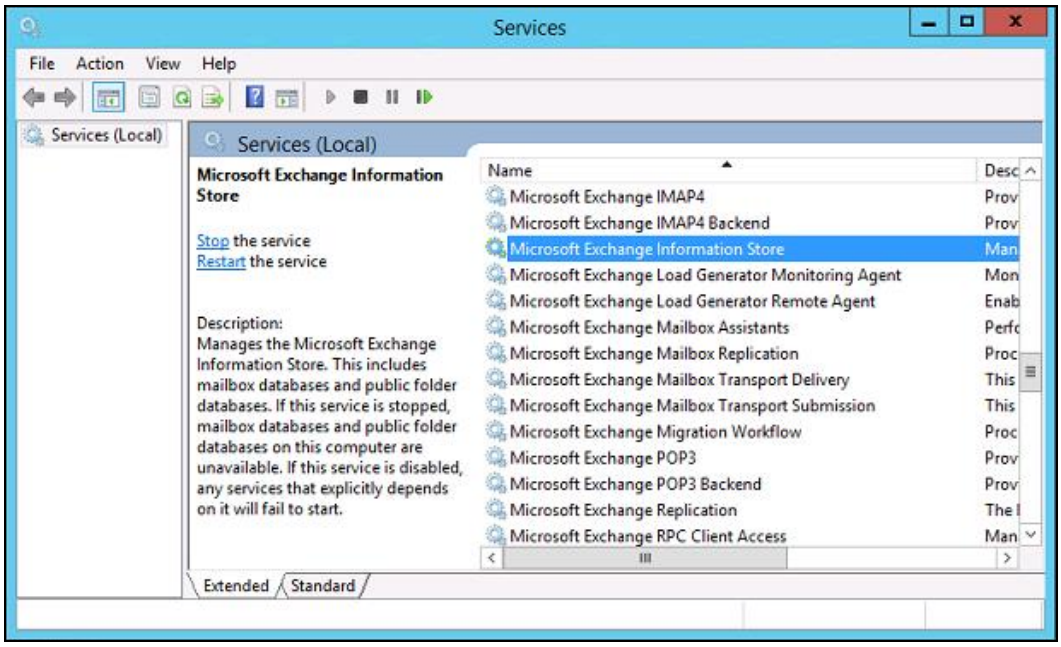
1. Navigate to **Server Manager** > **Manage**, then select **Add Roles and Features**.
2. On the **Select installation type** screen, select **Role-based or feature-based** installation.
3. Select the target server.
4. On the **Select features** screen, go to the **Features** option, check the box next to **Windows PowerShell 2.0 Engine**.



2.16 MS Exchange related Windows Services

Ensure that all MS Exchange related services have been started, particularly the **MS Exchange Information Store** and **MS Exchange System Attendant Services.**

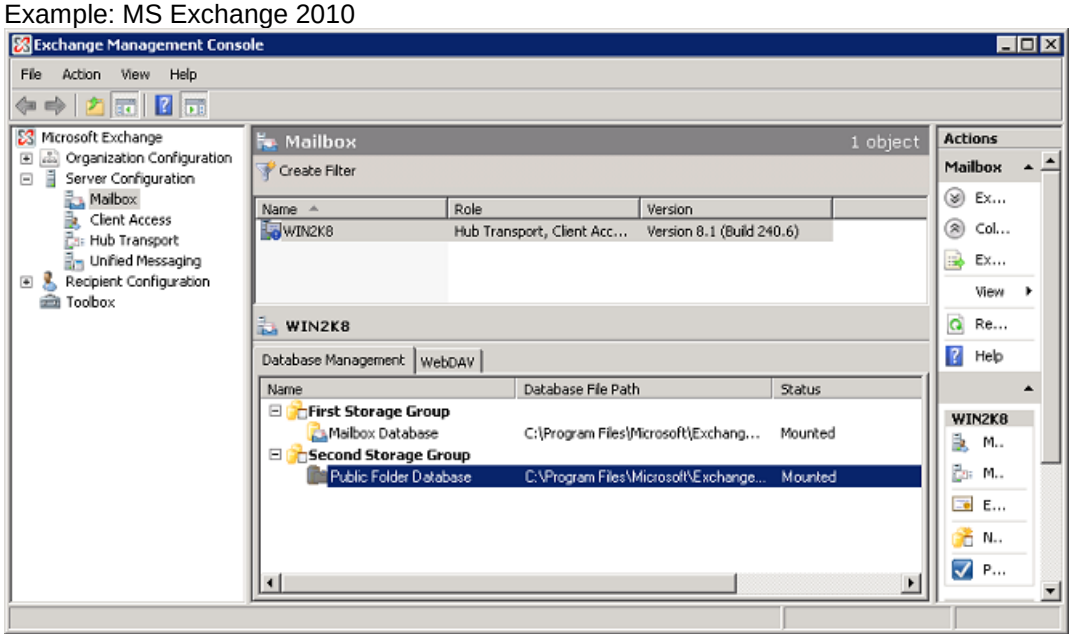
To verify this setting, launch the **Services** menu by clicking **Start** then typing “Services” in the search box. All Exchange related services should be started by default, in case if it is not, turn it on by right clicking the item and then select **Start**.



2.17 MS Exchange Database Status

Ensure the MS Exchange Mailbox and Public Folder databases are mounted.

Example: MS Exchange 2010



2.18 IISAuthenticationMethods Setting

Verify if the IISAuthenticationMethods is set to **Basic** only. If so, change the setting with the commands below.

Exchange Server 2013

1. Click **Start** > **Microsoft Exchange Server** > **Exchange Management Shell**.

2. Enter the following command to check on the IISAuthenticationMethods setting:

```
>Get-OutlookAnywhere
```

3. If it is set to {Basic} only, enter the following command to modify the setting:

```
>Set-OutlookAnywhere -Identity:"%Server%\Rpc (Default Web Site)"
-IISAuthenticationMethods Basic,NTLM,Negotiate
```

4. Reboot the Exchange server.

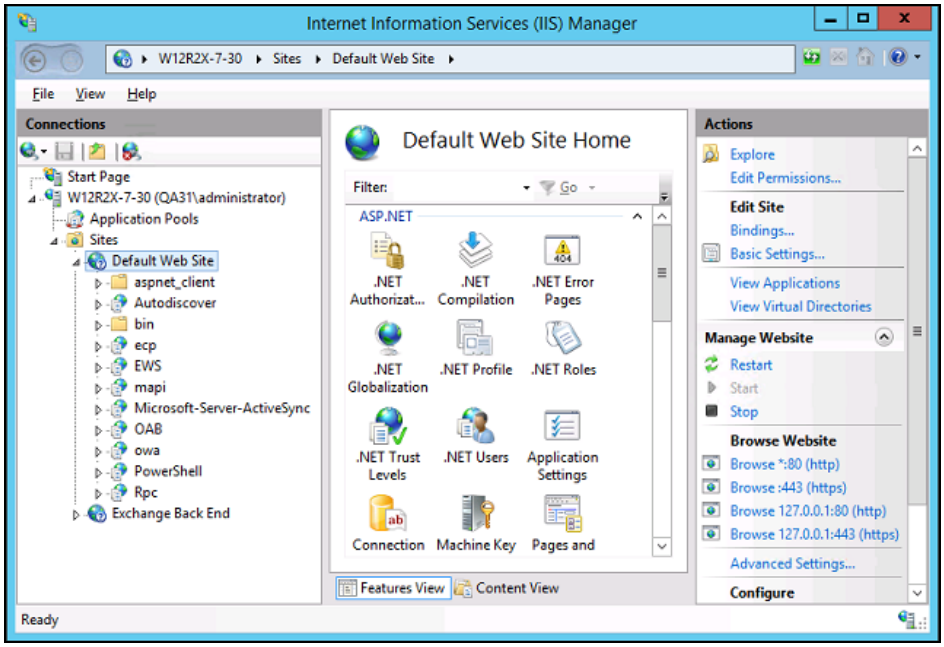
2.19 Connection to Exchange Management Shell (EMS) or Exchange Management Console (EMC)

Confirm on the connection to the Exchange Management Shell (EMS) or Exchange Management Console (EMC).

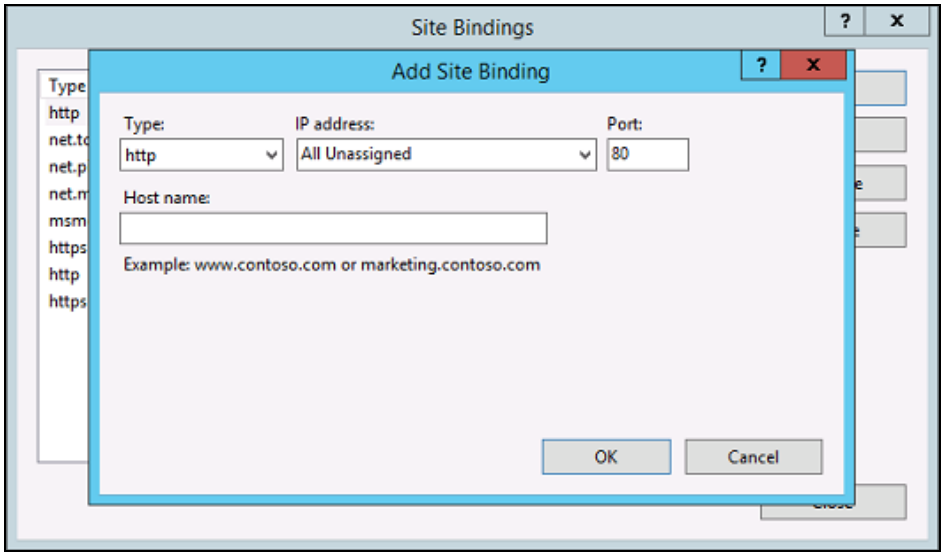
Ensure that the HTTP binding on the Default Web Site in Internet Information Services (IIS) is correctly configured by following the steps below.

1. Click **Start** > **Control Panel** > **Administrative Tools**, and then click **Internet Information Services (IIS) Manager**.

2. Navigate to **Default Web Site**, then right-click and select **Edit Bindings**.



3. Create a new binding that has no host name and a value of **All Unassigned** for the IP address.

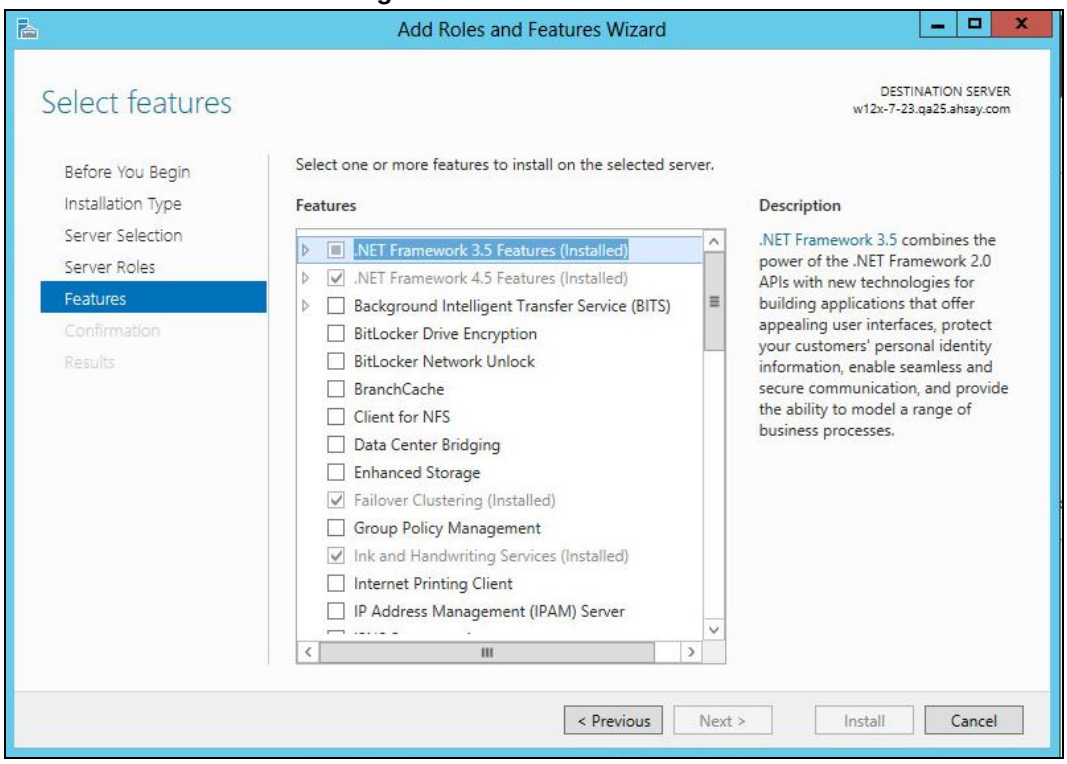


4. Restart IIS.

2.20 .Net Framework 3.5 Features

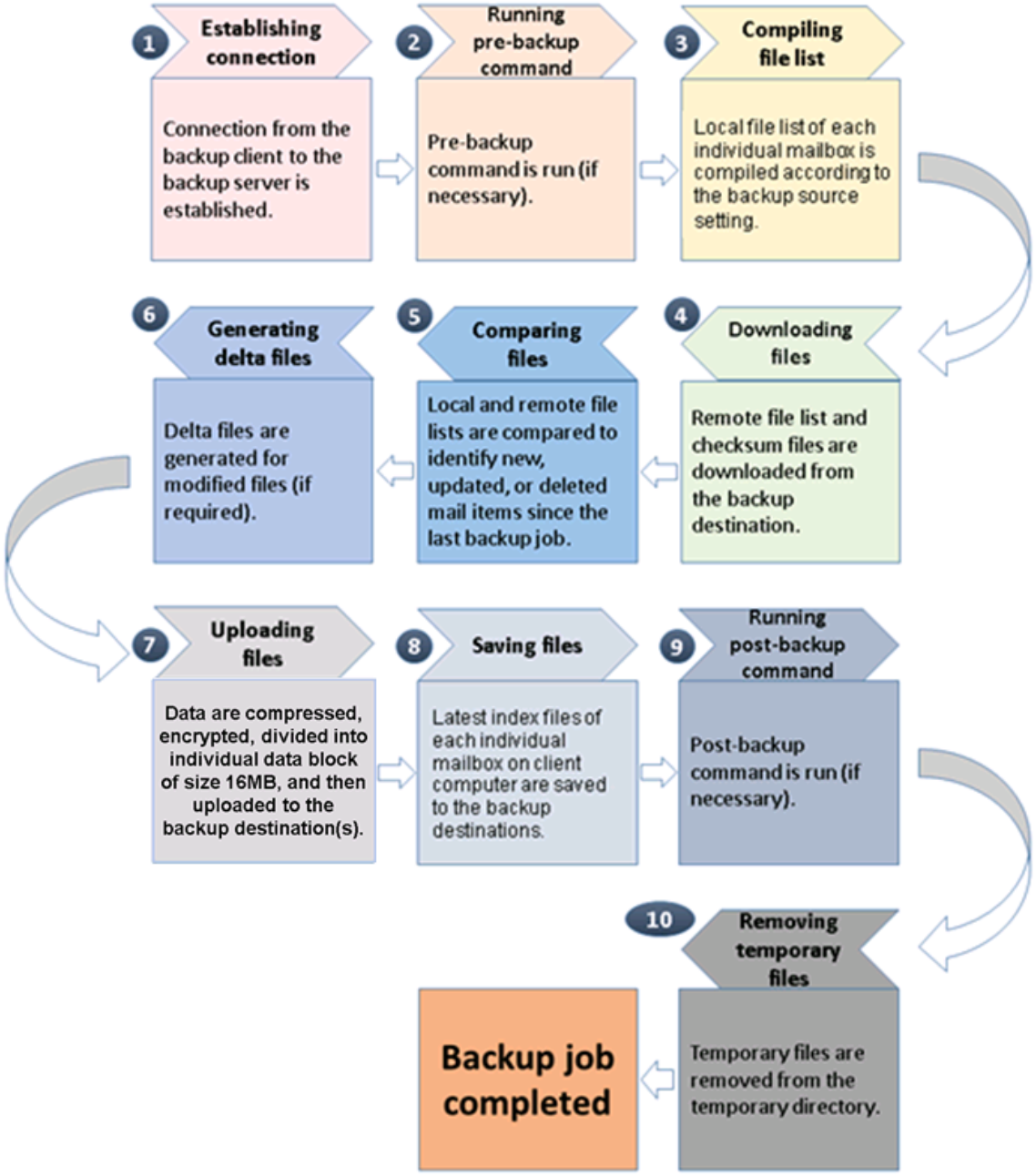
If you are using Exchange server 2013 on Windows server 2012, please install **.Net Framework 3.5 Features**.

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



3 Overview of MS Exchange Mail Level Backup Process

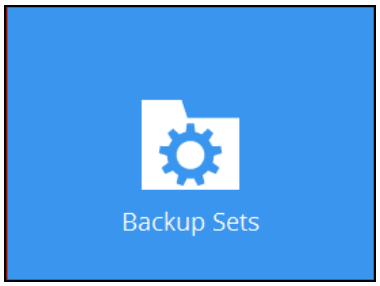
The following steps are performed during an MS Exchange mail level backup job:



4 Performing Mail Level Backup for Microsoft Exchange 2007/2010/2013

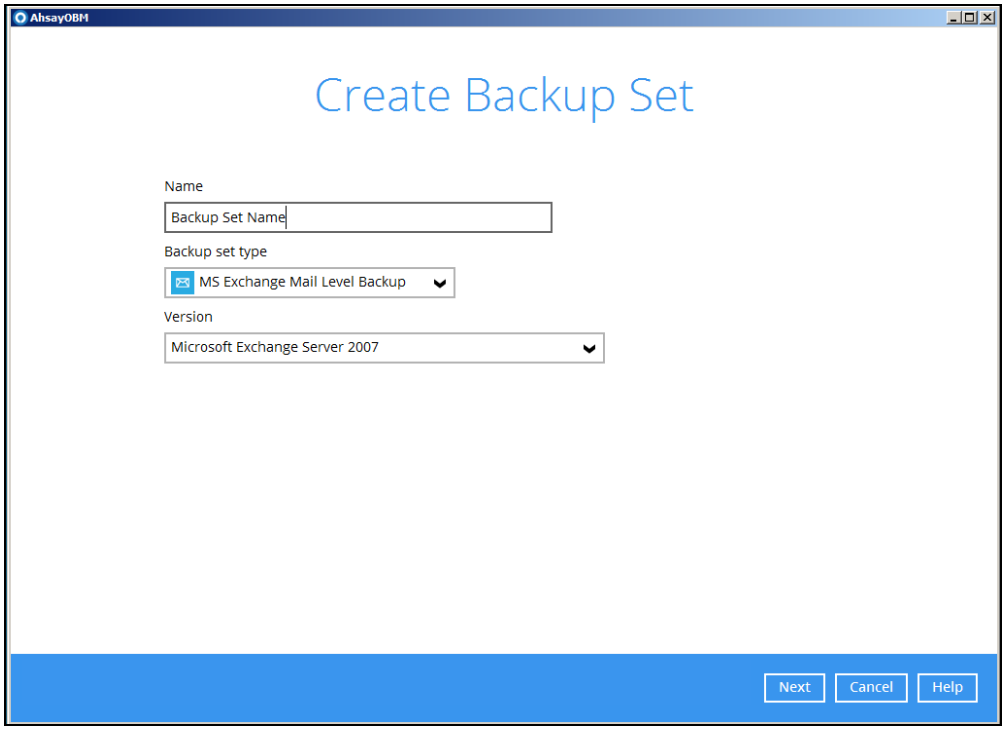
4.1 Creating Mail Level Backup Set for Microsoft Exchange 2007/2010/2013

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



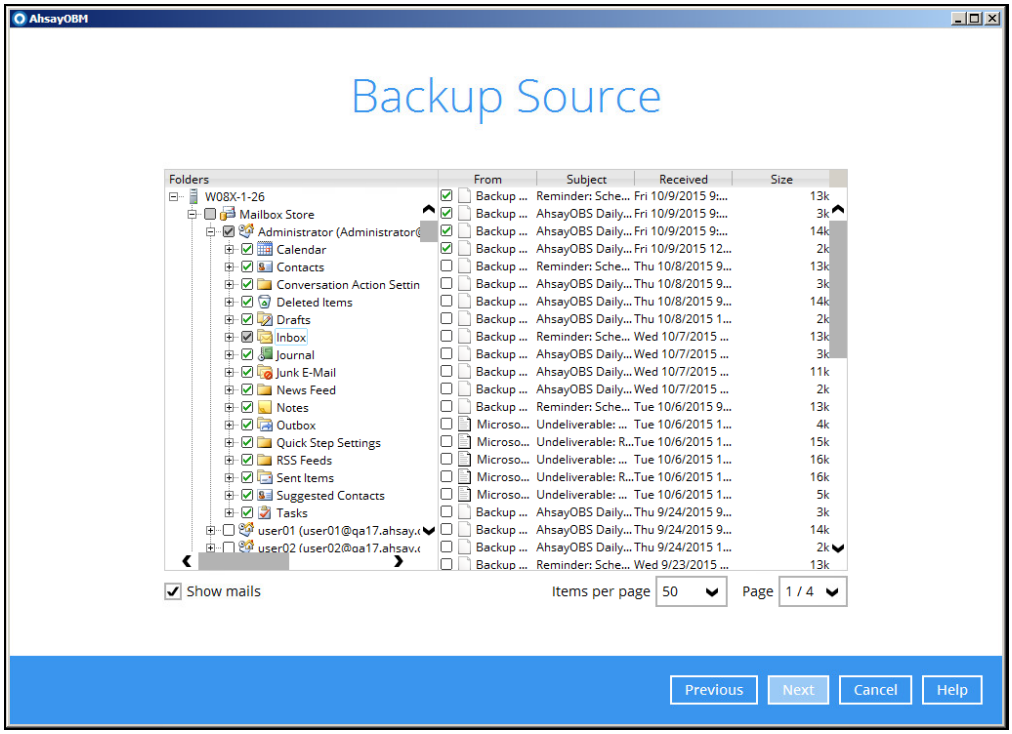
2. Create a new backup set by clicking the "**+**" icon next to **Add new backup set**.

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 and then click **Next** to proceed.

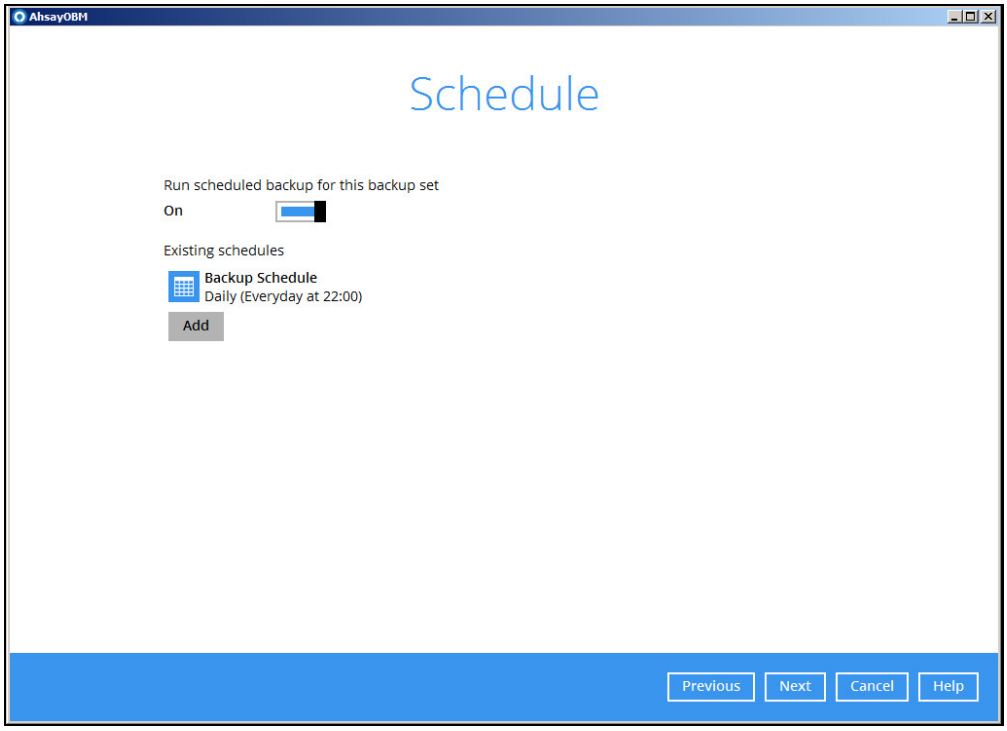


4. In the **Backup Source** menu, select the Mailbox Store for backup.

   You can click to expand the mailbox store to select which mailbox to back up. You can also click **Show mails** to select individual mail to back up. Click **Next** to proceed when you are done.

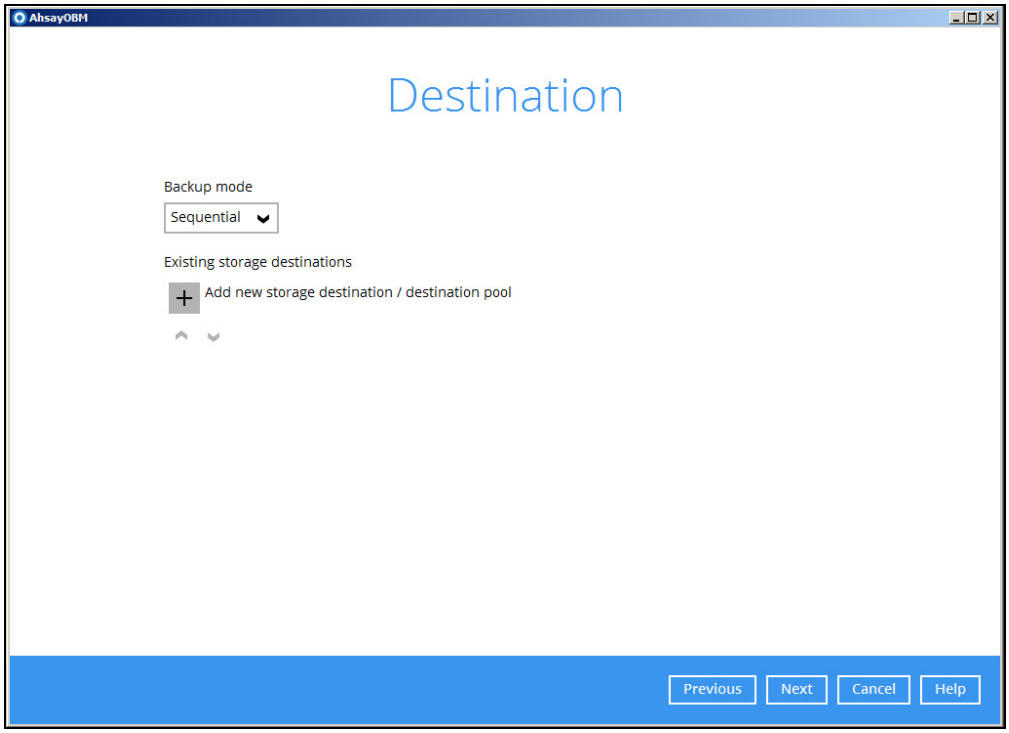


5. In the Schedule menu, you can configure a backup schedule for backup job to run automatically at your specified time interval. Click **Add** to add a new schedule, then click **Next** to proceed when you are done setting.

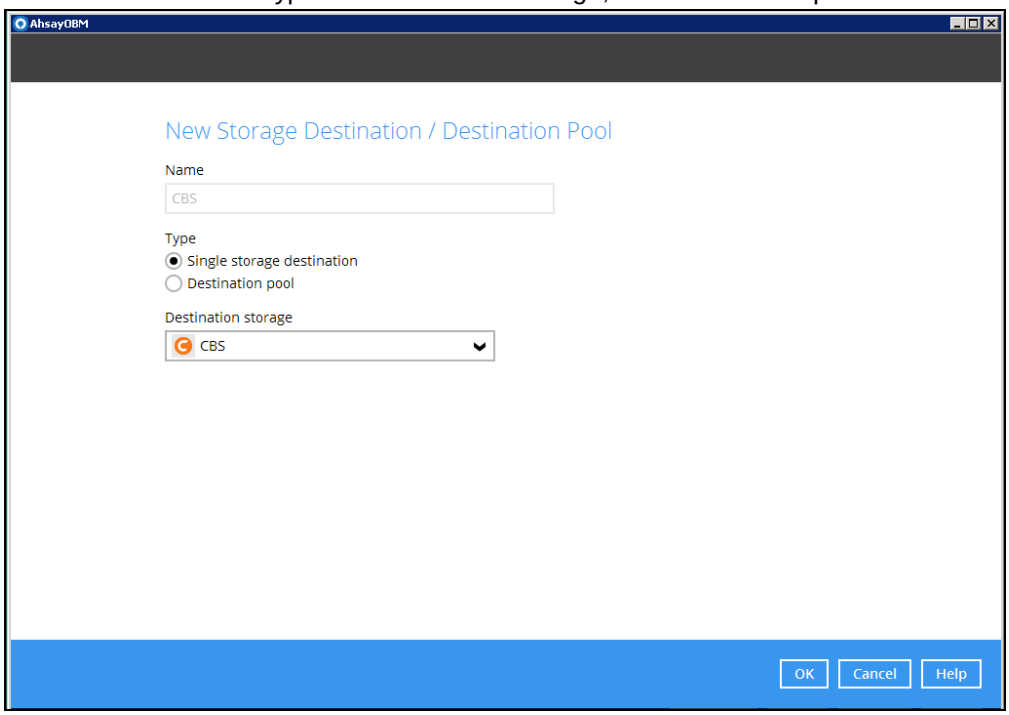


Note: *By default, a daily backup scheduled for 22:00 is created automatically.*

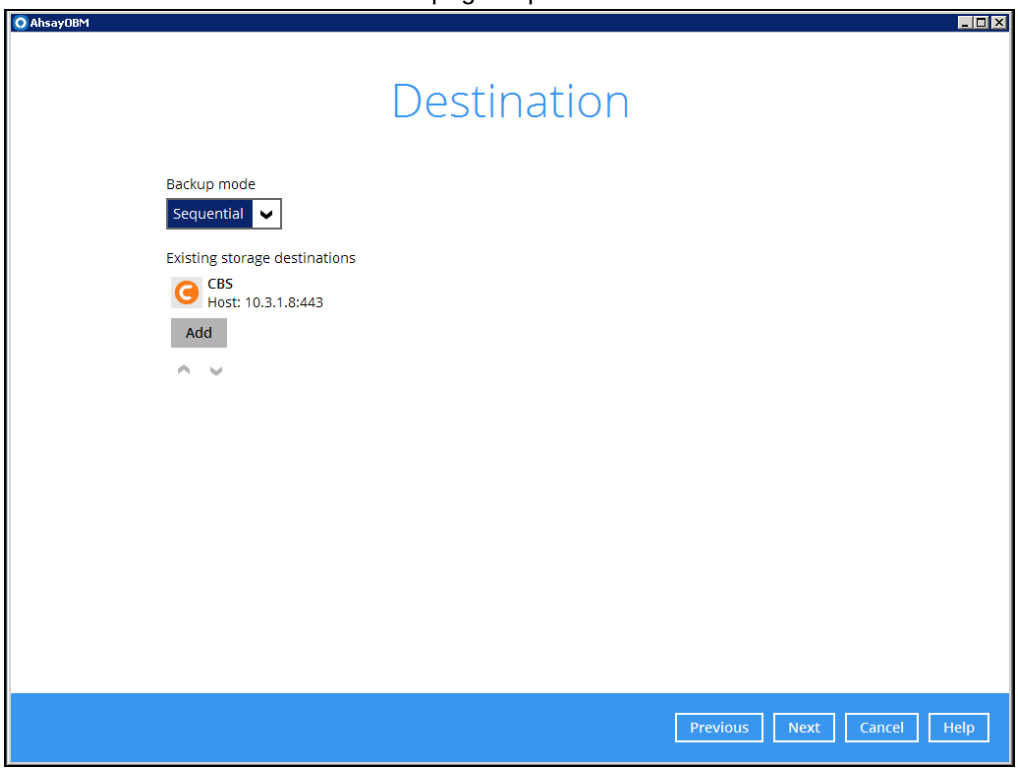
6. In the Destination menu, select a backup destination where the backup mail will be stored. Click the "**+**" icon next to **Add new storage destination / destination pool**.



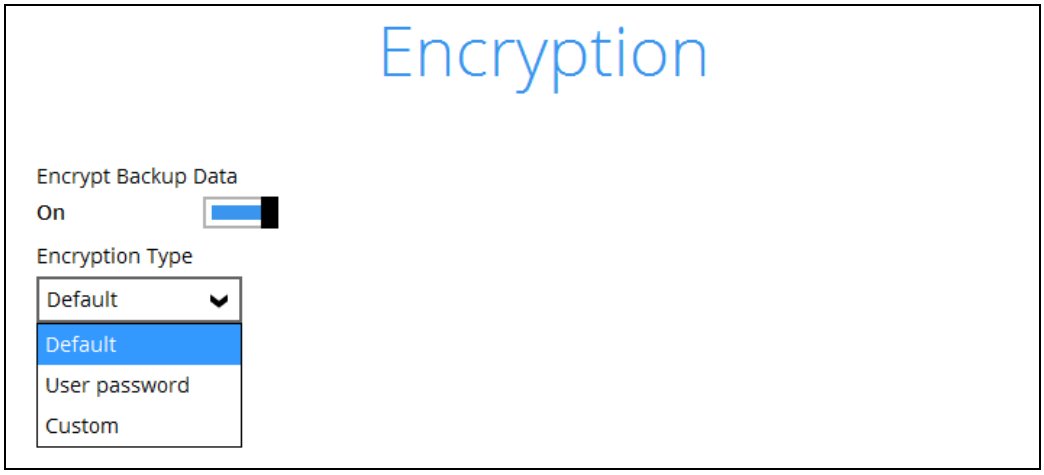
7. Select the destination type and destination storage, then click **OK** to proceed.



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



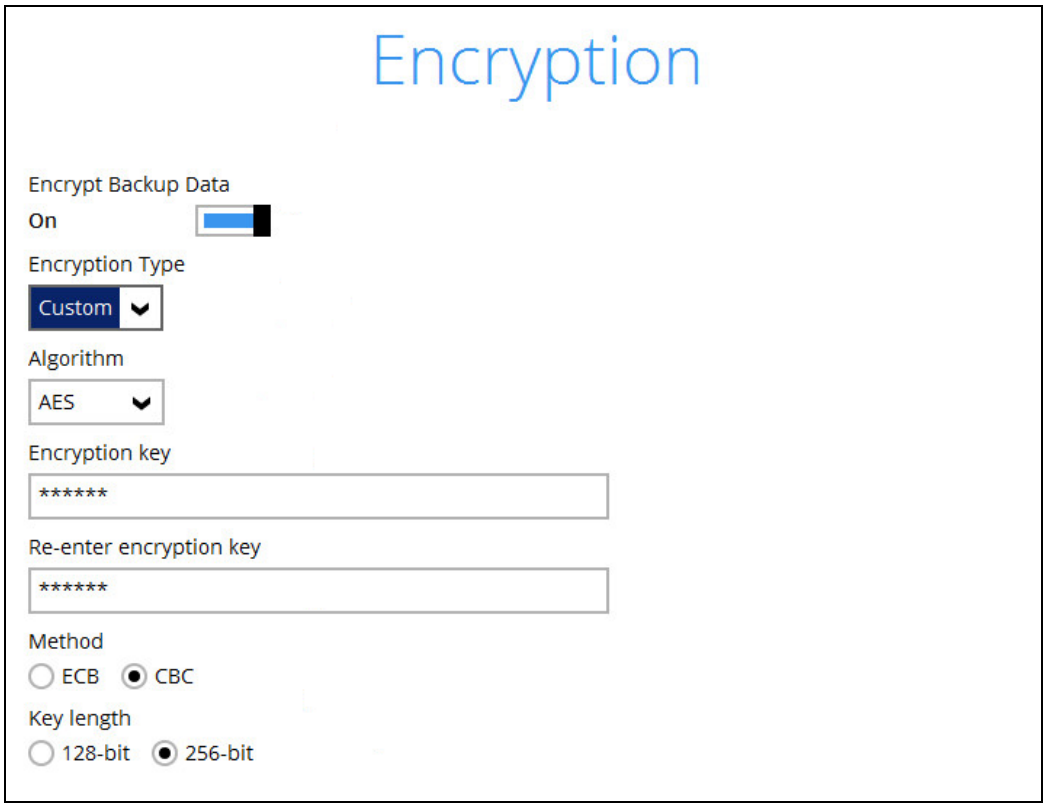
9. In the Encryption window, the default **Encrypt Backup Data** option is enabled with an encryption key preset by the system which provides the most secure protection.



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

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

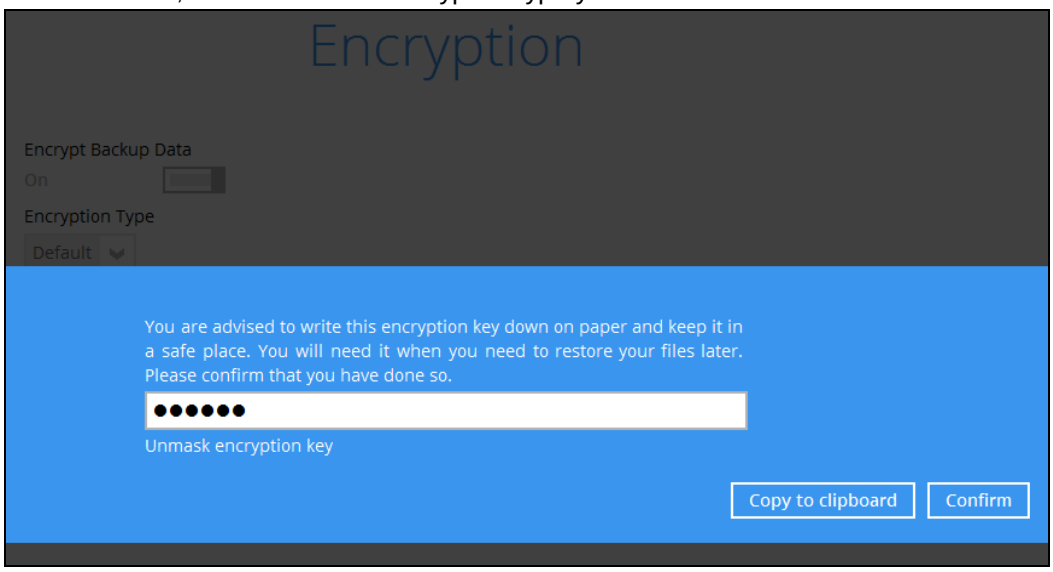
- **Custom** – you can customize your encryption key, where you can set your own algorithm, encryption key, method and key length.



Note: *For best practice on managing your encryption key, refer to the following KB article.* *FAQ: Best practices for managing encryption key on AhsayOBM or AhsayACB version 7? (5034)*

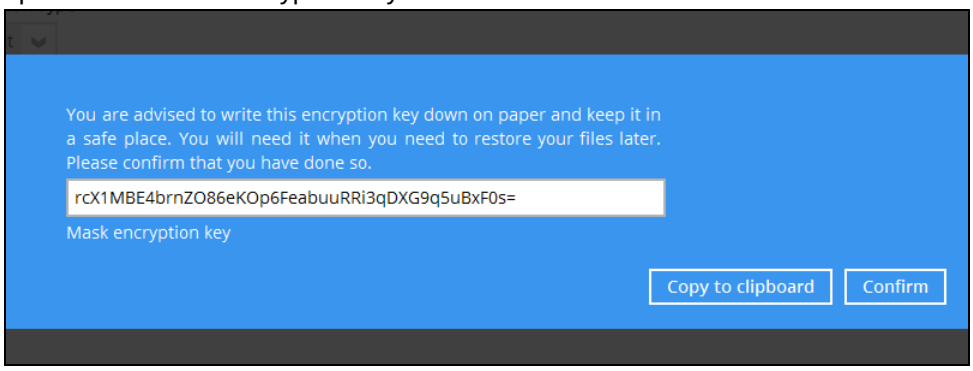
Click **Next** when you are done setting.

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



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

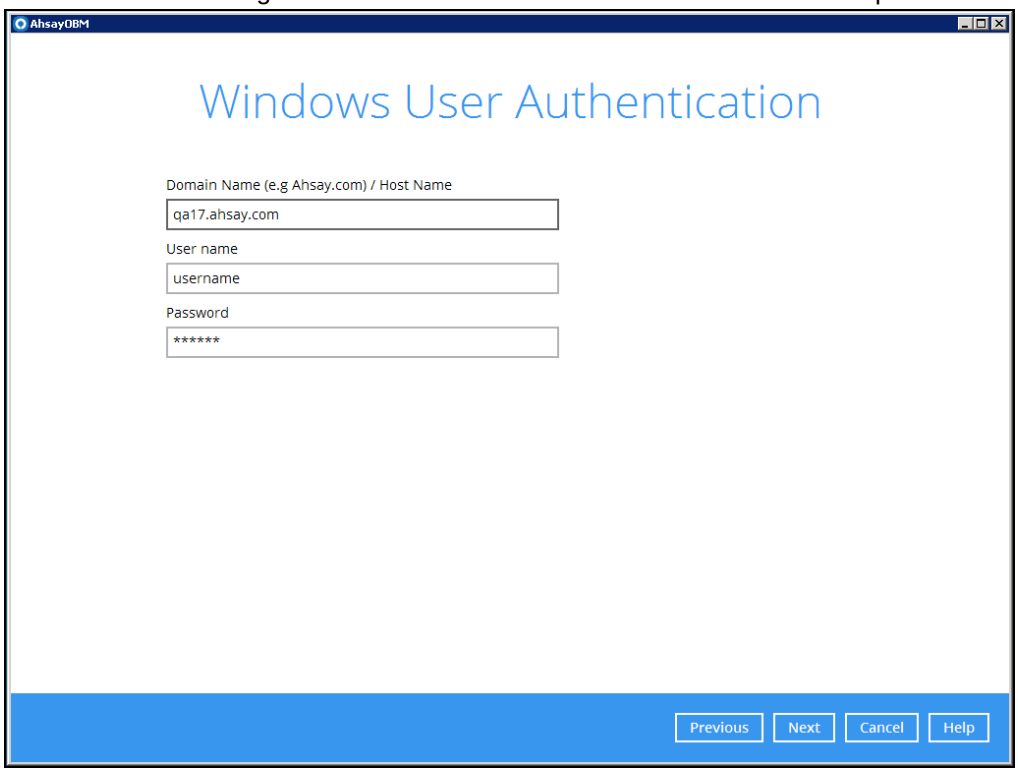
- **Unmask encryption key** – The encryption key is masked by default. Click this option to show the encryption key.



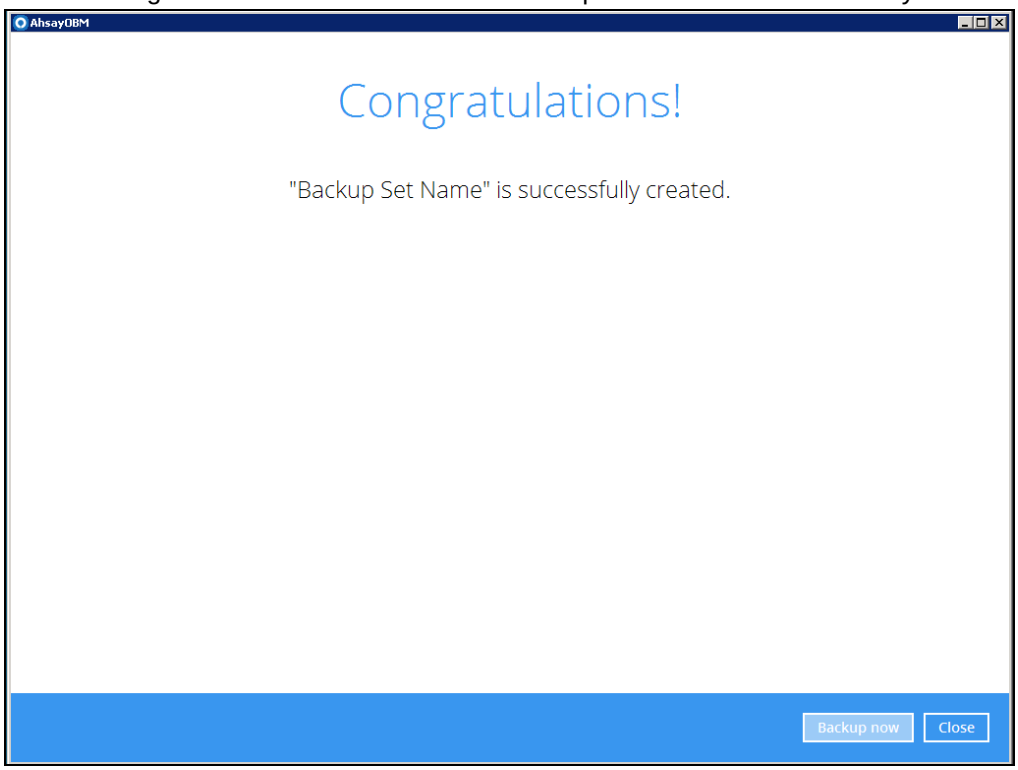
- **Copy to clipboard** – Click to copy the encryption key, then you can paste it in another location of your choice.

- **Confirm** – Click to exit this pop-up window and proceed to the next step

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



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



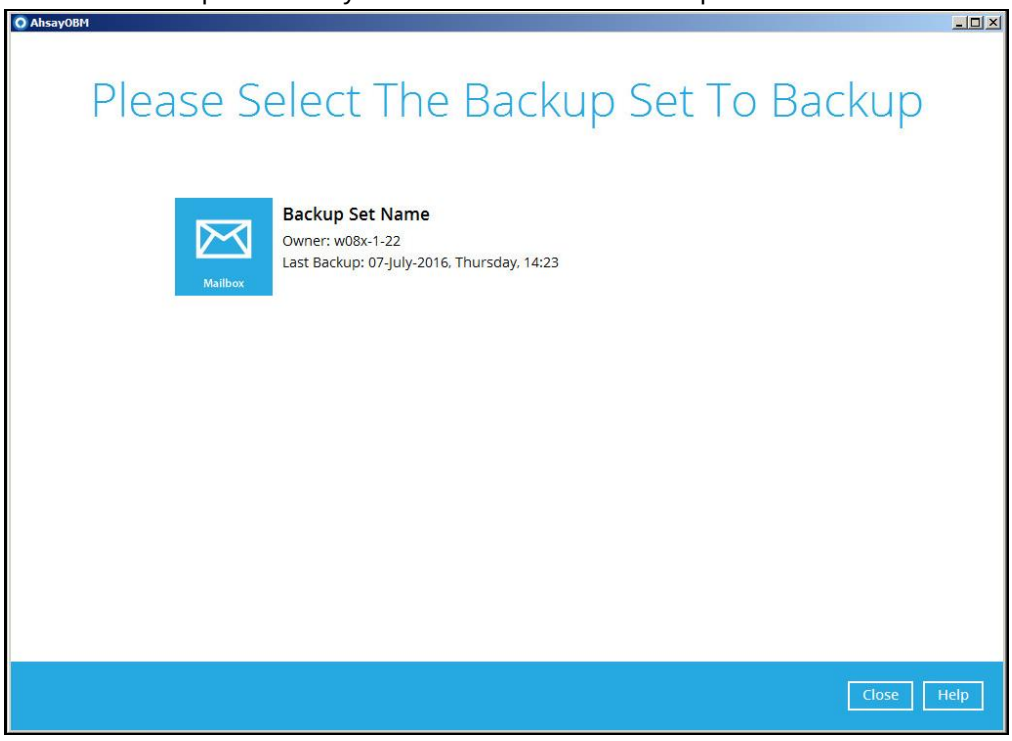
13. Click **Backup now** to start a backup immediately, or you can run a backup job later by following the instructions in Running Mail Level Backup Job for Microsoft Exchange 2007/2010/2013.

4.2 Running Mail Level Backup Job for Microsoft Exchange 2007/2010/2013

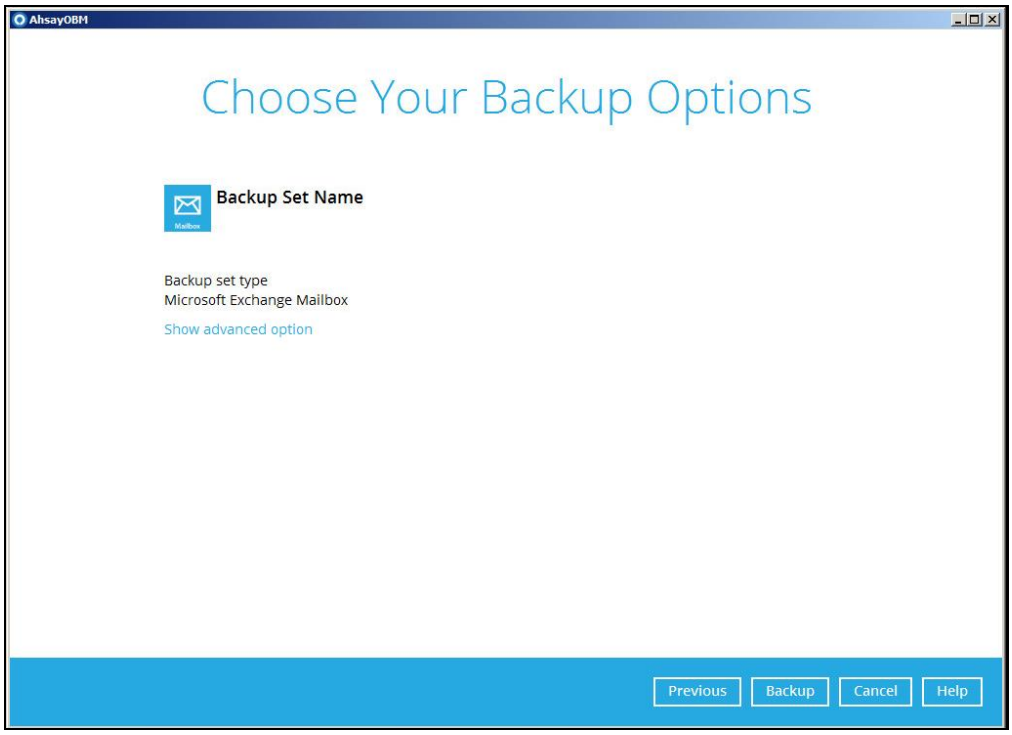
1. Log in to AhsayOBM.

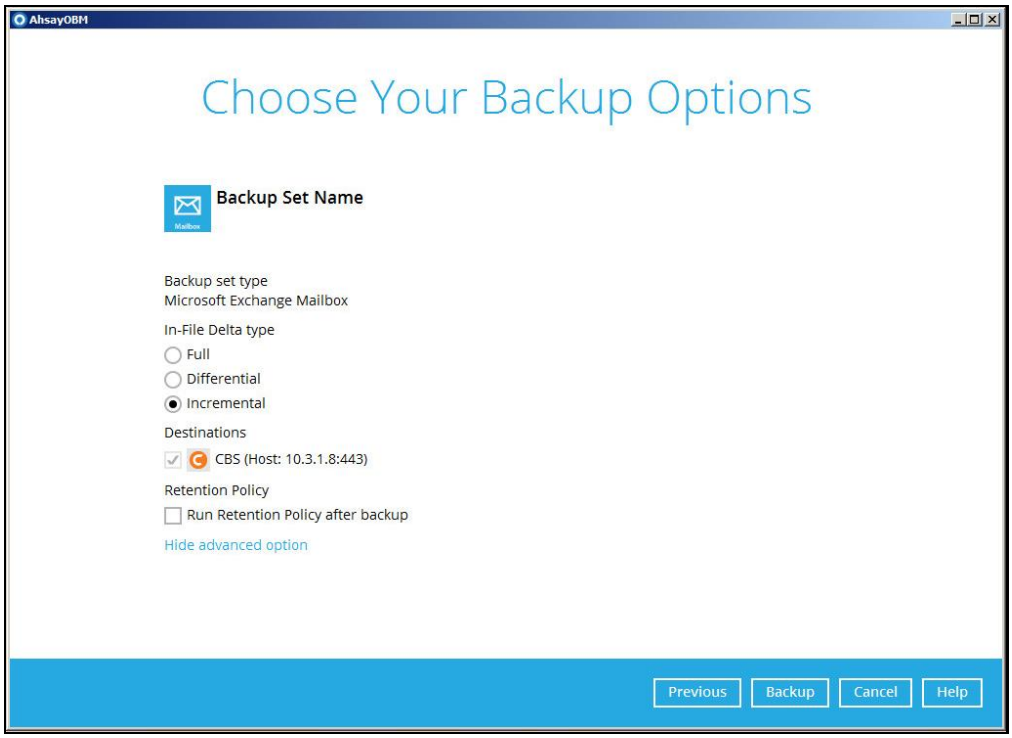
2. Click the Backup icon on the main interface of AhsayOBM.

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**.





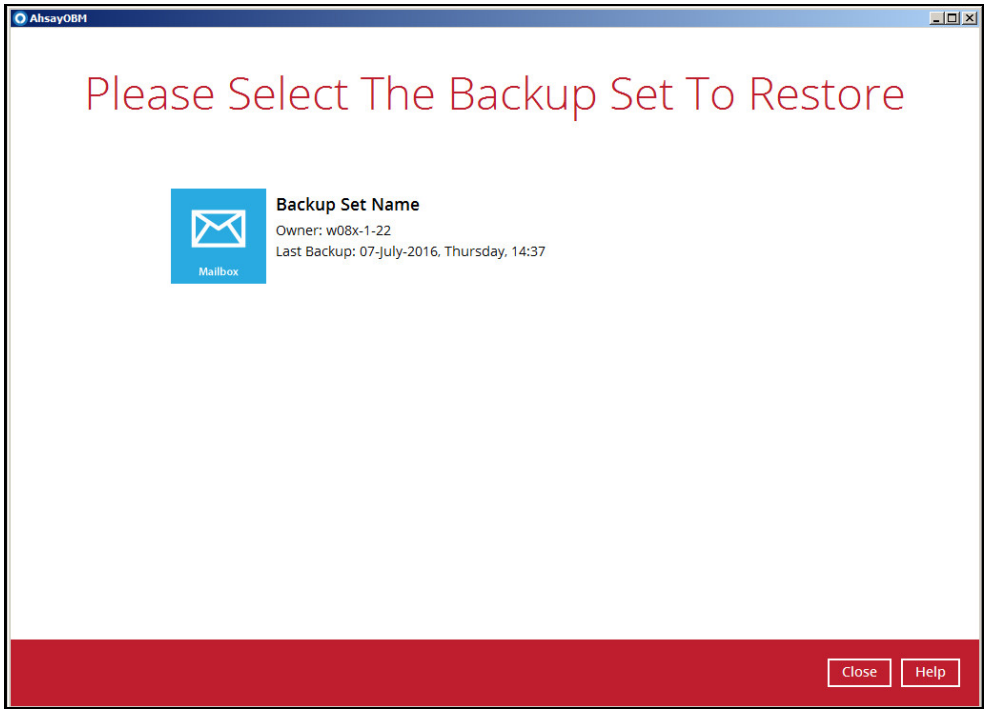
5. Click **Backup** to start the backup.

5 Performing Mail Level Restoration for Microsoft Exchange 2007/2010/2013

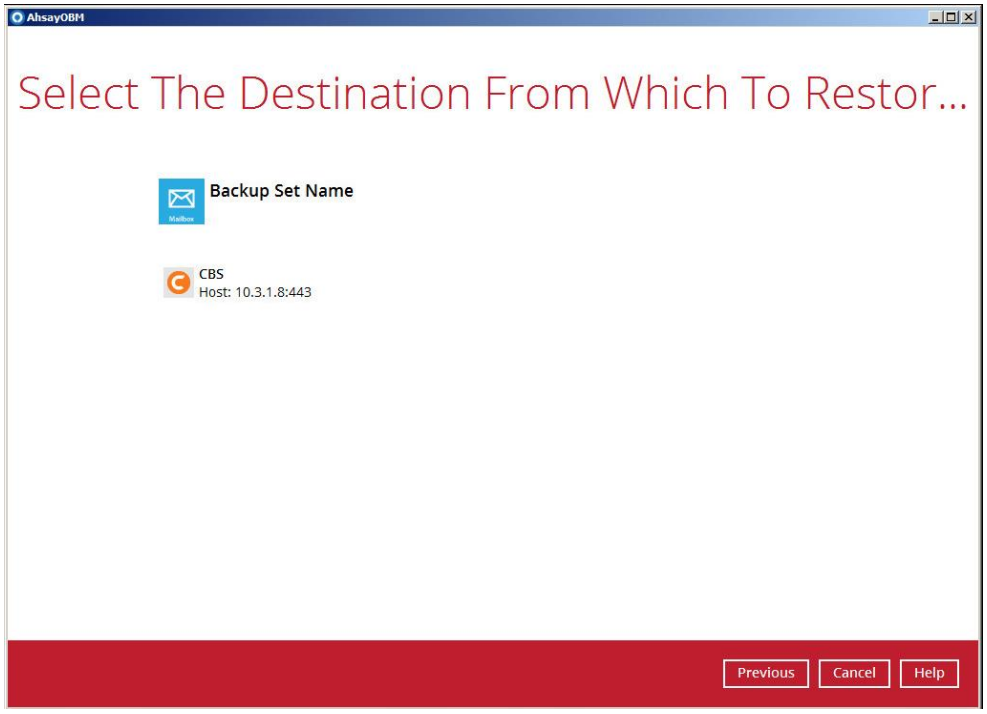
5.1 Restoring Mail Level Backup for Microsoft Exchange 2007/2010/2013

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

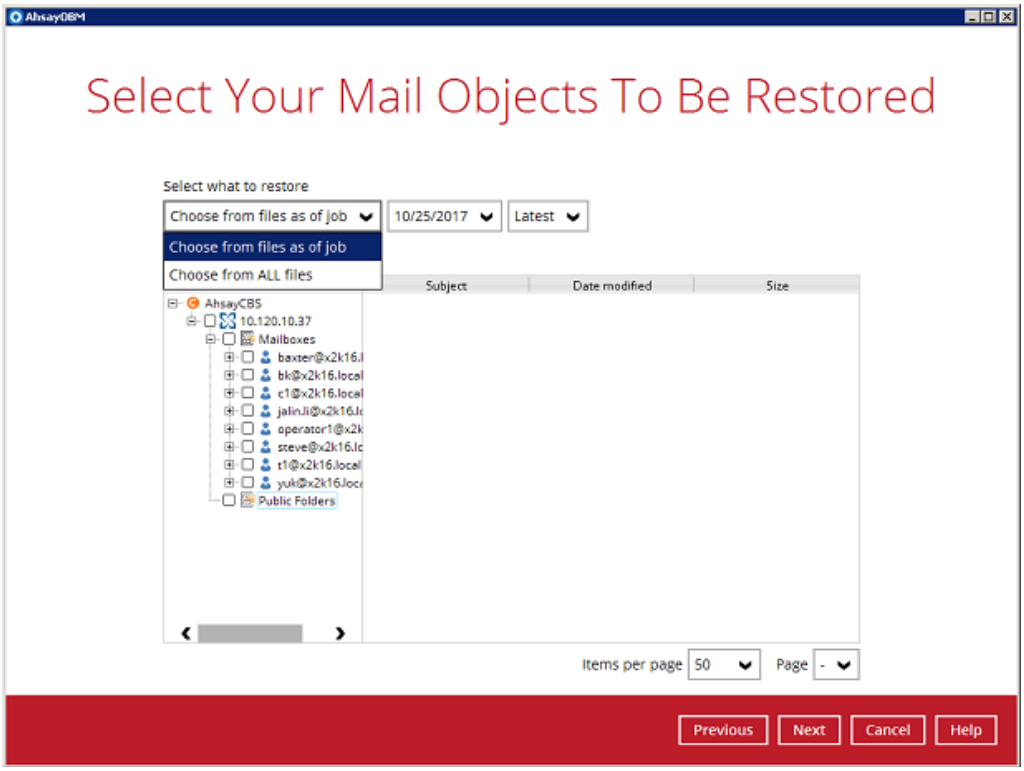
2. Select the backup set that you would like to restore mail from.



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



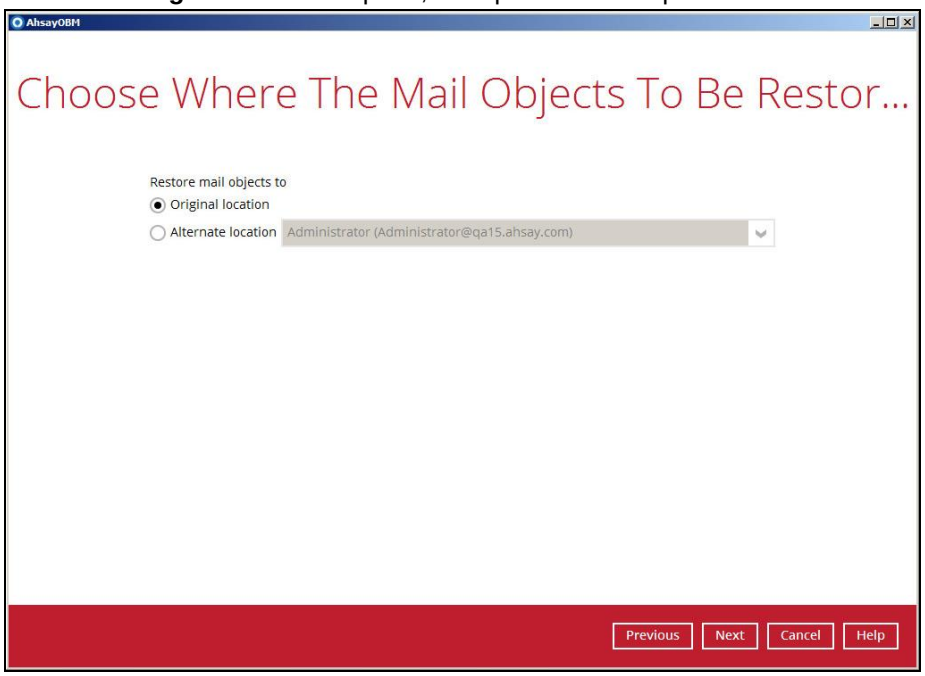
4. Click to expand the menu tree to select which mailbox to restore. You can also select mail item(s) from a specific backup job or all mail items that you have backed up to restore. Click **Next** to proceed.



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

   - **Restore to Original Mailbox**

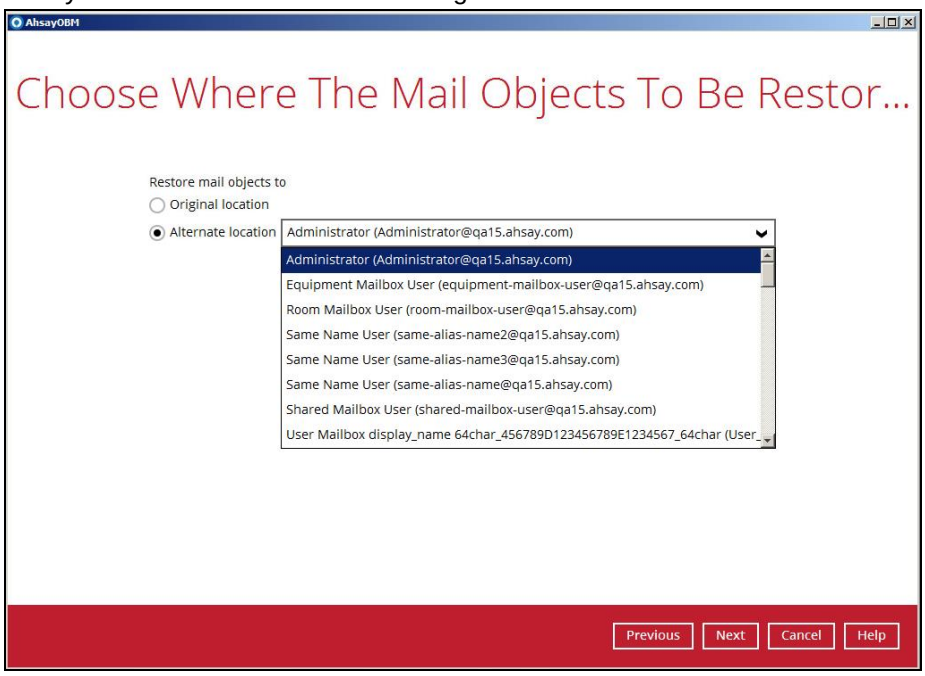
     Select the **Original location** option, then press **Next** to proceed.



- **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.



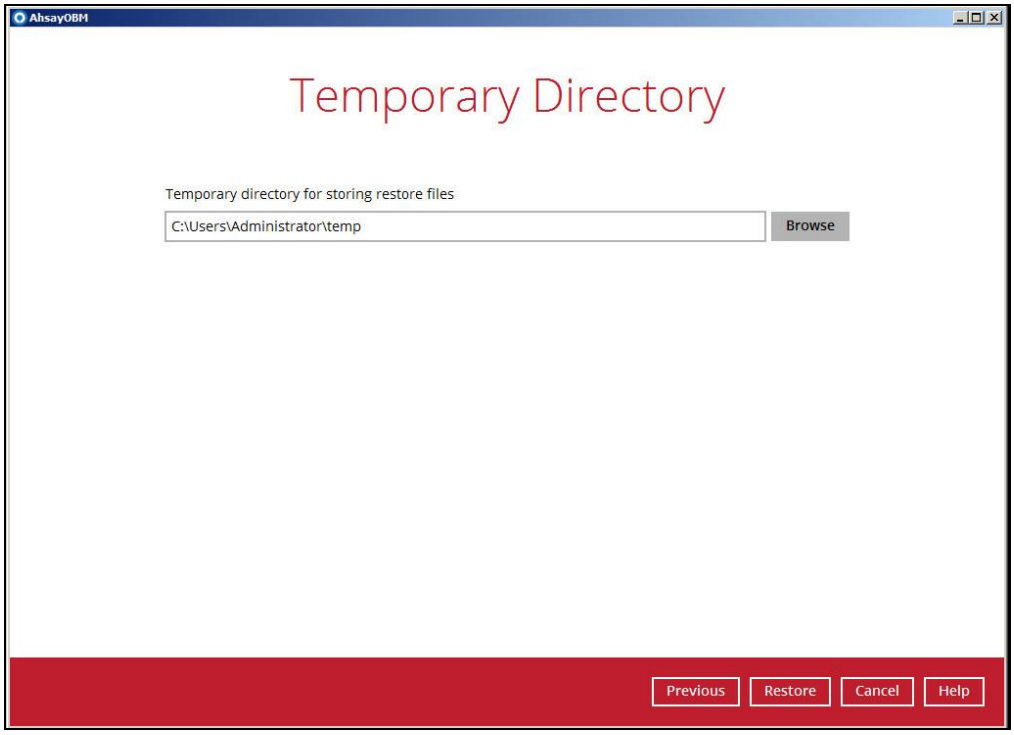
Limitation

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 attempt to restore mailbox item(s) to their respective destination folder based on the translation listed below.

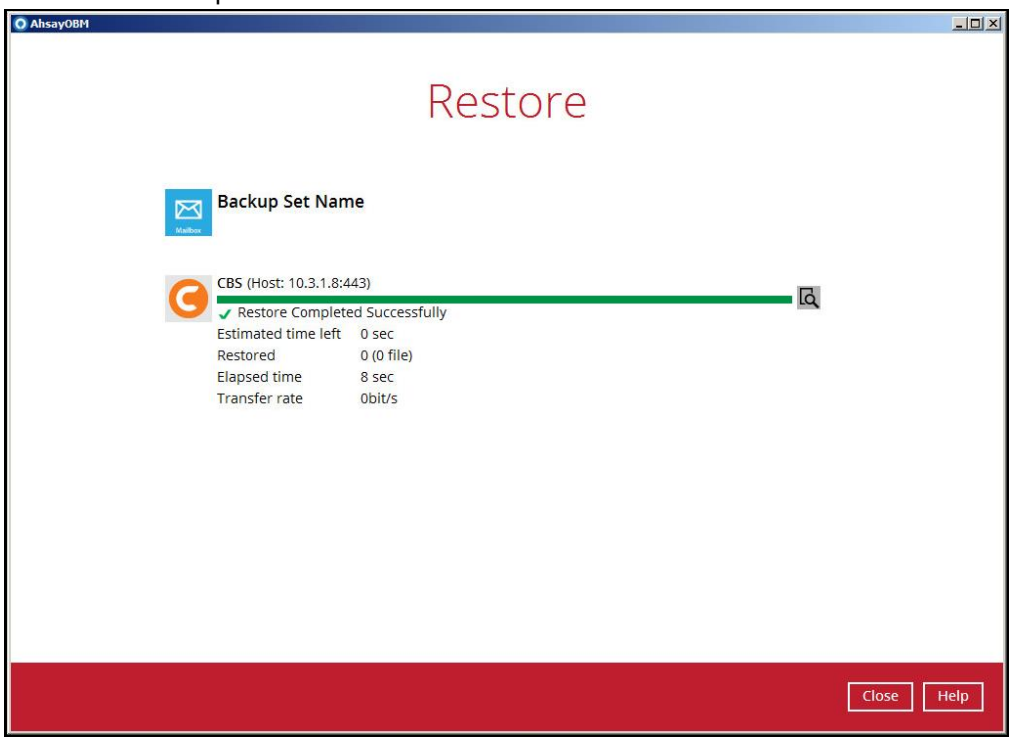
For folders such as 'Calendar' or 'Notes', a new folder 'Calendar' or 'Notes' will be created.

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
Calendar	Create new folder	Calendar
Notes	Create new folder	Notes

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



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



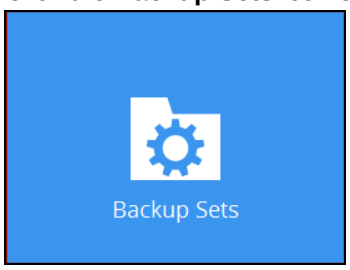
6 Performing Mail Level Backup for Microsoft Exchange 2010/2013 in Database Availability Group (DAG)

6.1 License Requirement to Back up Exchange Mailboxes in DAG environment

Each member in the DAG requires separate license for Microsoft Exchange Mailbox Add-on Module. One license will be deducted from each installation of the AhsayOBM on the DAG environment. Please check with your backup service provider if more Microsoft Mailbox Add-On module is required.

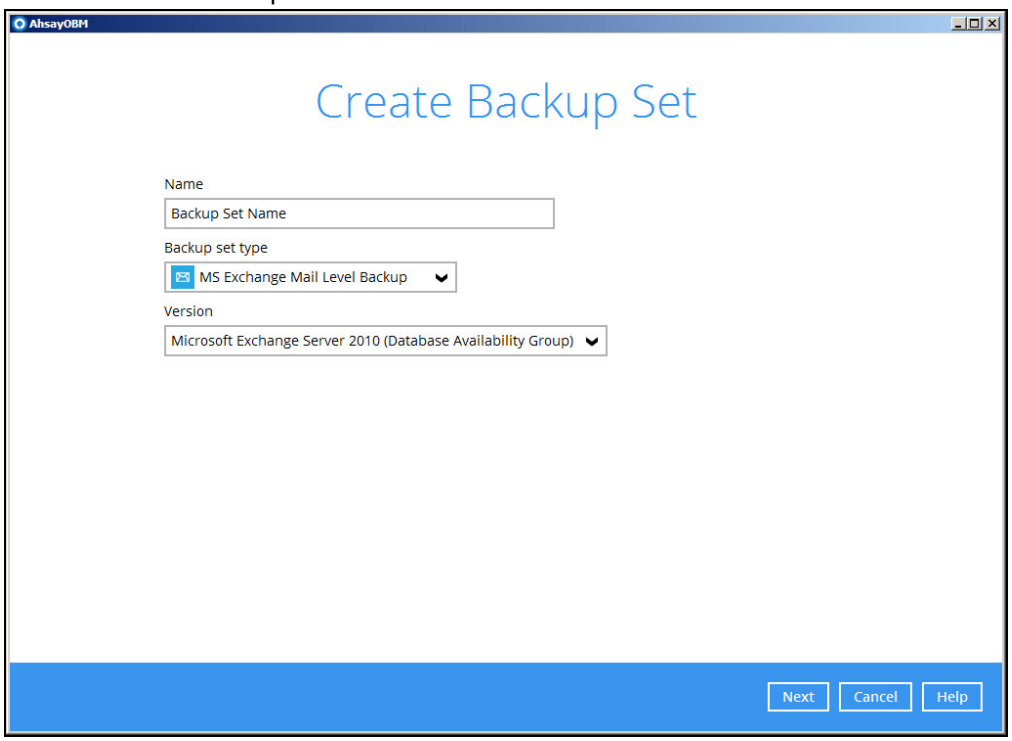
6.2 Creating Mail Level Backup Set for Microsoft Exchange 2010/2013 in Database Availability Group (DAG)

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



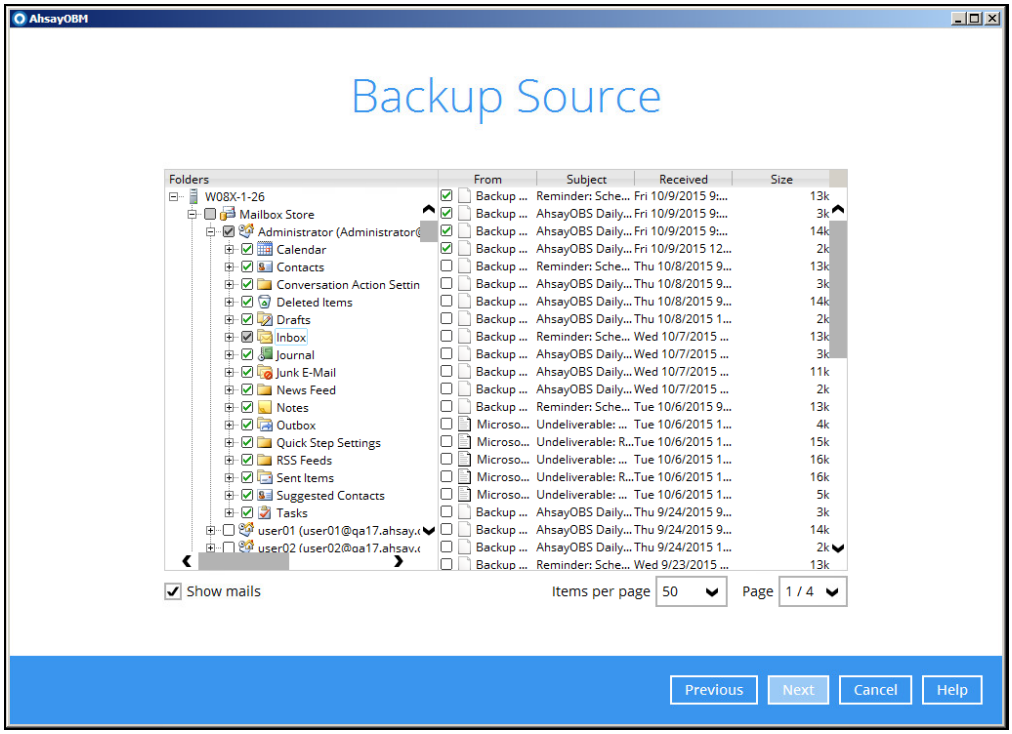
2. Create a new backup set by clicking the "**+**" icon next to **Add new backup set**.

3. Select the Backup set type as **MS Exchange Mail Level Backup** and choose the correct Exchange Server version with "Database Availability Group". Name your new backup set and then click **Next** to proceed.

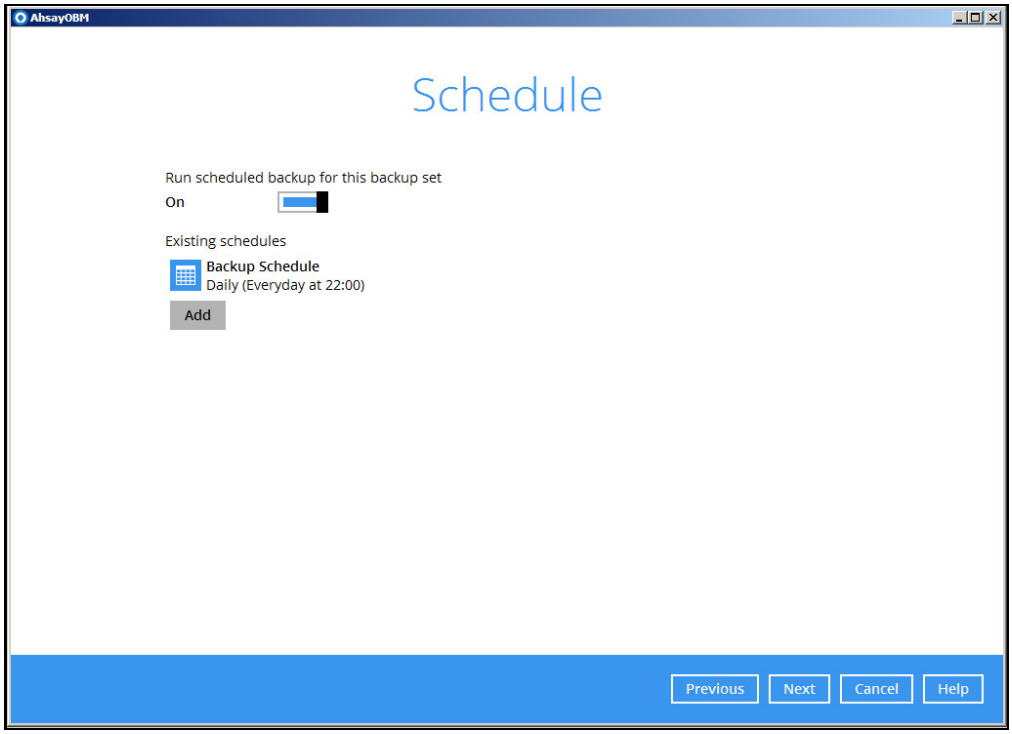


4. In the **Backup Source** menu, select the Mailbox Store for backup.

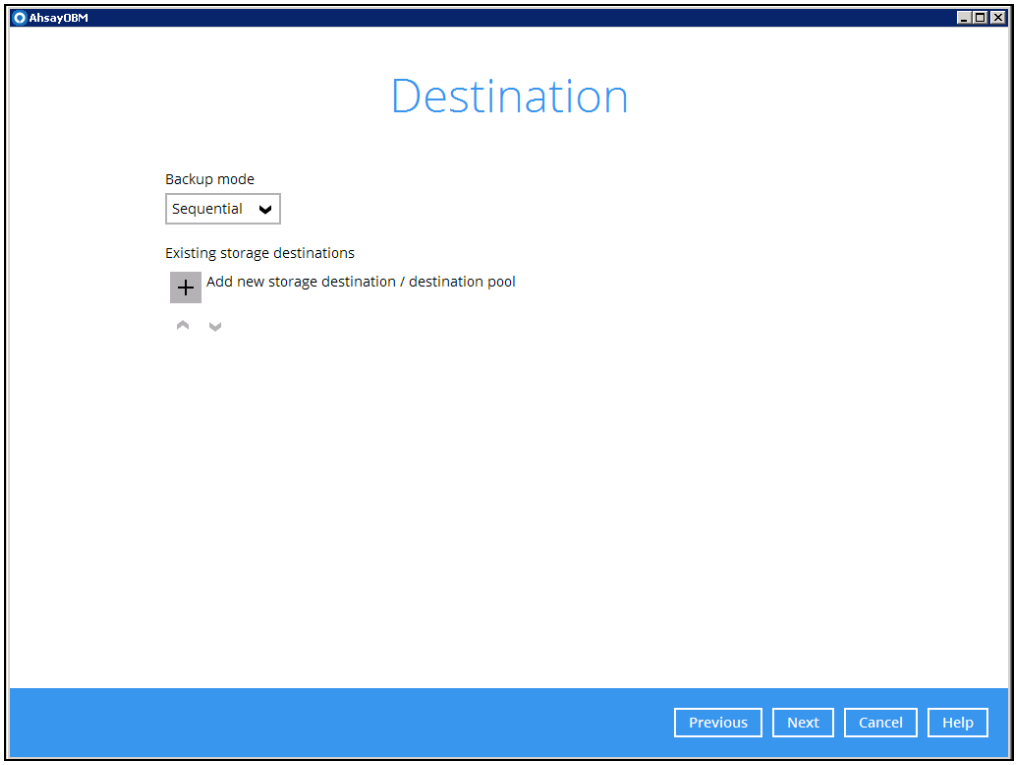
   You can click to expand the mailbox store to select which mailbox to back up, and then click **Show mails** to select individual mail to back up. Click **Next** to proceed when you are done.



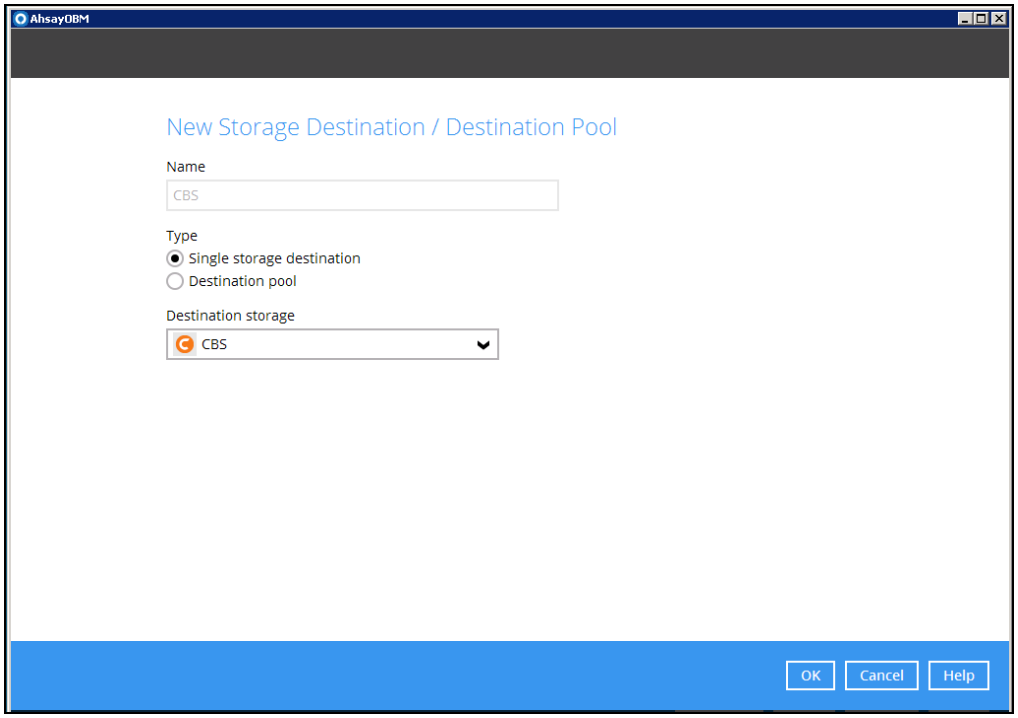
5. In the Schedule menu, you can configure a backup schedule for backup job to run automatically at your specified time interval. Click **Add** to add a new schedule, then click **Next** to proceed when you are done setting.



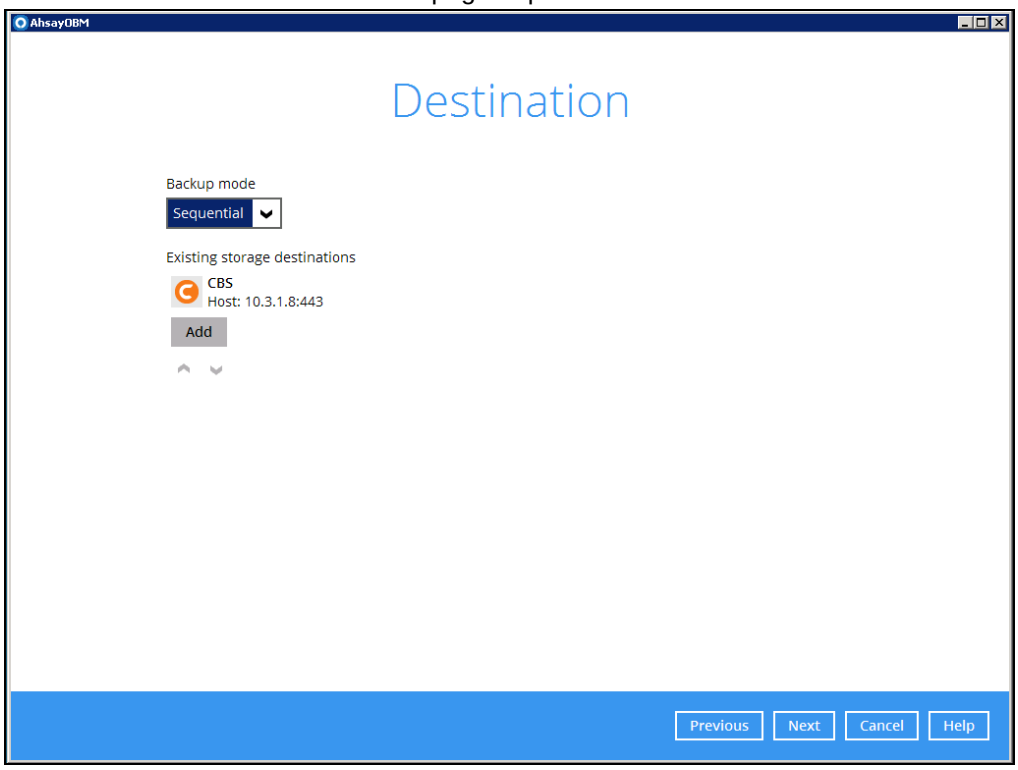
6. In the Destination menu, select a backup destination where the backup email will be stored. Click the "**+**" icon next to **Add new storage destination / destination pool**.



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



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

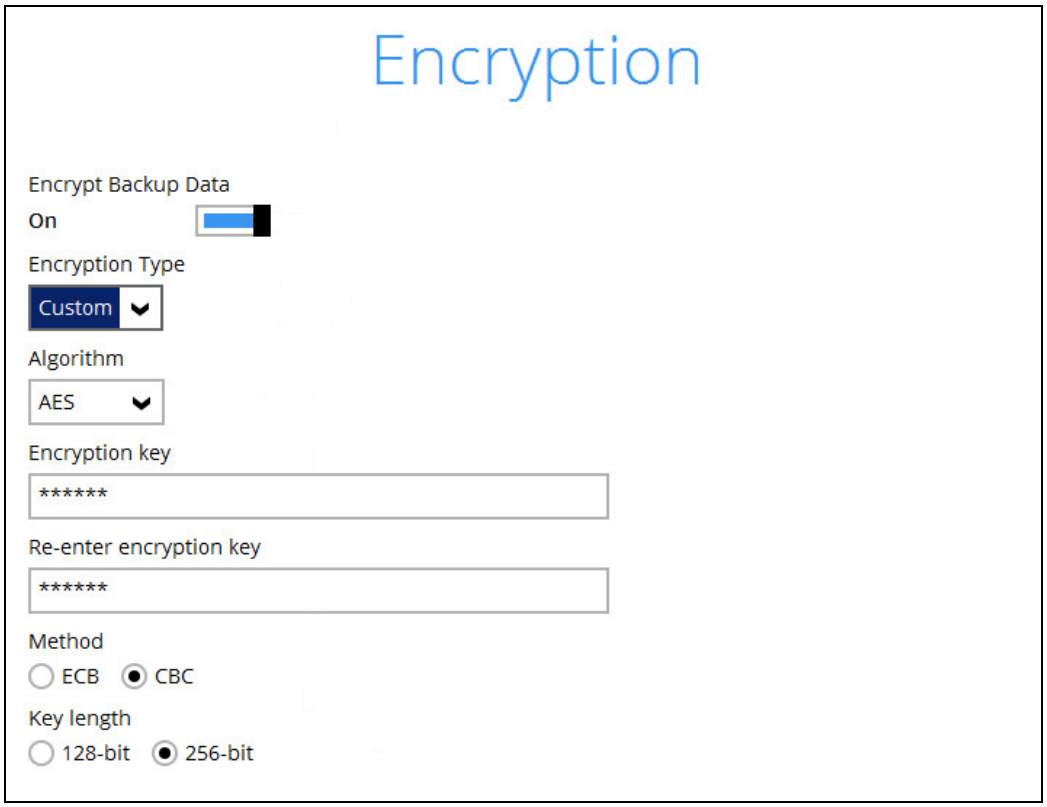


9. In the Encryption window, the default **Encrypt Backup Data** option is enabled with an encryption key preset by the system which provides the most secure protection.

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

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

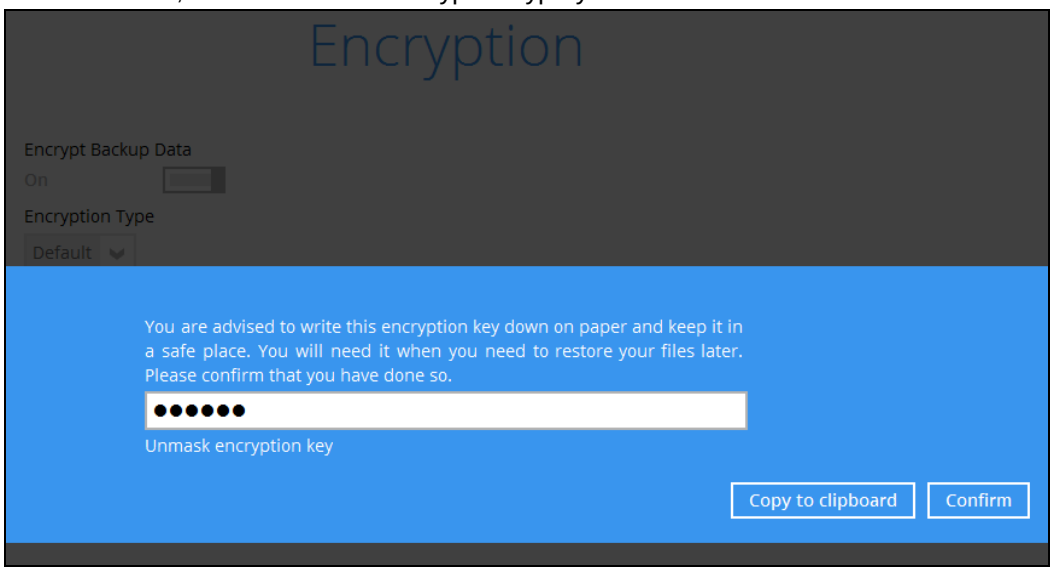
- **Custom** – you can customize your encryption key, where you can set your own algorithm, encryption key, method and key length.



Note: *For best practice on managing your encryption key, refer to the following KB article. [FAQ: Best practices for managing encryption key on AhsayOBM or AhsayACB version 7? (5034)]*

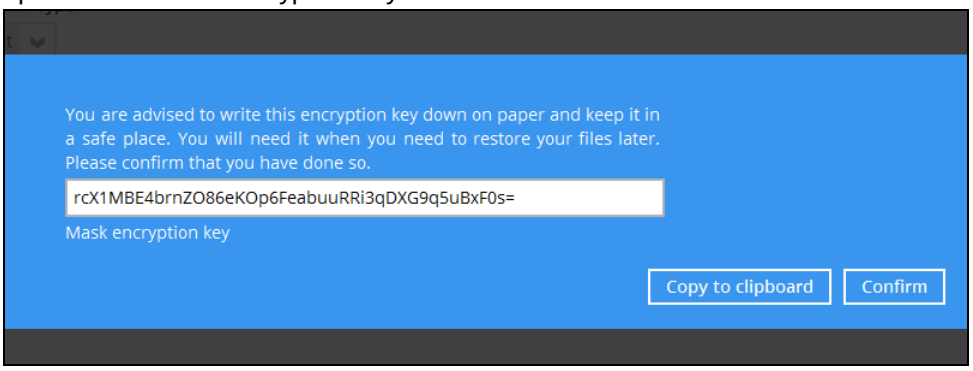
Click **Next** when you are done setting.

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



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

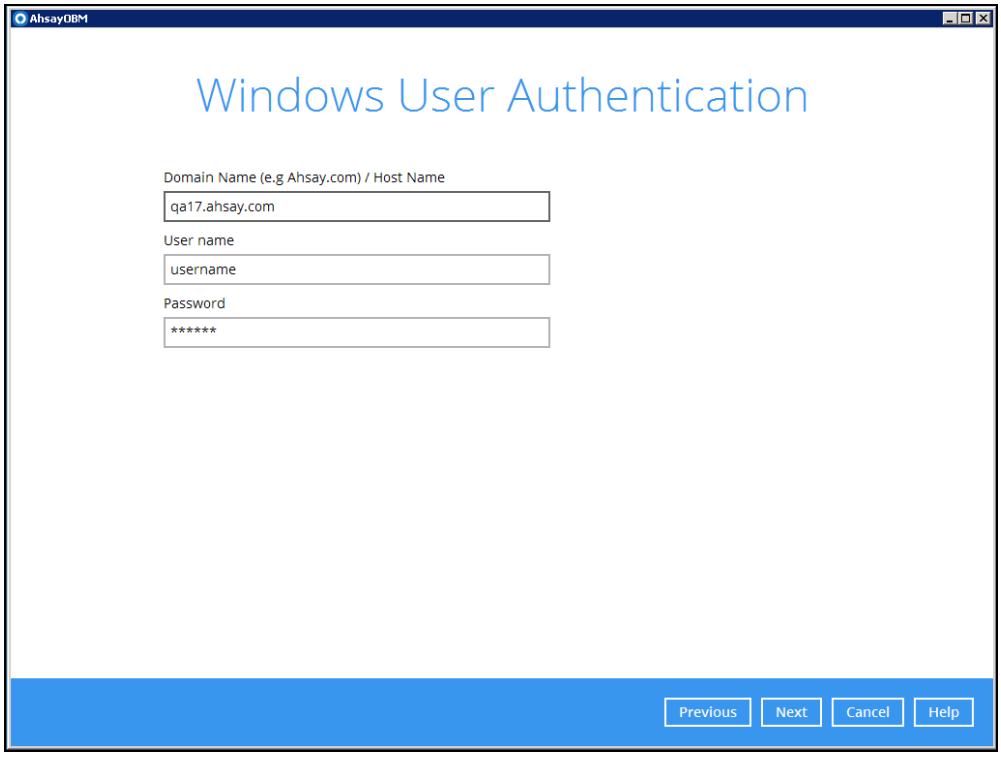
- **Unmask encryption key** – The encryption key is masked by default. Click this option to show the encryption key.



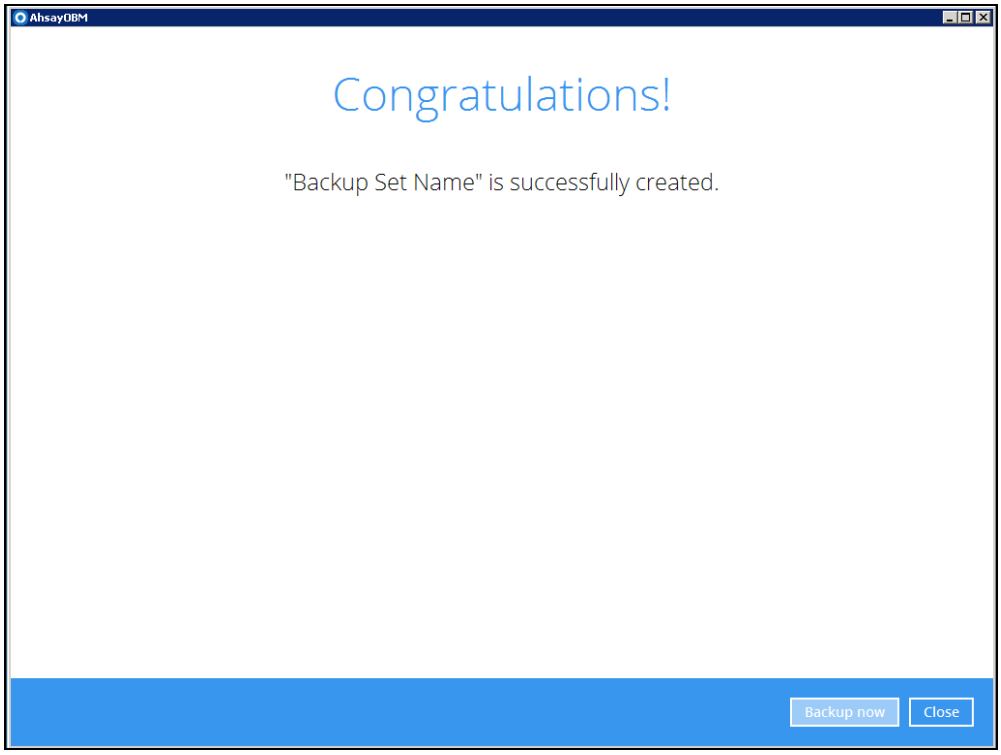
- **Copy to clipboard** – Click to copy the encryption key, then you can paste it in another location of your choice.

- **Confirm** – Click to exit this pop-up window and proceed to the next step

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

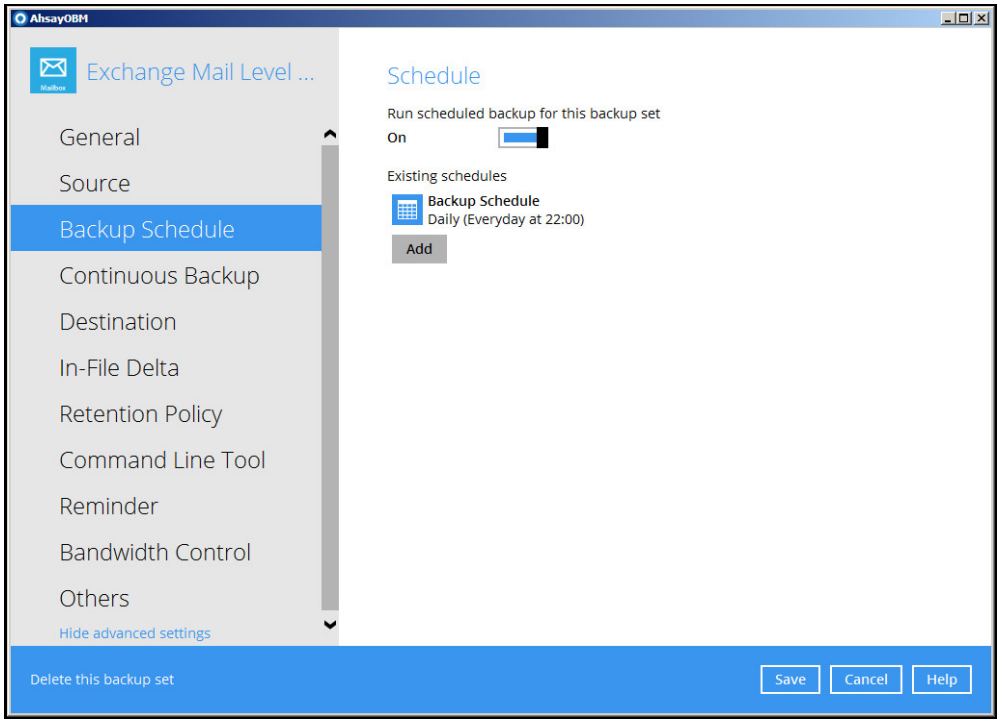


12. The following screen shows when the new backup set is created successfully. Backup will run automatically at the configured scheduled time.



You may click **Backup now** to start a backup immediately, however, manual backup will not be counted as part of the DAG backup cycle. For more information, refer to Scheduled Backup for Data Availability Group (DAG) Option.

13. On all other Exchange Servers within the same DAG, open the AhsayOBM and click the same backup set, and make sure the **Run scheduled backup for this backup set** is turned on in the **Backup Schedule** menu. Make sure you save the setting before exiting the application.



7 Performing Mail Level Restoration for Microsoft Exchange 2010/2013 in Database Availability Group (DAG)

7.1 Pre-restoration requirements

Refer to the following steps to restore individual items to the active database on the relevant Microsoft Exchange server within the DAG.

The mail level restoration should be performed on the active database only. You can identify the Exchange server with the active database from the Exchange Management Shell by following the steps below.

Type the following command in the Exchange Management Shell.

```
Get-MailboxDatabase | ft name, server
```

It will show which Exchange server is hosting the active mailbox database. In the following case, Mailbox Database 01 and 03 are hosted on EX1, while Mailbox Database 02 and 04 are hosted on EX2.

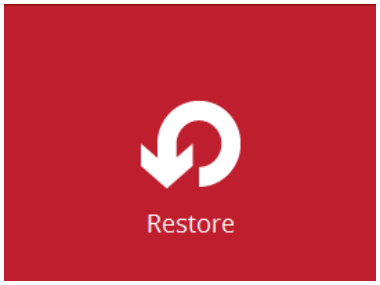
```
[PS] C:\>Get-MailboxDatabase | ft name, server

Name                    Server
----                    ----
Mailbox Database 02     EX2
Mailbox Database 01     EX1
Mailbox Database 03     EX1
Mailbox Database 04     EX2
```

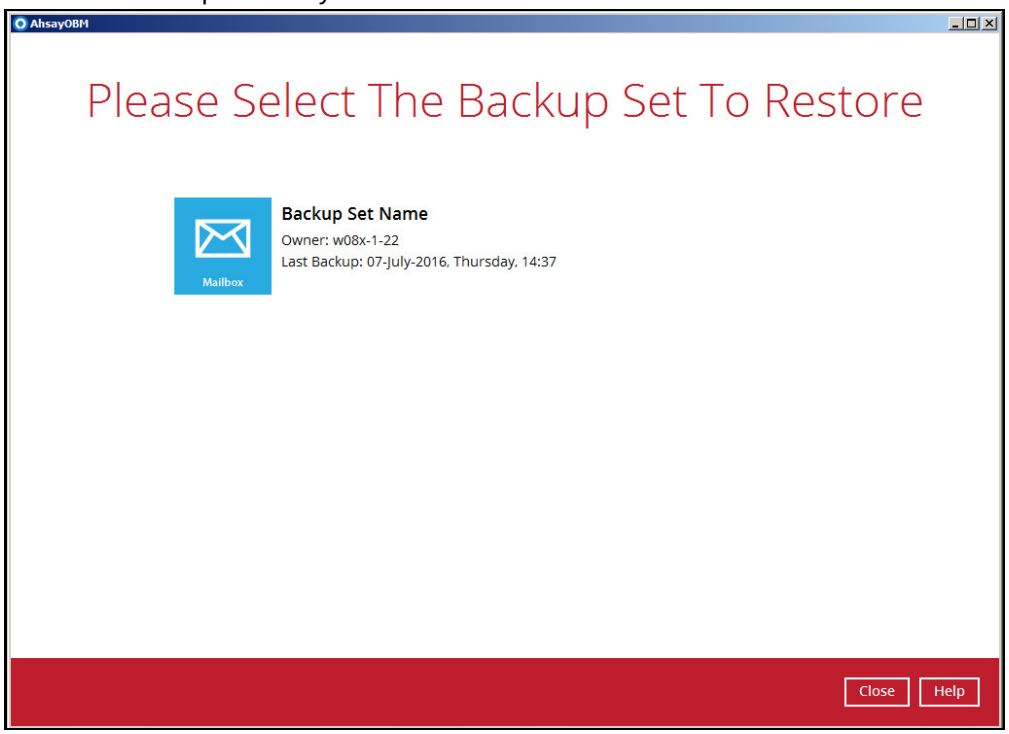
When you can identify which Exchange server hosted the active database, you can logon to that Exchange server to restore the database.

7.2 Restoring Mail for Exchange Server in DAG

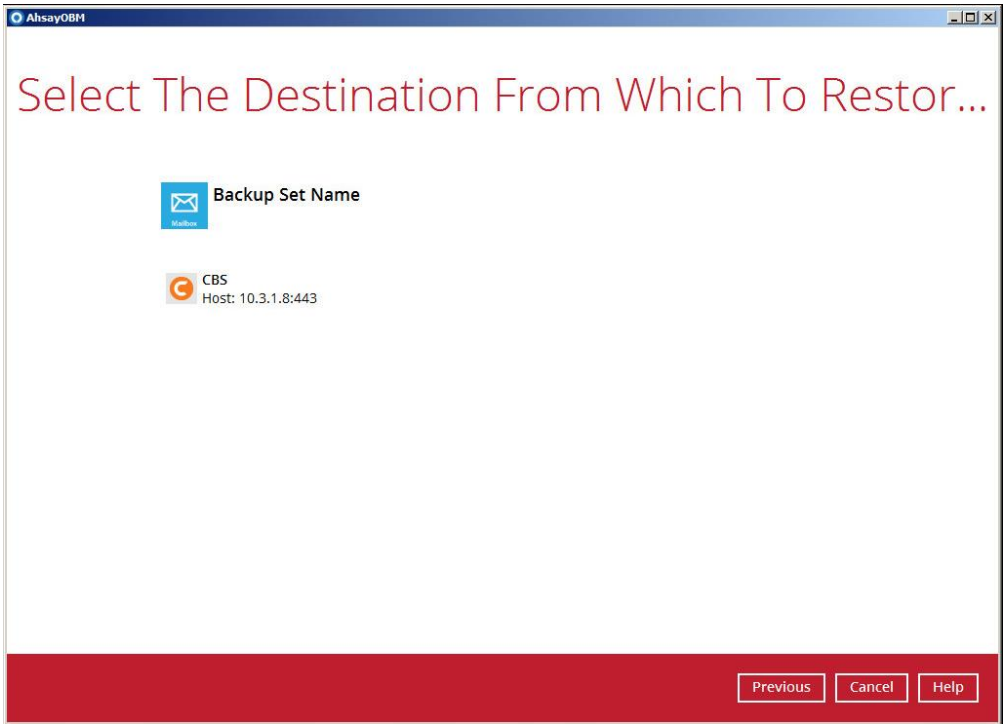
1. In the AhsayOBM main interface, click **Restore**.



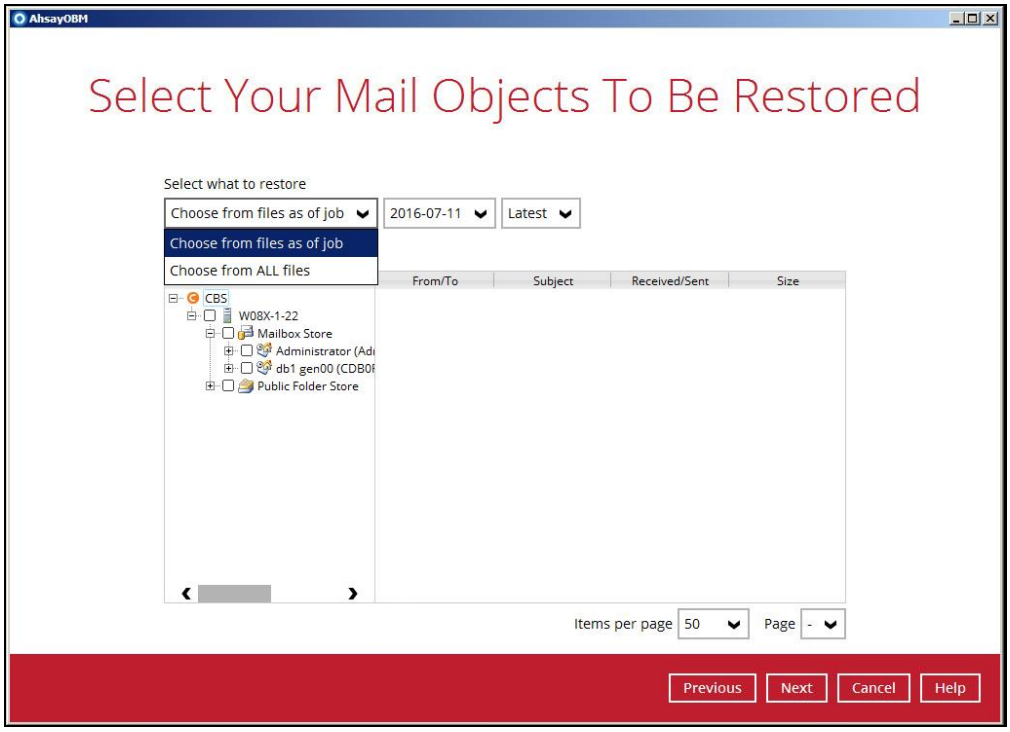
2. Select the backup set that you would like to restore mail from.



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



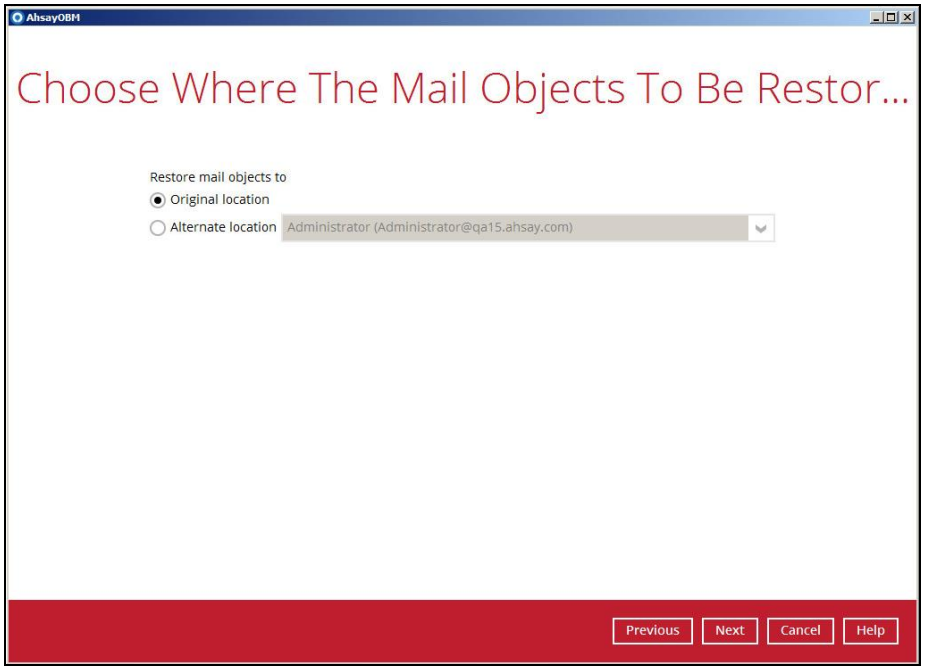
4. Click to expand the menu tree to select which mailbox to restore. You can also select mail item(s) from a specific backup job or all mail items that you have backed up to restore. Click **Next** to proceed.



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

- **Restore to Original Mailbox**

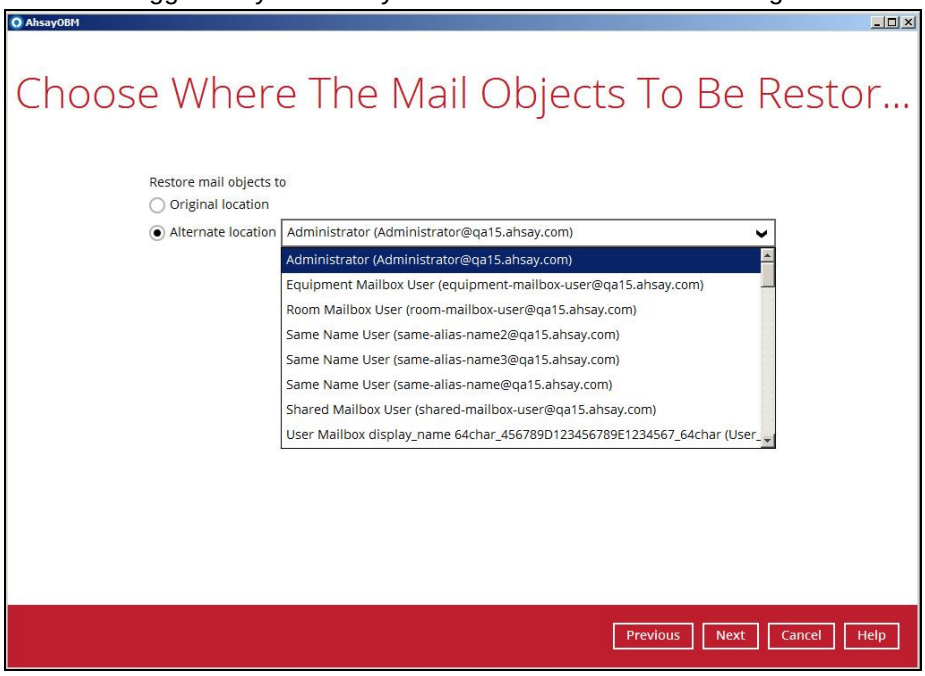
  Select the **Original location** option, then press **Next** to proceed.



- **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 with the same version of Exchange server installed. In this case, the restoration should be triggered by the AhsayOBM on the destination Exchange server.



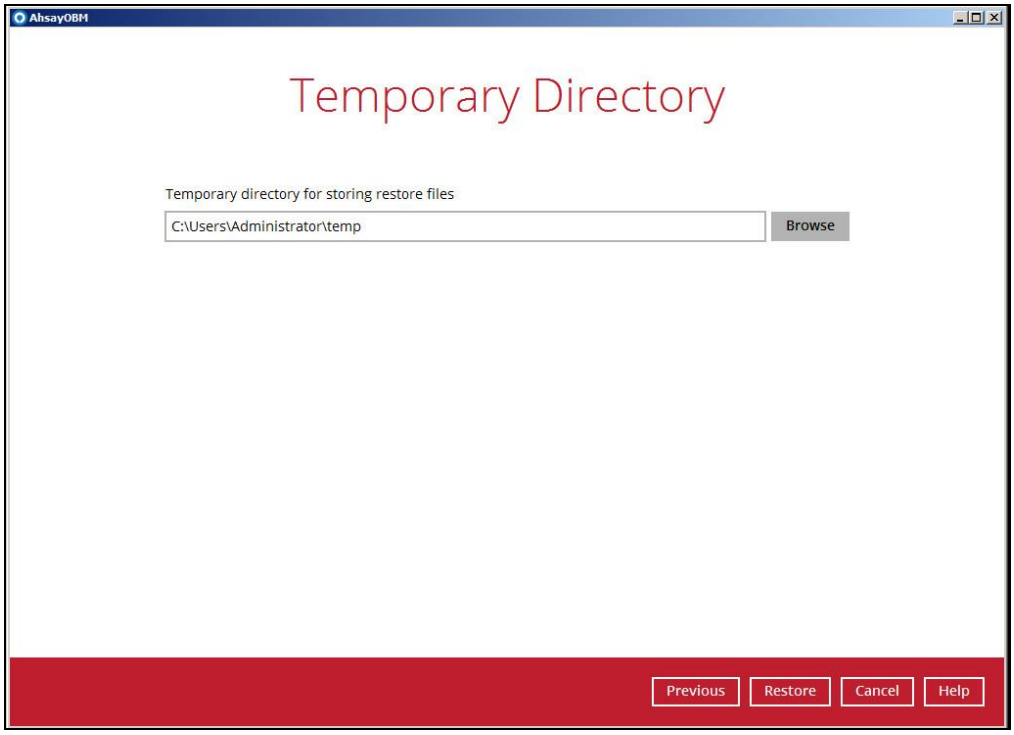
Limitation

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 attempt to restore item(s) to their respective destination folder based on the translation listed below.

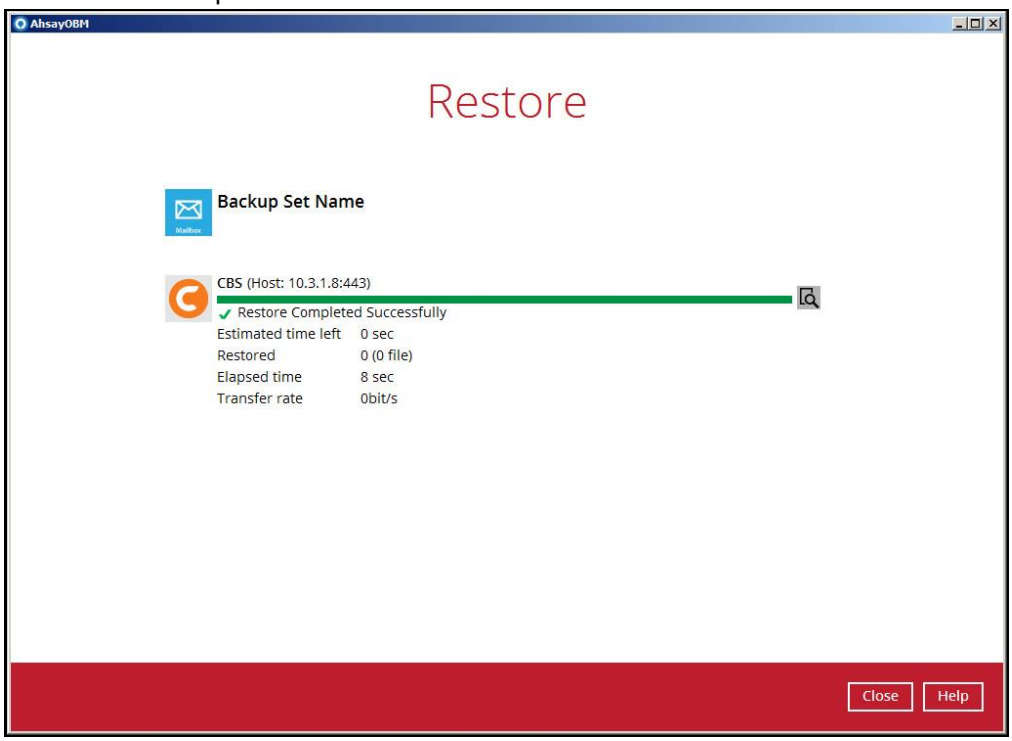
For folders such as 'Calendar' or 'Notes', a new folder 'Calendar' or 'Notes' will be created.

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
Calendar	Create new folder	Calendar
Notes	Create new folder	Notes

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



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



8 Technical Assistance

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

Use our Ahsay Wikipedia for resources such as Hardware Compatibility List, Software Compatibility List, and other product information:
http://wiki.ahsay.com

9 Documentation

Documentations for all Ahsay products are available at:
https://www.ahsay.com/jsp/en/home/index.jsp?pageContentKey=ahsay_downloads_documentation_guides

You can send us suggestions for improvements or report on issues in the documentation, by contacting us at:
https://www.ahsay.com/jsp/en/contact/kbQuestion.jsp

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