

Online Backup Manager v7

Microsoft Exchange Mail-Level Backup & Restore Guide

8 September 2017

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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

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1 Getting started

1.1 Introduction

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

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 or calendars, etc. A Mail-Level restoration cannot fully recover the Information Store after a disaster.

Important

Mail-Level Backup must be utilized in conjunction with full Information Store Backup, in order to fully protect the Exchange Server.

1.2 MS Exchange Server in Data Availability Group (DAG)

Exchange Server in Data Availability Group (DAG) provides higher availability for mail items backup and restoration. The Microsoft Exchange Mailbox add-on module is available if you are using Exchange server 2010/2013.

Refer to the URL for more details.

<https://technet.microsoft.com/en-us/library/dd298065%28v=exchg.150%29.aspx>

2 Best Practices and Recommendations

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

2.1 OBM Installation

The latest version of OBM must be installed on the Exchange Server hosting the database. For 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.

2.2 OBM Add-On Module Configuration

Make sure the Microsoft Exchange Mailbox feature has been enabled as an add-on module in your OBM user account. Contact your backup service provider for more details.

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

Scheduled backup is required if you choose to back up in DAG option, as OBM on all DAG members will base on the scheduled backup time to start backups on 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.

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.

2.4 Temporary Directory Folder

Temporary Directory folder is used by OBM 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 plenty of free disk space.

2.5 Mailbox Access Permission

The Active Directory account used for 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"
```

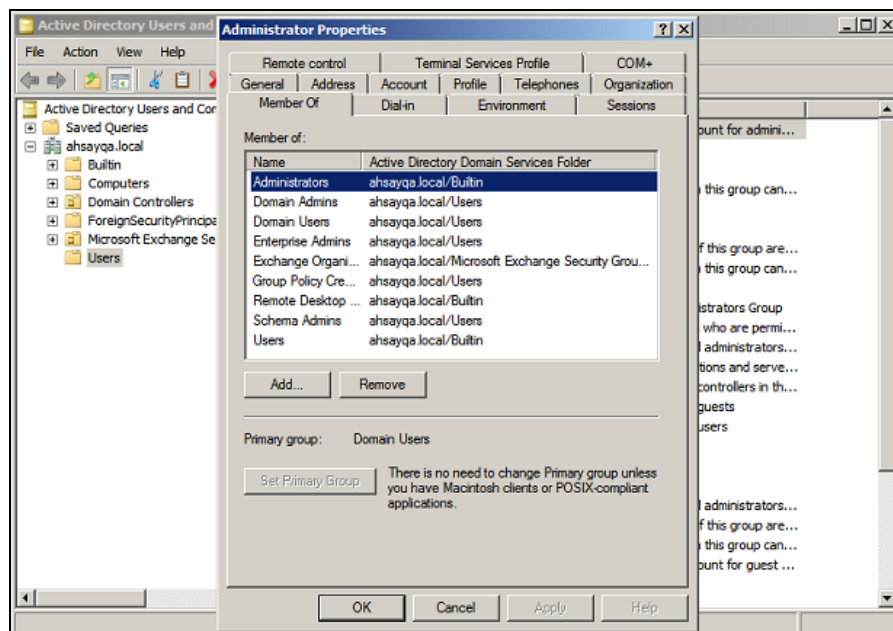
Reboot the Exchange Server after executing the command.

2.6 Membership Settings of the Operating System Account

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

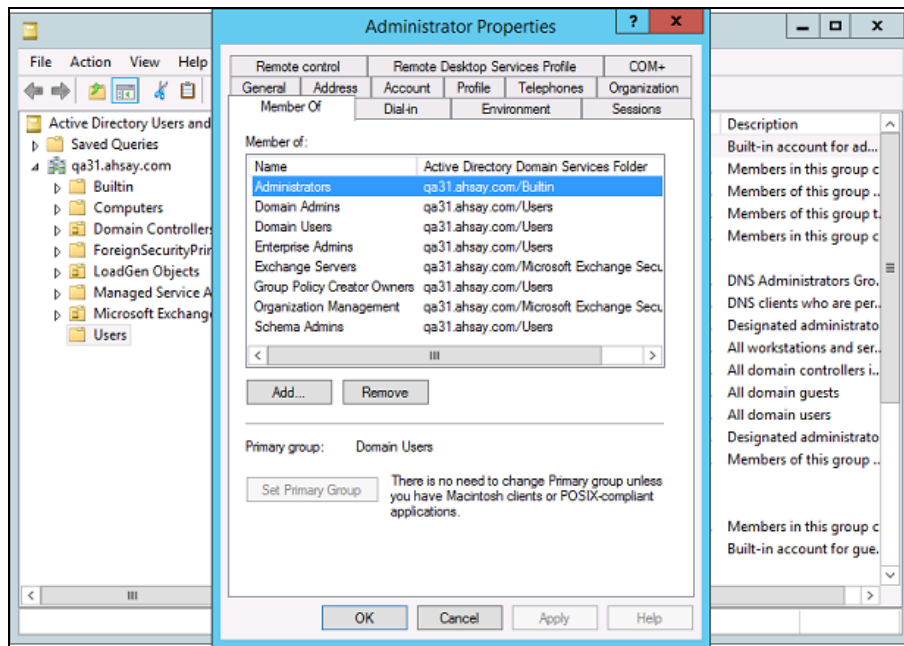
Exchange Server 2007

- ▶ 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.

2.7 Remote Exchange Management Shell

For setup on Exchange Server 2010 / 2013, 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.

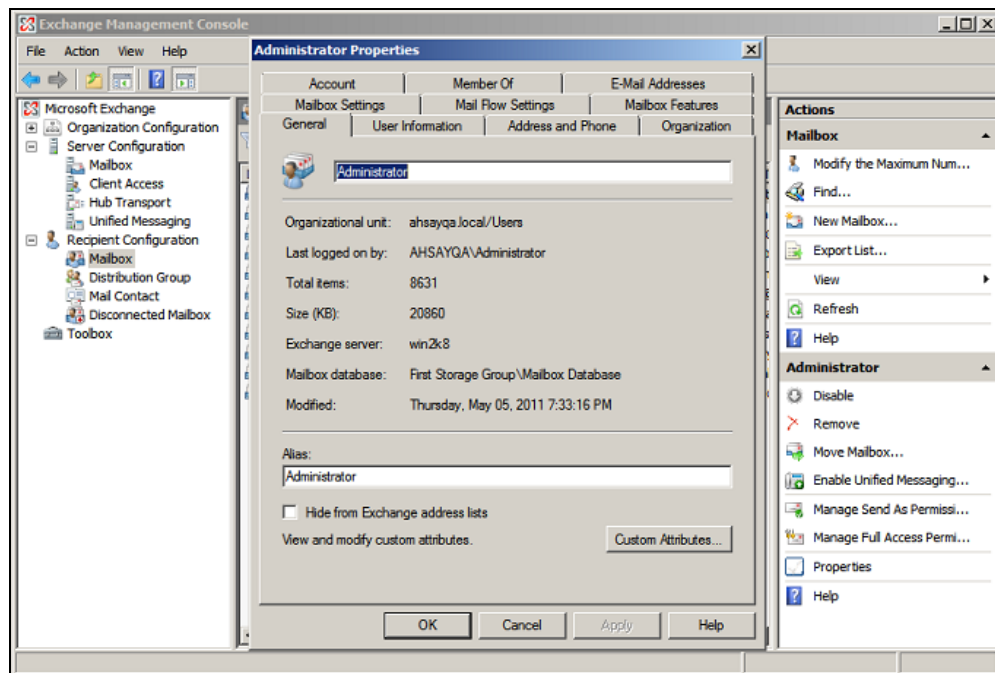
2.8 Enabling Mailbox

Make sure the account for backup mailbox has been 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](https://technet.microsoft.com/en-us/library/jj991919(v=exchg.150).aspx)

2.9 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

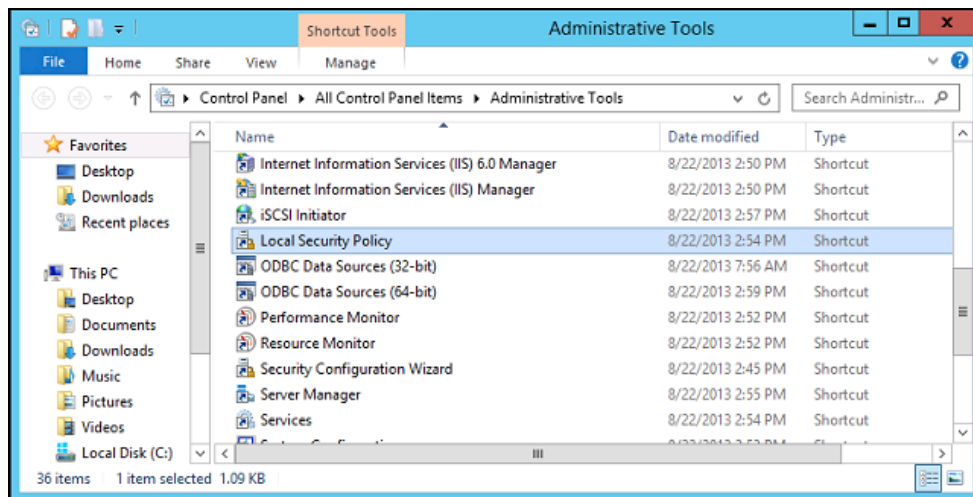
<https://www.microsoft.com/en-gb/download/details.aspx?id=42040>

2.10 LAN Manager Authentication Level

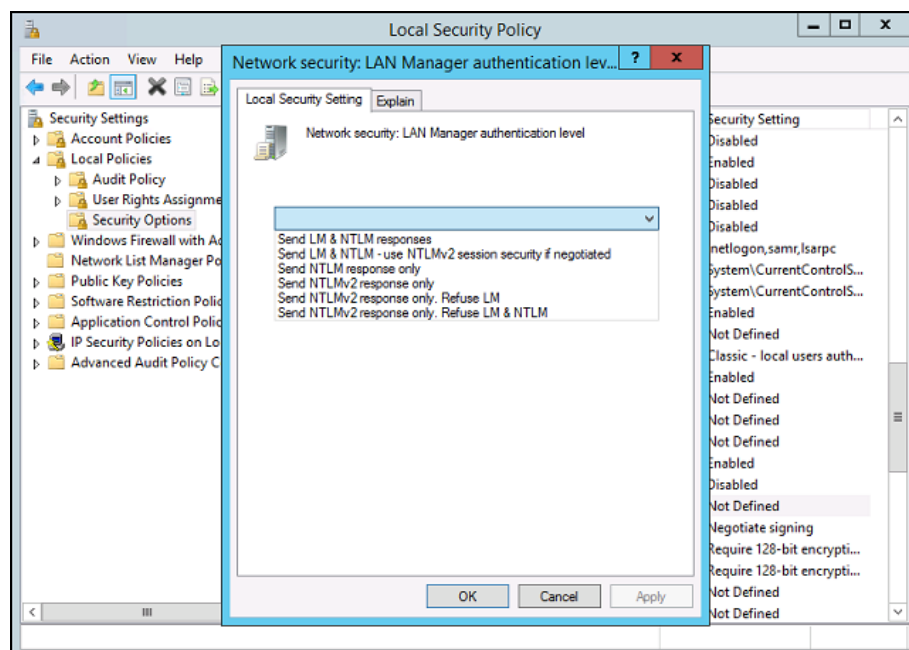
Exchange Server 2013

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



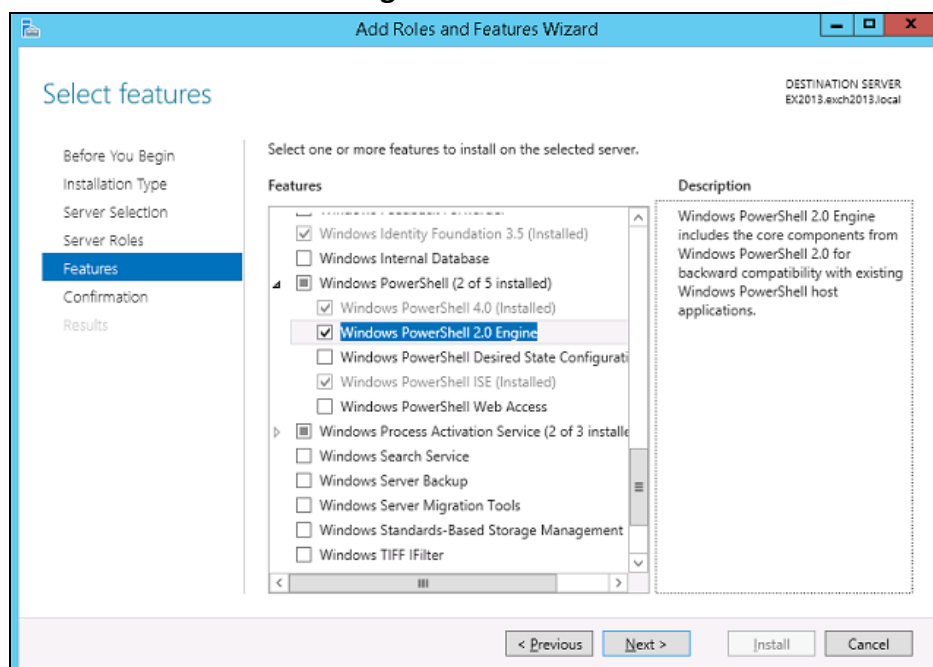
2.11 Windows PowerShell 2.0 Engine

Make sure the Windows PowerShell 2.0 Engine is installed.

Exchange Server 2013

To install the feature:

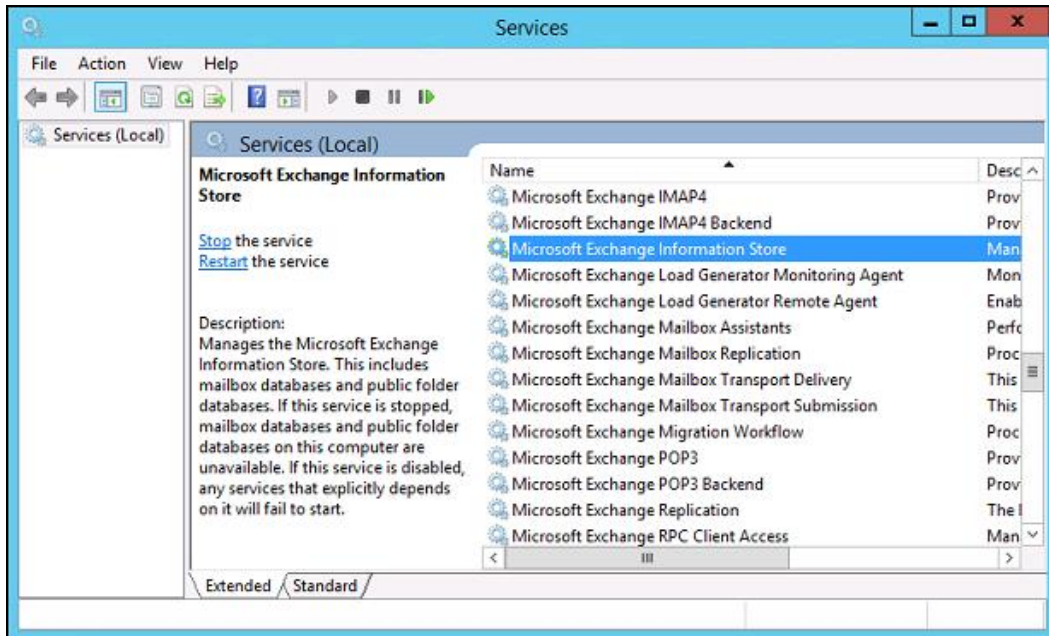
1. Navigate to **Server Manager > Manage**, then select **Add Roles and Features**.
2. On the **Select installation type** screen, select **Role-based or feature-based** installation.
3. Select the target server.
4. On the **Select features** screen, go to the **Features** option, check the box next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



2.12 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**.



2.13 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
```

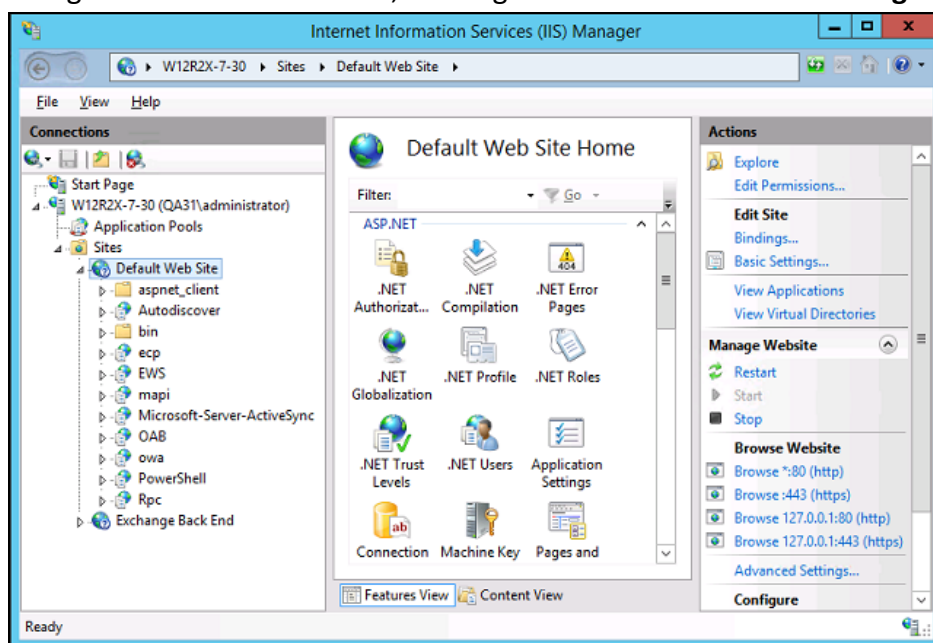
4. Reboot the Exchange server.

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

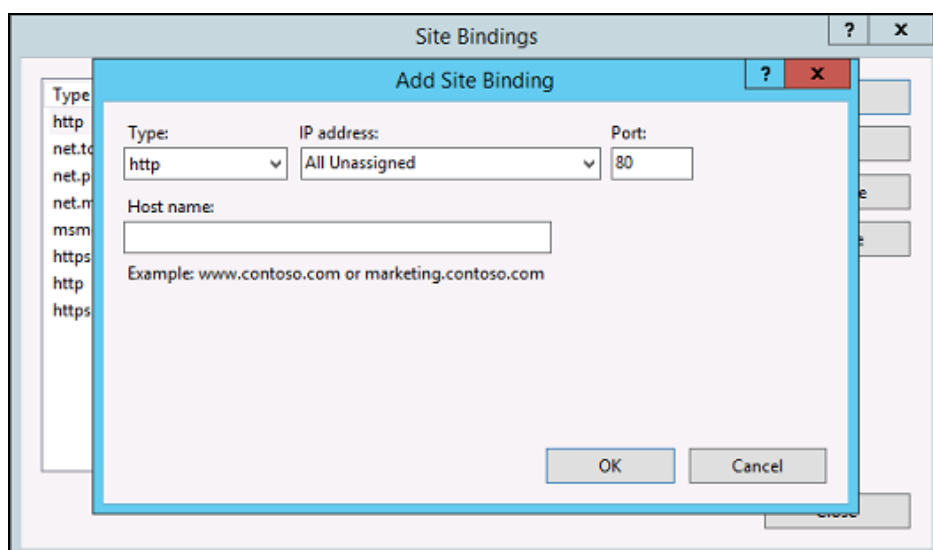
Confirm on the connection to the Exchange Management Shell (EMS) or Exchange Management Console (EMC).

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.

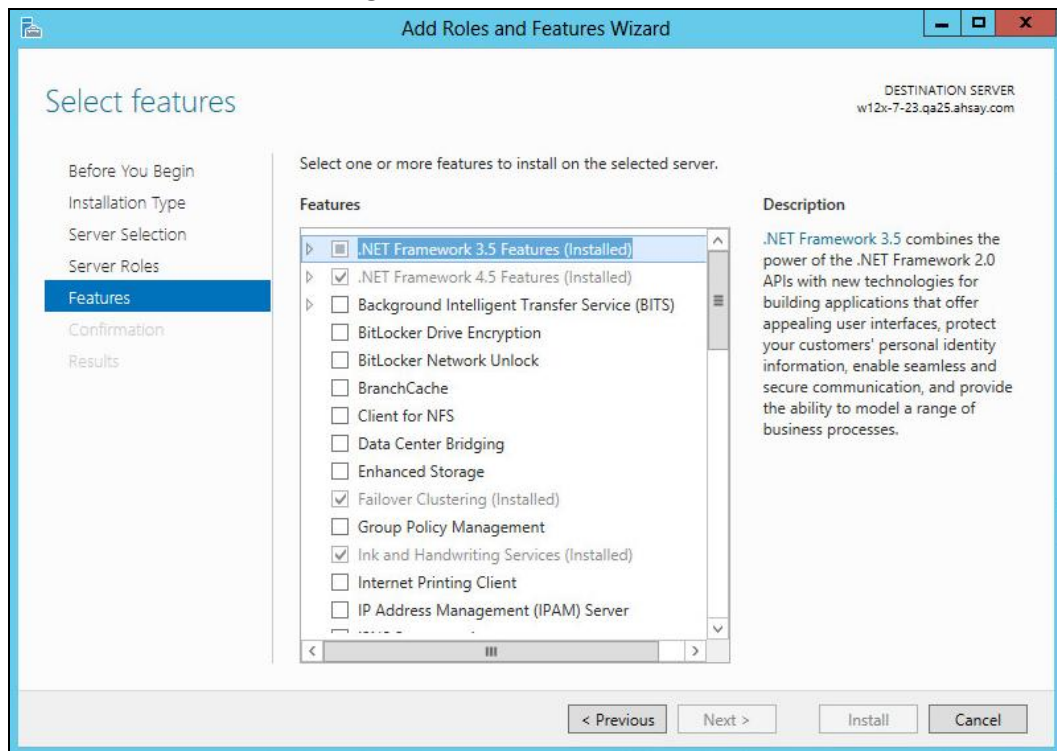


4. Restart IIS.

2.15 .Net Framework 3.5 Features

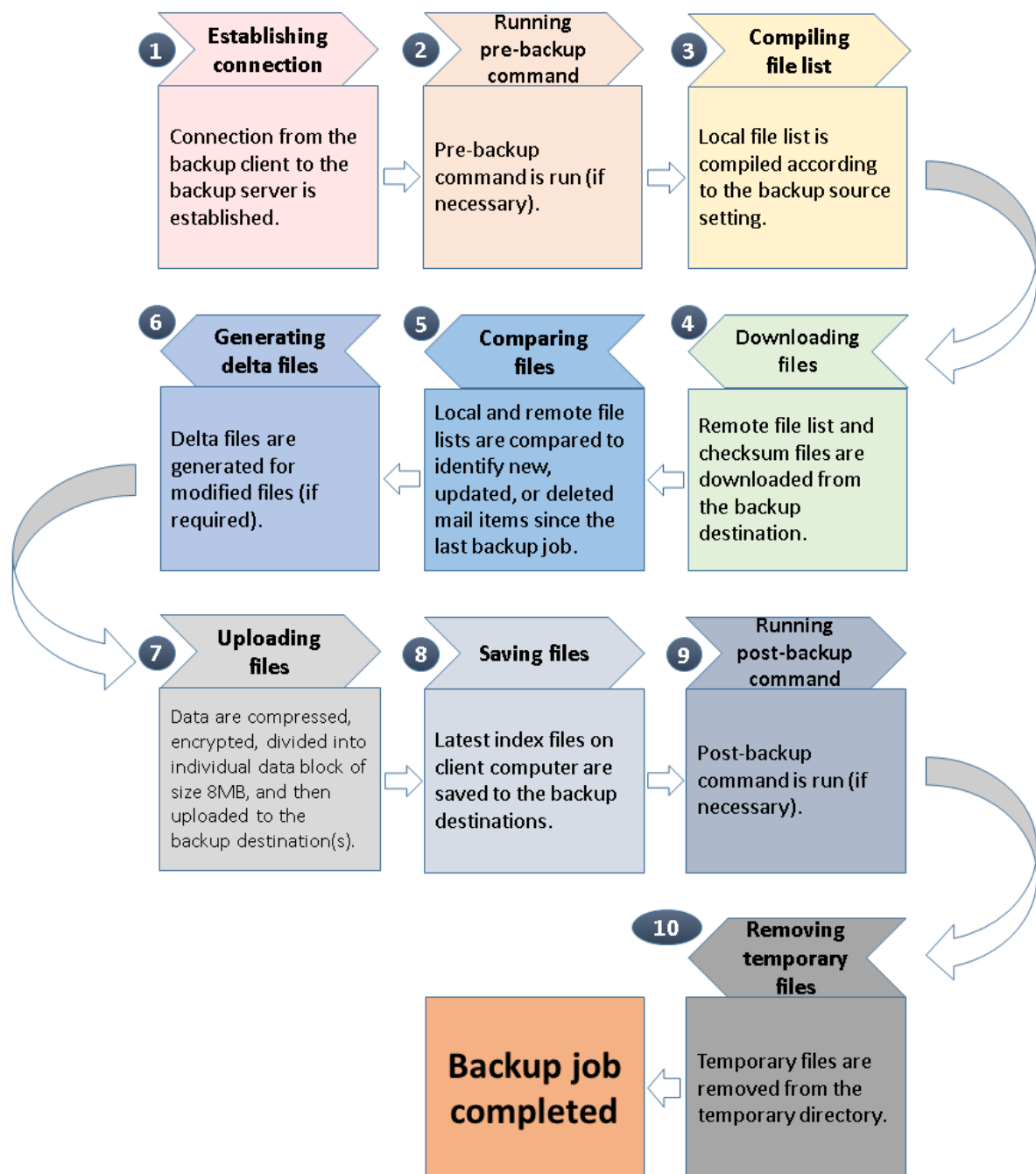
If you are using Exchange server 2013 on Windows server 2012, please install **.Net Framework 3.5 Features**.

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



3 Overview of MS Exchange Mail-Level Backup Process

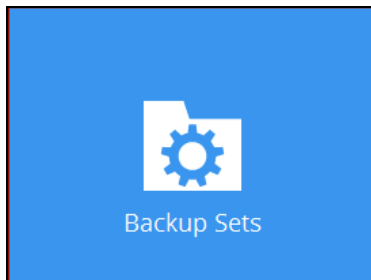
The following steps are performed during an Exchange mail-level backup job:



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 OBM.



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.

Create Backup Set

Name

Backup set type

 MS Exchange Mail Level Backup ▼

Version

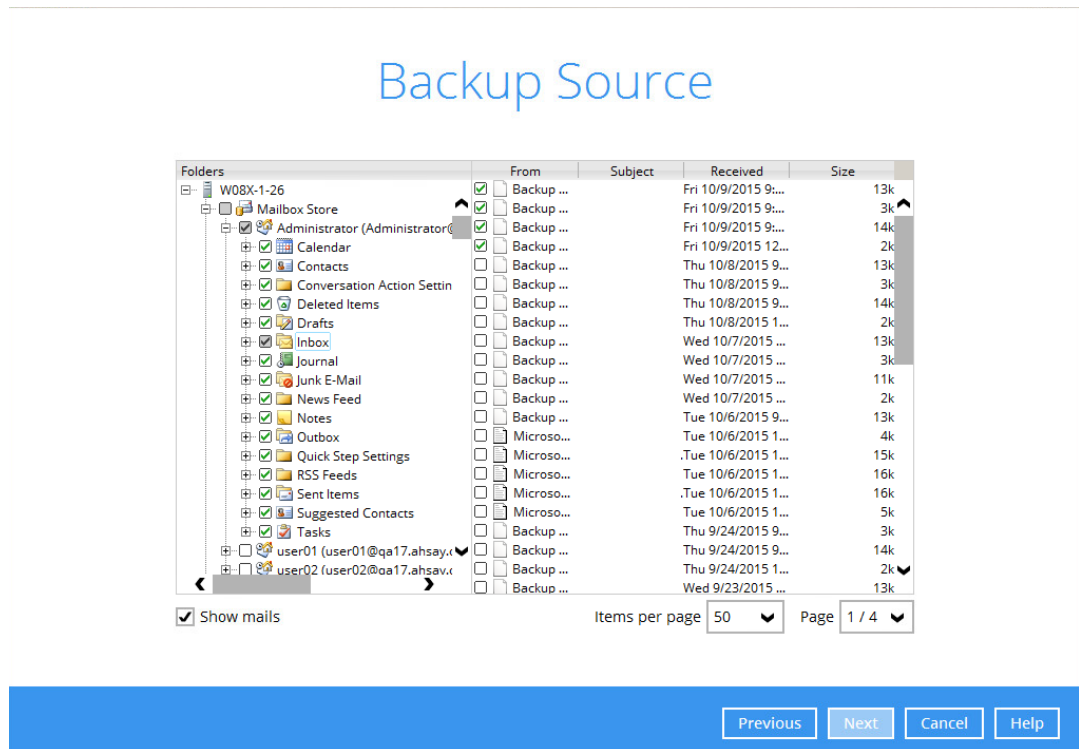
Microsoft Exchange Server 2007 ▼

Next Cancel Help

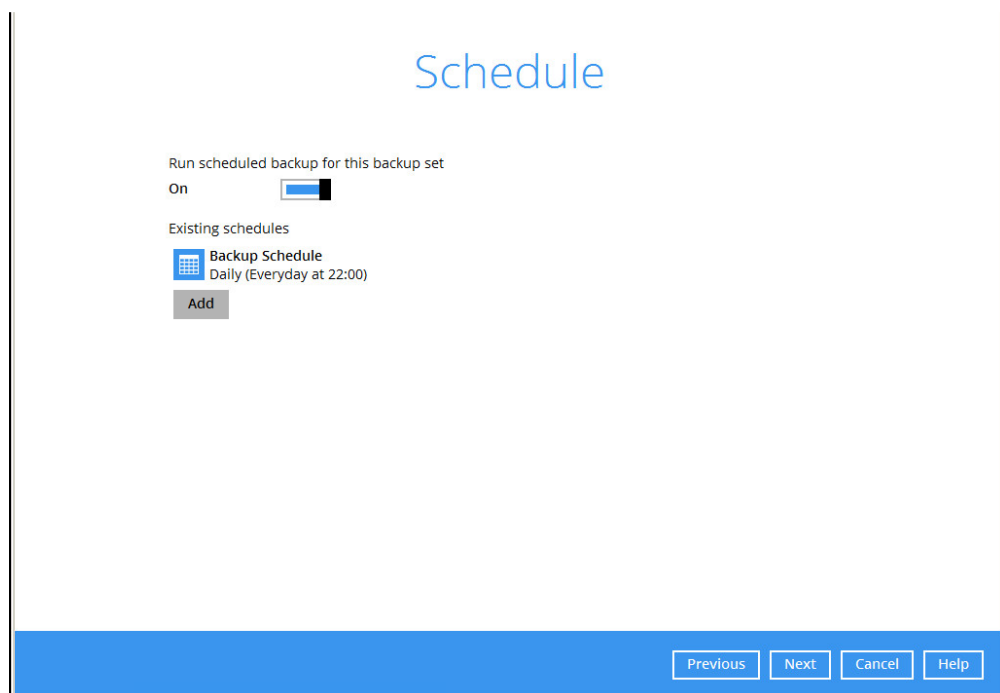
4. In the **Backup Source** menu, select the Mailbox Store for backup.

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.

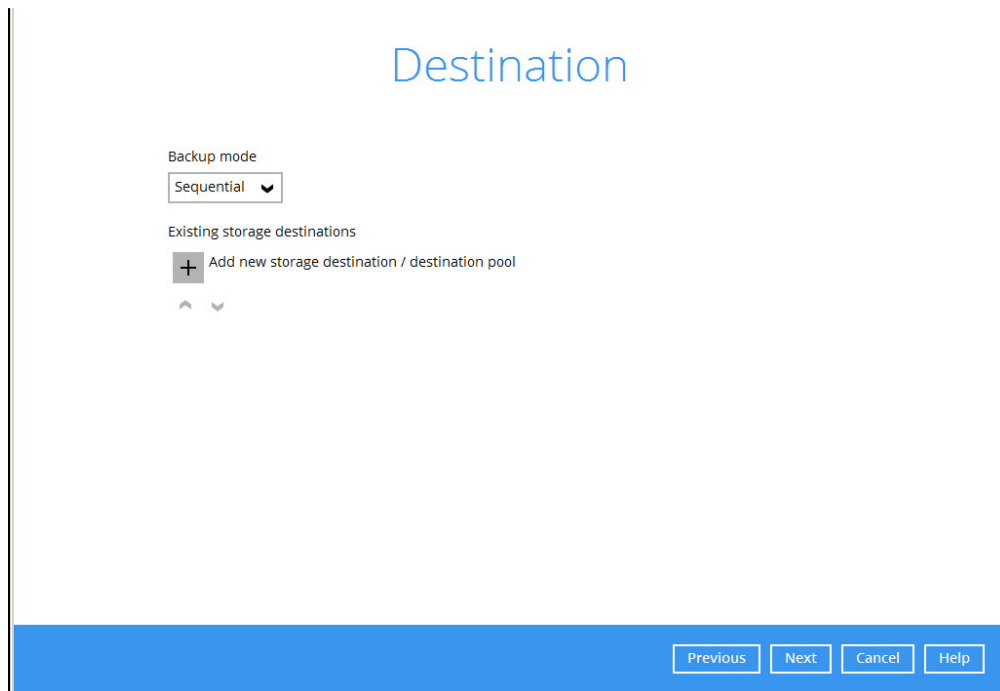


5. In the Schedule menu, you can configure a backup schedule for backup job to run automatically at your specified time interval. Click **Add** to add a new schedule, then click **Next** to proceed when you are done setting.



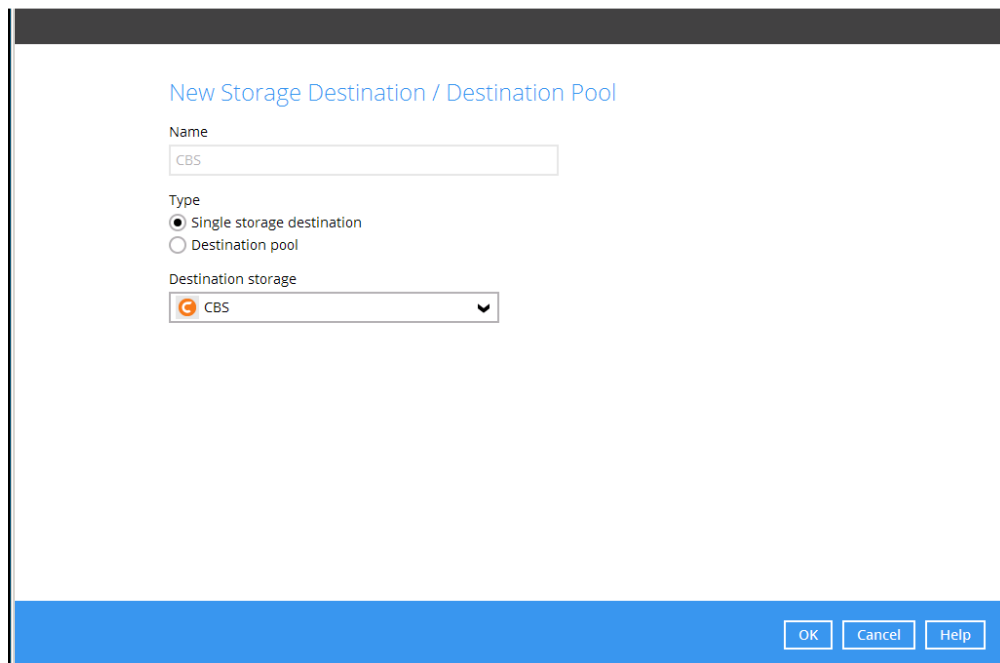
Note: By default, a daily backup scheduled for 22:00 is created automatically.

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**.



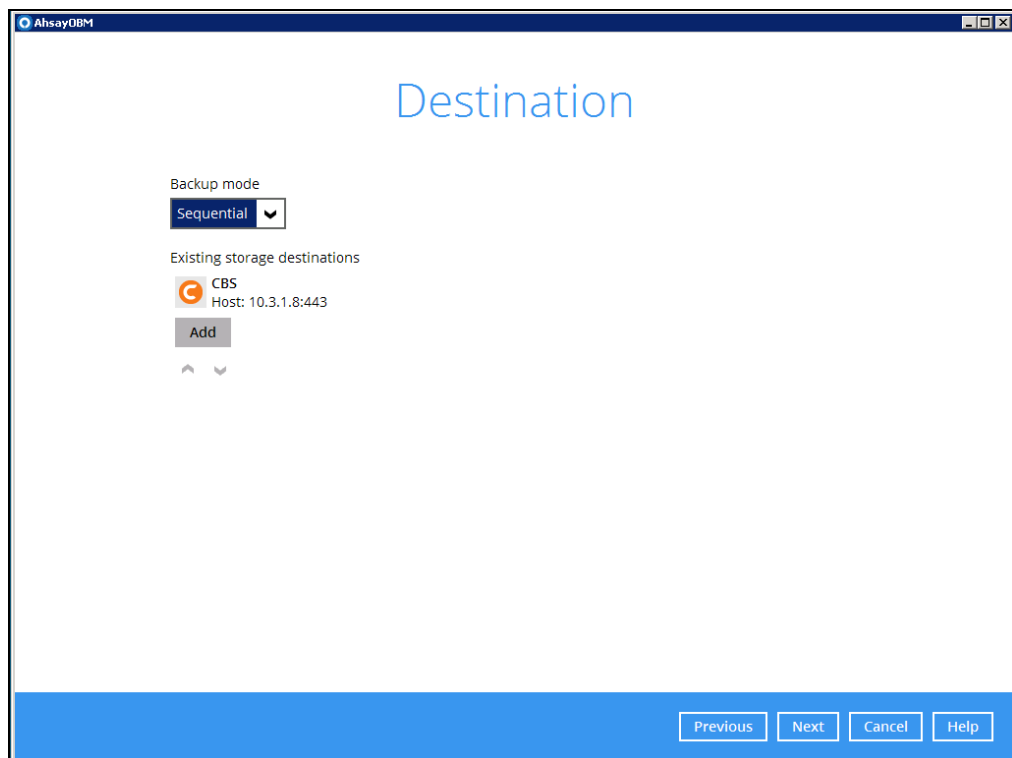
The screenshot shows a window titled "Destination" in blue text. Below the title, there is a "Backup mode" section with a dropdown menu currently set to "Sequential". Underneath, the "Existing storage destinations" section features a grey button with a "+" icon and the text "Add new storage destination / destination pool". Below this button are two small, faint icons. At the bottom of the window, a blue bar contains four buttons: "Previous", "Next", "Cancel", and "Help".

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

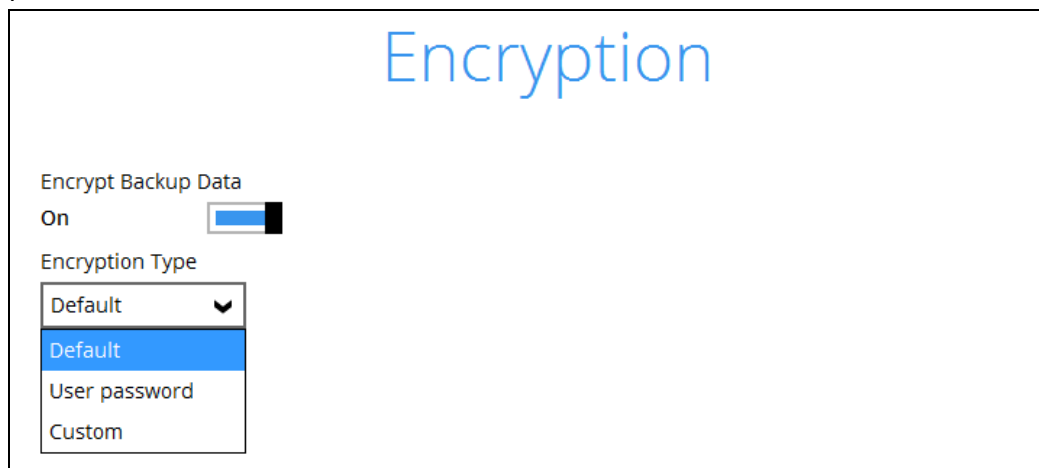


The screenshot displays a window titled "New Storage Destination / Destination Pool" in blue text. It contains three main sections: "Name" with a text input field containing "CBS"; "Type" with two radio buttons, "Single storage destination" (which is selected) and "Destination pool"; and "Destination storage" with a dropdown menu showing "CBS" and a small orange icon to its left. At the bottom, a blue bar contains three buttons: "OK", "Cancel", and "Help".

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 OBM at the time when this backup set is created. Please be reminded that if you change the OBM 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.

The screenshot shows the 'Encryption' settings window. At the top, the title 'Encryption' is displayed in blue. Below it, the 'Encrypt Backup Data' toggle is set to 'On'. The 'Encryption Type' dropdown is set to 'Custom'. The 'Algorithm' dropdown is set to 'AES'. The 'Encryption key' field contains six asterisks. The 'Re-enter encryption key' field also contains six asterisks. The 'Method' section has two radio buttons: 'ECB' (unselected) and 'CBC' (selected). The 'Key length' section has two radio buttons: '128-bit' (unselected) and '256-bit' (selected).

WARNING: If a note of the encryption key is NOT taken, and the key is LOST, the data will be irretrievable. Always ensure you take a note of the encryption key.

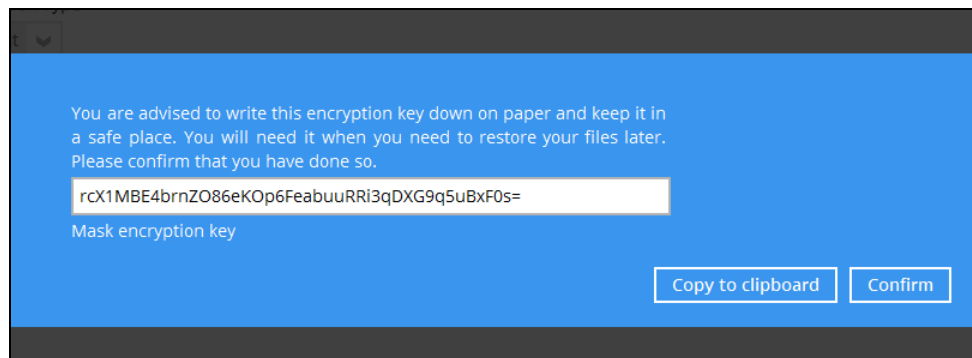
Click **Next** when you are done setting.

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 screenshot shows the 'Encryption' pop-up window. The title 'Encryption' is displayed in blue. Below it, the 'Encrypt Backup Data' toggle is set to 'On'. The 'Encryption Type' dropdown is set to 'Default'. A blue banner contains the text: '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.' Below the banner, there is a text input field containing six asterisks. Below the input field, the text 'Unmask encryption key' is displayed. At the bottom right, there are two buttons: 'Copy to clipboard' and '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.

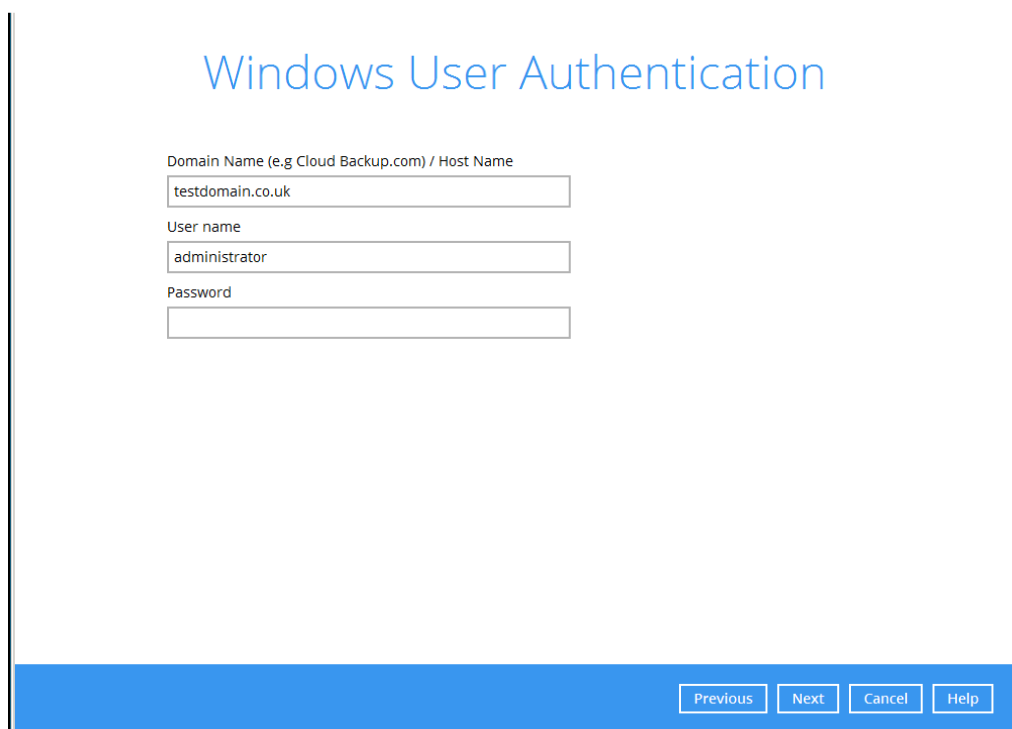


A blue pop-up window with a dark grey header and footer. The main content area is blue and contains the following text: "You are advised to write this encryption key down on paper and keep it in a safe place. You will need it when you need to restore your files later. Please confirm that you have done so." Below this text is a text input field containing the encryption key: "rcX1MBE4brnZO86eKOp6FeabuuRRI3qDXG9q5uBxF0s=". Below the input field is the label "Mask encryption key". At the bottom right of the window are two buttons: "Copy to clipboard" and "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

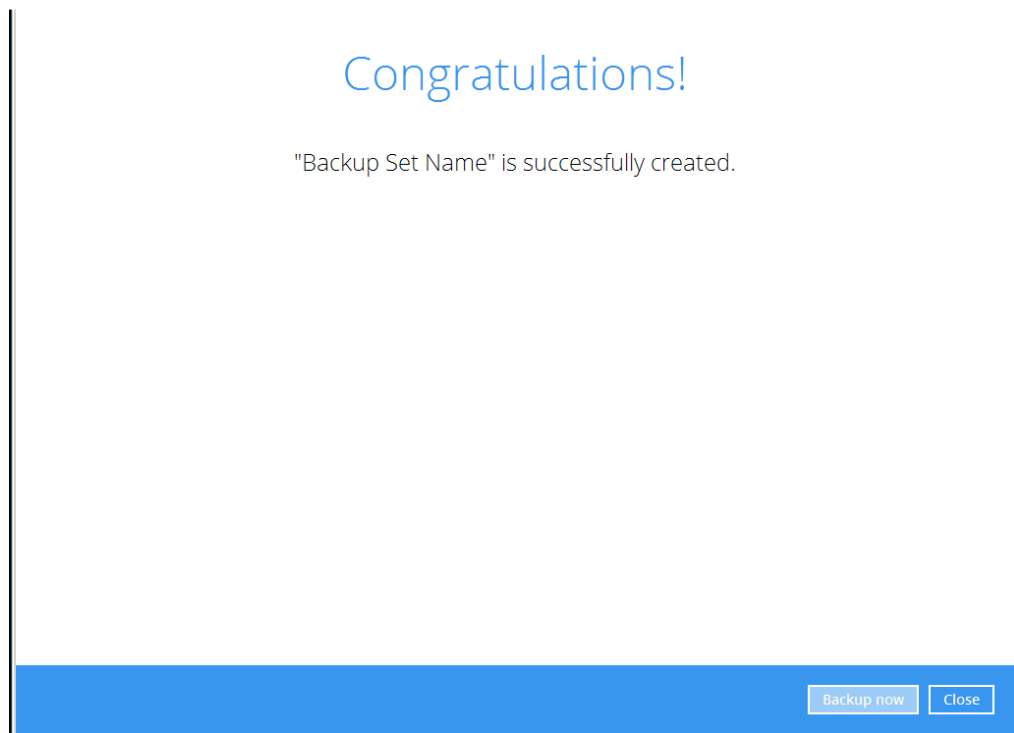
WARNING: If a note of the encryption key is NOT taken, and the key is LOST, the data will be irretrievable. Always ensure you take a note of the encryption key.

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



A white window titled "Windows User Authentication" in blue text. Below the title are three text input fields: "Domain Name (e.g Cloud Backup.com) / Host Name" with the value "testdomain.co.uk", "User name" with the value "administrator", and "Password" which is empty. At the bottom of the window is a blue bar containing four buttons: "Previous", "Next", "Cancel", and "Help".

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



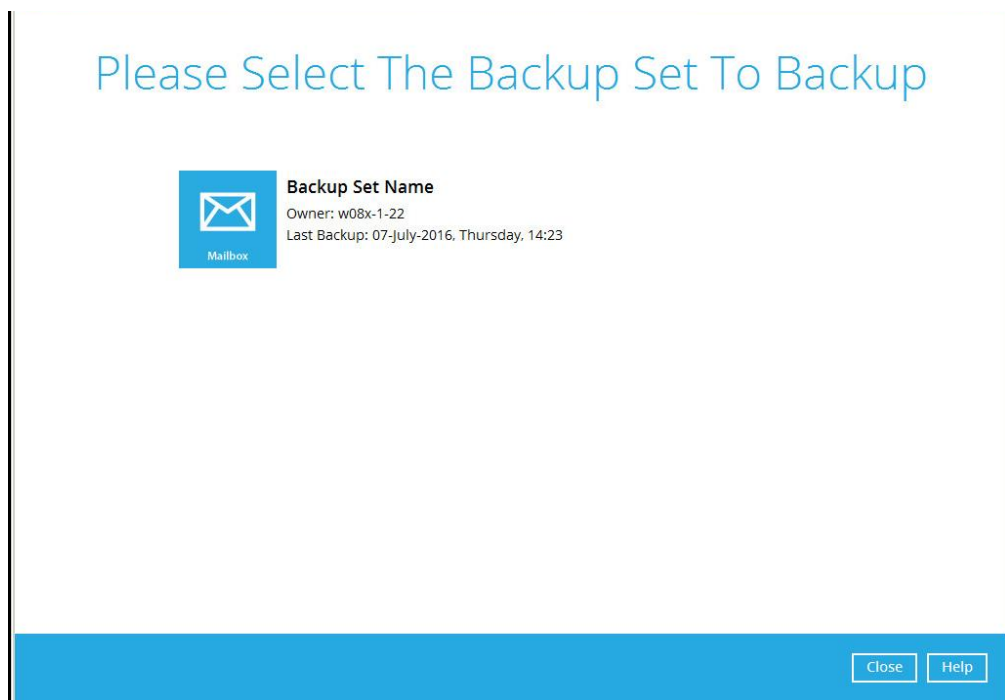
13. Click **Backup now** to start a backup immediately, or you can run a backup job later by following the instructions in [Running Mail-Level Backup Job for Microsoft Exchange 2007/2010/2013](#).

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

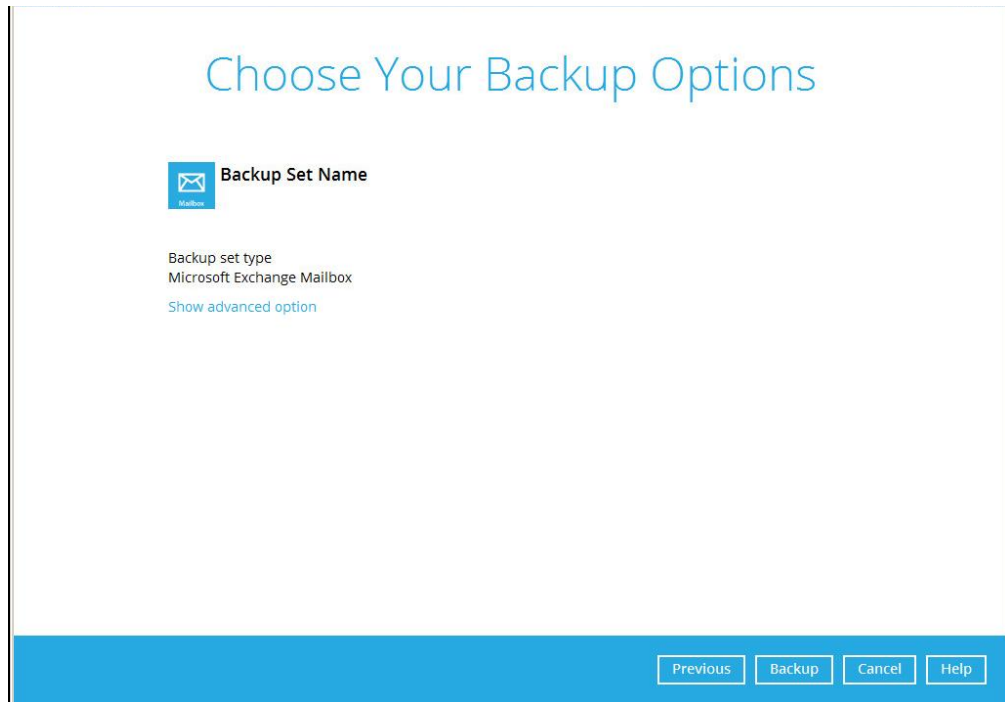
1. Log in to OBM.
2. Click the Backup icon on the main interface of OBM.



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**.

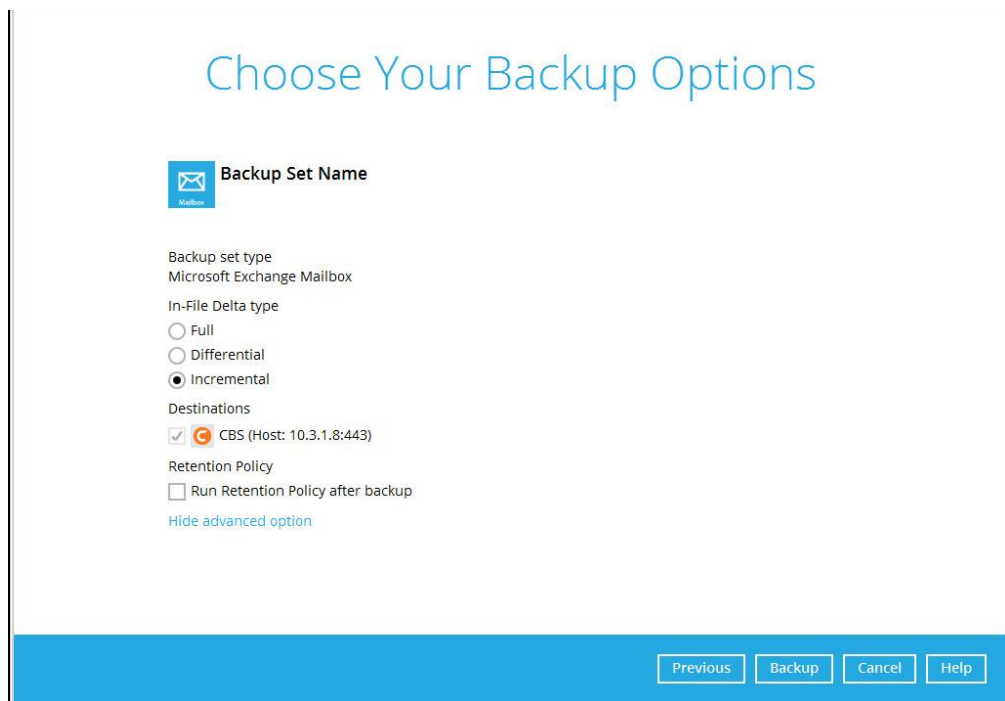


Choose Your Backup Options

 **Backup Set Name**

Backup set type
Microsoft Exchange Mailbox
[Show advanced option](#)

[Previous](#) [Backup](#) [Cancel](#) [Help](#)



Choose Your Backup Options

 **Backup Set Name**

Backup set type
Microsoft Exchange Mailbox

In-File Delta type

☐ Full
☐ Differential
☒ Incremental

Destinations

☒  CBS (Host: 10.3.1.8:443)

Retention Policy

☐ Run Retention Policy after backup
[Hide advanced option](#)

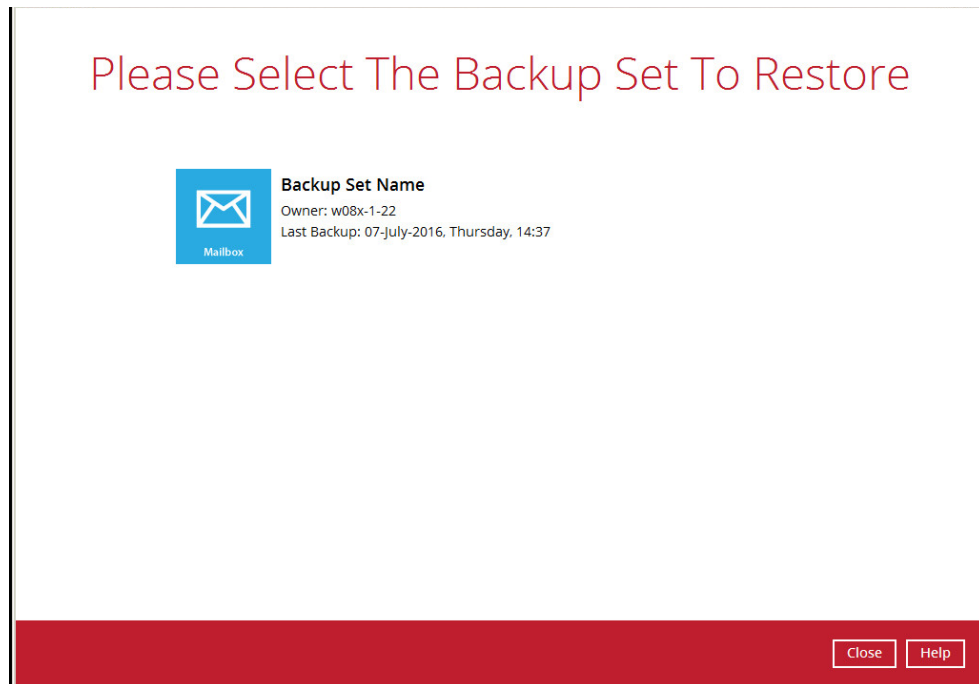
[Previous](#) [Backup](#) [Cancel](#) [Help](#)

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

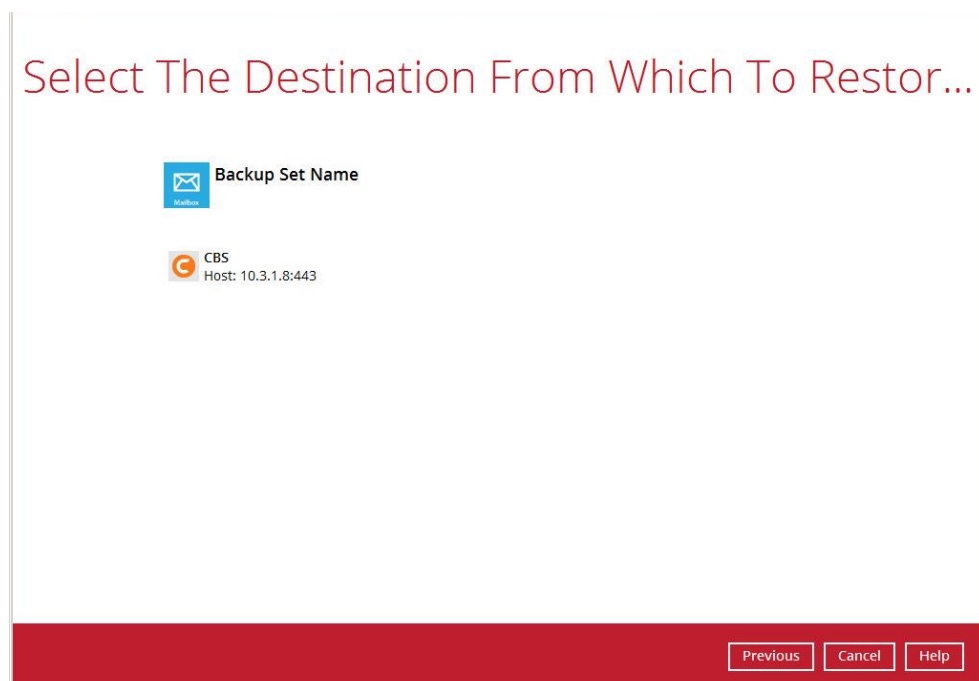
5 Performing Mail-Level Restoration for Microsoft Exchange 2007/2010/2013

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

1. In the OBM 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.



- 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.

Select what to restore

Choose from files as of job 2016-07-11 Latest

Choose from files as of job

Choose from ALL files

CBS

W08X-1-22

Mailbox Store

Administrator (Adi)

db1 gen00 (CDB0f)

Public Folder Store

From/To	Subject	Received/Sent	Size
---------	---------	---------------	------

Items per page 50 Page 1

Previous Next Cancel Help

- 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.

Choose Where The Mail Objects To Be Restored

Restore mail objects to

☒ Original location

☐ Alternate location Administrator (Administrator@qa15.ahsay.com)

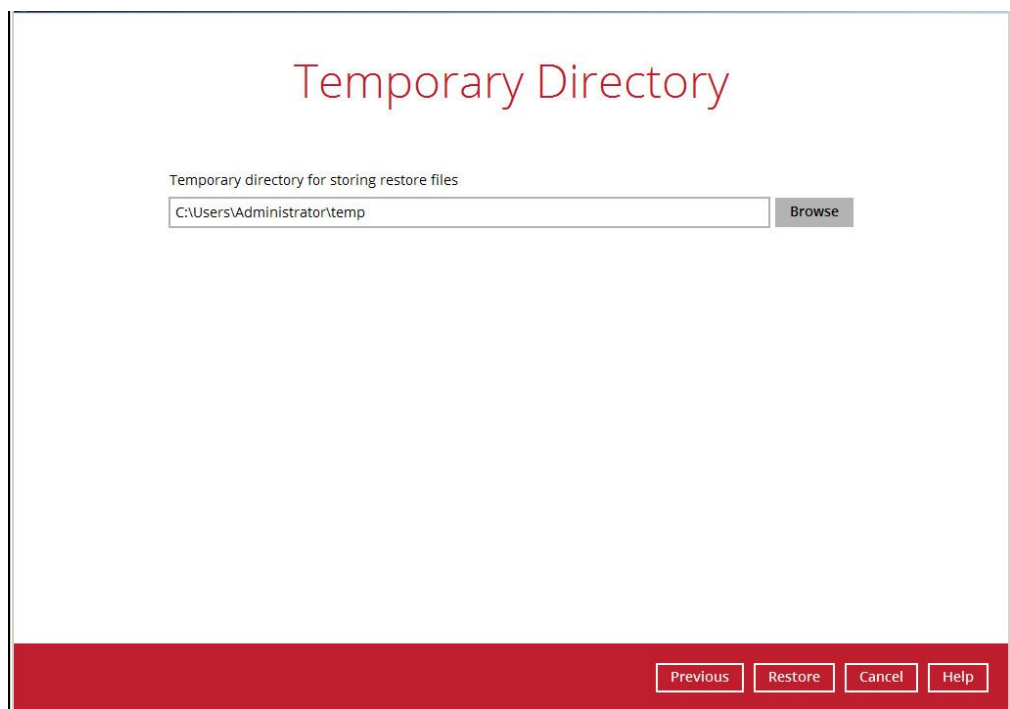
Previous Next Cancel Help

• **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 OBM on the destination Exchange server.

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

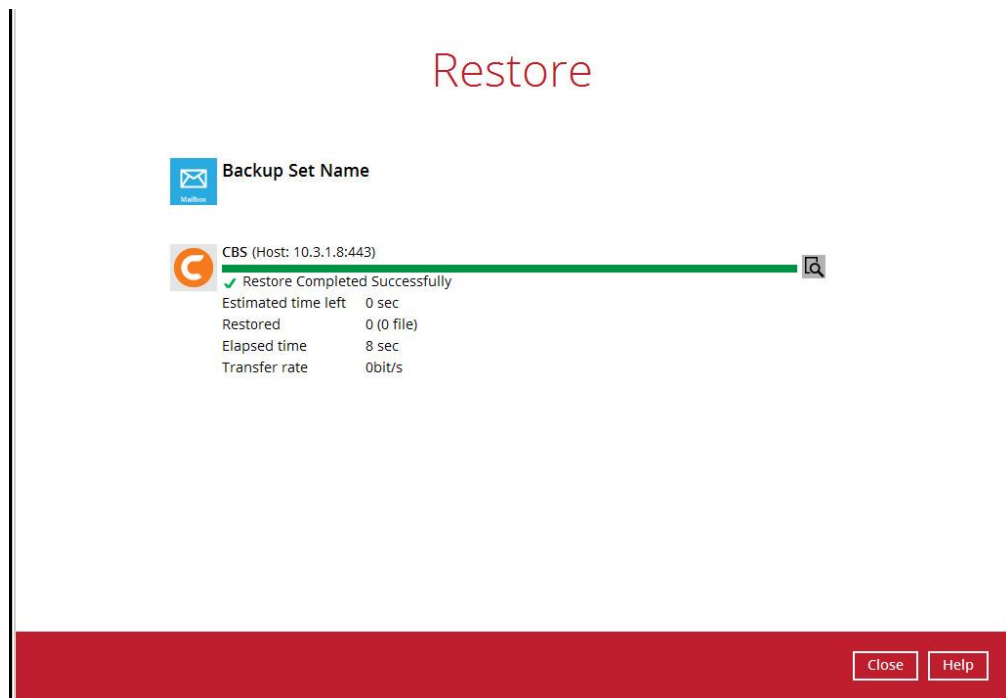


Temporary Directory

Temporary directory for storing restore files

C:\Users\Administrator\temp

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 OBM 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 OBM.



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.

Create Backup Set

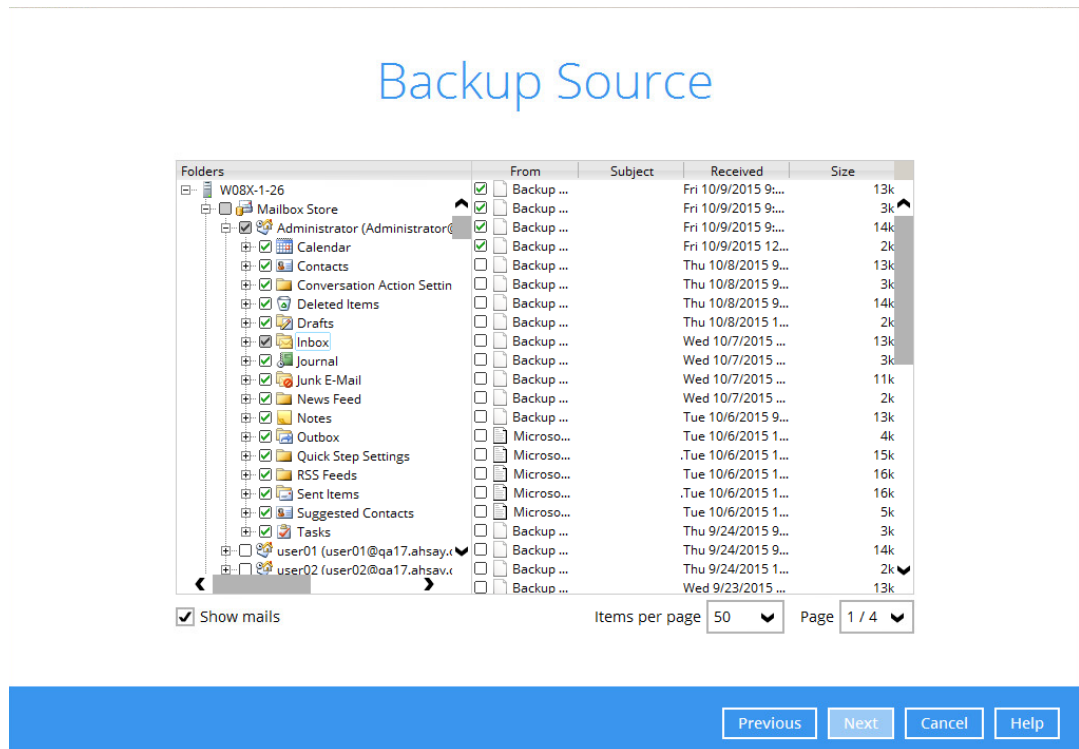
Name

Backup set type
 ▼

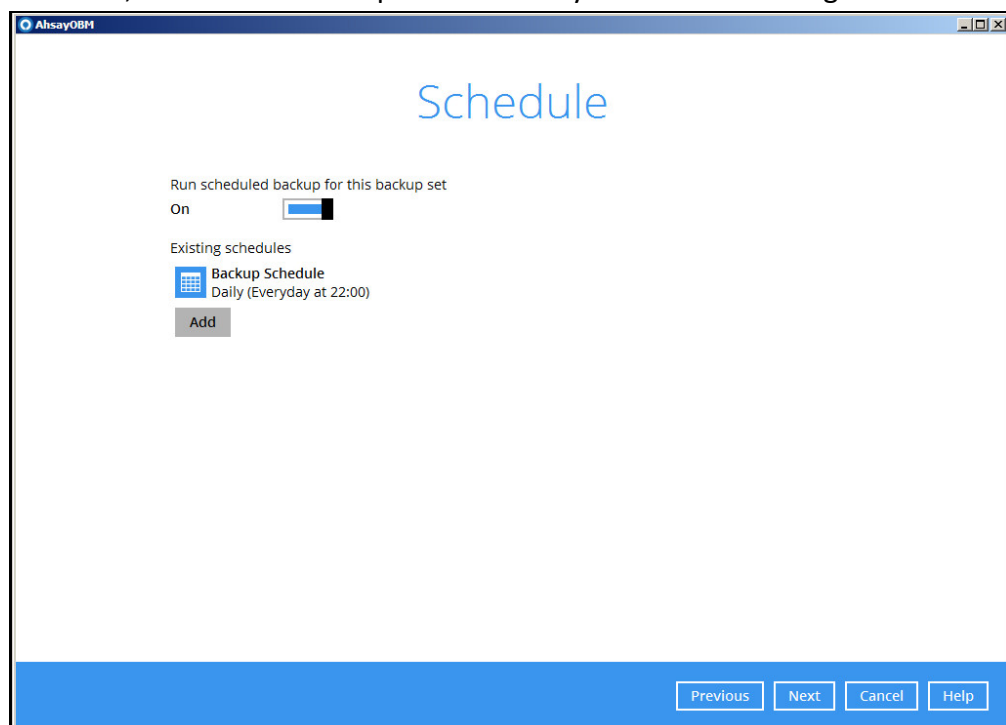
Version
 ▼

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

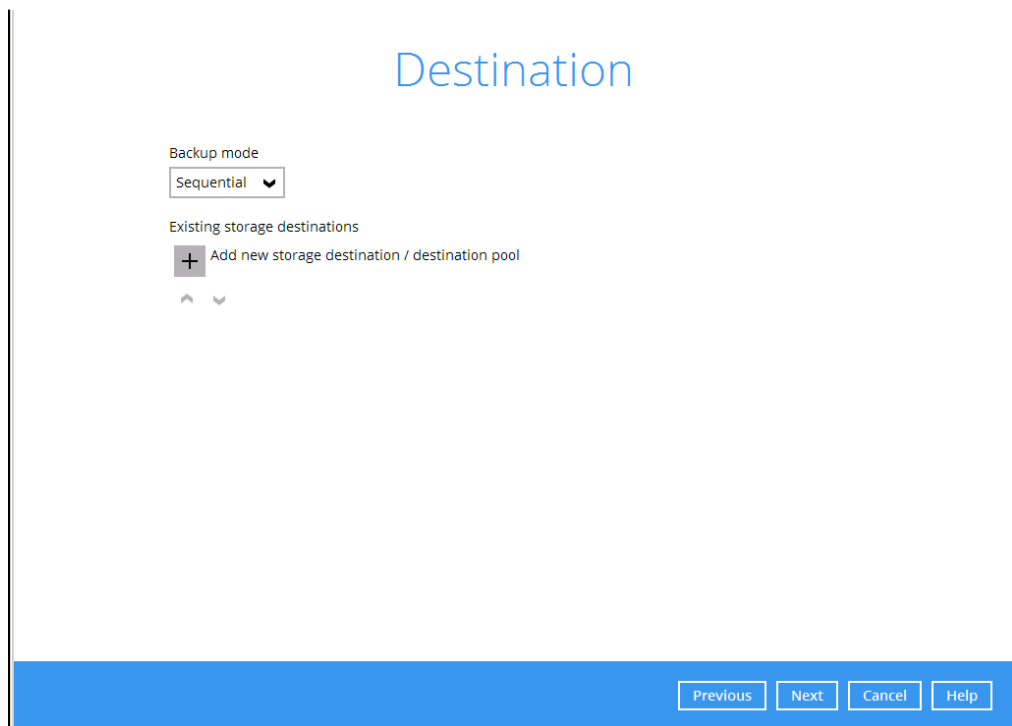
You can click to expand the mailbox store to select which mailbox to back up, and then click **Show mails** to select individual mail to back up. Click **Next** to proceed when you are done.



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.

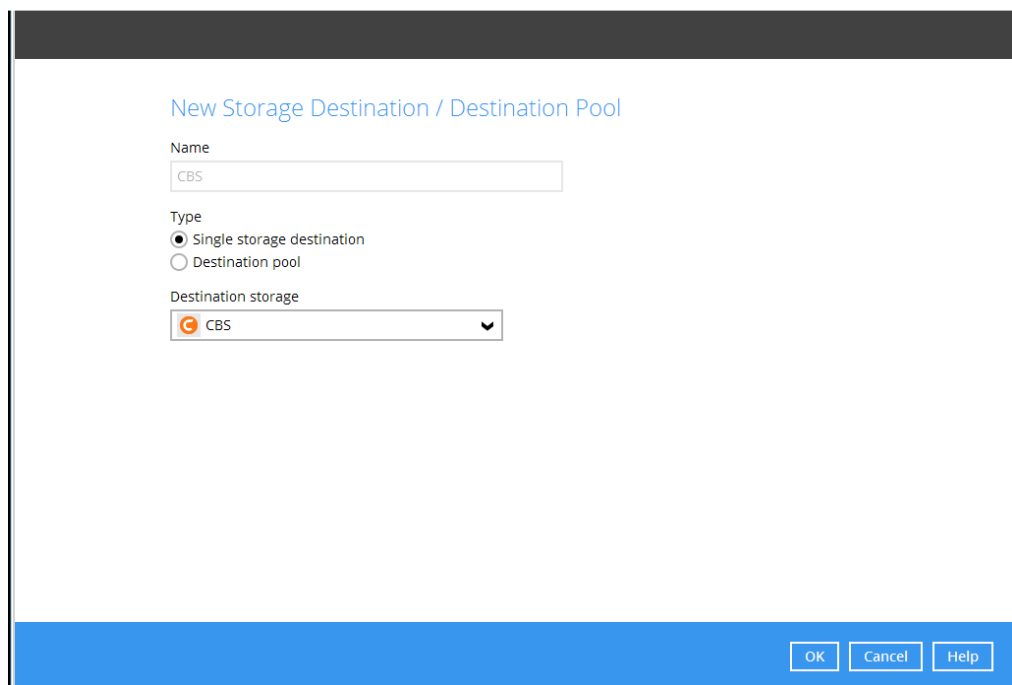


6. In the Destination menu, select a backup destination where the backup email will be stored. Click the “+” icon next to **Add new storage destination / destination pool**.



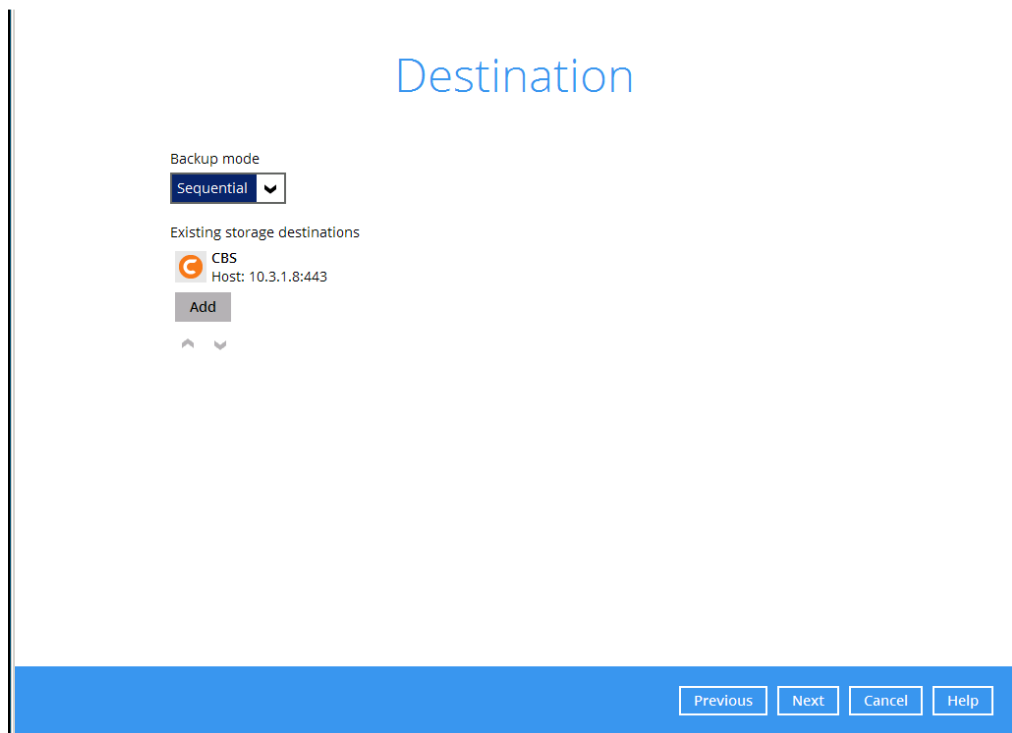
The screenshot shows a window titled "Destination" in blue text. Below the title, there is a "Backup mode" section with a dropdown menu currently set to "Sequential". Underneath, the "Existing storage destinations" section features a grey square button with a white "+" icon, followed by the text "Add new storage destination / destination pool". Below this text are two small, faint upward and downward arrow icons. At the bottom of the window, a blue bar contains four buttons: "Previous", "Next", "Cancel", and "Help".

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



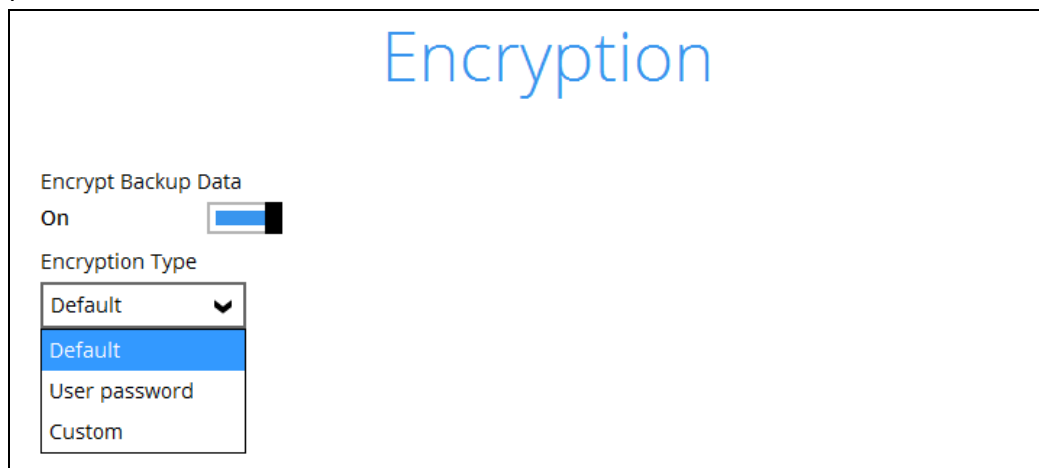
The screenshot shows a dialog box titled "New Storage Destination / Destination Pool" in blue text. It contains three main sections: "Name" with a text input field containing "CBS"; "Type" with two radio buttons, "Single storage destination" (which is selected) and "Destination pool"; and "Destination storage" with a dropdown menu showing "CBS" and a small orange circular icon to its left. At the bottom, a blue bar contains three buttons: "OK", "Cancel", and "Help".

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



The 'Destination' window features a title bar at the top. Below it, the word 'Destination' is displayed in a large blue font. Underneath, there is a 'Backup mode' section with a dropdown menu currently set to 'Sequential'. Below this is the 'Existing storage destinations' section, which contains a list of destinations. One destination is visible: 'CBS' with a host address of '10.3.1.8:443'. An 'Add' button is located below the list. At the bottom of the window, there is a blue bar containing four buttons: 'Previous', 'Next', 'Cancel', and '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.

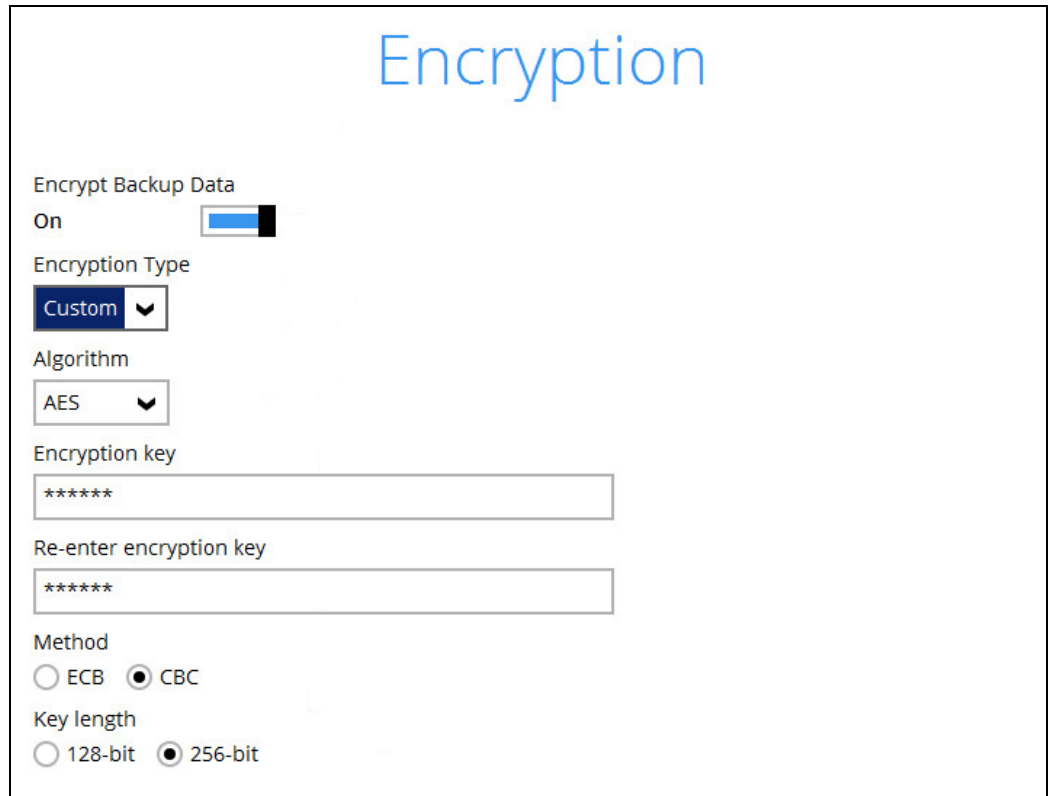


The 'Encryption' window has a title bar and the word 'Encryption' in a large blue font. Below the title, there is a section for 'Encrypt Backup Data' with a toggle switch set to 'On'. Underneath this is the 'Encryption Type' section, which includes a dropdown menu. The dropdown menu is open, showing four options: 'Default' (selected), 'Default', 'User password', and 'Custom'.

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 OBM at the time when this backup set is created. Please be reminded that if you change the OBM 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.

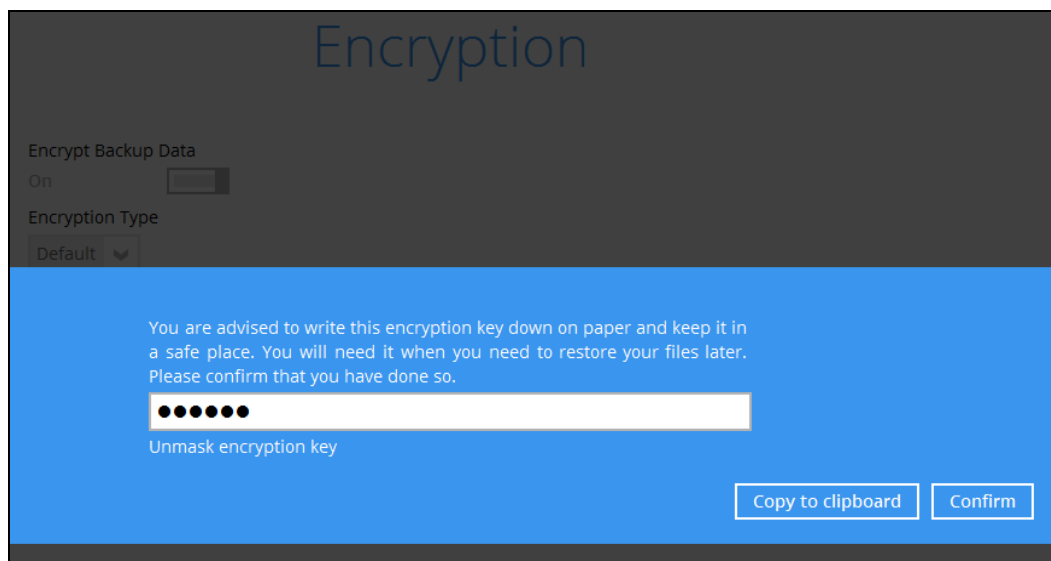


The screenshot shows the 'Encryption' settings window. At the top, the title 'Encryption' is displayed in blue. Below it, the 'Encrypt Backup Data' toggle is set to 'On'. The 'Encryption Type' dropdown is set to 'Custom'. The 'Algorithm' dropdown is set to 'AES'. The 'Encryption key' field contains six asterisks. The 'Re-enter encryption key' field also contains six asterisks. The 'Method' section has two radio buttons: 'ECB' (unselected) and 'CBC' (selected). The 'Key length' section has two radio buttons: '128-bit' (unselected) and '256-bit' (selected).

WARNING: If a note of the encryption key is NOT taken, and the key is LOST, the data will be irretrievable. Always ensure you take a note of the encryption key.

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

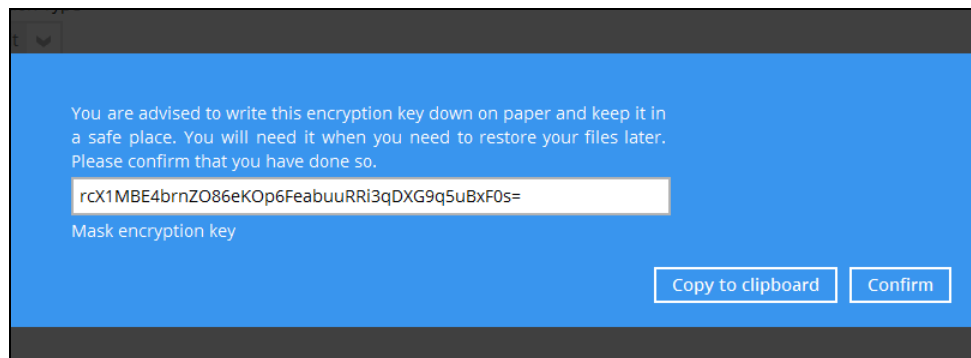
10. If you have enabled the Encryption Key feature in the previous step, the following pop-up window shows, no matter which encryption type you have selected.



The screenshot shows a pop-up window titled 'Encryption'. The background is dark grey. The title 'Encryption' is in blue. Below it, the 'Encrypt Backup Data' toggle is set to 'On'. The 'Encryption Type' dropdown is set to 'Default'. A blue banner at the bottom contains the following text: '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.' Below this text is a text input field containing six asterisks. Below the input field is the label 'Unmask encryption key'. At the bottom right, there are two buttons: 'Copy to clipboard' and '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.



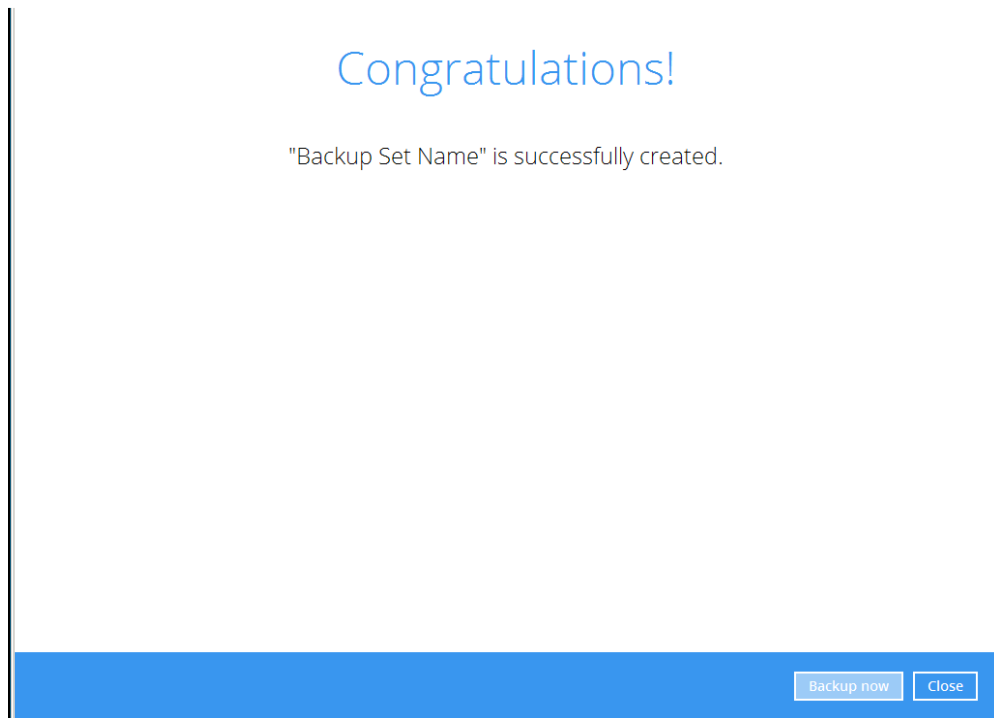
- **Copy to clipboard** – Click to copy the encryption key, then you can paste it in another location of your choice.
- **Confirm** – Click to exit this pop-up window and proceed to the next step

WARNING: If a note of the encryption key is NOT taken, and the key is LOST, the data will be irretrievable. Always ensure you take a note of the encryption key.

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

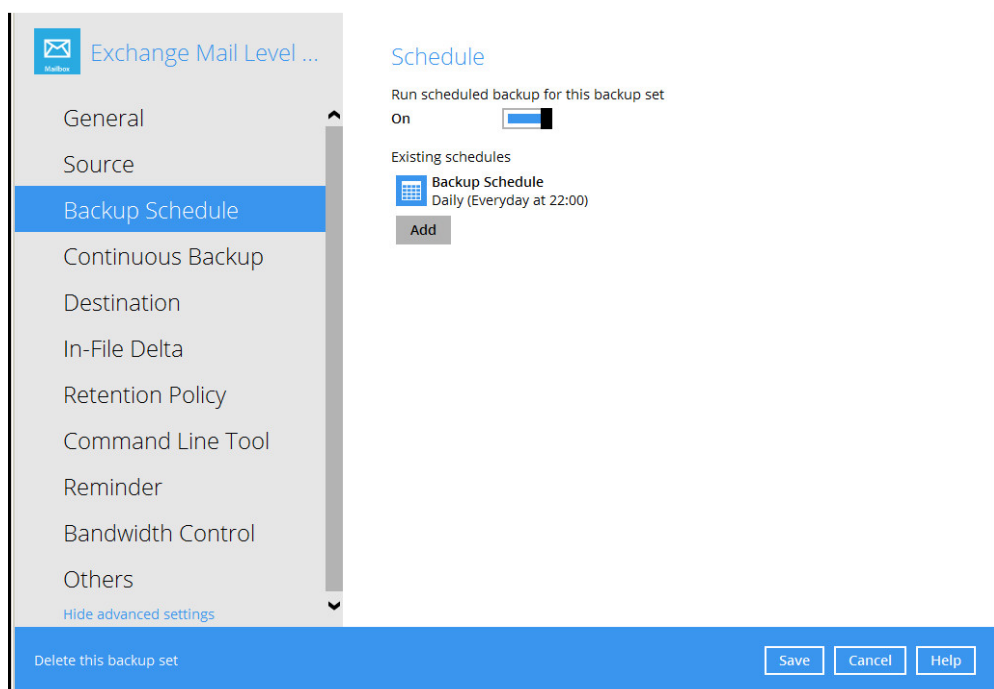
A screenshot of the "Windows User Authentication" window. The title "Windows User Authentication" is displayed in blue at the top. Below the title are three input fields: "Domain Name (e.g Cloud Backup.com) / Host Name" with the value "testdomain.co.uk", "User name" with the value "administrator", and "Password" which is empty. At the bottom of the window, there is a blue bar containing four buttons: "Previous", "Next", "Cancel", and "Help".

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 OBM 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.

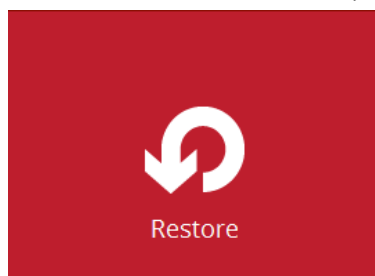
```
[PS] C:\>Get-MailboxDatabase | ft name, server
```

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

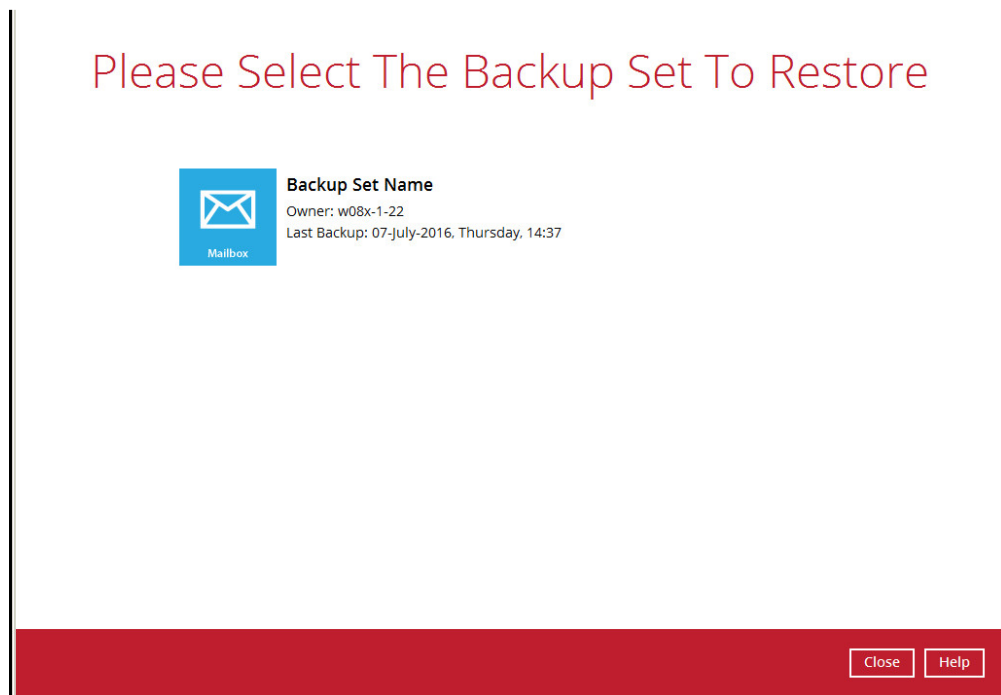
When you can identify which Exchange server hosted the active database, you can logon to that Exchange server to restore the database.

7.2 Restoring Mail for Exchange Server in DAG

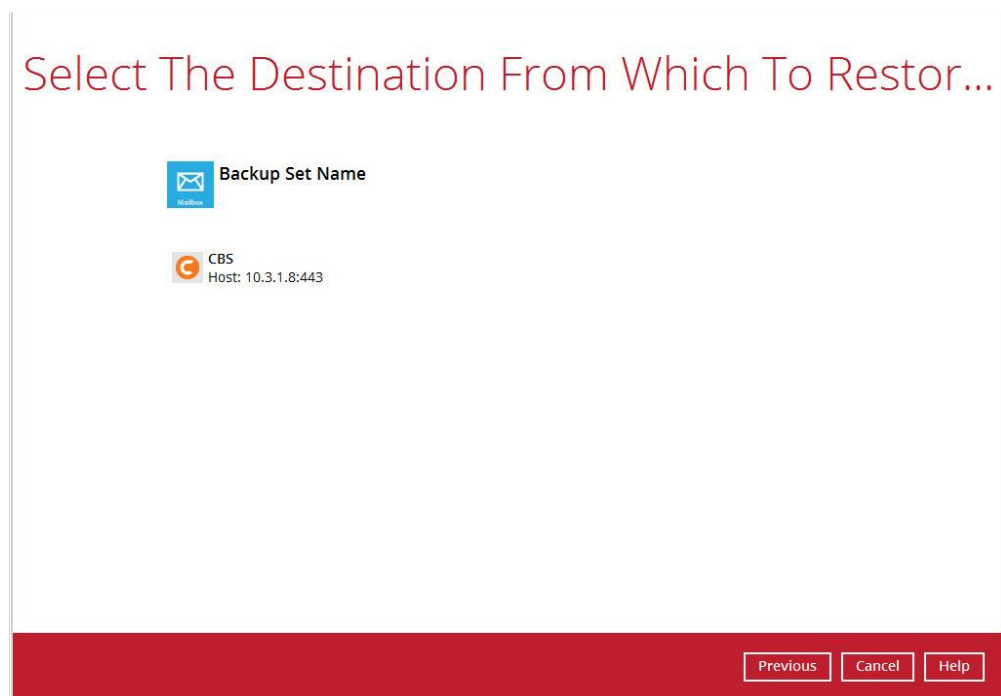
1. In the OBM main interface, click **Restore**.



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.



- 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.

Select what to restore

Choose from files as of job 2016-07-11 Latest

Choose from files as of job

Choose from ALL files

CBS

W08X-1-22

Mailbox Store

Administrator (Adi)

db1 gen00 (CDB0f)

Public Folder Store

From/To	Subject	Received/Sent	Size
---------	---------	---------------	------

Items per page 50 Page 1

Previous Next Cancel Help

- 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.

Choose Where The Mail Objects To Be Restored...

Restore mail objects to

☒ Original location

☐ Alternate location Administrator (Administrator@qa15.ahsay.com)

Previous Next Cancel Help

• 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 OBM on the destination Exchange server.

Choose Where The Mail Objects To Be Restor...

Restore mail objects to

☐ Original location

☒ Alternate location

Administrator (Administrator@qa15.ahsay.com)

Administrator (Administrator@qa15.ahsay.com)

Equipment Mailbox User (equipment-mailbox-user@qa15.ahsay.com)

Room Mailbox User (room-mailbox-user@qa15.ahsay.com)

Same Name User (same-alias-name2@qa15.ahsay.com)

Same Name User (same-alias-name3@qa15.ahsay.com)

Same Name User (same-alias-name@qa15.ahsay.com)

Shared Mailbox User (shared-mailbox-user@qa15.ahsay.com)

User Mailbox display_name 64char_456789D123456789E1234567_64char (User_...)

Previous Next Cancel Help

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

Temporary Directory

Temporary directory for storing restore files:

C:\Users\Administrator\temp

Browse

Previous Restore Cancel Help

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

