

Agent for Microsoft Exchange Server Guide

Arcserve® Backup

19.0

arcserve®

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Arcserve Product References

This document references the following Arcserve products:

- Arcserve® Backup
- Arcserve® Unified Data Protection
- Arcserve® Unified Data Protection Agent for Windows
- Arcserve® Unified Data Protection Agent for Linux
- Arcserve® Replication and High Availability

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With Arcserve Support:

- You can get in direct touch with the same library of information that is shared internally by our Arcserve Support experts. This site provides you with access to our knowledge-base (KB) documents. From here you easily search for and find the product-related KB articles that contains the field-tested solutions for many top issues and common problems.
- You can use our Live Chat link to instantly launch a real-time conversation between you and the Arcserve Support team. With Live Chat, you can get immediate answers to your concerns and questions, while still maintaining access to the product.
- You can participate in the Arcserve Global User Community to ask and answer questions, share tips and tricks, discuss the best practices and participate in conversations with your peers.
- You can open a support ticket. By opening a support ticket online, you can expect a callback from one of our experts in the product area you are inquiring about.
- You can access other helpful resources appropriate for your Arcserve product.

Arcserve Backup Documentation

Arcserve Backup documentation contains specific guides and release notes for all major releases and service packs. Click links below to access documentation.

- [Arcserve Backup 19.0 Release Notes](#)
- [Arcserve Backup 19.0 Bookshelf](#)

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Chapter 1: Introducing the Agent

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Introduction

Arcserve Backup is a comprehensive, distributed storage solution for applications, databases, distributed servers, and file systems. It provides backup and restore capabilities for databases, business-critical applications, and network clients.

Among the backup agents Arcserve Backup offers is the Arcserve Backup Agent for Microsoft Exchange Server for database level backup and restore operations.

The agent works with Arcserve Backup to back up and restore Microsoft Exchange Server (Exchange Server) databases and mailboxes. The agent lets you ensure that your messaging solution is reliable and secure.

Microsoft Exchange Server Description

Microsoft Exchange Server is a centralized corporate messaging system that enables you to manage electronic mail and other messaging tools for your organization from a single location.

How to Protect Different Parts of Your Exchange Server Organization

The following Arcserve Backup agents and options can be used to protect different parts of your Exchange Server organization:

- **Arcserve Backup Agent for Microsoft Exchange Server**--For Database Level backup and restore. Database Level backup and restore protects the Exchange Server database and logs.
- **Arcserve Backup Client Agent for Windows**--Protects files and system state, including Active Directory. It is important to protect Active Directory when using Microsoft Exchange Server because it stores mailbox and user information. Arcserve Backup Client Agent for Windows also protects your domain controllers, which are equally as important to protect as your Exchange Server.
- **Arcserve Backup Disaster Recovery Option**--In the event of a disaster, the Arcserve Backup Disaster Recovery Option recovers the machine to the last full backup state.

Be aware of the following:

- You do not need to install an email client on the Exchange server that you are protecting. For example, Microsoft Outlook.
- You do not need to install the Arcserve Backup Agent for Open Files on the Exchange server that you are protecting. The Agent for Open Files is beneficial when you want to protect files that are open or in use by active applications. Because the Arcserve Backup Agent for Microsoft Exchange Server is an application-specific agent, dedicated to protecting Microsoft Exchange Servers, it offers a complete solution that encompasses all the features offered by the Agent for Open Files.

How the Agent Backs Up and Restores Exchange Server Data

The Agent for Microsoft Exchange Server integrates with Arcserve Backup to let you back up and restore Exchange Server databases and database components (such as mailboxes). It also integrates with the Exchange Server's backup and restore functions, enabling you to perform online backups.

The agent offers many benefits, such as:

- Manage backups of Exchange Server databases, mailboxes, and public folders from a remote location.
- Perform online database backups and restores using Exchange Server's backup and restore APIs.
- Schedule Exchange Server backups using the Backup Manager.
Note: For Exchange Server 2010, 2013, 2016, and 2019, Volume Shadow Copy Service (VSS) APIs are used.
- Schedule Exchange Server backups using the powerful Backup Manager.
- Back up to a wide array of storage devices.
- Push agent technology
- Multi-threading
- Multi-streaming support
- Enhanced cluster support (on Exchange Server versions prior to 2010)

The agent lets you perform Database level Exchange Server backups and restores.

How You Can Use the Agent to Perform Database Level Backups and Restores

Using the agent to perform database level backup and restore, you can do the following:

Exchange Server 2010 Systems

- Restore the system in disaster recovery scenarios.
- Back up an Exchange Server system at the database level.
- Back up and restore mailbox database or public folder database from a standalone server.
- Back up and restore mailbox database or public folder database from a Database Availability Group (DAG).
- Restore to the original or an alternate location.

For more information, see the topic, [Performing Database Level Backups and Restores](#).

Exchange Server 2013/2016/2019 Systems

- Restore the system in disaster recovery scenarios.
- Back up an Exchange Server system at the database level.
- Back up and restore mailbox database from a standalone server.
- Back up and restore mailbox database from a Database Availability Group (DAG).
- Restore to the original or an alternate location.

More information:

[Backup and Restore Limitations on Exchange Server Data](#)

Backup and Restore Limitations on Exchange Server Data

The following limitations affect backup and restore operations on Exchange server data:

The Arcserve Backup Restore Manager lets you restore Exchange server data based on the location of the source data (Restore by Tree) and by session (Restore by Session). You cannot restore Exchange server data using any of the following restore methods:

- Restore by Query
- Restore by Backup Media
- Restore by Image

Note: When you Restore by Tree, Search option is not supported.

How the Agent Communicates With Arcserve Backup

Communication between Arcserve Backup and the Agent for Microsoft Exchange Server is accomplished through the following:

- The agent is installed on the Exchange Server and facilitates all communication between Arcserve Backup and the Exchange Server database during backup and restore operations. In Exchange Server 2010/2013/2016 systems, the agent is installed on any mailbox server in a Database Availability Group (DAG).

Note: Installation on all DAG mailbox servers is not required.

This includes preparing, retrieving, transmitting, interpreting, and processing data packets that are sent back and forth across the network.

- When Arcserve Backup starts to back up a database or database component, it sends a request to the agent. The agent retrieves the data from the Exchange Server and sends it to Arcserve Backup, where the full database or the components are backed up to your storage media.

Similarly, the agent transfers database information when data is restored from storage media.

Chapter 2: Installing the Agent

The Arcserve Backup Agent for Microsoft Exchange Server can be installed locally or remotely.

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How to License the Agent

The Arcserve Backup Agent for Microsoft Exchange Server uses a count-based licensing method. You must register a number of licenses equal to the number of **active** Exchange Servers you wish to protect. You may install the Agent on either the active or replica server. Apply licenses on the Arcserve Backup Primary or Standalone Servers.

Examples: How to License the Agent

The following list describes typical installation scenarios:

- Your environment consists of one Exchange Server. You must register one Agent for Microsoft Exchange license and install the agent on the active server. (This example does not have a replica.)
- You wish to back up your Exchange Server 2010/2013/2016/2019 system from a replica. You've set up a Database Availability Group (DAG) to replicate one active server to a passive node. You must purchase one Agent for Microsoft Exchange license (number of licenses equals number of active servers). You can install the agent on the passive node and back up your database from that node. Or, you can install the Agent on the active node.
- You have five active Exchange Server systems that you replicate to multiple passive servers. You must purchase five licenses (number of licenses equals number of active servers). You can install the Agent on all five active servers or on as many replica servers as you need to replicate your environment.

System Requirements

For a complete list of hardware and software requirements for installing and running the agent, see [compatibility matrix](#).

Installation Prerequisites

Before installing the agent, you must satisfy the following prerequisites listed according to Microsoft Exchange Server version:

Prerequisite	2010	2013	2016	2019
Ensure your system requirements meet the minimum requirements needed to install the agent. For a list of requirements, see Release Notes .	Yes	Yes	Yes	Yes
Ensure that you have Administrator privileges.	Yes	Yes	Yes	Yes
Ensure that you know the name and password of the machine you are installing the agent on.	Yes	Yes	Yes	Yes
If you will be performing remote backups, ensure that File and Printer Sharing for Microsoft Networks is enabled on the agent machine that you will be backing up.	Yes	Yes	Yes	Yes
The NetLogon service must be started to support pass-through authentication of account logon events for computers in a domain.	Yes	Yes	Yes	Yes
If you are backing up or restoring mailboxes, the Exchange RPC Client Access Service must be running on the same server hosting the backup account's mailbox database. The RPC Client Access Service of the server configured as the client access server role of the mailbox database hosting the mailbox must be running.	Yes	Yes	N/A	N/A
If you are backing up or restoring public folders, the Exchange RPC Client Access Service must be running on the same server hosting the public folder.	Yes	N/A	N/A	N/A

Install the Agent for Microsoft Exchange Server

Before you install the agent, consider the following:

- You must install the agent on the server where you have Exchange Server installed and on the local drives of all Exchange Servers.

Note: For Exchange Server 2010/2013/2016/2019, you do not need to install the agent on all mailbox servers in a Database Availability Group (DAG). Install the agent on the standalone server or on the DAG member server where the Mailbox Database will be protected.

- If your Exchange Server has high CPU usage during normal operations, you should have a separate server for the Backup Manager and should not install it on the same server where you install the agent.
- When you install the agent, you should also consider installing the Client Agent for Windows and the Disaster Recovery Option. The Client Agent allows you to back up your System State and the Disaster Recovery Option lets you recover the entire server in the event of a disaster.

Note: When you install the agent, the Arcserve Universal Agent is installed. Because the agent uses push technology and shares the transport layer with the Client Agent for Windows, you should see the [Client Agents Guide](#) for more information about configuring network communication.

After you have reviewed the installation considerations, you can install the agent using the standard installation procedure for all Arcserve Backup system components, agents, and options. For information about installing Arcserve Backup, see the [Implementation Guide](#).

Post-installation Tasks

Before you can use the Arcserve Backup Agent for Microsoft Exchange Server, you must complete the following post-installation tasks:

- [Configure the Agent for Database Level Backup and Restore](#)
- [Delete Trace Log Files](#)

Configure the Agent for Database Level Backup and Restore

This section describes how to configure the agent for database level backup and restore on Exchange Server 2010/2013/2016/2019 installations.

To configure the agent for database level backup and restore

1. From the Windows Start menu, select All Programs, Arcserve, Arcserve Backup, and Backup Agent Admin.

The Arcserve Backup Agent Admin dialog opens.

2. From the drop-down list, select Arcserve Backup Exchange Server Agent and click Configuration.

The Configuration dialog with the Exchange Database Level tab selected opens.

Important! The options displayed on the Configuration dialog vary based on the version of Exchange that you are using in your environment.

3. Specify the following options as necessary:

Note: The options listed below apply to Exchange Server 2010/2013/2016/2019 systems, unless otherwise noted.

- **Log Detail Level**--Do not change this value unless directed by a trained Arcserve Customer Support technician. This option specifies the level of detail on the debug trace and log in the log location you specify. The default Debug Level value is 1 and the supported range is between 0 and 5.
- **Single log file size**--This option specifies the maximum size of a single log file. After the file reaches the specified maximum file size, a new file is created.
Note: The default value for this option is 200 MB.
- **Max log files**--This option specifies the maximum number of log files. After the maximum number of log files reaches this value, the oldest log file is deleted and a new log file is created.
Note: The default value for this option is 50.
- **Retry Counter**--If an Exchange backup API error or time out occurs while trying to retrieve data from the Exchange server, this option lets you control the number of times you want to retry. The default Retry counter value is 2 and the supported range is between 0 and 10.
- **Retry Delay**--If an Exchange backup API error or time out occurs while trying to retrieve data from the Exchange server, this option setting lets you control

the delay between retries. The default Retry Delay value is 20 and the supported range is between 0 and 60.

- **Log Locations**--Specifies the path to the log file.
- **Path for creating recovery database**--If the Recovery Database (RDB) needs to be created during the restore operation, specify the path to it.

Note: This option applies to Exchange Server 2010/2013/2016/2019 systems.

4. Click **OK**.

The database level options are saved.

Delete Trace Log Files

Arcserve Backup creates trace log files for backups and restores of Microsoft Exchange Server data. Trace log files provide you with data that you can use to debug problems that occur when performing database level backups and restores of Microsoft Exchange Server data.

By default, for Database level backups, Arcserve Backup stores Microsoft Exchange Server trace log files in the following directories on the Microsoft Exchange Server systems:

C:\Program Files\CA\ARCserve Backup Agent for Microsoft Exchange Server\DBLOG
Trace log files contain the file extension .trc.

Over time, many trace log files can consume a large amount of free disk space on your Arcserve Backup server. To free disk space on your backup server, you can configure Arcserve Backup to delete trace log files after a specified period of time elapses.

To delete trace log files

1. Locate the following registry key:
HKEY_LOCAL_MACHINE\SOFTWARE\ComputerAssociates\CA ARCserve Backup\ExchangeDBAgent\Parameters\AgentLogLife
2. Right-click AgentLogLife and click Modify on the pop-up menu.
The Edit DWORD Value dialog opens.
3. In the Value Data field, specify the number of days that you want to retain the trace log files.

Note: The default value for AgentLogLife is 14.

Example:

The value specified for AgentLogLife is 14. The next time that you back up or restore Microsoft Exchange Server data, the agent checks the trace log files directory on the Arcserve Backup server and deletes trace log files that were not modified in the last 14 days. With a value of 0, Arcserve Backup will not delete trace log files.

4. Click OK.
The new value is applied.

Configure IP Address for Microsoft Exchange Server 2010/2013/2016/2019 Systems

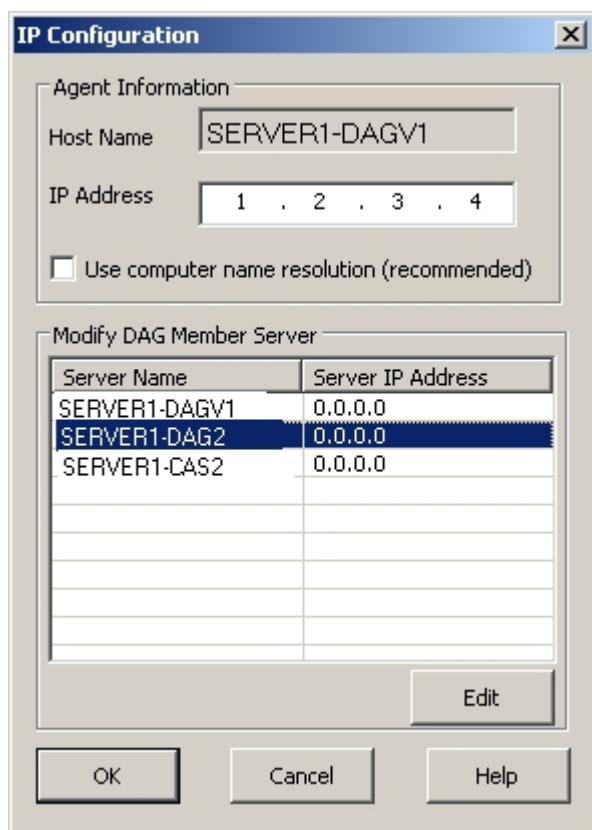
On Exchange Server 2010/2013/2016/2019 systems, you should change the IP address if:

- The Exchange Server cannot be reached by resolving its name
- You want to use a specific IP address when the Exchange Server has multiple assigned IP addresses
- Exchange Servers from different domains have the same name.

To change the IP address

1. Launch the Arcserve Backup Backup Manager.
2. Right-click the Exchange Organization and select Active Directory Servers.
3. Click **Add** to enter an AD server. Enter a Server Name, IP Address and account credentials. Click **OK** to return to the Exchange Organization browse dialog.
4. Right-click the Exchange Server 2010/2013/2016/2019 server you added and click **IP Configuration**.

The IP Configuration dialog opens.



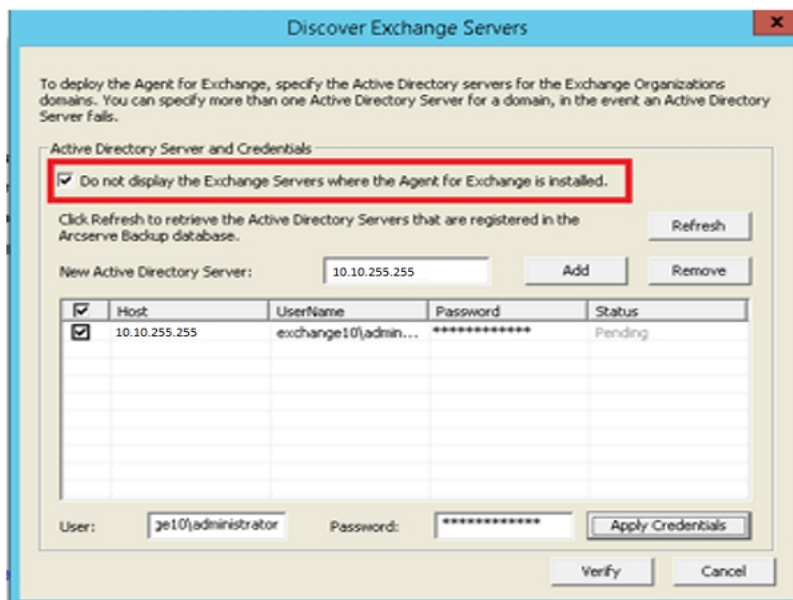
5. Select the Server whose IP address you wish to change and click **Edit**. If the server is a standalone deployment, this dialog will not show DAG Member Servers. If it is a DAG, the dialog shows a list of all member servers.
6. Select a server to modify and click Edit. Enter a new IP address and click **OK**.
7. Click **OK** to exit IP Configuration.

Arcserve Backup Agent Deployment

Arcserve Backup Agent Deployment can be used to install and upgrade the Arcserve Backup Agent for Microsoft Exchange Server on remote hosts. For more information, see the [Arcserve Backup Administration Guide](#).

Note: Arcserve Backup Agent Deployment for Agent deployment works as specified:

1. Click **Discover Exchange Server** available under **Host Information**.
2. Enter details of Active Directory Server hostname or IP address and click **Add**.
3. When you select the **Do not display the Exchange Servers where the Agent for Exchange is installed** check box:



For Exchange Server 2010 and later

Agent deployment lists all the Exchange servers in a domain whether the agent is installed or not. For example, if you have three Exchange Servers such as, DGNODE1, DGNODE2, and DGNODE3 where the Agent for Exchange is installed on DGNODE3 and not on DGNODE1, DGNODE2, then all the three Exchange Servers are displayed in Hosts and Credentials tab.

Click Next after selecting the servers on which the agent was not installed

before.

The screenshot shows the 'Host Information' window in the Arcserve Backup Agent Deployment wizard. The window is titled 'Arcserve Backup Agent Deployment' and has a sidebar on the left with navigation options: Login Server, Methods, Components, Host Information (selected), Setup Summary, Installation Status, and Installation Report. The main area is divided into sections: 'Input Host List' with an 'Import' button, 'Hosts and Credentials' with a 'Discover Exchange Server' button, and a table of hosts. Below the table are fields for 'User' and 'Password' with an 'Apply Credentials' button, and a checkbox for 'Allow the Remote Registry service to run for the duration of the deployment process'. At the bottom are '< Back', 'Next >', and 'Cancel' buttons.

<input checked="" type="checkbox"/>	Host	UserName	Password	Status
<input checked="" type="checkbox"/>	DGNODE1	exchange10...	*****	Pending
<input checked="" type="checkbox"/>	DGNODE2	exchange10...	*****	Pending
<input checked="" type="checkbox"/>	DGNODE3	exchange10...	*****	Pending

4. When you do not select the **Do not display the Exchange servers where the agent for Exchange is installed** check box, then all the Exchange servers are listed for all versions.

Uninstall the Agent for Microsoft Exchange Server

Effective in this release, now only one entry is available for Arcserve Backup and its related options and agents in the Windows Add/Remove Programs dialog.

Follow these steps:

1. Click Remove.

A list of the installed Arcserve Backup products is displayed.

2. Select the products you wish to remove and then click Uninstall.

The uninstallation utility breaks dependencies in the correct order automatically.

Chapter 3: Browsing Microsoft Exchange Servers

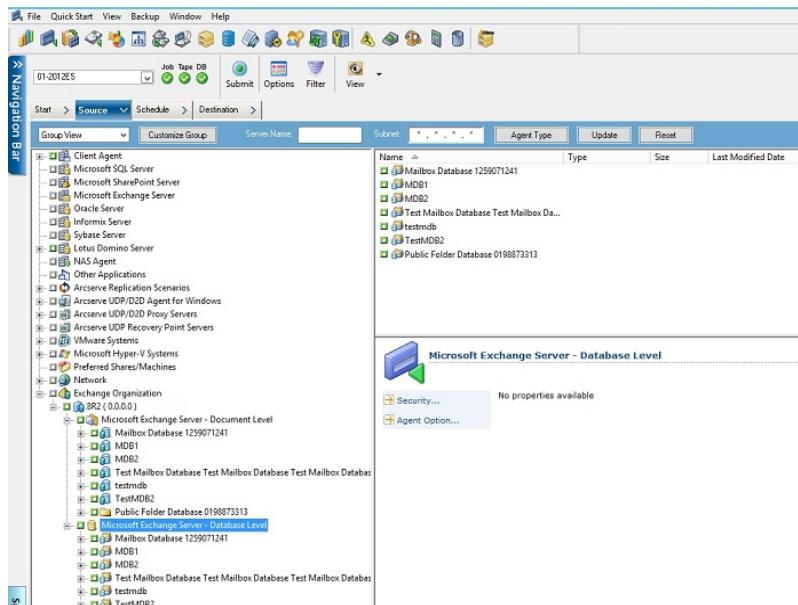
You can view Exchange servers from the Exchange Organization View - All Exchange Server versions.

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Exchange Organization View

The Exchange Organization View provides a central display of your entire Exchange Organization. This lets you quickly find all the remote Exchange servers in your environment rather than having to enter each of them manually under the Windows Systems object or Preferred Shares/Machines object.



In the Exchange Organization View, the Exchange Server database objects are organized in a hierarchy similar to the Exchange Server Manager.

Exchange Server 2010/2013/2016/2019 systems are not shown under Windows Systems. They are shown only under Exchange Organization.

Note: The Exchange Organization is always explicitly packaged. You must repackage jobs if Exchange servers are added or removed from your organization. For more information on packaging your jobs, see the [Administration Guide](#).

How Microsoft Exchange Server Organization Hierarchy Works

A Microsoft Exchange Server messaging system comprises several administrative units, the largest of which is the organization. The organization hierarchy varies depending on the version of Exchange Server you are using:

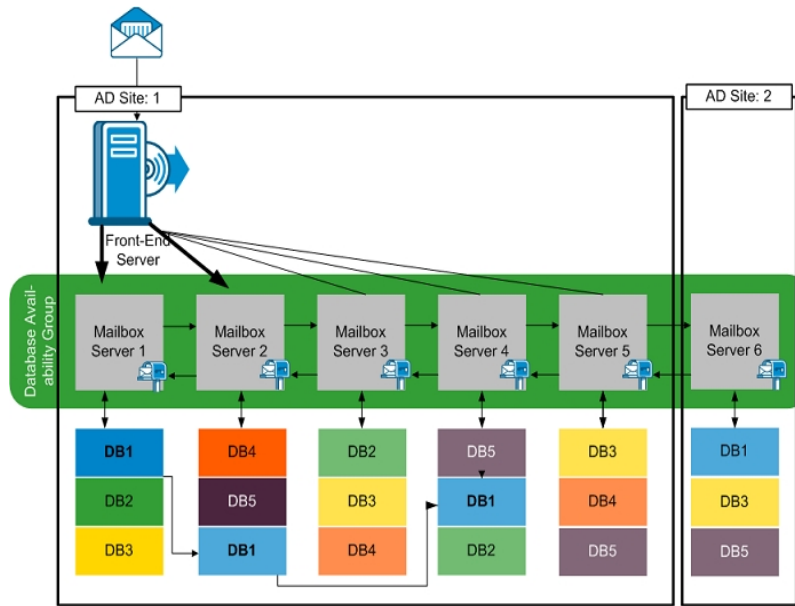
Exchange Server 2010/2013/2016/2019--In Exchange 2010/2013/2016/2019, storage groups are no longer supported. A Database Availability Group (DAG) is a collection of up to 16 mailbox servers, where each server stores up to 100 mailbox databases. A copy of a database can be stored on any server in a DAG. Some additional changes in this version:

- Recovery Storage Groups have been replaced with Recovery Database
- Database names must now be unique across your organization
- All copies are located at the same paths
- Active Manager is required to mount a database and determines which database is mounted
- All high availability configuration is performed post-setup

The concept of a Database Availability Group provides failover at database level, rather than server level, and is transparent to end users. In a DAG, only one copy of a database is active at any one time. Arcserve Backup lets you choose to back up from active databases or replicas. DAGs can include mailbox servers in separate physical locations, as well.

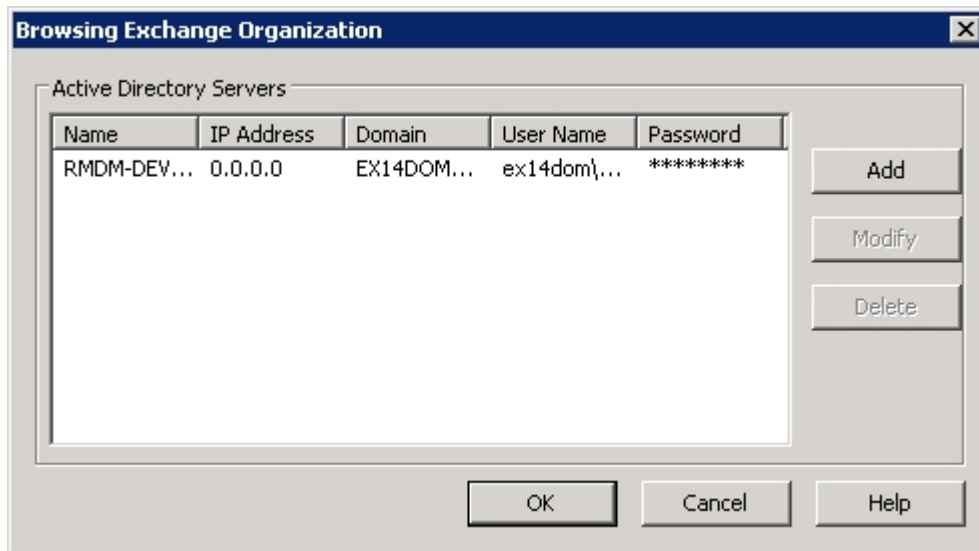
In this example, five members comprise the DAG with a sixth one off-site. Databases are spread across the DAG so that no two members have the same database configuration. This configuration is Microsoft's suggestion for providing database availability in the event of hardware failure. Users access the Exchange Server and are routed to the active database. Suppose DB1 hosted on Mailbox Server 1 is active. If Mailbox Server 1 fails, users can be routed to the copy of DB1 on Mailbox Server 2. If Mailbox Server 2 fails, users are routed to the copy of DB1 on Mailbox Server 4. For more information on how DAGs work,

see the Microsoft website.

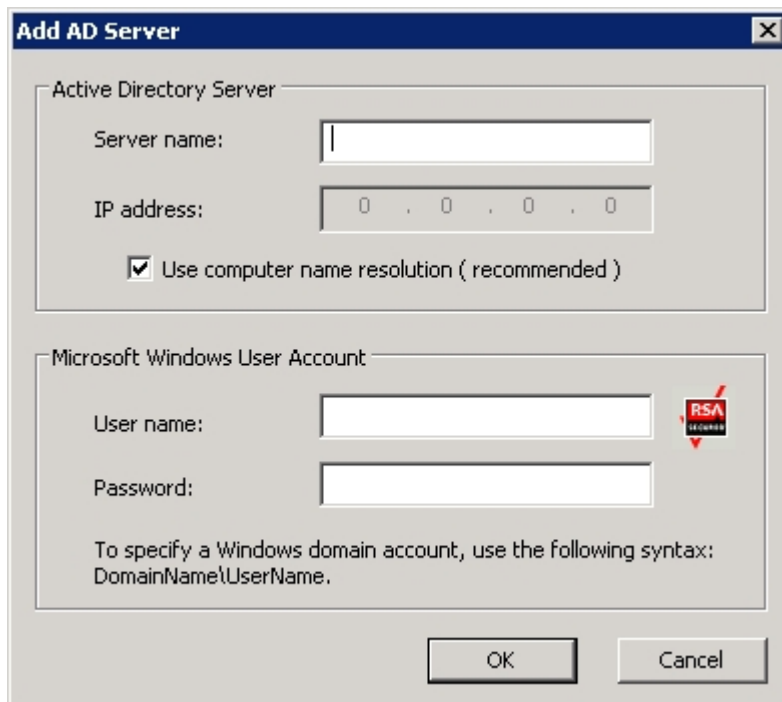


Browsing the Exchange Organization

If you did not use Agent Deployment, Arcserve Backup opens a dialog that prompts you to enter Active Directory server information when you browse the Exchange Organization from the Backup Manager. The information you enter is used to browse Exchange servers.



To add multiple Active Directory servers, click Add. To modify existing AD server information, click Modify.



You may add AD servers for different domains or that contain different Exchange Server versions. Adding more than one AD server ensures browsing even when one AD server is down. If there is more than one Exchange organization, all mailbox servers for all organizations are included.

To refresh the organization, right-click Exchange Organization and select Refresh from the shortcut menu.



User account requirements

The AD user account must satisfy the following conditions in order to browse the Exchange organization:

- It must be a Domain user
- It must have at least "View-only Organization Management" role

Note: If you want to back up and restore data using the AD user account, the AD user account must also satisfy the Database Level Agent.

Chapter 4: Performing Database Level Backups and Restores

Depending on the version of Microsoft Exchange you are protecting, the options and procedures for backing up and restoring vary. Make sure of the following:

- You are following the correct instructions before you begin. Topics in this section are organized by Exchange Server version.
- You have completed the required installation, post-installation and set-up tasks. For more information, see [Installing the Agent](#).
- You know which backup options are available for your Exchange version and how to set them. For more information, see Understanding How the Arcserve Backup Agent for Microsoft Exchange Server Works.

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How Database Level Backup Works

Database level backup and restore protects the Exchange Server database files and logs. It is the fundamental backup for your Exchange server, and you should always use it regardless of whether you use one of the other granular backup types. You can use database level backups to restore Exchange server data in the event of a system failure, database corruption, or disaster recovery scenario.

Note: In addition to the full database backups that you perform during your weekly backup strategy, you should perform full database backups after installing service packs, after performing restores, and after changing the Circular Logging setting on your Exchange server.

Database Level Backup and Restore Benefits

Database level backup and restore offers many benefits, including:

- **Push Agent Technology**--Database level backup uses push agent technology to increase the efficiency of your backup jobs by processing the data at the remote client workstations rather than processing it all from the Arcserve Backup host server. This off loads the system resources from the Arcserve Backup host server and minimizes network traffic.
- **Multi Streaming Support**--Database level backup lets you take advantage of the full capacity of multiple drives and high-speed RAID arrays capable of fast concurrent backups to multiple tapes. It does this by partitioning information into concurrent streams for parallel backups.
- **Job Continuation**-- If a job fails to complete, the makeup job continues from the failed database (Exchange Server 2010/2013/2016/2019).
- **Replica Database Support**-- On Exchange Server 2010/2013/2016/2019 systems, the agent can successfully back up replica databases in the Database Availability Group (DAG). This capability reduces the load on the active exchange databases.

Microsoft VSS Writer Requirements

A shadow copy is created for each mailbox database (Exchange Server 2010/2013/2016/2019) that you back up when you back up systems using Microsoft Volume Shadow Copy Services (VSS).

To create the shadow copy, a volume shadow copy is created on each volume or mount point that contains the system files, log files, or database files of the storage group. The default initial size of the shadow copy storage area for the VSS is 300 MB. You should therefore have at least 300 MB of free disk space available on each shadow copy storage volume.

The size of the shadow copy storage area may increase when VSS creates multiple shadow copies on the same volume concurrently. In this case, more available free disk space is required to ensure that your backups are successful.

For more information, see *Volume Shadow Copy Service Tools and Settings* on the Microsoft web site.

Database Level Views in the Backup Manager

This section contains the following topic:

[Database Level Views - Exchange Server 2010/2013/2016/2019](#)

Database Level Views - Exchange Server 2010/2013/2016/2019

Effective with Microsoft Exchange Server 2010, any Exchange Server 2010/2013/2016/2019 servers in your environment now appear under the Exchange Organization, rather than under Windows Systems. Servers running versions of Exchange Server prior to 2010 still appear under both Windows Systems and Exchange Organization, no matter which version of the Arcserve Backup Agent for Microsoft Exchange Server installed. If you select an Exchange server for backup under Windows Systems and Exchange Organizations, your backup data is duplicated.

When you expand the Exchange Organization object, you can view your standalone servers and Database Availability Groups (DAG). When you expand a server or DAG, you can see the databases and components you can protect using Database Level backup and restore.

Note: Member servers in a DAG are not shown. Only master databases are shown. Recovery Databases (RDB) are not shown.

Backup Agent Service Account Requirements for Database Level Backup and Restore

To perform database level backup and restore jobs, your backup agent service account must meet the following criteria on the Exchange Server:

It must be:

- A domain account.
- A member of the Administrator group.
- A member of the Backup Operators group.
- (Exchange Server 2010/2013/2016/2019 systems) Assigned the Exchange Organization Management Role.

Note:

For Exchange Server 2010/2013/2016/2019

The service account needs to be assigned only to the Exchange View-Only Organization Management role when you do not use the following options:

- Allow databases to be overwritten
- Dismount databases before restore
- Create Recovery Database automatically

If the database level backup service account has View-Only Organization Management role privileges, the following property is not available: the list of servers that have a copy of the database. This property is available when Exchange Organization Management Role privileges are used.

If you use the client agent with local account privileges to back up an Exchange Server 2010 mailbox folder, the database files and transaction log files are included in the backup job. These files are excluded only when backed up with a domain account with at least Exchange View-Only Organization Management privileges.

Database Level Backup

This section contains the following topics:

[Database Level Backup Options by Version](#)

[Database Level Global Options](#)

[Specify Backup Options for a Specific Database Level Backup Job](#)

[Perform a Database Level Backup](#)

[Configure the Agent for Database Level Backup and Restore](#)

Database Level Backup Options by Version

Backup options control how Arcserve Backup protects your data. The following matrix lists the options available by Exchange Server version. For descriptions of each agent, see the topic, [Database Level Global Options](#). For information on using options with a specific version of Exchange Server, see the related topics.

Options are applied at a global level by default. You can override global options by right-clicking a database and choosing Agent Option from the shortcut menu. Some of the following options are available only from the shortcut menu; they are noted.

	Exchange Server 2010/2013/2016/2019
Backup Methods	
Use globally scheduled Custom or Rotation backup method	yes
Full Backup	yes
Copy Backup	yes
Incremental Backup	yes
Differential Backup	yes
Backup Sources	
Use backup source specified in global agent options	yes (Agent Option)
Back up from active database	yes
Back up from replica	yes
Back up from active if there is no healthy replica available	yes
Database Availability Group Options	
Choose replica server according to database copy activation preference	yes
Customize preference	yes (Agent Option)
Reset All	yes (Agent Option)

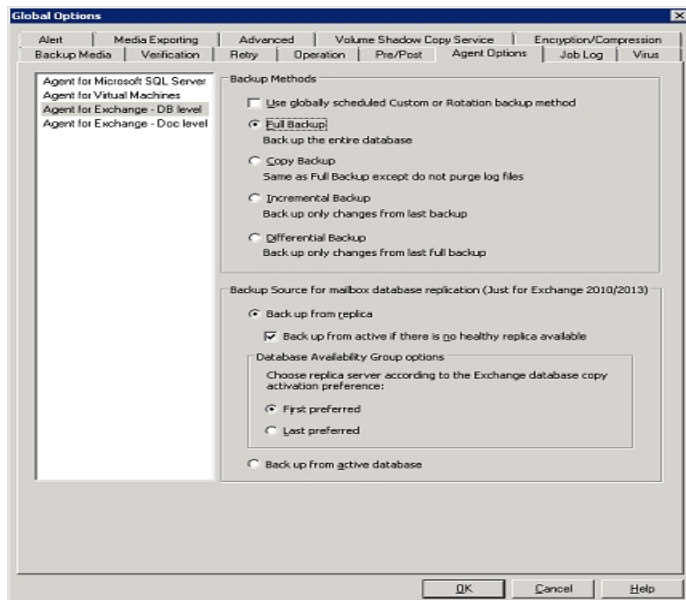
Agent Options are available only with this release of the Arcserve Backup Agent for Microsoft Exchange.

Database Level Global Options

The agent lets you configure default backup options for all Exchange Database Level backup jobs using the Global Options in the Backup Manager. Setting default options is appropriate for bulk jobs because these settings apply to all Exchange Server versions. You may override global options for a specific database using local agent options. For more information, see the topic, Specify Backup Options for a Specific Database Level Backup Job.

The following describes all options regardless of Exchange Server version. For information on what options are available by server version, see the related topics.

To set database level global options, open the Backup Manager and click Options. From the Global Options dialog, click the Agent Options tab. From the list of available agents on the left, select Agent for Exchange Server - DB Level.



Backup Methods

Use globally scheduled Custom or Rotation backup method

(Enabled by default) This option backs up using the Backup Method defined on the Schedule tab in the Backup Manager. You must disable this option if you want to set a different backup method for Exchange Database level backup jobs.

Note: If you do not disable this and select Custom Schedule on the Schedule tab, there is no difference between the full (Keep Archive Bit) and the Full (Clear Archive Bit) backup methods; they each function as full backups.

Full Backup

(Enabled by default) This option backs up the entire database, including the log files, and marks all log files that have been backed up in preparation for a subsequent incremental or differential backup. The backup operation then purges the committed log files.

Note: Always perform a full backup when running the agent for the first time, after upgrading to a Service Pack, and after performing a restore.

Copy Backup

This option backs up the entire database, including the log files, but does not mark the files as having been backed up. Use a copy backup if you want to make a full backup of your data but do not want to disrupt any existing incremental or differential backups.

Note: The log files are not truncated during a copy backup.

Important! If you select to back up only a mailbox store or public folder store without dynamically selecting the entire storage group, the copy backup method is automatically used so that the storage group's logs are not affected.

Incremental Backup

This option backs up the log files that have changed since the last full or incremental backup and marks them as backed up. The log files are also truncated. When restored, the log files are applied to re-create the database at the time of backup.

Differential Backup

This option backs up the log files that have changed since the last full backup. The log files are not truncated. It does not mark them as backed up.

Note: Microsoft does not support incremental or differential backups when the Circular Logging feature is enabled. If you do not disable Circular Logging and submit an incremental or differential backup job, the Agent automatically converts the job to a full backup. If you submit an incremental or differential job without first performing a full backup of the storage group or database, the Agent automatically converts the job to a full backup. If you perform an incremental or differential backup when an Exchange Server joins or disjoins a (Microsoft Exchange Server 2010) Database Availability Group (DAG), the job is converted to a full backup.

Backup Sources (Exchange Server 2010/2013/2016/2019 only)

Back up from replica

This option performs a backup job from a healthy replication.

Back up from Active Database if backup from replica fails

If there is no healthy replica available and this option is selected, the backup job is performed from the active database. Otherwise, the job fails.

Back up from Active Database

This option specifies the active database as the backup source.

Database Availability Group Options (Exchange Server 2010/2013/2016/2019 only)

Choose replica server according to the database copy activation preference (This option is set only from Agent Option.)

Select this option to instruct the agent to use the sequence in the Exchange Server configuration to determine which server takes over in the event of failure. You must indicate First or Last preferred activation preference. Activation preference sequence can be configured using the Exchange PowerShell cmdlet:

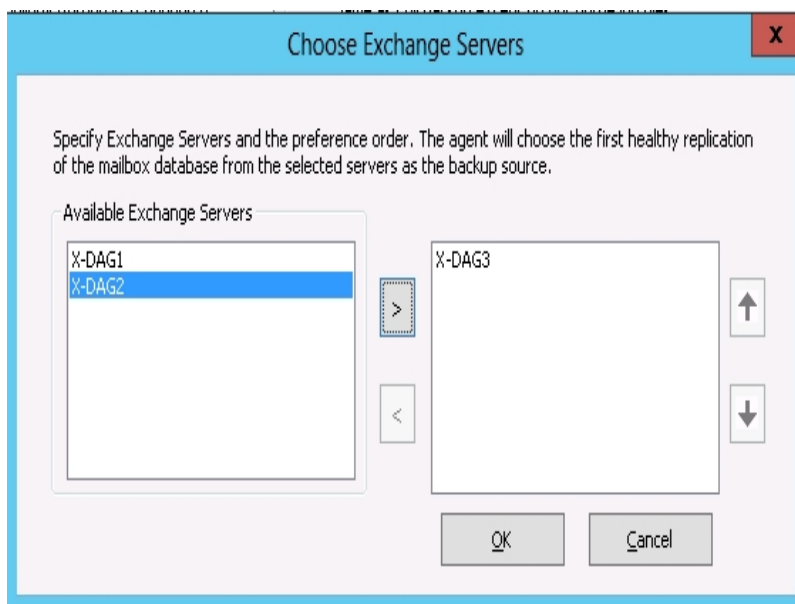
```
Set-MailboxDatabaseCopy -Identity MDB1WBX2 -ActivationPreference 1
```

To get the activation preference, use the following cmdlet:

```
Get-MailboxDatabaseCopy -Identity MDB1WBX2 | fl ActivationPreference
```

Customize server preference

Select this option to activate the Choose Exchange Servers button. From the Choose Exchange Servers dialog, choose an Available Exchange Server to use as a selected backup source. Change the sequence using the direction buttons, as needed.

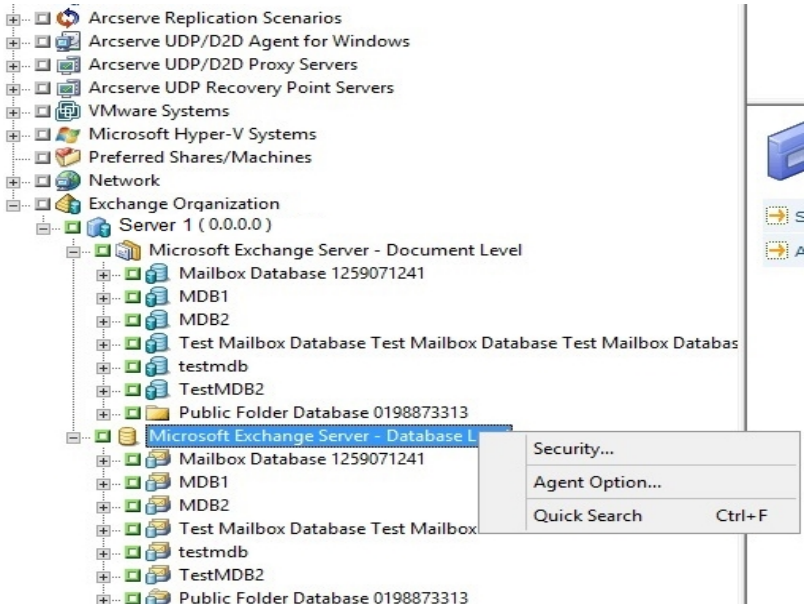


Specify Backup Options for a Specific Database Level Backup Job

When you submit a backup job, it uses Global Options by default. You can override Global Options and set options for a specific Exchange Server object using local agent options.

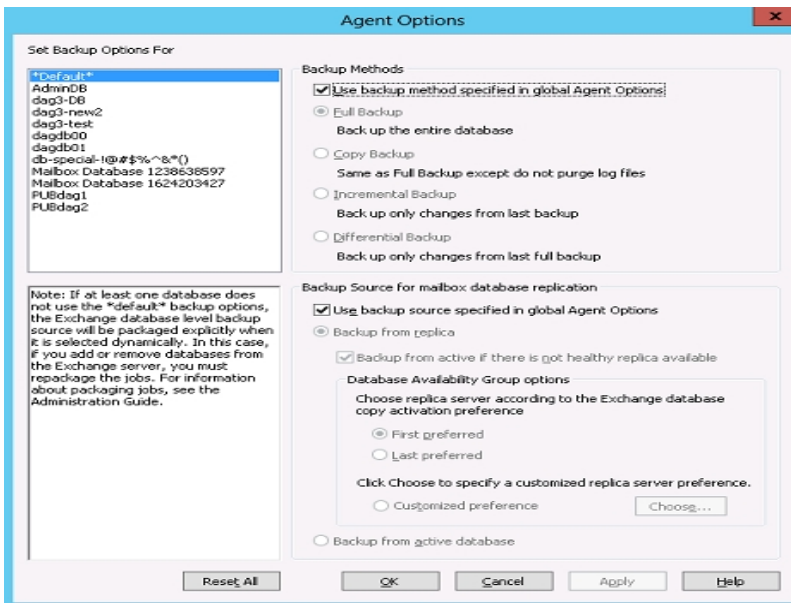
To set local agent options, right-click the Database Level Agent object (Microsoft Exchange Server - Database Level), and select Agent Option from the shortcut menu.

The Agent Option dialog opens.

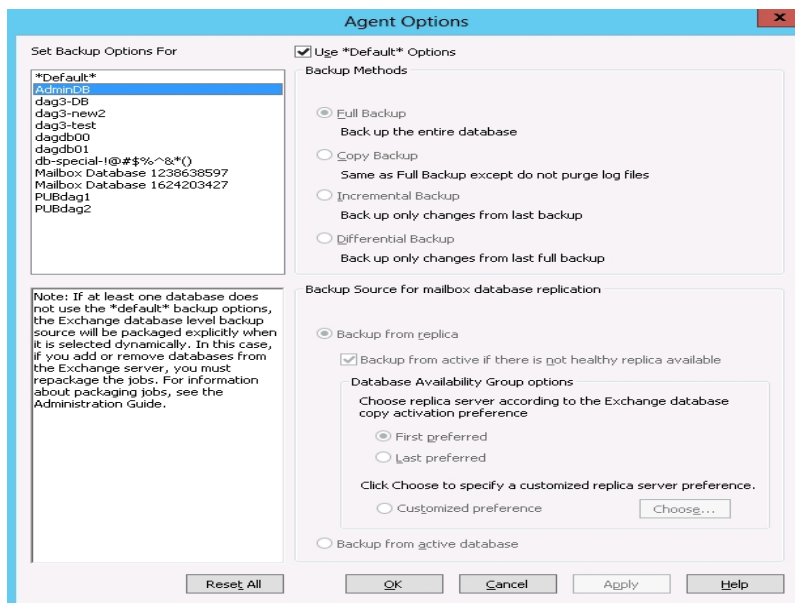


For Exchange Server 2010/2013/2016/2019

There are no storage groups in Exchange 2010/2013/2016/2019. You can specify a backup method for all databases using the *Default* selection.



Or, you can specify options that are unique to the selected database. Select a mailbox database from the list on the left and then clear the check mark for Use Default Options to activate additional settings.



Important! If at least one database does not use the *default* backup options, the Exchange Server database level backup source is packaged explicitly when it is selected dynamically. In this case, if you add or remove databases from the Exchange Server, you must repackage your jobs. For more information about packaging jobs, see the Arcserve Backup [Administration Guide](#).

Reset All

The Reset All button resets the options selected back to the default settings for all of your Exchange Server databases.

Specify a backup method and source according to the information in the topic, [Database Level Global Options](#).

Perform a Database Level Backup

Before you submit a database level backup job, make sure that the Exchange server databases are mounted on your server and that the Microsoft Exchange Information Store and the Arcserve Backup Universal Agent service are running on your server.

Note: The following steps apply to all versions of Microsoft Exchange Server.

To perform a database level backup

1. From the Arcserve Backup Home Page, select Backup from the Quick Start menu.
The Backup Manager window opens.
2. From the Backup Manager window, select the backup source (storage group, or databases you want to back up).
3. (Optional) Right-click the backup source and select Agent Option to specify any options unique to this job. These options override or are combined with applicable Global Options. For more information, see the topic, Database Level Global Options.

Note: Always perform a full backup when running the agent for the first time. This allows you to store a complete set of Exchange Server databases.

4. (Optional) Choose the desired server-side features such as CRC checking, data encryption, or data compression. For more information, see the [Administration Guide](#).
 - a. From the Backup Manager window, click the Options toolbar button.
The Options dialog opens.
 - b. For CRC checking, select the Operations tab.
Enter a check mark in the Calculate and Store CRC Value on Backup Media option and click OK.
 - c. For data encryption and compression, select the Encryption/Compression tab.
Set Encrypt data - Select at Agent.
Set Session/Encryption password. You must provide a password to use data encryption.
Set Compress data - Select at Agent.
 - d. Click OK.
5. Click the Destination tab and specify a backup destination.

6. Click the Schedule tab.

If you want to use a Custom Schedule, select a Repeat Method. If you want to use a rotation scheme, select the Use Rotation Scheme option and set up your scheme. For more information on scheduling jobs and rotation schemes, see the online help or the [Administration Guide](#).

Note: If you clear the check mark from the Use globally scheduled backup method option on the Agent Options dialog, the options in the Backup Method section on the Schedule tab do not apply. For more information, see Database Level Backup Global Options.

7. Click the Submit toolbar button.

The Security and Agent Information dialog opens.

8. From the Security and Agent Information dialog, ensure that the correct user name and password are filled in for each object. If you need to enter or modify a user name or password, click the Security button, make your changes, and then click OK.

Note: Database security is first priority. If database security credentials are not required, user security credentials take effect.

9. Click OK.

The Submit Job dialog opens.

10. From the Submit Job dialog, select Run Now to run the job immediately, or select Run On and select a future date and time when you want the job to run.

Enter a description for your job.

If you selected multiple sources to back up and want to set the priority in which the job sessions initiate, click Source Priority. Use the Top, Up, Down, and Bottom buttons to change the order in which the jobs are processed. When you finish setting priorities, click OK.

11. On the Submit Job page, click OK to submit your job.

In addition to performing a database level backup job, Microsoft Exchange is enabled to check the database integrity. However, if the database contains a large amount of log files then checking the database integrity becomes time consuming. To prevent this from occurring, set the following registry key to skip the integrity:

Set this registry on the Microsoft Exchange Server:

Key: HKEY_LOCAL_MACHINE\SOFTWARE\ComputerAssociates\Arcserve Backup\ExchangeDBAgent\Parameters

Value Name: (DWORD) SkipIntegrity

Value: 0 or 1

Note: The value of 1 skips the integrity checking where 0 performs the integrity checking. This registry applies to Exchange 2010/2013/2016/2019 Agents.

Important! Microsoft does not recommend disabling the DB integrity validation.

Configure the Agent for Database Level Backup and Restore

This section describes how to configure the agent for database level backup and restore on Exchange Server 2010/2013/2016/2019 installations.

To configure the agent for database level backup and restore

1. From the Windows Start menu, select All Programs, Arcserve, Arcserve Backup, and Backup Agent Admin.

The Arcserve Backup Agent Admin dialog opens.

2. From the drop-down list, select Arcserve Backup Exchange Server Agent and click Configuration.

The Configuration dialog with the Exchange Database Level tab selected opens.

Important! The options displayed on the Configuration dialog vary based on the version of Exchange that you are using in your environment.

3. Specify the following options as necessary:

Note: The options listed below apply to Exchange Server 2010/2013/2016/2019 systems, unless otherwise noted.

- **Log Detail Level**--Do not change this value unless directed by a trained Arcserve Customer Support technician. This option specifies the level of detail on the debug trace and log in the log location you specify. The default Debug Level value is 1 and the supported range is between 0 and 5.
- **Single log file size**--This option specifies the maximum size of a single log file. After the file reaches the specified maximum file size, a new file is created.
Note: The default value for this option is 200 MB.
- **Max log files**--This option specifies the maximum number of log files. After the maximum number of log files reaches this value, the oldest log file is deleted and a new log file is created.
Note: The default value for this option is 50.
- **Retry Counter**--If an Exchange backup API error or time out occurs while trying to retrieve data from the Exchange server, this option lets you control the number of times you want to retry. The default Retry counter value is 2 and the supported range is between 0 and 10.
- **Retry Delay**--If an Exchange backup API error or time out occurs while trying to retrieve data from the Exchange server, this option setting lets you control

the delay between retries. The default Retry Delay value is 20 and the supported range is between 0 and 60.

- **Log Locations**--Specifies the path to the log file.
- **Path for creating recovery database**--If the Recovery Database (RDB) needs to be created during the restore operation, specify the path to it.

Note: This option applies to Exchange Server 2010/2013/2016/2019 systems.

4. Click **OK**.

The database level options are saved.

Database Level Data Restore

The following sections include information on the prerequisites you must meet before you perform a restore, the features that the agent offers when restoring from a Database Level backup, and the procedure for how to perform a restore:

- [Database Level Restore Prerequisites](#)
- [Database Level Restore Sets](#)
- [Database Level Restore Options](#)
- [Database Level Restore Options Selection](#)

Database Level Restore Prerequisites

Before you restore data, and to prepare your Exchange server, you must complete the following prerequisite tasks:

- Dismount the restore destination databases.

Note: You can dismount databases automatically using the agent option, Automatically dismount database before restore. For more information on this option, see Database Level Restore Options.

- Enable This database can be overwritten by a restore.

Note: You can also enable this by using the agent option, Allow database to be overwritten by restore. For more information on this option, see Database Level Restore Options.

- Ensure that all required Exchange Server services are running on the Exchange server.
- Ensure the following requirements are met according to your version of Exchange Server:

For Exchange Server 2010/2013/2016/2019 -- Ensure that the agent is installed on the same system as the Exchange Server that is to be used as the backup source and that the Arcserve Backup Universal Agent Service is running on that system.

Database Level Restore Sets

When you back up an Exchange Server 2010/2013/2016/2019 server, each database you selected to back up is saved on media as an individual session. To restore an Exchange server, you must restore all of the sessions that, when combined, completely restore the backed up object. These sessions are called your restore set.

The number of sessions in your restore set depends on the backup methods you used:

- If you backed up using only the full backup method, your restore set includes only this full session.
- If you backed up using both full and incremental backups, your restore set includes your full session and at least one, but up to as many incremental sessions as you want to include. For example, in the following backup scenario, your restore set can be full and incremental 1, full and incremental 1 and 2, full and incremental 1, 2, and 3, or full and incremental 1, 2, 3, and 4:

Full	Incremental 1	Incremental 2	Incremental 3	Incremental 4
------	---------------	---------------	---------------	---------------

- If you backed up using both full and differential backups, your restore set includes your full session and one differential session. For example, in the following backup scenario, your restore set can be full and differential 1, full and differential 2, full and differential 3, or full and differential 4:

Full	Differential 1	Differential 2	Differential 3	Differential 4
------	----------------	----------------	----------------	----------------

After you determine your restore set, the entire set must be selected when you submit the restore job. When using the Restore by Tree method, select the last incremental or differential session in your restore set and the agent will automatically include the full session for you.

To select restore sets in the Restore Manager

1. From the Arcserve Backup Home Page, select the Restore Manager from the Quick Start menu.
2. When the Restore Manager opens, select Restore by Tree in the drop-down box below the Source tab.
3. Expand the server that has the Information Store that you backed up, select the Information Store, Storage Group, or database object, and select a Recovery Point session. Choose a backup date and then select a Recovery Point for that date. If your restore set includes incremental or differential backups, select the last

incremental or differential backup in the set and the agent will automatically include the full backup for you.

4. Set your restore options, specify a destination, and submit the job.

Note: If you use Restore by Session rather than Restore by Tree, you must repeat Steps 1 to 4 for each session in your restore set.

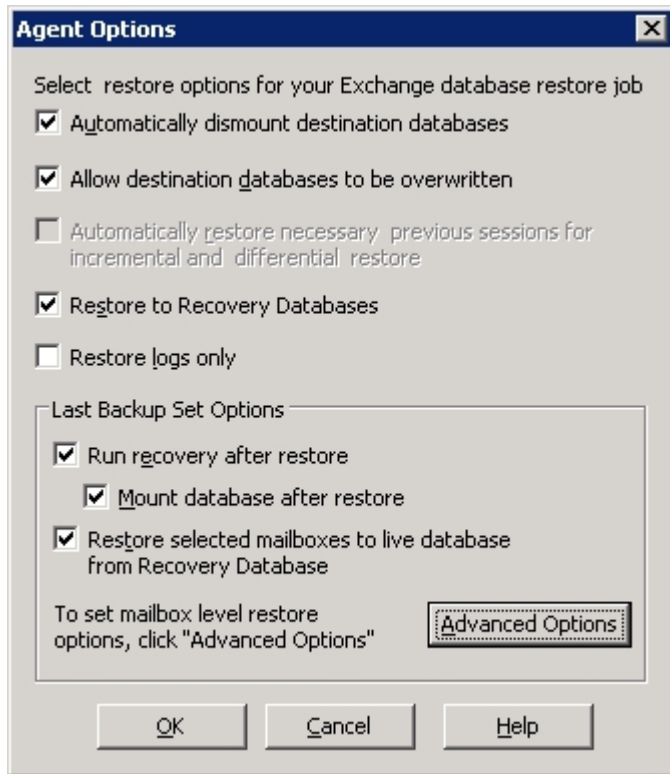
Database Level Restore Options

When you create a restore job, you can specify restore options to customize the job. The following topics describe the options available to each version of Exchange Server:

- [Exchange Server 2010 Database Level Restore Options](#)
- [Exchange Server 2013/2016/2019 Database Level Restore Options](#)

Exchange Server 2010 Database Level Restore Options

The Agent Options dialog displays additional options for Exchange Server 2010. The options selected on the dialog are the default options for a full backup session.



Restore to Recovery Database

This option lets you restore data to the recovery database. It is disabled when restoring public folders because public folders cannot be restored to the recovery database. If you enable this option, you are prompted at job submission to create a new recovery database or select an existing one.

When the Restore to Recovery Database option is enabled, you can choose to restore to existing Recovery Databases or let the Agent create Recovery Databases at the location you specify.

When you are restoring a mailbox database to a Recovery Database in Database Availability Group (DAG) environments, you are prompted to choose a physical node, and to choose whether to create or overwrite an existing RDB.

Restore log files only

This option is available for full and copy backup sessions only. It is not selected by default.

Advanced Options -- Message Filters

The Message Filters tab contains the following fields:

The screenshot shows the 'Restore Mailbox Option' dialog box with the 'Message Filters' tab selected. The dialog is titled 'Restore Mailbox Option' and has a close button (X) in the top right corner. Inside the dialog, there are three tabs: 'Restore Options', 'Folder Filters', and 'Message Filters'. The 'Message Filters' tab is active. The main area is titled 'Include Filters for messages' and contains four filter categories: 'Subject', 'Content', 'Attachment', and 'All Content'. Each category has two text input fields and 'Add' and 'Remove' buttons. Below these are 'Start Time' and 'End Time' fields with date and time pickers, and a 'Locale' dropdown menu set to '(All Language)'. At the bottom are buttons for 'Set As Default Filter', 'OK', 'Cancel', and 'Help'.

Subject filters

Use Subject filters to specify the keyword filters for subjects of items in the source mailbox. This filter finds the search string if it is part of a word. Subject filters are not whole-word searches.

Content filters

Content filters specify the keywords for message bodies and attachments of items in the source mailbox. This filter finds the search string if it is part of a word. Content filters are not whole-word searches.

Sender filters

Use the Sender filters to specify the keyword for messages in the source mailbox sent by a specific person.

Attachment filters

Use Attachment filters to specify the keywords for attachment file names of messages in the source mailbox. If an Attachment filter string matches a word or part of a word in one of the message attachment file names, the message is restored.

All Content filters

All Content filters specify the keywords for the subject, message bodies and attachments of items in the source mailbox and finds search strings if they are part of words.

Recipient filters

Use the Recipient filters to specify keywords for messages in the source mailbox sent to a specific individual.

Start and End Times

Use the Start and End Time filters to specify the start date or time and end date or time of messages that you want to export from the source mailbox. Only messages in the mailbox received after the start date and before the end date are exported. Start dates must precede end dates.

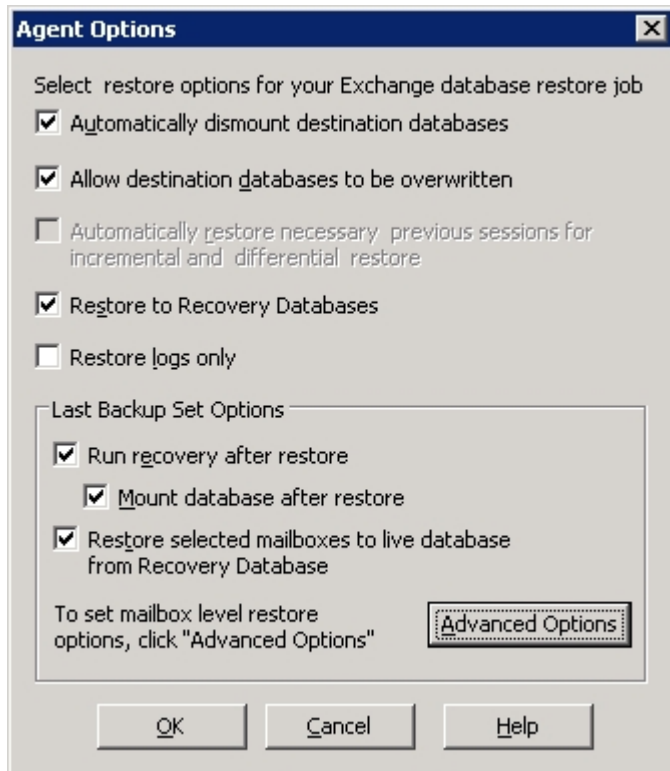
Locale

Use the Locale filters to specify source message locale. Only messages with the specified locale are restored.

These filters can be classified as Include filters. Include filters let you restore only the messages that satisfy the filter search criteria.

Exchange Server 2013/2016/2019 Database Level Restore Options

The Agent Options dialog displays additional options for Exchange Server 2013/2016/2019. The options that are selected on the dialog are the default options for a full backup session.



The options are similar to the Exchange Server 2010 options, with the following differences to support Exchange Server 2013/2016/2019:

Advanced Options

When you click the Advanced Options button, the Restore Mailbox Option dialog opens. The Restore Mailbox Option dialog contains two tabs that let you configure advanced options on how Arcserve Backup restores mailboxes.

- Restore Options
- Folder Filters

Note: For a detailed description, refer to the Exchange Server 2013/2016/2019 New-MailboxRestoreRequest article from the <http://technet.microsoft.com> web-site.

Restore Mailbox Option -- Restore Options

The Restore Options tab contains the following fields:

Source root folder

Specifies the root folder of the mailbox from where the data is restored.

Note: If this field is left blank, then all folders are restored.

Target root folder

Specifies the top-level folder where the data is restored.

Note: If this field is left blank, then all folders are restored to the top of the folder structure in the target mailbox or archive. The content is merged under the existing folders and the new folders are created when they do not exist in the target folder structure.

Conflict resolution

Specifies the following values for the Microsoft Exchange Server 2013/2016/2019 Mailbox Replication Service (MRS) to select from when there are multiple matching messages in the target:

- ◆ KeepSourceItem (default)
- ◆ KeepLatestItem
- ◆ KeepAll

Copy associated message

Specifies whether associated messages are copied when a request is processed. Associated messages are special messages that contain hidden data with information about rules, views, and forms. This parameter accepts the following values:

- ◆ DoNotCopy (default)
- ◆ MapByMessageClass--This option lets you search for the corresponding associated message with the MessageClass attribute of the source message. If the associated message contains the MessageClass attribute in both source and target folders, then the associated message in the target is overwritten. If the associated message is not in the target, then a copy of the message is created in the target.
- ◆ Copy--This option copies associated messages from the source to the target. If the same message type exists in both the source and the target location, then the associated messages are duplicated.

Note: Content filtering does not apply to associated messages.

Target is archive

Specifies that the content is restored to the target mailbox archive.

Exclude dumpster

Specifies whether to exclude the Recoverable Items folder or not. You do not have to include a value with this parameter. If you do not specify this parameter, the Recoverable Items folder is copied with the following subfolders:

- ◆ Deletions
- ◆ Versions
- ◆ Purges

Bad item limit

Specifies the number of bad items skipped when the request encounters corruption in the mailbox. When not skipping bad items, use value 0. The valid input range for this parameter is from 0 through 2147483647. The default value is 0.

Note: Keeping the default value 0 is recommended. Only change this parameter value if the request fails. When you set this parameter to 50 or higher, the command fails and you receive a warning message:

"Please confirm your intention to accept a large amount of data loss by specifying AcceptLargeDataLoss."

If you receive this warning message, run the command again and use the AcceptLargeDataLoss parameter. Any corrupted items become unavailable after the process is complete and no other warnings appear.

Large item limit

Specifies the number of items skipped in the mailbox because these items exceed the item size limit for the target mailbox database. When not skipping any large items, use the value 0.

Note: If you set the LargeItemLimit parameter to 51 or higher, it is required to include the AcceptLargeDataLoss parameter.

Accept large data loss

Specifies that a large amount of data loss is acceptable if the BadItemLimit is set to 51 or higher. Items are considered corrupted if the item cannot be read from the source database or the item cannot be written to the target database. The corrupted items results to being unavailable in the destination mailbox or .pst file.

Priority

Specifies the priority of the mailbox restore request. Select one of the following values:

- ◆ Emergency
- ◆ Highest

- ◆ Higher
- ◆ High
- ◆ Normal
- ◆ Low
- ◆ Lower
- ◆ Lowest

Workload type

Specifies the type of restore request that is based on the type of Exchange deployment or the purpose of the restore request. Select one of the following values:

- ◆ None
- ◆ Local
- ◆ Onboarding
- ◆ Offboarding
- ◆ TenantUpgrade
- ◆ LoadBalancing
- ◆ Emergency

Name prefix

Specifies the prefix of the restore request for tracking and display purposes.

Note: If you do not specify a name prefix, then Microsoft Exchange Agent automatically generates a default name (Timestamp + Mailbox GUID).

Restore Mailbox Option -- Folder Filters

The Folder Filters tab lets you exclude or include specific folders during a restore request by clicking Add or Remove.

Database Level Restore Options Selection

When to use Database Level Restore options depends on your restore set. The following tables describe when to use each restore option. If you restore using the Restore by Tree method, the correct restore options are automatically applied for you. If you restore data using Restore by Session, use the following information to determine when to use each option.

Table legend

- N -- You are not required to enable the option
- Y -- You must use the option
- Y/N -- You may, but are not required to enable the option

To read the tables, consider the heading first, and then the column headings for each option.

If your restore set contains incremental backups:

Type	Full	Intermediate Incremental	Last Incremental
Run Recovery after restore (2010/2013/2016/2019)	N	N	N
Mount database after restore	N	N	Y/N

If your restore set contains differential backups:

Type	Full	Differential
Run Recovery after restore (2010/2013/2016/2019)	N	N
Mount database after restore	N	Y/N

If your restore set is a full backup:

Type	Full
Apply existing logs	Y/N
Run Recovery after restore (2010/2013/2016/2019)	N
Mount database after restore	Y/N

Selecting Database Restore Sources and Destinations

This section contains the following topics:

[How to Select Restore Source Objects](#)

[How to Select Restore Destinations](#)

[Supported Database Restore Destinations by Version](#)

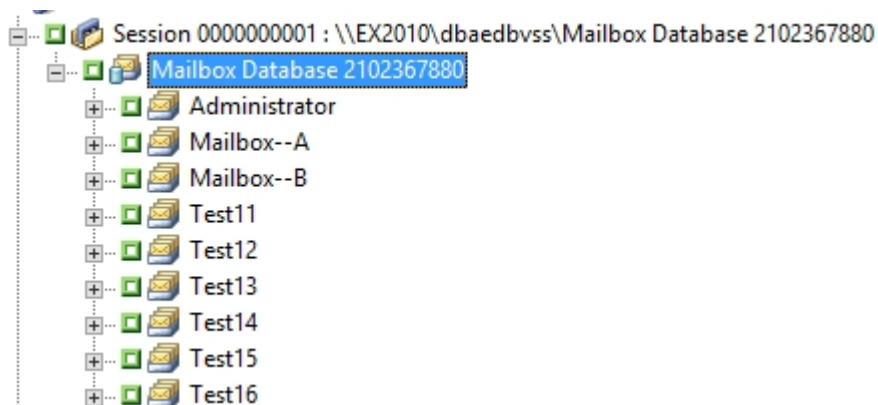
[Set the File System Path Manually When Restoring Data to a Windows File System](#)

How to Select Restore Source Objects

The method that you use to select the source that you want to restore depends on the methods used to back up the sessions.

- **Select individual mailboxes from Full and Copy Backups (only Exchange Server 2010, 2013, 2016 and 2019), and Incremental and Differential Backups (only Exchange Server 2010, 2013, 2016 and 2019)**

When the options Restore selected mailboxes to live database from Recovery Storage Group or Restore selected mailboxes to live database from Recovery Database is selected, you can browse the restore source down to the mailbox level and select the individual mailboxes as the restore source, as illustrated by the following screen:



- **Select Incremental and Differential sessions**

When you are restoring incremental or differential backup sessions of Exchange Server 2010, 2013, 2016, or 2019, you can select the entire database to restore or select the individual mailboxes.

How to Select Restore Destinations

When restoring a database level backup, you can restore data to its original location (default) or you can restore data to an alternative location.

Use the option, Restore files to their original location, only when you want to restore data to the exact location that you backed up from and the hierarchy of the server has not changed.

For all other scenarios, you must restore data to an alternative location.

Note: The restore target Exchange Server must be the same version as the source Exchange Server.

For Exchange Server 2010, 2013, 2016, and 2019 -- To restore data to an alternate destination, the Restore Manager must communicate with the Exchange agent on the target server so that it can browse for Exchange objects. You can enter the agent backup account by right-clicking the Microsoft Exchange Server - Database Level. On the agent side, if the agent backup account is not provided, the machine user account is used instead. Restore destination browsing can be down to the database level.

Supported Database Restore Destinations by Version

You can restore to alternative locations such as a different server, storage group, database or Windows file system. When you restore to an alternative location, the destination you can select depends on the source you select. The following chart lists the source objects you can select and their supported destinations.

Note: If you select multiple sources to restore, you must select a destination that supports all sources.

For Exchange Server 2010/2013/2016/2019

Alternative locations can be a different server or database. It can also be a Windows file system. When restoring to an alternate location, the destination you can select depends on the source you select.

Source Objects	Supported Destinations
More than one database	<p>Microsoft Exchange Server - Database Level - In this case, the databases with the same names as the sources must exist at run time on the destination server, or the restore job fails.</p> <p>A Windows File System.</p>
One database	<p>Microsoft Exchange Server - Database Level - In this case, the database with the same name as the source must exist at run time on the destination server or the restore job fails.</p> <p>A database - If a mailbox is restored to a public folder database or a public folder database is restored to a mailbox, the restore job may fail at run time.</p> <p>A Windows File System.</p>
Logs	<p>Microsoft Exchange Server - Database Level - In this case, the databases with the same names as the sources must exist at run time on the destination server.</p> <p>A database.</p> <p>A Windows File System.</p>

Set the File System Path Manually When Restoring Data to a Windows File System

(For Exchange Server 2010, 2013, 2016 and 2019) -- If you want to restore data to a Windows file system, you must select the Exchange database level agent in the Restore Manager Window. When you select this agent, the path to the target system appears in the Destination field. To complete the path to the Windows file system, enter the path to the file system into the Destination field immediately after the name of the target system.

To set the path manually when restoring data to a Windows file system

1. Open the Restore Manager and select the destination tab.
2. Clear the check mark from the **Restore files to their original location(s)** option.
3. Expand the Windows Systems or Exchange Organization object and browse to the target system that you want to restore the data to.

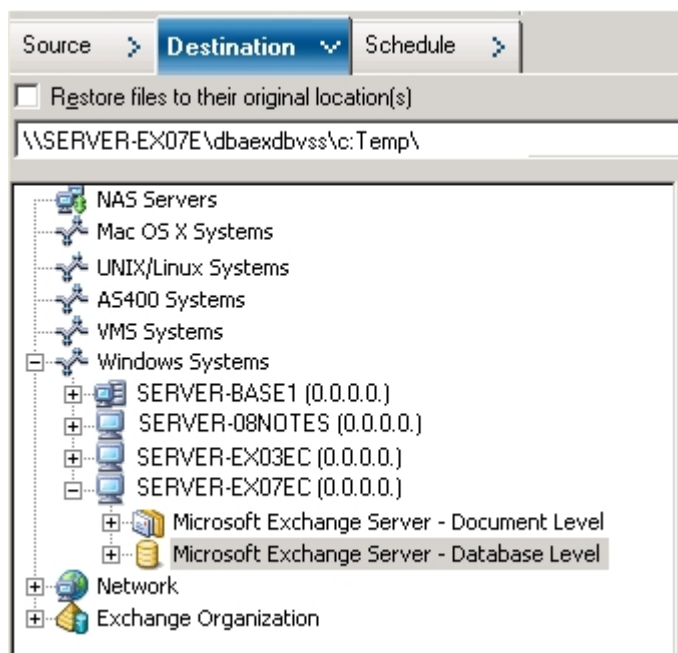
Expand the target system and select the **Microsoft Exchange Server - Database Level** object.

Arcserve Backup automatically populates the Destination field.

For Exchange Server 2010/2013/2016/2019, use:

\\<server name>\dbaedbvss

4. Enter path to the file system directory, for example c:\Temp.



Note: If the file system directory does not exist on the target system, Arcserve Backup creates the directory that you specified for you (for example, c:\Temp).

When restoring Exchange Server 2010/2013/2016/2019, the agent creates on sub-directory for each database under the specified destination at the restore time, labeled as follows:

\<original database>

Where <original database> represents the name of the source database. For example, the path to restore the database named "mailbox database 123" is as follows:

c:\Temp\mailbox database 123

When you restore a full or copy backup to a file system, the agent empties the contents of the target folder before the restore operation starts. For example, when you restore a full or copy backup of a database named "mailbox database 123", the agent empties the following directory:

c:\Temp\mailbox database 123

After you specify the file system as the restore destination, Arcserve Backup applies the following options at run time to the restore operation (if specified):

- Run recovery after restore.
- Automatically restore necessary previous sessions for incremental and differential restore.

Note: Arcserve Backup ignores all other restore options at run time when restoring data to a Windows file system.

Perform a Database Level Data Restore

To perform a database level data restore on an Exchange Server database

1. From the Arcserve Backup Home Page, select Restore from the Quick Start menu.
The Restore Manager window opens.

2. From the Restore Manager window, select Restore by Tree in the drop-down box below the Source tab.

Note: Both Restore by Tree and Restore by Session restore methods are supported for Database Level restores.

3. Expand the Exchange Organization object for Exchange Server 2010/2013/2016/2019 from the directory tree.

Further expand the server that contains the database you backed up and select the database object.

4. If the most recent backup is not the backup you want to restore, select a Recovery Point session to restore. Select a date and then choose a recovery point from that date.

Note: If you are using a restore set, you must restore the entire set in the order that it was backed up. If your restore set includes incremental and differential backups, select the last incremental or differential backup in the set and the agent will automatically include the full backup for you (applies to Restore by Tree only). For more information on restore sets, see Database Level Restore Sets.

5. Right-click Database object for Exchange Server 2010/2013/2016/2019 that is included in this job and select Agent Option to select backup options. For more information about restore options, see Database Level Restore Options.
6. Click the **Destination** tab. You can restore the database objects to their original location (default) or you can restore the database objects to an alternative location.
7. If you want to restore to an alternative location, clear the check mark from the Restore files to their original locations check box, expand the server you want to restore to, and select the destination object.
8. Click the **Submit** toolbar button.

If you are restoring to an alternative location, when the Security dialog appears, enter the user name and password for the destination server and click **OK**.

Note: Arcserve Backup does not support logging into systems with passwords that are greater than 23 characters. If the password on the system you are attempting to log into is greater than 23 characters, you must modify the password on the

agent system such that it is 23 characters or less, and then you can log into the agent system.

9. When the Session User Name and Password dialog opens, verify or change the user name and password for the destination Exchange Server. To change the user name or password, select the session, click Edit, make your changes, and then click OK.

Note: The user name must be entered in the following format:

DOMAIN\USERNAME

10. Click **OK**.
11. When the Submit Job dialog opens, select Run Now to run the job immediately, or select Run On and select a future date and time when you want the job to run.
12. Enter a description for your job and click **OK**.

Chapter 5: Performing Document Level Backups and Restores

Note: We no longer support Exchange document level (all versions of Exchange) as it uses legacy MAPI/CDO library technology, which Microsoft no longer supports. We recommend to use the [Exchange Granular Restore Utility](#) for restoring individual items.

This section contains the following topics:

Exchange Granular Restore Utility	80
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Exchange Granular Restore Utility

Important! With this release, Arcserve Backup offers the use of an Exchange Granular Restore utility to restore Microsoft Exchange email and non-email objects.

The utility includes the injection capability for items, such as emails from offline databases (*.EDB) and log files to the original live Exchange databases, as well as granular data extraction to Personal Storage File (.pst) files.

This utility includes the following key benefits:

- Supports non-email items (for example, tasks) and public folders.
- Works with just a database file as well. Logs are not mandatory, but having them will ensure more recent data available for restore.
- Requires a minimum amount of time to restore a mailbox level item from a database or user mailbox of any size.

Note: For more details on the supported specifications, functionalities, and other features, see the Exchange Granular Restore user guide ([esr.pdf](#)).

Once the utility is installed, you can also find the user guide (esr.pdf) located at **%ProgramFiles\CA\ARCserve Backup Agent for Microsoft Exchange Server\Exchange GRT**.

Perform the following tasks to restore Microsoft Exchange email, using the Exchange Granular Restore utility:

1. From the Arcserve Restore Manager, select a file system as the destination on the Exchange Server to restore the database.

For detailed instructions, see [Selecting Database Restore Sources and Destination](#).

Note: The Exchange Granular Restore Utility is installed with the Microsoft Exchange Agent installation. The Exchange Granular Restore Utility is installed by default to **%ProgramFiles\CA\ARCserve Backup Agent for Microsoft Exchange Server\Exchange GRT**.

2. Launch the utility tool and open the Exchange database and logs that was restored in step 1.
3. Find and select the mailboxes, folders, and messages.

Note: The utility provides two mutually complimentary modes of finding, pre-viewing, and selecting items: **Browsing the mailbox tree** and **Search**.

4. Select and restore the individual items to one of the following locations:

- Original location
- Alternate location
- .PST files

Notes:

- By default, the utility uses the current user who is logged on to Windows to establish the connection. If the current user does not have permissions to impersonate the selected user, the following message appears: *"Exchange impersonation lets you connect to a mailbox other than the default one for your credentials. To use the feature, access permissions need to be configured at the Exchange Server."*
 - You can connect to the selected mailbox using one of the following options:
 - Use credentials of the selected mailbox.
 - Specify the user that has impersonation rights.
5. (Optional) Use the command line to process several databases.

Usage: esr.exe <source> <destination>

Chapter 6: Using Best Practices

This section recommends best practices for using Arcserve Backup Agent for Microsoft Exchange Server.

This section contains the following topics:

General Recommendations	84
Installation Recommendations	87
Exchange Server Configuration Recommendations	90
Backup Recommendations	93
Restore Recommendations	98
Backup and Restore Test Strategies	100
Using the Disaster Recovery Option with the Agent	101

General Recommendations

Consider the following best practices when using the agent.

- [Technical Resources](#)
- [Logs in the Event Viewer](#)

Technical Resources

The Microsoft web site offers numerous technical resources for Exchange Server, including books, downloadable Help files, and software development kits. You should read these documents, especially white papers about disaster recovery for Microsoft Exchange Server. The more informed you are about Exchange Server, the more you can apply your knowledge to maximize data protection when using the agent.

Logs in the Event Viewer

In addition to monitoring the Arcserve Backup Activity log for events that may occur when using the agent, you should also monitor the logs in your Windows Event Viewer, especially the Application log and System log. The Application log includes internal Exchange Server events and the System log includes Windows events.

Installation Recommendations

Consider the following best practices when installing the agent.

- [Product Recommendations](#)
- [Load Reduction](#)

Product Recommendations

Arcserve Backup offers agents and options that let you protect all of the servers in your Exchange Organization. These servers include your Exchange Servers and domain controllers.

Note: It is important to protect your domain controllers since they include the Active Directory containers, which hold user, mailbox, and public folder information.

To maximize your Exchange Server protection, use all of the following solutions on each of your Exchange Servers:

- **Arcserve Backup Agent for Microsoft Exchange Server**--For Database Level backup and restore. Database Level backup and restore protects the Exchange Server database and logs.
- **Arcserve Backup Client Agent for Windows**--Protects files and system state, including Active Directory. It is important to protect the Active Directory because it stores mailbox and user information.

Note:In addition to using the Arcserve Backup Client Agent for Windows on all of your Exchange Servers, also use it to protect all of your domain controllers.

- **Arcserve Backup Disaster Recovery Option**--In the event of a disaster, the Arcserve Backup Disaster Recovery Option recovers the machine to the last full backup state. Install the Arcserve Backup Disaster Recovery Option on all servers you will use to back up your Exchange Servers and domain controllers.

You do not need to install the following application to effectively protect Exchange Server data:

- **Arcserve Backup Agent for Open Files**--Arcserve Backup Agent for Open Files is beneficial when you want to protect files that are open or in use by active applications. Because the Arcserve Backup Agent for Microsoft Exchange Server is an application-specific agent, dedicated to protecting Microsoft Exchange, it offers a complete and robust solution that encompasses all the features offered by Arcserve Backup Agent for Open Files.

Load Reduction

If you have the network infrastructure to support high performance remote backups, install the Backup Manager on a different server than your Exchange Server. This reduces the load on the Exchange Server.

Exchange Server Configuration Recommendations

Consider the following best practices for configuring your Exchange Server.

- [Circular Logging](#)
- [Transaction Log Space](#)

Circular Logging

Circular Logging must be disabled to take advantage of incremental and differential backups. If Circular Logging is not disabled and you submit an incremental or differential backup, the agent automatically converts the backup to full.

Although Circular Logging decreases the amount of disk space you use, it does not let you recover all changes since your last backup because it only maintains a small number of log files. Consequently, you cannot take advantage of the benefits of using a transaction-based system and you cannot completely recover if something goes wrong with the system. If you want to conserve disk space, perform regular backups rather than using Circular Logging because backups automatically remove transaction log files.

You cannot restore individual databases if circular logging is enabled during the backup operation or during the recovery operation.

Transaction Log Space

Make sure that you have enough space on your Exchange Server in case you want to restore transaction logs. Leave at least twice the amount of space that you expect your transaction logs to use. In addition, if you intend to restore Database Level backups, you should leave enough space to accommodate the size of the backups because the size of the database file may increase during the restore.

Backup Recommendations

Consider the following best practices for backing up your Exchange Server.

- [Online Backup Use](#)
- [Media Integrity](#)
- [Database Level Backup Strategies](#)

Online Backup Use

Always perform online backups. This lets you back up Exchange Server databases without shutting them down and losing work time. If you do not perform online backups, not only do you lose valuable work time, but you also run the risk of making costly errors since offline backups are detailed and labor-intensive. When you perform online backups, the agent manages files for you. When you perform offline backups, you must do all of the work yourself. In addition, if you perform offline backups, there is no process for validating the checksum on each page of the database so you cannot detect corruptions and check the integrity of the database.

Media Integrity

Use the global option Calculate and Store CRC Value on Backup Media when creating your backup job. Afterwards, scan your media with CRC verification to ensure the media integrity.

Database Level Backup Strategies

There are many factors that contribute to your backup strategy--backup window size, restore window size, server and storage hardware, the amount of available media, media retention time, network bandwidth, server load, and the size of your databases. Consequently, the backup strategy that you should use depends on your environment and physical hardware.

When determining a backup strategy, you must first assess the amount of time your organization has available each week for backing up your Exchange Server. When doing so, remember that the most time-consuming aspect of performing a restore is replaying the log files. Depending on how often you perform full backups, it can take several hours to replay log files on large servers during a restore because every transaction that has occurred since the last backup must be scanned. In addition, the speed at which transaction log replay occurs varies, depending on the type of transactions that must be replayed. Perform a test restore of your log files to get a more accurate estimate of how long it will take.

After you determine the size of your restore window, you must consider the affect that your environment and resources will have on your backup strategy:

- In an environment that has mission-critical data with minimal restore windows, you should perform full backups nightly (or during the hours your server is least active) and incremental backups at mid-day (or during a low production period during the day that is evenly spaced from your full backups).
- If media usage is a major factor in your backup strategy, either perform full backups daily or full alternating with differential backups daily.
- In an environment that has non mission-critical data with less aggressive restore windows, you should perform a full backup at least once a week and perform incremental or differential backups on the other days.

In Exchange Server 2010/2013/2016 Database Availability Group (DAG) environments, you should use the default backup source to avoid affecting the performance of live databases. By default, the database is backed up from the replica, and the agent backs up from the active database only if no healthy replica is available. In Exchange Server 2010/2013/2016 environments, if more than one replica for a database exists, the default order for replica selection is based on the database copy activation preference. The first copy is used first.

The following chart includes examples of a few backup strategies and their advantages and disadvantages. Although, for maximum protection, you should perform daily full and incremental backups, for maximum protection, you can customize your backup strategy to suit your organization's needs. The only requirement is

that you minimally perform daily backups on work days with a full backup once a week.

Backup Strategy	Advantages	Disadvantages
Daily full and incremental backups*	High frequency of protection Short restore window	High media usage
Daily full backups	Good frequency of protection Short restore window	High media usage
Daily backups with a full at least once a week	Good frequency of protection Less media usage	Varying restore window

* Schedule full and incremental backups approximately 12 hours apart.

Restore Recommendations

Consider the following best practices for restoring the Exchange Server.

- [General Restore Strategies](#)

General Restore Strategies

Perform a test restore to a backup server **at least once a month** and make sure the restored database is functioning properly.

Backup and Restore Test Strategies

After you have developed backup and restore strategies, you need to test them to ensure that they work satisfactorily. You can perform backup tests on a production system; however, you should perform recovery tests on a test system that closely mimics the production system before applying your backup and restore strategies to the product system.

You should perform a test restore to a backup server at least **once a month** and make sure the restored database is functioning properly. This lets you test your backup and restore strategies to assess whether you are backing up your system accurately and to prepare for a possible disaster.

For information about how to perform test restores on Exchange Server 2010/2013/2016/2019 systems, see [Database Level Data Restore](#).

Note: Exchange Server 2010/2013/2016/2019 has a recovery database, both of which can be used to test restores. However, you should still practice restoring your entire Exchange Server to a test server.

Using the Disaster Recovery Option with the Agent

Planning your backup methodology is critical for protecting your Exchange Server 2010/2013/2016/2019 systems against failures, and for quick recovery of your server in case of disaster.

The following process assumes you have a Windows server running 2010/2013/2016/2019 and some Exchange Server Databases are running. A disaster occurs and it is necessary to rebuild the entire server.

Important! Before performing disaster recovery, ensure you have the most recent full backup of the Exchange Mailbox Server and the most recent database level full backups for all mailbox databases and public folder databases.

1. If the Active Directory server was destroyed, perform disaster recovery of AD server first. For more information, see the Arcserve Backup > [Disaster Recovery Option Guide](#).
2. Perform disaster recovery of the Exchange Server.
3. Perform database level restores of all mailbox databases and public folder databases. For more information, see the section, [Performing Database Level Backups and Restores](#).

Note: If you are running Exchange Servers in cluster environments, perform database level restores of mailbox and public folder databases according to your particular configuration.

You may receive the following error:

AE9650 The volume shadow service provider has reported a bad state for the operation.

If so, perform the following steps using the Arcserve Backup Disaster Recovery Option Wizard

1. Perform Disaster Recovery to recover the Exchange 2010/2013/2016/2019 Server.
2. Use the Arcserve Backup Agent for Microsoft Exchange to restore all Mailbox Database data to an alternate location. Make sure the option, Run recovery after restore is disabled.
3. Log into the Exchange Server with the Mailbox role installed and stop the IS (Information Store) service.
4. Navigate to the Mailbox Database folder, delete the *.chk, *.log, and *.edb files. If your Exchange server has more than one storage group, repeat the delete operation for all storage groups.

5. On the alternate location used in Step 2, copy the *.chk, *.log, and *.edb files restored there to their original location.
6. Restart the IS service.

Chapter 7: Troubleshooting

This section provides troubleshooting information to help you identify and resolve problems that you may encounter when using the Arcserve Backup Agent for Microsoft Exchange Server. To help you quickly find the information you need, this section lists some error messages and possible reasons and solutions for these messages.

This section contains the following topics:

Activity Log	104
I Cannot Determine How Much Space is Saved Using Complete Single Instance Storage	105
I Cannot Determine the Purpose of the M Drive	106
Exchange Server Errors	107
Information for Technical Support	109

Activity Log

Many of the actions to resolve error conditions advise you to check the Arcserve Backup Activity log. The Activity log contains comprehensive information about the operations performed by Arcserve Backup. It provides an audit trail of all Arcserve Backup activity for every job that is run. You can scan this log whenever necessary to see if any errors have occurred. The log is available from the Job Status Manager. For more information about using the Activity log, see the [Administration Guide](#).

I Cannot Determine How Much Space is Saved Using Complete Single Instance Storage

Valid on all Exchange Server systems.

Symptom

After I back up data using Single Instance Storage, I cannot determine how much space is saved.

Solution

After you submit your backup job, you can go to the Job Status Manager and double-click the active job to view real-time job properties. If you have Complete Messaging Single Instance Storage enabled, all of the fields related to size will reflect the size prior to single instance storage optimization. The actual size of the backup after single instance storage optimization opens in the Activity Log and is labeled "(xx)MB Written to Media."

I Cannot Determine the Purpose of the M Drive

Valid in all Exchange Server systems.

Symptom

I cannot determine the purpose of the M drive and do not know if it needs to be backed up.

Solution

The M drive (ExIFS) is a virtual drive that exposes mailboxes and public folders. It is simply a view of the Exchange Server and not a physical drive, so you do **not** need to back it up, which is why it is skipped when you perform a backup job using the Client Agent for Windows.

Exchange Server Errors

For additional information on any Exchange Server error, check the Event Log on the Exchange Server or see the Microsoft web site.

This section contains the following topics:

[Exchange Agent Does Not Display When You Browse the Server](#)

Exchange Agent Does Not Display When You Browse the Server

Valid on Exchange Server 2010 system.

Symptom

When you attempt to browse the Exchange Server system, the Exchange Agent object does not display in either the Backup Manager or Restore Manager window.

Solution

The Agent service is not running. Start the Universal Agent service.

Information for Technical Support

If you need to contact Arcserve support for assistance with Exchange Server 2010, 2013, 2016 and 2019, use the following registry keys to gather the information that Customer Support will need to help resolve your issues:

Database Level Backup and Restore

HKEY_LOCAL_MACHINE\SOFTWARE\ComputerAssociates\CA ARCserve Backup\ExchangeDBAgent\Parameters

Value Name: Debug

Value Type: REG_DWORD

Value Data: 0(off), 1(default), 5(verbose)

Results: dbaexdb*.log & dbaexdb*.trc, in Exchange agent DBLOG directory

If the trace files grow too large or too many, you can use the following registry values to reduce the size and file count:

Value Name: MaxLogSize

Value Type: REG_DWORD

Value Data: size of each trace file in MB

Result: As soon as the size is reached, a new trace file will be generated.

Value Name: MaxLogCount

Value Type: REG_DWORD

Value Data: Number of log files

Results: After the maximum number of log file reaches this value, the oldest log file is deleted and a new log file is created.

Note: You can change the registry values listed above using the Exchange agent configuration utility. You do not need to restart the Universal Agent service.

Chapter 8: Setting Up a Backup Agent Service Account

After you install the Arcserve Backup Agent for Microsoft Exchange, you must set up a backup agent service account on your Exchange Server. The backup agent service account grants the agent the authority to communicate with the Exchange Server.

This section contains the following topics:

How to Set Up Your Backup Agent Service Account	112
Set Up Your Backup Agent Service Account	116
Set Up Groups	122
Delegate Roles	126
Additional Configuration Considerations	128

How to Set Up Your Backup Agent Service Account

Before you can set up your backup agent service account, you must perform the following tasks:

1. Determine your backup agent service account requirements.

Note: For more information, see [Backup Agent Service Account Requirements Overview](#).

2. Determine your tasks.

Note: For more information, see [Task Requirements](#).

3. Determine your environment.

Note: For more information, see [Implementation Considerations](#).

4. Set Up Your Backup Agent Service Account.

Backup Agent Service Account Requirements Overview

See information about backup agent service account requirements in the chapters “Performing Database Level Backups and Restores” on page 37”.

Task Requirements

After you decide on your backup agent service account requirements, you must determine your tasks.

Depending on your requirements, you must perform one or more of the following tasks:

- Create a user account
- Create a mailbox
- Create groups
- Delegate roles

Implementation Considerations

Each task you must perform to manually set up your backup agent service account depends on one or more of the following factors:

- Using Exchange Server 2010/2013/2016/2019
- The version of Windows you are using:
 - Windows Server 2008
 - Windows Server 2008 R2
 - Windows Server 2012
 - Windows Server 2012 R2
 - Windows Server 2016
- The type of server you are using:
 - Domain controller
 - Member server

Set Up Your Backup Agent Service Account

To set up your Backup Agent Service Account

1. Set up user accounts.
2. Set up mailboxes.
3. Set up groups.
4. Set up roles.

Important! Each task includes different procedures based on the environment. Select the tasks and environments that match your needs and use the corresponding procedures to manually set up your backup agent service account.

Note: For additional configuration considerations, see Additional Configuration Considerations.

More information:

[Create a Domain User on Windows Server 2008](#)

[Set Up Groups](#)

Create a Domain User on Windows Server 2008

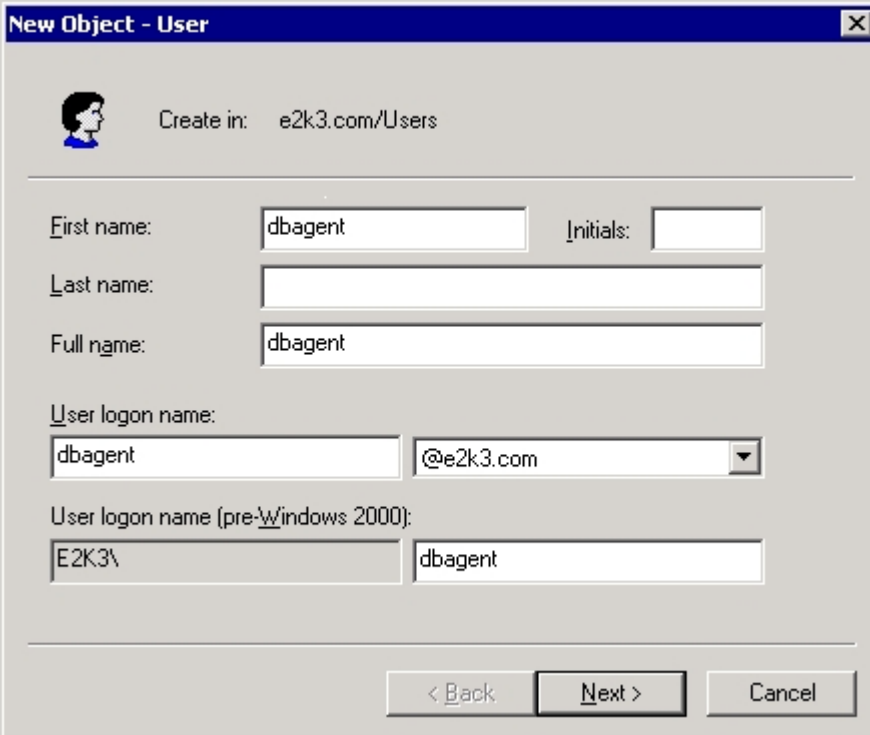
If you already have a domain account, you do not have to create a user. You can use the domain account as your backup agent service account. To do this, simply use your domain account to set up a mailbox, add groups, add rights, and delegate roles.

To create a backup agent service account

1. On your domain controller, from the Start menu, select All Programs, Administrative Tools, and select Active Directory Users and Computers.

The Active Directory Users and Computers window opens.

2. When the Active Directory dialog opens, expand the Active Directory Users and Computer tree and click Users.
3. From the Action menu, select New, User.
4. When the New Object - User dialog opens, enter a first, last and full name for the user. Also enter Initials. Enter a User logon name, and then click Next.



The screenshot shows the 'New Object - User' dialog box. The title bar reads 'New Object - User'. Below the title bar is a small icon of a person and the text 'Create in: e2k3.com/Users'. The dialog contains several input fields: 'First name:' with 'dbagent', 'Initials:' (empty), 'Last name:' (empty), 'Full name:' with 'dbagent', 'User logon name:' with 'dbagent' and a dropdown menu showing '@e2k3.com', and 'User logon name (pre-Windows 2000):' with 'E2K3\' and 'dbagent'. At the bottom are three buttons: '< Back', 'Next >', and 'Cancel'.

5. Enter a password, confirm the password, enable the Password never expires option, and then click Next.

The screenshot shows a Windows dialog box titled "New Object - User". At the top left, there is a user icon and the text "Create in: e2k3.com/Users". Below this, there are two text input fields: "Password:" and "Confirm password:", both containing seven black dots. Underneath the password fields are four checkboxes with the following labels: "User must change password at next logon", "User cannot change password", "Password never expires" (which is checked), and "Account is disabled". At the bottom of the dialog, there are three buttons: "< Back", "Next >" (which is highlighted with a black border), and "Cancel".

6. Click Finish.

Create a Domain User with a Mailbox for Exchange Server 2010

Follow these steps:

1. From the Windows Start menu on your Exchange server system, select Programs, Microsoft Exchange Server, and Exchange Management Console.

The **Exchange Management Console** opens.

2. Expand the Recipient Configuration object, select and right-click the Mailbox object.

From the pop-up menu, select New Mailbox.

The **New Mailbox - Introduction** dialog opens.

3. From the section **Choose mailbox type**, select the **User Mailbox** option and click Next.

The **New Mailbox - User Type** dialog opens.

4. From the section **New user**, select New user and click Next.

The **New Mailbox - User Information** dialog opens.

5. Complete the following fields:

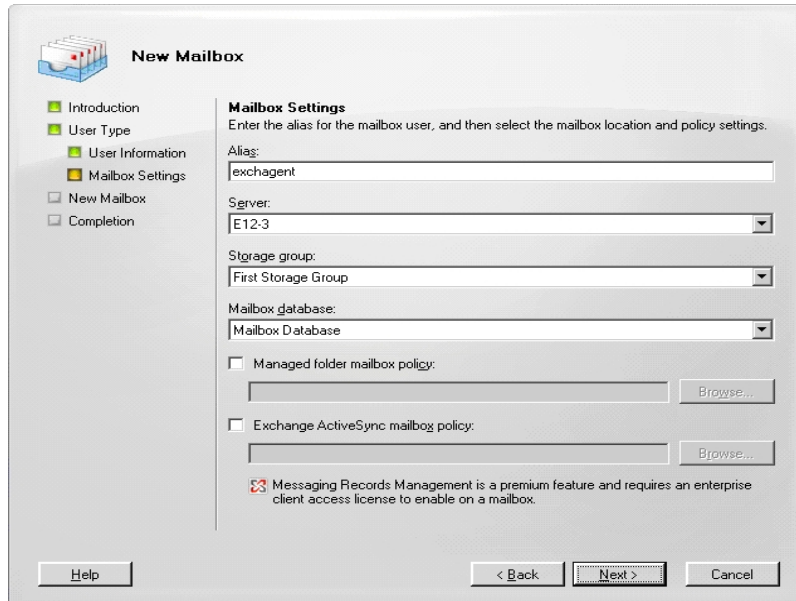
The screenshot shows the 'New Mailbox - User Information' dialog box. The 'User Information' section is active, and the 'Next >' button is highlighted. The fields are filled with the following values:

- Organizational unit: E12Dom.com/Users
- First name: exchagent
- Initials:
- Last name:
- Name: exchagent
- User logon name (User Principal Name): exchagent
- User logon name (pre-Windows 2000): exchagent
- Password: [masked]
- Confirm password: [masked]
- User must change password at next logon

In the First name field, enter a name for your backup agent service account, enter a User logon name and password, and then click Next.

The **New Mailbox - Mailbox Settings** dialog opens.

6. Complete the following fields:



Select a Storage Group and a Database for the mailbox, and then click Next.

The **New Mailbox - Configuration Summary** dialog opens.

7. Verify the configuration summary and click the **Back** button if you need to make changes.
8. To complete the configuration, click New and then click Finish.

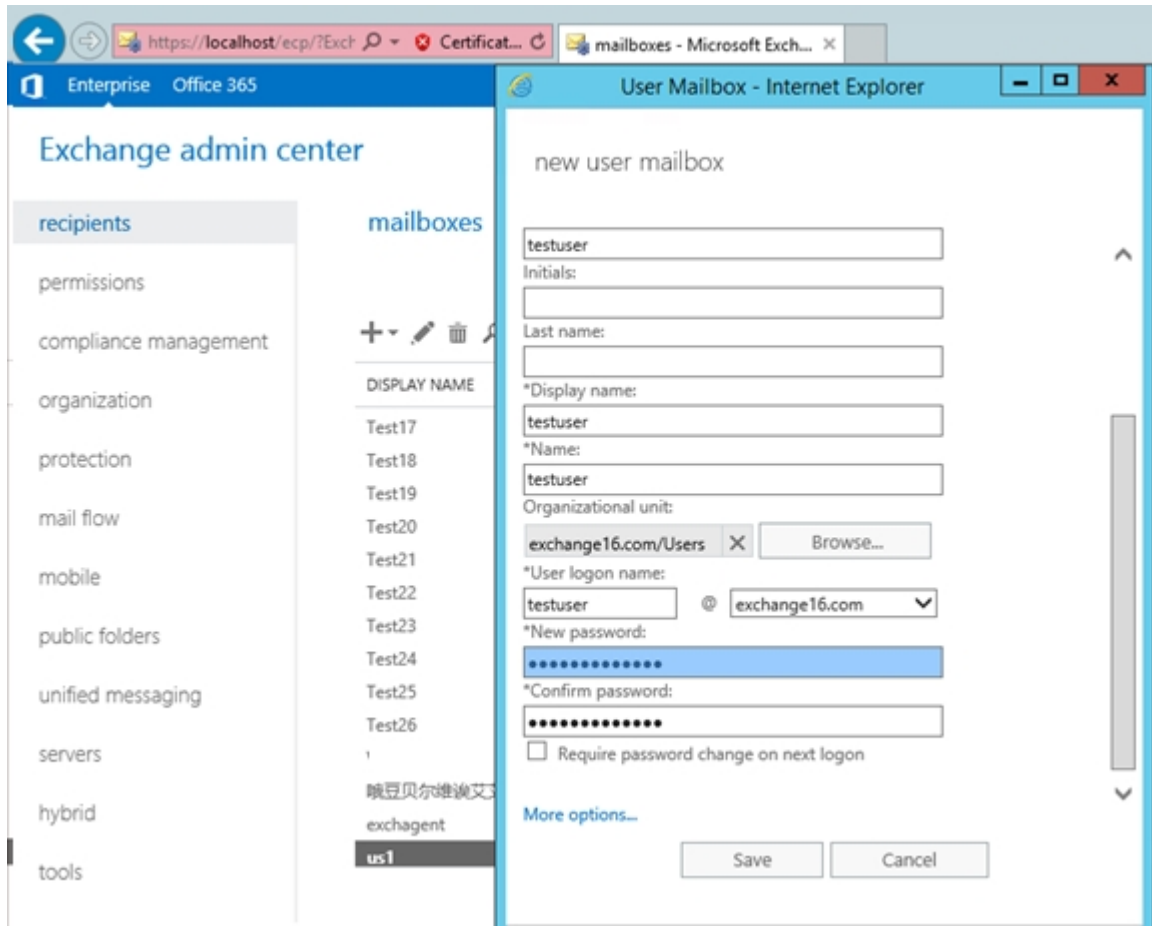
You have successfully created a domain user with a mailbox on an Exchange Server 2010 system.

Note: After you finish creating your backup agent service account and mailbox, you should log into this account using Outlook or by sending an email to the account to verify that the mailbox functions properly.

Create a Domain User with a Mailbox for Exchange Server 2013, 2016, and 2019

Follow these steps:

1. From the Windows start menu, open Exchange Administrative Center.



2. Navigate to **recipients** and click **+**.
3. From the drop-down list, select **User mailbox**.
The **User Mailbox** window appears.
4. Enter the required fields and click **More options** to browse the mailbox database.
5. Click **Save**

You have created a domain user with mailbox on an Exchange Server 2013, 2016 and 2019 successfully.

Set Up Groups

Based on the type of Microsoft Exchange Server that is running in your environment (member server or domain controller), use one of the following procedures to set up groups:

- [Add Groups for all Versions of Exchange Server on a Windows Member Server](#)
- [Add Groups for all Versions of Exchange Server on a Domain Controller](#)

Add Groups for all Versions of Exchange Server on a Windows Member Server

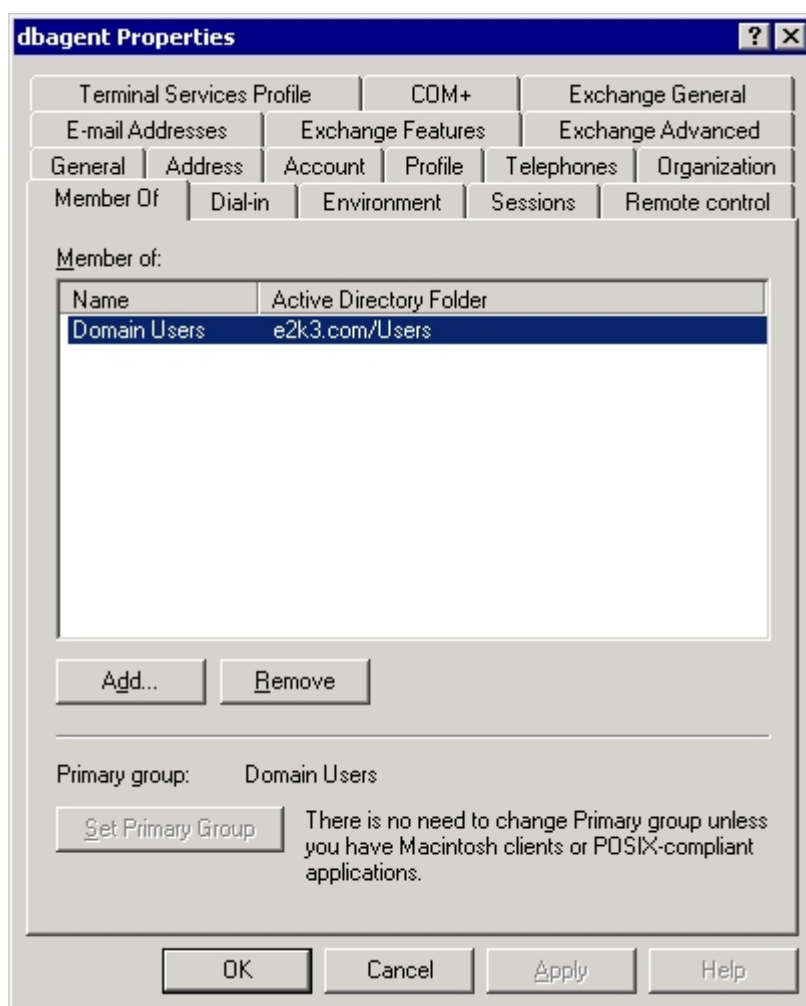
To add groups

1. Right-click My Computer and select **Manage**.
2. When the **Computer Management** dialog opens, expand the **Local Users and Groups** object and click **Groups**.
3. In the right-pane, double-click **Administrators**.
4. When the Properties dialog opens, click **Add**.
5. When the **Select Users or Groups** dialog opens, in the **Look in** field, select the appropriate domain. Next, in the **Name** column, select the name of your backup agent service account, click **Add**, and then click **OK**.
6. When the Properties dialog reopens, the name of your backup agent service account is displayed in the **Members** list. Click **OK**.
7. When the Computer Management dialog reopens, in the right-pane, double-click **Backup Operators** and repeat Steps 4 to 6.

Add Groups for all Versions of Exchange Server on a Domain Controller

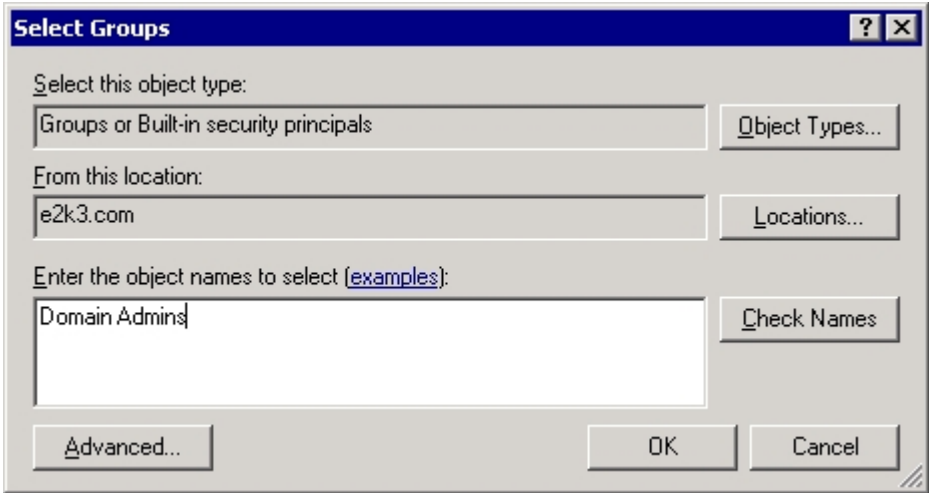
To add groups

1. On your domain controller, from the Start menu, select All Programs, Administrative Tools, and select Active Directory Users and Computers. From the Active Directory Users and Computers dialog, in the right pane, right-click your new account name and select Properties.
2. When the Properties dialog opens, click the Member Of tab and click Add.

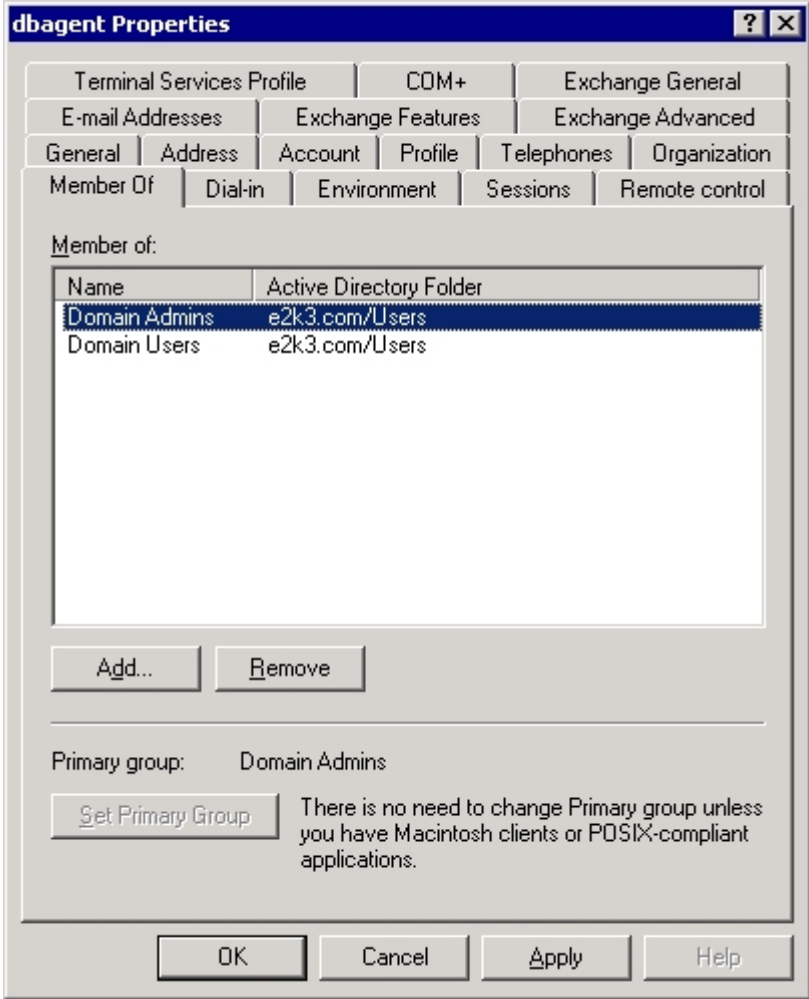


3. When the Select Groups dialog opens, type Domain Admins in the Enter the object names to select field and click OK.

Note: If your Exchange Server is your domain controller, you must also select Administrators and Backup Operators.



- 4. When the Properties dialog reappears, select Domain Admins and click Set Primary Group. Next, select Domain Users, click Remove, click Yes, and then click OK.



Delegate Roles

Use the following procedure to delegate roles:

[Delegate Roles for Exchange Server 2010/2013/2016/2019 on a Domain Controller or Member Server](#)

Delegate Roles for Exchange Server 2010/2013/2016/2019 on a Domain Controller or Member Server

In Exchange Server 2010/2013/2016/2019, the procedure is not supported by the interface and must be performed using the Management Shell. Using the Management Shell, you must use the Role Based Access Control (RBAC) authorization system to assign permissions for the backup agent service account.

Follow these steps:

1. From the Exchange Server machine, click Start, Programs, Microsoft Exchange Server 2010/2013/2016/2019, Exchange Management Shell.

The Exchange Management Shell opens.

2. Type the following command to add a mailbox as a member of a role group:

```
Add-RoleGroupMember <"role group name"> -Member <"member">
```

The permissions are assigned to the backup agent service account.

Example

In the following command, the mailbox, "exchagent" is added to the role group, "Organization Management", and inherits all access rights associated to that group.

```
Add -RoleGroupMember "Organization Management" -member "exchagent"
```

Additional Configuration Considerations

The following sections include additional configuration considerations, depending on your environment.

- [Member Server Considerations](#)
- [Multiple Domain Considerations](#)

Member Server Considerations

If your Exchange Server is on a member server, you may need to add the backup agent service account to the same groups and rights on the domain controller, depending on the domain controller security policies and security settings.

Multiple Domain Considerations

If your Exchange Server is running on a network that has multiple domains and you want to create the backup agent service account in a different domain than the domain where your Exchange Server is located, add the groups and rights in both domains.

Chapter 9: Glossary

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Database Availability Group (DAG)

A Database Availability Group (DAG) is a concept introduced in Exchange Server 2010. It is a collection of up to 16 mailbox servers, where each server stores up to 100 mailbox databases.

Database Level Backups

Database Level Backups let you protect the system and supports restoring the Exchange Server in its entirety.

Multiplexing

Multiplexing is a process in which data from multiple sources is written to the same media simultaneously. In Arcserve Backup, jobs with multiple sources submitted with this option are broken into child jobs, which write data at the same time.

Multistreaming

Multistreaming is a process that divides backup jobs into several sub-jobs that run simultaneously to different devices.

Restore Set

A restore set is the set of all sessions needed to restore your Exchange Server, storage group, or mailbox database. The number of sessions in a restore set depends on the backup method used.

Organization View

Organization View provides a central display of the entire Exchange Server organization, so you can quickly find remote Exchange servers.

Trace Log Files

Trace Log Files are files created by Arcserve Backup. They provide data you can use to debug problems that may occur when performing database level backups and restores.

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