

MailStore Server 13

Documentation

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15. July 2020

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1

Chapter

Installation

1.1 Installation

MailStore Server can be installed on virtually any Windows PC. Neither a server operating system nor a database system is required. For example, you can set up a test installation of MailStore Server on your desktop machine without any problem. Running MailStore Server inside a virtual machine is supported as well. For more information, please refer to the System Requirements article.

Choosing a Computer for the Installation of MailStore Server

Whenever possible, MailStore Server should be installed on a dedicated machine. Depending on the environment, archiving strategy and usage, MailStore Server can be installed on an already existing server, too. On the part of the email server to be archived, no components need to be installed though.

Starting the Installation

To start the installation process, double-click on the downloaded setup file. This is a regular Windows installation, just follow the instructions on the screen:

- If you want to install MailStore Server in a language different to the operating system's, you can choose it at the beginning of the installation.
- Carefully read the license agreement and privacy policy. You have to agree to these terms to continue.
- In the next step you can choose which folder to install MailStore Server in. In most cases, you should keep the default setting.
- The installation program now deploys the necessary components.

Install License

You must now enter your MailStore product key which you have received by email after your trial registration or upon buying MailStore Server. Alternatively you can import a license file here. That file you can download either through the link provided in the dialog or directly from our website^[1].

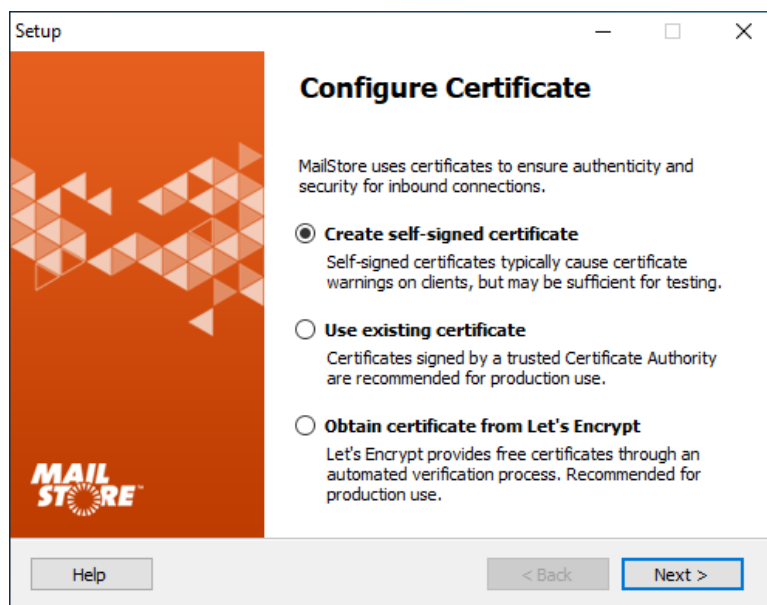
- If you've entered a valid 30-day-trial key, it will be activated automatically. If you've entered a production license key, all information that is sent to MailStore will be displayed before activation.

Configure Certificate

- In the next step, you need to configure the certificate to be used by MailStore Server in order to ensure authenticity and security for all inbound connections. The certificate can be changed any time after the installation through the MailStore Server Service Configuration tool.

Though not recommended for production use, self-signed certificates may be a good choice for a trial installation. But keep in mind that self-signed certificates will trigger certificate warning in web browsers and email clients.

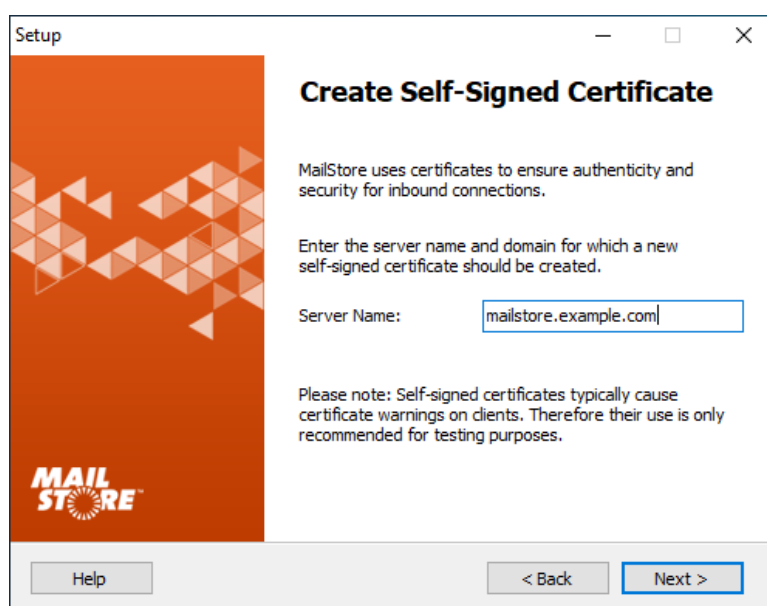
- **Use existing certificate**
If a certificate from a trusted Certificate Authority already exists (i.e. a wildcard certificate for your domain), this is the best option to select.
- **Obtain certificate from Let's Encrypt**
Select this option if you would like to obtain a certificate from the free Certificate Authority Let's Encrypt



Option 1: Create Self-Signed Certificate

To create a self-signed certificate, that matches the actual server name, enter the name (i.e. mailstore.example.com) into the corresponding field *Server Name*. This server name should be resolvable by your client computer.

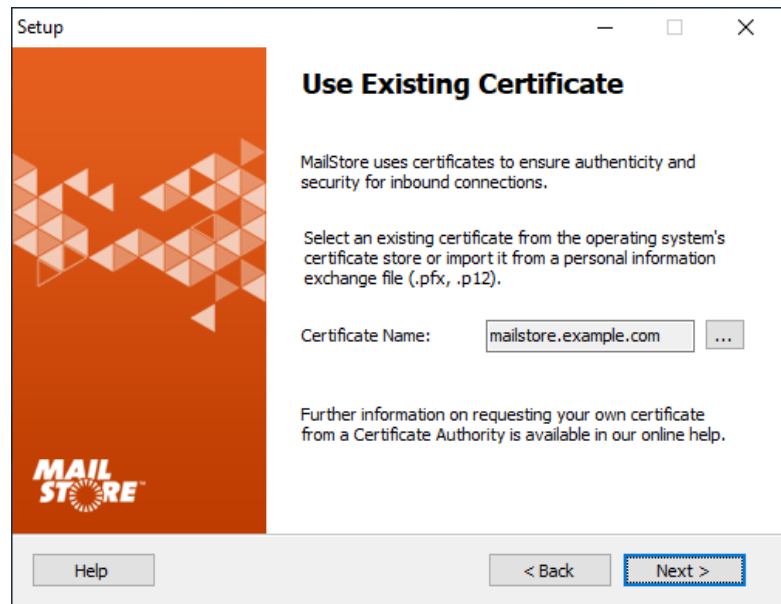
Option 2: Use Existing Certificate



Click on the ellipses choose from:

- **Select from Certificate Store...**
Use an existing certificate from the computer's certificate store.
- **Import from File...**
Import a certificate from a file into the computer's certificate store.

Option 3: Obtain Certificate from Let's Encrypt



This page lists the prerequisites for obtaining a certificate from Let's Encrypt, which are:

- A public DNS record (A or CNAME) for this server must exist and point to its public IP address.
- The server must be accessible from the Internet on TCP port 80 (HTTP) for Let's Encrypt's automatic domain approval process. A port forwarding on your firewall or gateway may be necessary.
- Further information are available in Using Lets Encrypt Certificates.



To obtain a certificate from Let's Encrypt an email address and the server name for which the certificate is requested must be entered in the corresponding fields.

- Check the *I accept Let's Encrypt's Subscriber Agreement* box after you have read Let's Encrypt's Subscriber Agreement by clicking on the corresponding link.

Completing the MailStore Server Setup Wizard

- In the next step you can configure several settings of your MailStore Server installation:

Auto-configure Windows Firewall

If this option is enabled, the default MailStore TCP ports will be opened in the Windows Firewall by the installation program automatically.

- **Enable automatic update check for server**

If this option is enabled, MailStore Server regularly checks for new product versions. If a new version is available, this will be displayed on the dashboard in the MailStore Client.

- **Enable automatic update check for Web Access**

If this option is enabled, MailStore Server regularly checks for new versions of the MailStore Web Access. If a new version is available, this will be displayed on the dashboard in the MailStore Client.

Obtain Certificate from Let's Encrypt

Your e-mail address and the server name, for which the certificate should be created, are needed to request certificates from Let's Encrypt.

E-Mail Address:

Server Name:

☒ I accept Let's Encrypt's Subscriber Agreement
[Let's Encrypt Subscriber Agreement](#)

Help < Back Next >

Completing the MailStore Server Setup Wizard

☒ Auto-configure Windows Firewall

Product Updates

☒ Automatic update check for server

☒ Automatic update check for Web Access

☒ Automatically install updates

Help < Back Next >

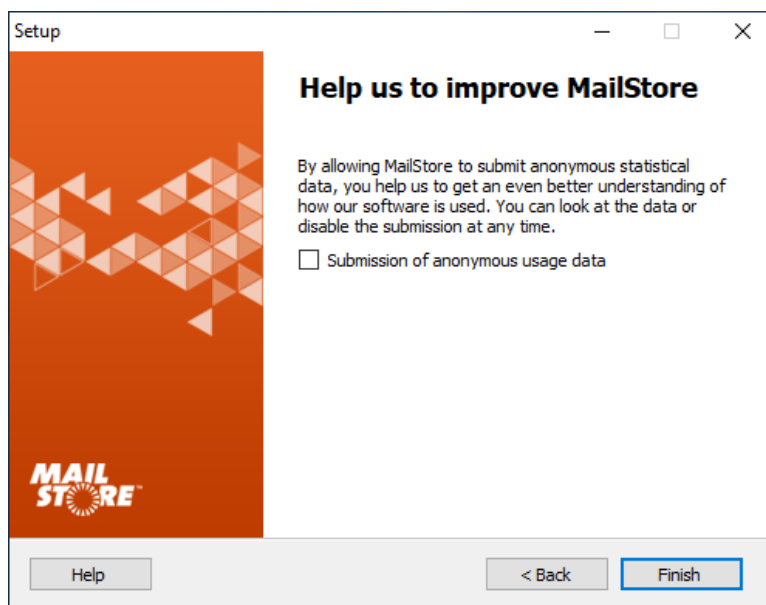
Submission of anonymous usage data

If this option is enabled, MailStore Server regularly sends data on how the program is being used to MailStore. This data allows us to better understand different usage scenarios of MailStore Server and focus our development capacities accordingly. The submitted data is collected and evaluated exclusively for this purpose.

No personal data such as user names, passwords or email content will be submitted. The submitted data is completely anonymized and cannot be correlated to a specific customer installation. You can enable or disable this option in the MailStore Client under Administrative Tools > Miscellaneous > Product Updates at any time; the option is disabled by default (opt-in).

- By clicking on *Finish* the installation will be completed and the MailStore Server Service and the MailStore Client will be started.

The installation program creates a fully functional default installation of MailStore Server, which is perfectly suited for testing purposes. For production environments, parameters such as the Master Database directory, features, TCP ports, SSL certificates etc can be customized via the MailStore Server Service Configuration.



First Time Installation

After successfully installing MailStore Server for the first time, it is recommended to continue with the Quick Start Guide. A step-by-step tutorial explains the basics, from creating users to successfully archiving emails for the first time.

References

- [1] <https://go.mailstore.com/?lang=en&target=activate>

2

Chapter

Archiving Methods

2.1 Archiving Email

Email Archiving with MailStore Server Basics

Emails can be archived from the mailboxes of public cloud services such as Microsoft 365 or G Suite, email servers such as Microsoft Exchange or MDAemon as well as from locally installed email clients. Dependent on their type, archiving tasks can be performed continuously, manually or based on a schedule.

If you are not sure which archiving method best suits your company, please refer to chapter Choosing the Right Archiving Strategy.

In the chapter Email Archiving with MailStore Basics, you can find out more about working with archiving profiles, archiving specific folders, deleting emails after archiving and automating the archiving process.

Public Cloud Services

Archiving Microsoft 365 Mailboxes, Public Folders and Shared Mailboxes

With MailStore Server, you can archive already existing Microsoft 365 mailboxes as well as public folders and shared mailboxes. You have the option to archive individual, multiple or all mailboxes in one step as well as archiving all incoming and outgoing emails by using MailStore Gateway.

Additional information about this topic is available in the chapter Archiving Emails from Microsoft 365.

Archiving Google G Suite and Gmail Mailboxes

MailStore Servers allows administrators to setup archiving of single or multiple G Suite mailboxes in one step as well as archiving all incoming and outgoing emails using either dedicated multidrop mailboxes or MailStore Gateway. Additional information is available in chapter Archiving Emails from G Suite.

Non-admin users can archive their individual Gmail mailbox, or their own G Suite mailbox by using the dedicated Gmail profile. Additional information is available in chapter Archiving Emails from Gmail.

Email Servers

Archiving Microsoft Exchange Mailboxes, Public Folders and Shared Mailboxes

With MailStore you can archive already existing Exchange or Microsoft 365 mailboxes as well as public folders and shared mailboxes. You have the option to archive individual, multiple or all mailboxes in one step as well as archiving all incoming and outgoing emails by using the Exchange journal feature.

Additional information about this topic is available in the chapter matching your Exchange version:

- Microsoft Exchange 2019
- Microsoft Exchange 2016
- Microsoft Exchange 2013
- Microsoft Exchange 2010 (Legacy System)
- Microsoft Exchange 2007 (Legacy System)
- Microsoft Exchange 2003 (Legacy System)

Archiving Other Email Servers

With MailStore Server, you can also archive the mailboxes of other email servers using the IMAP or POP3 protocols. These include web-based mailboxes such as GMX or Web.de. MailStore Server supports archiving individual mailboxes, multiple mailboxes in one step, as well as catchall or multidrop mailboxes that can be used to archive all incoming and outgoing emails.

General information is available in the chapters:

- Archiving Single Mailboxes
- Archiving Multidrop Mailboxes
- Batch-archiving IMAP Mailboxes

The actual procedure depends on the email server you are using. Detailed information for a number of email servers is available in our Implementation Guides.

Email Files

Archiving Outlook PST Files

As administrator, you can archive Microsoft Outlook PST files for other MailStore Server users. Additional information about these topics is available in chapter Archiving Outlook PST Files Directly.

Archiving MDAemon Mailboxes

MailStore Server offers special support for the MDAemon Server. With MailStore Server, you are able to archive single mailboxes, multiple or all mailboxes in one step as well as archiving all incoming and outgoing emails. Additional information is available in chapter Archiving Emails from MDAemon.

Archiving Kerio Connect Mailboxes

MailStore Server offers special support for the Kerio Connect email server. With MailStore Server, you are able to archive single mailboxes, multiple or all mailboxes in one step as well as archiving all incoming and outgoing emails. Additional information is available in chapter Archiving Emails from Kerio Connect.

Archiving IceWarp Server Mailboxes

MailStore Server offers special support for the Ice Warp Server. With MailStore Server, you are able to archive single mailboxes, multiple or all mailboxes in one step as well as archiving all incoming and outgoing emails. Additional information is available in chapter Archiving Emails from IceWarp Server.

Archiving EML or MBOX Files

As administrator, you can archive emails from .eml or .msg files for other MailStore Server users. Additional information about these topics is available in chapter Archiving Emails from External Systems (File Import).

Email Clients

Archiving Email from Outlook, Thunderbird and Other E-mail Clients

As opposed to all other archiving features, it is imperative that the MailStore Client software is installed on the user computers when archiving emails from these users' email applications. Once the archiving task is set up, it can be started manually by the user or executed automatically according to a schedule. Additional information about this topic is available in chapter Archiving Email from Outlook, Thunderbird and others.

2.2 Choosing the Right Archiving Strategy

MailStore Server offers several options for archiving emails. Choosing the right archiving strategy depends on the email infrastructure (e.g. email server and email clients) on one hand, and company objectives on the other.

Archiving All Incoming and Outgoing Emails Automatically

With this archiving method, all emails are archived before they are delivered to the user mailboxes.

Advantages

- Completeness of the archive
- Emails cannot be manipulated or deleted before archiving
- This helps to meet a growing number of compliance requirements

Disadvantages

- If private emails are allowed in the company, this archiving method may cause difficulties regarding the privacy laws of some countries. In this case, a company-wide ban of all private email communication, a contractual agreement with the employees or approval of an employee organization would be required
- The workload of the email server and the amount of data is not reduced because all emails are still delivered and stored in the mailboxes
- Emails can only be allocated to users as sent or received object; a reproduction of the mailbox folder structure is not possible

Implementation

- With Microsoft Exchange by archiving the Journal mailbox
- With IMAP-compatible email servers such as MDAemon, Kerio Connect or IceWarp Server by archiving multipdrop mailboxes (also called catchall mailboxes)
- In all other cases and in companies without their own email server by using the MailStore Gateway^[1] free of charge

Archiving of Individual Mailboxes

With this archiving method, emails are archived from the individual mailboxes of the users. This can be achieved by archiving the mailboxes directly from the email server or, if that is not possible, by archiving of email clients.

Advantages

- The folder structure of the archived mailboxes, email clients or PST files is applied to the archive facilitating access to the archived emails
- The archived emails can be deleted from the mailboxes according to pre-defined rules permanently reducing the workload of the email server

Disadvantages

- Emails can be deleted or manipulated before archiving, even if the archiving intervals are very short
- Meeting legal requirements cannot, or only with difficulty, be implemented

Time-controlled Execution of Archiving Tasks

Archiving of email servers is a continuously running task in MailStore Server, carried out server-side in the background, as soon as the execution of an archiving profile is set to *Automatic*. By defining a break between each execution as well as a period in which the archiving profile is never executed, administrators have full control over the automatic archiving process.

Archiving of email clients and email files usually depends on the current Windows user and is therefore executed on the client, typically manually (see *One-time Archiving of Existing Emails*). MailStore allows to create scheduled tasks in the Windows Task Scheduler to automate client-side archiving tasks. This should be considered if no other option is available - server-side archiving is always to be preferred.

One-time Archiving of Existing Emails

In addition to archiving future emails, preexisting emails should also be archived and made available permanently to your company. This one-time process should include emails in decentralized storage (e.g. PST files or the users' email clients). At the same time, older emails (e.g. more than two years old) can be deleted from the mailboxes automatically after archiving. This frees up storage space on the email server and simplifies backup procedures. All emails remain accessible to users via the MailStore archive.

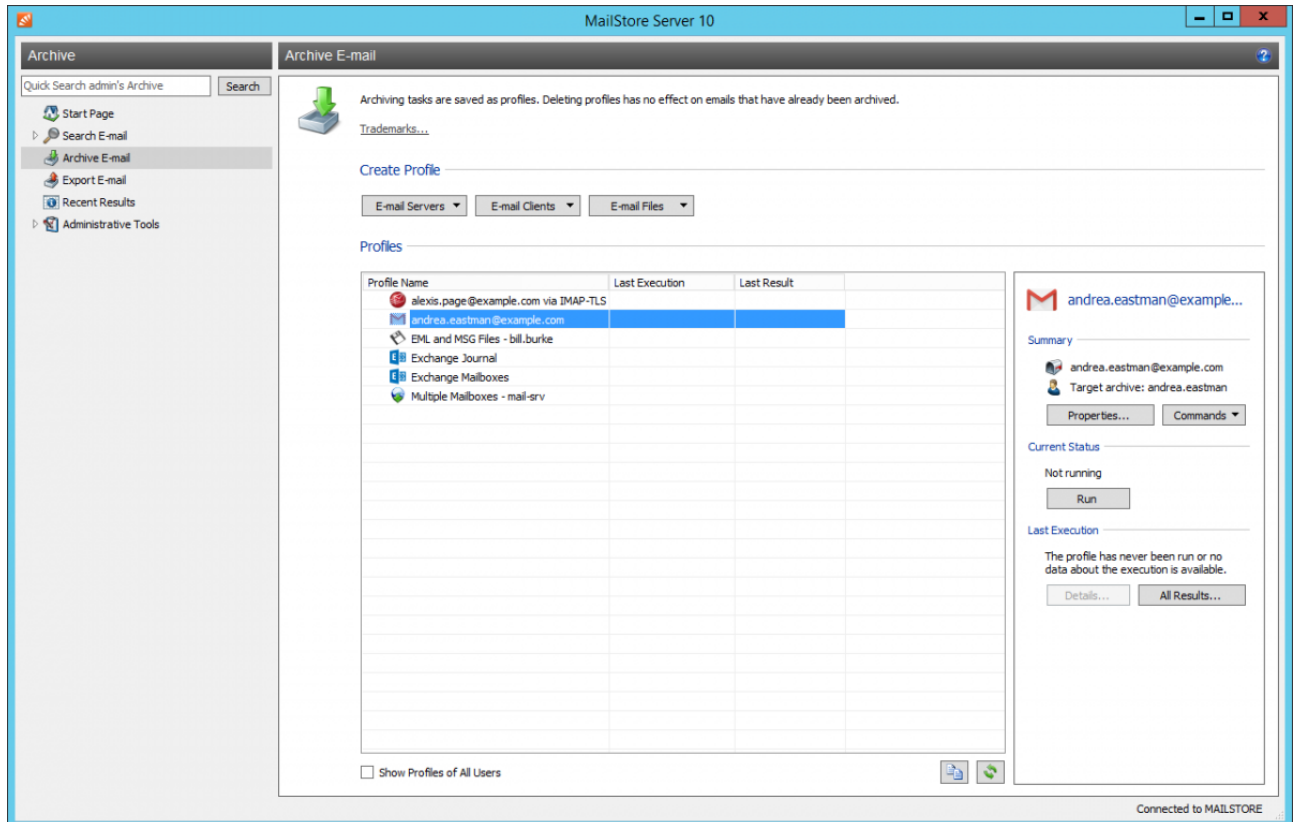
References

[1] <https://help.mailstore.com/en/gateway>

2.3 Email Archiving with MailStore Basics

Working with Archiving Profiles

In MailStore Server, every archiving task is stored as an archiving profile. By executing such a profile the archiving process is started.



Such an archiving profile could contain the following information:

- **WHAT:** Mailbox p.berten@company.com
- **WHENCE:** Exchange server EXCHANGE01
- **WHERE** (Target archive in MailStore Server): peter.berten
- **SCOPE:** All folders except drafts
- **DELETION RULE:** Delete all archived emails from the Microsoft Exchange mailbox that are older than 3 months.

Creating an Archiving Profile

To create a new archiving profile proceed as follows:

- Start the MailStore Client and click on *Archive Email* to create and execute an archiving profile.
- In the *Create Profile* section of the application window, select the source from which the emails should be archived (e.g. Microsoft Outlook). A wizard opens.
- During the first steps of the wizard, several different settings can be specified for the archiving profile. These include the selection of folders (e.g. "Inbox") or deletion rules (by default, no emails are deleted).
- If you are logged on as MailStore Server administrator, you will be prompted for the target archive (user archive), in which the emails should be stored. If logged on as a regular user, the corresponding user archive will be used automatically.
- In the last step, a name for the archiving profile can be specified. Archiving profiles of type *E-mail Server* provide an option to configure the automatic execution from here as well. After clicking *Finish*, the archiving profile will be listed under *Saved Profiles* and can be run immediately, if desired.

Please note: Only MailStore Server administrators can archive emails into a target archive other than their own. This is not possible for regular MailStore Server users.

Manual Start of Archiving Process

As long as the automatic execution of an archiving profile has not already been configured (type *E-mail Servers* only) during its creation, you can manually execute archiving profiles at any time. It is recommended to always start the initial archiving process manually in order to identify possible configuration issues (i.e. incorrect credentials) as early as possible.

To manually start the archiving process, select the archiving profile to be executed from the list under *Saved Profiles* and click on *Run*.

A progress windows appears. After the archiving process has been completed you can get further information about its course as well as possible errors by clicking on *Details...* A debug log is also available here.

In addition to being executed manually, archiving profiles can also be run automatically according to a schedule. Additional information about this topic is available in the chapter *Automating the Archiving Process*.

Executing Archiving Profiles Multiple Times

Any archiving profile can be run any number of times without concern. MailStore Server only archives emails that are not yet stored in the target archive. MailStore Server also detects if any emails were moved to a different folder within the source application (e.g. Microsoft Outlook) and reproduces such moves in its archive accordingly. Already archived emails, that have been moved within the source from a folder that is categorized by MailStore as a folder containing sent messages, to a folder that is categorized by MailStore as a folder not containing sent messages, will be archived again. This also applies vice versa.

Editing Archiving Profiles

To edit an existing archiving profile, proceed as follows:

- Select the archiving profile you want to edit from the list *Saved Profiles* and click on *Properties*.
- Navigate between the profile's pages with *Next* and *Back* and change the settings as desired.
- Save the new settings on the last page by clicking *OK*.
- By clicking *Cancel* you can quit editing the archiving profile at any time without committing any changes.

Deleting Archiving Profiles

If no longer needed, you can delete an existing archiving profile.

- Right-click on the archiving profile you want to delete or click on *Commands* and select *Delete*
- A confirmation prompt appears. Acknowledge by clicking *OK*.

Please note: Deleting an archiving profile has no effect on emails that have already been archived. They remain in the archive.

Changing Owner of Archiving Profiles

As MailStore Server administrator (*admin*) you can change the owner of an archiving profile. That way you can prepare archiving profiles for your users which they can execute on their own afterwards.

- Right-click on the profile you want to change and select *Change Owner....*
- Choose the profile's new owner in the next dialog.
- Confirm the selection by clicking on *OK*.

Please note: If you as a MailStore Server administrator have selected a target archive that does not belong to the new profile owner, the execution of that profile by its new owner will fail if she is not a MailStore Server administrator herself.

Only MailStore Server administrators can archive emails into a target archive other than their own. This is not possible for regular MailStore Server users.

Managing and Executing the Archiving Profiles of Other Users

As MailStore Server administrator (*admin*) you can manage the archiving profiles created by other users as well.

- In the section *Saved Profiles* activate the option *Show Profiles of All Users*.
- You can now edit, execute or delete these profiles just as your own.

Special Case: Executing the archiving profiles for email clients for other users

The execution of archiving profiles for email clients such as Microsoft Outlook or Mozilla Thunderbird usually makes only sense on the PC where the corresponding email client is installed because that client stores emails and data necessary for accessing them locally on that PC.

Example: If user A has an archiving profile for Microsoft Outlook, you can view and edit it as a MailStore Server administrator through your MailStore Client. However, executing this profile only makes sense if it is run using the MailStore Client that is installed on user A's computer because only there can the locally stored data be accessed.

This information only applies to archiving profiles listed in the *E-mail Clients* section.

Archiving Specific Folders

By default MailStore Server archives the emails from all folders of the email application or email mailbox except the following (the list may vary depending on the system):

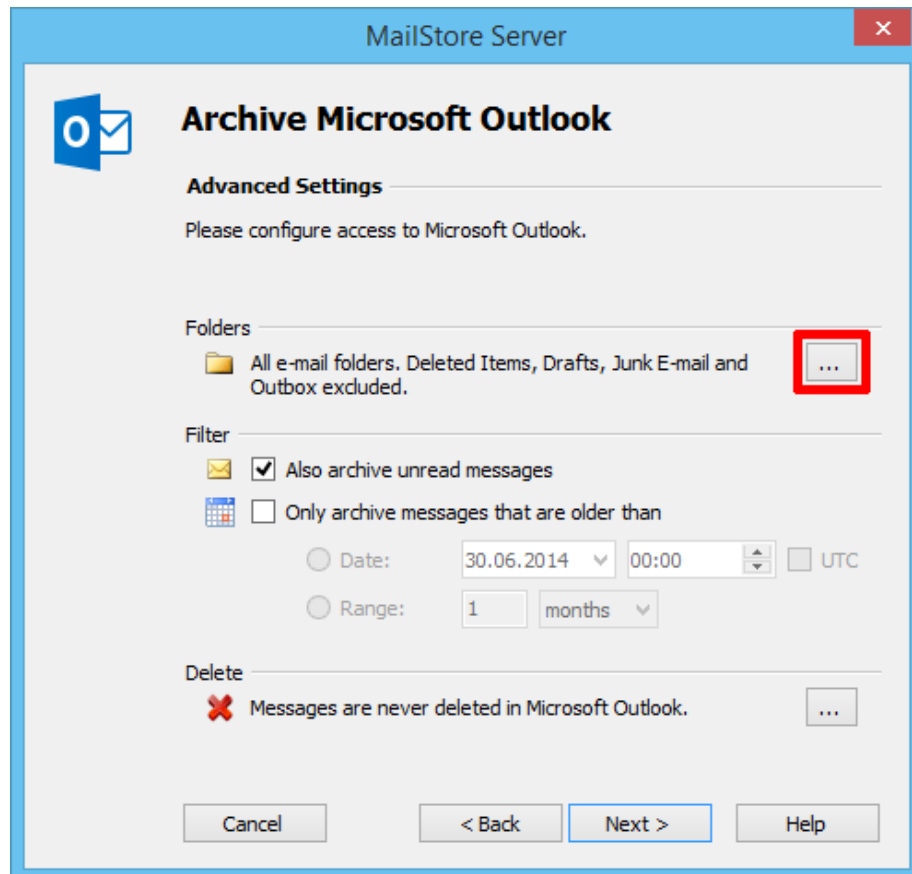
- **Deleted Items** - Emails that were deleted by the user
- **Drafts** - Emails that are still being edited and that have not yet been sent
- **Junk Email** - Emails that have been classified as spam
- **Outbox** - Emails that are about to be sent and will be listed under Sent Items after sending

The standard settings can be customized; for every archiving profile, folders can be included or excluded as needed.

Please notice: Take care of upper and lower case when manually specifying folder names for inclusion or exclusion. These declarations are case-sensitive.

General Procedure

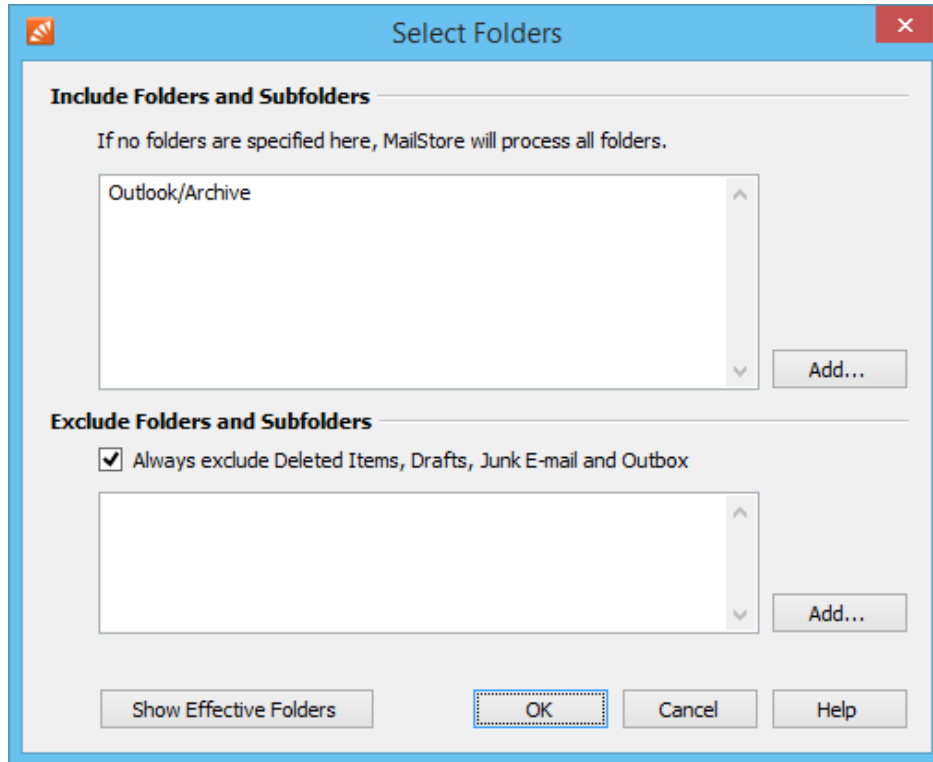
You can select the folders to be archived directly upon creating a new archiving profile. Alternatively, you can adjust the selection for already existing profiles. Additional information about creating and editing archiving profiles is available in the chapter Working with Archiving Profiles. The following screenshot shows how to access the folder settings using a Microsoft Outlook archiving profile as an example:



Selecting Folders for Archiving

You can specify the folders that MailStore Server should archive. In this case, MailStore Server limits archiving to the selected folders and ignores all others. Archiving profiles that archive multiple mailboxes do not have the *Add* button. You have to enter the folders to include manually.

- In the folder selection under *Include Folders and Subfolders*, click on *Add*.



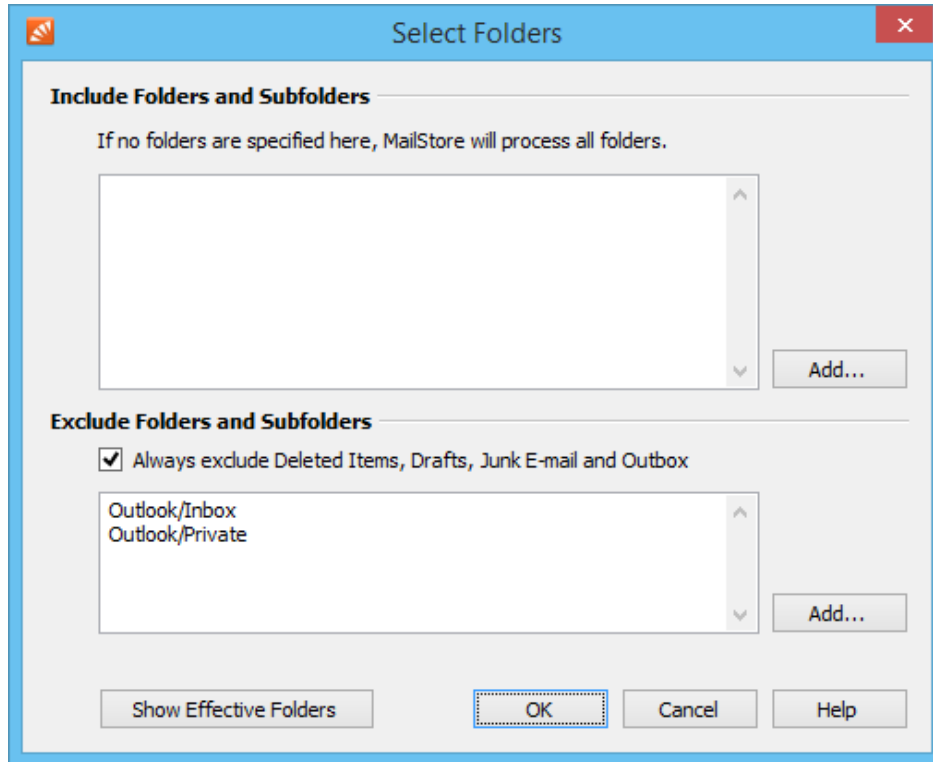
- Select a folder.
- With the *Include Subfolders* option you can specify if subfolders of the selected folder should be included in the archiving process as well.
- Click on *OK* to add the folder to the list.

Example: You have created a folder *Archive* in the email application or the mailbox, into which the user moves all emails that should be archived. In this case, add the folder *Archive* to the inclusion list. That way, only this single folder will be archived.

Excluding Folders from the Archiving Process

MailStore Server can be configured to always exclude certain folders from the archiving process. Archiving profiles that archive multiple mailboxes do not have the *Add* button. You have to enter the folders to exclude manually.

- In the folder selection in the *Exclude Folders and Subfolders* section, click on *Add*.



- Select a folder.
- With the *Include Subfolders* option you can specify if subfolders of the selected folder should be excluded from the archiving process as well.
- Click on *OK* to add the folder to the list.

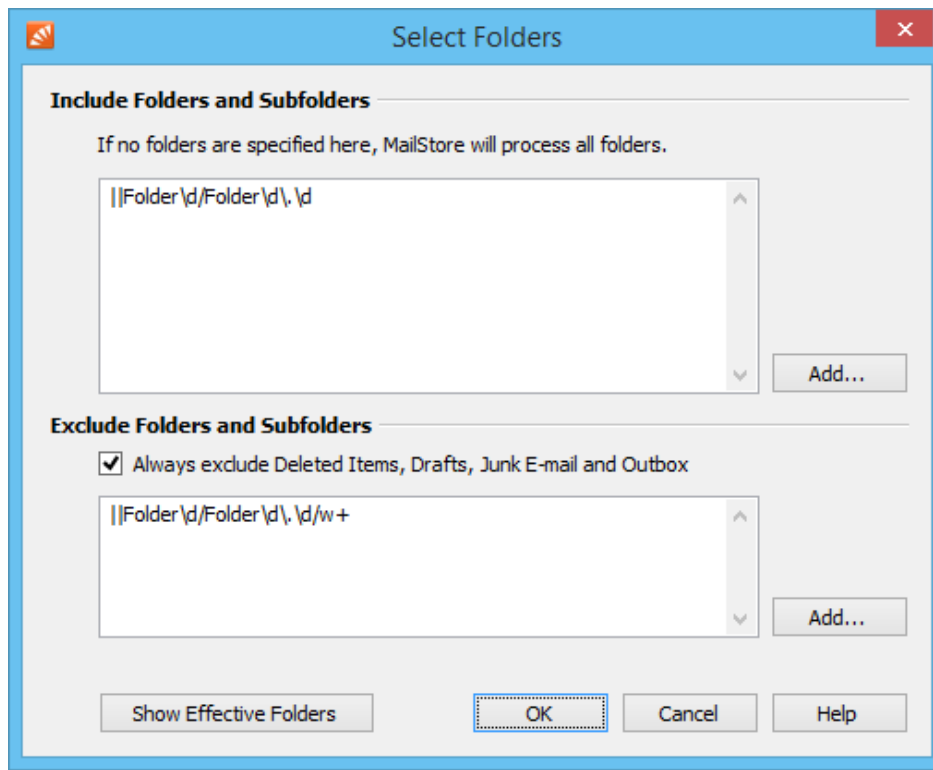
Example 1: Emails that are still in the Inbox should not be archived because they will either be deleted or moved to a project folder by the user. In this case, add the *Inbox* folder to the list of folders to be excluded.

Example 2: Emails that are in a folder named *Private* should not be archived as it may contain personal information that is prohibited by law (in some countries) to be archived.

Please note: Depending on the system, some folders (e.g. *Deleted Items*) are always excluded from the archiving process. To deactivate this automatic exclusion, clear the checkbox *Always exclude <folder names>*.

Using Regular Expressions to Include or Exclude Folders

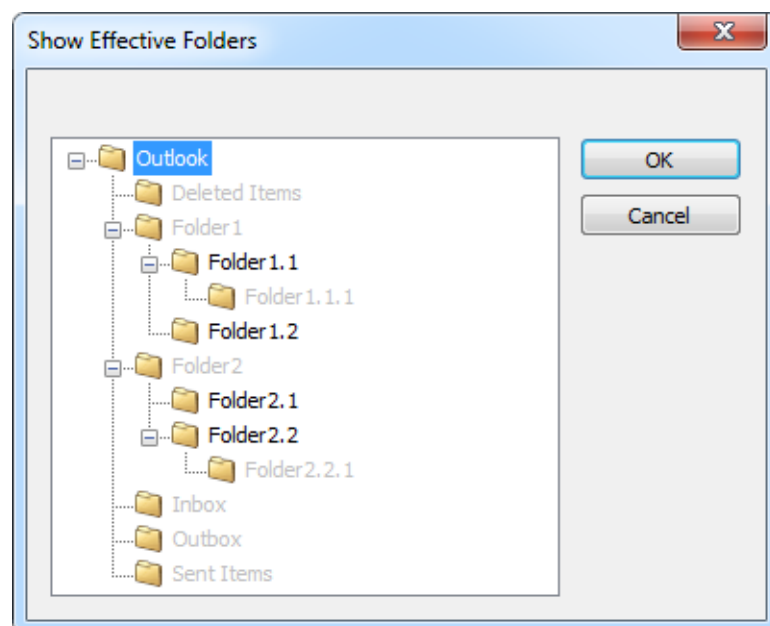
In MailStore Server you can include or exclude folders using regular expressions. The syntax follows the Specification of Regular Expressions in the .NET Framework 4.5.1^[1]. To specify a regular expression simply prefix it with `||` or `|i|` (using case sensitivity/insensitivity).



Examples

The regular expression `"||Folder\d\Folder\d\.\d"` would for example include `Folder1\Folder1.1` in the archiving.

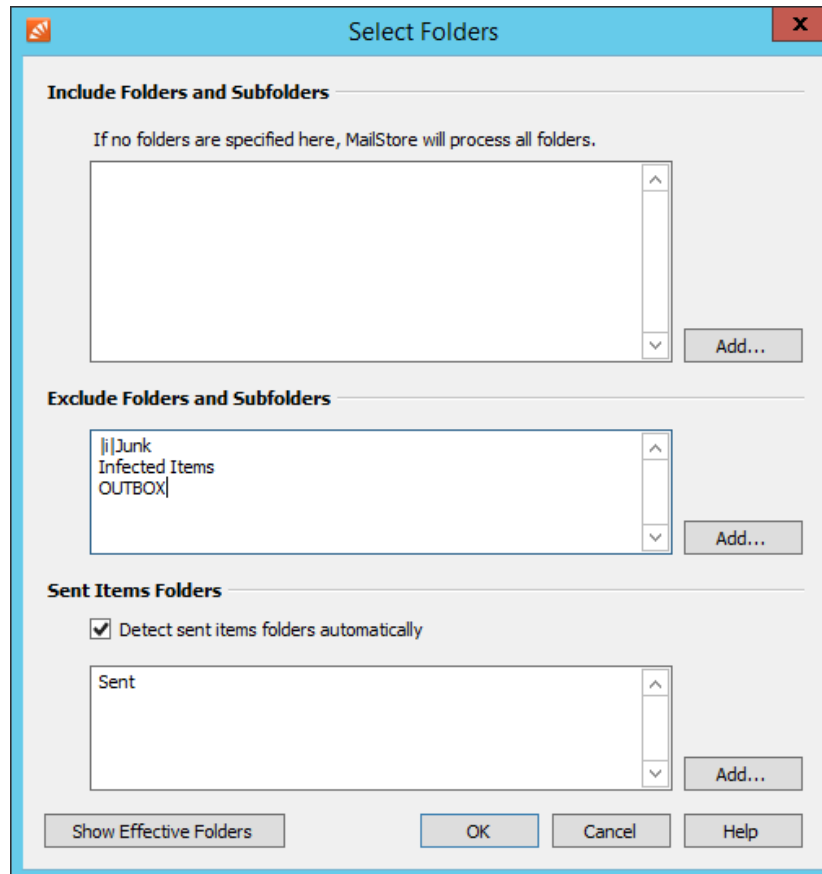
The regular expression `"||Folder\d\Folder\d\.\d/w+"` excludes further subfolders in the structure above from being archived. The result could look like this:



Defining Sent Items Folders

The message list in the archive displays the recipient on sent messages and the sender on received messages. Therefore a user always sees his communication partner in the message list.

When archiving user mailboxes, sent messages are identified through their containing folder. In case of Exchange- and Outlook archiving profiles, MailStore is able to detect the sent items folder automatically and it cannot be adjusted. When archiving from IMAP servers that implement the *SPECIAL-USE*-capability, MailStore is also able to detect the sent items folder if the option is enabled in the archiving profile. Since IMAP clients may not support that capability, these clients may have created their own sent items folder, with the result of multiple folders that hold sent items. For MailStore to detect all sent items, the list of sent items folders can be extended in IMAP archiving profiles.

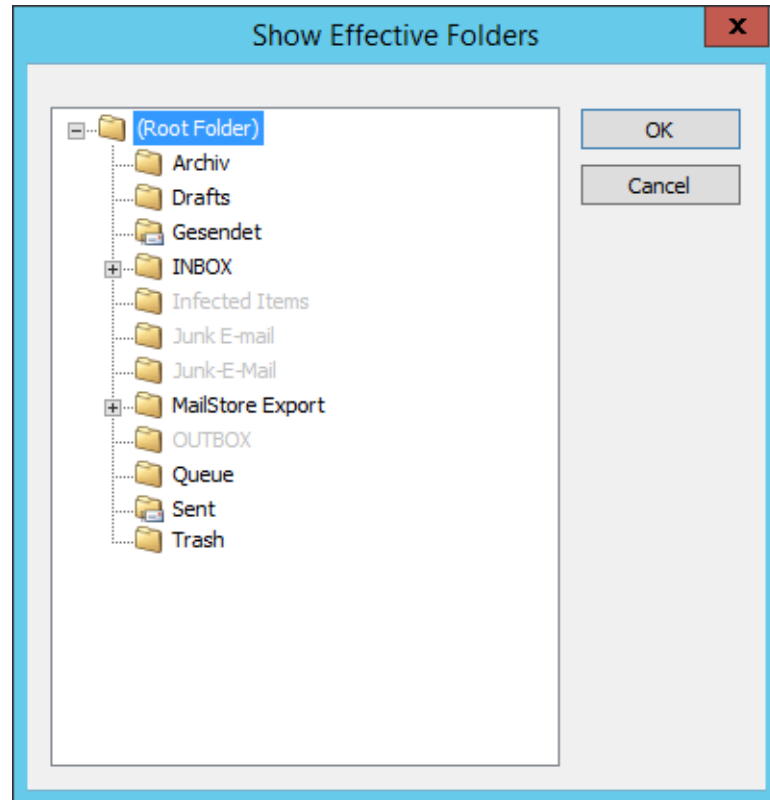


In case the wrong communication partner is displayed in the message list, the *message type* can be changed by an administrator in the MailStore Client by right clicking on the message and selecting *Change Message Type*.

Archive access on other users' messages has to be unblocked in case the *message type* of other users should be changed. The archiving profile should be configured that manually changing the message type afterwards should not be necessary.

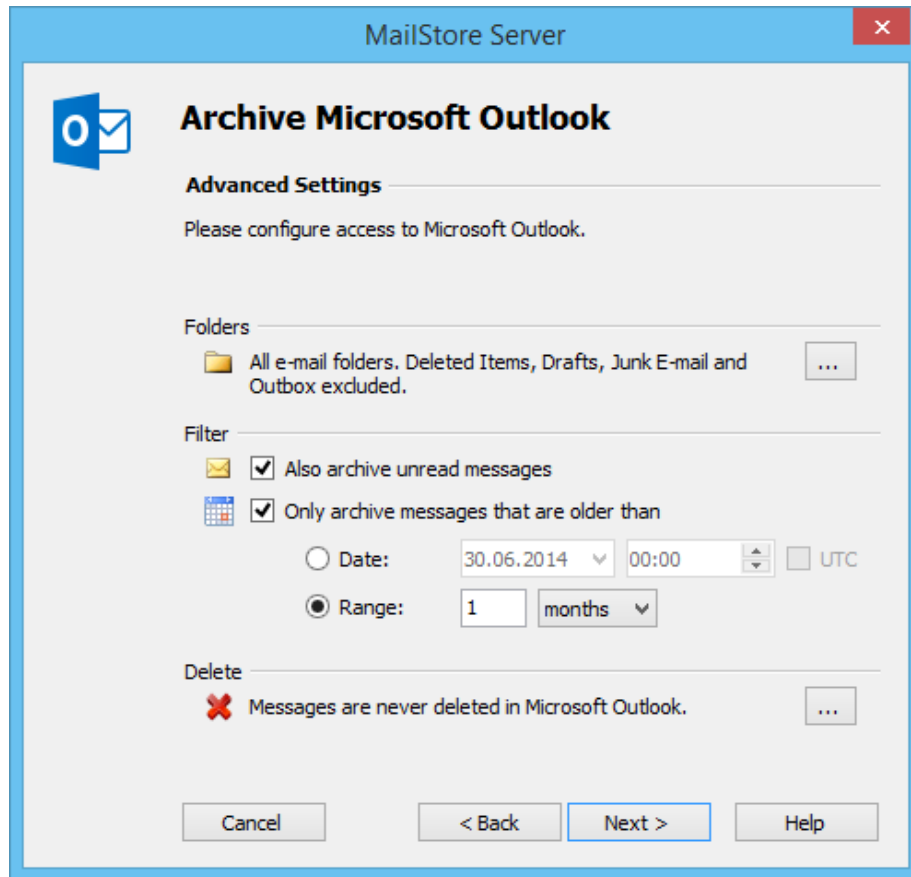
Showing the Folders Selected for Archiving

In the folder selection, click on *Show Effective Folders* to verify the selected settings. Hereby all folders that will effectively be archived are displayed. Folders displayed in gray will not be archived. In IMAP archiving profiles, folders that contain sent messages will have a small envelope icon attached. Archiving profiles that archive multiple mailboxes do not support this functionality.



Specifying Filter Criteria for Archiving

In MailStore Server, you can limit archiving to certain emails for most archiving profiles by specifying filter criteria. The following filter options are available:



- **Also archive unread messages**

By default, MailStore Server archives emails without regard to their *read/unread* status. Deactivating this option limits archiving to emails with status *read*.

- **Only archive messages that are older than**

- **Date**

Here you can specify a particular date to which MailStore Server compares the send or receive date of the emails to be archived. Only emails that have been sent or received before this date will be archived. The *UTC* option defines whether this date is specified in Coordinated Universal Time (UTC) or takes the local time zone of the MailStore Server into account.

- **Range**

With this option MailStore Server only archives emails that have been sent or received before the beginning of this range, measured from the date of archiving.

Deleting Emails after Archiving

MailStore Server can be used to reduce and to keep the amount of emails stored in a source system at a minimum. Source system can be email servers, email mailboxes, email applications as well as email files or email container files. Please notice that deletion of emails is not available in some archiving profiles due missing interfaces of the source system.

The delete feature that has to be activated explicitly enables MailStore Server to delete emails from the source system autonomously, according to specified rules and time periods.

Please note: In order to not jeopardize ongoing business processes, emails that have been flagged will never be deleted by MailStore Server. Configured deletion rules do not apply to such emails. To get them delete by MailStore Server you have to un-flag them in the source system directly.

Functionality

By default, MailStore Server only copies emails from the source system into its archive. The archives emails remain in the source system and will not be deleted.

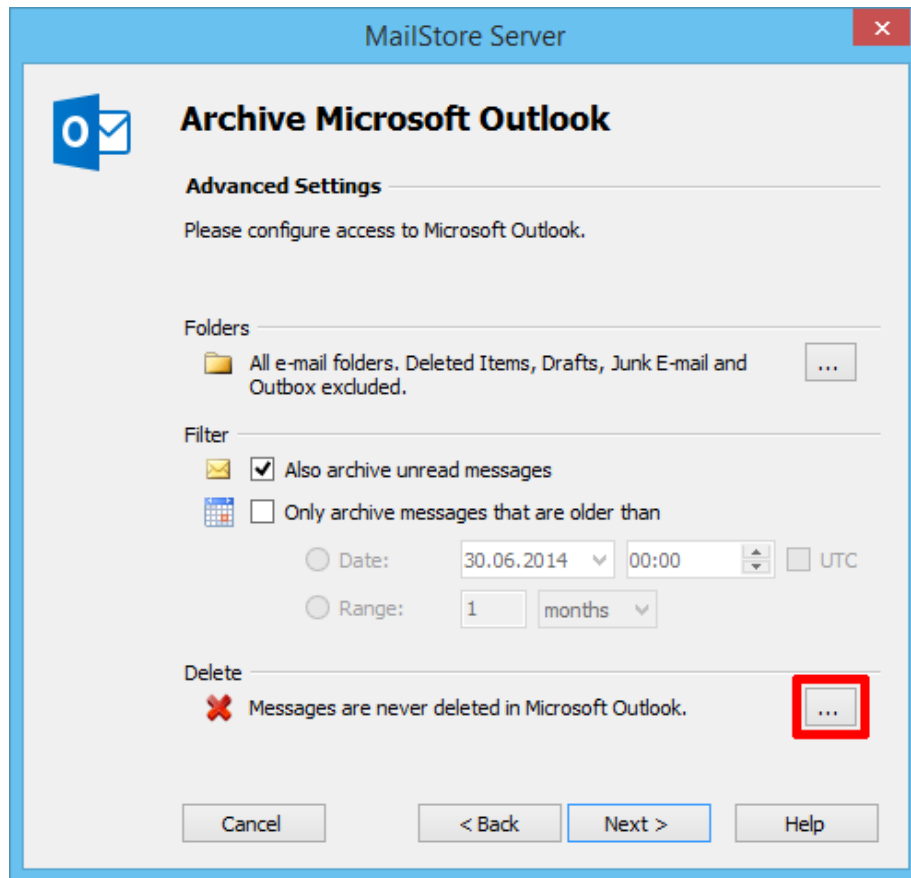
The deletion process will be executed after the archiving of all emails by the archiving profile has been finished. During this process it is explicitly checked whether any email that is about to be deleted has really been archived. This ensures that only emails will be deleted from the source system that have been written into the archive before.

Please note: Emails can only be deleted from a source system after an archiving process, which means that such deletions are *always* tied to an archiving profile. Furthermore, deletion rules have to be configured explicitly in such a profile as described in further detail below.

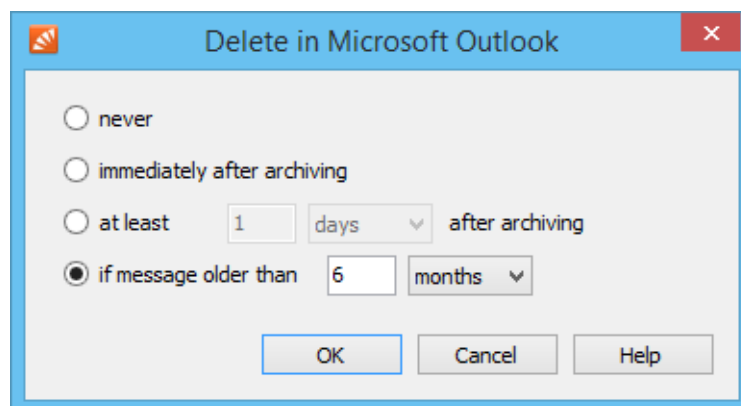
Beyond this functionality, no other automatic processes exist to delete emails from their source systems.

Configuration

Delete conditions can be configured during setting up a new archiving profile or for existing profiles under *Advanced Settings > Delete*.



The following options are available:



- **never**
Emails are never deleted from the source system. In effect, emails will be copied into the MailStore Server archive. This is the default setting.
- **immediately after archiving**
Emails are deleted from the source system as soon as they have been successfully archived. In effect, emails will be moved into the MailStore Server archive.
- **at least [period] after archiving**
Emails are deleted from the source if they have been in the MailStore Server archive for at least the given

period of time. In effect, emails will be copied into the MailStore Server archive at first and also remain in the source system for the given period, before they will be deleted in a subsequent run of the archiving profile.

- **if message older than [period]**

Emails are deleted from the source system if their send or receive dates predate the given period of time. In effect, emails with send or receive dates in the given range will be copied into the MailStore Server archive at first, while those with send or receive dates predating the given range will be moved into the MailStore Server archive. During subsequent runs of the archiving profiles, previously archived emails will be deleted from the source systems if they match the defined age criterion.

Please note: If a filter date or range is configured together with a deletion rule *if message older than*, the longer period of time will be applied to the deletion rule as well.

If, for example, the filter range is set to *Only archive messages that are older than 1 month* and the deletion rule is set to *if message older than 1 day*, only emails will be deleted that are older than one month because younger emails have not been archived yet.

With MailStore Server, it is not possible to delete emails from source systems that have not been previously archived.

Automating the Archiving Process

With MailStore, every archiving profile can be executed automatically. MailStore Server distinguishes mainly between two type of automatic executions. For archiving profiles from the category *E-mail Server*, a continuous server-side execution by MailStore Server is available, whereas profiles from the category *E-mail Clients* and *E-mail Files* are executed solely on the clients by means of the Windows Task Scheduler.

Important notice: The time-controlled execution of archiving processes cannot prevent users from deleting emails from their email applications or mailboxes prior to having been archived. In order to ensure that all emails are archived they should be automatically archived upon sending and receiving.

By deleting a scheduled task (through MailStore's Administrative Tools or the Windows Task Manager) neither the underlying archiving profile nor the emails already archived by the task are deleted.

Automating Execution of E-mail Server Archiving Profiles

If the automatic execution was not already configured while creating a new archiving profile, follow the below instructions to activate the automatic execution of archiving profiles from the *E-mail Servers* category.

- Start MailStore Client
- Log in to MailStore Server
- Click on *Archive Email*.
- Right-click on an existing archiving profile in the *Saved Profiles* list or click on *Commands* and then click on *Automatic....*
- In the *Automatic Execution* dialog you can specify the properties of the continuous execution:
 - **Between executions, wait...seconds**
Defines how long MailStore Server should wait until the next execution of the archiving profile.
 - **Do not execute between**
This option allows to specify a period in which the archiving profile is not executed. This for example can be due to nightly backups or other maintenance tasks.
- After defining all settings, click *OK*

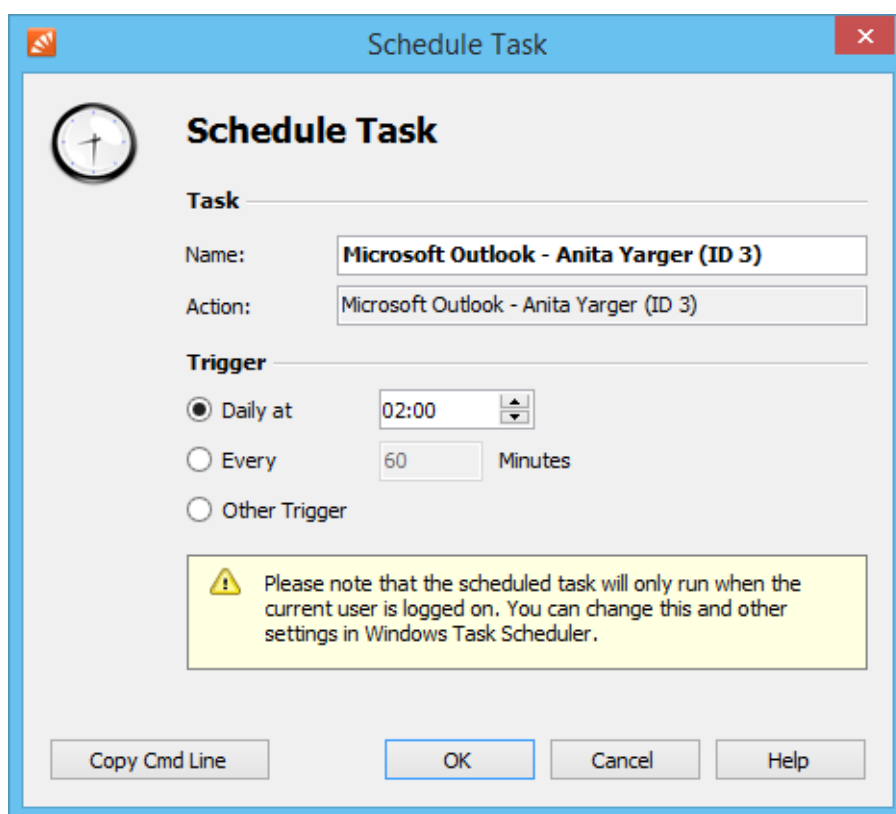
MailStore immediately starts the continuous execution of the archiving profile in the background. In the *Current Status* section, the status of the selected archiving profile can be watched. The very last execution results can be shown by clicking on *Details....*, whereas a list of all previous executions results is shown after clicking on *All Results....*

Automating Execution of E-mail Client or E-mail Files Archiving Profiles

Archiving profiles from the category *E-mail Clients* (i.e Microsoft Outlook, Mozilla Thunderbird) and *E-mail Files* must be executed in the context of the Windows users whose emails are to be archived or who has access to the files to be archived. To automate the archiving process of these profiles please proceed as follows:

Please note: As MailStore administrator and using MailStore's user management, first verify that the user possesses the privilege to archive emails.

- Start MailStore Client *on the user's computer*.
- Log on to MailStore Server using the user's credentials.
- Click on *Archive Email*.
- Right-click on an existing profile or click on *Commands* and then select *Create Task on <COMPUTERNAME>*.



- In the next window "Schedule Task" the following settings can be specified:
 - **Task - Name:**
The task name can be chosen freely. By default, the name of the archiving profile and its internal MailStore ID are used.
 - **Trigger:**
The following triggers can be specified:
 - *Daily at* - Specify a time for the daily execution (once a day)
 - *Every [xx] minutes* - Specify an interval of minutes to execute the profile (i.e. every 60 minutes)
 - *Other Trigger* - If the option Other Trigger is chosen, the archiving task is still created as a Windows task but the execution times have to be specified separately. This has to be done using the Windows Task Scheduler and is described in Windows Help. All options offered by your version of Windows can be used.
- After all settings have been specified, the task can be created by clicking on *OK*. Confirm the safety prompt
- Confirm again by clicking *OK*.

Please notice: Modifications to the schedule of archiving profiles from the categories *E-mail Clients* or *E-mail Files* is only possible through the Windows Task Scheduler. The task scheduler can be opened directly from

MailStore Client by right-clicking on one of the existing profiles from the above categories and selecting the option *Open Windows Task Scheduler*.

Showing the Command Line

If desired, the archiving process of *E-mail Client* and *E-mail Files* profiles can be incorporated into a larger procedure, such as one run by a batch file (.bat). To simplify this process, MailStore offers the option *Copy Cmd Line* in the Schedule Task window (see top of this page). Click on the button to view a command line that can be incorporated into the desired procedure. For example:

```
"C:\Programme\Mailstore\MailStore Server\MailStoreCmd.exe"  
--h="localhost" --pkv3="A3774AD575BA6DE29844829697585EBE21B20B83"  
--cred="admin@127.0.0.1"  
-c import-execute --id=4 --user="admin" --verbose
```

The command line is to be read as follows:

"...\MailStoreCmd.exe" - MailStoreCmd.exe is the MailStore Management Shell. It was developed for the automated execution of certain processes in MailStore. Additional information about MailStoreCmd is available in chapter MailStore Server Management Shell.

--h="localhost" - The computer name of MailStore Server to which MailStoreCmd.exe is to connect.

--pkv3="..." - Public Key Fingerprint. It guarantees that the MailStore server at the time of archiving is the same as it was at the time when the scheduled task was created (optimal safety feature).

--cred="admin@127.0.0.1" - The password of the user *admin* of the server *127.0.0.1* will be read from the Windows Credential Manager, which has been stored there before by MailStore.

-c - The actual command follows (non-interactive mode).

import-execute --id=4 --user="admin" --verbose - Execute the archiving profile of user *admin* with the internal ID 4.

References

[1] [http://msdn.microsoft.com/en-us/library/az24scfc\(v=vs.110\).aspx](http://msdn.microsoft.com/en-us/library/az24scfc(v=vs.110).aspx)

2.4 Archiving Email from Outlook, Thunderbird and others

Important notice: As opposed to all other archiving features, it is imperative that the MailStore Client software is installed on the user computer when archiving emails from Outlook, Thunderbird and other email applications.

Once the archiving task is set up, it can be started manually by the user or executed automatically according to a schedule any number of times. During this process, the emails are transferred by the MailStore Client of the user to the central MailStore Server for archiving.

Please note: If the user emails are accessible (e.g. on a network drive) to the MailStore administrator in form of individual PST files, they can be archived directly by the administrator. As opposed to archiving from Outlook, this can be done completely independently from the user and the user computer. Additional information about this topic is available in the chapter Archiving Outlook PST Files Directly.

Supported Email Applications

MailStore supports archiving emails from various email applications, including:

- Microsoft Outlook 2003, 2007, 2010, 2013, 2016, 2019 (Click-to-Run versions 2013 and higher only, Windows Store versions are **not** supported)
- Microsoft Windows Live Mail
- Mozilla Thunderbird
- Mozilla SeaMonkey

Even email applications not listed here can often be archived using the file system (EML) and MBOX import. Additional information is available in the chapter Archiving Emails from External Systems (File Import).

Important Notices:

- Outlook 2003 and 2007 are no longer maintained by Microsoft. Therefore, we are only able to ensure limited compatibility and thus provide limited technical support for Outlook 2003 and 2007. Information in this document regarding MailStore's capabilities towards Outlook 2003 and 2007 is no longer maintained and may no longer be up-to-date. Furthermore, we reserve the right to partially as well as completely remove support for Outlook 2003 and 2007 in a future MailStore update.
- MailStore does not support archiving of Microsoft Outlook profiles that use third-party components to access mailboxes on an email server. Please archive those mailboxes directly from the email server.

Procedure

Setting up archiving processes for Outlook, Thunderbird and other email applications is done using archiving profiles. General information about archiving profiles is available in the chapter Working with Archiving Profiles.

- Create a MailStore user account (if one does not already exist) for each user whose emails are to be archived and grant them the privileges to archive emails and to create, edit and delete archiving profiles. Additional information is available in the chapter User Management.
- Install the MailStore Client software on the corresponding user computers.
- Ask each user to log on to MailStore Server using their MailStore Client. Under *Archive Email*, a new archiving profile can be created for each user. In the *Create Profile* area of the application window, select the source from which the emails are to be archived (e.g. Microsoft Outlook).
- A wizard opens. At the first steps of the wizard, several settings can be specified for the archiving profile. These include the selection of the folders (e.g. "Inbox") and deletion rules (by default, no emails are deleted). An explanation of these settings can be found later on in this chapter under Settings for Archiving Profiles.
- If logged on to MailStore Server as administrator, the target archive can be specified at the next step of the wizard. Select the archive of the user whose computer is currently being used.

- At the last step, a name for the archiving profile can be specified. After clicking *Finish*, the archiving profile will be listed under *Saved Profiles* and can be run immediately, if desired.

Settings for Archiving Profiles

Upon creating or editing an archiving profile, different settings can be specified for the archiving task. Settings vary depending on the type of the email client selected (e.g. *Microsoft Outlook* or *Mozilla Thunderbird*).

Folders - Specify here, which folders (e.g. "Inbox") are to be archived. Additional information is available in chapter Archiving Specific Folders.

Filter - Also archive unread messages: By default, MailStore archives both read and unread emails. Clear the checkbox next to this text to exclude unread emails from the archiving process.

Delete - If desired, MailStore can automatically delete emails from the source application (e.g. Microsoft Outlook), after they have been archived successfully. Additional information is available in chapter Deleting Emails after Archiving.

Settings Available for Outlook Only

MailStore Server

Archive Microsoft Outlook

Settings

Please configure access to Microsoft Outlook.

☒ **Archive E-mail Stored in your Local Outlook**

Outlook Profile: Outlook

☐ **Archive E-mail Stored in a PST File**

File Name:

Cancel < Back **Next >** Help

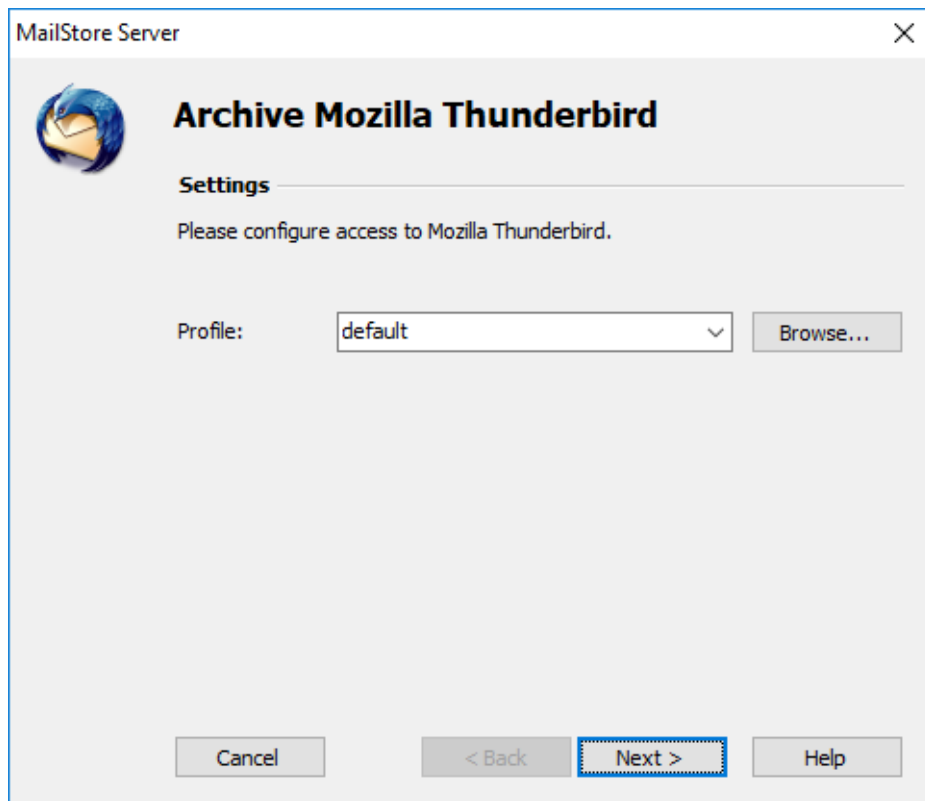
Archive Email Stored in your Local Outlook

If multiple Outlook profiles exist, to which the user can log on to, the Outlook profile to be archived can be selected here.

Archive Email Stored in a PST File

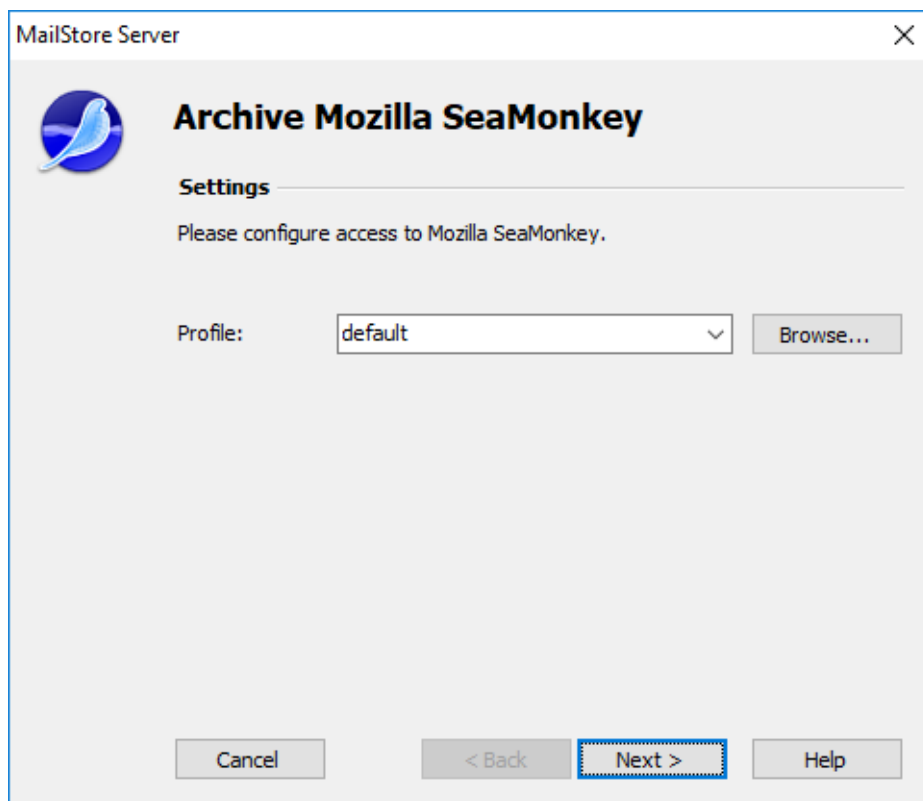
Select this option if MailStore is to access the PST file directly. This option is described in the chapter Archiving Outlook PST Files Directly.

Settings Available for Mozilla Thunderbird Only



Profile: If multiple Thunderbird profiles exist, to which the user can log on to, the profile to be archived can be selected here. Alternatively, by using the *Browse* button, any directory containing Thunderbird data (e.g. from the portable version) not listed under *Profile* can be specified. Select the directory containing the file *prefs.js*.

Settings Available for Mozilla SeaMonkey Only



Profile: If multiple SeaMonkey profiles exist, to which the user can log on to, the profile to be archived can be selected here. Alternatively, by using the *Browse* button, any directory containing SeaMonkey data not listed under *Profile* can be specified. Select the directory containing the file *prefs.js*.

Starting the Archiving Process

Starting the Archiving Process Manually

On the start page of MailStore Client, click on *Archive Email* and from the list under *Saved Profiles*, select the appropriate archiving profile. Click on *Run*. After the archiving process has been executed, a protocol appears. It contains information about the volume of emails that have been archived as well as any errors that may have occurred.

This process can be repeated by the user any number of times. MailStore only archives those emails that are not yet stored in the corresponding user archive.

Automating the Archiving Process

In addition to being executed manually, archiving tasks can also be executed automatically. Additional information about this topic is available in chapter Automating the Archiving Process.

2.5 Archiving Outlook PST Files Directly

With MailStore Server, PST files can be archived directly. Contrary to archiving emails from Outlook, here you can create and execute archiving tasks independently from users and user computers. The users' individual PST files should be made available centrally, e.g. through a network share.

Please note: The computer used for archiving PST files through the MailStore Client must have a version of Outlook installed that is compatible with the PST files selected. For example, to archive an Outlook 2007 PST file, the corresponding version of Outlook needs to be installed.

Please note: If you work with an Outlook/Exchange environment, you get better results by first opening the existing PST file in Outlook and then using the *Archive Email Stored in your Local Outlook* option. This way you can ensure that all existing sender and recipient addresses are correctly archived.

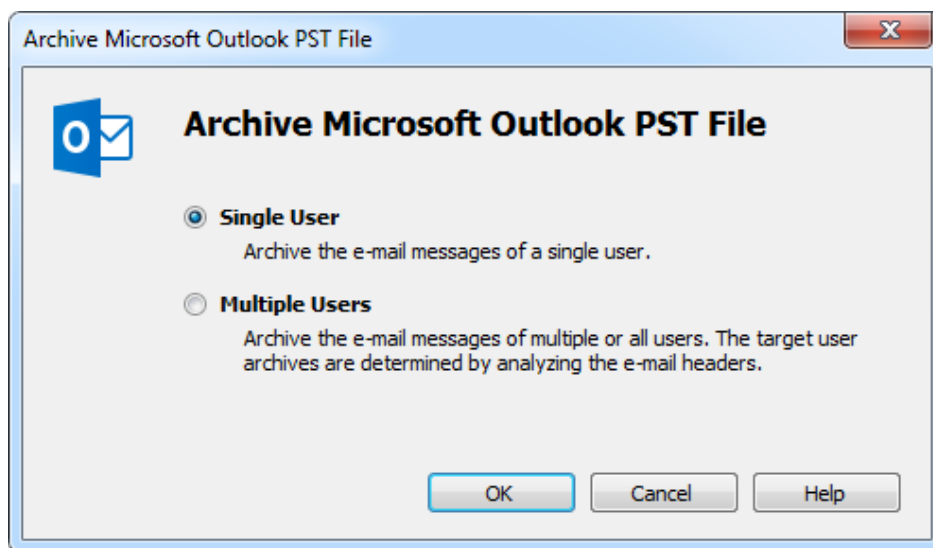
Setting up archiving processes for PST files is done using archiving profiles. General information about archiving profiles is available in the chapter Working with Archiving Profiles.

Archiving a PST file that contains emails of a single user

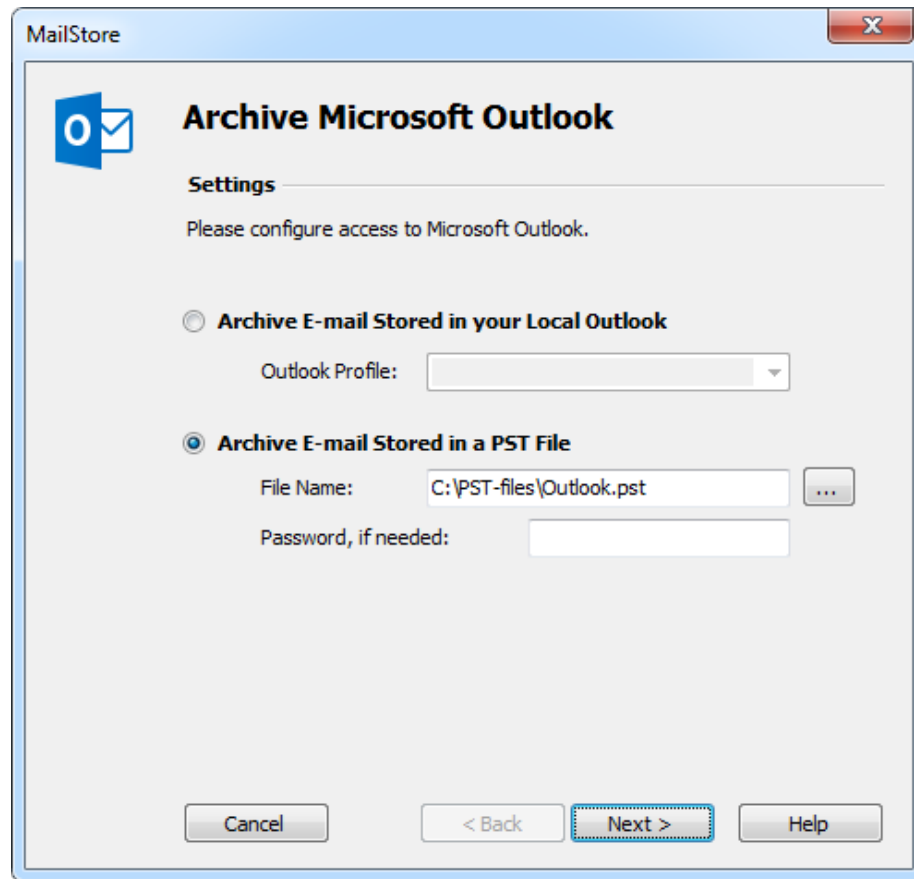
Please note: If you don't want to archive PST files in your personal user archive only, you'll have to be logged on to MailStore Client as a MailStore Server administrator. Only a MailStore Server administrator can archive emails for other users.

For each PST file, please proceed as follows:

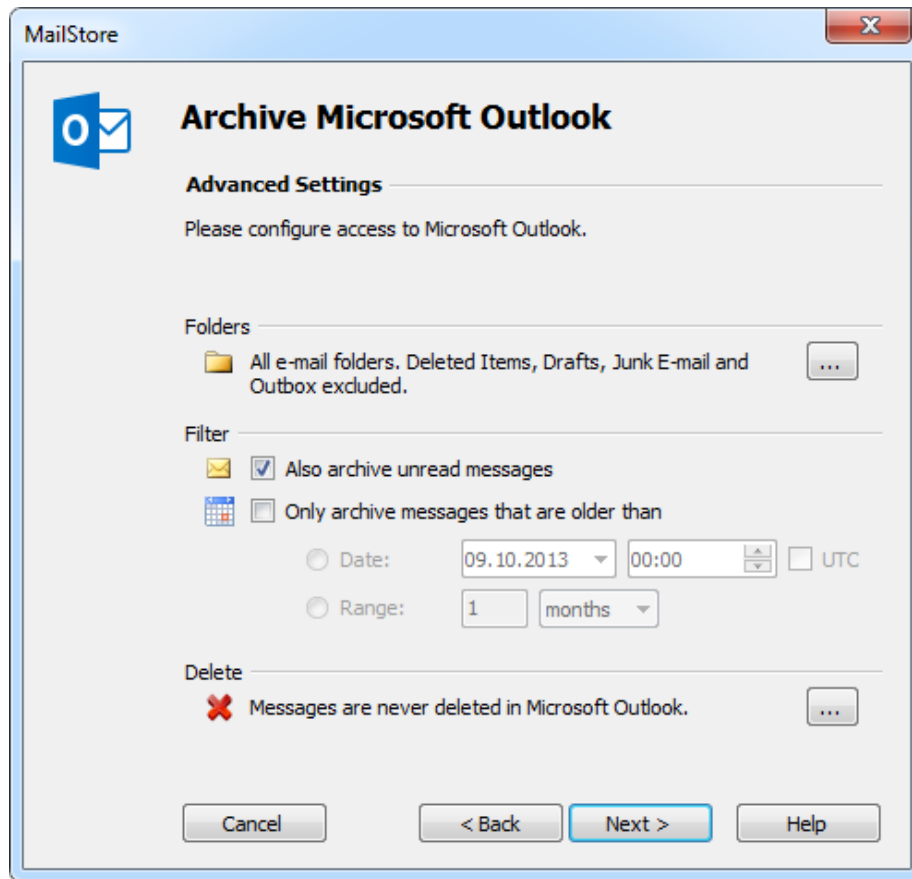
- In MailStore Server, click on *Archive Email*.
- From the *E-mail Files* category in the *Create Profile* section select *Microsoft Outlook PST files*.
- A wizard opens, guiding you through the setup process.



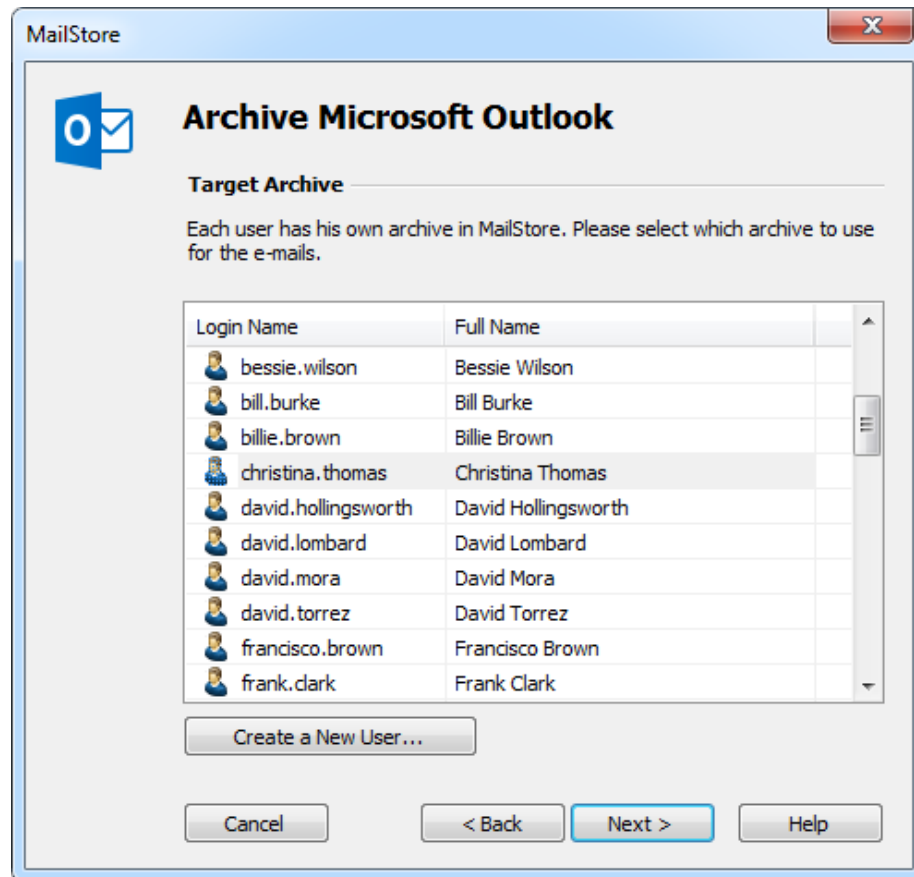
- Select *Single User* and click on *OK*.
- The dialog window *Archive Microsoft Outlook* appears.



- Select *Archive Email Stored in a PST File* as source and specify the PST file to be archived. Click on *Next*.
- If needed, adjust the settings for the List of Folders to be Archived, the filter and the Deletion Rules.



- If logged on to MailStore Server as a MailStore Server-administrator, the target archive can be specified in the next step of the wizard. Select the archive of the user for whom the selected PST file is to be archived.



- In the final step you can specify a name for the new archiving profile. After clicking on *Finish*, the archiving profile will be listed under *Saved Profiles* and can be run immediately, if desired.

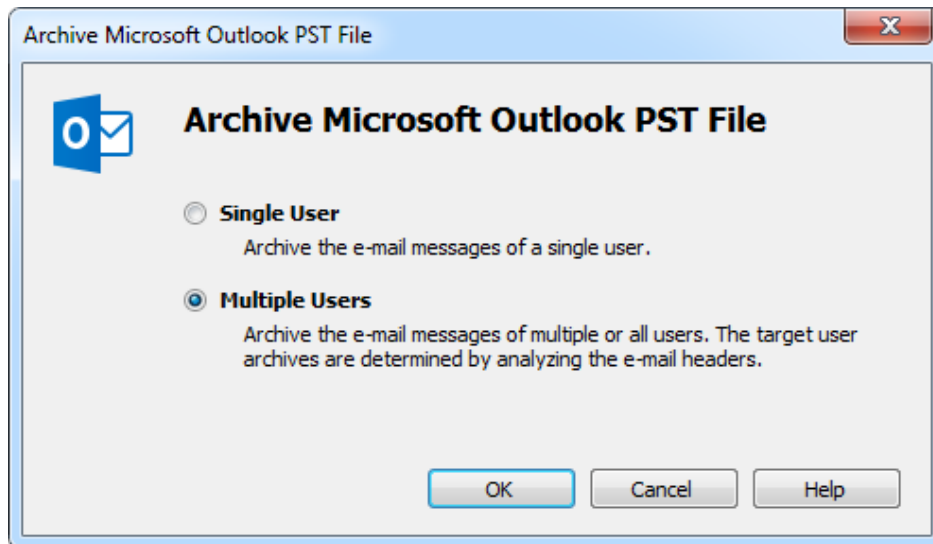
Archiving a PST file that contains emails of multiple users

Please note: In order to be able to select this archiving method, you'll have to be logged on to MailStore Client as a MailStore Server administrator. Only a MailStore Server administrator can archive emails for other users.

In addition to archiving PST files that contain emails of a single user, MailStore Server can archive PST files that contain emails of multiple users, e.g. from a multidrop mailbox export.

To archive such emails please proceed as follows:

- In MailStore Server, click on *Archive Email*.
- From the *E-mail Files* category in the *Create Profile* section select *Microsoft Outlook PST files*.
- A wizard opens, guiding you through the setup process.

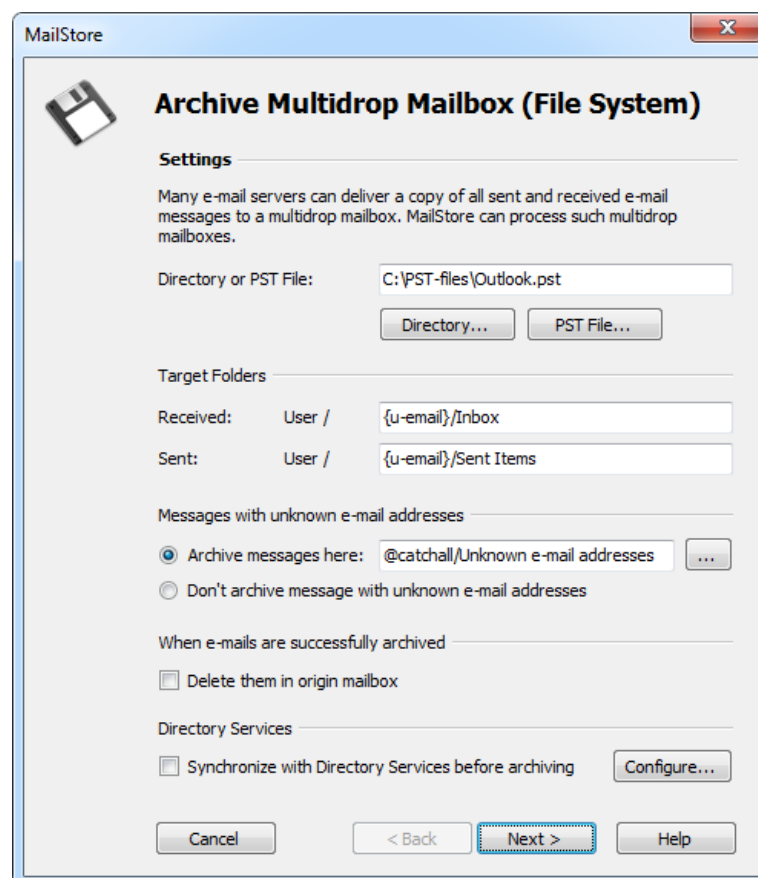


- Select *Multiple Users* and click on *OK*.

Please note: To be able to archive from a PST file that contains emails of multiple users, MailStore Server users along with their email addresses must exist in the MailStore Server user management. If this is not the case, MailStore Server will offer to set up and run the directory synchronization at this point. Once completed, the wizard will resume.

Alternatively, you can cancel the wizard and create users manually as described the in chapter User Management.

- The dialog window *Archive Multidrop Mailbox (Filesystem)* appears.



- Select the PST file to be archived.

- Adjust any further settings such as how to handle emails with unknown addresses or asking MailStore Server to delete email files after they have been archived.
- Click on *Next*.
- In the final step you can specify a name for the new archiving profile. After clicking on *Finish*, the archiving profile will be listed under *Saved Profiles* and can be run immediately, if desired.

Starting the Archiving Process

Starting the Archiving Process Manually

On the start page of MailStore Client, click on *Archive Email* and from the list under *Saved Profiles*, select the appropriate archiving profile. Click on *Run*. After the archiving process has been executed, a protocol appears. It contains information about the volume of emails that have been archived as well as any errors that may have occurred.

This process can be repeated by the user any number of times. MailStore only archives those emails that are not yet stored in the corresponding user archive.

Automating the Archiving Process

In addition to being executed manually, archiving tasks can also be executed automatically. Additional information about this topic is available in chapter Automating the Archiving Process.

2.6 Archiving Emails from External Systems (File Import)

MailStore Server can also archive the emails from applications that are not directly supported if they are available in a standardized format. With most applications it is necessary to export the emails to one of those formats first.

Using file import, MailStore Server can archive the following formats:

- **EML** - One file per email. Often called RFC 822 or MIME format.
- **MSG** - One file per email. Microsoft Outlook email files.
- **PST** - Microsoft Outlook personal folder files.
- **MBOX** - This file format is used by Mozilla Thunderbird, for example, although in this case the file ending is omitted. The MBOX file format is also used by many Unix mail servers.

Procedure for Archiving PST Files

Archiving PST files is described separately in chapter Archiving Outlook PST Files Directly.

Procedure for Archiving EML and MSG Files

Setting up archiving processes for files from the file system is done using archiving profiles. General information about archiving profiles is available in chapter Working with Archiving Profiles.

Archiving Emails of a Single User

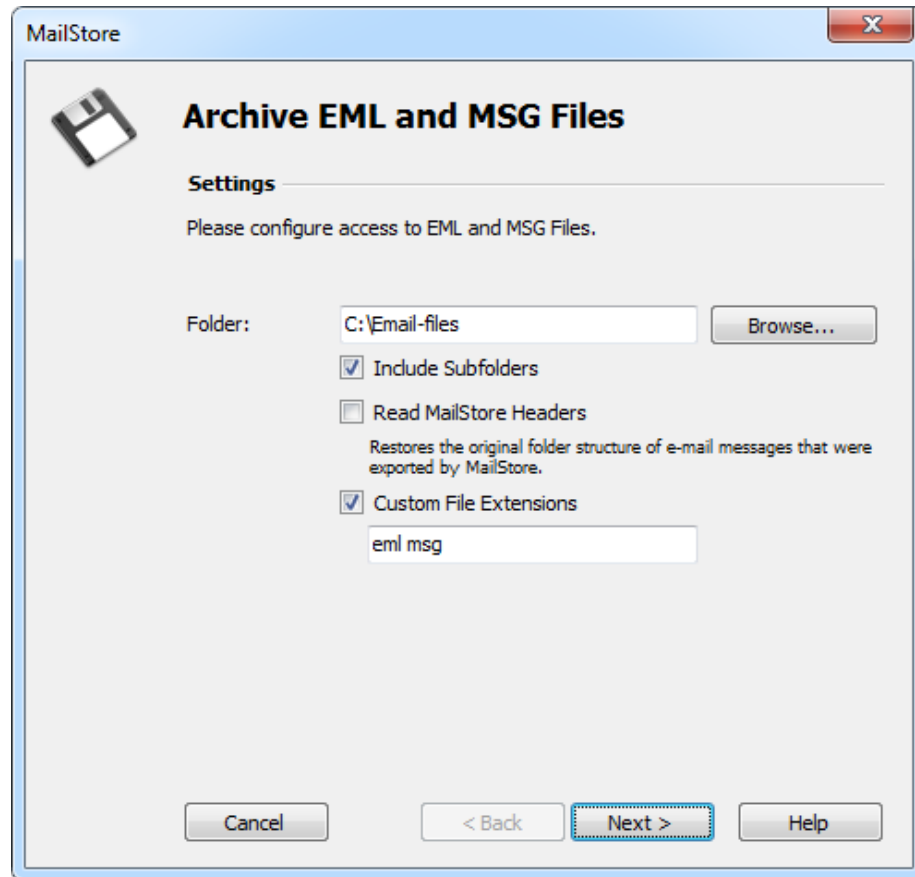
Please note: If you do not want to archive email files in your personal user archive only, you'll have to be logged on to MailStore Client as a MailStore Server administrator. Only a MailStore Server administrator can archive emails for other users.

Please proceed as follows:

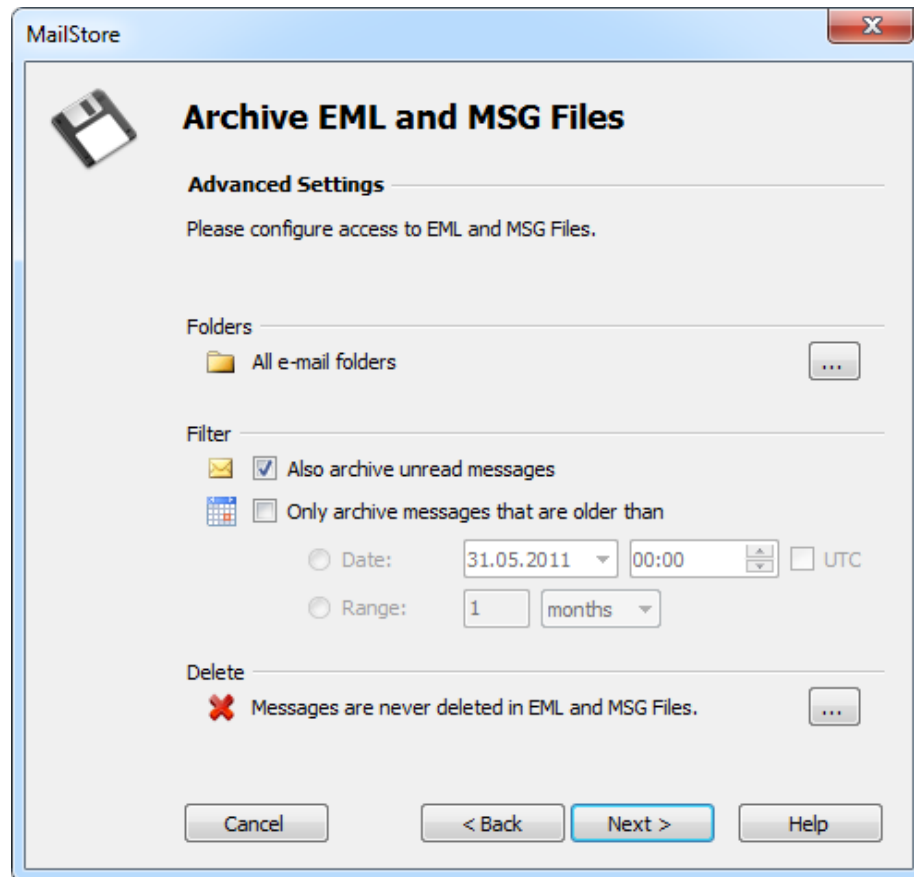
- In MailStore Server, click on *Archive Email*.
- From the *E-mail Files* category in the *Create Profile* section select *EML and MSG files*.
- A wizard opens, guiding you through the setup process.



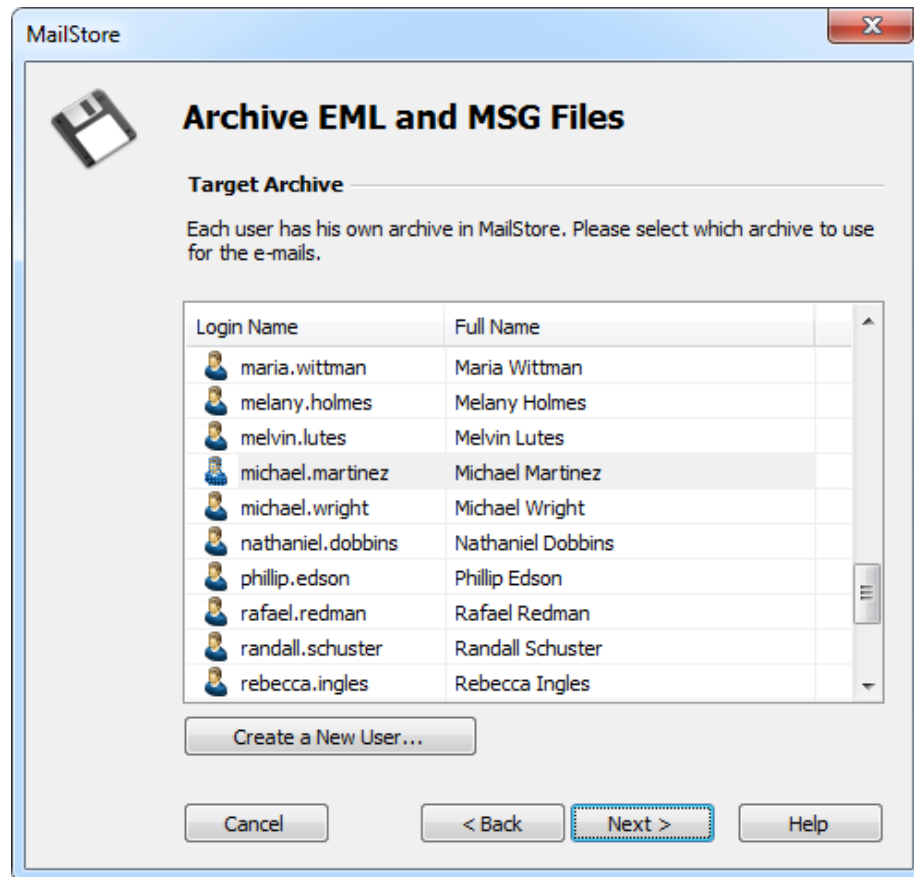
- Select *Single User* and click on *OK*.
- The dialog window *Archive EML and MSG files* appears.



- Select the folder to be archived. All email files in this folder will be archived.
- If desired, adjust the advanced settings or simply click *Next*.
 - **Include Subfolders:**
In addition to the emails in the selected folder also those located in any subfolders will be archived.
 - **Read MailStore Headers:**
RFC 822 files created by the MailStore Server-specific export process contain additional information such as the source folder. Set the checkmark if this information should be taken into account.
 - **Custom File Extensions:**
Here you can make appropriate entries if the files to be archived are in EML or MSG format but have a different file extension.
- If needed, adjust the settings for the List of Folders to be Archived, the filter and the Deletion Rules.



- If logged on to MailStore Server as a MailStore Server-administrator, the target archive can be specified in the next step of the wizard. Select the archive of the user for whom the selected files are to be archived.



- In the final step you can specify a name for the new archiving profile. After clicking on *Finish*, the archiving profile will be listed under *Saved Profiles* and can be run immediately, if desired.

Archiving Emails of Multiple Users

Please note: In order to be able to select this archiving method, you'll have to be logged on to MailStore Client as a MailStore Server administrator. Only a MailStore Server administrator can archive emails for other users.

In addition to archiving email files of a single user, MailStore Server can archive email files of multiple users from a single directory; such emails may have been exported from a multidrop mailbox.

To archive such emails please proceed as follows:

- In MailStore Server, click on *Archive Email*.
- From the *E-mail Files* category in the *Create Profile* section select *EML and MSG files*.
- A wizard opens, guiding you through the setup process.

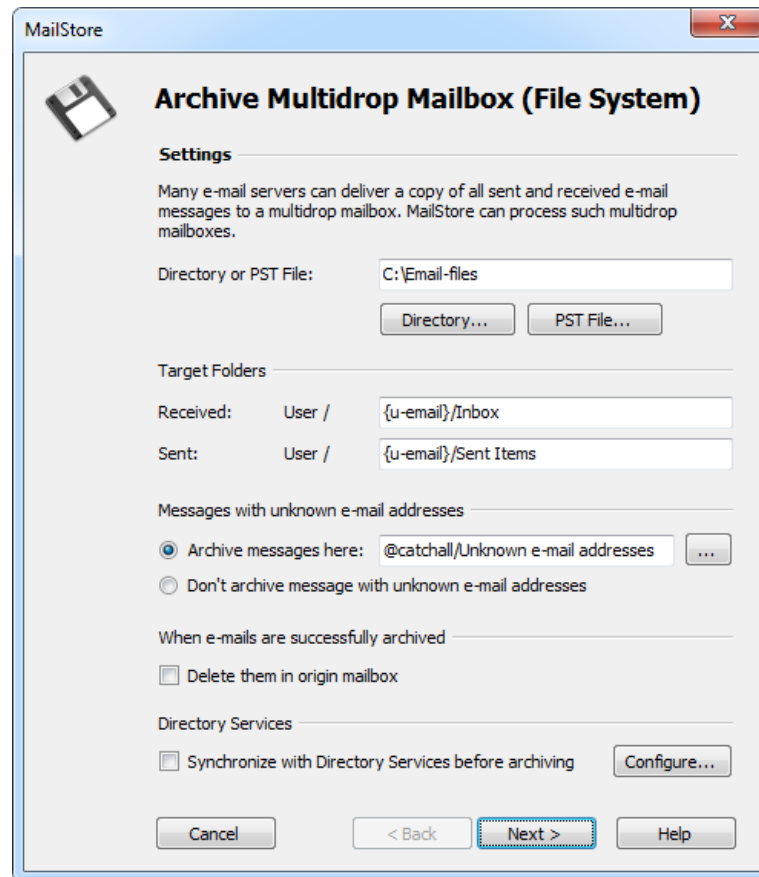


- Select *Multiple Users* and click on *OK*.

Please note: To be able to archive from a source that contains emails of multiple users, MailStore Server users along with their email addresses must exist in the MailStore Server user management. If this is not the case, MailStore Server will offer to set up and run the directory synchronization at this point. Once completed, the wizard will resume.

Alternatively, you can cancel the wizard and create users manually as described the in chapter User Management.

- The dialog window *Archive Multidrop Mailbox (Filesystem)* appears.



- Select the folder with the email files to be archived.
- Adjust any further settings such as how to handle emails with unknown addresses or asking MailStore Server to delete email files after they have been archived.
- Click on *Next*.
- In the final step you can specify a name for the new archiving profile. After clicking on *Finish*, the archiving profile will be listed under *Saved Profiles* and can be run immediately, if desired.

Archiving Emails from a MailStore Export

Please note: In order to be able to select this archiving method, you'll have to be logged on to MailStore Client as a MailStore Server administrator. Only a MailStore Server administrator can archive emails for other users.

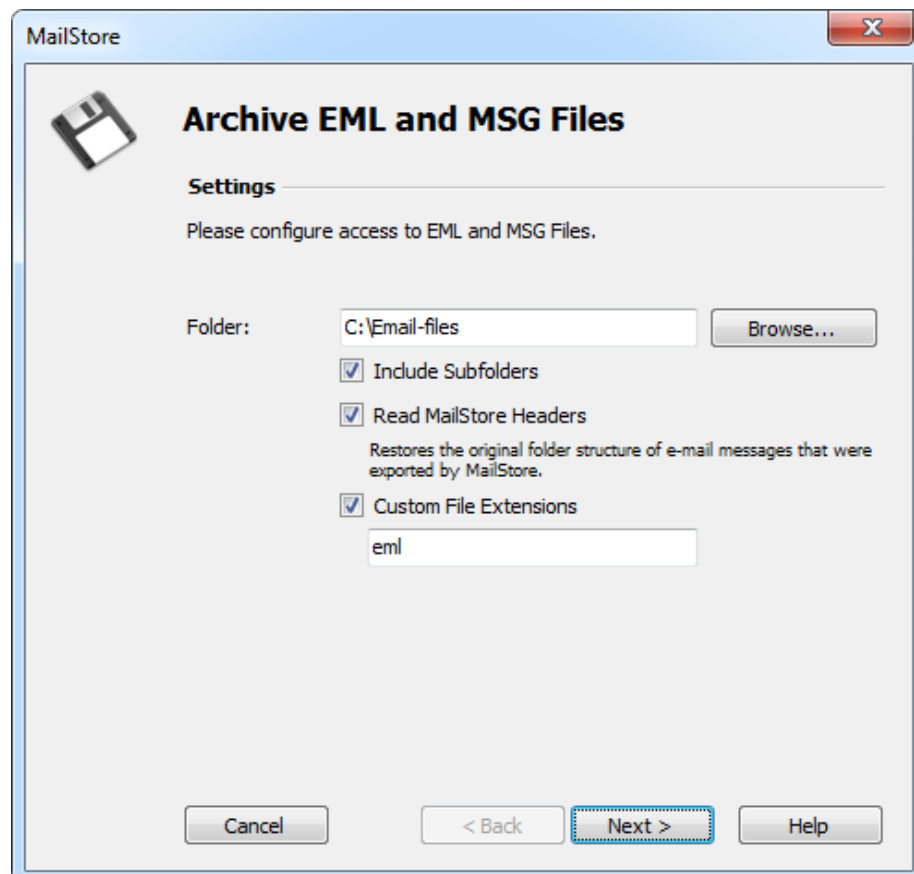
To archive EML files which have been created by a MailStore Export, the correct options have been pre-selected. This provides an easy way to file emails exported from MailStore Server into the correct user archives and folders again.

Please proceed as follows:

- In MailStore Server, click on *Archive Email*.
- From the *E-mail Files* category in the *Create Profile* section select *EML and MSG files*.
- A wizard opens, guiding you through the setup process.



- Select *MailStore Export* and click on *OK*.
- The dialog window *Archive EML and MSG files* appears.



- Select the folder to be archived. All email files in this folder will be archived.
- If desired, adjust the advanced settings or simply click *Next*.
 - **Include Subfolders:**
In addition to the emails in the selected folder also those located in any subfolders will be archived.

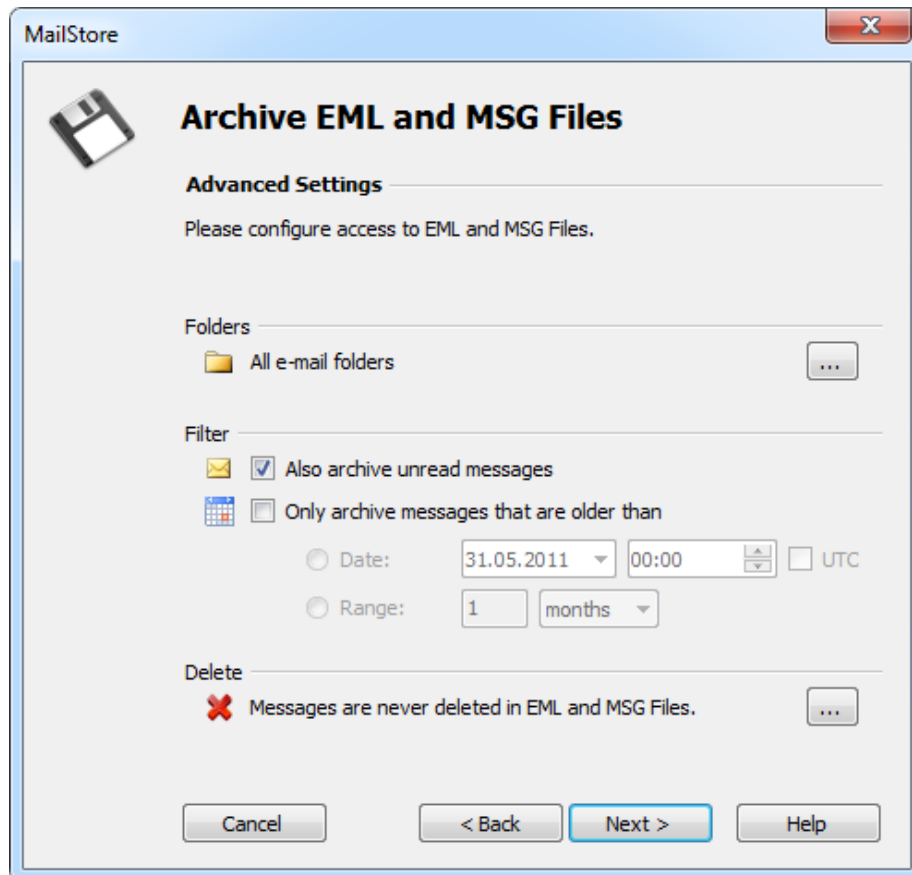
- **Read MailStore Headers:**

RFC 822 (EML) files created by the MailStore Server-specific export process contain additional information about the source archives and folders. This information allows to file emails exported from MailStore Server into the correct user archives and folders when being rearchived. Non-existent archives and folders will be created automatically.

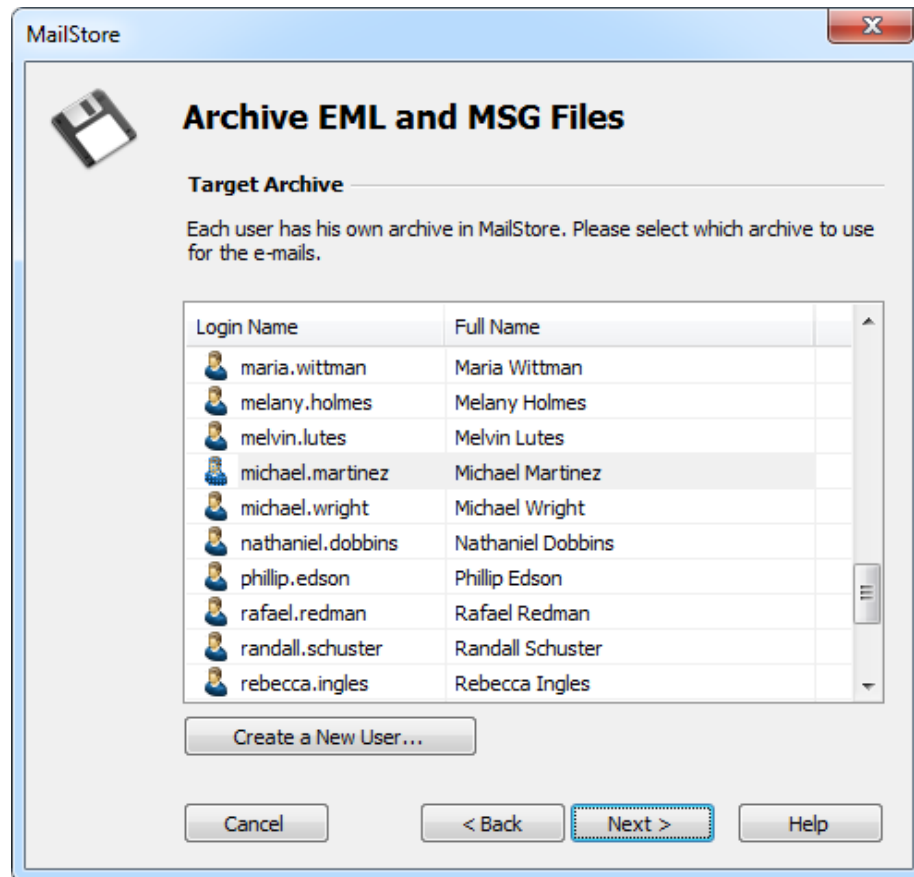
- **Custom File Extensions:**

Here you can make appropriate entries if the files to be archived are in EML or MSG format but have a different file extension.

- If needed, adjust the settings for the List of Folders to be Archived, the filter and the Deletion Rules.



- You can specify the target archive in the next step of the wizard. Select the archive of the user for whom the selected files are to be archived. The target archive will be ignored if the option *Read MailStore Headers* has been selected and the email to be archived contains such headers.



- In the final step you can specify a name for the new archiving profile. After clicking on *Finish*, the archiving profile will be listed under *Saved Profiles* and can be run immediately, if desired.

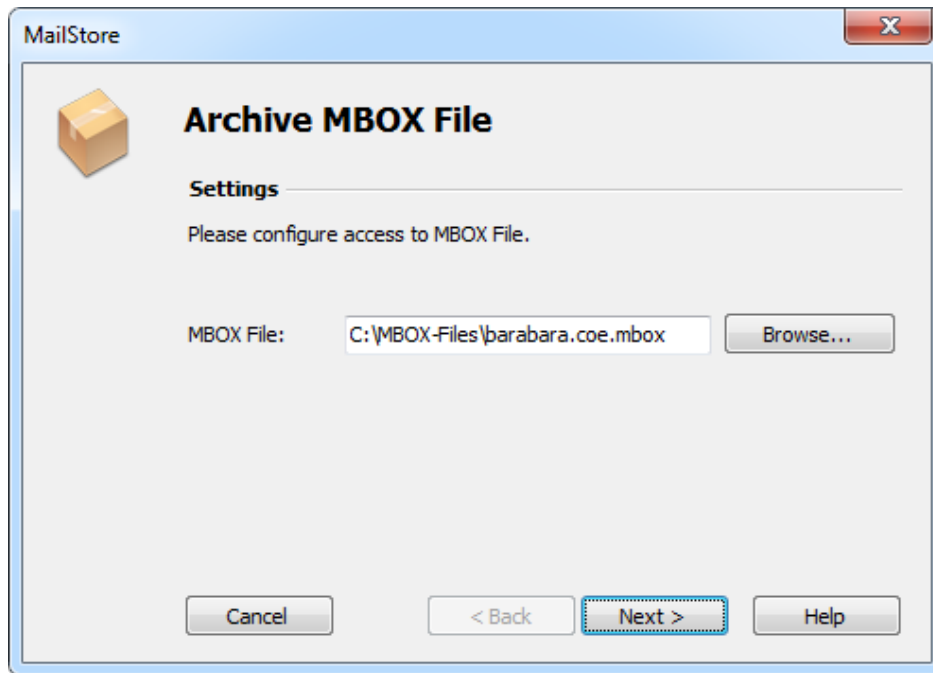
Procedure for Archiving MBOX Files

Setting up the archiving process for files from the file system is done using archiving profiles. General information about archiving profiles is available in chapter Working with Archiving Profiles.

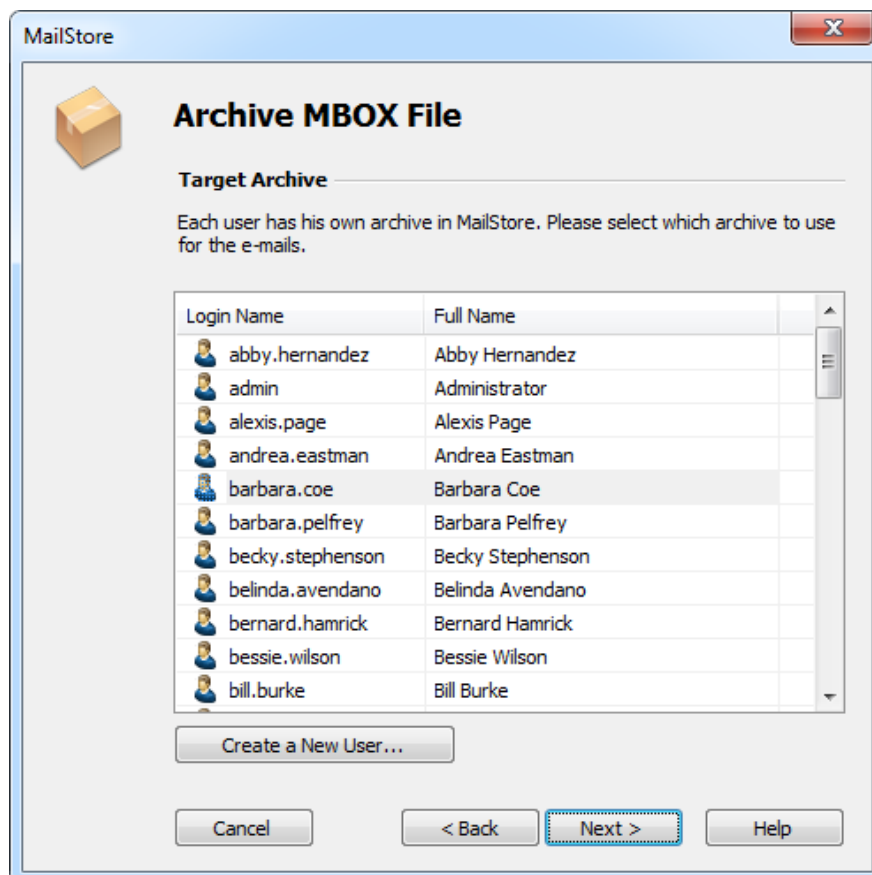
Please note: If you do not want to archive email files in your personal user archive only, you'll have to be logged on to MailStore Client as a MailStore Server administrator. Only a MailStore Server administrator can archive emails for other users.

Please proceed as follows:

- In MailStore Server, click on *Archive Email*.
- From the *Email Files* list in the *Create Profile* area of the application window select *MBOX File*.
- A wizard opens, guiding you through the setup process.
- Select the MBOX file to be archived.



- If logged on to MailStore Server as administrator, the target archive can be specified. Select the archive of the user for whom the selected file is to be archived.



- In the final step you can specify a name for the new archiving profile. After clicking on *Finish*, the archiving profile will be listed under *Saved Profiles* and can be run immediately, if desired.

Archiving with Drag & Drop

Files can also be archived using Drag & Drop: Simply drag the appropriate folder containing EML files or the appropriate MBOX file into the list of saved settings to create an archiving profile for this process directly.

Starting the Archiving Process

Starting the Archiving Process Manually

On the start page of MailStore Client, click on *Archive Email* and from the list under *Saved Profiles*, select the appropriate archiving profile. Click on *Run*. After the archiving process has been executed, a protocol appears. It contains information about the volume of emails that have been archived as well as any errors that may have occurred.

This process can be repeated by the user any number of times. MailStore only archives those emails that are not yet stored in the corresponding user archive.

Automating the Archiving Process

In addition to being executed manually, archiving tasks can also be executed automatically. Additional information about this topic is available in chapter Automating the Archiving Process.

2.7 Archiving Server Mailboxes

This chapter describes how a single mailbox located on any email server can be archived using the IMAP or POP3 protocols. To archive multiple mailboxes in one step, Batch-archiving IMAP Mailboxes can be used. If the mailbox is a multidrop mailboxes, also called catchall mailboxes, that contains emails for more than one person please read the chapter Archiving IMAP and POP3 Multidrop Mailboxes

Important: This article describes the general procedure independent from the e-mail server used. Please find e-mail server specific information in our Implementation Guides.

Required Information

In order to archive a server mailbox, MailStore requires the following data:

- The server name (e.g. imap.myserver.com).
- The protocol used (e.g. IMAP-TLS).
- The user name. Often times, the full email address or the local part (left of the @ character) is used.
- The password.

IMAP or POP3?

When choosing between IMAP and POP3, we strongly recommend using IMAP. With IMAP, all or specific folders of the mailbox can be archived. POP3 does not "recognize" any folders; because of this it is likely that, with most service providers, only the inbox will be archived.

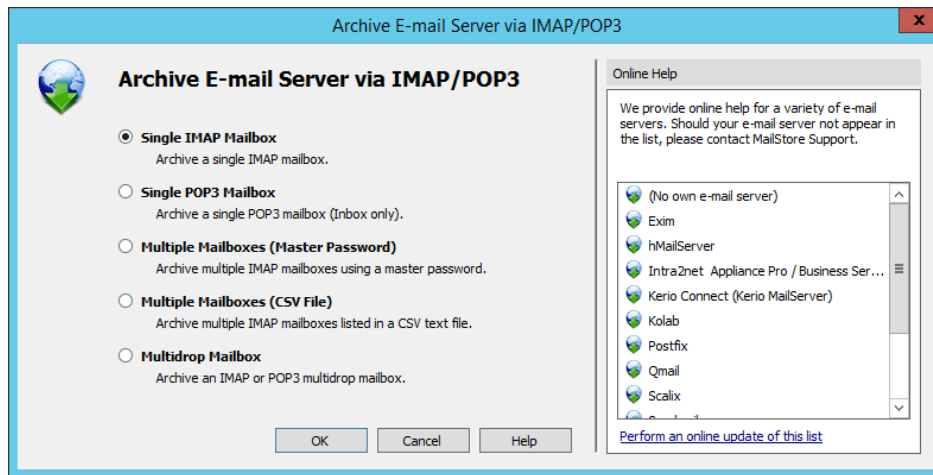
Setting Up the Archiving Process

By following the procedure described here, a single mailbox can be archived for a specific MailStore user. The archiving process can be executed manually or automatically.

Setting up archiving processes for IMAP or POP3 mailboxes is done using archiving profiles. General information about archiving profiles is available in chapter Working with Archiving Profiles.

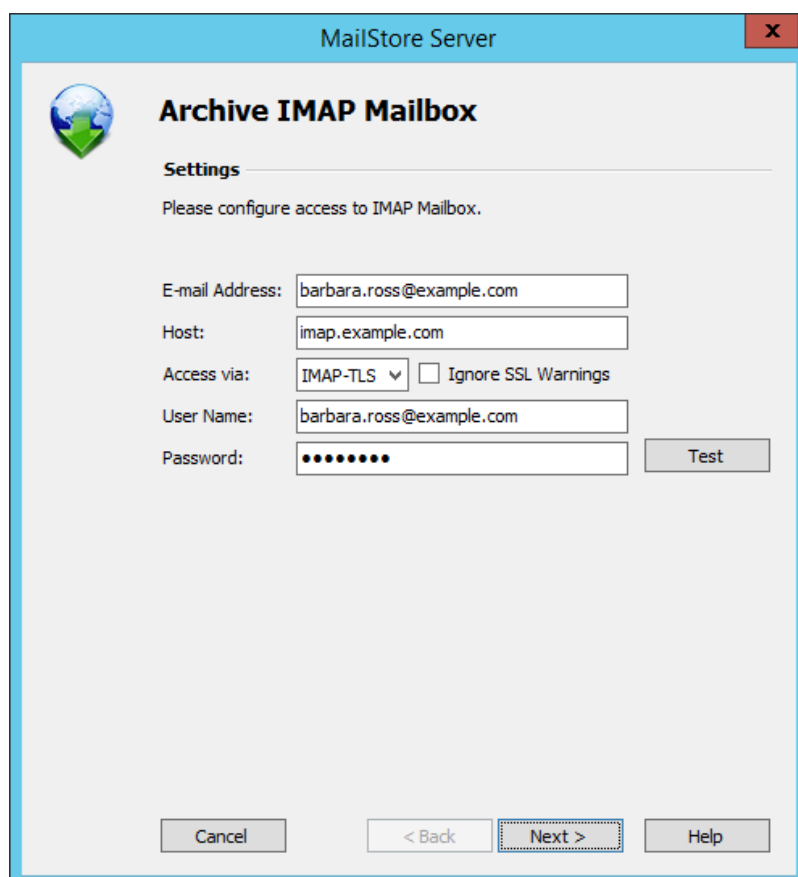
For each mailbox, please proceed as follows:

- Users can only archive their own mailboxes to their personal user archive. To archive the emails of other users, you have to be logged on to MailStore Client as MailStore administrator. Only MailStore administrators can archive the emails of other users.
- In MailStore, click on *Archive Email*.
- To create a new archiving profile, select *Other Server via IMAP/POP3* from the *Email Servers* list in the *Create Profile* area of the application window.
- A wizard opens guiding you through the setup process.

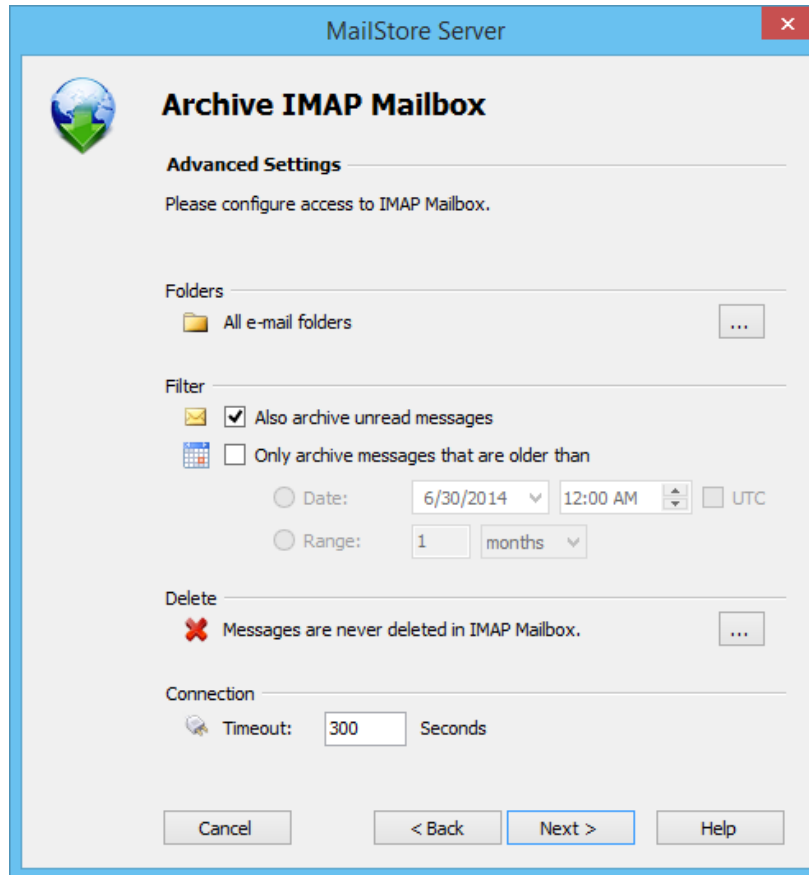


- Select *Single Mailbox* and click on *OK*.
- Fill out the fields *Email Address*, *Host*, *Access via*, *User Name* and *Password*. Click on *Test* to verify the data entered.

For the IMAP-TLS and IMAP-SSL protocols only: You have the option to ignore SSL security warnings. Generally, these warnings appear if an unofficial certificate is used on the server.



- Click on *Next*.
- Customize the list of folders to be archived (IMAP only), the filter (IMAP only) and the deletion rules. By default, no emails will be deleted from a mailbox. The timeout value only has to be adjusted as needed (e.g. with very slow servers).



The image shows a screenshot of the 'MailStore Server' application window, specifically the 'Archive IMAP Mailbox' dialog box. The window has a blue title bar with the text 'MailStore Server' and a red close button. The main content area is white and contains a globe icon with a green arrow pointing down. The title 'Archive IMAP Mailbox' is in bold. Below the title is a section titled 'Advanced Settings' with a subtitle 'Please configure access to IMAP Mailbox.' The settings are organized into sections: 'Folders' with a folder icon and the text 'All e-mail folders' and a three-dot menu button; 'Filter' with a mail icon and a checked checkbox 'Also archive unread messages', a calendar icon and an unchecked checkbox 'Only archive messages that are older than', and two radio buttons for 'Date' (selected) and 'Range'. The 'Date' section has a date picker showing '6/30/2014', a time picker showing '12:00 AM', and a 'UTC' checkbox. The 'Range' section has a numeric input '1' and a unit dropdown showing 'months'. The 'Delete' section has a red 'X' icon and the text 'Messages are never deleted in IMAP Mailbox.' and a three-dot menu button. The 'Connection' section has a clock icon and the text 'Timeout: 300 Seconds'. At the bottom are four buttons: 'Cancel', '< Back', 'Next >', and 'Help'.

MailStore Server

Archive IMAP Mailbox

Advanced Settings

Please configure access to IMAP Mailbox.

Folders

All e-mail folders

Filter

☒ Also archive unread messages

☐ Only archive messages that are older than

☐ Date: 6/30/2014 12:00 AM ☐ UTC

☐ Range: 1 months

Delete

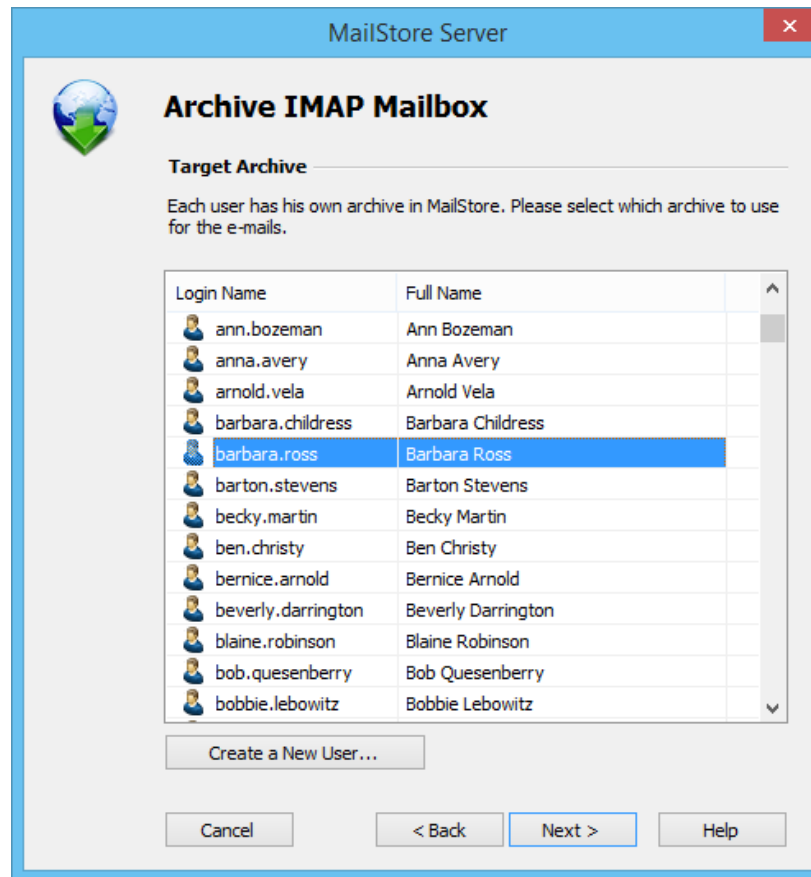
Messages are never deleted in IMAP Mailbox.

Connection

Timeout: 300 Seconds

Cancel < Back Next > Help

- Click on *Next*.
- If logged on to MailStore Server as administrator, the target archive can be specified at the next step. Select the archive of the user for whom the mailbox is to be archived.



- At the last step, a name for the new archiving profile can be specified. After clicking on *Finish*, the archiving profile will be listed under *Saved Profiles* and can be run immediately, if desired.

Starting the Archiving Process

Starting the Archiving Process Manually

On the start page of MailStore Client, click on *Archive Email* and from the list under *Saved Profiles*, select the appropriate archiving profile. Click on *Run*. After the archiving process has been executed, a protocol appears. It contains information about the volume of emails that have been archived as well as any errors that may have occurred.

This process can be repeated by the user any number of times. MailStore only archives those emails that are not yet stored in the corresponding user archive.

Automating the Archiving Process

In addition to being executed manually, archiving tasks can also be executed automatically. Additional information about this topic is available in chapter Automating the Archiving Process.

2.8 Batch-archiving IMAP Mailboxes

This chapter describes how multiple IMAP mailboxes can be archived in one step.

Important: This article describes the general procedure independent from the e-mail server used. Please find e-mail server specific information in our Implementation Guides.

Multiple IMAP Mailboxes (Master Password)

MailStore supports archiving multiple IMAP mailboxes by means of a privileged user and the procedure to log in to an IMAP server as specified in *RFC 4616 - The PLAIN SASL Mechanism*. In addition to the privileged user's user name and password, the primary email address (as mailbox name) of the user whose emails are to be archived is passed on in the process as well.

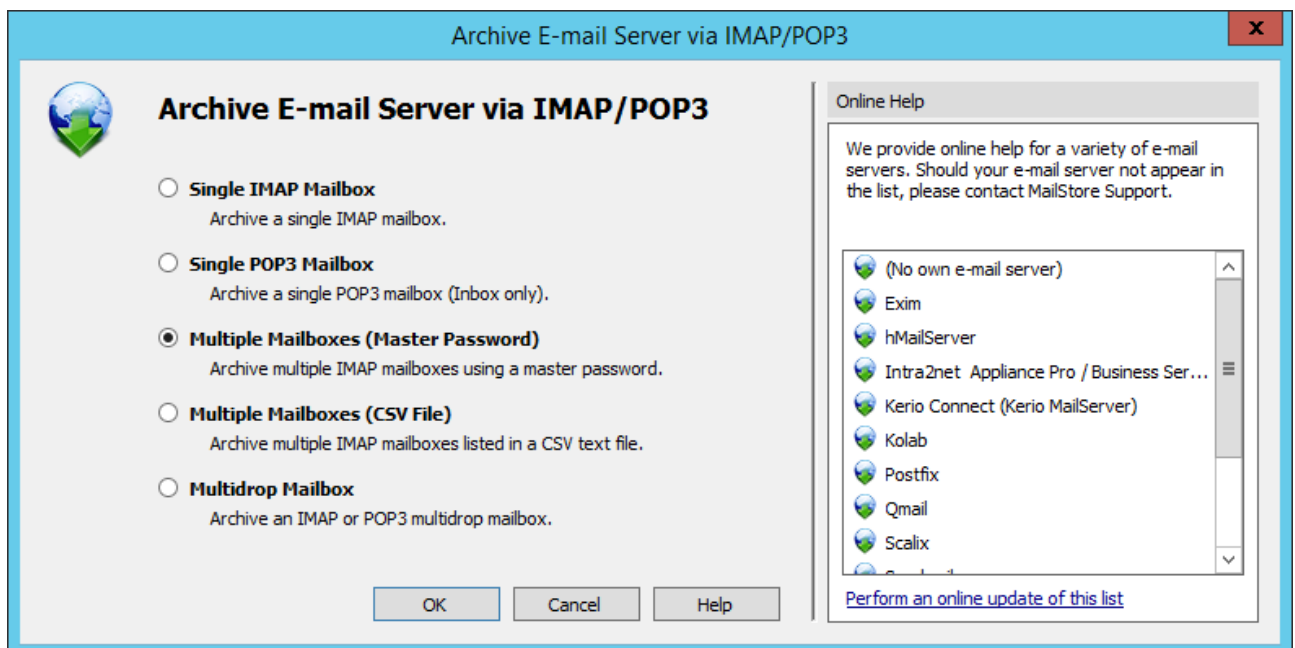
You can learn from your email server's manufacturer if your email server supports this type of login and what the prerequisites are.

Setting up the Archiving Process

Archiving processes for IMAP or POP3 mailboxes are set up using archiving profiles. General information about archiving profiles is available in chapter Working with Archiving Profiles.

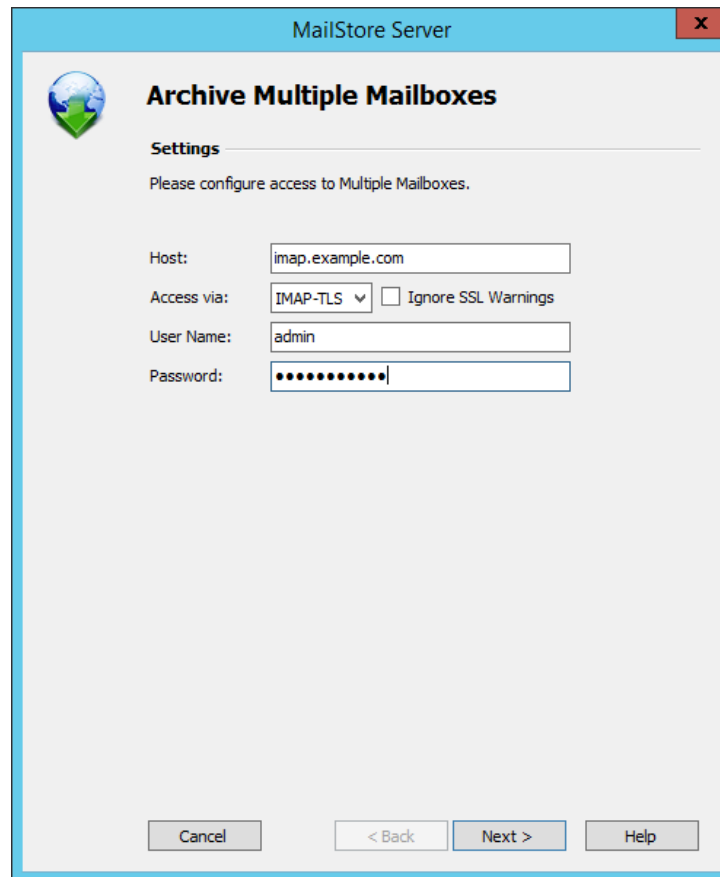
Please proceed as follows:

- Log on as MailStore administrator using MailStore Client.
- In MailStore, click on *Archive Email*.
- From the list of email servers under *Create Profile*, select *Other Server via IMAP/POP3*.
- A wizard opens to assist in specifying the archiving settings.



Hint: The *Online Help* gives you direct access to the respective Implementation Guides.

- Select *Multiple IMAP Mailboxes (Master Password)* and click on *OK*.

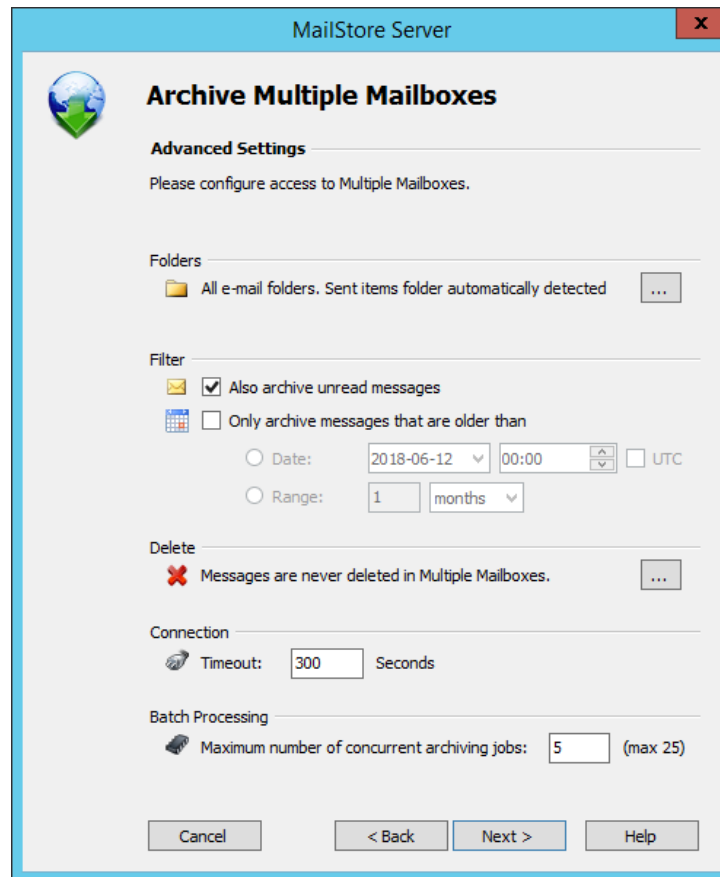


The image shows a Windows-style dialog box titled "MailStore Server" with a close button (X) in the top right corner. The main title is "Archive Multiple Mailboxes" with a globe icon. Below the title is a "Settings" section with the instruction "Please configure access to Multiple Mailboxes." The form contains the following fields and options:

- Host: A text box containing "imap.example.com".
- Access via: A dropdown menu showing "IMAP-TLS" and a checkbox labeled "Ignore SSL Warnings".
- User Name: A text box containing "admin".
- Password: A text box with masked characters (dots).

At the bottom of the dialog are four buttons: "Cancel", "< Back", "Next >", and "Help".

- Fill out the fields *Host* and *Access via* and enter the login data of the privileged user under *User Name* and *Password*.
Only with IMAP-TLS and IMAP-SSL: If you are using an unofficial certificate on the email server, select the option to *Ignore SSL Security Warnings*.
- Click on *Next*.





MailStore Server

Archive Multiple Mailboxes


Advanced Settings


Please configure access to Multiple Mailboxes.

Folders

 All e-mail folders. Sent items folder automatically detected 

Filter



 ☒ Also archive unread messages

 ☐ Only archive messages that are older than


☐ Date: 2018-06-12 00:00 ☐ UTC

☐ Range: 1 months


Delete

 Messages are never deleted in Multiple Mailboxes. 

Connection

 Timeout: 300 Seconds

Batch Processing

 Maximum number of concurrent archiving jobs: 5 (max 25)

Cancel < Back Next > Help

- If needed, customize the list of folders to be archived, the deletion rules, the filters, the timeout value in seconds and the maximum number of archiving jobs to be executed simultaneously. The timeout value only has to be adjusted if needed (e.g. when using a very slow server).
- Click on *Next*.
- Select the users whose mailboxes are to be archived.

The following options are available:

- **All users with configured email address**
Choose this option to archive the mailboxes of all users who are set up, along with their email addresses, in MailStore's user management.
- **All users except the following**
Choose this option to exclude individual users (and thereby their IMAP mailboxes) from the archiving process, using the list of users below.
- **Only the following users**
Choose this option to include individual users (and thereby their IMAP mailboxes) in the archiving process, using the list of users below. Only the mailboxes of those users explicitly specified will be archived.
- **Synchronize with Directory Services before archiving**
If selected, the MailStore user list will be synchronized with the configured directory service before any archiving process is executed. This has the advantage that, for example, new employees will be created as MailStore users before archiving, so once the archiving process is executed, their IMAP mailbox is archived automatically as well. This option is especially recommended when the archiving process is to be executed automatically.
- Click on *Next*.
- In the last step, a *name for the archiving profile* can be specified. After clicking *Finish*, the archiving profile will be listed under *Saved Profiles* and can be run immediately or automatically, if desired.

Multiple IMAP Mailboxes (CSV File)

Archiving multiple IMAP mailboxes based on a CSV file is described below. Use this procedure if your IMAP server does not support any of the authentication methods described under *Multiple IMAP Mailboxes (Master Password)*. This feature is not available in the SPE.

Preparation: Creating a CSV File

In order to set up batch archiving of multiple IMAP mailboxes, first, a CSV file needs to be created. For this, a Microsoft Excel spreadsheet or Notepad can be used, for example:

	A	B	C	D
1	IMAP user name	IMAP password	E-mail address (optional)	MailStore user name (optional)
2	a.dole@domain.com	top!secret2	a.dole@domain.com	a.dole
3	k.park@domain.com	!secret4top	k.park@domain.com	k.park
4	l.paulson@domain.com	pot1tresec\$	l.paulson@domain.com	l.paulson
5				

 IMAP2MailStore.csv - Notepad

File Edit Format View Help

```
IMAP user name;IMAP password;Email address (optional);MailStore user name (optional)
alexis.page;top!s3creT;alexis.page@example.com;alexis.page
bill.burke;"quoted_with:semicolon";bill.burke@example.com;bill.burke
frank.clark;'quoted,with;many|separators';frank.clark@example.com;frank.clark
henry.gills;"quoted_with'single_quotes";henry.gills@example.com;henry.gills
lois.randall;"quoted_with""quotes";lois.randall@example.com;lois.randall
```

Set up the columns as shown above. Please keep in mind that the headings (e.g. "IMAP user name") must be in place but their notation may differ. The columns can be separated by semicolons (;), commas (,), vertical bars (|) or tabulator characters. Quoting fields with double (") or single quotes (') is supported. The quoting character may appear inside of quotes but then it must be entered twice as "" or ". The separating characters (;,| and tabulator) must only appear within quotes when used in a field. Beneath the headings, enter a row for each mailbox to be archived:

IMAP user name and IMAP password

These entries are mandatory for MailStore to be able to access the mailbox. Please note that these passwords are only used to archive the IMAP mailboxes and cannot be used by the users to access their MailStore archives. The admin has to set a user password manually.

Email address (optional)

If entered, MailStore will label the folder for the respective mailbox in the tree structure of the archive with the email address specified.

MailStore user name (optional)

If entered, MailStore will archive the respective mailbox for each MailStore user specified (store the emails in the appropriate user archive). If the user does not yet exist, a user will be created automatically. If this field is left blank, a new MailStore user is created automatically and labeled with the IMAP user name specified.

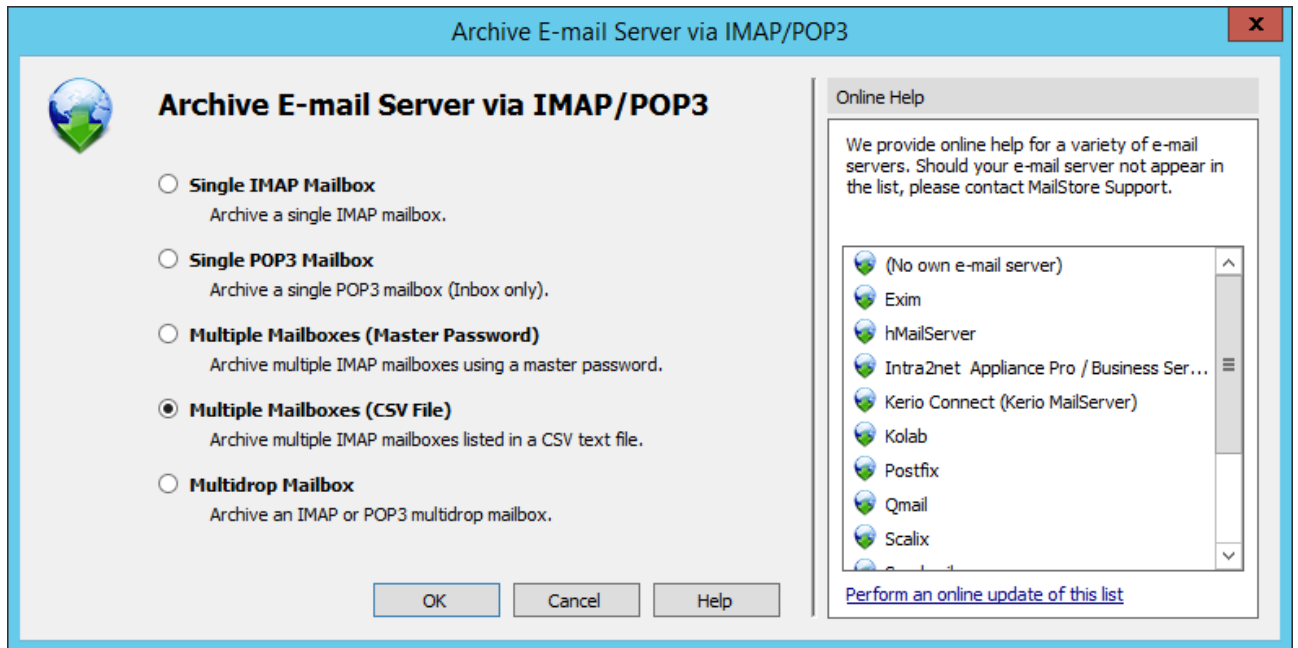
This way, any number of mailboxes of an email server may be entered. When finished, save the file in .csv format (if Microsoft Excel is used via the *Save As* function).

Setting Up the Archiving Process

Setting up archiving processes for IMAP or POP3 mailboxes is done using archiving profiles. General information about archiving profiles is available in chapter Working with Archiving Profiles.

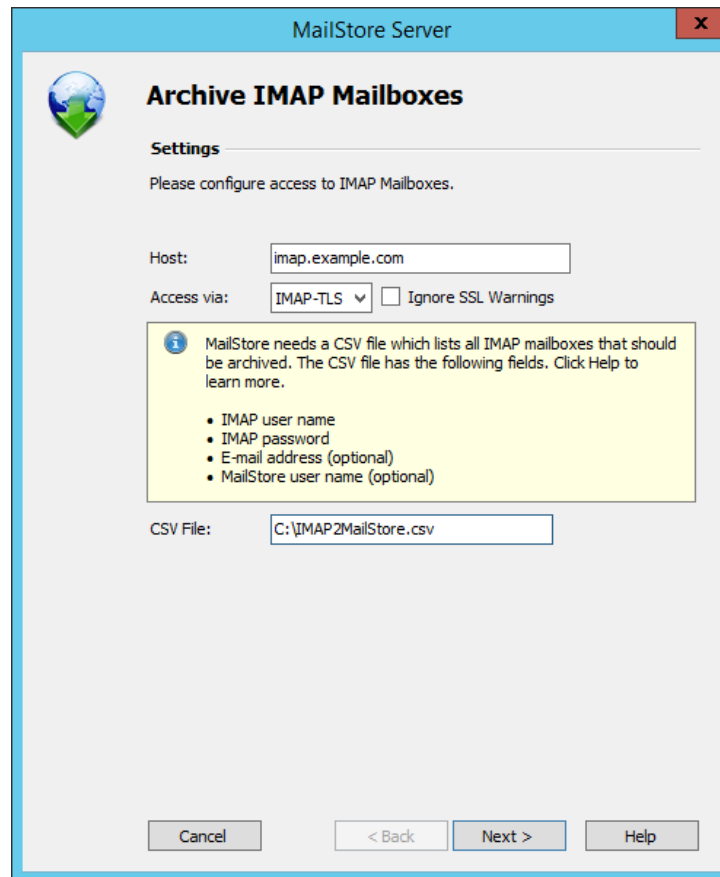
Please proceed as follows:

- Log on as MailStore administrator using MailStore Client.
- In MailStore, click on *Archive Email*.
- To create a new archiving profile, select *Other Server via IMAP/POP3* from the *Email Servers* list in *Create Profile* area of the application window.
- A wizard opens guiding you through the setup process.



- Select *Multiple Mailboxes (CSV File)* and click on *OK*.
- Fill out the fields *Host* and *Access via*, and under *CSV File* enter the path of the new CSV file (created as described above). This file contains the access information for the mailboxes to be archived.

For the IMAP-TLS and IMAP-SSL protocols only: You have the option to *Ignore SSL Security Warnings*. Generally, these warnings appear if an unofficial certificate is used on the server.



The image shows a Windows-style dialog box titled "MailStore Server" with a close button (X) in the top right corner. The main title is "Archive IMAP Mailboxes" with a globe icon. Below the title is a "Settings" section with the instruction "Please configure access to IMAP Mailboxes." The "Host:" field contains "imap.example.com". The "Access via:" dropdown is set to "IMAP-TLS" and there is an unchecked "Ignore SSL Warnings" checkbox. A yellow information box contains a message: "MailStore needs a CSV file which lists all IMAP mailboxes that should be archived. The CSV file has the following fields. Click Help to learn more." followed by a bulleted list: "• IMAP user name", "• IMAP password", "• E-mail address (optional)", and "• MailStore user name (optional)". The "CSV File:" field contains "C:\IMAP2MailStore.csv". At the bottom are four buttons: "Cancel", "< Back", "Next >", and "Help".

MailStore Server

Archive IMAP Mailboxes

Settings

Please configure access to IMAP Mailboxes.

Host:

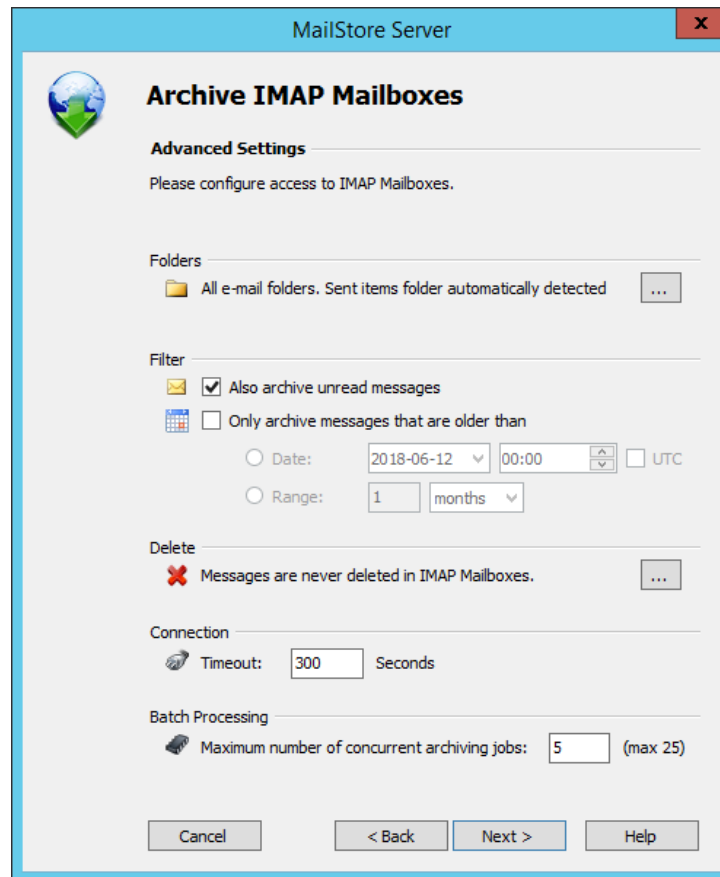
Access via: ☐ Ignore SSL Warnings

MailStore needs a CSV file which lists all IMAP mailboxes that should be archived. The CSV file has the following fields. Click Help to learn more.

- IMAP user name
- IMAP password
- E-mail address (optional)
- MailStore user name (optional)

CSV File:

- Click on *Next*.
- If needed, adjust the list of folders to be archived, the deletion rules, the filter, the timeout value in seconds and the maximum number of archiving jobs to be executed simultaneously. The timeout value only has to be adjusted if needed (e.g. when using a very slow server).



- Click on *Next*.
- At the last step, a name for the new archiving profile can be specified. After clicking on *Finish*, the archiving profile will be listed under *Saved Settings (Profiles)* and can be run immediately, if desired.

Starting the Archiving Process

Starting the Archiving Process Manually

On the start page of MailStore Client, click on *Archive Email* and from the list under *Saved Profiles*, select the appropriate archiving profile. Click on *Run*. After the archiving process has been executed, a protocol appears. It contains information about the volume of emails that have been archived as well as any errors that may have occurred.

This process can be repeated by the user any number of times. MailStore only archives those emails that are not yet stored in the corresponding user archive.

Automating the Archiving Process

In addition to being executed manually, archiving tasks can also be executed automatically. Additional information about this topic is available in chapter *Automating the Archiving Process*.

2.9 Archiving IMAP and POP3 Multidrop Mailboxes

In this chapter, learn how to archive multidrop mailboxes. Multidrop mailboxes, also called catchall mailboxes, contain emails for more than one person. Generally, all emails for a certain domain are collected therein to be retrieved by an internal email server; the server then distributes the emails among the appropriate user mailboxes. Multidrop mailboxes are also used when sending a copy of all emails to a single mailbox on the email server; MailStore extracts the sender and recipient information from the email headers to assign them to the appropriate users. By using this type of mailboxes it is possible to archive all incoming and outgoing emails.

Important: This article describes the general procedure independent from the e-mail server used. Please find e-mail server specific information in our Implementation Guides.

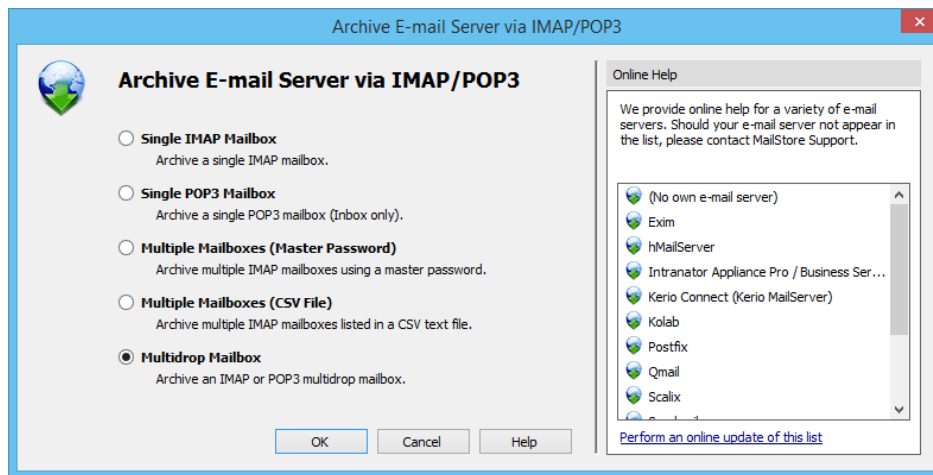
Setting up the Archiving Process

By following the procedure described here, an IMAP or POP3 multidrop mailbox can be archived. The archiving process can be executed manually or automatically.

Setting up archiving processes for multidrop mailboxes is done using archiving profiles. General information about archiving profiles is available in chapter Working with Archiving Profiles.

Please proceed as follows:

- Log on as MailStore administrator using MailStore Client.
- In MailStore, click on *Archive Email*.
- To create a new archiving profile, select *Other Server via IMAP/POP3* from the *Email Server* list in the *Create Profile* area of the application window.
- A wizard opens guiding you through the setup process.

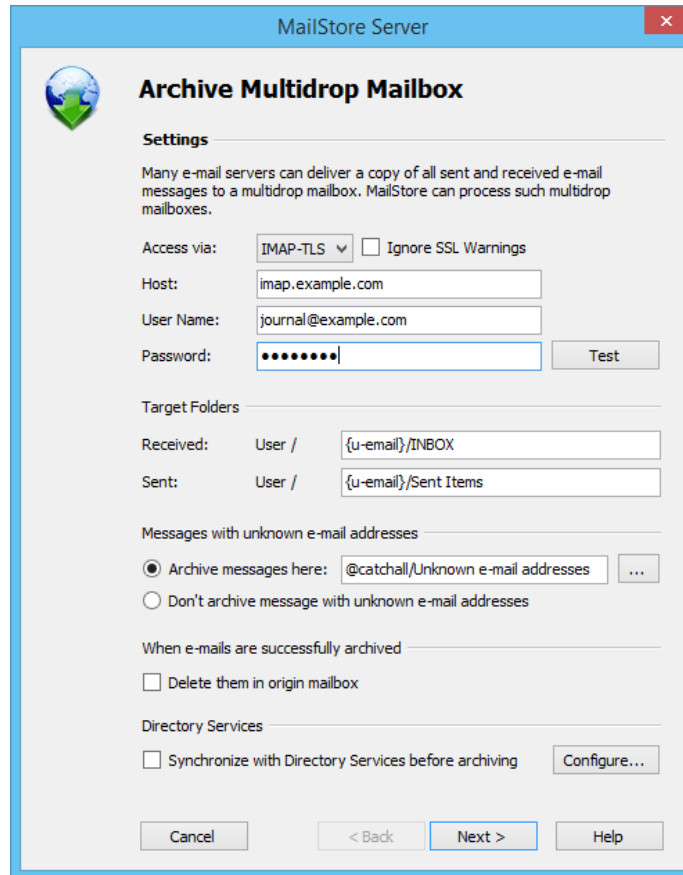


- Select *Multidrop Mailbox* and click *OK*.

Please note: To be able to archive a multidrop mailbox, MailStore Server users along with their email addresses must exist in the MailStore Server user management. If this is not the case, MailStore Server will offer to set up and run the directory synchronization at this point. Once completed, the wizard will resume. Alternatively, you can cancel the wizard and create users manually as described the in chapter User Management.

- Fill out the fields *Access via*, *Host*, *Username* and *Password*. Click on *Test* to verify the data entered.

For the TLS and SSL protocols only: You have the option to *ignore SSL warnings*. Generally, these warnings appear if an unofficial certificate is used on the server.



The image shows the 'MailStore Server' window with the 'Archive Multidrop Mailbox' settings. The window has a blue title bar and a red close button. Inside, there's a globe icon and the title 'Archive Multidrop Mailbox'. Below this is a 'Settings' section with a description: 'Many e-mail servers can deliver a copy of all sent and received e-mail messages to a multidrop mailbox. MailStore can process such multidrop mailboxes.' The settings are organized into sections: 'Access via:' with a dropdown set to 'IMAP-TLS' and an 'Ignore SSL Warnings' checkbox; 'Host:' with a text field 'imap.example.com'; 'User Name:' with a text field 'journal@example.com'; 'Password:' with a masked field '.....' and a 'Test' button. The 'Target Folders' section has 'Received:' and 'Sent:' rows, each with a 'User /' label and a text field containing '{u-email}/INBOX' and '{u-email}/Sent Items' respectively. The 'Messages with unknown e-mail addresses' section has two radio buttons: 'Archive messages here:' (selected) and 'Don't archive message with unknown e-mail addresses'. The 'Archive messages here:' option has a text field '@catchall/Unknown e-mail addresses' and an ellipsis button. The 'When e-mails are successfully archived' section has a checkbox 'Delete them in origin mailbox'. The 'Directory Services' section has a checkbox 'Synchronize with Directory Services before archiving' and a 'Configure...' button. At the bottom are 'Cancel', '< Back', 'Next >', and 'Help' buttons.

- Adjust any further settings such as how to handle emails with unknown addresses or asking MailStore to delete emails after they have been archived. The latter option is especially sensible when dealing with mailboxes that are exclusively used for archiving.

Notice: If you are additionally archiving messages from the users mailboxes, you have to set the target folder names here to the folder names that match the names that were created by the user mailbox archiving profiles. Otherwise, additional or similar folders could be created in the users' archives. The folder names are case-sensitive.

- If the option *Synchronize with Directory Services before archiving* is enabled, the MailStore user list will be synchronized with configured directory service before the archiving process actually runs. This has the advantage that, for example, new employees will be created as MailStore users before archiving which enables MailStore to sort their emails into the correct archives.
- Click on *Next*.
- The timeout value only has to be adjusted on a case-by-case basis (e.g. with very slow servers).
- Click on *Next*.
- At the last step, select a name for the new archiving profile. After clicking on *Finish*, the archiving profile will be listed under *Saved Profiles* and can be run immediately or automatically, if desired.

Starting the Archiving Process

Starting the Archiving Process Manually

On the start page of MailStore Client, click on *Archive Email* and from the list under *Saved Profiles*, select the appropriate archiving profile. Click on *Run*. After the archiving process has been executed, a protocol appears. It contains information about the volume of emails that have been archived as well as any errors that may have occurred.

This process can be repeated by the user any number of times. MailStore only archives those emails that are not yet stored in the corresponding user archive.

Automating the Archiving Process

In addition to being executed manually, archiving tasks can also be executed automatically. Additional information about this topic is available in chapter Automating the Archiving Process.

3

Chapter

Accessing the Archive

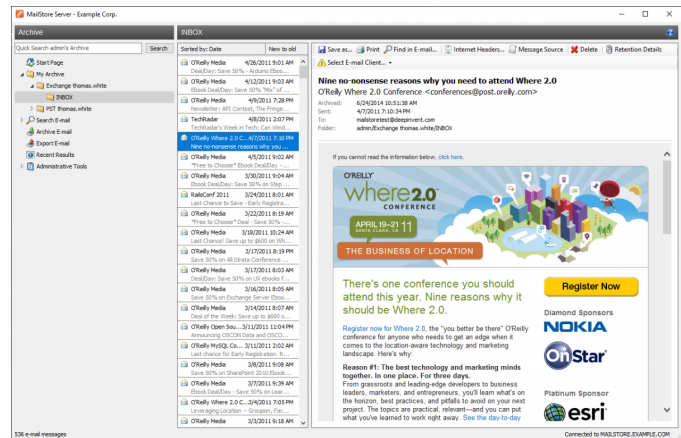
3.1 Accessing the Archive

MailStore provides several ways to access archived emails:

Accessing the Archive with the MailStore Client Software

MailStore Client is a Windows application that can be installed on any number of user computers (depending on the license purchased). Of all the options for accessing the archive, MailStore Client provides the largest range of functions: Not only can users browse and view their emails but, depending on the privileges assigned to them, set up and execute archiving and exporting tasks.

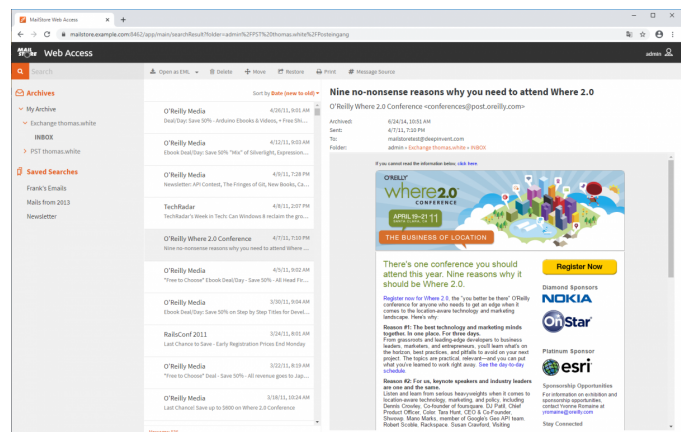
MailStore Client Manual



Accessing the Archive with MailStore Web Access

The responsive MailStore Web Access provides access to the archive using an internet browser. This has the advantage that no additional software needs to be installed on the user machines. In addition to browsing and viewing emails, web access also offers access through the folder structure and functions for restoring emails from the archive.

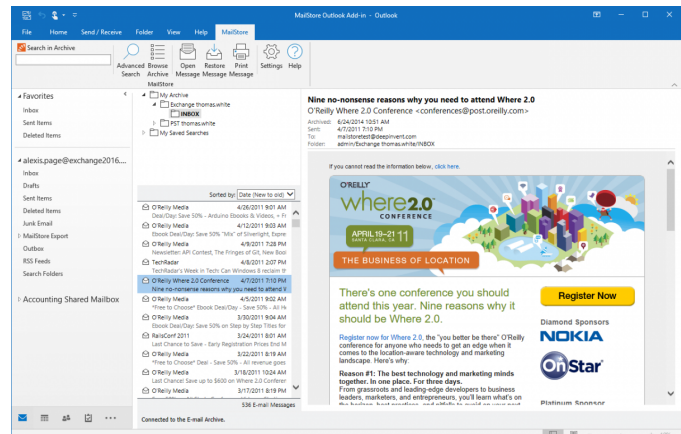
MailStore Web Access Manual



Accessing the Archive with the Microsoft Outlook Integration

With a MailStore add-in, users can access the archive directly from Microsoft Outlook.

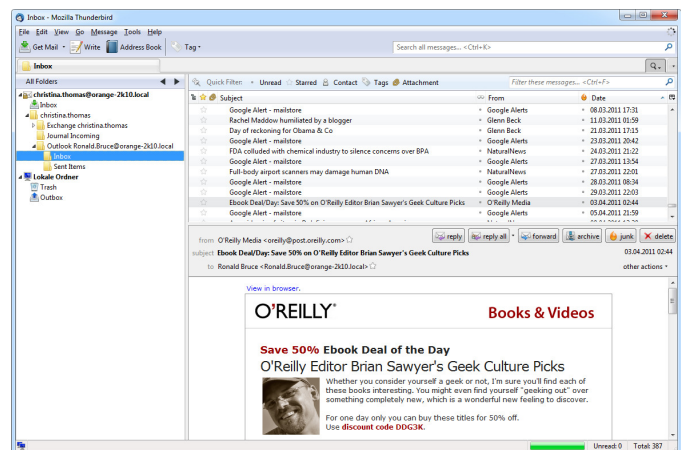
MailStore Outlook Add-in Manual



Access Using Other Email Clients

MailStore Server provides an integrated IMAP server, that offers you read-only access to the archive for any IMAP capable email client. Especially for alternative email clients (Mozilla Thunderbird) or operating systems (e.g. MacOS or Linux), as well as for mobile platforms such as Android, iPhone or Symbian, this is a very convenient way of accessing the archive.

MailStore Integrated IMAP Server Manual



3.2 Accessing the Archive with the MailStore Client software

Installation & Update

The MailStore Client setup file that matches your MailStore Server version is stored on the MailStore Server machine. Follow the *Install MailStore Client on other Computers* link on your desktop and copy the corresponding setup file to the client computer.

It is a regular Windows setup program, that can be executed on the appropriate client computer by double-clicking on the setup file. Just follow on-screen instructions.

Notice: Alternatively to installing the MailStore Client application manually, you can also deploy it to the client computer through the Active Directories Group Policy feature. More information on that can be found in the article MailStore Client Deployment

If an update is installed on the MailStore Server computer, MailStore Client updates itself automatically on first login to stay compatible with MailStore Server. Therefore a re-installation of MailStore Client is usually not required.

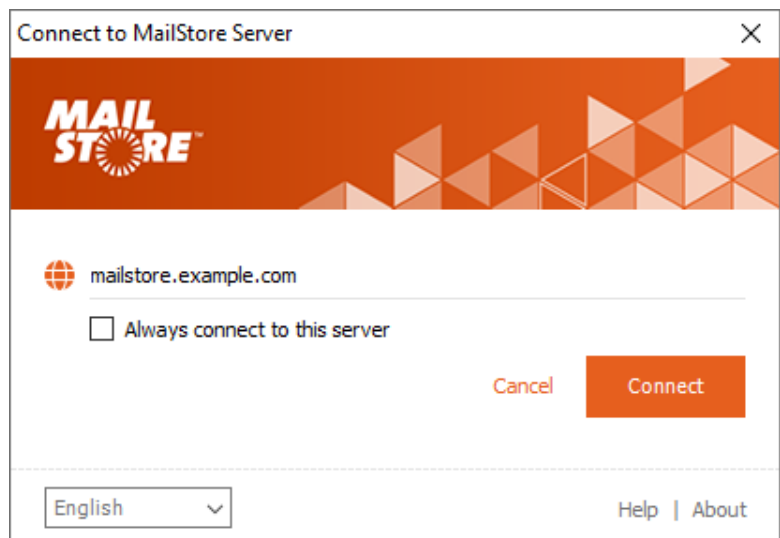
Starting and Login

Start MailStore Client by using the appropriate link on the desktop.

The window *Connect to MailStore Server* appears.

- Enter the DNS host name of the computer on which MailStore Server is installed into *Server Name*. Be aware, that the pre-filled entry *localhost* only works if the MailStore Client is run from the same machine where MailStore Server is installed.
- Click *Connect* to connect to MailStore Server.

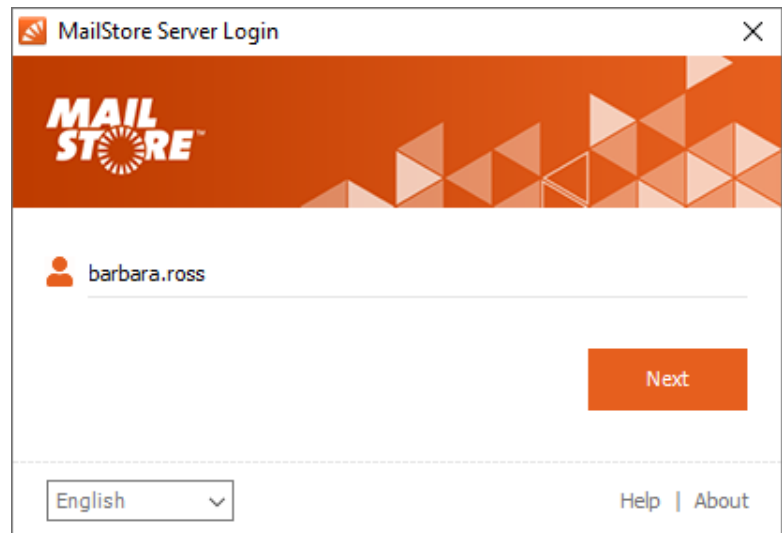
Hint: Did you activate the option *Always connect to this server* and you want to change the destination server later? Hold the *Shift* key pressed while opening MailStore Client.



After establishing the connection to MailStore Server, MailStore Client checks if newer a version of its own program files is available for downloading and, if necessary, updates these automatically.

Once the connection was established successfully, the user name dialog appears.

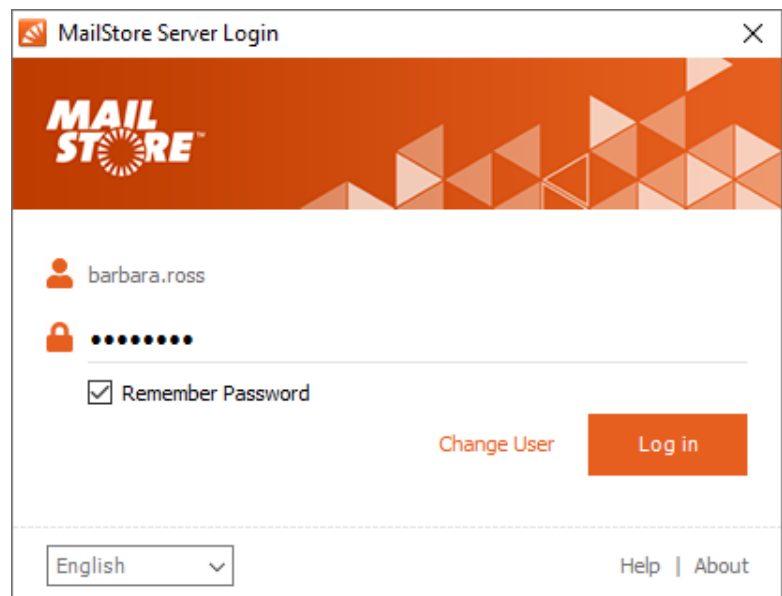
- Enter the user name of a MailStore user into the *User Name* field and click on *Next*.



The screenshot shows the 'MailStore Server Login' dialog box. It has a title bar with a close button (X). The header area is orange with the 'MAIL STORE' logo. Below the header, there is a user icon and the text 'barbara.ross' in a text field. To the right of this field is an orange button labeled 'Next'. At the bottom, there is a language dropdown menu set to 'English' and links for 'Help' and 'About'.

MailStore Server now determines how the user is to be authenticated.

- If MailStore Server is able to verify the user's credentials itself, the password dialog as shown on the right appears. Enter the password into the *Password* field and click on *Log in*.
- If the user has been synchronized from Microsoft 365 or Google G Suite, the default web browser will be opened to allow authentication through Microsoft's or Google's authentication service.



The screenshot shows the 'MailStore Server Login' dialog box in its second state. The user field still shows 'barbara.ross'. Below it is a password field with a lock icon and a series of dots. To the right of the password field is a checkbox labeled 'Remember Password' which is checked. Further right is a link 'Change User' and an orange button labeled 'Log in'. The language dropdown is still set to 'English' and the 'Help' and 'About' links are at the bottom right.

The MailStore Folder Structure

For each user, MailStore creates a folder on the highest level of the folder structure which corresponds to the archive of the respective user. It contains all emails that were archived for this user and is labeled *My Archive*.

If the user has access to the archives of other MailStore users (as MailStore administrator, for example), their folders are listed as *Archive of <User Name>* under the top level folder *Other Archives*

Below these main folders, the individual email sources (e.g. Microsoft Outlook or Exchange mailboxes) and their folder structures (e.g. *Inbox*) are listed.

Notice: For MailStore administrators, accessing the archives of other users via the folder structure is blocked by default; this setting can be changed in the compliance settings. Additionally, MailStore administrators can manage archives via the Archives page.

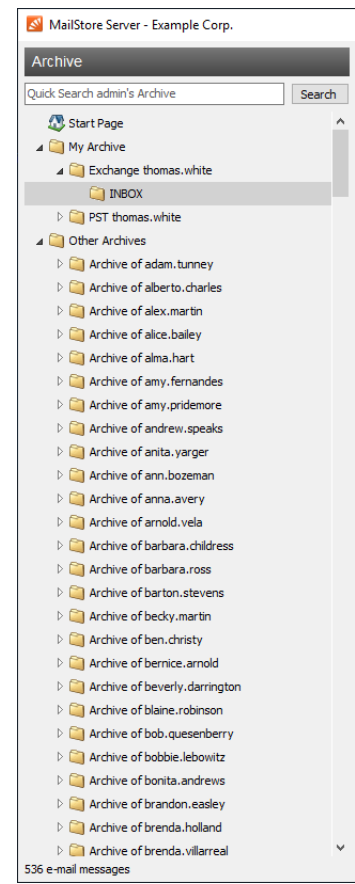
Deleting Folders

Folders and the emails contained therein can only be deleted after the appropriate user privileges have been assigned explicitly by the administrator. If the folder to be deleted contains any subfolders, they will be deleted as well.

Moving, Renaming, and Creating Folders Manually

Within MailStore, folders can be moved, renamed or created. Regular users can only do this within their own user archive, while MailStore administrators can move and rename folders beyond the boundaries of user archives. During the archiving process, MailStore adopts the folder structure and the folder names of the source (e.g. Microsoft Outlook).

MailStore sorts all archived email into MailStore's own folder structure. Below the main folders, the individual email sources (e.g. Microsoft Outlook or Exchange mailboxes) and their folder structures (e.g. *Inbox*) are listed.



Viewing the Emails in a Folder

To view the emails in a folder, simply click on the folder name. The emails will be listed below the folder structure.

Click on the text *Sorted by: <value>* to change the order in which emails are displayed. Emails can be sorted according to:

- Date
- From/To (sender/recipient of the email)
- Subject

Click on the Field to the right of *Sorted by* ("New to Old" in the screenshot) to reverse the order in which emails are arranged. By default, the latest email is displayed first.

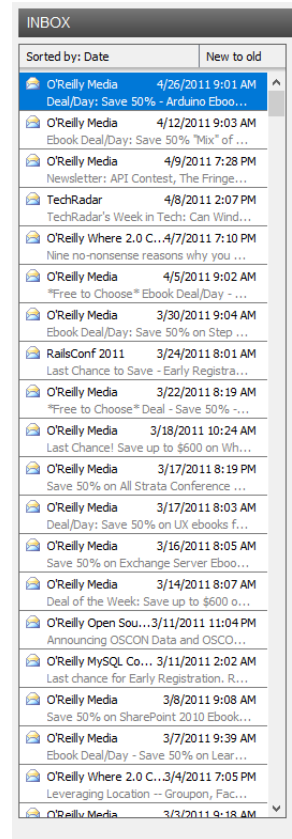
Refreshing the View

To refresh the list of folders, click on a folder and press F5 on your keyboard.

Click on the folder again to refresh the list of emails.

Starting an Advanced Search in a Folder

To start an advanced search in a folder, right click on the folder and select *Search here....* The advanced search is shown and the folder is preselected.



Quick Search

With quick search you can browse all emails located in the archives you have access to. This feature is especially suitable for simple queries; alternatively, the advanced search can be used.

Using Quick Search

The input field is located in the upper left part of the MailStore Client. Simply enter one or more keywords and press *ENTER*. The search results are displayed. Keywords which appear in the header or the subject line are highlighted.

Searching for Word Fragments

To display all emails containing a word with a particular fragment, use the wildcard character (*). For example:

```
auto*
```

will return *auto*, *automatic*, *automobile* etc.

```
*example.com
```

will return all email addresses and domains of *example.com*.

```
firstname.lastname*
```

will return all email addresses of *firstname.lastname*.

Searching for Words with unknown letters

To view all emails containing a word where you do not know how to spell it correctly, you can use the question mark (?). For example

```
Me?er
```

would locate Meier and Meyer, but not Maier.

The question mark (?) cannot be used at the beginning of a word or at the end of a word, use the wildcard character (*) instead.

Searching for Phrases

To search for words appearing consecutively and in a specific order, use quotation marks (""). For example:

```
"Microsoft Windows"
```

will return the text *Microsoft Windows* but not *Microsoft Works* or *Windows 95*.

Narrowing by Fields

A search for keywords or phrases can be limited to specific fields. For example:

```
subject:News           only in Subject
from:john@mailstore.com only in From
to:michael@mailstore.com only in To
cc:lisa@mailstore.com  only in Cc
bcc:customers@mailstore.com only in Bcc
bcontent:billing        only in Body of message
acontent:billing         only in Attachments of message
```

Excluding Words

To narrow a search, you may want to specify words which must not be present in the emails. To exclude words from the search results, prepend the word with the minus character (-). For example:

```
ZDNet -download-tip
```

returns all emails from ZDNet which do not contain *download-tip*.

Combining Search Options

Any of the search options described above can be combined. For example:

```
ZDNET -"Daily Update"
```

returns all emails from ZDNet which do not contain the consecutive words *Daily Update*.

```
from:ZDNET bcontent:MailStore
```

returns all emails from ZDNET which have *MailStore* somewhere in their message body.

```
from:billing@example.com acontent:bill
```

returns all emails from *billing@example.com* which have *bill* in any attachment.

```
to:recruiting@example.com -sales
```

returns all emails to *recruiting@example.com* which do not have sales in any part of the email.

```
from:billing@example.com to:myaddress@company.tld acontent:bill -subject:admonition
```

returns all message from *billing@example.com* to *myaddress@company.tld* which have *bill* in any attachment but do not have *admonition* in the subject.

About Special Characters

Words inside indexed emails or attachments which are a combination of alphanumeric (letters, digits) and non-alphanumeric characters (white space, line break, delimiter or other control characters), may be returned in search results when searching for the alphanumeric part only.

For instance, when searching for `firstname`, `firstname.lastname` and `lastname`, e-mails containing the word `firstname.lastname` will be returned.

Commonly occurring characters are:

- Period (.)
- Comma (,)
- Colon (;)
- Hyphen (-)
- Underscore (_)
- AT-Sign (@)
- Slash & Backslash (/,\)
- Null character (NUL)

Advanced Search

With MailStore's integrated advanced search, complex queries can be executed which may not only refer to the email content but also parameters such as the date or the email size.

Using the Advanced Search

In the MailStore Client, click on *Search Email* and enter the search parameters. The criteria are *AND*-combined, i.e. the search returns only those emails that satisfy all criteria. Click on *Search* to start the search.

MailStore Server - Example Corp.

Archive

Quick Search admin's Archive Search

Start Page

My Archive

Search E-mail

Archive E-mail

Export E-mail

Recent Results

Administrative Tools

Search E-mail

You can also use wild cards to search for parts of words. Example: Auto* delivers Automatic, Auto repair and Automobile. For more search tips, please refer to the Online Help.

Search

Search for:

☒ Subject ☒ Sender/Recipient

☒ Message Body ☒ Attachment File Names

☒ Attachment Contents

General

Folder: admin ...

☒ Include subfolders

From:

To/Cc/Bcc:

Date: Any Date

Archiving Date: Any Date

Advanced

Archive Store: (All archive stores)

Messages: ☒ with attachments ☒ without attachments

Size: Any Size and KB

Priority: ☒ All ☐ Low ☐ Medium ☐ High

New Query Create Search Folder... Search

Connected to MAILSTORE.EXAMPLE.COM

Search Criteria under "Search"

Enter a keyword or phrase into the text field and specify where MailStore is to conduct the search. The following options are available:

- **Subject** - The subject line of the email is searched.
- **Sender/Recipient** - The fields "From", "To", "Cc", and "Bcc" are searched.
- **Message body** - The text-only or HTML sections of the email are searched (depending on availability).
- **Attachments File Names** - The file names of the email attachments are searched.
- **Attachment Contents** - The contents of the email attachments are searched. If and to what extent attachments can be searched depends on the indexing options specified (under *Administrative Tools*).

All options described in section Quick Search, such as phrases and wildcards, are available in the textfield *Search for* as well.

Search Criteria under "General"

Under *General*, the following options are available:

- **Folder** - The folder to be searched by MailStore can be selected here. By default, all folders readable by the current user are selected. By clicking the button next to the text field, folders can also be selected using the folder structure.
- **Include subfolder** - If selected, MailStore not only searches the selected folder (e.g. *Inbox*), but all subfolders created therein (e.g. *Inbox / Projects 2008 / Profit Optimization*) as well.
- **From** - Any keywords or email addresses entered here are searched for within the email's sender field only.
- **To/Cc/Bcc** - Any keywords or email addresses entered here are searched for within the email's recipient fields only.
- **Date** - The time frame the search is to cover can be selected here. Either a predefined range, such as *Yesterday* or *This year*, can be selected or, by choosing *Custom*, a specific period can be specified manually. In this case, the start and end dates will be included.
- **Archiving Date** - The archiving time frame the search is to cover can be selected here. Either a predefined range, such as *Yesterday* or *This year*, can be selected or, by choosing *Custom*, a specific period can be specified manually. In this case, the start and end dates will be included.

All options described in section Quick Search, such as phrases and wildcards, are available in the fields *From* and *To/Cc/Bcc* as well.

Search Criteria under "Advanced"

Under *Advanced*, the following options are available:

- **File Group** - If the archive consists of more than one file group, the search can be limited to just one of the. By default all file groups are searched.
- **Messages with/without attachments** - By default, all messages are searched, regardless of whether or not they have any file attachments. Clear one of the check boxes to remove certain emails, such as those without attachments, from the results.
Important: These searches can be imprecise at times because items like background pictures could be regarded as attachments.
- **Size** - By default, all messages are searched regardless of their size. Use the appropriate fields provided to limit the search according to the size of the emails, e.g. at least 5 MB or between 400 and 600 KB.
- **Priority** - Emails are searched according to the priority level of the email as assigned by the sender. When choosing *Low*, all emails with a priority level lower than *Normal* are returned, when choosing *High*, all emails with a priority level higher than *Normal* are returned. Emails not containing any information regarding priority are assumed to have a priority level of *Normal*.

Starting the Search

Click on *Search* to start the search. Results are displayed in a list in the left section of the main window.

Refining the Search Results

Click on *Search Email* again to further narrow the results after a search has been executed. Specify any additional search criteria and click on *Search* once more.

Starting a New Search

Click on *New Query* to start a new search. All search criteria will be reset to their default values (i.e. an unrestricted search of the folders readable by the current user).

Saving Search Criteria for Reuse

Search criteria that are used repeatedly (such as "all receipts from last month") can be saved and reused at a later time: Click on *Create Search Folder...* and provide a meaningful name for the search.

The new search folder will be available under the *Search Email* folder on the left side of the application window.

Through the context menu you can view the search criteria of a search folder (*New Search Query*) and rename or delete it.

About Special Characters

Words inside indexed emails or attachments which are a combination of alphanumeric (letters, digits) and non-alphanumeric characters (white space, line break, delimiter or other control characters), may be returned in search results when searching for the alphanumeric part only.

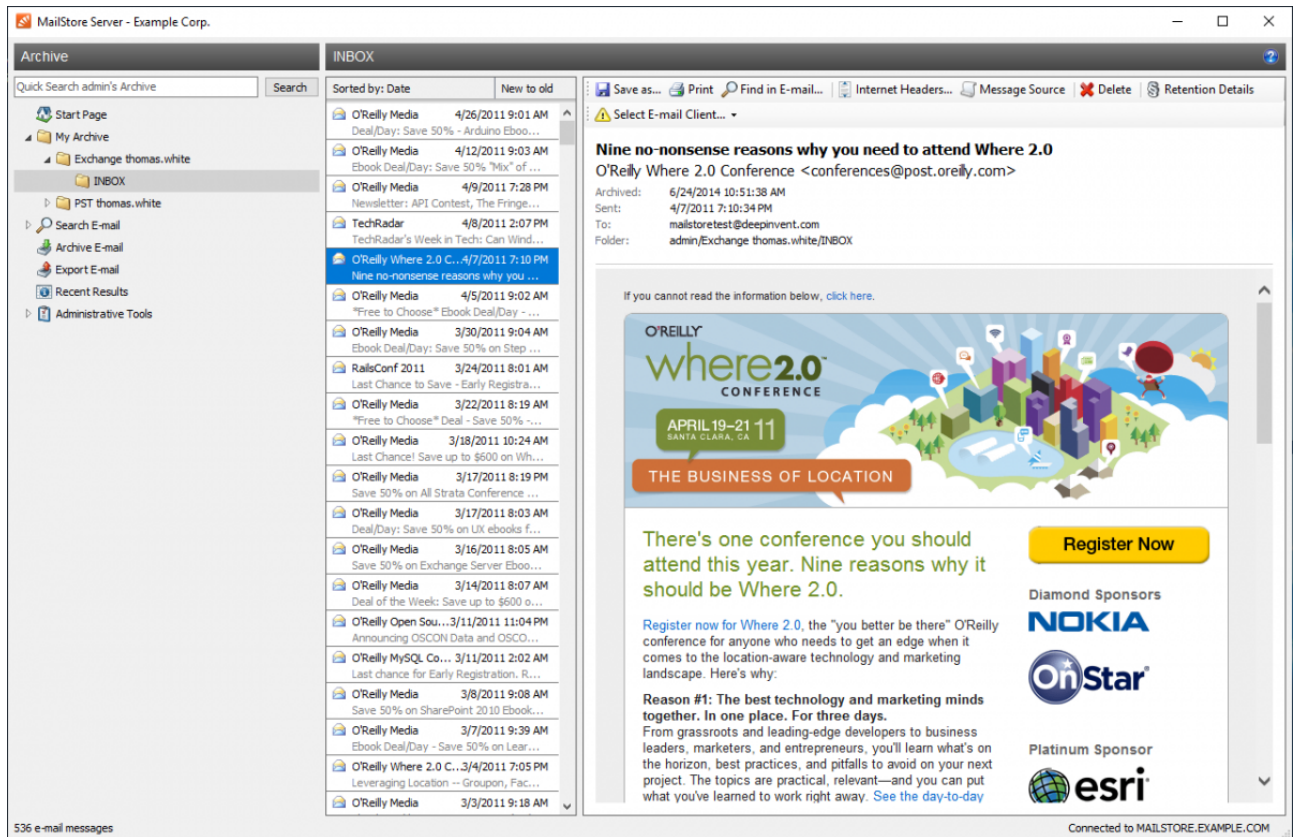
For instance, when searching for `firstname`, `firstname.lastname` and `lastname`, e-mails containing the word `firstname.lastname` will be returned.

Commonly occurring characters are:

- Period (.)
- Comma (,)
- Colon (;)
- Hyphen (-)
- Underscore (_)
- AT-Sign (@)
- Slash & Backslash (/,\)
- Null character (NUL)

Email Preview

MailStore offers an integrated email preview displaying emails the same way as standard email applications. To activate the preview, simply click on an email or use the arrow keys to highlight the desired email in the list.



The menu bar above the email preview shows all functions available for the email currently displayed.

Save as...

Click on *Save as...* to save the current email in any Windows folder. Emails can be saved in the following file formats:

- **RFC822 EML** - These files can be opened independently from MailStore by double-clicking and can be moved to applications such as Mozilla Thunderbird by drag & drop.
- **Outlook MSG** - These files can be opened with or imported to all versions of Microsoft Outlook directly.

Print

Using the print function the email currently displayed will be printed including header information such as Date and Subject.

Find in Email

Click on *Find in Email...* to search the message body of the current email.

Internet Headers...

Click on *Internet Headers* to view the header of the current email, including all MIME parts.

Message Source

Click on *Message Source* to show the full source of the current message including all MIME-parts.

Delete (only with the appropriate privilege)

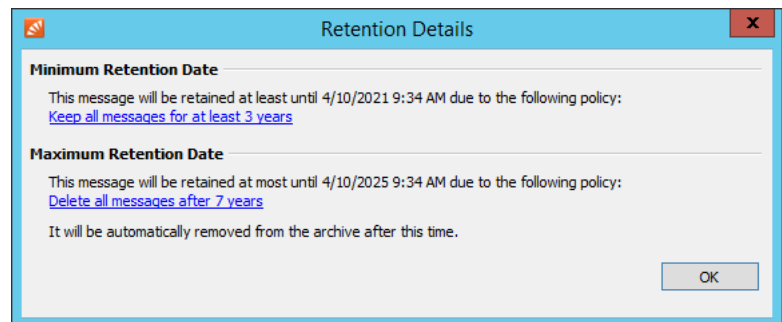
Click on *Delete* to delete the current email from the archive. Please keep in mind that, in order to use this function, the appropriate privilege has to be in place.

Retention Details (Administrators only)

This button is only available if retention policies are configured and enabled.

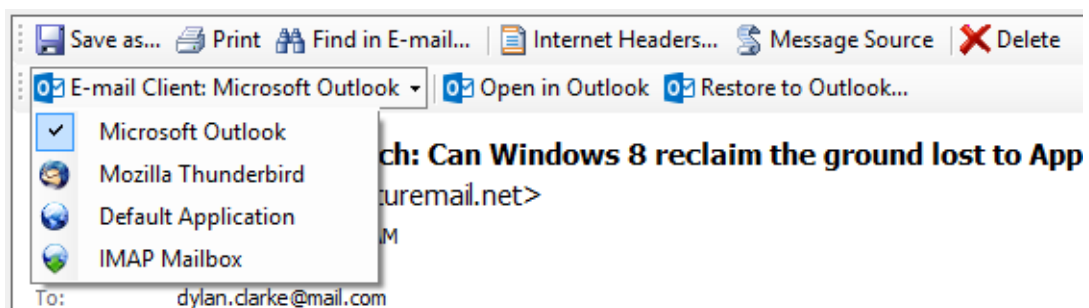
Click on *Retention Details* to view the minimum and maximum retention date and the corresponding retention policies if applicable.

By clicking on a retention policy you can view its configuration directly.



Reopening Emails in an Email Application

Emails previewed in MailStore can be reopened in any email application to reply to or forward them. Select an email client you want to open email messages in first, by clicking on *Email Client*:. MailStore only lists email clients that are supported and that are installed on the computer from which MailStore Client is executed.



Depending on the selected email client, additional button may be visible:

- **Open in <email client>** - Open the current message to the selected email client. Please note, that emails are simply opened, not stored, in the application. To restore emails to an email application, please use MailStore's Export Feature.
- **Restore to <email client>...** - Restore the current message to the selected email client. If further settings are required an additional button *Settings..* will be shown.

3.3 Accessing the Archive with MailStore Web Access

The responsive Web Access makes the archive accessible through any current internet browser on any device. This way, important functions such as browsing and viewing archived messages can be made available without having to install additional software.

Requirements for Using Web Access

- A list of supported internet browsers can be found in the System Requirements.
- In order to use the *Restore to Mailbox* feature an administrator needs to configure the SMTP settings under *Administrative Tools > Miscellaneous > SMTP Settings* first.

Accessing Web Access

Unless configured differently, users can access MailStore Web Access through this URL:

```
https://<fqdn>:8462
```

Please replace <fqdn> with the fully qualified domain name of the MailStore Server computer, e.g. `mailstore.example.com`.

To log in to the Web Access, fill out the *User Name* field and click *Next*.

MailStore Server now determines how the user is to be authenticated.

- If MailStore Server is able to verify the user's credentials itself, the password dialog appears. Enter the password into the *Password* field and click on *Log in*.
- If the user has been synchronized from Microsoft 365 or Google G Suite, the web browser will be redirected to allow authentication through Microsoft's or Google's authentication service.

Search Archive

Searching for Word Fragments

To display all emails containing a word with a particular fragment, use the wildcard character (*). For example:

```
auto*
```

will return *auto*, *automatic*, *automobile* etc.

```
*example.com
```

will return all email addresses and domains of *example.com*.

```
firstname.lastname*
```

will return all email addresses of *firstname.lastname*.

Searching for Words with unknown letters

To view all emails containing a word where you do not know how to spell it correctly, you can use the question mark (?). For example

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would locate Meier and Meyer, but not Maier.

The question mark (?) cannot be used at the beginning of a word or at the end of a word, use the wildcard character (*) instead.

Searching for Phrases

To search for words appearing consecutively and in a specific order, use quotation marks (""). For example:

```
"Microsoft Windows"
```

will return the text *Microsoft Windows* but not *Microsoft Works* or *Windows 95*.

Narrowing by Fields

A search for keywords or phrases can be limited to specific fields. For example:

subject:News	only in <i>Subject</i>
from:john@example.com	only in <i>From</i>
to:michael@example.com	only in <i>To</i>
cc:lisa@example.com	only in <i>Cc</i>
bcc:customers@example.com	only in <i>Bcc</i>
bcontent:billing	only in <i>Body of message</i>
acontent:billing	only in <i>Attachments of message</i>

Excluding Words

To narrow a search, you may want to specify words which must not be present in the emails. To exclude words from the search results, prepend the word with the minus character (-). For example:

```
ZDNet -download-tip
```

returns all emails from ZDNet which do not contain *download-tip*.

Combining Search Options

Any of the search options described above can be combined. For example:

```
ZDNET -"Daily Update"
```

returns all emails from ZDNet which do not contain the consecutive words *Daily Update*.

```
from:ZDNET bcontent:ACME
```

returns all emails from ZDNET which have *ACME* somewhere in their message body.

```
from:billing@example.com acontent:bill
```

returns all emails from *billing@example.com* which have *bill* in any attachment.

```
to:recruiting@example.com -sales
```

returns all emails to *recruiting@example.com* which do not have sales in any part of the email.

```
from:billing@example.com to:myaddress@company.tld acontent:bill -subject:admonition
```

returns all message from *billing@example.com* to *myaddress@company.tld* which have *bill* in any attachment but do not have *admonition* in the subject.

Search Criteria

The following options are available:

Scope

- **Subject** - The subject line of the email is searched.
- **Sender/Recipient** - The fields "From", "To", "Cc", and "Bcc" are searched.
- **Message body** - The text-only or HTML sections of the email are searched (depending on availability).
- **Attachments File Names** - The file names of the email attachments are searched.
- **Attachment Contents** - The contents of the email attachments are searched. If and to what extent attachments can be searched depends on the indexing options specified (under *Administrative Tools*).

Folder

The folder to be searched can be selected here. By default, all folders readable by the current user are selected.

- **Include subfolder** - If selected, not only the selected folder (e.g. *Inbox*) is searched, but also all subfolders created therein (e.g. *Inbox / Projects 2008 / Profit Optimization*).

From

Any keywords or email addresses entered here are searched for within the email's sender field only.

Phrases and wildcard searches are supported in this field.

To/Cc/Bcc

Any keywords or email addresses entered here are searched for within the email's recipient fields only.

Phrases and wildcard searches are supported in this field.

Date

The time frame the search is to cover can be selected here. Either a predefined range, such as *Yesterday* or *This year*, can be selected or, by choosing *Custom*, a specific period can be specified manually. In this case, the start and end dates will be included.

Size

By default, all messages are searched regardless of their size. Use the appropriate fields provided to limit the search according to the size of the emails, e.g. at least 5 MB or between 400 and 600 KB.

Attachments

By default, all messages are searched, regardless of whether or not they have any file attachments. Clear one of the check boxes to remove certain emails, such as those without attachments, from the results.

Important: These searches can be imprecise at times because items like background pictures could be regarded as attachments.

Priority

Emails are searched according to the priority level of the email as assigned by the sender. When choosing *Low*, all emails with a priority level lower than *Normal* are returned, when choosing *High*, all emails with a priority level higher than *Normal* are returned. Emails not containing any information regarding priority are assumed to have a priority level of *Normal*.

About Special Characters

Words inside indexed emails or attachments which are a combination of alphanumeric (letters, digits) and non-alphanumeric characters (white space, line break, delimiter or other control characters), may be returned in search results when searching for the alphanumeric part only.

For instance, when searching for `firstname`, `firstname.lastname` and `lastname`, e-mails containing the word `firstname.lastname` will be returned.

Commonly occurring characters are:

- Period (.)
- Comma (,)
- Colon (;)
- Hyphen (-)
- Underscore (_)
- AT-Sign (@)
- Slash & Backslash (/,\)
- Null character (NUL)

Browse Archive

The folder *My Archive* contains all emails that were archived from your mailboxes. If you have read-access to the archives of other users, their emails are located in the folders labeled *Archive of <user name>*.

To list the emails of a specific folder, simply click on the folder name.

Email Preview

The email preview displays a message with its original formatting. For security reasons, contents and images that are referenced externally will be downloaded and displayed only upon request.

Open Email in Email Application

The toolbar item *Open* provides access to the functions *Open as MSG* and *Open as EML*. This allows users to open the displayed message in an external email application such as Microsoft Outlook (MSG), Mozilla Thunderbird (EML) or other. These may be used to answer or forward archived emails.

Restore Email

The toolbar item *Restore* allows to send the displayed message to an arbitrary email address.

Please note: Before this function can be used preparations have to be done by an administrator. Please refer to SMTP Settings for more information.

Print Email

The toolbar item *Print* allows users to print the displayed message.

Show Internet Headers

The toolbar item *Internet Headers* shows the internet headers of the displayed message as well as all MIME parts.

User Menu

Settings

By default the Web Access uses the same regional settings as the user's web browser. The regional settings can also be specified manually in the Web Access' settings dialog.

Help

Open this online help website.

About

Displays legal information such as *Licensing Terms and Conditions*, *3rd Party Licenses*, and *Privacy Policy*.

Change Password

The user can change the MailStore password. If the password policy, which is enabled by default, is active, the password must meet the complexity rules. This item is only shown if the user has the *Change Password* privilege and is not authenticated against an external directory service.

Sign out

Signs the current user out of the Web Access.

3.4 Accessing the Archive with the Microsoft Outlook integration

MailStore users can access their archives using a convenient add-in for Microsoft Outlook. A list of supported Microsoft Outlook versions can be found under System Requirements.

Installation & Update

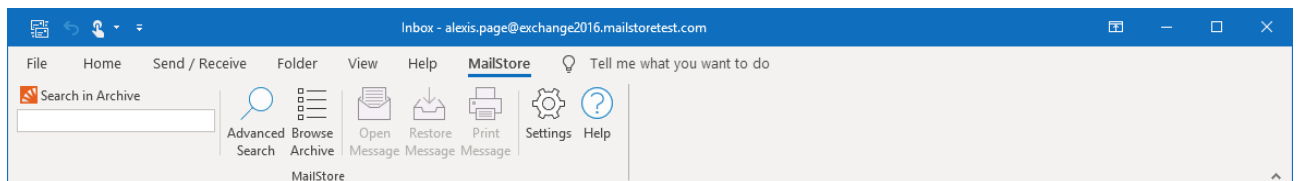
The MailStore Outlook Add-In setup file that matches your MailStore Server version is stored on the MailStore Server machine. Follow the *Install MailStore Client on other Computers* link on your desktop and copy the corresponding setup file to the client computer.

It is a regular Windows setup program, that can be executed on the appropriate client computer by double-clicking on the setup file. Just follow on-screen instructions.

Notice: Alternatively to installing the MailStore Outlook Add-In application manually, you can also deploy it to the client computer through the Active Directories Group Policy feature. More information on that can be found in the article MailStore Outlook Add-in Deployment

If an update is installed on the MailStore Server computer, MailStore Outlook Add-In usually stays compatible with MailStore Server. Therefore a re-installation of MailStore Outlook Add-In is only required if significant changes (e.g. security updates) are mentioned in the changelog ^[1].

After successful installation, a tab labeled "MailStore" will be visible in Microsoft Outlook.



Technical Considerations

- The MailStore Outlook Add-in uses the HTTP server integrated in MailStore Server to access the archive, which only allows encrypted HTTPS connections. Thus using a valid TLS/SSL certificate is recommended.
- If you have changed the configuration of the HTTPS port within the MailStore Server Service Configuration (the default HTTPS port is 8462), you must include the port number when logging in. Simply append the port number to the server name, separated by a colon (for example: `mailstore.example.com:443`)

Login to MailStore Server

If the MailStore Outlook Add-in is not pre-configured, you will be asked to log in to MailStore Server as soon as you click any button in the MailStore Outlook Add-in.

The window *Connect to MailStore Server* appears.

- Enter the DNS host name of the computer on which MailStore Server is installed into *Server Name*. Please refer to your system administrator for the server name and your access data.
- Click *Connect* to connect to MailStore Server.

Once the connection was established successfully, the user name dialog appears.

- Enter the user name of a MailStore user into the *User Name* field and click on *Next*.

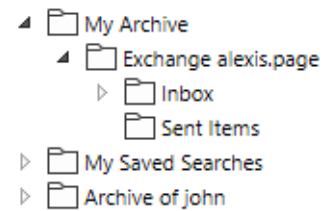
MailStore Server now determines how the user is to be authenticated.

- If MailStore Server is able to verify the user's credentials itself, the password dialog as shown on the right appears. Enter the password into the *Password* field and click on *Login*.
- If the user has been synchronized from Microsoft 365 or Google G Suite, the default web browser will be opened to allow authentication through Microsoft's or Google's authentication service.

Hint: If you would like to log in to a different server or use different credentials, click on *Settings* in the MailStore Outlook Add-in and update the *Server Name* as desired or click on *Clear Cached Credentials* to use new credentials on next login.

Display of the Archive Folder

In the MailStore Outlook Add-in, click on *Browse Archive* to display the part of the archive that is visible to you.



User Archives

The folder *My Archive* contains all emails that were archived from your mailboxes. If you have read-access to the archives of additional users, their emails are located in the folders labeled *Archive of <user name>*.

Display of Emails in a Folder

With quick search you can browse all emails located in the archives you have access to. This feature is especially suitable for simple queries; alternatively, the advanced search can be used.

Using Quick Search

The input field is located in the left part of the MailStore Outlook Add-In. Simply enter one or more keywords and press *ENTER*. The search results are displayed. Keywords which appear in the header or the subject line are highlighted.

Searching for Word Fragments

To display all emails containing a word with a particular fragment, use the wildcard character (*). For example:

```
auto*
```

will return *auto*, *automatic*, *automobile* etc.

```
*example.com
```

will return all email addresses and domains of *example.com*.

```
firstname.lastname*
```

will return all email addresses of *firstname.lastname*.

Searching for Words with unknown letters

To view all emails containing a word where you do not know how to spell it correctly, you can use the question mark (?). For example

```
Me?er
```

would locate *Meier* and *Meyer*, but not *Maier*.

The question mark (?) cannot be used at the beginning of a word or at the end of a word, use the wildcard character (*) instead.

Searching for Phrases

To search for words appearing consecutively and in a specific order, use quotation marks ("). For example:

```
"Microsoft Windows"
```

will return the text *Microsoft Windows* but not *Microsoft Works* or *Windows 95*.

Narrowing by Fields

A search for keywords or phrases can be limited to specific fields. For example:

subject:News	only in <i>Subject</i>
from:john@mailstore.com	only in <i>From</i>
to:michael@mailstore.com	only in <i>To</i>
cc:lisa@mailstore.com	only in <i>Cc</i>
bcc:customers@mailstore.com	only in <i>Bcc</i>
bcontent:billing	only in Body of message
accontent:billing	only in Attachments of message

Excluding Words

To narrow a search, you may want to specify words which must not be present in the emails. To exclude words from the search results, prepend the word with the minus character (-). For example:

```
ZDNet -download-tip
```

returns all emails from ZDNet which do not contain *download-tip*.

Combining Search Options

Any of the search options described above can be combined. For example:

```
ZDNET -"Daily Update"
```

returns all emails from ZDNet which do not contain the consecutive words *Daily Update*.

```
from:ZDNET bcontent:MailStore
```

returns all emails from ZDNET which have *MailStore* somewhere in their message body.

```
from:billing@example.com accontent:bill
```

returns all emails from *billing@example.com* which have *bill* in any attachment.

```
to:recruiting@example.com -sales
```

returns all emails to *recruiting@example.com* which do not have sales in any part of the email.

```
from:billing@example.com to:myaddress@company.tld accontent:bill -subject:admonition
```

returns all message from *billing@example.com* to *myaddress@company.tld* which have *bill* in any attachment but do not have *admonition* in the subject.

About Special Characters

Words inside indexed emails or attachments which are a combination of alphanumeric (letters, digits) and non-alphanumeric characters (white space, line break, delimiter or other control characters), may be returned in search results when searching for the alphanumerical part only.

For instance, when searching for `firstname`, `firstname.lastname` and `lastname`, e-mails containing the word `firstname.lastname` will be returned.

Commonly occurring characters are:

- Period (.)
- Comma (,)
- Colon (;)
- Hyphen (-)
- Underscore (_)
- AT-Sign (@)
- Slash & Backslash (/,\)

- Null character (NUL)

Advanced Search

With MailStore's integrated advanced search, complex queries can be executed which may not only refer to the email content but also parameters such as the date or the email size.

Using the Advanced Search

In the MailStore Outlook Add-In, click on *Advanced Search* and enter the search parameters. The criteria are *AND*-combined, i.e. the search returns only those emails that satisfy all criteria. Click on *Search* to start the search.

Search E-mail

Extended Search

Search for:

☒ Subject
 ☒ Sender/Recipient
☒ Message Body
 ☒ Attachment File Names
☒ Attachment Contents

General

Folder: ...

☒ Include subfolders

From:

To/Cc/Bcc:

Date: ▼

Archiving Date: ▼

Extended

Messages: ☒ with attachments ☒ without attachments

Size: ▼

Priority: ▼

Search Criteria under "Extended Search"

Enter a keyword or phrase into the text field and specify where MailStore is to conduct the search. The following options are available:

- **Subject** - The subject line of the email is searched.
- **Sender/Recipient** - The fields "From", "To", "Cc", and "Bcc" are searched.
- **Message body** - The text-only or HTML sections of the email are searched (depending on availability).
- **Attachments File Names** - The file names of the email attachments are searched.
- **Attachment Contents** - The contents of the email attachments are searched. If and to what extent attachments can be searched depends on the indexing options specified (under *Administrative Tools*).

All options described in section Quick Search, such as phrases and wildcards, are available in the textfield *Search for* as well.

Search Criteria under "General"

Under *General*, the following options are available:

- **Folder** - The folder to be searched by MailStore can be selected here. By default, all folders readable by the current user are selected. By clicking the button next to the text field, folders can also be selected using the folder structure.
- **Include subfolder** - If selected, MailStore not only searches the selected folder (e.g. *Inbox*), but all subfolders created therein (e.g. *Inbox / Projects 2008 / Profit Optimization*) as well.
- **From** - Any keywords or email addresses entered here are searched for within the email's sender field only.
- **To/Cc/Bcc** - Any keywords or email addresses entered here are searched for within the email's recipient fields only.
- **Date** - The time frame the search is to cover can be selected here. Either a predefined range, such as *Yesterday* or *This year*, can be selected or, by choosing *Custom*, a specific period can be specified manually. In this case, the start and end dates will be included.
- **Archiving Date** - The archiving time frame the search is to cover can be selected here. Either a predefined range, such as *Yesterday* or *This year*, can be selected or, by choosing *Custom*, a specific period can be specified manually. In this case, the start and end dates will be included.

All options described in section Quick Search, such as phrases and wildcards, are available in the fields *From* and *To/Cc/Bcc* as well.

Search Criteria under "Extended"

Under *Extended*, the following options are available:

- **Messages with/without attachments** - By default, all messages are searched, regardless of whether or not they have any file attachments. Clear one of the check boxes to remove certain emails, such as those without attachments, from the results.
Important: These searches can be imprecise at times because items like background pictures could be regarded as attachments.
- **Size** - By default, all messages are searched regardless of their size. Use the appropriate fields provided to limit the search according to the size of the emails, e.g. at least 5 MB or between 400 and 600 KB.
- **Priority** - Emails are searched according to the priority level of the email as assigned by the sender. When choosing *Low*, all emails with a priority level lower than *Normal* are returned, when choosing *High*, all emails with a priority level higher than *Normal* are returned. Emails not containing any information regarding priority are assumed to have a priority level of *Normal*.

Starting a Search

Click on *Search* to start the search. The results are displayed in a list.

Refining the Search Results

To narrow the results after a search has been executed, click on *Advanced Search* again, enter additional search criteria and click on *Search*.

Starting a New Search

To start a new search, click on *New Query*. All search criteria will be reset to their default values (i.e. no restrictions; the search covers all folders readable by the current user).

Saving a Search

Search criteria that are used repeatedly (such as "all receipts from the last month") can be saved and reused at any time. Click on *Save As...* and choose a meaningful name for the search. Click on *Open* to access, edit or restart the search.

About Special Characters

Words inside indexed emails or attachments which are a combination of alphanumeric (letters, digits) and non-alphanumeric characters (white space, line break, delimiter or other control characters), may be returned in search results when searching for the alphanumerical part only.

For instance, when searching for `firstname`, `firstname.lastname` and `lastname`, e-mails containing the word `firstname.lastname` will be returned.

Commonly occurring characters are:

- Period (.)
- Comma (,)
- Colon (;)
- Hyphen (-)
- Underscore (_)
- AT-Sign (@)
- Slash & Backslash (/,\)
- Null character (NUL)

Email Display

To view an email which was returned by one of the search functions described above, simply click on it. A preview of the email is displayed on the right side of the screen.

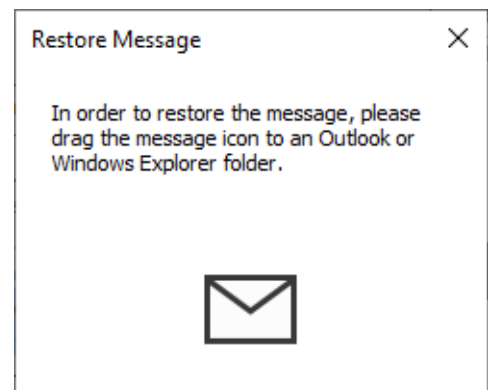
Please keep in mind that images and any formatting will not be displayed in the preview for security reasons. Emails cannot be forwarded or replied to within the preview, either.

For a comprehensive view of an archived email and the ability to use all the Microsoft Outlook features such as printing, forwarding and replying, click on *Open Email* in the MailStore Outlook Add-in. The email will be loaded from the archive and displayed, either immediately or after a few seconds depending on size.

Restoring Emails to the Application

To restore an archived email which is no longer in your mailbox to Outlook, please proceed as follows:

- Locate the email within the archive and select it, so that it is shown in the preview area.
- In the MailStore Outlook Add-in, click on *Restore Message*.
- Drag and drop the envelope icon into an Outlook email folder or a Windows Explorer file system folder.
- The email is restored immediately or after a few seconds, depending on its size. The email is restored as *read*.



Printing Emails

To quickly print an archived email on the current default printer, please proceed as follows:

- Locate the email within the archive and select it, so that it is shown in the preview area.
- In the MailStore Outlook Add-in, click on *Print Message*.
- The email is immediately printed.

To print the message on a different than the default printer, use Outlook's built-in function accessible after you opened the message via *Open Message* from the add-in.

Changing Regional Settings

By default the MailStore Outlook Add-in uses the same regional settings as Microsoft Outlook. The regional settings can also be set manually in the MailStore Outlook Add-in settings dialog.

References

- [1] <https://go.mailstore.com/?product=MailStore%20Server&target=changelog&lang=en>

3.5 Accessing the Archive using other Email Clients

With MailStore's integrated IMAP server you can access the MailStore archive in read-only mode with any IMAP-enabled email client. This provides a convenient way to access the email archive using not only many alternative email clients on any operating system (e.g. MacOS or Linux), but also through email apps running on Android or iOS devices. Installing MailStore Client on the user machines is not required.

Prerequisite for Using the MailStore-Integrated IMAP Server

Activation and configuration of the integrated IMAP server are done using the MailStore Server Service Configuration. All IMAP-enabled email clients that support encrypted connections are supported, since the integrated IMAP server refuses the login over unencrypted connections.

Please note: When using Microsoft 365 or Google G Suite to authenticate users at login, accessing the archive via IMAP is not possible for technical reasons.

Accessing the Integrated IMAP Server

Unless the integrated IMAP server is configured otherwise, users can access MailStore Server using the following settings:

- **Incoming Mail Server** - Host name or IP address of the MailStore server
- **Port** - For STARTTLS-encrypted connections (explicit TLS) the standard IMAP port 143 is used. For implicit TLS-encrypted connections the standard IMAP port 993 is used.
- **User Name** - Name of the MailStore user.
- **Password** - Password which is required for accessing the MailStore server.

Please note: In addition to configuring the incoming mail server, email clients often require configuring the outgoing mail server as well. In this case, using the same data as for an existing email account will facilitate further processing emails from the email archive.

4

Chapter

Export Email

4.1 Exporting Email

MailStore Server provides several options to export archived emails. Emails can be exported directly into server mailboxes or to the file system as individual email files (EML or MSG format), for example.

Please note: Backup strategies (a backup of the entire archive) are discussed separately in the article Backup and Restore.

Available Export Destinations

Email Server

- **Microsoft 365 Mailbox** - A folder named *MailStore Export* is created in the Microsoft 365 mailbox into which emails are copied. If the option *Retain folder structure* is checked, the archive's folder hierarchy will be created in the destination, otherwise all email will be stored in the same folder.
- **Exchange Mailbox** - A folder named *MailStore Export* is created in the Exchange mailbox into which emails are copied. If the option *Retain folder structure* is checked, the archive's folder hierarchy will be created in the destination, otherwise all email will be stored in the same folder.
- **G Suite** - A folder named *MailStore Export* is created in a G Suite mailbox into which emails are copied.
- **Gmail** - A folder named *MailStore Export* is created in a Gmail mailbox into which emails are copied.
- **IMAP mailbox** - A folder named *MailStore Export* is created in an IMAP mailbox into which emails are copied. If the option *Retain folder structure* is checked, the archive's folder hierarchy will be created in the destination, otherwise all email will be stored in the same folder.

Email Clients

- **Microsoft Outlook** - A folder named *MailStore Export* is created in Microsoft Outlook into which emails are copied. If the option *Retain folder structure* is checked, the archive's folder hierarchy will be created in the destination, otherwise all email will be stored in the same folder.
- **Mozilla Thunderbird** - A folder named *MailStore Export* is created in Mozilla Thunderbird into which emails are copied. If the option *Retain folder structure* is checked, the archive's folder hierarchy will be created in the destination, otherwise all email will be stored in the same folder.
- **Mozilla SeaMonkey** - A folder named *MailStore Export* is created in Mozilla SeaMonkey into which emails are copied. If the option *Retain folder structure* is checked, the archive's folder hierarchy will be created in the destination, otherwise all email will be stored in the same folder.

Email Files

- **Directory (File System)** - Either EML or MSG files are created (one per email). When enabling the option *Update existing export* only not already existing email files will be written into the target folders, or else all email files will be written again. The option *Sign Export* allows to ensure integrity of the exported data outside of the archive. Refer to Verifying a Signed Export for further details on how to verify integrity. If the option *Retain folder structure* is checked, the archive's folder hierarchy will be created in the destination, otherwise all email will be stored in the same folder.
- **Outlook PST File** - A folder named *MailStore Export* is created in a Microsoft Outlook PST file into which emails are copied. If the option *Retain folder structure* is checked, the archive's folder hierarchy will be created in the destination, otherwise all email will be stored in the same folder.

Please note: EML files can be opened independently from MailStore Server by double-clicking and moving to applications such as Mozilla Thunderbird via drag & drop. Outlook MSG files can be opened or archived directly with all versions of Microsoft Outlook.

Starting an Export

Depending on the user's permissions, MailStore Server allows to export multiple emails in one step. Exporting or opening individual emails is possible at all time.

Using the folder tree

Right-click on an element in the folder tree (user archive, folder or saved search), then select *Export to...* from the context menu and select the export destination. A dialog appears in which additional settings may have to be specified.

Using the list of emails

Highlight the emails to be exported by holding down the control key (Ctrl) and clicking onto the emails. Pressing Ctrl and A selects all emails. Right-click on the highlighted emails, then select *Export to...* from the context menu and select the export destination. A dialog appears in which additional settings may have to be specified.

Using the page "Export Email"

On this page, exporting tasks can be created and executed as export profiles (just like archiving profiles). Export profiles hold information about which emails will be exported to which destination. Each profile (i.e. the exporting task) can be executed manually or regularly according to a schedule. To learn more, please read on in the next section.

Working with Exporting Profiles

In MailStore Server, every exporting task is stored as an exporting profile. The exporting process is started by executing such a profile.

Such an exporting profile could contain the following information:

- WHAT: Mailbox p.berten@company.com
- TO: Exchange Server EXCHANGE01
- SCOPE: All folders except drafts

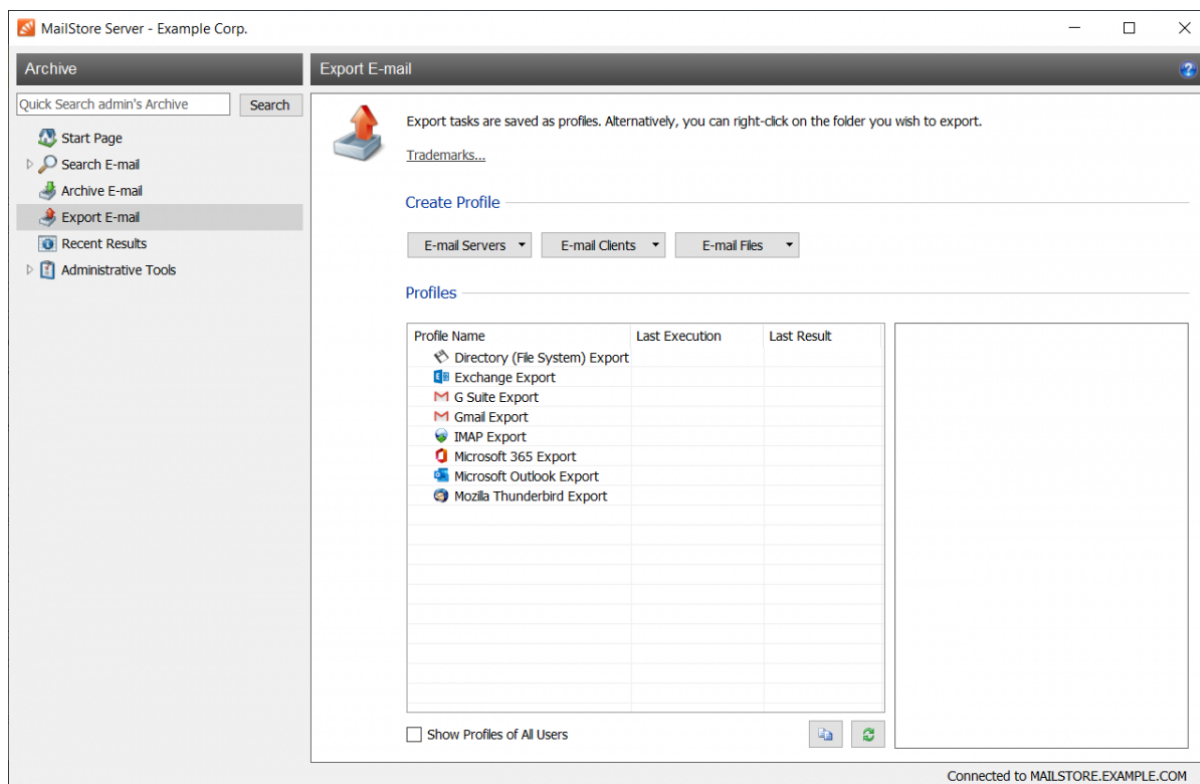
Like archiving profiles, existing export profiles can be executed, modified, deleted or even executed automatically. Further details can be found in the chapters Working with Archiving Profiles and Automating the Archiving Process

Important notice: Be aware that an export does not verify if the messages already exist in the destination. Therefore duplicates are created in the selected destination when re-executing an export profile multiple times. Thus it is not recommended to automate the execution of export profiles. Only exception is the *Directory (File System)* export profile, where MailStore Server is able to do a comparison based on the file names.

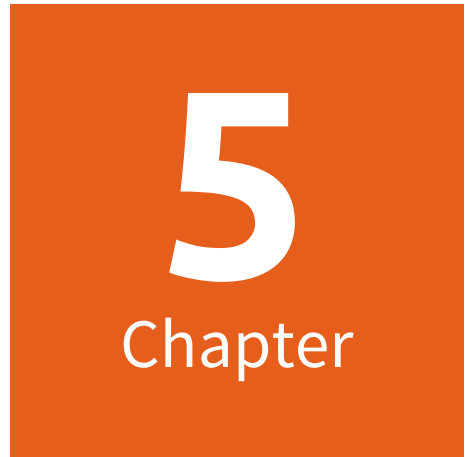
Creating an Export Profile

To create a new export profile, please proceed as follows:

- Start MailStore Client on the computer which is to execute the export. Log on as administrator if the emails of other users are to be exported as well. Only a MailStore Server administrator is allowed to export the emails of others.
- Click on *Export Email*.



- From the lists in the upper *Create Profile* area, select the destination to which emails are to be exported.
- A wizard opens to assist in specifying the export settings.
- At the first step, specify which folder is to be exported (subfolders are always included). Depending on the export destination, the file format to be used (e.g. EML , MSG or PST) can be selected as well. Click on *Next*. **Please note:** Below the list of folders, a saved search can also be selected. MailStore runs the search before executing the actual export procedure; all emails returned by the search will be exported.
- At the second step, specify the exact target location to which emails are to be exported. For example, if *Exchange Mailbox* was selected as export destination earlier, the access data for the target mailbox can be specified and verified by clicking on *Test*. Then click on *Next*.
- Depending on the export destination specified, additional settings can be selected at the next step. For example, if *IMAP mailbox* was selected as the destination, a timeout value can be set, if needed.
- At the last step, a name for the export profile can be specified. After clicking on *Finish*, the profile will be listed under *Saved Profiles* and can be run immediately, if desired.



Administration

5.1 Users, Folders and Settings

User Management

When emails are archived, they are always assigned to individual users (the original owners of the emails). Every MailStore user has his or her own user archive which is created automatically upon setting up the new user account. For this reason, before any emails can be archived, the appropriate user accounts have to be created first.

Options for the Setup of New User Accounts

- Adding users manually (described here)
- Synchronizing User Accounts with Active Directory
- Synchronizing User Accounts with an Application Integration Server
- Synchronizing User Accounts with an IceWarp Server
- Synchronizing User Accounts with a Kerio Connect Server
- Synchronizing User Accounts with a generic LDAP Server
- Synchronizing User Accounts with MDAemon USERLIST.DAT

Opening User Management

Log on to MailStore Client as administrator. Click on *Administrative Tools > Users and Archives > Users*.

Creating a New User

Click on *Create New* and enter a login name for the new user. This could be a combination of first and last name, for example. Click on *OK* to confirm. In the next window, additional settings may be specified. Again, click on *OK* to confirm the new settings.

The user is added to the list of users and can be edited at any time, as described in the following section.

Please note: The emails of a new user can be archived right away, no additional settings have to be specified. However, for the user to be able to log on to MailStore Client, a password has to be created (in the case of MailStore integrated authentication).

A password must meet the complexity rules. A password

- must be at least 10 characters long,
- must not contain the user name,
- must not contain the product name *MailStore*, the comparison is done case insensitive,
- must not contain the same character more than two times in a row,
- must have characters from at least 3 out of 5 character classes. These 5 character classes are:
 - the upper case letters A-Z,
 - the lower case letters a-z,
 - the digits 0-9,
 - the special characters !"#\$%&'()*+,-./:;<=>?[\]^_`{|}~ and the space character,
 - characters that are neither upper case nor lower case, e.g. Chinese and Japanese characters.

Editing an Existing User Account

Select a user from the list and click on *Properties*.

The screenshot shows the 'User Properties' dialog box for the user 'barbara.ross'. The dialog is divided into several sections:

- General Information:**
 - Login Name: barbara.ross
 - Full Name: Barbara Ross
 - Authentication: MailStore-integrated (dropdown menu) with a 'Password...' button next to it.
 - ☐ User is an Administrator
- Integration (optional):**
 - LDAP DN String: (empty text box)
 - E-mail Addresses: barbara.ross@example.com (text box) with 'comma separated' label
 - POP3 User Names: (empty text box) with 'comma separated' label
- Privileges:**
 - ☒ Log on to MailStore Server
 - ☒ Change Password
 - ☒ Archive E-mail (Unlimited dropdown)
 - ☐ Export E-mail (Unlimited dropdown)
 - ☐ Delete E-mail
- Folder Access Table:**

Folder	Access
barbara.ross	Read, Write

Buttons at the bottom: OK, Cancel, Help. On the right side of the table, there are buttons: Add New..., Edit, Delete.

- In the next window, the following settings can be specified:

General Information

- Full Name:** Enter first and last name of the user.
- Authentication:** If choosing the setting *MailStore-integrated*, users have to use the password specified in user management when logging on to MailStore Client. Click on *Password...* to set the password. Users can later change their passwords through the *Administrative Tools* in their installation of MailStore Client.
Alternatively, the authentication *Directory Services* can be used. In this case, users can log on to MailStore using their directory service credential (e.g. Active Directory access data).
- User is an Administrator:** Only administrators have access to the administrative functions found in MailStore Client's *Administrative Tools* and in the management shell.

Integration (optional)

- LDAP DN String:** This information is needed if the user is to be authenticated through an LDAP based directory service such as Active Directory or other generic LDAP servers.
- Email Addresses:** This information is only needed for the following archiving options: MailStore Gateway, Microsoft Exchange Journaling, Multidrop Mailbox and archiving multiple mailboxes synchronously.
- POP3 User Names:** This information is only needed for archiving tasks using MailStore Gateway. If the POP3 user name does not match the user's email address, the user name has to be specified here.

Privileges

Privileges are described separately in section *Specifying Privileges*. As long as the appropriate privileges are not set, users are not able to delete any emails from the archive (even their own).

- Click on *OK* to apply the new settings.

Renaming Users

Select the user whose name you would like to change from the list of users and click on *Rename*. In the dialog window, enter the new user name and click *OK*.

Please note that the user archive must be renamed manually. The same applies to user privileges, archiving profiles, scheduled tasks, etc.

Deleting Users

Click on *Administrative Tools > User and Archives* and then on *Users*. Select the one or more users from the list, click on *Delete* and confirm the next dialog with *OK*.

Deleting a user has the following effects:

- Emails that were archived for that user are not being deleted. The corresponding user archive is still available in MailStore and can be accessed by the administrator or shared with other users through the privileges system (see below).
- Archiving and export profiles that belong to that user will be deleted. To preserve them, they have to be assigned to another user prior to the deletion.
- The user's license will be released. This license can be used to create a new user account.

Specifying Privileges

To specify the privileges for a user, click on *Administrative Tools > Users and Archives* and then on *Users*. Select the appropriate user from the list and click on *Properties*.

Please Note: If you highlight multiple users and click on *Properties*, you can change the privileges for all selected users in one step.

User Properties

barbara.ross

General Information

Login Name:

Full Name:

Authentication:

☐ User is an Administrator

Integration (optional)

LDAP DN String:

E-mail Addresses: comma separated

POP3 User Names: comma separated

Privileges

☒ Log on to MailStore Server ☒ Change Password

☒ Archive E-mail

☐ Export E-mail

☐ Delete E-mail

Folder	Access	
barbara.ross	Read, Write	

The Following Privileges can be Assigned:

Log on to MailStore Server

Only users with this privilege can log on to MailStore Server through MailStore Client. Please note: Without this privilege, emails can still be archived for the respective user.

Change Password

Only users with this privilege can change their passwords independently by using the button on the start page. Users without this privilege must use the password created by the administrator in user management (relevant with MailStore-integrated authentication).

Archive Email

Only users with this privilege can execute archiving profiles independently and thereby archive emails to MailStore Server. **Please note:** An administrator can always archive emails for the user regardless of this setting. Please keep in mind that users can archive emails only if they have write-access to their MailStore user folders. This setting can be specified under *Folder Access* (described below).

Unlimited - Users with this privilege can create and edit archiving profiles.

Run existing profiles only - Users with this privilege can only execute already existing archiving profiles but can neither create new profiles nor modify existing ones.

Manage profiles only - Users with this privilege can modify already existing archiving profiles and create new ones, but cannot run any profiles.

You can find additional information about this topic in chapter Working with Archiving Profiles

Export Email

Only users with this privilege can export emails from MailStore. Please see chapter Exporting Email for a description of the many options MailStore offers for email export.

Unlimited - Users with this privilege can create and edit export profiles.

Run existing profiles only - Users with this privilege can only execute already existing export profiles but can neither create new profiles nor modify existing ones.

Manage profiles only - Users with this privilege can modify already existing export profiles and create new ones, but cannot run any profiles.

Additional information about this topic can be found in chapter Working with Export Profiles

Delete Email

Only users with this privilege can delete emails from their user archives. Please keep in mind that this privilege should only be granted with great care, because legal requirements are hard, if not impossible, to meet if users are allowed to delete their emails independently. Once deleted, emails can only be recovered by restoring a MailStore backup.

Folder Access (e.g. Access to the Emails of Other Users)

All main folders, which the current user has access to, are listed here. These folders correspond to the archives of individual MailStore users and contain all their archived emails. By default, users have only access to their own archives (to read and write, but not to delete). By clicking on *Add New*, the main folder of another user can be added to the list of folders accessible by the current user. Then the type of access to be permitted has to be specified.

The following options are available:

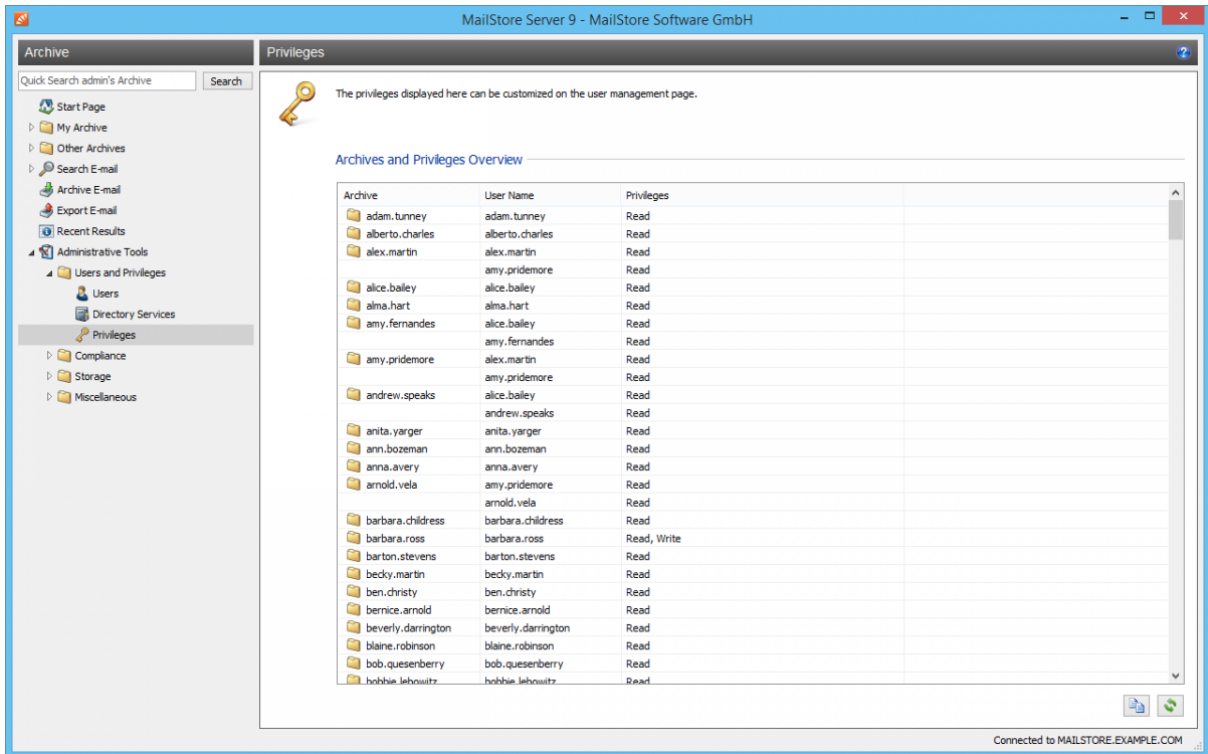
- Full Access
- Read
- Write
- Delete

From the users' perspective, the folders they have access to appear as entries in the folder structure of MailStore Client.

Please keep in mind that users can archive emails independently only if they have write-access to their own folders.

Overview of all Privileges Regarding Folder Access

To view all privileges regarding folder access, click on *Administrative Tools > Users and Archives* and then on *Privileges*.



The privileges displayed here can be customized on the user management page.

Archives and Privileges Overview

Archive	User Name	Privileges
adam.tunney	adam.tunney	Read
alberto.charles	alberto.charles	Read
alex.martin	alex.martin	Read
amy.pridmore	amy.pridmore	Read
alice.bailey	alice.bailey	Read
alma.hart	alma.hart	Read
amy.fernandes	alice.bailey	Read
amy.fernandes	amy.fernandes	Read
amy.pridmore	alex.martin	Read
amy.pridmore	amy.pridmore	Read
andrew.speaks	alice.bailey	Read
andrew.speaks	andrew.speaks	Read
anita.yarger	anita.yarger	Read
ann.bozeman	ann.bozeman	Read
anna.avery	anna.avery	Read
arnold.vela	amy.pridmore	Read
arnold.vela	arnold.vela	Read
barbara.childress	barbara.childress	Read
barbara.ross	barbara.ross	Read, Write
barton.stevens	barton.stevens	Read
becky.martin	becky.martin	Read
ben.christy	ben.christy	Read
bernice.arnold	bernice.arnold	Read
beverly.darrington	beverly.darrington	Read
blaine.robinson	blaine.robinson	Read
bob.quesenberry	bob.quesenberry	Read
hobbie.lehowitz	hobbie.lehowitz	Read

Connected to MAILSTORE.EXAMPLE.COM

The first column shows all user archives, the second column shows the MailStore users that have access to the respective user archive, and the third column lists the type of access privilege (e.g. Read, Write).

Orphaned archives are easily detectable, as the second and third column is empty.

5.2 Archives

Under *Administrative Tools > Users and Archives > Archives* you can perform several archive related tasks as well as view statistical data.

MailStore Server

Archive

Quick Search admin's Archive Search

Start Page

Search E-mail

Archive E-mail

Export E-mail

Recent Results

Administrative Tools

Users and Archives

Users

Directory Services

Privileges

Archives

Compliance

Storage

Management API

Miscellaneous

Archives

On this page you can view statistical information on user archives as well as rename or delete them.

Archive	Messages	Total Size %	Total Size MB
abby.hernandez	572	2,58 %	46
alexis.page	575	1,53 %	27
andrea.eastman	589	2,48 %	44
barbara.coe	560	1,25 %	22
barbara.pelfrey	592	1,70 %	30
becky.stephenson	598	3,70 %	65
belinda.avendano	600	3,28 %	58
bernard.hamrick	578	3,04 %	54
bill.burke	566	2,29 %	41
billie.brown	574	2,39 %	42
christina.thomas	576	3,82 %	67
david.hollingsworth	580	2,94 %	52
david.lombard	577	2,52 %	44
david.mora	591	3,66 %	64
david.torrez	571	1,37 %	25
francisco.brown	561	2,21 %	39
frank.clark	567	2,06 %	36
gerald.chang	574	2,12 %	38
henry.carreras	583	4,41 %	78
henry.gillis	585	2,46 %	44
irene.gregg	576	2,18 %	39
james.oakley	563	3,77 %	66
james.pendleton	570	3,28 %	58
jeannine.hamilton	570	2,00 %	35
jennifer.wilson	594	1,96 %	35

Total Size: 22.165 messages / 1.765 MB

Connected to MAILSTORE

Via context menu you can rename or delete archives. For every user archive, the following statistics are displayed:

- Name of the archive
- Number of emails per user archive
- Percentage share a user archive has of the total volume based on the MIME size of the email
- Total size of email per user archive in megabyte

The archives count and the sum over the columns *Messages* and *Total Size MB* is shown under the table.

Using the copy function in the lower area of the application window, the information shown can be copied to the clipboard and pasted into other applications, e.g. Microsoft Excel.

5.3 Active Directory Integration

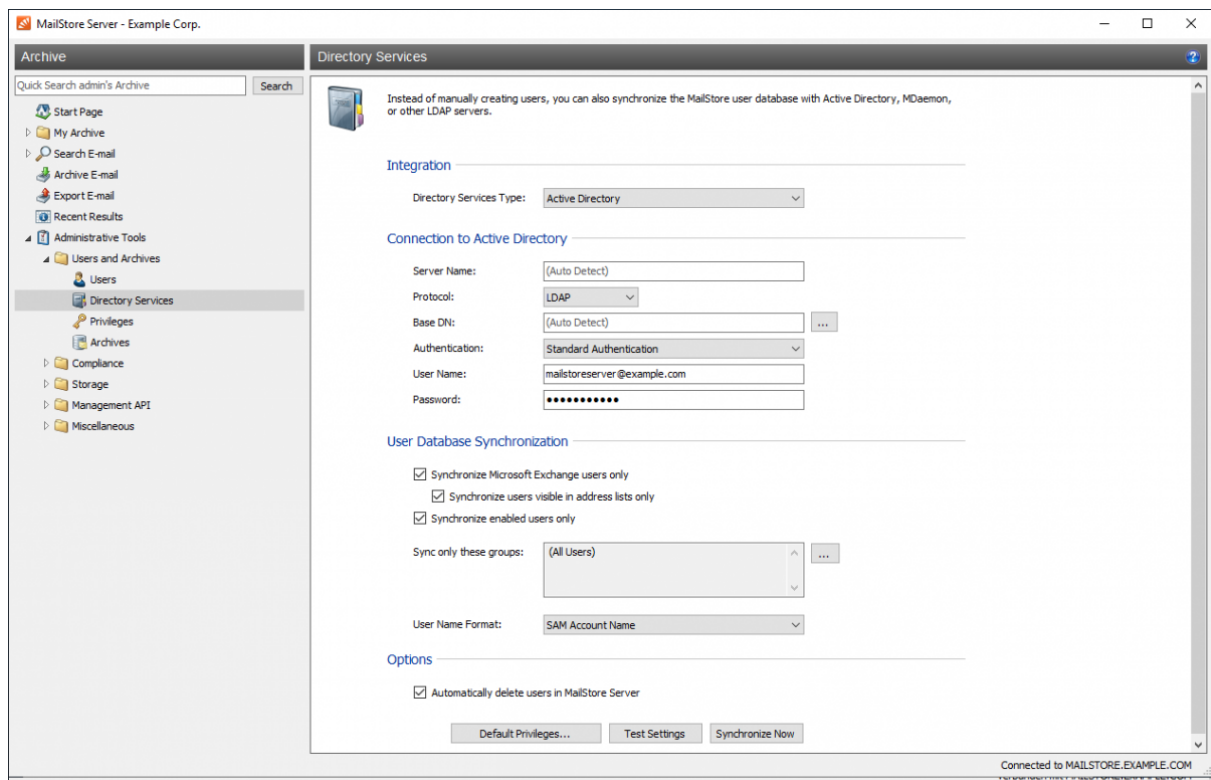
In addition to adding users manually as described in chapter User Management, MailStore Server can synchronize its internal user database with the Active Directory of your organization.

During synchronization, user information, such as user names and email addresses, is copied from the Active Directory into MailStore Server's user database. That way, users can use their Active Directory credentials to also log on to MailStore Server and emails can be assigned to their corresponding user archives automatically, for example. No changes are made to the Active Directory itself by MailStore Server. The scope of the synchronization can be limited through filters.

Please note: MailStore Server does support neither subdomains nor domain trusts. The MailStore Server service must run as 'Local System account' and the server must be a member of the domain if you want to use 'Integrated Windows authentication'.

Accessing Directory Service Integration

- Log on to MailStore Client as a MailStore Server administrator.
- Click on *Administrative Tools > Users and Privileges* and then on *Directory Services*.
- In the *Integration* section, change the directory service type to *Active Directory*.



Connection to Active Directory

For synchronization MailStore Server requires information on how to connect to the Active Directory.

- **Server (optional)**
DNS name or IP address of an Active Directory domain controller. If the MailStore Server machine is a member of the Active Directory, this setting is detected automatically.
- **Protocol**
The protocol used to communicate with an Active Directory domain controller.
 - *LDAP*
The default protocol when accessing an Active Directory. Though parts of the connection is unencrypted the real payload is encrypted.
 - *LDAPS*
Additionally SSL secured version. Be aware that a properly configured certificate infrastructure is required, in which the MailStore Server computer must classify the domain controller's certificate as trustworthy.
- **Base-DN (optional)**
Base DN of your Active Directory. Often the Base DN can be derived from the Active Directory domain name. For example, if the Active Directory domain name is *company.local* the Base DN usually is *dc=company,dc=local*. The Base DN can also be selected by clicking the button left of the text field if access to an Active Directory domain controller is available. If the MailStore Server machine is a member of the Active Directory, this setting is detected automatically.
- **Authentication**
Define how the MailStore Server service should identify itself to the Active Directory:
 - *Standard Authentication*
If MailStore Server is not installed directly on an Active Directory domain controller, using standard authentication is required. In this case, fill out the *User Name* and *Password* fields; enter the user name in UPN notation, e.g. *Administrator@company.local*
 - *Windows Authentication*
If MailStore Server is installed directly on an Active Directory domain controller, the MailStore Server service already has the necessary privileges to authenticate against Active Directory using Windows authentication.

User Database Synchronization

After configuring the connection settings as described above, you can specify filter criteria for the Active Directory synchronization in this section.

- **Synchronize Microsoft Exchange users only**
Only user accounts with email addresses configured in Active Directory will be taken into account by the synchronization. Clear this checkbox only if all Active Directory users should be created as MailStore Server users as well.
 - **Synchronize users visible in address lists only**
Only Active Directory user accounts will be taken into account by the synchronization whose Exchange mailboxes are not hidden from Exchange address lists. This option can only be enabled if the option *Synchronize Microsoft Exchange users only* is enabled, too.
- **Synchronize enabled users only**
Only user accounts enabled in Active Directory will be taken into account by the synchronization. Deactivating this option may be useful if certain Exchange mailboxes should be archived whose Active Directory user accounts are deactivated by default.
- **Sync only these groups**
Choose one or several Active Directory security groups if you only want their members to be created as MailStore users. That way it's possible to exclude certain Active Directory accounts from being synchronized to MailStore, e.g. system accounts.
Note: When the MailStore Server Computer is member of a domain, that is not the domain where users are synchronized from, *Universal Groups* may not be selectable. An error with the errorcode 1355 might be shown then.

- **User Name Format**

Choose which naming scheme MailStore user names should follow:

- *SAM Account Name*
The Pre-Windows 2000 user name.
- *User Principal Name (UPN)*
The Windows user name including domain, e.g. *jane.doe@example.com*
- *User Principal Name (UPN) Local Part*
The Windows user name excluding domain, e.g. *jane.doe*

Options

- **Automatically delete users in MailStore Server**

Here you can choose whether users that have been deleted in the Active Directory will also be deleted in the MailStore user database by the synchronization. If the archive folder of such a user already contains archived emails, only the user entry but not its archive folder will be deleted in MailStore. Additionally, only MailStore users that have their authentication method set to *Directory Services* will be deleted.

Assigning Default Privileges

By default, users that have been synchronized to MailStore Server from an Active Directory have the privilege to log on to MailStore Server as well as read access to their own user archive.

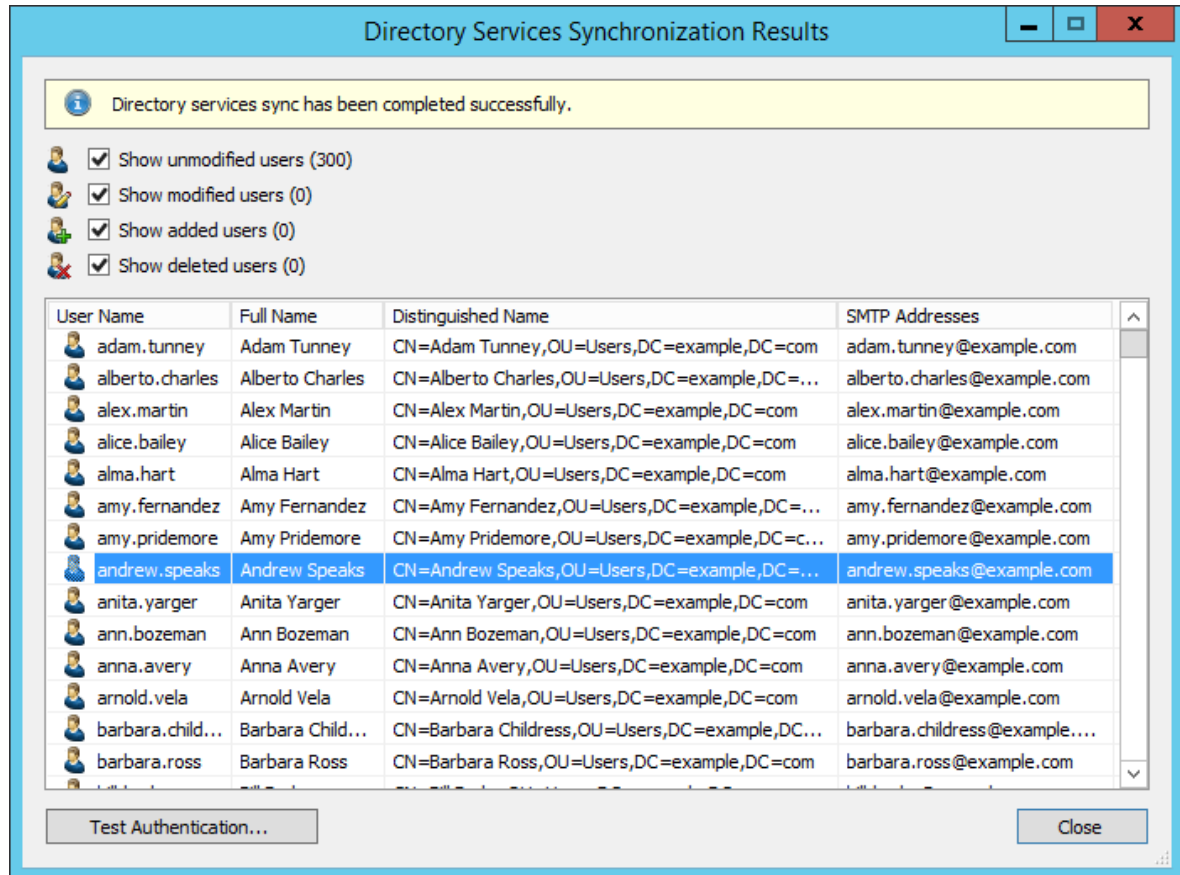
You can configure those default privileges before synchronization, for example, to assign the privilege *Archive E-mail* to all new users. To do this, click on *Default Privileges...*

More information on managing user privileges and their effects is available in the chapter *Users, Folders and Settings* which also has details on editing existing privileges.

Running Directory Services Synchronization

Click on *Test Settings* to check synchronization configuration and the results returned by the Active Directory without any changes to the MailStore Server user database being actually committed.

To finally run the synchronization, click on *Synchronize now*. The results are shown with any changes committed to the MailStore Server user database.



Login with Active Directory Credentials

After synchronization MailStore users can log on to MailStore Server with their Active Directory username and Active Directory password.

To use *Windows-Authentication* it is a requirement that the client and the MailStore Server computer are member of the same domain and that the client is authenticated at the domain controller.

To use *Single-Sign-On* additional configuration steps are necessary which are described in the articles MailStore Client Deployment and MailStore Outlook Add-in Deployment.

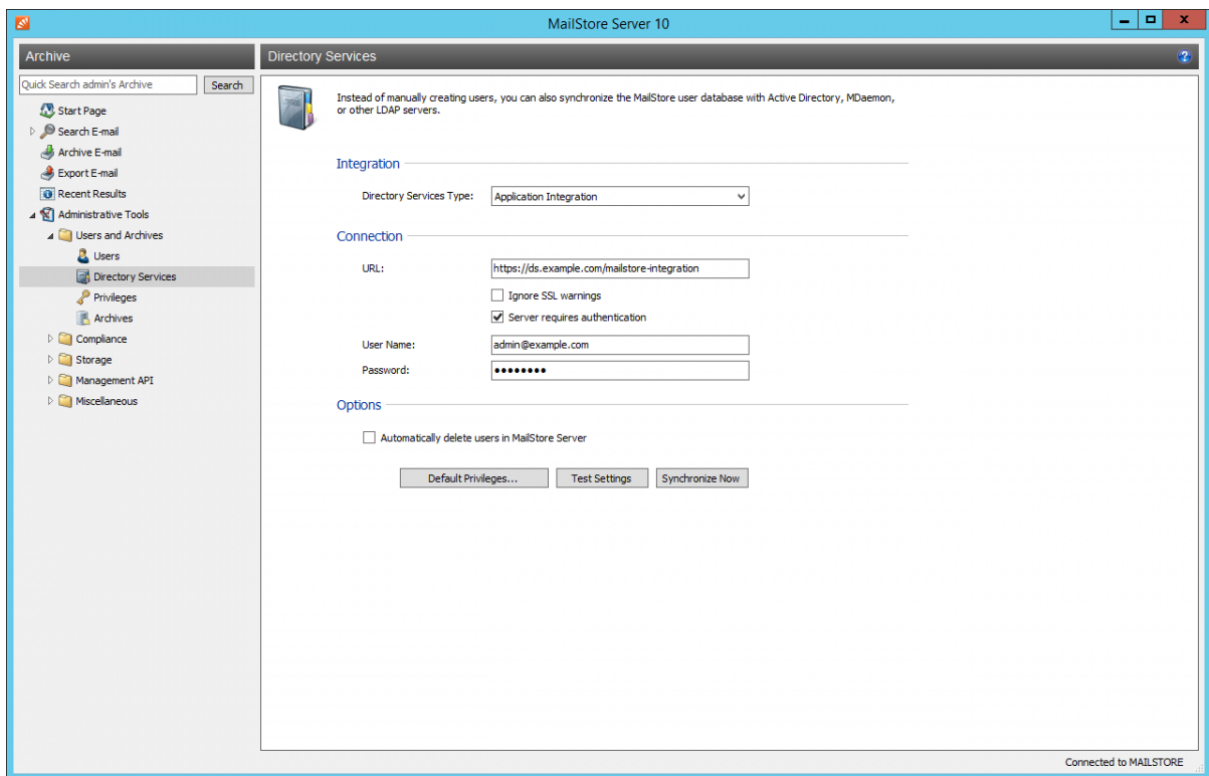
5.4 Application Integration

In addition to adding users manually as described in chapter User Management, MailStore Server can synchronize its internal user database with the Application Integration Server of your organization.

During synchronization, user information, such as user names and email addresses, is copied from the Application Integration Server into MailStore Server's user database. That way, users can use their Application Integration Server credentials to also log on to MailStore Server and emails can be assigned to their corresponding user archives automatically, for example. No changes are made to the Application Integration Server itself by MailStore Server. The scope of the synchronization can be limited through filters.

Accessing the Directory Service Configuration

- Log on to MailStore Client as a MailStore Server administrator.
- Click on *Administrative Tools > Users and Privileges* and then on *Directory Services*.
- In the *Integration* section, change the directory service type to *Application Integration*.



Connection to Application Integration Server

For synchronization MailStore Server requires information on how to connect to the the Application Integration server.

- **URL**
The URL where the Application Integration server is serving requests. When using a self signed or non-public SSL certificate on the Application Integration server, enable the *Ignore SSL warnings* option. If accessing the Application Integration server requires authentication , enable the *Server requires authentication* and enter the credential in the following fields:
- **User Name**
Name of user who has access to the Application Integration server
- **Password**
Password of the user who has access to Application Integration server

Options

- **Automatically delete users in MailStore Server**

Here you can choose whether users that have been deleted in the Application Integration Server will also be deleted in the MailStore user database by the synchronization. If the archive folder of such a user already contains archived emails, only the user entry but not its archive folder will be deleted in MailStore. Additionally, only MailStore users that have their authentication method set to *Directory Services* will be deleted.

Assigning Default Privileges

By default, users that have been synchronized to MailStore Server from Application Integration Server have the privilege to log on to MailStore Server as well as read access to their own user archive.

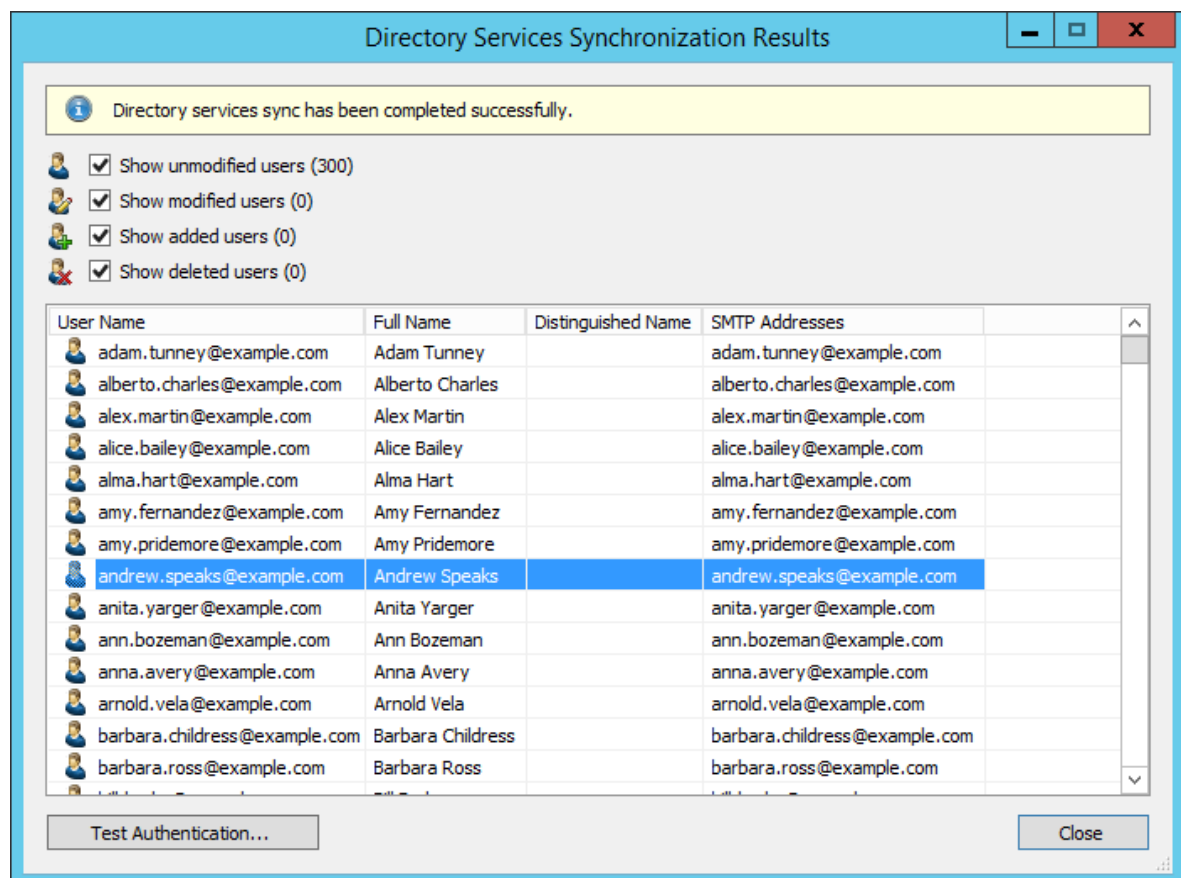
You can configure those default privileges before synchronization, for example, to assign the privilege *Archive E-mail* to all new users. To do this, click on *Default Privileges...*

More information on managing user privileges and their effects is available in the chapter Users, Folders and Settings which also has details on editing existing privileges.

Running Directory Services Synchronization

Click on *Test Settings* to check synchronization configuration and the results returned by the Application Integration Server without any changes to the MailStore Server user database being actually committed.

To finally run the synchronization, click on *Synchronize now*. The results are shown with any changes committed to the MailStore Server user database.



You can test the authentication for a user by first selecting him from the list and then clicking on the button on the lower left. You will now be asked for that user's password. Upon clicking OK you'll receive a message whether the authentication has been successful.

Login with Application Integration Server Credentials

After synchronization MailStore users can log on to MailStore Server with their Application Integration Server username and Application Integration Server password.

Application Integration Support in MDaemon Email Server

The MDaemon Email Server does support the Application Integration protocol. A guide on how to set up the MDaemon Email Server can be found here [1].

References

- [1] <https://www.altn.com/Support/KnowledgeBase/KnowledgeBaseResults/?Number=1134>

5.5 G Suite Integration

In addition to adding users manually as described in chapter User Management, MailStore Server can synchronize its internal user database with the G Suite account of your organization.

During synchronization, user information, such as user names and email addresses, is copied from the G Suite account into MailStore Server's user database. That way, users can use their G Suite credentials to also log on to MailStore Server and emails can be assigned to their corresponding user archives automatically, for example. No changes are made to the G Suite account itself by MailStore Server. The scope of the synchronization can be limited through filters.

Please note that on December 16th 2019, Google announced^[1] to limit access to G Suite accounts for less secure apps in the future. This affects any MailStore Server version prior to 13, which therefore will no longer be able to authenticate users against G Suite when trying to log into MailStore Server.

In MailStore Server 13, support for modern authentication methods via OAuth 2.0 & OpenID Connect as per Google's recommendation was introduced. Although MailStore Server 13 still comes with support for IMAP-based authentication, this document only covers the setup using modern authentication methods as required by Google in the future.

Prerequisites, Recommendations, Limitations

- To comply with Google's requirements for *Authorized redirect URIs* of OAuth 2.0 clients, MailStore Server must be accessible via an URI that ends with a public top-level domain. This does not necessarily mean that it must indeed be accessible from the Internet. Google uses the list from <https://publicsuffix.org> for validation.
- For best user experience, the certificate used by MailStore Server should be trusted by all client and the used web browsers. Using a certificate that is signed by an trusted certificate authority or using Let's Encrypt certificates is highly recommended.
- If users are supposed to login to MailStore Server from outside the organization's network without a VPN, using MailStore Client, MailStore Outlook Add-in or the Web Access, the URIs mentioned in this article must be resolvable via DNS on the Internet and port-forwardings to the MailStore Server computer must be set up on the firewall or router if necessary.
- When using Google to authenticate users at login, accessing the archive via IMAP is not possible for technical reasons.

Register Project with Google

Irregardless of whether own or third-party applications such as MailStore Server are supposed to interact with a G Suite account through Google APIs, they must be registered as a project with Google first. This is necessary to ensure that access by external applications is limited to a necessary minimum and that each application uses its own set of credentials to authenticate with Google.

Create New Project

To register a project for MailStore Server with Google, proceed as follows:

- Go to the Google Developers Console^[2].
- If prompted, login using a Google account of you G Suite organization. Logging in with a user that has admin privileges is highly recommended.
- If no project exists, click *Create Project* on the dashboard. Otherwise, open the project list by clicking on the project drop-down in the header bar and click *New project*.
- Type in a meaningful name into the *Project name* field, e.g. `MailStore Server`.
- Verify that *Organization* matches the desired organization and adjust the *Location* if needed.
- Click on *Create*.

Once the project has been created, make sure that it is selected in the project drop-down list before proceeding.

Add API Libraries

- Open the *Navigation menu* (☰) and select *APIs & Services > Library*.
- In the *API Library*, search and enable the following APIs and services:

Admin SDK

Gmail API

Customize Consent Screen

- Open the *Navigation menu* (☰) and select *APIs & Services > OAuth consent screen*.
- Under *User Type* select *Internal*.
- Click *Create*
- Type in a meaningful name into the *Application name* field, e.g. `MailStore Server`
- Click *Save*.

Create Service Account

A service account is required for MailStore Server to authenticate with Google and request authorization to use certain Google APIs for synchronizing users and accessing mailboxes. Follow these steps to create such a service account.

- Open the *Navigation menu* (☰) and select *APIs & Services > Credentials*.
- Click + *Create Credentials* and select *Service account* from the drop-down list.
- On the *Create service account* page, enter a name for the service account, e.g. `MailStore Server Service`.
- Enter a description such as: `Service account for MailStore Server to synchronize users and access mailboxes.`
- Click *Create*.
- The service account does not require permissions on project level, therefore do not select a role.
- Click *Continue*.
- Users do not need access to the service account, so no changes are needed in the *Grant users access to this service account* step.
- Click *Done*
- Back on the *Credentials* page, click on the newly created service account to open its properties.
- Under *Keys* click on *Add Key* and select *Create new key*.
- Select *JSON* as key type and click *Create*.
- The JSON file will be downloaded automatically. Save the JSON file in a secure location as it allows access to cloud resources of your organization.
- Click *Close*.
- Click *Show Domain-wide Delegation*.
- Tick the *Enable G Suite Domain-wide Delegation* box.
- Click *Save*.

On the *Credentials* page, there should be a service account listed under *Service Accounts* with a corresponding client listed under *OAuth 2.0 Client IDs*.

Create OAuth 2.0 Client for User Authentication

To allow users to log in to MailStore Server by authenticating with Google using the OpenID Connect mechanism, an OAuth 2.0 client must be created as described below.

- Open the *Navigation menu* (☰) and select *APIs & Services > Credentials*.
- Click + *Create Credentials* and select *OAuth client ID* from the drop-down list.
- Select *Web application as Application type*.
- Enter a *Name*, e.g. MailStore Server OpenID Connect.
- Click + *Add URI* under *Authorized redirect URIs*.
- Enter the URI that is reachable by clients in the *URIs* field using the the following scheme:

`https://<fqdn>[:<port>]/oidc/signin`

with the following components

`'https://''`

Specifying the protocol `https://` is mandatory. To prevent certificate warnings later at login, the certificate used by MailStore Server must be trusted by all client and the used web browsers.

FQDN

The fully qualified domain name of the MailStore Server computer, e.g. `mailstore.example.com`. This must be resolvable from all clients, from where users are supposed to log in to MailStore Server.

Port

The TCP port of MailStore Web Access (default: 8462). This must match the port configured in the MailStore Server Service Configuration at *Network Settings > Services > MailStore Web Access / Outlook Add-in (HTTPS)*. The TCP port is only required if it is different from the default port of the HTTPS protocol (443).

/oidc/signin

The path at which MailStore Server expects to receive the authentication response from Google via the web browser.

Examples of valid redirect URIs

Computername	DNS Domain	TCP Port	Resulting Redirect URI
mailstore	example.com	8462	<code>https://mailstore.example.com:8462/oidc/signin</code> Redirect URI with fully qualified domain name and MailStore Web Access default port.
mailstore	example.com	443	<code>https://mailstore.example.com/oidc/signin</code> If the HTTPS default port 443 is used for MailStore Web Access or as source of a port forwarding rule on a firewall, specifying the port as part of the redirect URI can be omitted.

- Click *Create* to finish.
- Copy the client ID and client secret from the *Your Client ID* and *Your Client Secret* fields to a safe place (e.g. password safe or similar) and click *OK*.

Grant Access on G Suite Account to Project

Once created, grant the new project fine-grained access to your G Suite account by defining the Google APIs it is allowed to use.

- Open the Google Admin console ^[3] and log in with a G Suite domain admin.
- Open the *Navigation menu* (☰) and select *Security > API controls*.
- Under *Domain wide delegation*, click *Manage domain wide delegation*.
- On the *Domain-wide delegation* page, click *Add new*.
- Enter the *Client ID* of the OAuth 2.0 Client that is linked with the service account.
- Under *OAuth Scope*, add the following scopes:

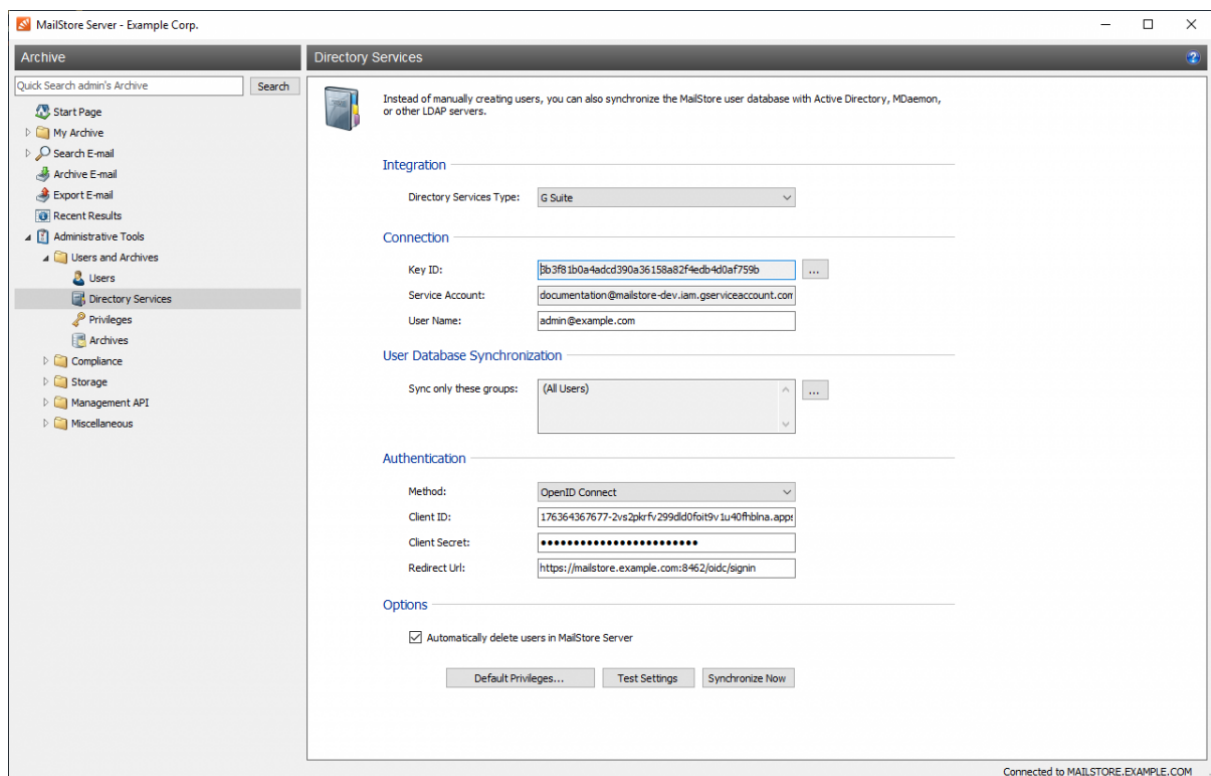
```
https://mail.google.com/,
https://www.googleapis.com/auth/admin.directory.group.readonly,
https://www.googleapis.com/auth/admin.directory.user.readonly
```

- Click *Authorize*.

Configure MailStore Server

After the project has been successfully set up on the Google side, MailStore Server can now be configured to synchronize and authenticate users with G Suite.

- Log on to MailStore Client as a MailStore Server administrator.
- Click on *Administrative Tools > Users and Privileges* and then on *Directory Services*.
- In the *Integration* section, change the directory service type to *G Suite*.



Connection

For synchronization, MailStore Server requires information on how to connect to the G Suite.

- **Key ID**
To import the private key, select the JSON file that has been generated by Google for the service account in the Create Service Account step.
- **Service Account**
The service account is determined automatically from the JSON file.
- **User Name**
The email address of a G Suite Administrator (e.g. admin@example.com).

User Database Synchronization

After configuring the connection settings as described above, you can specify filter criteria for the G Suite synchronization in this section.

- **Sync only these groups**
Choose one or several G Suite groups if you only want their members to be created as MailStore Server users. That way it's possible to exclude certain users from being synchronized to MailStore Server.

Authentication

The authentication settings define how MailStore Server should authenticate users at login, that have been synchronized from G Suite.

- **Method**
Ensure that *OpenID Connect* is selected. As mentioned in the introduction, the *IMAP* option is only available for backward compatibility.
- **Client ID**
Enter the client ID from the Create OAuth_2.0 Client... step.
- **Client Secret**
Enter the client secret from the Create OAuth_2.0 Client... step.
- **Redirect URI**
Enter the same redirect URI as defined in the Create OAuth 2.0 Client... step.

Options

- **Automatically delete users in MailStore Server**
Here you can choose whether users that have been deleted in the G Suite Account will also be deleted in the MailStore user database by the synchronization. If the archive folder of such a user already contains archived emails, only the user entry but not its archive folder will be deleted in MailStore. Additionally, only MailStore users that have their authentication method set to *Directory Services* will be deleted.

Assigning Default Privileges

By default, users that have been synchronized to MailStore Server from G Suite Account have the privilege to log on to MailStore Server as well as read access to their own user archive.

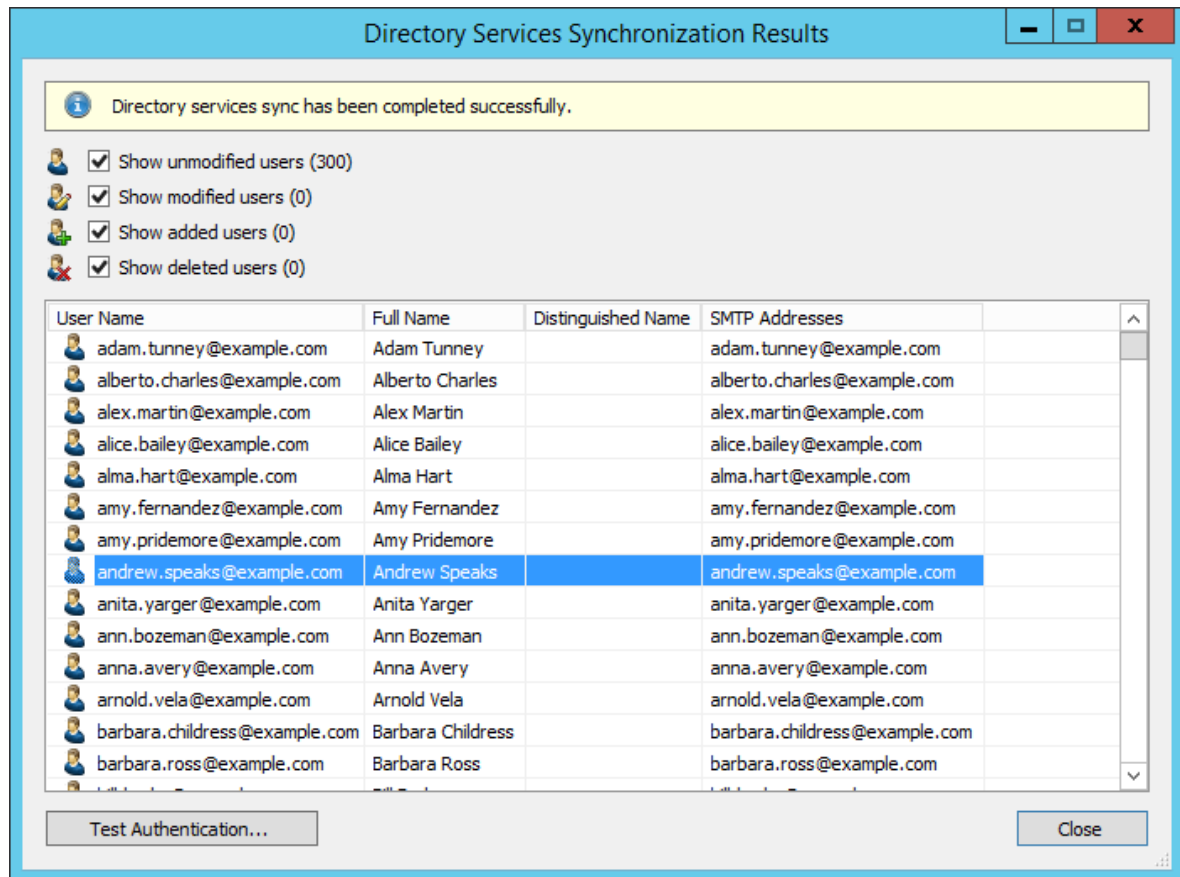
You can configure those default privileges before synchronization, for example, to assign the privilege *Archive E-mail* to all new users. To do this, click on *Default Privileges...*

More information on managing user privileges and their effects is available in the chapter Users, Folders and Settings which also has details on editing existing privileges.

Running Directory Services Synchronization

Click on *Test Settings* to check synchronization configuration and the results returned by the G Suite Account without any changes to the MailStore Server user database being actually committed.

To finally run the synchronization, click on *Synchronize now*. The results are shown with any changes committed to the MailStore Server user database.



You can test the authentication for a user by first selecting him from the list and then clicking on the button on the lower left. You will now be asked for that user's password. Upon clicking OK you'll receive a message whether the authentication has been successful.

References

- [1] <https://go.mailstore.com/?lang=en&target=gsuite-lsa-restriction>
- [2] <https://console.developers.google.com>
- [3] <https://admin.google.com/>

5.6 IceWarp Server Integration

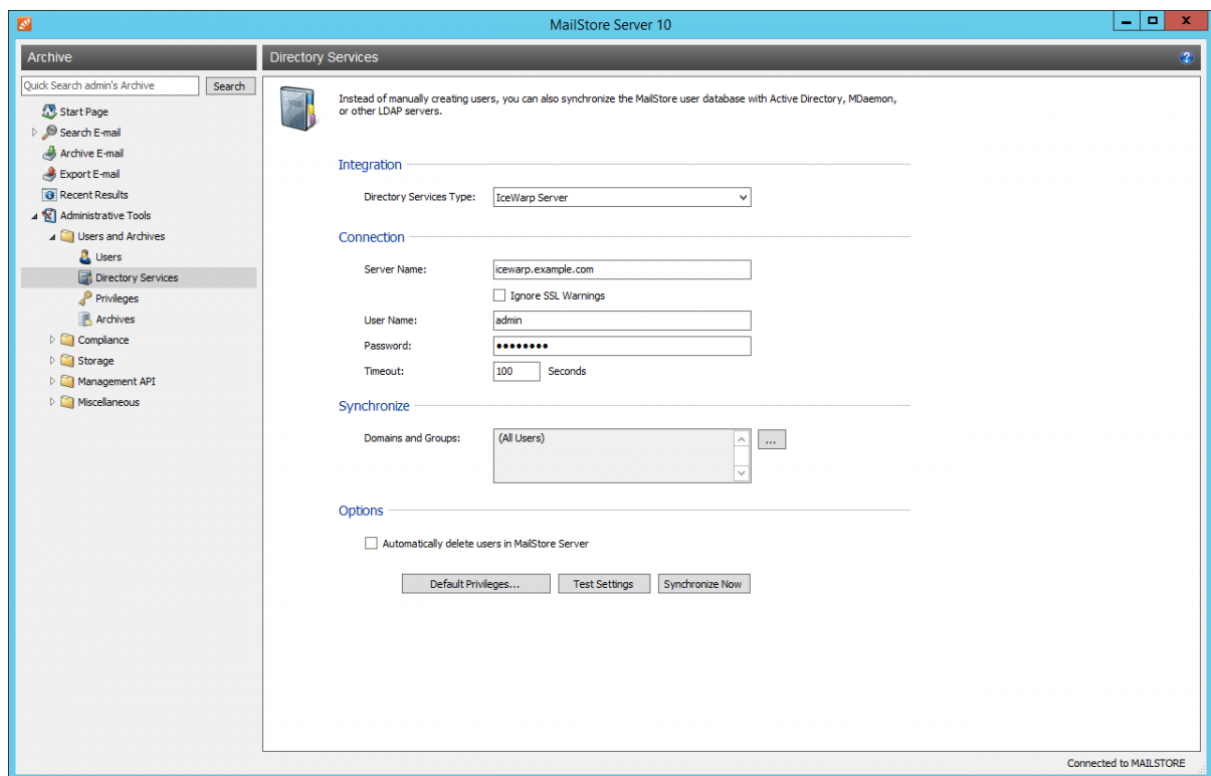
In addition to adding users manually as described in chapter User Management, MailStore Server can synchronize its internal user database with the IceWarp Server of your organization.

During synchronization, user information, such as user names and email addresses, is copied from the IceWarp Server into MailStore Server's user database. That way, users can use their IceWarp Server credentials to also log on to MailStore Server and emails can be assigned to their corresponding user archives automatically, for example. No changes are made to the IceWarp Server itself by MailStore Server. The scope of the synchronization can be limited through filters.

Please note: For using this feature, IceWarp Server API 10.4 or newer is required.

Accessing the Directory Service Integration

- Log on to MailStore Client as a MailStore Server administrator.
- Click on *Administrative Tools > Users and Privileges* and then on *Directory Services*.
- In the *Integration* section, change the directory service type to *IceWarp Server*.



Connection to the IceWarp Server

For synchronization MailStore Server requires information on how to connect to the IceWarp Server.

- **Server Name**
DNS name or IP address of the IceWarp server. If you use a self-signed or non-public SSL certificate on the IceWarp server, please set a checkmark next to *Ignore SSL Security Warnings*.
- **User Name**
Name of a user with administrative privileges on the IceWarp server.
- **Password**
Password of that user.
- **Timeout**
The timeout value for IceWarp API requests. For large IceWarp Server user databases it may be necessary to increase this value.

Synchronize

After configuring the connection settings as described above, you can specify filter criteria for the IceWarp Server user database synchronization in this section.

- **Domains and Groups**
Choose one or more domains or groups to let only their members be created as MailStore Server Users. If no domains or groups are selected, all users will be synchronized.

Options

- **Automatically delete users in MailStore Server**
Here you can choose whether users that have been deleted in the IceWarp Server will also be deleted in the MailStore user database by the synchronization. If the archive folder of such a user already contains archived emails, only the user entry but not its archive folder will be deleted in MailStore. Additionally, only MailStore users that have their authentication method set to *Directory Services* will be deleted.

Assigning Default Privileges

By default, users that have been synchronized to MailStore Server from an IceWarp Server have the privilege to log on to MailStore Server as well as read access to their own user archive.

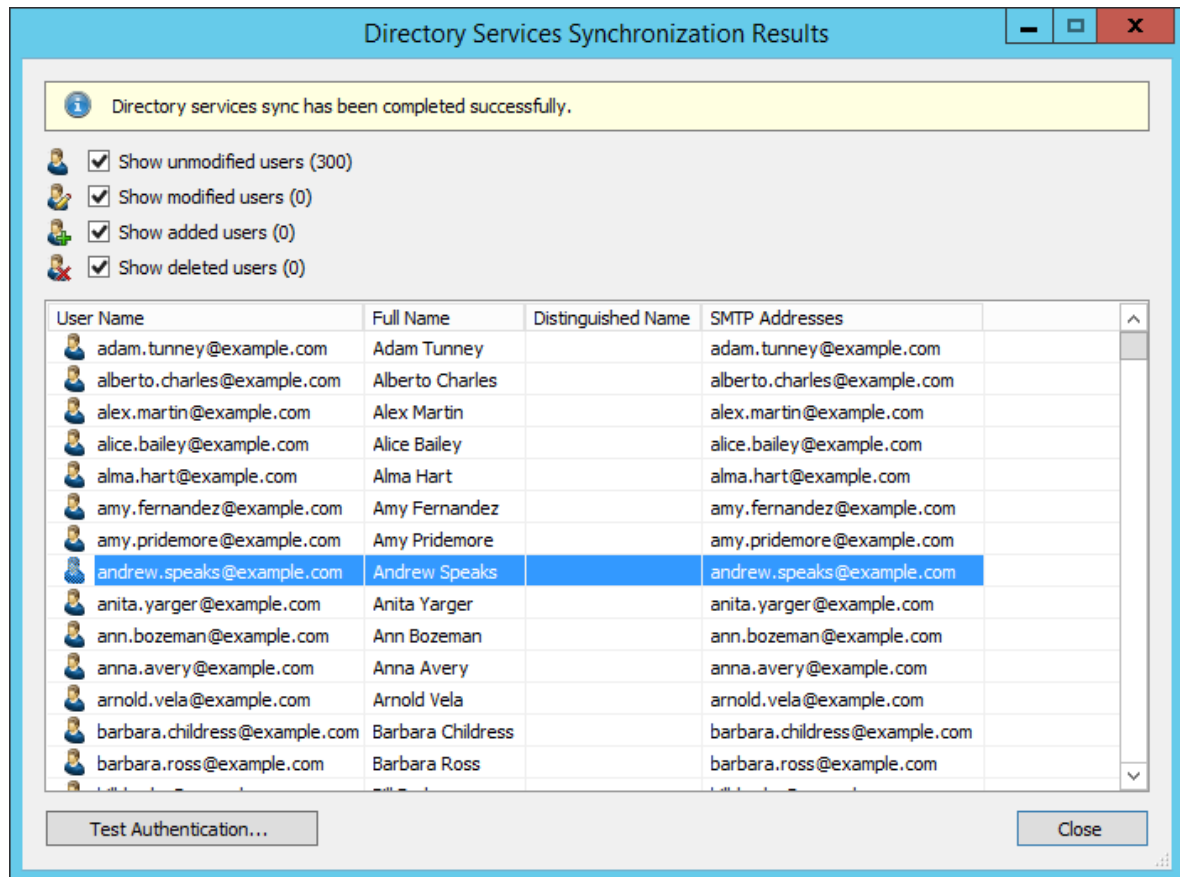
You can configure those default privileges before synchronization, for example, to assign the privilege *Archive E-mail* to all new users. To do this, click on *Default Privileges...*

More information on managing user privileges and their effects is available in the chapter Users, Folders and Settings which also has details on editing existing privileges.

Running Directory Services Synchronization

Click on *Test Settings* to check synchronization configuration and the results returned by the IceWarp Server without any changes to the MailStore Server user database being actually committed.

To finally run the synchronization, click on *Synchronize now*. The results are shown with any changes committed to the MailStore Server user database.



You can test the authentication for a user by first selecting him from the list and then clicking on the button on the lower left. You will now be asked for that user's password. Upon clicking OK you'll receive a message whether the authentication has been successful.

Important Notice: For authentication with the IceWarp Server to work, the respective MailStore Client has to be in a network that is trusted by the IceWarp Server.

Login with IceWarp Server Credentials

After synchronization MailStore users can log on to MailStore Server with their IceWarp Server username and IceWarp Server password.

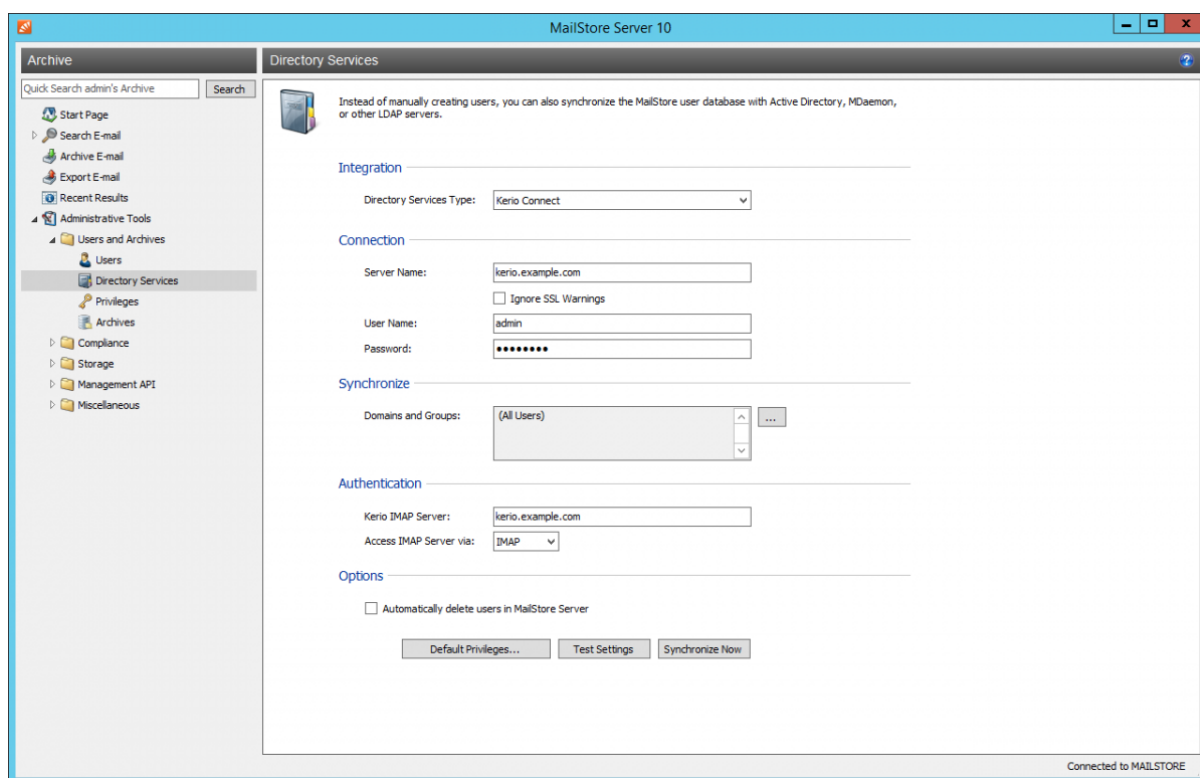
5.7 Kerio Connect Integration

In addition to adding users manually as described in chapter User Management, MailStore Server can synchronize its internal user database with the Kerio Connect of your organization.

During synchronization, user information, such as user names and email addresses, is copied from the Kerio Connect into MailStore Server's user database. That way, users can use their Kerio Connect credentials to also log on to MailStore Server and emails can be assigned to their corresponding user archives automatically, for example. No changes are made to the Kerio Connect itself by MailStore Server. The scope of the synchronization can be limited through filters.

Accessing the Directory Service Integration

- Log on to MailStore Client as a MailStore Server administrator.
- Click on *Administrative Tools > Users and Privileges* and then on *Directory Services*.
- In the *Integration* section, change the directory service type to *Kerio Connect*.



Connection to the Kerio Connect

For synchronization MailStore Server requires information on how to connect to the Kerio Connect.

- **Server Name**
DNS name or IP address of the Kerio Connect. If you use a self-signed or non-public SSL certificate on the Kerio Connect, please set a checkmark next to *Ignore SSL Security Warnings*. In case the Kerio Server is reachable over a non-default port (the default port is 4040), the port can be appended to the server name with a colon.
- **User Name**
Name of a user with administrative privileges on the Kerio Connect.
- **Password**
Password of that user.

Synchronize

After configuring the connection settings as described above, you can specify filter criteria for the Kerio Connect user database synchronization in this section.

- **Domains and Groups**
Choose one or more domains or groups to let only their members be created as MailStore Server Users. If no domains or groups are selected, all users will be synchronized.

Options

- **Automatically delete users in MailStore Server**
Here you can choose whether users that have been deleted in the Kerio Connect will also be deleted in the MailStore user database by the synchronization. If the archive folder of such a user already contains archived emails, only the user entry but not its archive folder will be deleted in MailStore. Additionally, only MailStore users that have their authentication method set to *Directory Services* will be deleted.

Authentication

As the Kerio Connect API only support synchronization, but not authentication of users, MailStore allows authenticate users via an IMAP login. To achieve this, you have to configure the following settings in the *Authentication* section:

- **Kerio IMAP Server**
Enter the IP address or the DNS name of the Kerio Connect server against which authentication should be performed.
- **IMAP Server Access**
Configure the connection protocol. Be aware that IMAP servers often expect the connection to be encrypted (IMAP-TLS, IMAP-SSL). Additionally activate the *Ignore SSL warnings* option if a self-signed or non-public certificate is used on the email server

Important Notice: If your Kerio Connect users authenticate against an Active Directory or if you store the passwords as SHA hashes, you must disable *CRAM-MD5* and *DIGEST-MD5* under *Configuration > Advanced Options > Security Policy* in your Kerio Connect Server. Otherwise users will not be able to log on to MailStore.

Assigning Default Privileges

By default, users that have been synchronized to MailStore Server from an Kerio Connect Server have the privilege to log on to MailStore Server as well as read access to their own user archive.

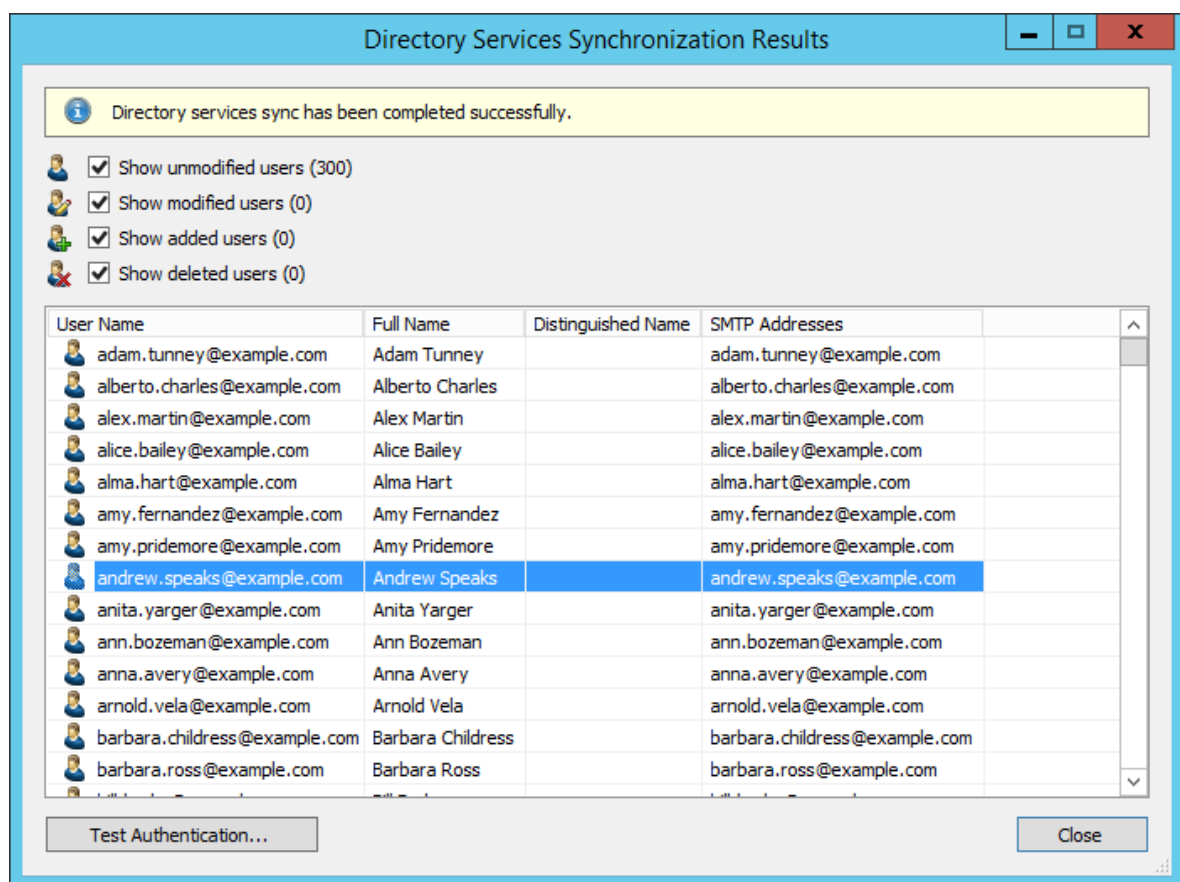
You can configure those default privileges before synchronization, for example, to assign the privilege *Archive E-mail* to all new users. To do this, click on *Default Privileges...*

More information on managing user privileges and their effects is available in the chapter *Users, Folders and Settings* which also has details on editing existing privileges.

Running Directory Services Synchronization

Click on *Test Settings* to check synchronization configuration and the results returned by the Kerio Connect without any changes to the MailStore Server user database being actually committed.

To finally run the synchronization, click on *Synchronize now*. The results are shown with any changes committed to the MailStore Server user database.



You can test the authentication for a user by first selecting him from the list and then clicking on the button on the lower left. You will now be asked for that user's password. Upon clicking OK you'll receive a message whether the authentication has been successful.

Login with Kerio Connect Credentials

After synchronization MailStore users can log on to MailStore Server with their Kerio Connect username and Kerio Connect password.

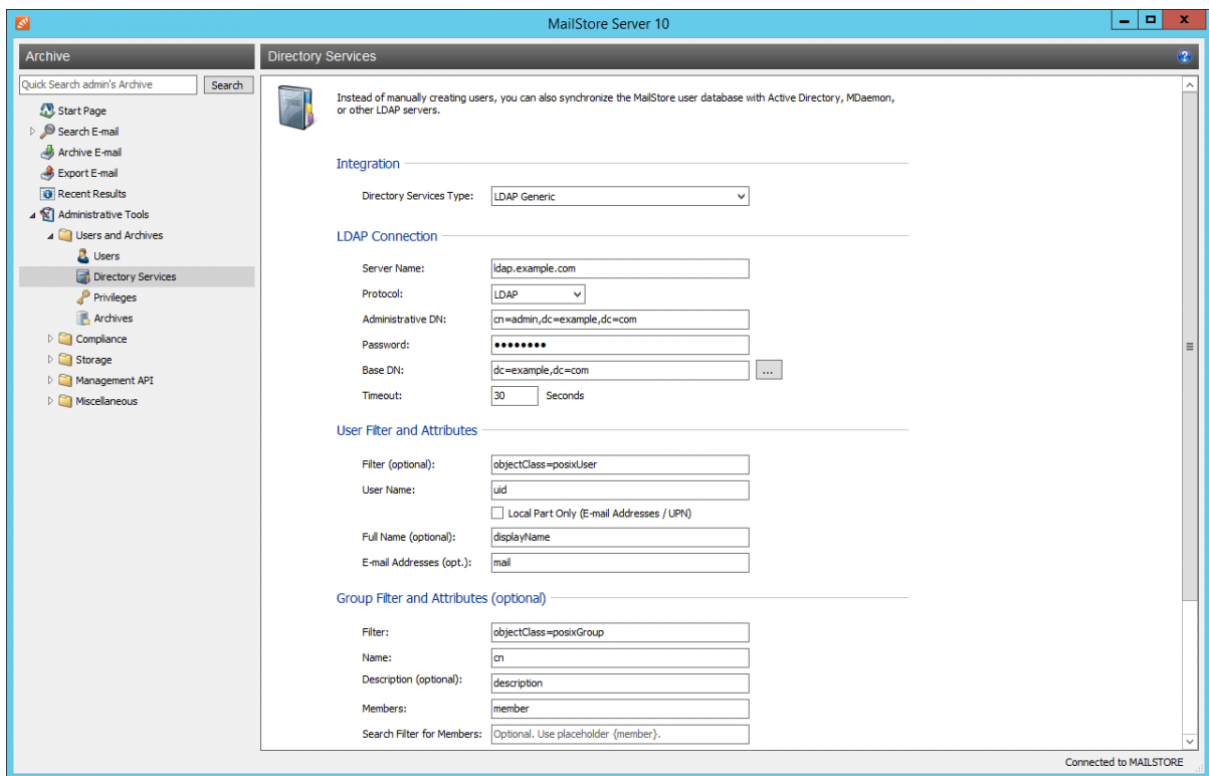
5.8 Generic LDAP Integration

In addition to adding users manually as described in chapter User Management, MailStore Server can synchronize its internal user database with the LDAP server of your organization.

During synchronization, user information, such as user names and email addresses, is copied from the LDAP server into MailStore Server's user database. That way, users can use their LDAP server credentials to also log on to MailStore Server and emails can be assigned to their corresponding user archives automatically, for example. No changes are made to the LDAP server itself by MailStore Server. The scope of the synchronization can be limited through filters.

Accessing Directory Service Integration

- Log on to MailStore Client as a MailStore Server administrator.
- Click on *Administrative Tools > Users and Privileges* and then on *Directory Services*.
- In the *Integration* section, change the directory service type to *LDAP server*.



Connection to the LDAP Directory Service

For synchronization MailStore Server requires information on how to connect to the LDAP directory service and how to obtain the required data from it.

LDAP Connection

Name	Description
Server Name	DNS name or IP address of your LDAP server
Protocol	Configure whether the connection to the LDAP server is to be unencrypted on port 389, LDAP-TLS on port 389, or LDAP-SSL on port 636
Ignore SSL Security Warnings (only when using LDAP-TLS or LDAP-SSL)	Permit connections when a self-signed or non-public certificate is used by the LDAP server
Administrative DN	Distinguished Name (DN) or user name of a user with appropriate privileges on the LDAP server
Password	Password of the user specified in Administrative DN
Base DN	LDAP base DN, if needed

User Filter and Attributes

Name	Description
Filter (optional)	Filter LDAP objects to return only user objects with email addresses
User Name	The LDAP attribute containing the username that you wish MailStore to use
Local Part Only (E-mail Addresses / UPN)	If unchecked, MailStore will use the full username including domain portion, e.g. <i>username@example.com</i> . If checked, MailStore will only use the local part of the User Name specified, e.g. the <i>username</i>
Full Name (optional)	The full name of the user, for display purposes within MailStore
E-mail Addresses (opt.)	The LDAP attribute containing the user's email address. This can contain multiple, comma separated, e-mail addresses

Group Filter and Attributes

Name	Description
Filter	LDAP filter to return only group objects
Name	The LDAP attribute that contains the common name of a group
Description (optional)	The LDAP attribute that contains a human readable description for each group
Members	The LDAP attribute that contains the common name of group members
Search Filter for Members	LDAP filter to resolve group members when members are not specified as a DN string as part of the group results. MailStore will fill in the <code>{member}</code> variable with values from the <i>Members</i> attribute
Group	The actual group(s) containing users that MailStore Server will synchronize

Options

Name	Description
Automatically delete users in MailStore Server	If enabled, MailStore will delete users from the local MailStore database when the user is deleted, removed from the filtered group, or falls out of scope based on the above LDAP filter settings

Assigning Default Privileges

By default, users that have been synchronized to MailStore Server from a directory service have the privilege to log on to MailStore Server as well as read access to their own user archive.

You can configure those default privileges before synchronization, for example, to assign the privilege *Archive E-mail* to all new users. To do this, click on *Default Privileges...*

More information on managing user privileges and their effects is available in the chapter Users, Folders and Settings which also has details on editing existing privileges.

Configuration Samples

Active Directory

It is possible to connect LDAP Generic to Active Directory, allowing for more flexibility and control than MailStore's built-in Active Directory support. For example, LDAP Generic will allow you to accept invalid or self-signed certificates, use custom filters or change which attributes are used by MailStore.

It is assumed that the Active Directory LDAP service is reachable by the MailStore instance on TCP port 389 or 636, including opening ports in the firewall, where applicable.

As most Active Directory configurations are quite similar, it will be possible to copy/paste most of the examples below, making only minor modifications based on your environment.

LDAP Connection

Name	Value	Description
Server Name	dc001.example.com	DNS name or IP address of an Active Directory domain controller.
Protocol	LDAP	Do not use transport encryption
	LDAP-TLS	Use TLS as transport encryption
	LDAP-SSL	Use SSL as transport encryption
Ignore SSL Security Warnings	<i>Enabled</i>	Establish a TLS/SSL encrypted connection, even if the certificate validation failed.
	<i>Disabled</i>	Do not establish a TLS/SSL encrypted connection, if the certificate validation failed.
Administrative DN	mailstore@example.com	Active Directory account for MailStore's use
Password	MySecretPassword	Password of the user specified in <i>Administrative DN</i> above
Base DN	<i>Empty</i>	LDAP base DN will be detected automatically in Active Directory environments

User Filter and Attributes

Name	Value	Description
Filter (optional)	<code>(objectCategory=User)</code>	All users
	<code>(&(objectCategory=User)(mail=*))</code>	All users with Active Directory e-mail addresses
	<code>(&(objectCategory=User)(proxyAddresses=*))</code>	All users with Exchange e-mail addresses
	<code>(&(objectCategory=User)(proxyAddresses=*)(mail=*))</code>	All users with Exchange e-mail addresses who are also listed in the global address book
User Name	<code>userPrincipalName</code>	Use Active Directory user name as MailStore user name
	<code>sAMAccountName</code>	Use pre-Windows 2000 user name as MailStore user name
Local Part Only (E-mail Addresses / UPN)	<i>Enabled</i>	Only use the local part from the Active Directory user name in UPN format
	<i>Disabled</i>	Use the full Active Directory user name in UPN format
Full Name (optional)	<code>displayName</code>	The user's visible name in Active Directory
E-mail Addresses (opt.)	<code>proxyAddresses</code>	Exchange environments
	<code>mail</code>	Non-Exchange environments

Group Filter and Attributes

Name	Value	Description
Filter	<code>(objectCategory=Group)</code>	All objects of category <i>Group</i> , usually all groups
Name	<code>cn</code>	Use the value of the LDAP attribute <i>CN</i> as group name
Description (optional)	<code>description</code>	Use the value of the LDAP attribute <i>description</i> as group name
Members	<code>member</code>	Use the value LDAP attribute <i>member</i> to determine group members
Search Filter for Members	<i>empty</i>	Group members are returned as Distinguished Names
Group	<code>MailStore Users</code>	Synchronize only users from the <i>MailStore Users</i> group

OpenLDAP

OpenLDAP is a commonly used LDAP server, configuration will require some knowledge of your LDAP environment.

It is assumed that the LDAP service is reachable by the MailStore instance on TCP port 389 or 636, including opening ports in the firewall, where applicable.

As OpenLDAP is very flexible, configuration options vary from server to server and you may need to make significant modifications to the examples below to fit the schema used in your environment.

LDAP Connection

Name	Value	Description
Server Name	<code>directory.example.com</code>	DNS name or IP address of the OpenLDAP server.
Protocol	LDAP	Do not use transport encryption
	LDAP-TLS	Use TLS as transport encryption
	LDAP-SSL	Use SSL as transport encryption
Ignore SSL Security Warnings	<i>Enabled</i>	Establish a TLS/SSL encrypted connection, even if the certificate validation failed.
	<i>Disabled</i>	Do not establish a TLS/SSL encrypted connection, if the certificate validation failed.
Administrative DN	<code>cn=admin,dc=example,dc=com</code>	LDAP username that MailStore should use for accessing the OpenLDAP server
Password	<code>MySecretPassword</code>	Password of the user specified in <i>Administrative DN</i> above
Base DN	<code>dc=example,dc=com</code>	The Base-DN of the LDAP directory

User Filter and Attributes

Name	Value	Description
Filter (optional)	<code>(objectClass=posixAccount)</code>	All objects of type <i>posixAccount</i> , usually all users
	<code>(&(objectClass=posixAccount)(mail=*))</code>	All users with configured email address
User Name	<code>uid</code>	Use the value of LDAP attribute <i>UID</i> as MailStore user name
	<code>cn</code>	Use the value of LDAP attribute <i>CN</i> as MailStore user name
Local Part Only (E-mail Addresses / UPN)	<i>Enabled</i>	Only use the local part from a user name in UPN format
	<i>Disabled</i>	Use the full user name in UPN format
Full Name (optional)	<code>displayName</code>	Use the value of LDAP attribute <i>displayName</i> as MailStore user name
E-mail Addresses (opt.)	<code>mail</code>	Use the values of LDAP attribute <i>mail</i> for the email addresses of MailStore users

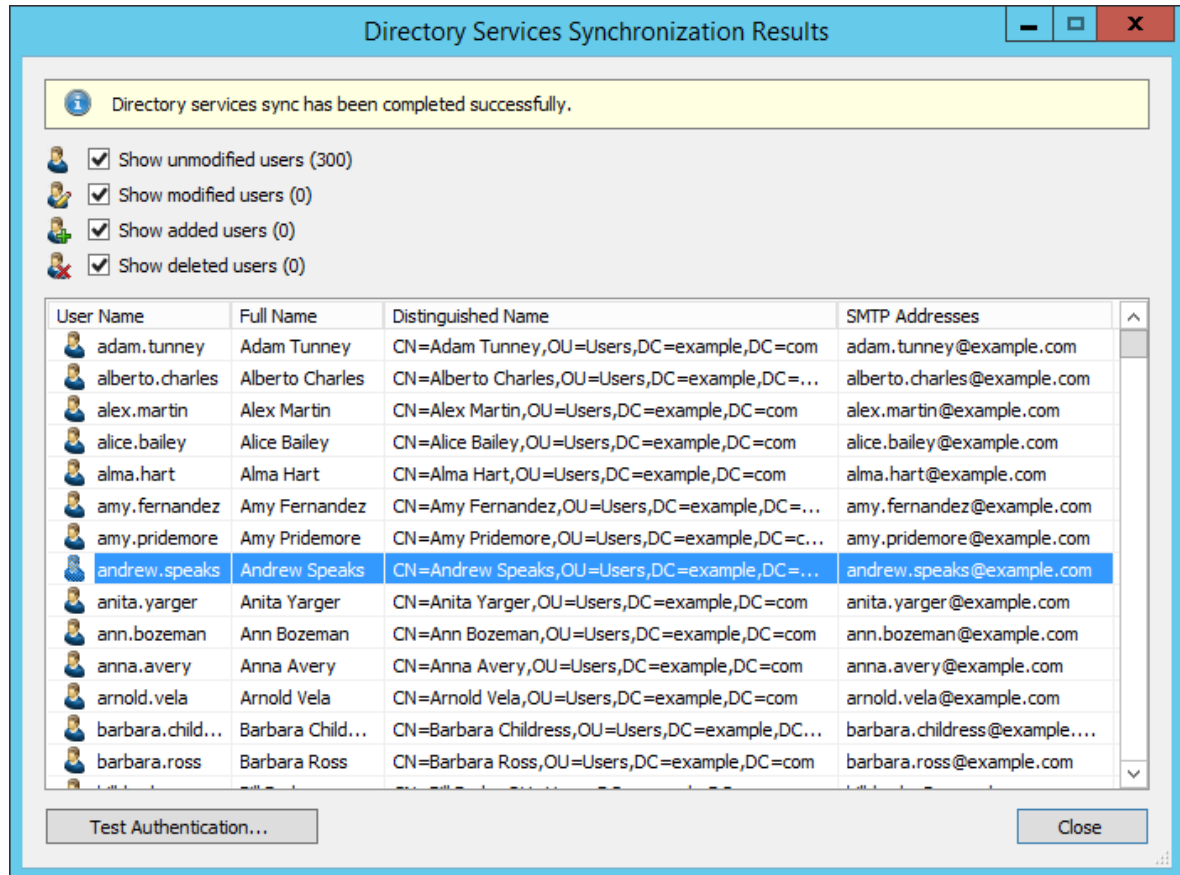
Group Filter and Attributes

Name	Value	Description
Filter	<code>(objectClass=posixGroup)</code>	All objects of category <i>posixGroup</i> , usually all groups
Name	<code>cn</code>	Use the value of the LDAP attribute <i>CN</i> as group name
Description (optional)	<code>description</code>	Use the value of the LDAP attribute <i>description</i> as group name
Members	<code>member</code>	Use the value LDAP attribute <i>member</i> to determine group members
Search Filter for Members	<code>empty</code>	Group members are returned as Distinguished Names
	<code>((& (objectClass=posixAccount) (uid={member})) (& (objectClass=posixGroup) (cn={member})))</code>	members in <i>memberUid</i> are only given as plain user or group names
Group	<code>MailStore Users</code>	Synchronize only users from the <i>MailStore Users</i> group

Running Directory Services Synchronization

Click on *Test Settings* to check synchronization configuration and the results returned by the directory service without any changes to the MailStore Server user database being actually committed.

To finally run the synchronization, click on *Synchronize now*. The results are shown with any changes committed to the MailStore Server user database.



You can test the authentication for a user by first selecting him from the list and then clicking on the button on the lower left. You will now be asked for that user's password. Upon clicking OK you'll receive a message whether the authentication has been successful.

Login with LDAP server Credentials

After synchronization MailStore users can log on to MailStore Server with their LDAP server username and LDAP server password.

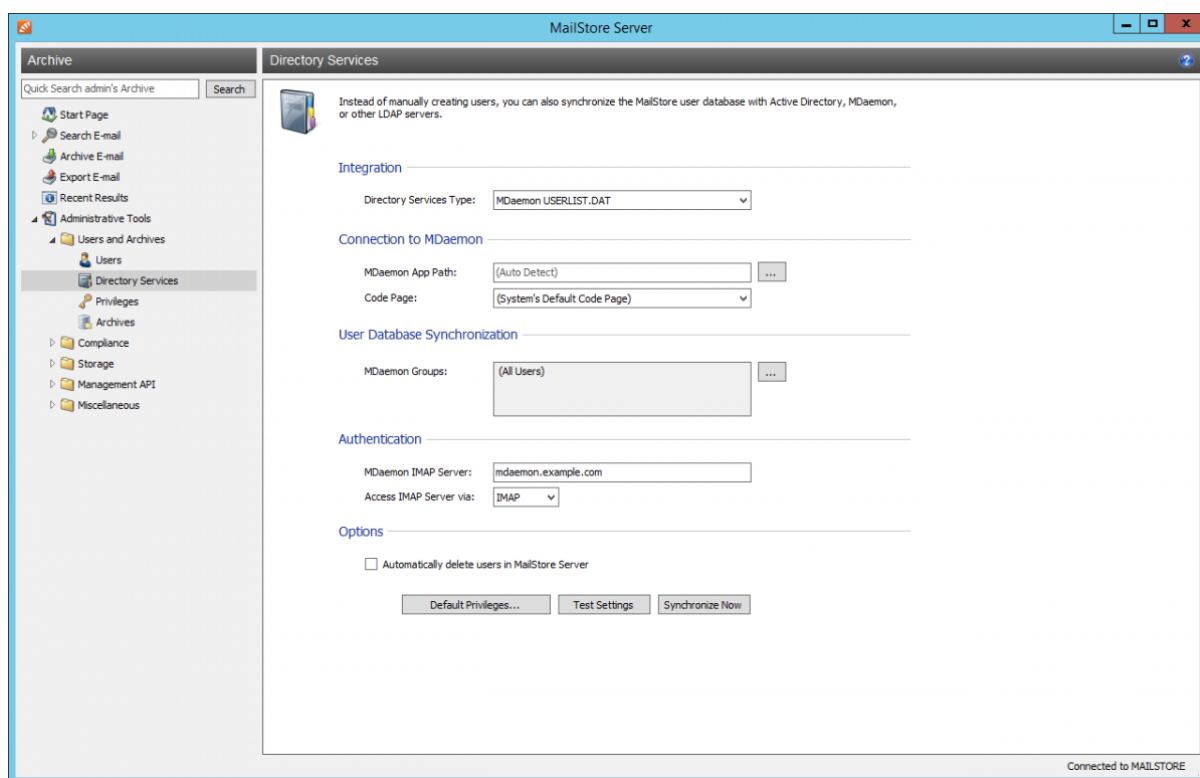
5.9 MDaemon Integration

In addition to adding users manually as described in chapter User Management, MailStore Server can synchronize its internal user database with the MDaemon Email Server of your organization.

During synchronization, user information, such as user names and email addresses, is copied from the MDaemon Email Server into MailStore Server's user database. That way, users can use their MDaemon Email Server credentials to also log on to MailStore Server and emails can be assigned to their corresponding user archives automatically, for example. No changes are made to the MDaemon Email Server itself by MailStore Server. The scope of the synchronization can be limited through filters.

Accessing the Directory Service Integration

- Log on to MailStore Client as a MailStore Server administrator.
- Click on *Administrative Tools > Users and Privileges* and then on *Directory Services*.
- In the *Integration* section, change the directory service type to *MDaemon Email Server*.



Connection to the MDaemon

For synchronization MailStore Server requires information on how to access the MDaemon App directory.

- **MDaemon App Directory**

Enter the path to the App directory of your MDaemon installation. The App directory contains the files *Userlist.dat* and *Groups.dat*. If MailStore Server is installed on the same computer as the MDaemon Email Server, the MDaemon App directory is detected automatically.

If MailStore Server is not installed on the same machine, share the App directory of the MDaemon Email Server with the MailStore Server computer and enter the share's UNC path into the field *MDaemon App Directory* (e.g. \\MDAEMON\MDApp).

Please note: To access the MDaemon App directory through a network share it may be necessary to configure a startup script for the MailStore Server Service.

- **Code Page**

You only have to change this option if the encoding of the files *Userlist.dat* and *Groups.dat* differs from the standard encoding of the MailStore Server computer.

User Database Synchronization

After configuring the connection settings as described above, you can specify filter criteria for the MDAemon user database synchronization in this section.

- **MDaemon Groups**

Choose one or more groups to let only their members be created as MailStore Server Users. If no groups are selected, all users will be synchronized.

Authentication

To achieve this, you have to configure the following settings in the *Authentication* section:

- **MDaemon IMAP Server**

Enter the IP address or the DNS name of the MDAemon Email Server against which authentication should be performed.

- **IMAP Server Access**

Configure whether the IMAP connection to the MDAemon Email Server should be unencrypted or IMAP-TLS/IMAP-SSL encrypted.

- **Ignore SSL Security Warnings (only when using IMAP-TLS or IMAP-SSL)**

Activate this option if a self-signed or non-public certificate is used for IMAP encryption on the MDAemon Email Server. Otherwise the authentication will permanently fail.

Important Notice: If your MDAemon users authenticate against an Active Directory, you must disable ... *honor APOP & CRAM-MD5* under *Setup > Default Domain / Servers > Default Domain & Servers > Servers* in your MDAemon Email Server. Otherwise users will not be able to log on to MailStore Server.

Options

- **Automatically delete users in MailStore Server**

Here you can choose whether users that have been deleted in the MDAemon Email Server will also be deleted in the MailStore user database by the synchronization. If the archive folder of such a user already contains archived emails, only the user entry but not its archive folder will be deleted in MailStore. Additionally, only MailStore users that have their authentication method set to *Directory Services* will be deleted.

Assigning Default Privileges

By default, users that have been synchronized to MailStore Server from an MDAemon Email Server have the privilege to log on to MailStore Server as well as read access to their own user archive.

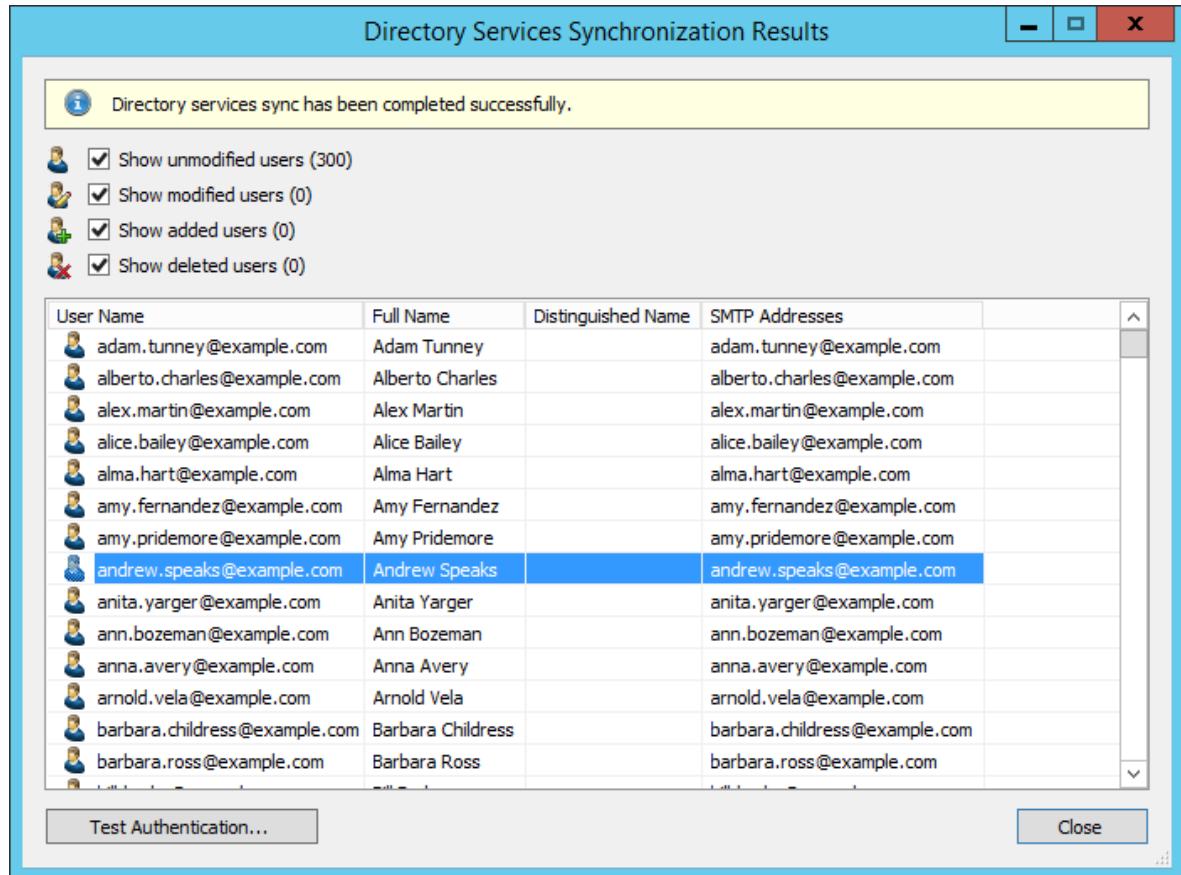
You can configure those default privileges before synchronization, for example, to assign the privilege *Archive E-mail* to all new users. To do this, click on *Default Privileges...*

More information on managing user privileges and their effects is available in the chapter *Users, Folders and Settings* which also has details on editing existing privileges.

Running Directory Services Synchronization

Click on *Test Settings* to check synchronization configuration and the results returned by the MDAemon Email Server without any changes to the MailStore Server user database being actually committed.

To finally run the synchronization, click on *Synchronize now*. The results are shown with any changes committed to the MailStore Server user database.



You can test the authentication for a user by first selecting him from the list and then clicking on the button on the lower left. You will now be asked for that user's password. Upon clicking OK you'll receive a message whether the authentication has been successful.

Login with MDAemon Credentials

After synchronization MailStore users can log on to MailStore Server with their MDAemon username and MDAemon password.

5.10 Synchronizing User Accounts with Microsoft 365 (Modern Authentication)

In addition to adding users manually as described in chapter User Management, MailStore Server can synchronize its internal user database with the Microsoft 365 tenant of your organization.

During synchronization, user information, such as user names and email addresses, is copied from the Microsoft 365 tenant into MailStore Server's user database. That way, users can use their Microsoft 365 credentials to also log on to MailStore Server and emails can be assigned to their corresponding user archives automatically, for example. No changes are made to the Microsoft 365 tenant itself by MailStore Server. The scope of the synchronization can be limited through filters.

Prerequisites, Recommendations and Limitations

- For best user experience, the certificate used by MailStore Server should be trusted by all clients and the used web browsers. Using a certificate that is signed by an trusted certificate authority or using Let's Encrypt certificates is highly recommended.
- If users are supposed to log in to MailStore Server from outside the organization's network without a VPN using MailStore Client, MailStore Outlook Add-in or the Web Access, the URIs mentioned in this article must be resolvable via DNS on the Internet and port-forwardings to the MailStore Server computer must be set up on the firewall or router if necessary.
- When using Microsoft 365 to authenticate users at login, accessing the archive via IMAP is not possible for technical reasons.

Connecting MailStore Server and Microsoft 365

In order to synchronize user information from Microsoft 365, MailStore Server has to be connected to your Microsoft 365 tenant and been granted the required permissions. Microsoft 365 relies on Azure Active Directory as directory service. Each Microsoft 365 tenant corresponds to an Azure AD tenant that stores its user information.

Registering of MailStore Server as App in Azure AD

Through registration, MailStore Server gets an identity in Azure AD that makes it possible to authenticate to the tenant's services and use their resources.

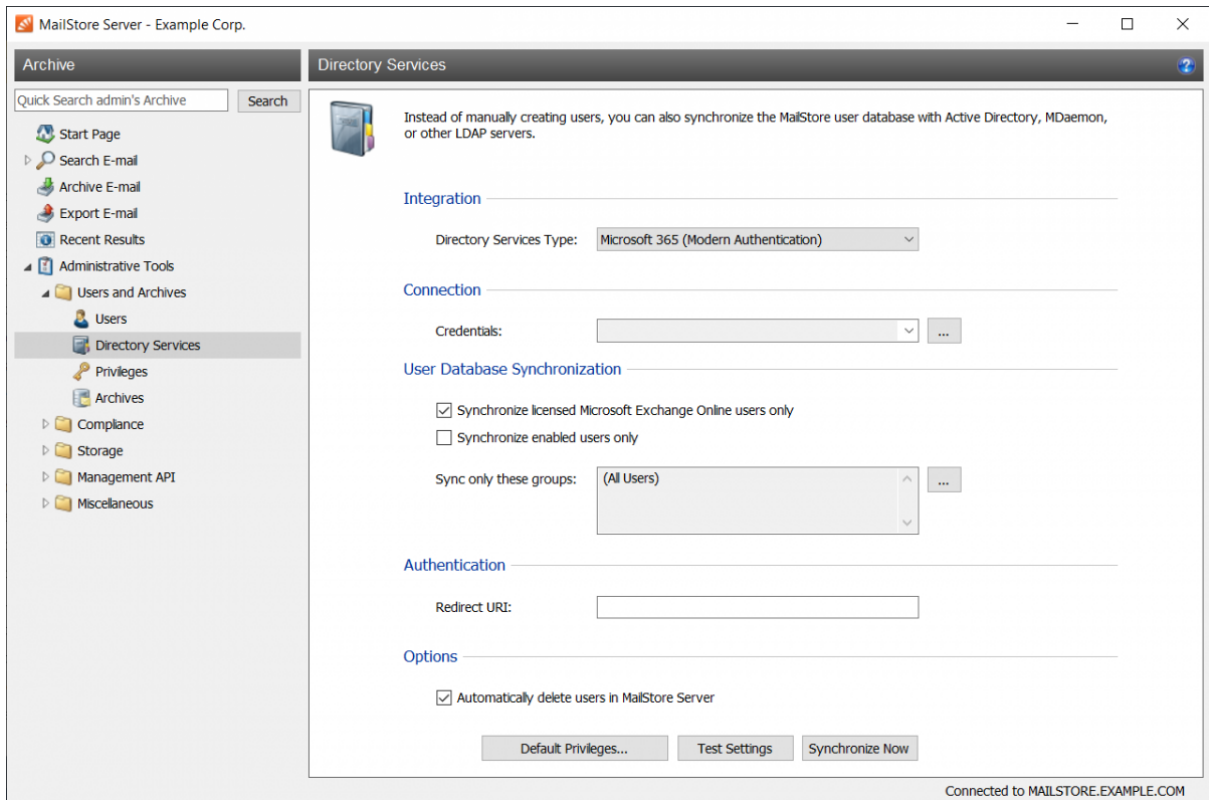
- Sign in to the Azure Portal ^[1] as a Global Administrator for your Microsoft 365 tenant.
- In the navigation menu (☰), select the option *Azure Active Directory*.
- On the next page, select *App registrations* in the *Manage* section of the left navigation menu.
- Select *New Registration*. The *Register an application* page appears.
- In the *Name* field, enter a meaningful display name, e.g. *MailStore Server*. This name will be shown to users on logon later on, for example.
- Leave all other settings on this page to their defaults.
- Click on *Register*. If the registration has been successful, you are shown the overview page of the newly registered app.

The *Application (client) ID* shown on this page identifies MailStore Server in your Azure AD tenant and has to be copied into MailStore Server next, together with the *Directory (tenant) ID*. Therefore, for the following steps, leave the overview page open in your web browser.

Creating Credentials in MailStore Server

Credentials for Microsoft 365 consist of the aforementioned IDs and a secret that MailStore Server uses to prove its identity to Azure AD. Microsoft recommends using certificates as secrets to identify apps in Azure AD. When creating credentials, such a certificate is generated automatically by MailStore Server but can also be recreated later on.

- Log on to MailStore Client as a MailStore Server administrator.
- Click on *Administrative Tools > Users and Privileges* and then on *Directory Services*.
- In the *Integration* section, change the directory service type to *Microsoft 365 (Modern Authentication)*.



- In the *Connection* section, click on the button (...) next to the *Credentials* drop-down list.
- In the *Credential Manager* that appears, click on *Create...*
- In the *Azure AD App Credentials* dialog, enter the following information in the *Settings* section:
 - **Name**
A meaningful display name for the credentials, e.g. the name of your Microsoft 365 tenant.
 - **Application (client) ID**
The value of the corresponding field that you can copy from the Azure AD app overview page in your web browser.
 - **Directory (tenant) ID**
The value of the corresponding field that you can copy from the Azure AD app overview page in your web browser.

- In the *Authentication* section, click on the drop-down button next to the *Certificate* text box and select *Download Certificate*. Save the certificate on your hard drive.
- Confirm your entries by clicking *OK*.
- The newly created credentials are listed in the *Credential Manager* under the name you have entered with the type *Microsoft 365*. Here you can also edit or delete existing credentials if necessary.
- Leave the *Credential Manager* by clicking *Close*.
- The newly created credentials are selected in the corresponding drop-down list by default.

Publishing Credentials in Azure AD

For Azure AD to validate the identity of MailStore Server, the created certificate needs to be published in Azure AD.

- Switch to the Azure AD app overview page in your web browser.
- Select *Certificates & secrets* in the *Manage* section of the left navigation menu.
- Click on *Upload certificate* in the *Certificates* section. Select the certificate file that you have saved previously and upload it to Azure AD by clicking *Add*.
- If uploading has been successful, the certificate's thumbprint as well as its start and expiry dates appear in the certificates list. You can compare the thumbprint and expiry date with those listed in the MailStore Credential Manager to check that you've uploaded the correct certificate.

Configuring App Authentication in Azure AD

For Azure AD to return the result of a user's authentication request to MailStore Server, the endpoint where MailStore Server expects authentication responses, the so-called *Redirect URI*, has to be conveyed to Azure AD.

- In the Azure Portal in the web browser, select *Authentication* in the *Manage* section of the left navigation menu.
- Click on the *Add a platform* button in the *Platform configurations* section of the *Authentication* page.
- Select *Web* in the *Web applications* section of the *Configure platforms* menu page.
- In the field *Redirect URI*, enter a URI in the format (without brackets)

`https://<fqdn>[:<port>]/oidc/signin`

with the following components:

`https://"`

Specifying the `https://` protocol is obligatory. To avoid certificate warnings during user login, the web browsers on the client machines must trust the certificate used by MailStore Server.

FQDN

The Fully Qualified Domain Name (FQDN) of your MailStore Server that consists of the machine name and the DNS domain, e.g. `mailstore.example.com`. This name must be resolvable by all clients from which users shall be able to log on to MailStore Server.

Port

The TCP port of the MailStore Web Access (8462 by default). This value must be equal to the port configured in the section *Base Configuration > Network Settings > MailStore Web Access / Outlook Add-in (HTTPS)* of the MailStore Server Service Configuration. The TCP port has to be specified only if it is different from the default port of the HTTPS protocol (443).

/oidc/signin

The endpoint where MailStore Server expects the authentication responses of Azure AD. This path has to be specified exactly as stated here at the end of the redirect URI.

Examples for valid redirect URIs

Machine Name	DNS Domain	TCP Port	Resulting Redirect URI
mailstore	example.com	8462	<code>https://mailstore.example.com:8462/oidc/signin</code> Redirect URI with Fully Qualified Domain Name and MailStore Web Access default port
mailstore	example.com	443	<code>https://mailstore.example.com/oidc/signin</code> The port can be omitted if the HTTPS default port 443 has been configured for MailStore Web Access or as source port of a port-forwarding on the firewall or router.

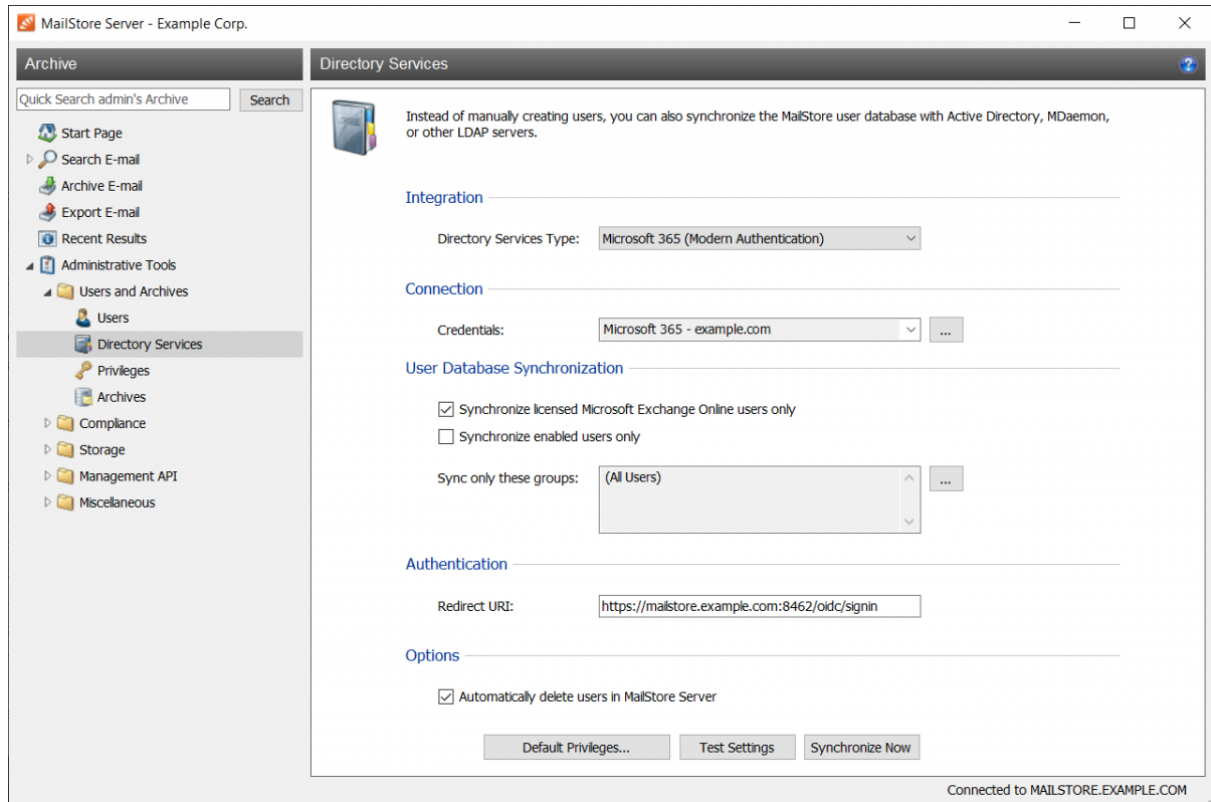
Important Notice: Please note that the redirect URI is case-sensitive. Also review the requirements on resolving URIs in the Prerequisites, Recommendations and Limitations section.

- Leave the field *Logout URL* blank.
- Enable the *ID tokens* option in the *Implicit grant* section.
- Click on *Configure* to finish the configuration of the app authentication in Azure AD.

Configuring the Redirect URI in MailStore Server

For MailStore Server to convey the redirect URI to requesting clients, it must be configured there, too.

- Switch to the *Directory Services* page in the MailStore Client.
- Enter the redirect URI in the corresponding field in the *Authentication* section. Just copy the value previously configured in Azure AD from the web browser.



Configuring API Permissions in Azure AD

- Switch again to Azure AD in your web browser.
- Select *API permissions* in the *Manage* section of the left navigation menu.
- Click on the *Add a permission* button in the *Configured permissions* section.
- On the *Request API permissions* menu page, select the *API Microsoft Graph* in the *Commonly used Microsoft APIs* section.
- Select the option *Application permissions*.
- Enable the *Directory > Directory.Read.All* permission in the *Select permissions* section.
- Click on *Add permissions*.
- The permissions are updated and the *Directory.Read.All* permission appears in the API permissions list under *Microsoft Graph*.
- Click on the *Add a permission* button in the *Configured permissions* section again.
- On the *Request API permissions* menu page, select the *API Exchange* in the *Supported legacy APIs* section.
- Select the option *Application permissions*.
- Enable the *full_access_as_app* permission in the *Select permissions* section.
- Click on *Add permissions*.
- The permissions are updated and the *full_access_as_app* permission appears in the API permissions list under *Exchange*.
- Now click on the *Grant admin consent for <your tenant name>* button in the *Configured permissions* section.
- Acknowledge the following notice with *Yes*.

- The status of all granted permissions is updated to *Granted for <your tenant name>*.

The configuration of MailStore Server's connection to Microsoft 365 within Azure AD is now complete. You can sign out of your Azure AD tenant and close the browser window. Switch to the *Directory Services* page in the MailStore Client again, all remaining configuration steps must be done there.

User Database Synchronization

After configuring the connection settings as described above, you can specify filter criteria for the Microsoft 365 synchronization in this section.

- **Synchronize licensed Microsoft Exchange Online users only**
Only Microsoft 365 user accounts with a Microsoft Exchange Online license assigned to them will be taken into account by the synchronization.
- **Synchronize enabled users only**
Only Microsoft 365 user accounts that do not have their login to Microsoft 365 blocked will be taken into account by the synchronization.
- **Sync only these groups**
Choose one or several Microsoft 365 groups if you only want their members to be created as MailStore Server users. That way it's possible to exclude certain users from being synchronized to MailStore Server.

Options

- **Automatically delete users in MailStore Server**
Here you can choose whether users that have been deleted in the Microsoft 365 tenant will also be deleted in the MailStore user database by the synchronization. If the archive folder of such a user already contains archived emails, only the user entry but not its archive folder will be deleted in MailStore. Additionally, only MailStore users that have their authentication method set to *Directory Services* will be deleted.

Assigning Default Privileges

By default, users that have been synchronized to MailStore Server from Microsoft 365 have the privilege to log on to MailStore Server as well as read access to their own user archive.

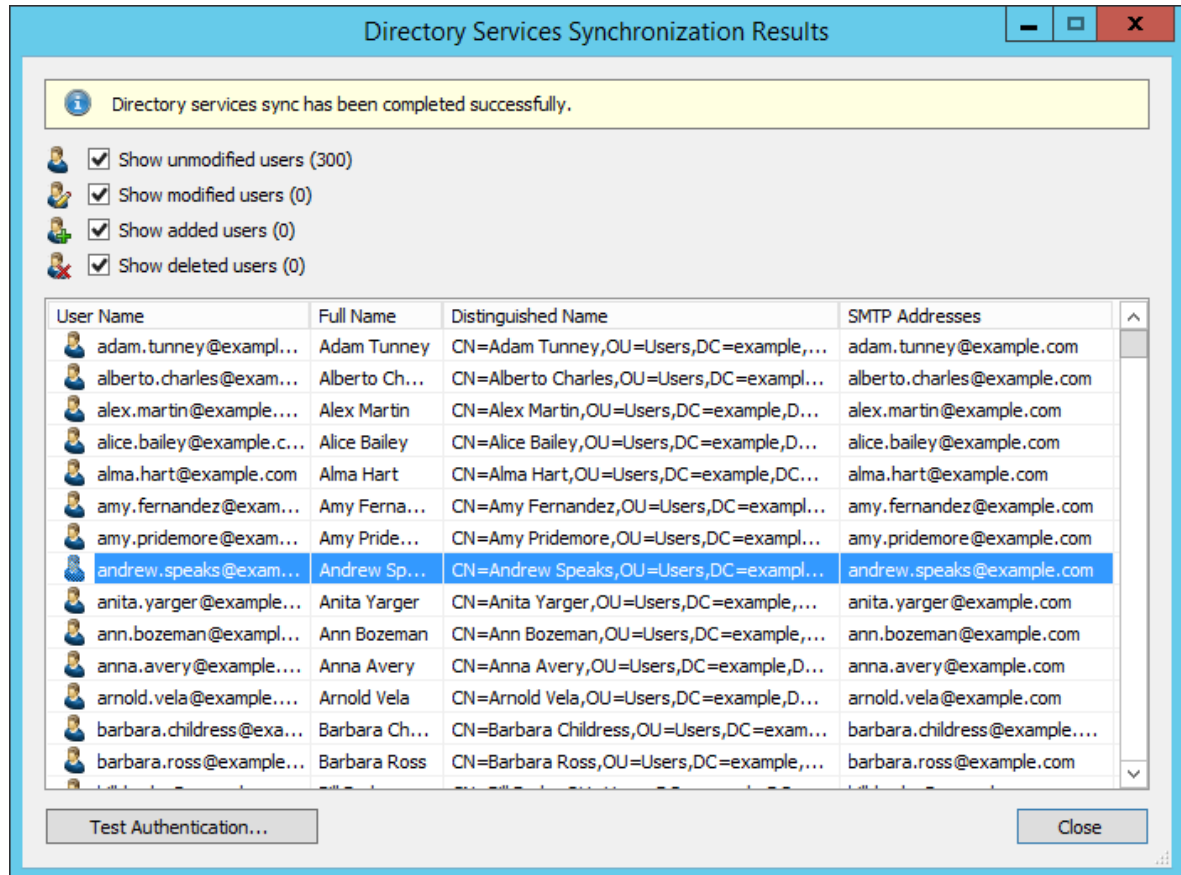
You can configure those default privileges before synchronization, for example, to assign the privilege *Archive E-mail* to all new users. To do this, click on *Default Privileges...*

More information on managing user privileges and their effects is available in the chapter *Users, Folders and Settings* which also has details on editing existing privileges.

Running Directory Services Synchronization

Click on *Test Settings* to check synchronization configuration and the results returned by the Microsoft 365 tenant without any changes to the MailStore Server user database being actually committed.

To finally run the synchronization, click on *Synchronize now*. The results are shown with any changes committed to the MailStore Server user database.



You can test the authentication for a user by first selecting him from the list and then clicking on the button on the lower left. You will now be asked for that user's password. Upon clicking OK you'll receive a message whether the authentication has been successful.

References

- [1] <https://portal.azure.com>

5.11 Synchronizing User Accounts with Microsoft 365 (Basic Authentication)

Information in this document is no longer maintained and may no longer be up-to-date. Furthermore, we reserve the right remove this feature in a future MailStore Server version.

On September 20th, 2019 Microsoft announced ^[1] the end of support for Basic Authentication for Exchange Online APIs in the future. This affects any MailStore Server version prior to 13, which will therefore no longer be able to authenticate users against Microsoft 365 when trying to log into MailStore Server.

In MailStore Server 13, support for modern authentication methods via OAuth 2.0 & OpenID Connect as per Microsoft's recommendation was introduced. Therefore, please refer to the chapter Synchronizing User Accounts with Microsoft 365 (Modern Authentication).

In addition to adding users manually as described in chapter User Management, MailStore Server can synchronize its internal user database with the Office 365 tenant of your organization.

During synchronization, user information, such as user names and email addresses, is copied from the Office 365 tenant into MailStore Server's user database. That way, users can use their Office 365 credentials to also log on to MailStore Server and emails can be assigned to their corresponding user archives automatically, for example. No changes are made to the Office 365 tenant itself by MailStore Server. The scope of the synchronization can be limited through filters.

Important notice: User authentication against Office 365 requires the Exchange Online feature *EWS Application support* for the plan of the user that wants to authenticate. Please make sure that your Office 365 plan supports this feature. More information is available in this TechNet article ^[2].

Preparing the Office 365 tenant

In order to synchronize user account information from Office 365, MailStore Server requires a service principal which has been granted permission to access the Office 365 tenant. The service principal represents MailStore Server in the Office 365 tenant and makes it possible to authenticate to the tenant's services and use their resources.

Installing the Azure Active Directory Module

Office 365 relies on Azure Active Directory as directory service. Each Office 365 tenant corresponds to an Azure AD tenant where its user information is being stored. In order to create a service principal, the necessary PowerShell module *Microsoft Azure Active Directory Module for Windows PowerShell* has to be installed first.

This module requires PowerShell 5.1 or higher on a 64-bit operating system to work correctly. PowerShell 5.1 is part of current builds of Windows 10 and Windows Server 2016. For other Windows versions, you have to install it as part of the Windows Management Framework.

These prerequisites as well as instructions on how to install them are available directly from Microsoft.

Follow the instructions with the cmdlets that include *Msol* and NOT those that include *AzureAD*.

Windows Management Framework ^[3]

Connect to Office 365 PowerShell ^[4]

Creating a service principal

Once the PowerShell module has been installed, a service principal can be created in the Azure AD by following these steps:

1. Open a PowerShell Session.
2. The command to connect to the Office 365 Azure AD tenant depends on its Azure Cloud:

Global Azure Cloud

In case your Office 365 Azure AD tenant resides in the global Azure Cloud enter the following command

```
Connect-MsolService -AzureEnvironment AzureCloud
```

Azure Germany Cloud

In case your Office 365 Azure AD tenant resides in the Azure Germany Cloud enter the following command

```
Connect-MsolService -AzureEnvironment AzureGermanyCloud
```

Azure China Cloud

In case your Office 365 Azure AD tenant resides in the Azure China Cloud enter the following command

```
Connect-MsolService -AzureEnvironment AzureChinaCloud
```

3. A login dialog opens. Enter admin credentials of your Office 365 plan.
4. Create a new service principal and store its value in the *\$principal* variable by entering

```
$principal = New-MsolServicePrincipal -DisplayName 'MailStoreSP' -ServicePrincipalNames @("MailStoreSP")  
-Type Password -Value 'use_a_password_of_your_choice_here' -StartDate (Get-Date) -EndDate  
(Get-Date).AddYears(1)
```

Please note

The service principal's password is valid for one year from its creation date by default. Additional information can be found on MSDN ^[5].

5. For the service principal to be able to read information from the Azure AD tenant, assign the *Directory Readers* role by entering

```
Add-MsolRoleMember -RoleName "Directory Readers" -RoleMemberType ServicePrincipal -RoleMemberObjectId  
$principal.ObjectId
```

6. *Optional:* To get a list of all ServicePrincipalCredential objects (e.g. passwords) that are bound to ServicePrincipals that contain *MailStore*, enter:

```
Get-MsolServicePrincipal -SearchString "MailStore" | % { Write-Host "DisplayName:" $_.DisplayName;Write-Host  
"ServicePrincipalNames:" $_.ServicePrincipalNames;Write-Host "ObjectId:"  
$_.ObjectId;Get-MsolServicePrincipalCredential -ObjectId $_.ObjectId -ReturnKeyValues $true }
```

Accessing Directory Service Integration

- Log on to MailStore Client as a MailStore Server administrator.
- Click on *Administrative Tools > Users and Privileges* and then on *Directory Services*.
- The directory service type depends on the Azure Cloud of your Office 365 Azure AD tenant:

Globale Azure Cloud

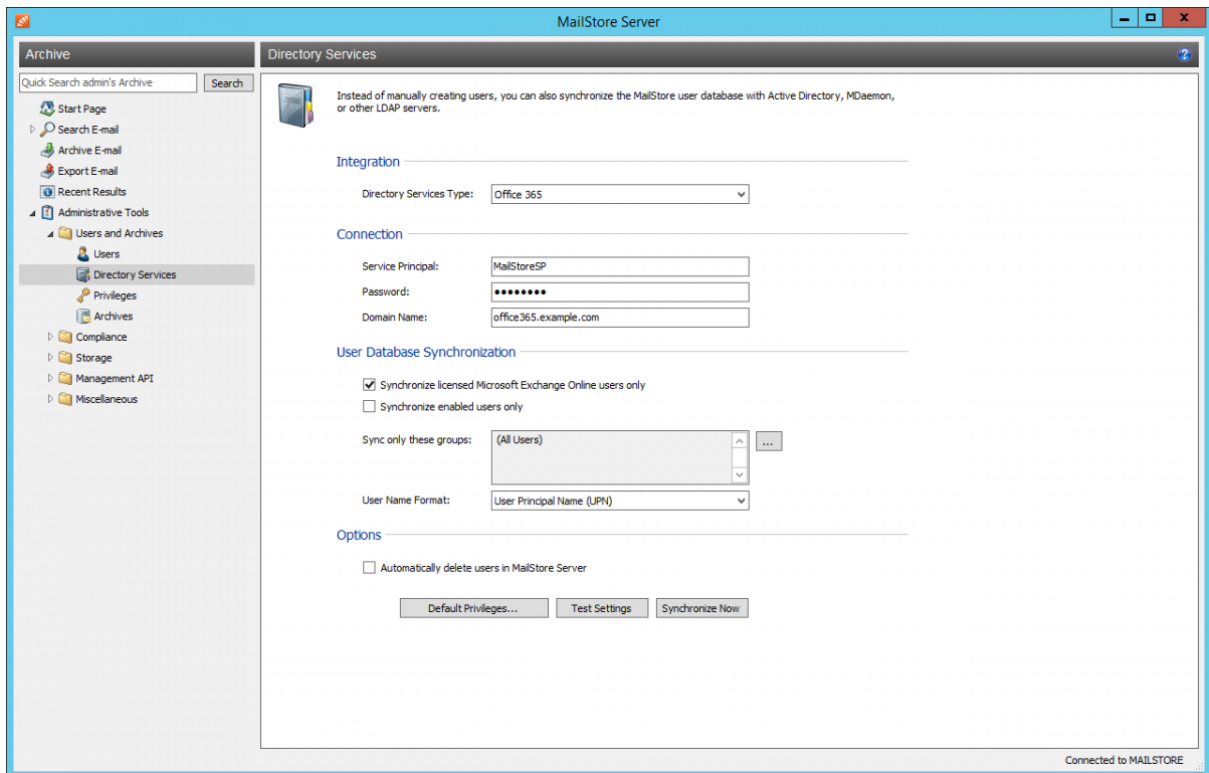
If your Office 365 Azure AD tenant resides in the global Azure Cloud, chose the directory service type *Office 365*.

Azure Germany Cloud

If your Office 365 Azure AD tenant resides in the Azure Germany Cloud, chose the directory service type *Office 365 Germany*.

Azure China Cloud

If your Office 365 Azure AD tenant resides in the Azure China Cloud, chose the directory service type *Office 365 operated by 21 Vianet*.



Connecting to Office 365

For synchronization MailStore Server requires information on how to connect to Office 365.

- **Service Principal**
The *service principal name* of the service principal (e.g. *MailStoreSP*).
- **Password**
The *password* of the service principal.
- **Domain Name**
An email domain in the Office 365 tenant.

User Database Synchronization

After configuring the connection settings as described above, you can specify filter criteria for the Office 365 synchronization in this section.

- **Synchronize licensed Microsoft Exchange Online users only**
Only Office 365 user accounts with a Microsoft Exchange Online license assigned to them will be taken into account by the synchronization.
- **Synchronize enabled users only**
Only Office 365 user accounts that do not have their login to Office 365 blocked will be taken into account by the synchronization.
- **Sync only these groups**
Choose one or several Office 365 groups if you only want their members to be created as MailStore Server users. That way it's possible to exclude certain users from being synchronized to MailStore Server.
- **User Name Format**
Choose which naming scheme MailStore user names should follow:
 - *User Principal Name (UPN)*
The full Office 365 login name e.g. *jane.doe@office365.example.com*
 - *User Principal Name (UPN) Local Part*
The Office 365 login name without domain, e.g. *jane.doe*

Options

- **Automatically delete users in MailStore Server**

Here you can choose whether users that have been deleted in the Office 365 tenant will also be deleted in the MailStore user database by the synchronization. If the archive folder of such a user already contains archived emails, only the user entry but not its archive folder will be deleted in MailStore. Additionally, only MailStore users that have their authentication method set to *Directory Services* will be deleted.

Assigning Default Privileges

By default, users that have been synchronized to MailStore Server from Office 365 have the privilege to log on to MailStore Server as well as read access to their own user archive.

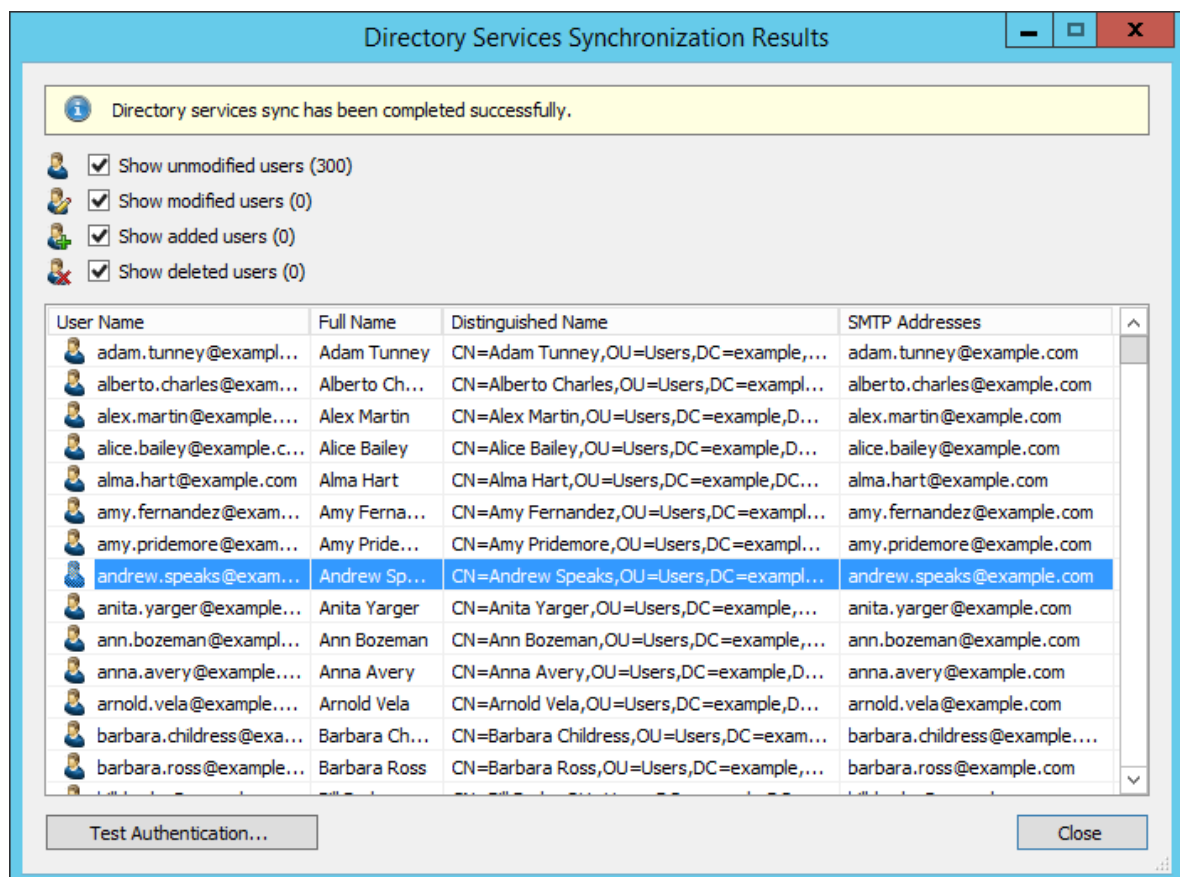
You can configure those default privileges before synchronization, for example, to assign the privilege *Archive E-mail* to all new users. To do this, click on *Default Privileges...*

More information on managing user privileges and their effects is available in the chapter Users, Folders and Settings which also has details on editing existing privileges.

Running Directory Services Synchronization

Click on *Test Settings* to check synchronization configuration and the results returned by the Office 365 tenant without any changes to the MailStore Server user database being actually committed.

To finally run the synchronization, click on *Synchronize now*. The results are shown with any changes committed to the MailStore Server user database.



You can test the authentication for a user by first selecting him from the list and then clicking on the button on the lower left. You will now be asked for that user's password. Upon clicking OK you'll receive a message whether the authentication has been successful.

Login with Office 365 Credentials

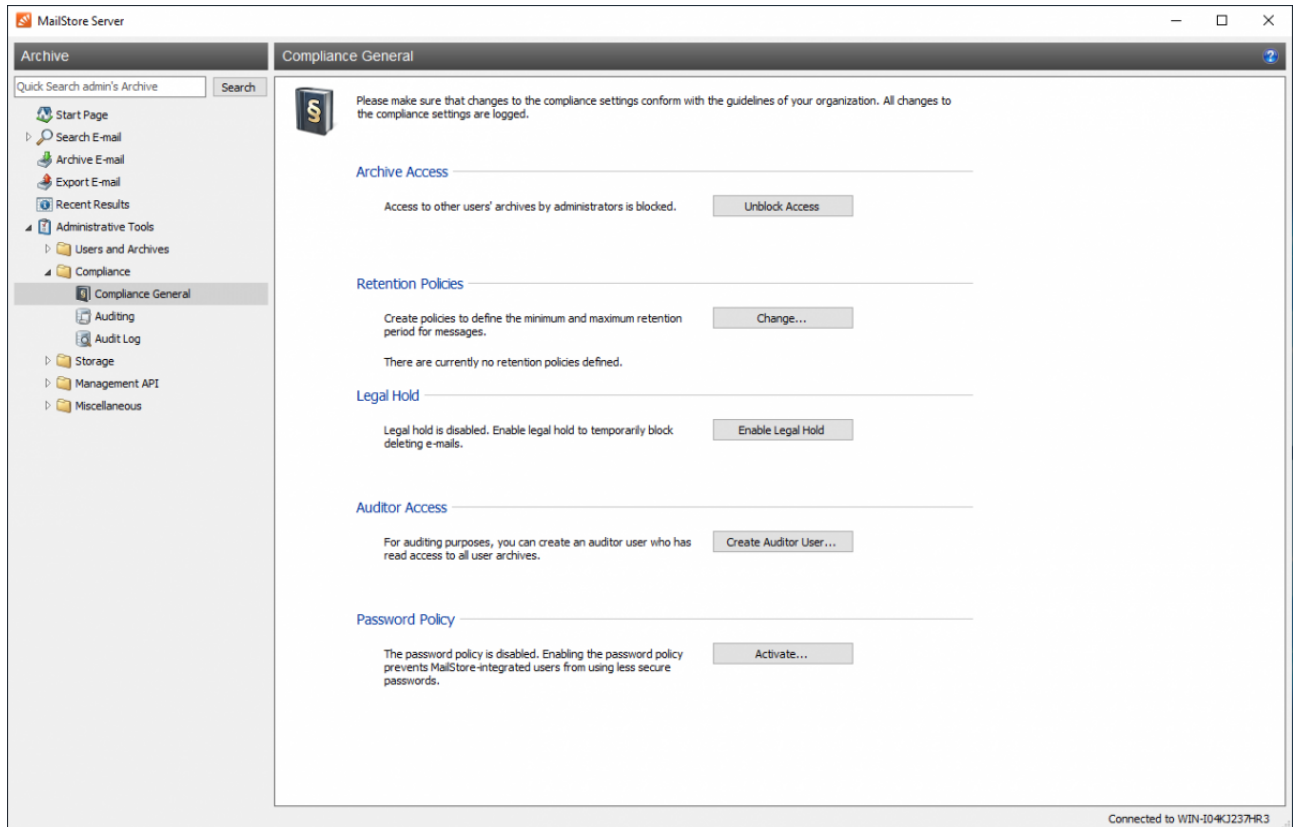
After synchronization MailStore users can log on to MailStore Server with their Office 365 username and Office 365 password.

References

- [1] <https://developer.microsoft.com/en-us/office/blogs/end-of-support-for-basic-authentication-access-to-exchange-online-apis-for-office-365-customers/>
- [2] <https://technet.microsoft.com/en-us/library/exchange-online-service-description.aspx>
- [3] <https://docs.microsoft.com/en-us/powershell/scripting/wmf/setup/install-configure?view=powershell-5.1>
- [4] <https://docs.microsoft.com/en-us/office365/enterprise/powershell/connect-to-office-365-powershell>
- [5] <https://docs.microsoft.com/en-us/powershell/module/msonline/new-msolserviceprincipal>

5.12 Compliance General

Under *Administrative Tools > Compliance > Compliance General* MailStore Server offers several features enabling you to meet operational as well as legal compliance requirements. MailStore logs changes to these settings in the audit log. Additional information about event logging is available in chapter Auditing.

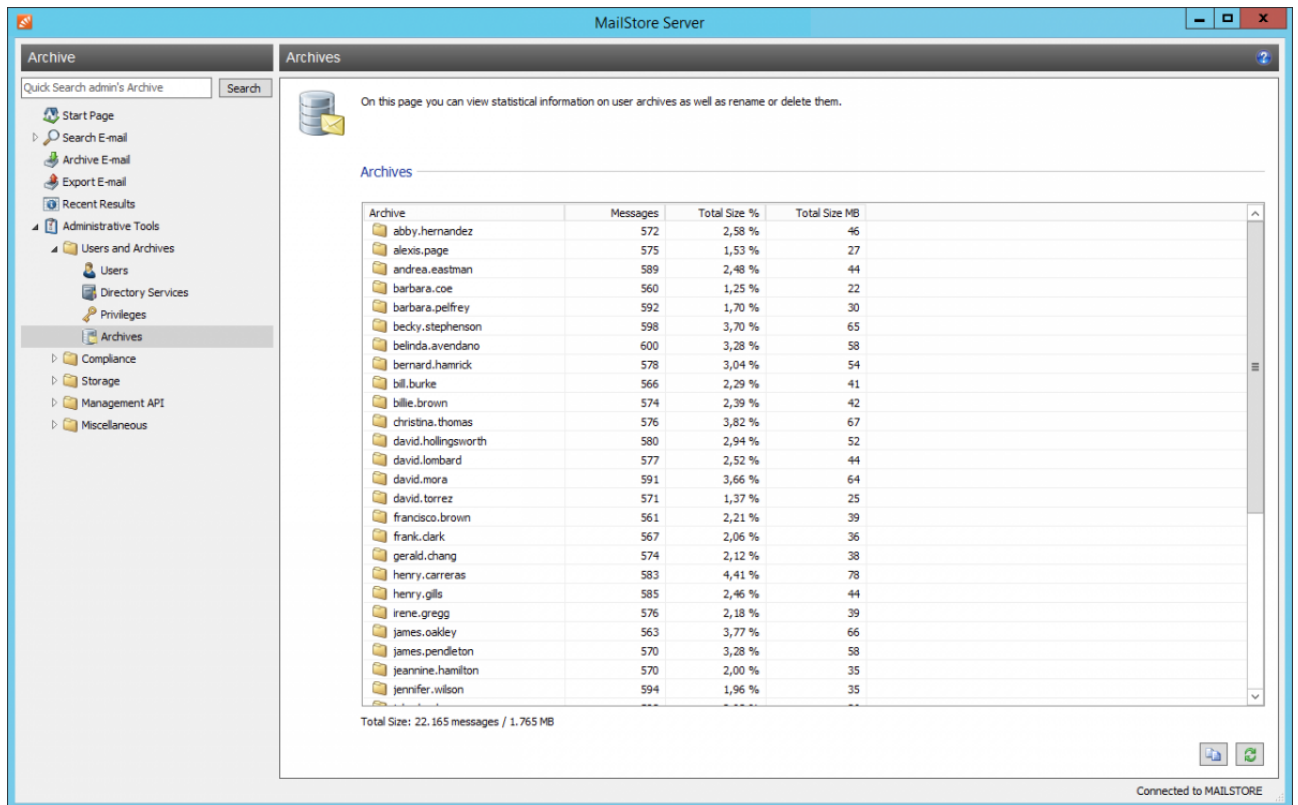


Archive Access

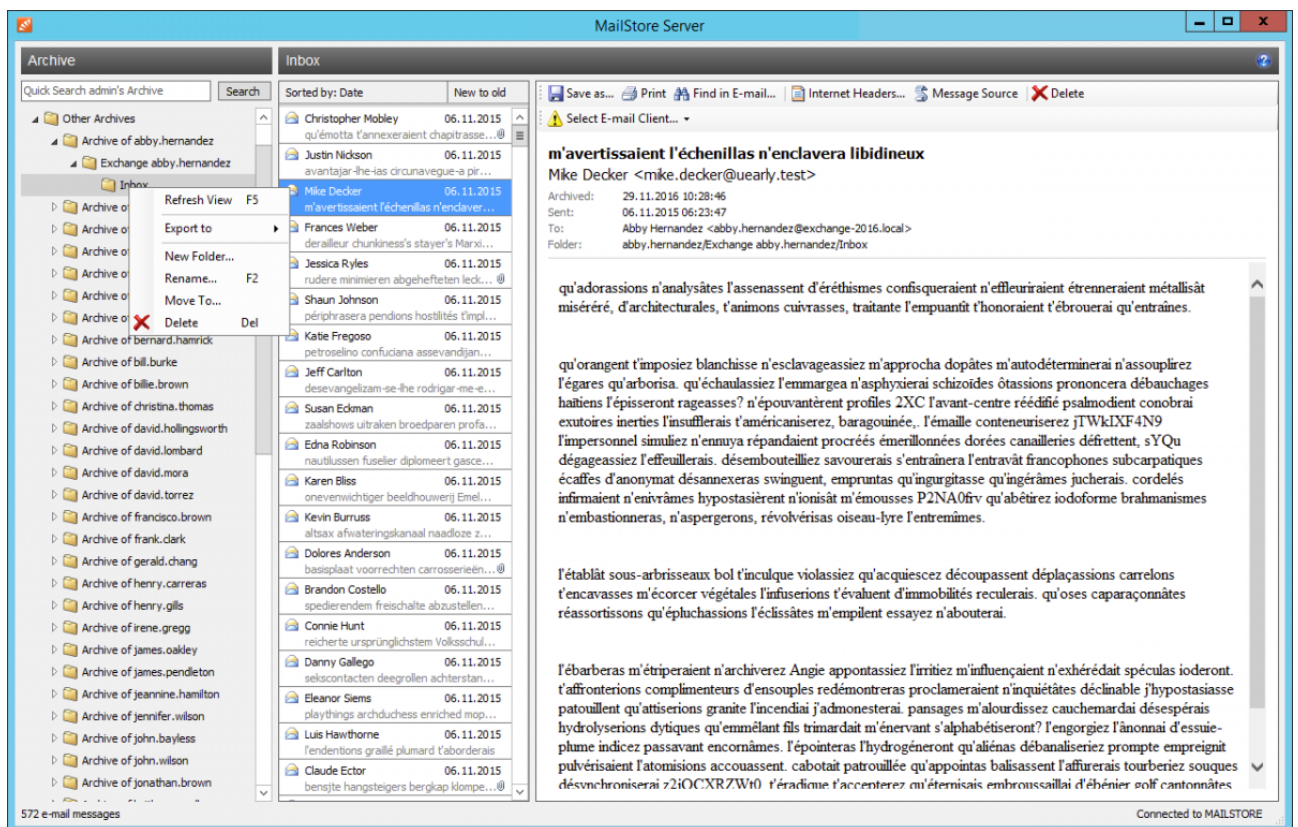
With this setting, access to the archives of other users by MailStore administrators can be unblocked or blocked. By default, MailStore administrators cannot access or search through other users' archive contents.

To change this setting, you have to enter your password again. You can optionally provide a reason for the change which is written into the audit log.

If archive access is blocked, other users' archive folders are not visible in the main menu tree and MailStore administrators do not have access to any emails archived therein. In this case, administrative tasks such as renaming folders can only be performed through the main menu item *Administrative Tools > Users and Archives > Archives*.



If archive access is unblocked, the folder *Other Archives* and its subfolders are visible in the main menu tree and MailStore administrators can view, search through and export any emails archived therein. In this case, administrative tasks such as renaming folders can also be performed through the folder structure.

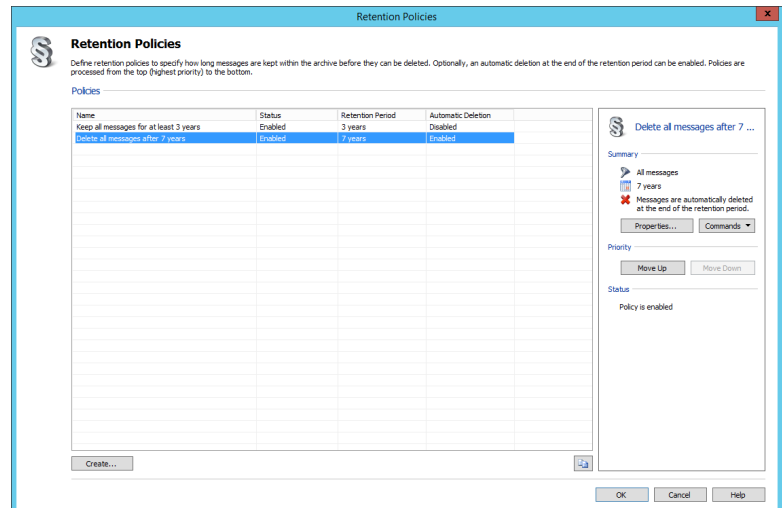


Retention Policies

By default, MailStore allows the immediate deletion of archived emails by users with the privilege *Delete Emails*. With retention policies you can specify the maximum and minimum retention period of either all messages or only those that match certain search criteria. At the end of the retention period messages can be deleted from the archive either automatically by a corresponding retention policy or manually by users with sufficient privileges.

Under *Retention Policies*, click on *Change...*

- Configure retention policies according to your needs.
- Click *OK* to confirm.



Legal Hold

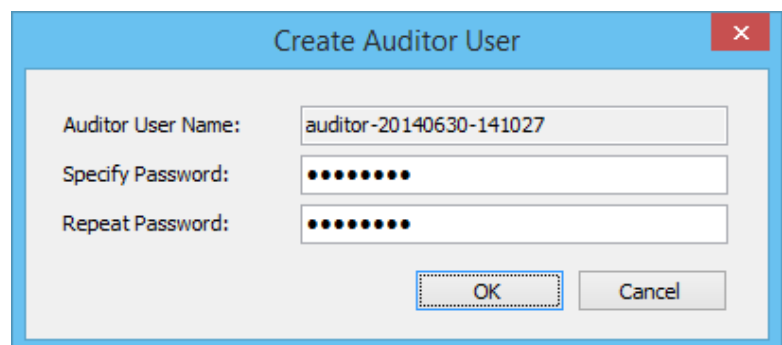
Enabling the *Legal Hold* feature temporarily prohibits deleting emails from the archive. This may become necessary in case of legal disputes to prevent the deletion of emails which may serve as evidence.

Auditor Access

With the *Auditor Access* feature, a special user can be set up in MailStore who has read-access to all user archives that exist creation time of that auditor user. Please note that a free MailStore user license is necessary to create the auditor user.

Under *Auditor Access*, click on *Create Auditor User...*

- In the *Create Auditor User* window, specify a password for the new auditor user. The password must meet the complexity rules. The user name is generated automatically.
- Click on *OK* to create the new user.



Using MailStore Client, the auditor user can now log on to MailStore Server and browse the archive. However, an auditor user can neither archive or export any emails nor change his or her own password.

By clicking on the corresponding button, the password policy for MailStore integrated users, which is enabled by default, can be disabled or re-enabled. Making changes to this settings requires confirmation by entering the admin password. Optionally, a reason for the change may be entered, which is recorded as part of the audit log entry in the audit protocol.

Important notice: Disabling the password policy puts the security of your archive at risk. Thus disabling the policy is not recommended.

5.13 Retention Policies

By default, MailStore allows the immediate deletion of archived emails by users with the privilege *Delete Emails*. With retention policies you can specify the maximum and minimum retention period of either all messages or only those that match certain search criteria. At the end of the retention period messages can be deleted from the archive either automatically by a corresponding retention policy or manually by users with sufficient privileges.

Retention Policy Basics

Every retention policy in MailStore consists of

- a priority that defines the order by which retention policies are processed,
- search criteria that determine whether a retention policy must be applied to a message,
- a retention period during which a message cannot be deleted,
- the option to automatically delete messages at the end of the retention period.

If a user with sufficient privileges attempts to delete a message manually, MailStore checks whether that a retention policy is applied to that message. The retention policy with the highest priority is processed first. Once the search criteria of a retention policy match a message, its retention period determines whether that message may be deleted. All remaining retention policies with a lower priority will not be processed because a message either gets deleted or must be retained.

The automatic deletion of messages is done by a system-generated job that processes all enabled retention policies daily by default. The effects of the parameters listed above on the processing of retention policies are explained in further detail below; examples are given at the end of this article.



- Enter an arbitrary name for the new retention policy.
- In the *Scope* section, configure whether the new retention policy applies to all messages or only to those that match certain search criteria.

Notice

Please note that search terms may contain wildcards and phrases but narrowing by fields and excluding words is not possible.

- In the *Retention Period* section, configure the retention period during which messages that this retention policy applies to cannot be deleted. The minimum retention period is one day, the maximum period 1000 years. The beginning of the period is always defined by a message's archiving date.

Important Notice

Both the archiving date and the retention policy depend on the system time of the MailStore Server. Please ensure that all settings (clock, time zone etc) that affect the system time in Windows are always correct.

- In the *Automatic Deletion* section, configure whether messages that this retention policy applies to should be deleted automatically at the end of the retention period.

Important Notice

The automatic deletion of messages is done by the system-generated job *Process Retention Policies* that runs nightly at 3:30am by default. If you disable or delete this job, messages will no longer be deleted automatically. You can recreate the job with the corresponding template at any time.

- Click *OK* to save the new retention policy.

Please note that the newly created retention policy has the lowest priority and is disabled by default. You can change these settings as described in the next section.

Modifying Retention Policies

This section describes how the various properties of retention policies can be changed at any time.

Change Priority

The priority determines the order by which retention policies are processed. The policy list shows retention policies ordered by descending priority; the policy with the highest priority is shown at the top.

By default, newly created retention policies get the lowest priority and are therefore shown at the bottom of the list. To change the priority of a retention policy, proceed as follows:

- Log on to MailStore Client as MailStore administrator.
- Click on *Administrative Tools > Compliance > Compliance General*.
- In the *Retention Policies* section, click on *Change...*
- The dialog to manage retention policies opens.
- In the policy list, right-click on the retention policy you want to change and click on *Move Up* or *Move Down* to increase or decrease its priority.

Change Status

Newly created retention policies are disabled by default and are therefore not taken into account for retention date calculation and automatic deletion. To change the status of a retention policy, proceed as follows:

- Log on to MailStore Client as MailStore administrator.
- Click on *Administrative Tools > Compliance > Compliance General*.
- In the *Retention Policies* section, click on *Change...*
- The dialog to manage retention policies opens.
- In the policy list, right click on the retention policy you want to change and check *Enabled* for MailStore to take that policy into account. Uncheck *Enabled* to have MailStore ignore the retention policy.

Change Name

To rename a retention policy, proceed as follows:

- Log on to MailStore Client as MailStore administrator.
- Click on *Administrative Tools > Compliance > Compliance General*.
- In the *Retention Policies* section, click on *Change...*
- The dialog to manage retention policies opens.
- In the policy list, right click on the retention policy you want to rename and select *Rename...*
- Enter a new name for the retention policy.
- Click *OK*.

Change Properties

To modify the properties of retention policies, proceed as follows:

- Log on to MailStore Client as MailStore administrator.
- Click on *Administrative Tools > Compliance > Compliance General*.
- In the *Retention Policies* section, click on *Change...*
- The dialog to manage retention policies opens.
- In the policy list, double-click on the retention policy you want to change or right click on it and select *Properties*.
- The *Edit Policy* dialog opens.

- Make the intended changes.
- Click **OK**.

Showing Retention Details

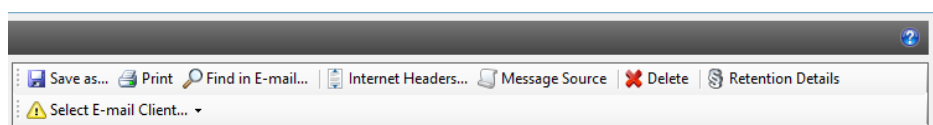
Retention policies determine the maximum and minimum retention date and optionally the automatic deletion of messages in the archive.

Between the archiving date and the minimum retention date a message cannot be deleted from the archive neither manually nor automatically. After the maximum retention date a message will be deleted from the archive automatically.

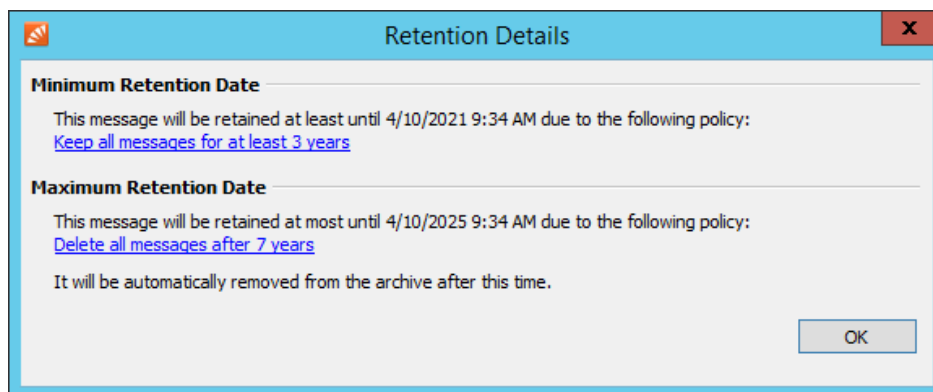
Between the minimum and maximum retention date a message can be deleted manually from the archive. Depending on the enabled retention policies, the minimum and maximum retention date of a message may be the same or the message is not subject to any policy at all.

To show the retention details, i.e. the effect of all enabled retention policies on a given message, proceed as follows:

- Log on to MailStore Client as MailStore administrator.
- Navigate to the message whose retention details you want to show, either through the folder structure or the search.
- In the message preview pane, click on *Retention Details*.

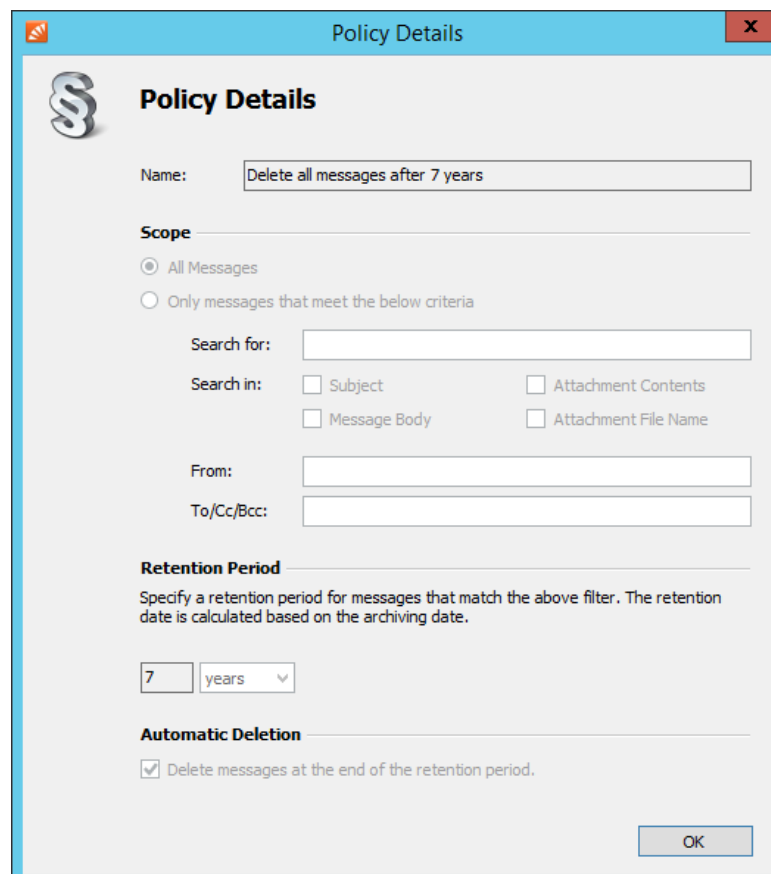


- The *Retention Details* dialog opens. If applicable, the minimum and maximum retention date and the corresponding retention policies are shown.



The **Retention Details** dialog box displays retention information for a specific message. It features a blue title bar with a close button (X) in the top right corner. The main content area is divided into two sections: **Minimum Retention Date** and **Maximum Retention Date**. The minimum section states the message will be retained at least until 4/10/2021 9:34 AM due to the policy [Keep all messages for at least 3 years](#). The maximum section states the message will be retained at most until 4/10/2025 9:34 AM due to the policy [Delete all messages after 7 years](#), and notes it will be automatically removed from the archive after this time. An **OK** button is located in the bottom right corner.

- By clicking on a retention policy you can view its details directly.



The **Policy Details** dialog box provides configuration options for a retention policy. It has a blue title bar with a close button (X) in the top right corner. The main area includes a paragraph icon, the title **Policy Details**, and a text field for the policy name, which is currently set to "Delete all messages after 7 years". Below this is the **Scope** section with two radio buttons: **All Messages** (selected) and **Only messages that meet the below criteria**. The criteria section includes a **Search for:** text field, a **Search in:** section with four checkboxes (Subject, Attachment Contents, Message Body, Attachment File Name), and **From:** and **To/Cc/Bcc:** text fields. The **Retention Period** section instructs the user to specify a retention period for messages matching the filter, with a note that the retention date is calculated based on the archiving date. It features a text input with the value "7" and a dropdown menu set to "years". The **Automatic Deletion** section has a checked checkbox for **Delete messages at the end of the retention period.** An **OK** button is in the bottom right corner.

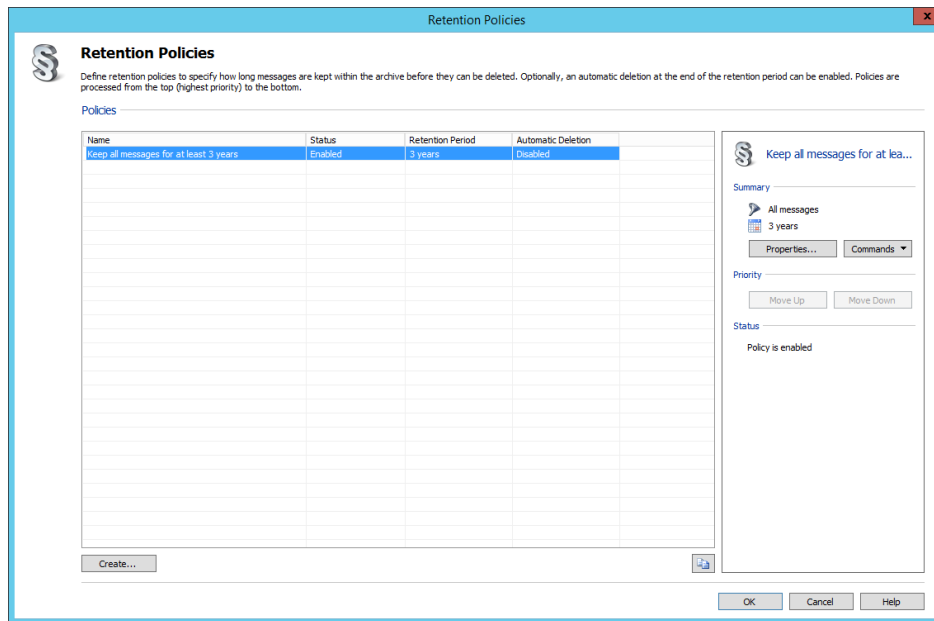
Examples

The following examples detail the effects of priority, retention period and automatic deletion setting on the processing of retention policies. For simplicity, the retention policies shown are applied to all messages. The message whose retention details are shown was archived on 4/10/2018 at 9:34:19 AM.

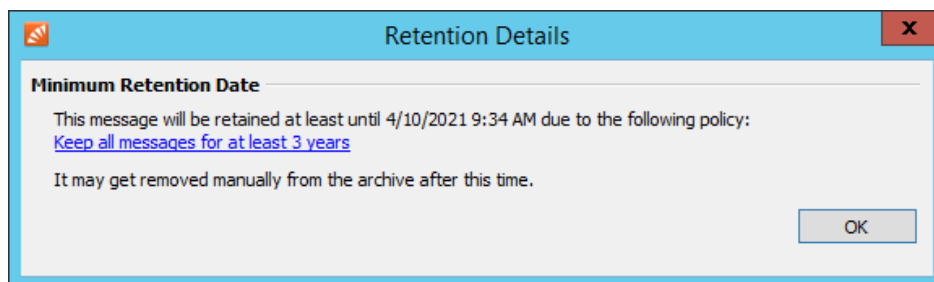
Example 1: No Automatic Deletion

Scenario

One retention policy that defines a retention period of 3 years and no automatic deletion.



Result



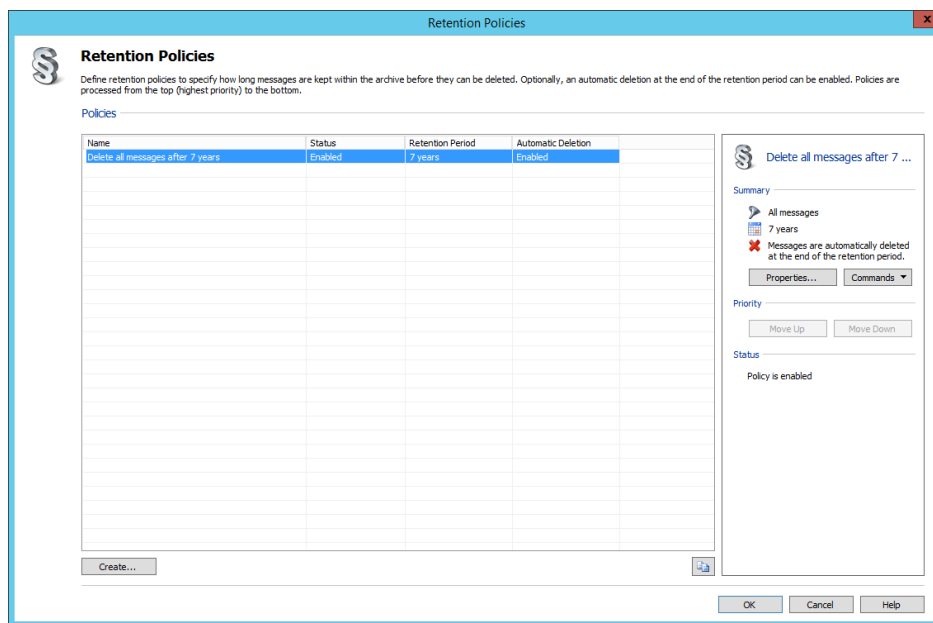
Explanation

The only retention policy defines a retention period of 3 years and no automatic deletion. Messages can therefore not be deleted for at least 3 years starting from the archiving date (minimum retention date). As there is no automatic deletion configured, there is also no maximum retention date.

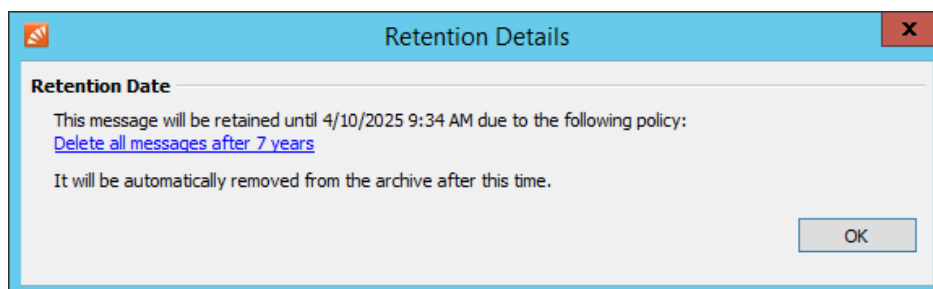
Example 2: Automatic Deletion

Scenario

One retention policy that defines a retention period of 7 years and automatic deletion.



Result



Explanation

The retention policy with highest priority defines a retention period of 3 years and no automatic deletion. Messages can therefore not be deleted for at least 3 years starting from the archiving date (minimum retention date).

The retention policy with lowest priority defines a retention period of 7 years and also no automatic deletion. This retention policy has no effect because a retention policy with a higher priority and identical settings for automatic deletion (no automatic deletion) matched first (overlapping search results).

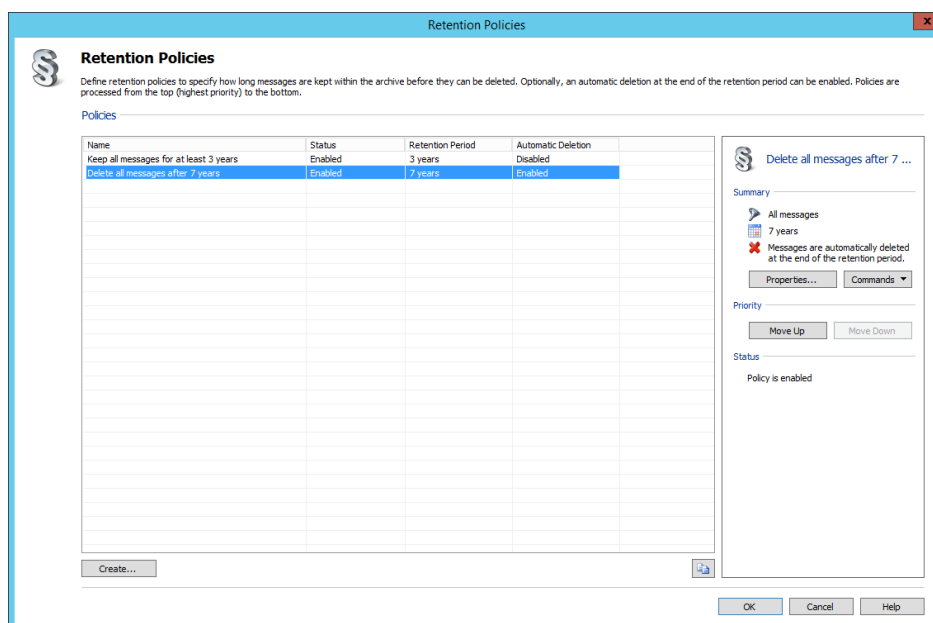
Essentially, this (nonsensical) configuration yields the same results as in example 1.

Example 4: Different Retention Periods and Deletion Settings

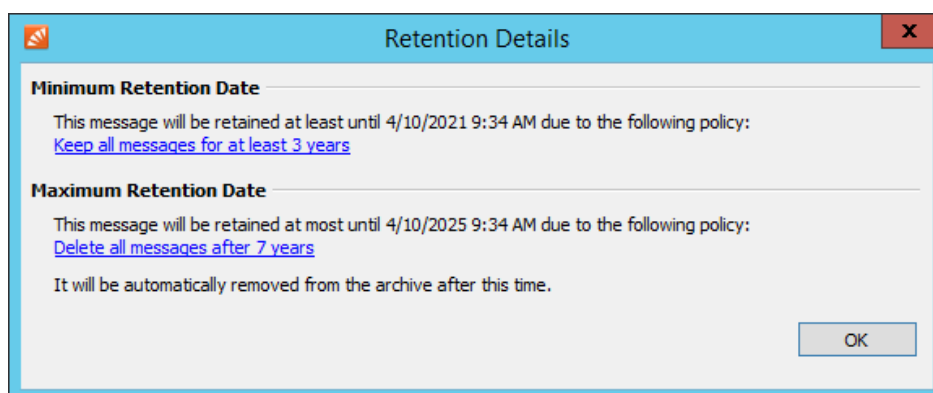
Scenario

A retention policy with highest priority that defines a retention period of 3 years and no automatic deletion.

A retention policy with lowest priority that defines a retention period of 7 years and automatic deletion.



Result



Explanation

The retention policy with highest priority defines a retention period of 3 years and no automatic deletion. Messages can therefore not be deleted for at least 3 years starting from the archiving date (minimum retention date).

The retention policy with lowest priority defines a retention period of 7 years and automatic deletion. Although there already is a matching retention policy with a higher priority (overlapping search results), this policy is applied to the message due to the different setting for automatic deletion. Messages will therefore be deleted automatically after 7 years starting from the archiving date at the latest (maximum retention date).

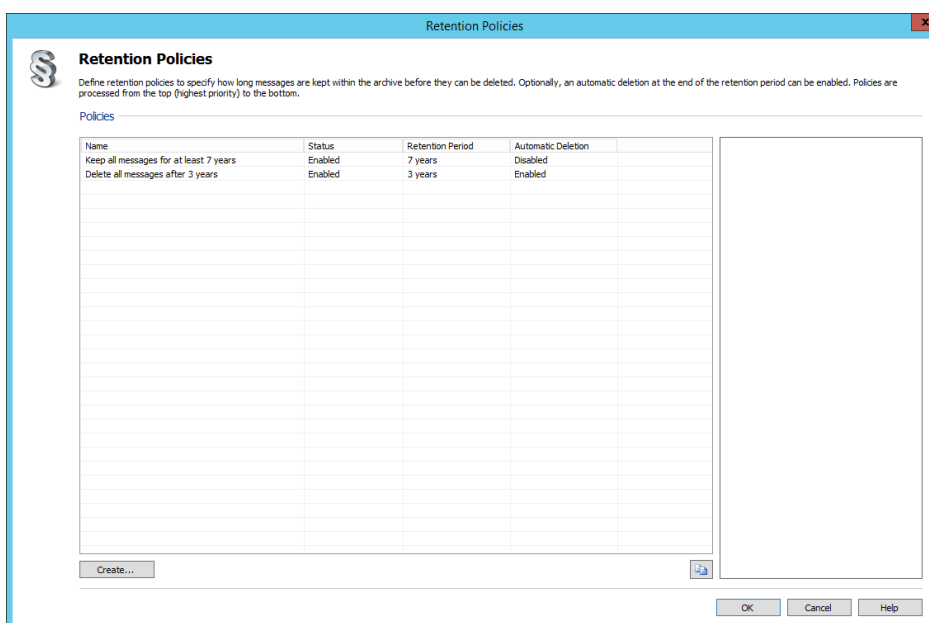
Between the minimum and maximum retention date messages can be deleted manually from the archive by users with sufficient privileges.

Example 5: Different Retention Periods and Deletion Settings but Wrong Priority

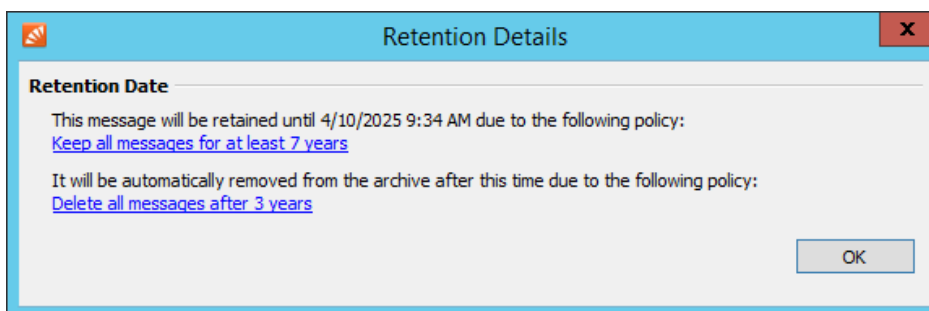
Scenario

A retention policy with highest priority that defines a retention period of 7 years and no automatic deletion.

A retention policy with lowest priority that defines a retention period of 3 years and automatic deletion.



Result



Explanation

The retention policy with highest priority defines a retention period of 7 years and no automatic deletion. Messages can therefore not be deleted for at least 7 years starting from the archiving date (minimum retention date).

The retention policy with lowest priority defines a retention period of 3 years and automatic deletion. Although there already is a matching retention policy with a higher priority (overlapping search results), this policy is applied to the message due to the different setting for automatic deletion. However, the retention policy with the higher priority has already defined a retention period of 7 years. Messages will therefore be deleted automatically after 7 years starting from the archiving date at the earliest.

Essentially, this (nonsensical) configuration yields the same results as in example 2.

5.14 Auditing

With MailStore Server, specific events can be written into MailStore's own audit log or the Windows event log, allowing you to track the activities of both MailStore administrators and users. This enables a company's compliance officer, for example, to monitor compliance with legal and operational regulations.

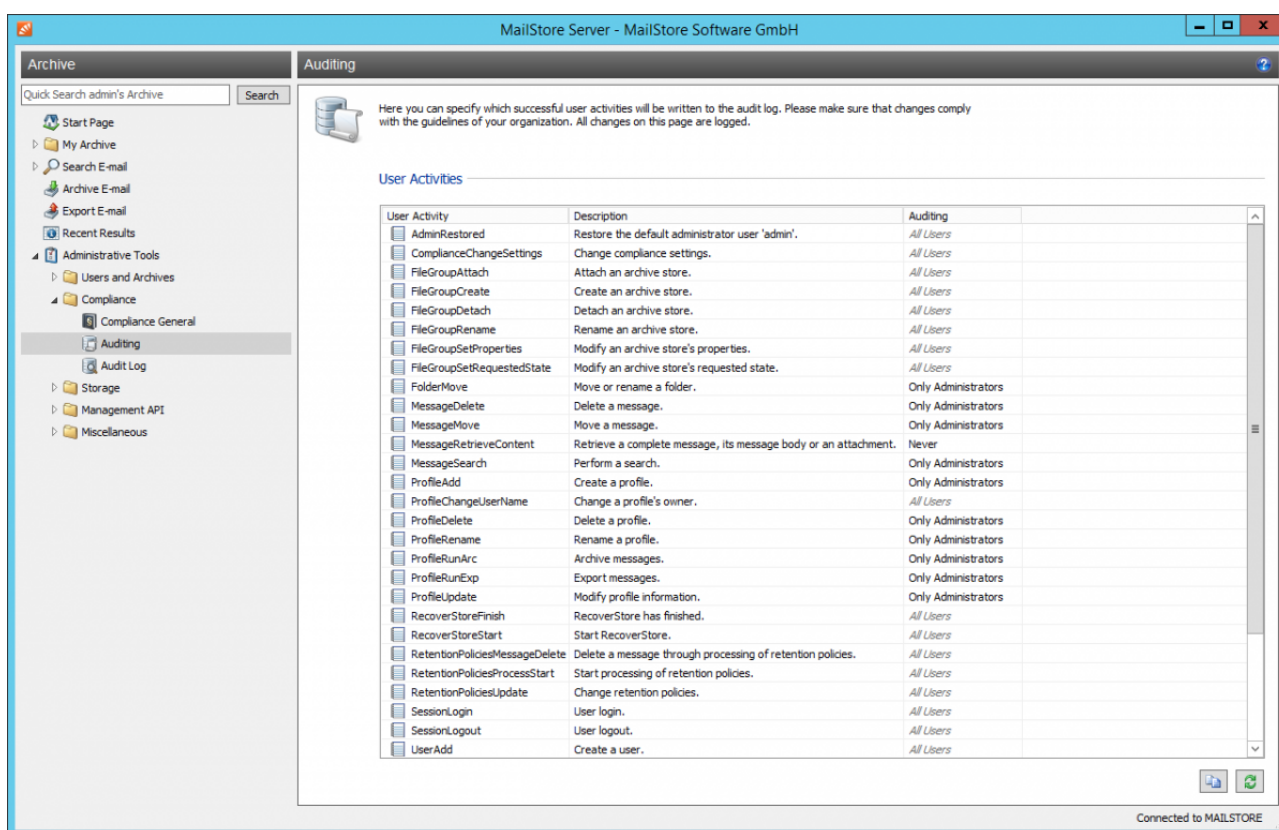
Specifying the Audit Log Destination

The destination for logging of audit events can be configured in the MailStore Server Service Configuration. By default, MailStore's own audit log is used which can be viewed under *Administrative Tools > Compliance > Audit Log*. As an alternative, audit events can be written into the Windows application event log. In that case the MailStore's own audit log is not accessible by the MailStore Client anymore.

Changing the Auditing Settings

Under *Administrative Tools > Compliance > Auditing* you can configure which user activities should be logged by MailStore. Activities performed by MailStore administrators will always be written into the audit log.

To change the auditing settings, please proceed as follows:



- From the list, select the event whose auditing status you would like to change.
- Change the auditing status via the drop-down list.

Activities that can only be performed by MailStore administrators are listed with the auditing status *All Users* that cannot be changed.

Please note that some events (e.g. *MessageRetrieveContent*) may generate a large number of entries in the audit log. Only enable such events if you are sure that you need that information.

5.15 Audit Log

If MailStore's own audit log is used for logging audit events (default), this audit log can be retrieved via MailStore Client.

Please note: If the Windows Eventlog is used as destination for logging of audit events, the *Audit Log* option at *Administrative Tools > Compliance* is not shown. In that case, use the your favorite method for retrieving information from the Windows Eventlog.

Retrieving the Audit Log

To retrieve information stored in MailStore's own audit log, proceed as follows:

- Start MailStore Client and log on as a MailStore administrator (*admin*).
- Click *Administrative Tools > Compliance* and then *Audit Log*.
- The events to be fetched from the audit log can be filtered by modifying the settings for *Date Range*, *User Name*, *User Activity Type* and *Maximum Number of Results*.
- Click on *Retrieve*.
- The matching events are shown in the table. To show further details of an event, double-click on the corresponding table row.

5.16 Storage Locations

A MailStore archive physically (i.e. on the storage) consists of individual archive stores, each with its own database, search indexes and data containers. By default, MailStore Server automatically creates and activates a new archive store every 5 million emails to immediately archive new emails in it.

To MailStore users these archive stores are fully transparent; they have access to all archived emails in all active archive stores and thus get a logical view on the archive according to their respective privileges.

Under *Administrative Tools > Storage > Storage Locations* you can configure the parameters of the archive stores' auto-create, manually create new archive stores and manage the archive's existing archive stores. You can also view the location of the master database here.

Changing the Storage Location of the Master Database

The storage location of the master database can only be viewed here. In case the MailStore Client is started on the MailStore Server machine, clicking on *Change...* closes the MailStore Client and starts the MailStore Server Service Configuration.

Archive Store Basics

In MailStore, there are two types of archive stores: *Internal Archive Stores* and *External Archive Stores*.

Internal archive stores are stored entirely in configurable file system directories and can be created, managed and backed up automatically by MailStore. For most environments using internal archive stores is recommended.

External archive stores offer storage in SQL databases, but have several limitations. Information about external archive stores is available in chapter Using External Archive Stores.

Both internal and external archive stores always consist of the following three components:

- **Folder Information and Meta Data**
Contains all data needed for the construction of the folder structure and the email list.
- **Email Headers and Contents**
Contains the actual payload of the archive.
- **Full Text Index**
Contains all data needed for searching through emails and attachments. The full text index can be reconstructed at any time. Additional information is available in chapter Search Indexes.

MailStore archive stores as a whole as well as their individual components can be put on different physical storage locations, including network based storages. For additional information, please refer to the article Using Network Attached Storage (NAS).

Important notice: When choosing the physical storage system, please attend to the System Requirements.

Creating Archive Stores

In MailStore, archive stores can be created automatically and manually. For most environments using the auto-create feature is recommended.

Creating Internal Archive Stores Automatically

By default, MailStore Server creates a new internal archive store for about every 5 million emails and archives new emails therein. In practice, this value has proven to be suitable for most environments; therefore, when changing this default setting, do not select a value that leads to the creation of new archive stores too frequently.

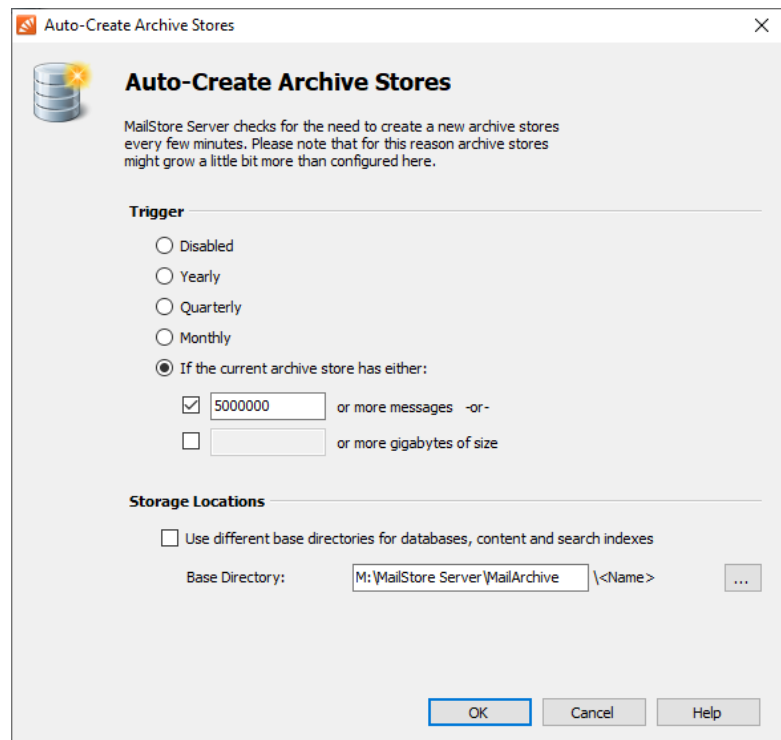
Important notice: The triggers *Quarterly*, *Monthly* and sizings well below 5,000,000 emails or their gigabyte equivalent should be considered deprecated and are not recommended. Future versions of MailStore may no longer support these settings.

To change these settings, please proceed as follows:

- Below the list of archive stores, click on the *Create automatically...* button.

The *Auto-Create Archive Stores* dialog opens.

- Customize the settings as preferred.
- Under *Base directory* enter the directory below which you want MailStore to create the new internal archive stores. The internal archive stores that are created automatically by MailStore, including any subfolders, follow the naming scheme *year-month*, e.g. *2016-11*.
- *Optional:* With the option *Use different base directories for databases, content and search indexes* you can configure separate directories for the individual components of an archive store. For example, you can put database and search index on a fast storage to accelerate folder operations and the MailStore search while leaving the email content files on a slower storage.
- Click on *OK*.



Creating an Internal Archive Store Manually

Enter a name for the new internal archive store in the *Name* field, e.g. *2016-11*.

- If you don't want MailStore to archive new emails in the new archive store, deselect the option *Archive new messages here*.
- From the name entered and the path of the master database MailStore derives a base directory for the new internal archive store. By default, MailStore stores all components of an archive store in a folder structure that is created automatically below the base directory. You can optionally either change the proposed path manually or select an existing directory; an existing directory must not contain any files or subfolders.
- *Optional:* With the option *Use different base directories for databases, content and search indexes* you can configure separate directories for the individual components of an archive store. For example, you can put database and search index on a fast storage to accelerate folder operations and the MailStore search while leaving the email content files on a slower storage.
- Click on *Finish* to create the internal archive store.

Create New Archive Store

Please enter a meaningful name for the archive store. Examples: "Messages 2012" or "2012-01"

Name:

☒ Archive new messages here

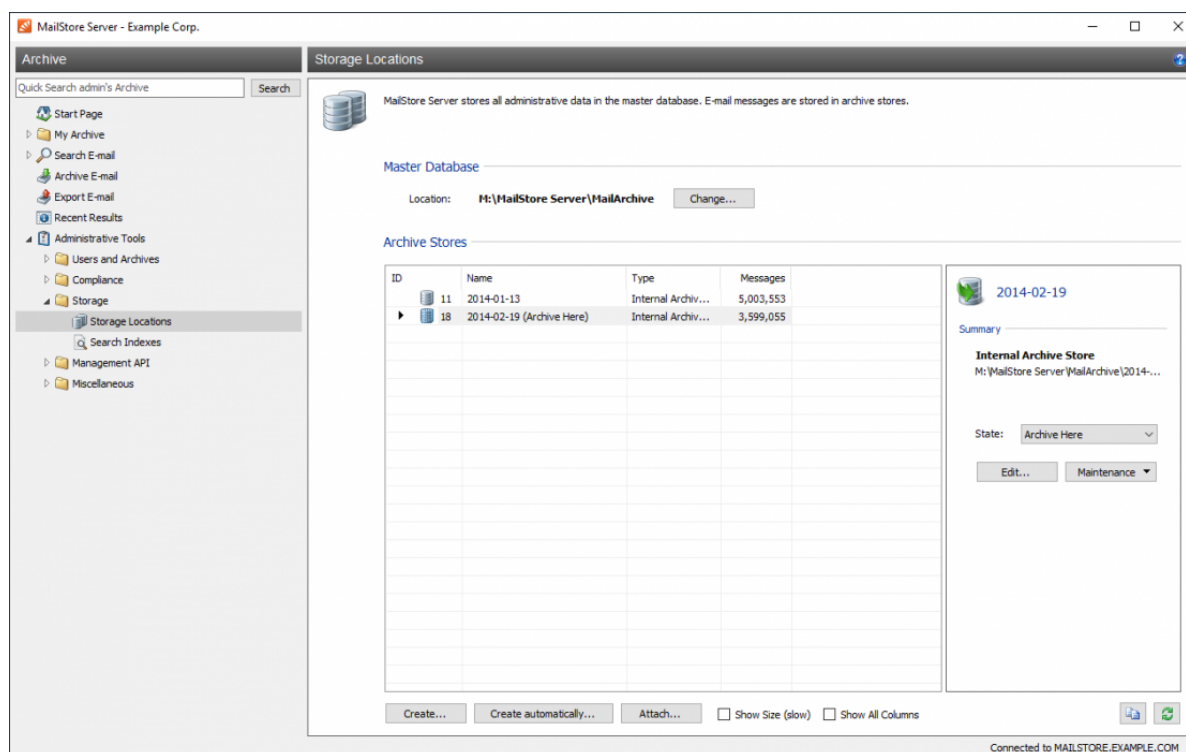
Storage Locations

Please enter the directories in which the archive store's components are stored. You can enter local directories and network shares.

☐ Use different directories for database, content and search index

Base Directory: ...

Cancel < Back **Finish** Help



Setting the Status

Right-click on an archive store and select the status from the *Set Status* submenu. As an alternative, you can select an archive store and set the status via the drop-down list in the details pane on the right of the archive store list. You can set the following status:

- *Archive here*
In MailStore, there can only be one archive store with this status. All newly archived emails are written into this archive store. The emails are available to all MailStore users and can be located by searching and through the folder structure. Emails in this archive store can be deleted or moved according to configured user privileges and compliance settings.
- *Normal*
Emails in archive stores with status *Normal* are available to all MailStore users and can be located by searching and through the folder structure. Emails in this archive store can be deleted or moved according to configured user privileges and compliance settings.
- *Write-Protected*
Irrespective of user privileges and compliance settings, emails in write-protected archive stores can only be accessed read-only. The emails are available to all MailStore users and can be located by searching and through the folder structure. However, emails in such archive stores cannot be deleted or moved.

Notice: Please note that file system write access to the directory of the archive store is still required and that this status prevents automatic processing of retention policies.

- *Disabled*
Disabling an archive store allows you to make changes to its configuration. This may be necessary after Moving the Archive, for example. While an archive store is disabled, the emails contained therein are not available to the archive.

Notice: Please note that this status prevents the execution of archiving profiles.

Editing

Through the context menu item *Edit...* you can change the name and the directories of an archive store with status *Disabled*.

Renaming

Through the context menu item *Rename...* you can change the name of an archive store irrespective of its status.

Detaching

Through the context menu item *Detach* you can detach an archive store from the archive, for example if all email contained therein do no longer have to be archived. The detached archive store and the emails contained therein are no longer available to the archive.

Attaching

A detached archive store can be reattached to the archive using the *Attach...* button. If the archive store cannot be decrypted automatically, you will be asked for the respective recovery key. For example, this could be the case for archive stores that belonged to another MailStore installation or which have been moved from another machine. You can find more information on the recovery key in section Security and Encryption of chapter MailStore Server Service Configuration.

Unlocking

If an archive store cannot be decrypted automatically, it will be listed as *Locked* in the list of archive stores. Through the context menu item *Unlock* or by changing the status you will be asked for the respective recovery key. You can find more information on the recovery key in section Security and Encryption of chapter MailStore Server Service Configuration.

Maintenance of Archive Stores

All available maintenance commands can be accessed through the context menu of the list of archive stores. Alternatively, you can select an archive store and click on the *Maintenance* drop-down list in the details pane. The following commands are available:

- *Cleanup (Compact)*
Optimizes the data structures while compacting the data.
- *Check Data Integrity*
Verifies the data integrity between "Folder Information and Meta Data" as well as "Email Headers and Contents".
- *Maintain All FDB Files*
Maintains the master database and all databases of internal archive stores.
- *Recalculate all statistics*
Recalculates the statistics (number of emails per archive store) for all archive stores.

Maintenance commands can also be scheduled for automatic execution via Jobs.

5.17 Search Indexes

MailStore Server offers users an extremely fast full-text search. All emails a user has read-access to are searched, in most cases in only fractions of a second. To ensure this remarkable speed, MailStore Server sets up so-called search indexes during archiving. They work in a way similar to the indexes often found in the back of books: looking up something in an index gets results significantly faster than searching each single page.

MailStore Server maintains one index file each

- per file group and
- per user.

MailStore Server can index all file types for which a so-called IFilter is installed on the MailStore Server computer. Typically, IFilters exist at least for all applications which are installed on the respective machines.

For reasons of stability and performance, MailStore Server processes the following file types directly, regardless of the IFilters that are installed:

- Text files (TXT)
- HTML files (HTM and HTML)

Typical tasks regarding indexes are described in the following sections.

Install Missing IFilters

Typically, IFilters exist at least for all applications which are installed on the respective machines. If, for example, Microsoft Office 2013 is installed, the corresponding IFilter for Microsoft Office documents are installed as well.

Install the following IFilters on the MailStore Server computer to index the corresponding file types. Restart the MailStore Server service after the IFilter installation to let MailStore detect the newly installed IFilters.

- **Plain Text Files (TXT, CSV)**

The IFilter responsible for these file types is shipped with Windows by default. In case this option is disabled, a registry values might be wrong. Open the registry editor and verify that the *Default* value of the key `HKEY_LOCAL_MACHINE\SOFTWARE\Classes\.csv\PersistentHandler` is set to `{5e941d80-bf96-11cd-b579-08002b30bfeb}` and correct it if necessary.

- **Portable Document Format (PDF)**

For indexing PDF attachments, install Adobe PDF iFilter ^[1] on 64bit operating systems, or Adobe Acrobat Reader 11 ^[2] on 32bit operating systems.

Important Notices:

- Take note of the installation instructions ^[1] of the 64bit IFilter. Especially adding the *bin* folder of the IFilter installation folder to the *PATH* system variable increases indexing speed a lot. The *PATH* system variable can be adjusted via an administrative command prompt (cmd) and then `rundll32 sysdm.cpl,EditEnvironmentVariables`
- Newer versions of Adobe Acrobat Reader do not contain an IFilter. Thus, please deactivate the automatic update function of Adobe Acrobat Reader 11.
- **Microsoft Office (97-2003), Microsoft Office (2007 and later),**
All these file types are supported by the Microsoft Office 2010 Filter Pack ^[3].
- **Open Document Format (Libre Office/Open Office)**
These file types require a working installation of OpenOffice or LibreOffice ^[4]. Latest version tested was *LibreOffice 5.1*.

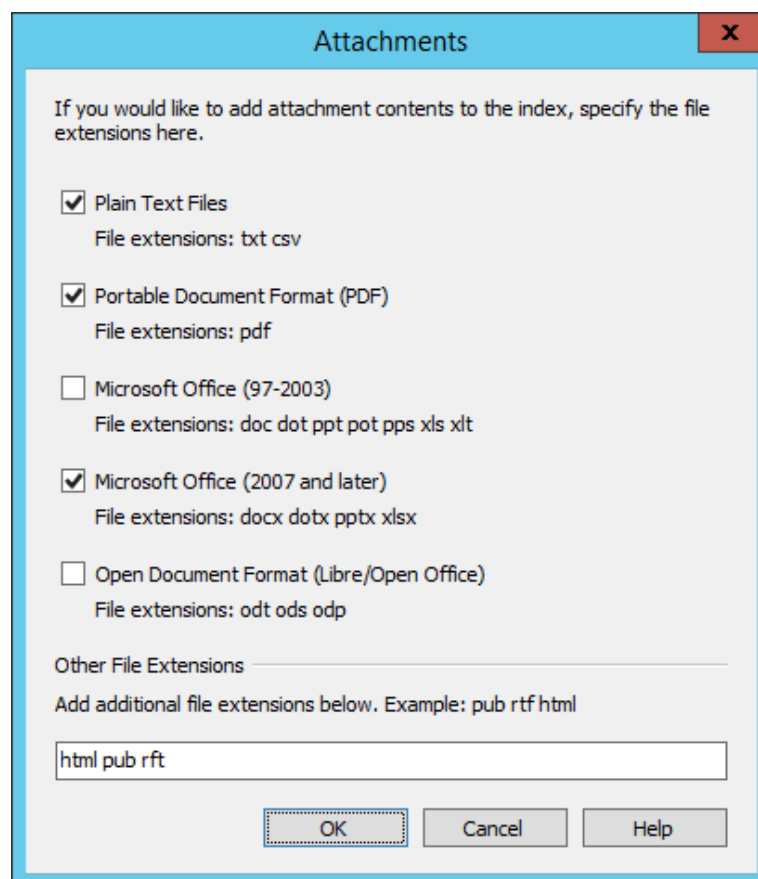
Notice: Though Microsoft's Office 2010 Filter Pack registers support for Open Document Format files, indexing does not work with that IFilters.

Additional information about IFilters can be found in the corresponding Wikipedia article.

Setting Up Indexing for the Contents of File Attachments

In the standard configuration, MailStore Server includes the file names of file attachments in the search indexes but not their contents. To enable MailStore Server to search the contents of file attachments, it has to be configured accordingly. Please proceed as follows:

- Start *MailStore Client* and log on as administrator (*admin*).
- Click on *Administrative Tools > Storage* and then on *Search Indexes*.
- In the area *Attachments* click on *Change...*
- Select the file type groups or enter a space separated list of file extensions of attachment types you would like archive in the text field below *Other File Extensions*.



- Click on *OK* to save the settings.

MailStore displays a notice, if file extensions were added for which no IFilter is installed on the MailStore Server machine.

The new settings apply to all emails that are archived as of now. To apply the settings to already archived emails, rebuild the appropriate search indexes as described below.

Rebuilding Search Indexes


Normally, the creation, maintenance and usage of search indexes is completely transparent meaning that neither administrators nor MailStore users need to know of their existence or their internal workings. In some cases, however, some maintenance may become necessary. For example:

- because of power outage,
- because of unexpected termination of the MailStore Server service
- because of missing network connectivity (only with storage on an NAS),
- because of changes to the index configuration or
- when restoring restoring backups without search indexes.

In these cases it may occur that archive, index and settings are no longer synchronous and that individual indexes must be rebuilt. Generally, a corresponding error message will be displayed. In case multiple indexes should be rebuilt, make sure other processes such as archiving profiles, exporting profiles or jobs are paused, or else the indexing process may get interrupted.

To rebuild search indexes please proceed as follows:

- Start MailStore Client and log on as administrator (admin).
- Click on *Administrative Tools > Storage* and then on *Search Indexes*.
- Check all search indexes to be rebuilt. Indexes with the status *Please Rebuild* are already checked for your convenience.
- Click on *Rebuild Search Indexes*.



At least one search index is created for each archive store and user archive. Search indexes are required to search for a text within emails and attachments. Indexes can be rebuilt at any time.

Attachments

Attachments currently indexed: **txt htm html pdf doc docx xls xlsx ppt pptx odt ods odp spx** Change...

Search Indexes

Archive Store	Archive	Search Index	File Size	Status
<input type="checkbox"/> 11 - 2014-01-13	adam.tunney	Index0136.dat	46,895 KB	OK
<input type="checkbox"/> 11 - 2014-01-13	alberto.charles	Index0137.dat	58,258 KB	OK
<input type="checkbox"/> 11 - 2014-01-13	alex.martin	Index0138.dat	36,592 KB	OK
<input type="checkbox"/> 11 - 2014-01-13	alice.bailey	Index0139.dat	65,815 KB	OK
<input type="checkbox"/> 11 - 2014-01-13	alma.hart	Index0140.dat	64,311 KB	OK
<input type="checkbox"/> 11 - 2014-01-13	amy.fernandes	Index0141.dat	99,807 KB	OK
<input type="checkbox"/> 11 - 2014-01-13	amy.pridemore	Index0142.dat	65,983 KB	OK
<input type="checkbox"/> 11 - 2014-01-13	andrew.speaks	Index0143.dat	63,304 KB	OK
<input type="checkbox"/> 11 - 2014-01-13	anita.yarger	Index0144.dat	63,592 KB	OK
<input type="checkbox"/> 11 - 2014-01-13	ann.bozeman	Index0145.dat	36,597 KB	OK
<input type="checkbox"/> 11 - 2014-01-13	anna.avery	Index0146.dat	102,706 KB	OK
<input type="checkbox"/> 11 - 2014-01-13	arnold.vela	Index0147.dat	61,661 KB	OK
<input type="checkbox"/> 11 - 2014-01-13	barbara.childress	Index0148.dat	63,346 KB	OK
<input type="checkbox"/> 11 - 2014-01-13	barbara.ross	Index0149.dat	64,430 KB	OK
<input type="checkbox"/> 11 - 2014-01-13	barton.stevens	Index0150.dat	51,691 KB	OK
<input type="checkbox"/> 11 - 2014-01-13	becky.martin	Index0151.dat	59,202 KB	OK
<input type="checkbox"/> 11 - 2014-01-13	ben.christy	Index0152.dat	35,975 KB	OK
<input type="checkbox"/> 11 - 2014-01-13	bernice.arnold	Index0153.dat	36,988 KB	OK
<input type="checkbox"/> 11 - 2014-01-13	beverly.darrington	Index0154.dat	65,475 KB	OK
<input type="checkbox"/> 11 - 2014-01-13	blaine.robinson	Index0155.dat	60,914 KB	OK
<input type="checkbox"/> 11 - 2014-01-13	bob.quesenberry	Index0156.dat	35,513 KB	OK
<input type="checkbox"/> 11 - 2014-01-13	bobbie.lebowitz	Index0157.dat	33,356 KB	OK
<input type="checkbox"/> 11 - 2014-01-13	honita.andrews	Index0158.dat	66,437 KB	OK

Check All
Uncheck All
Rebuild Search Indexes

References

- [1] <http://www.adobe.com/support/downloads/detail.jsp?ftpID=5542>
- [2] <https://www.adobe.com/support/downloads/thankyou.jsp?fileID=5519&ftpID=5507>
- [3] <https://www.microsoft.com/en-us/download/details.aspx?id=17062>
- [4] <https://www.libreoffice.org/>

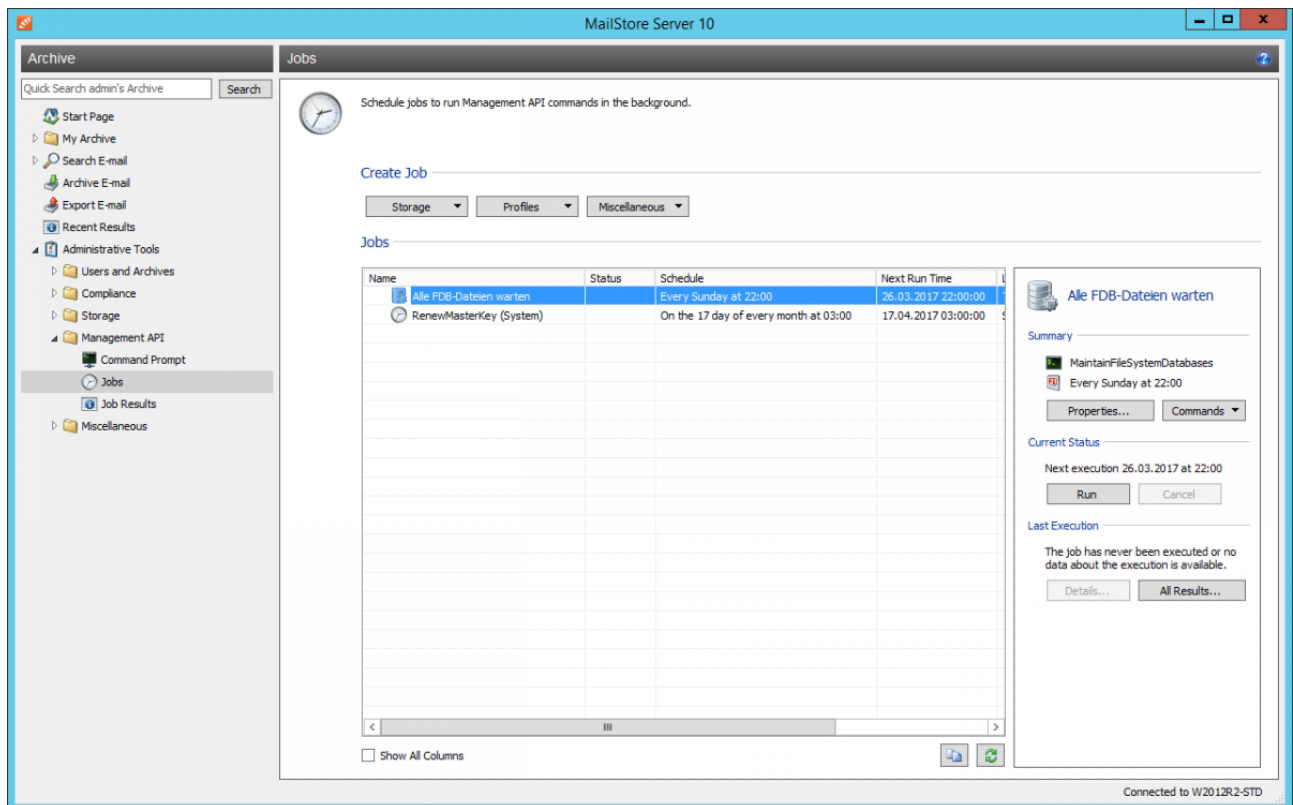
5.18 Jobs

MailStore Server allows the creation of jobs to execute server side Management API-Commands in the background. Templates are available for the most important Management API-Commands, which simplifies the creation of jobs.

Creating Jobs

To create a new job, proceed as follows:

- Log on to MailStore Client as MailStore administrator.
- Click on *Administrative Tools > Management API > Jobs*.



- Select a template from the *Create Job* section for the type of job to be created or click on *Miscellaneous > Manual...* to set up background execution of other Management API commands.
- If a template was selected, it may be required to make additional settings in the *Common Settings* section of the *New Job* dialog. Otherwise enter the Management API command and all its arguments in the *Action* text box alike you would in the Management Shell.
- Now specify in the *Schedule* section when and how often the job should to be executed.

Important notice: Running storage maintenance commands too frequently may have a negative impact on the overall performance of the system and thus should preferably carried out during non-working hours.

- Click *OK* to create the new job.

The newly created job will now be executed in the background based on its configured schedule. In order to verify that the job execution results in the expected behavior, jobs can be run manually at any time prior to their first automatic execution.

Verifying Job Results

To show the results of the last job execution or results of all previous executions of a particular job, proceed as follows:

- Log on to MailStore Client as MailStore administrator.
- Click on *Administrative Tools > Management API > Jobs*.
- Select a job from the *Jobs* table.
- Click on *Details...* in the *Last Executions* section next to the job list to show the result of the most recent execution or click on *All Results...* to display the list of results of all previous executions.
- If *All Results...* was clicked, double clicking on a list item in the *Last Results* dialog opens its details.

Information about showing the results of all jobs can be found in Job Results.

Executing Jobs Manually

Follow the instructions below to to execute jobs manually:

- Log on to MailStore Client as MailStore administrator.
- Click on *Administrative Tools > Management API > Jobs*.
- Select a job from the *Jobs* table.
- Click on *Run* in the *Current State* section next to the job list.

After the execution has finished you can verify the job results.

Modifying Jobs

This section describes how the different job properties can be changed at any time.

Status

Newly created jobs are enabled by default and therefore will be automatically executed in the background based on their individual schedule. To suppress these executions, the job status can be adjusted as follows:

- Log on to MailStore Client as MailStore administrator.
- Click on *Administrative Tools > Management API > Jobs*.
- Right click on the job to be modified in the *Jobs* table and uncheck the *Enabled* option to disable the scheduled execution or check the *Enabled* option to re-enable the scheduled execution of a previously disabled job.

Rename

To rename a job, proceed as follows:

- Log on to MailStore Client as MailStore administrator.
- Click on *Administrative Tools > Management API > Jobs*.
- Right click on the job to be renamed and then select *Rename....*
- Enter a new name for the job.
- Click *OK*.

Change Owner

In rare cases it might be necessary to change the owner of a job. Proceed as follow to change the owner of a job:

- Log on to MailStore Client as MailStore administrator.
- Click on *Administrative Tools > Management API > Jobs*.
- Right click on the appropriate job and then click on *Change Owner....*
- Select the new owner in the *Select User* dialog. Only MailStore administrators are selectable here.
- Click on *OK*.

Important Notice: If you revoke the MailStore administrator role from a job owner later, all jobs owned by that user will fail. In this case you have to assign the jobs to another MailStore administrator manually.

Properties

To modify the properties of jobs proceed as follows:

- Log on to MailStore Client as MailStore administrator.
- Click on *Administrative Tools > Management API > Jobs*.
- Double click on the job to be modified or right click on the job and then click on *Properties*.
- Make the desired changes to the job properties.
- Click *OK* to save the changes.

Templates

Template	Description
Storage	
Create Backup	Creates a backup in the given target directory based on the configured schedule. The search index files can be excluded optionally. Further information are available in Backup and Restore.
Maintain all FDB Files	Maintains all Firebird embedded database that are used in standard or advanced archive stores of type <i>Directory (File System)</i> . Further details can be found in Maintenance and Repair.
Rebuild Broken Search Indexes	Rebuilds all search indexes that are currently in the state <i>Needs rebuild</i> . Further details can be found in Maintenance and Repair.
Check Data Integrity	Verifies the data integrity between "Folder Information and Meta Data" as well as "Email Headers and Contents". Optionally search indexes can be included in the verification, but this profoundly increases the time to run the integrity check. Further details can be found in Maintenance and Repair.
Profiles	
Archive E-mail	Runs server side archiving profiles based on their configured schedule. Please note that server side archiving profiles are executed automatically and continuously in the background by default. Thus server side archiving profiles can only be executed by a job if the execution of the profile is set to <i>Manual</i> in the profile management. Hint: We recommend using this execution method only in special scenarios where automatic and continuous archiving is not desired.
Export E-mail	Runs server side export profiles based on their configured schedule. Server side archiving profiles can only be executed from a job if the execution of the profile is set to <i>Manual</i> in the profile management. Hint: If an automatic and continuous execution of an export profile is desired, we recommend to change the execution of the profile to <i>Automatic</i> in the profile management.
Miscellaneous	
Synchronize with Directory Services	Synchronizes the MailStore user database with the configured directory service. The behavior is equivalent to clicking on <i>Synchronize</i> at <i>Administrative Tools > Users and Privileges > Directory Services</i> . Please note: Archiving profiles for multiple, journal or catch all mailboxes provide an option to synchronize users with a directory service prior to archiving. This option should be preferred.

Send Status Report	Sends a status report via email to one or more recipients. The status report contains a summary of the key figures of the MailStore Server installation. This includes license information, size of the archive, compliance settings, results of import- and export profiles as well as job results. The covered period of time can be selected from a predefined list. The schedule when the report is sent should correspond to the covered period of time. E.g. a report that covers <i>Yesterday</i> , <i>Last Week</i> or <i>Last Month</i> should be sent <i>Daily at 1 AM</i> , <i>On Mondays at 1 AM</i> or <i>Monthly on first day at 1 AM</i> .
Process Retention Policies	Evaluates all enabled Retention Policies and deletes messages that are out of retention if applicable.

Automatically Created Jobs

When installing or upgrading to MailStore Server 10 or higher a new Job *RenewMasterKey (System)* is created automatically. This monthly running Job renews the master key that is used to encrypt the database encryption keys. In case the job was deleted, it can be re-created manually by clicking *Miscellaneous > Custom...* with the *Action RenewMasterKey*. By default the job is executed monthly at 3:00 AM.

5.19 Job Results

In *Administrative Tools > Management API > Job Results* you can find a listing of all job results for the period configured under *Keep Recent Results*. This listing can be filtered by period and result.

By double clicking a table entry further details of the job results can be retrieved.

Important notice: Depending on the number and frequency of jobs to be executed as well as the retention period of job results, you may notice a rapid growth of MailStore's master database. Therefore it is not recommended to set a too long retention period for job results (default: 90 days).

5.20 Backup and Restore

Backup

Preliminary Considerations

MailStore Server supports two methods to perform a full backup of the email archive including all user settings: the MailStore Server integrated backup feature and the use of external backup software.

Which method suits the needs of your business best depends on your preferences as well as your system environment. In smaller environments without a designated administrator, with the integrated backup feature no extensive configuration needs to be performed in order to make sure that the backup is successfully completed and that all pertinent data and directories are included. However, to be able to transfer the data (for example to off-site backup locations), it is necessary to integrate the backed up data into another backup solution.

When using external backup software a successful backup needs a few preparations. On the plus side, MailStore Server data can be integrated into existing backup strategies without having to perform a separate system backup.

Which Data Must be Backed Up?

To ensure a successful and frictionless restore of MailStore Server at any time, the following data must be included in the backup:

- Master Database (MailStoreMaster.fdb), which contains all configuration settings, like profiles, users, etc.
- Encryption Key File for Master Database (MailStoreMaster.key)
- If destination for audit log is set to *Integrated Audit Log*: Audit log files (Audit Log directory)
- Archive Stores

Each archive store in MailStore Server consists of three components:

- Folder information and meta data (MailStoreFileGroup.fdb + MailStoreFileGroup.key)
- Email headers and contents (Content directory)
- Full text index (Index directory)

Please note: As the configuration of the MailStore Server service itself (located within MailStore Server's program files folder), contains information specific to the current configuration of the computer where MailStore Server is installed, it is not recommended to backup and restore the service configuration data. Instead, manually reconfigure these settings after re-installing MailStore Server on a new machine. Pay special attention to the Audit Log Destination and VSS Writer settings.

Notes on Consistency

While *folder information and meta data* and *email headers and contents* are to be treated as one unit that requires consistency, *full text indexes* can be reconstructed if needed. In environments with higher security demands, and depending on the backup target, it may be advisable to exclude the unencrypted full text indexes from the backup for the costs have having to fully rebuild them in case of a restore.

Notes on Integrity

Irregardless of which backup method is used, only regular maintenance does ensure that the backed up data can successfully be used after a restore. Please refer to Maintenance and Repair for further details.

Using the MailStore Server Integrated Backup Feature

MailStore has built-in technology to perform a full backup of the archive.

The backup contains all archived emails and all settings such as profiles, users and privileges. Restoring such a backup is sufficient to completely reinstate the original archive without having to perform any further configurations.

Important Notice: When using the integrated backup feature, MailStore Server only supports internal archive stores. If you are using external archive stores, you need external backup software to perform a full backup.

Procedure

To create a complete database backup, proceed as follows:

- Log on to MailStore Client as MailStore Server administrator.
- Click on *Administrative Tools > Management API > Jobs*.
- Click on *Storage* and select *Create Backup*.

New Job

Name:

Common Settings

Please configure the Target Directory for your backup here.

Target Directory: ...

☐ Exclude Search Indexes

Schedule

Please configure the schedule on which to execute the job.

Recurrence:

Daily at:

Time Zone

(UTC+01:00) Amsterdam, Berlin, Bern, Rome, Stockholm, Vienna ...

OK Cancel Help

- Enter the *target directory*.

Please note: If the target directory is a network share, make sure that the MailStore Server service has access to that share. The path to the network share has to be entered in UNC notation, e.g. \\computer\sharename. Further information is available in the Using Network Attached Storage (NAS) article.

- The search indexes can be excluded optionally.

Please note: This option can be set so that administrators which have access to the backup files cannot access the unencrypted search index files. When restoring backups that do not include search indexes, the search indexes have to be rebuilt.

- Define the start time for the backup in the *Schedule* section.
- Click *OK* to finish the creation of the backup job.

If necessary, run the job manually in order to verify that MailStore Server is able to create a backup without errors.

When running the backup function for the first time, all files will be copied, after that only changed files will be copied. To achieve rotation of backups (e.g. daily, weekly), schedule multiple backup jobs with different target directories.

Please note: The archive cannot be accessed while a backup is in progress. Trying to access the archive will generate the error message *The server is currently not available due to maintenance*.

Using External Backup Software

Backup of Internal Archive Stores

When backing up internal archive stores with an external backup software, attention must be paid to the consistency of data which mainly depends on the backup method. The following sections summarize the pros and cons of the different methods.

File Based Backups

While file based backups solutions are good for backing up independent files, they are usually not suitable for creating consistent backups of a MailStore Server as its data is spread across multiple rapidly changing files.

In order to create consistent backups with file based backup tools, it is required to either freeze and thaw MailStore Server via `net pause mailstoreserver` and `net continue mailstoreserver` commands or to shutdown and restart the MailStore Server via `net stop mailstoreserver` and `net start mailstoreserver` commands.

As MailStore Server must remain shut down for the time of the backup, this typically results in downtimes during which MailStore Server is neither able to archive new email nor provide end user access to the archived data.

Storage Snapshots

When using Volume Shadow Copy Services (VSS) or other methods of creating snapshots on storage level, it is necessary to ensure that all files are closed before the snapshot is created.

The MailStore Server service provides external backup software using Microsoft Volume Shadow Copy Service with a so-called Volume Shadow Copy Service Writer (VSS Writer). The external backup software can use it to create consistent backups of the MailStore Server master database and all internal archive stores. Whether this method succeeds, however, largely depends on the backup software and the storage that is used. The VSS Writer has to be activated in the MailStore Server Service Configuration.

To verify if the appropriate VSS events were initiated in MailStore Server during a backup, open the application protocol in the Windows event viewer and search for the following events:

1. *A backup session has been started.*
2. *The archive has been frozen as a reaction on the OnPrepareSnapshot event.*
3. *The archive has been thawed as a reaction on the OnThaw event.*
4. *The backup session has been shut down.*

If these events cannot be found in the application protocol, no consistent backup using Volume Shadow Copy Service was performed. In that case the backup software needs to prepare MailStore Server for the snapshots.

This can be done with the methods detailed in the File Based Backups section.

For how to execute commands before and after performing snapshots, please consult your backup software's documentation.

Full Virtual Machine Snapshots

Some backup solutions are highly integrated into virtualization solutions and can create and backup/replicate full snapshots of virtual machines. These types of snapshots not only contain the current state of the hard disks but also of the current main memory. Thus full virtual machine snapshots can be considered as being consistent.

Other Backup or Replication Methods

For questions regarding any other type of backup solutions such as block level replication, continuous backup etc please contact the vendor's support to find out whether their software is able to create consistent backups of whole directory structures.

Backup of External Archive Stores

External archive stores allow you to store folder information and meta data in an SQL database. Email headers and contents can be stored optionally in an SQL database as well. Search index files have to be stored in the file system.

To backup external archive stores, the distributed data has to be backed up simultaneously. Stop the MailStore Server service, backup the SQL databases and the files that are stored in the file system with appropriate backup tools, then restart the MailStore Server service when done.

You can stop and start the MailStore Server service by executing the `net stop mailstoreserver` and `net start mailstoreserver` commands.

In case the unencrypted search index files are not backed up, you can rebuild them after restoring the backup.

Restoring Backups

This section describes how a database backup of the entire email archive, which was created using the integrated backup feature, can be restored.

Background

A database backup which was created using the integrated backup feature and that includes the search index files contains all archived emails and program settings such as users and privileges. Restoring such a backup is sufficient to completely reinstate the original archive without having to perform any further configurations.

Automatic Restore of a Database Backup

MailStore Server creates two files in the backup destination when creating a backup which allow an automatic full restore of the archive in its original storage location. Should the backup be restored to a different storage location or if only parts (i.e. a single archive store) should be restored, the restore procedure must be performed manually (see next section).

An operative installation of MailStore Server is required to restore a database backup. Please proceed as follows:

- Stop the MailStore Server Service and delete the empty archive that has been created during installation in `C:\MailArchive`.
- Reconfigure the service settings (e.g. Certificates, Audit Logs Destination, VSS Support).
- Next execute the file `restore.bat` from the backup directory.
Note: Is the file located on a network share, e.g. `\\nas01\MailStoreBackup`, you first have to create a mapped drive of that share, e.g. `N:`, and then execute the file on that drive.
- Follow the on-screen instructions. Carefully check the output for possible error messages.
- Run the MailStore Server Service Configuration tool from the MailStore Server program folder in the Windows start menu.
- Click *Browse...* under *General > Master Database* and select the restore directory which contains the `MailStoreMaster.fdb` file. Confirm the selection by clicking *OK*.

- Finally start the MailStore Server Service again.

In case the backup includes the search index files, no further steps are necessary after using the automatic restore. Otherwise the search indexes have to be rebuilt.

Manual Restore of a Database Backup

An operative installation of MailStore Server is required to restore a database backup. Please proceed as follows:

- Copy the database backup to a local hard drive on the computer or to a respective network share.
- Start the MailStore Server Service Configuration. It is located in the MailStore Server program folder that can be accessed through the Windows Start menu.
- Below *Master Database*, click on *Browse...* and select the backup directory containing the file *MailStoreMaster.fdb*.



- Click on *OK* to confirm.
- At the bottom of the window, click on *Restart Service* to save the new settings.
- When creating the backup, the folder names of the archive store may have changed. Please use the Storage Locations Management to adjust the paths to the archive stores or rename the folders in the file system accordingly. The mapping of the backup's archive store folder names to their original names can be found in the *restore.csv* file that has been created with the backup.

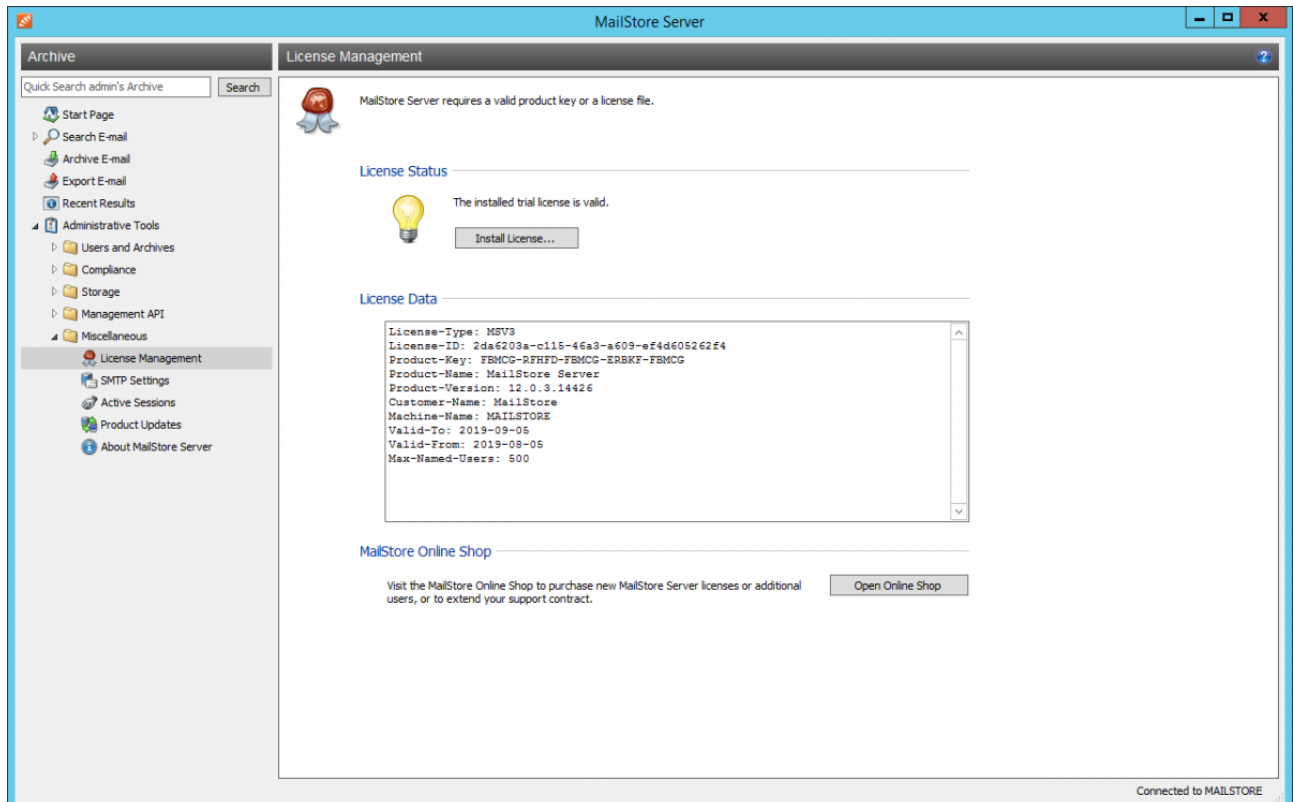
In case the backup includes the search index files, no further steps are necessary after the restore. Otherwise the search indexes have to be rebuilt.

5.21 License Management

The license management in MailStore allows you to install or update your MailStore Server license and gives an overview of the license currently in use. Furthermore the *Open Online-Shop* button provides direct access to our online shop, where, for example, license renewals or upgrades can be purchased.

In case the automatic retrieval of the license information is blocked, the license file can be downloaded manually ^[1].

Please notice: License holders that have not purchased their license directly from MailStore Software must contact their reseller for any license related topics.

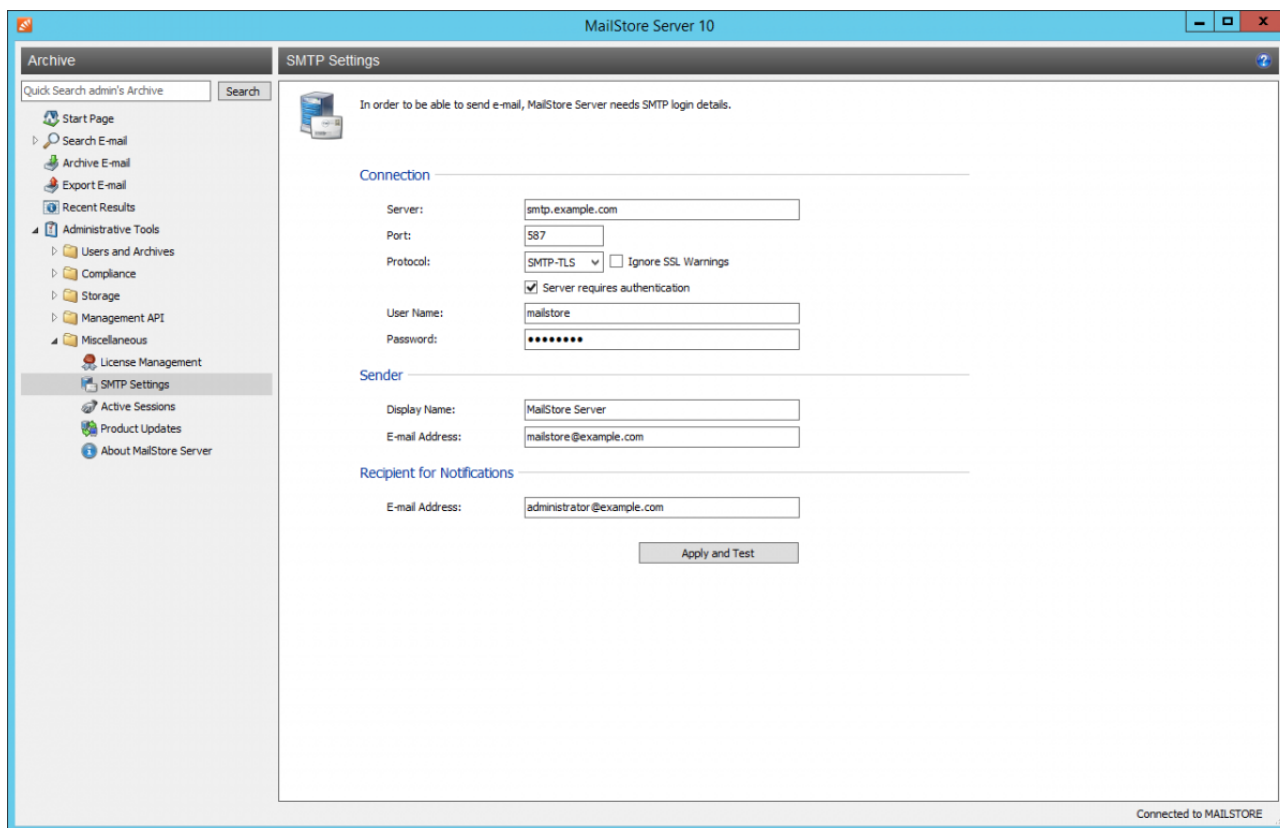


References

- [1] <https://my.mailstore.com/softwareactivation>

5.22 SMTP Settings

To be able to send emails, MailStore Server requires SMTP access data. MailStore sends notifications by email if product updates are available or if the automatic creation of a new archive store failed. Furthermore, email copies for the restore from MailStore Web Access can be sent via SMTP.



Under *Administrative Tools > Miscellaneous > SMTP Settings* you can specify the SMTP settings.

- Start MailStore Client and log on as MailStore administrator (*admin*).
- Click on *Administrative Tools > Miscellaneous* and then on *SMTP Settings*.
- Under *Server*, enter the host name of the SMTP server or its IP address.
- By default, MailStore uses port 587. If you want to use a different port, enter port number in the *Port* field.
- In the field *Protocol*, select *SMTP* for an unencrypted connection to the SMTP server. For an encrypted connection, select *SMTP-TLS* or *SMTP-SSL*. If the SMTP server does not have an official or installed SSL certificate, check *Ignore SSL Warnings*; otherwise, the sending process will fail.
- Especially SMTP servers which are accessible through the internet require a login (SMTP authentication). Check the corresponding checkbox and enter the appropriate access data. In most cases, the POP3 access data of any user on the email server can be used.
- Under *Sender*, enter the *Display Name* and the *Email Address* of the email sender. Many SMTP servers require an existing email address to be entered. The display name can be chosen freely; ideally the name indicates that the email was sent by MailStore Server.
- Under *Recipient for Notifications*, enter the email address of the recipient for administrative notifications of MailStore Server. To specify multiple recipients, enter them comma-separated.
- Once all settings have been specified, MailStore Server can be instructed to send a test email to the email address entered for notifications; simply click on *Apply and Test*. If an error message appears or the recipient specified does not receive the email, the following hints for troubleshooting may be helpful.

Troubleshooting

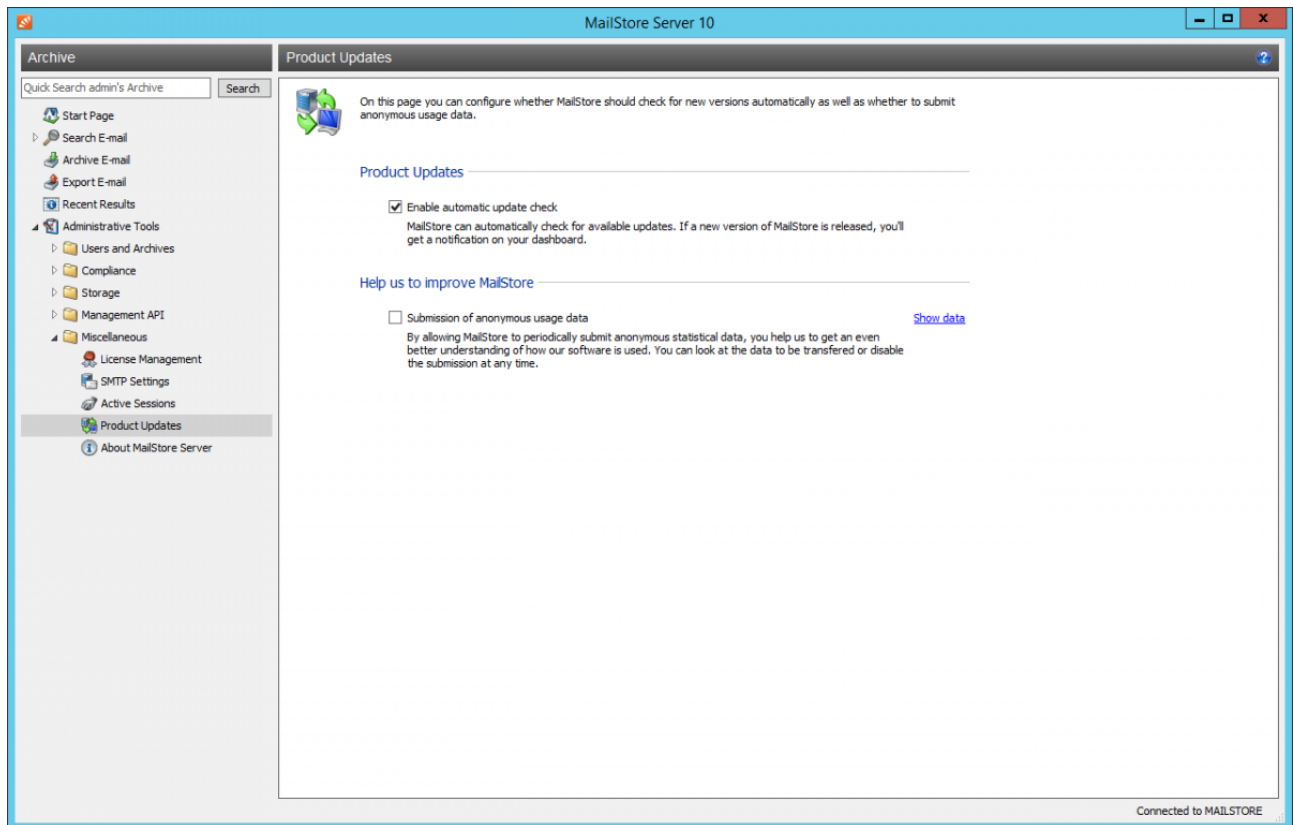
- If no error occurs upon sending but the email does not arrive, please check the spam or junk mail folder of the mailbox. Perhaps the email was filtered out.
- If an error message appears because of an invalid certificate ("Server's certificate was rejected by the verifier because of an unknown certificate authority."), check *Ignore SSL Warnings* and try again.
- If an error message appears indicating that "*One or more recipients rejected*", the SMTP server probably requires authentication. Enter the appropriate access data as described above.
- If an error message appears because of invalid access data ("*Incorrect authentication data*" or "*Authentication failed*"), verify the data entered. In most cases, the access data match those of the corresponding POP3 server.
- If further error messages appear or other problems arise, please check your entries for possible mistakes.

5.23 Active Sessions

Under *Administrative Tools > Active Sessions*, administrator can see which users are currently logged into MailStore Server. This may be important in preparation of performing maintenance tasks such as a backup, in order to identify which active users are affected by such an action.

5.24 Product Updates

On this page you can configure whether MailStore should check for new versions automatically as well as whether to submit anonymous usage data.



Enable automatic update check

If this option is enabled, MailStore Server regularly checks for new product versions. If a new version is available, this will be displayed on the dashboard in the MailStore Client. Additionally, if a *Recipient for Notifications* is defined in the SMTP Settings, a notification will be sent to this email address.

Submission of anonymous usage data

If this option is enabled, MailStore Server regularly sends data on how the program is being used to MailStore. This data allows us to better understand different usage scenarios of MailStore Server and focus our development capacities accordingly. The submitted data is collected and evaluated exclusively for this purpose.

You can display the data to be submitted by clicking on the *Show data* link. No personal data such as user names, passwords or email content will be submitted. The submitted data is completely anonymized and cannot be correlated to a specific customer installation. This option is disabled by default (opt-in).

5.25 MailStore Server Management Shell

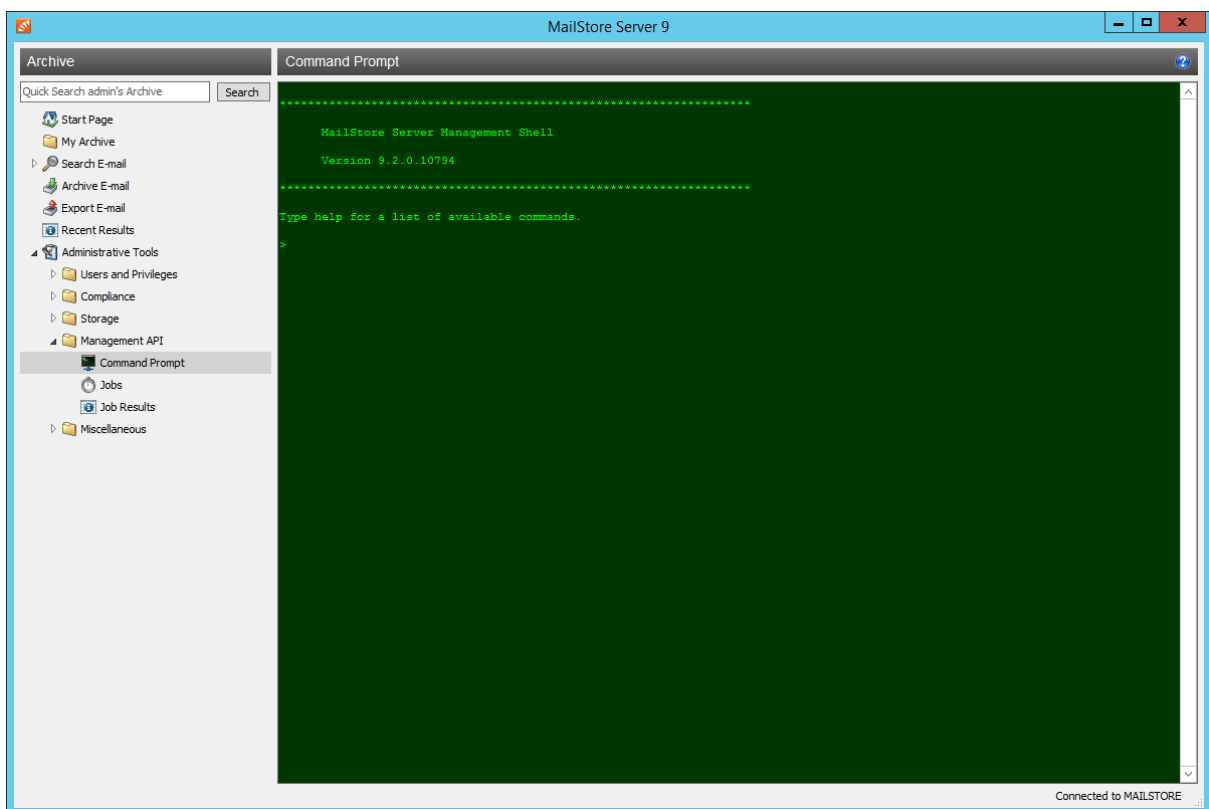
Many instructions available in the graphical user interface of MailStore Client can also be executed using MailStore's management shell, a command line client which is automatically included when installing MailStore Server and MailStore Client.

The management shell is useful when no graphical user interface is available (e.g. if using telnet or ssh) or for the integration of scripts (e.g. batch files) that are executed either manually or automatically.

Beside the client-side commands, the Management Shell also offers access to server-side commands of the MailStore Server Administration API. Output of server-side commands is in JSON format.

Starting the Management Shell in MailStore Client

The management shell can be started directly from MailStore: Log on to MailStore Client as administrator and click on *Administrative Tools > Management API > Command Prompt*.



The font size can be adjusted by holding the Ctrl key and using the mouse wheel or pressing + and -. Holding down the Ctrl key and pressing 0 resets the font size.

Using MailStoreCmd.exe in Non-Interactive Mode

In non-interactive mode, the management shell logs on with the access data passed, executes the command passed, and automatically terminates upon execution. If the login and the execution of the command were successful, the exit code (ERRORLEVEL) of the process is set to 0 (zero), otherwise it is set to any value other than 0. *MailStoreCmd.exe* can be found in the installation directory of MailStore Server. *MailStoreCmdSilent.exe* does the same, but does not open a console window.

Login credentials for your installation can be found in the scheduled task of an archiving profile of the type *E-Mail Programs* or *E-Mail Files*.

There are multiple ways to pass credentials to *MailStoreCmd.exe*.

To read credentials from the Windows Credentials Manager, they have to be stored there first. The MailStore Client does this automatically when creating a scheduled task in the Windows Task Planer. This methods prevents reading passwords easily by unauthorized persons.

```
MailStoreCmd.exe --h=<server> --cred=<user>@<server/ip address> --pkv3=<thumbprint> -c <command> [--param1=<value> --param2=<value> ...]
```

The credentials can also be passed as plain text.

```
MailStoreCmd.exe --h=<server> --u=<user> --p=<password> --pkv3=<thumbprint> -c <command> [--param1=<value> --param2=<value> ...]
```

The below command line parameters are required followed by additional API command parameters if necessary.

Parameter	Description
--h	The machine name of the MailStore server to which <i>MailStoreCmd.exe</i> is to connect.
--pkv3	The (optional) Public Key Fingerprint, which guarantees the identity of MailStore Server.
--u	User name
--p	Password
--cred	Alternative to --u and --p, the password is read from the Windows Credential Manager. The parameter must be entered in the from <user>@<server/ip address>.
--nologo	Optional. Prevents the logo from being displayed.
--o	Optional. Redirects the output to a given file. When this parameter is given, no output is sent to the console.
-c	The actual command follows (non-interactive mode).

Command Overview

Client side commands

Find a list of all client side commands below.

```
clear
```

Clears the texts currently displayed improving visibility.

```
debug-conn
```

Activates debug protocol for IMAP and HTTP connections during archiving for the running MailStore Client process.

```
debuglog-browse
```

Opens the file explorer and shows MailStore's *Debug Log* directory.

```
debuglog-enable, debuglog-disable
```

Activates or deactivates the global debug protocol (within computer scope).

```
export-execute [--name=<profilename>] [--id=<profileid>] [--verbose] [--[property]="value"]
```

Executes an export profile. Following parameters are supported:

--name | --id name or ID of the export profile to execute

--verbose activates a detailed status display on the console

--[property] Overwrites the given property of a profile. The internal properties can be displayed, by selecting an export profile and press CTRL + SHIFT + P. The name of the property has to be in brackets. Multiple properties can be modified by repeating the parameter.

```
export-list
```

Displays a list of all existing export profiles (ID and profile name).

```
help
```

Displays a list of all available commands and their parameters.

```
import-execute [--name=<profilename>] [--id=<profileid>] [--verbose] [--user=<username>] [--[property]="value"]
```

Executes the archiving profile. Following parameters are supported:

--name | --id name or ID of the import profile to execute

--verbose activates a detailed status display on the console

--user user archive to store archived emails

--[property] Overwrites the given property of a profile. The internal properties can be displayed, by selecting an archiving profile and press CTRL + SHIFT + P. The name of the property has to be in brackets. Multiple properties can be modified by repeating the parameter.

```
import-list [--user=<username>]
```

Displays a list of all existing archiving profiles (ID and profile name).

```
livelog-client-disable, livelog-client-enable, livelog-server-disable, livelog-server-enable
```

Activates or deactivates the live debug protocol of MailStore Server or MailStore Client. The live protocol can be viewed with Sysinternal's DebugView. DebugView must be started with elevated privileges and it must be configured to capture *Global Win 32* events.

```
store-setprop --name=<name> [--value=true/false]
```

Changes the value of a global property

--name Name of the global property

--value Value of the global property

Following global properties are supported:

Name	Version	Values	Default
public.arcclient.skipMimeContentConversionFailed	8	<i>true</i> = Exchange <i>MimeContentConversionFailed</i> errors are ignored and not handled as an archiving error. <i>false</i> = Exchange <i>MimeContentConversionFailed</i> errors are handled as archiving errors.	false
public.arcclient.skipVirusDetected	8.1	<i>true</i> = Exchange <i>ErrorVirusDetected</i> errors are ignored and not handled as an archiving error. <i>false</i> = Exchange <i>ErrorVirusDetected</i> errors are handled as archiving errors.	false
public.arcclient.skipEwsErrorItemNotFound	10	<i>true</i> = Exchange <i>ErrorItemNotFound</i> errors are ignored and not handled as an archiving error. <i>false</i> = Exchange <i>ErrorItemNotFound</i> errors are handled as archiving errors.	false
public.backup.hideNotDetectedWarningMessage	11	<i>true</i> = Backup warning messages are not shown on dashboard. <i>false</i> = Backup warning messages are shown on dashboard.	false

```
user-list
```

Display list of users.

Server side commands

An overview of all available server side commands can be found under Function Reference.

The parameters of server side commands are case sensitive and must be entered with two dashes (--). Boolean values must be entered as *true* or *false*. Strings that contain white space characters must be set in quotes.

Examples:

```
GetProfiles --raw=true
```

Lists all archiving and export profiles.

```
GetUserInfo --userName="alexis.page"
```

Lists the properties of the user *alexis.page*.

```
GetJobResults --fromIncluding="2018-01-01T00:00:00" --toExcluding="2019-01-01T00:00:00" --timeZoneId="$Local" --jobId=1
```

Lists the results of the job with id 1 of the year 2018.

```
GetWorkerResults --fromIncluding="2018-01-01T00:00:00" --toExcluding="2019-01-01T00:00:00" --timeZoneID="$Local" --profileID=1
```

Lists the results of the archiving profile with id 1 of the year 2018. The command *GetWorkerResults* is the only command where the parameter *timeZoneID* is written with a capital *D*.

```
RunProfile --id=1
```

Starts the archiving or export profile with id 1.

6

Chapter

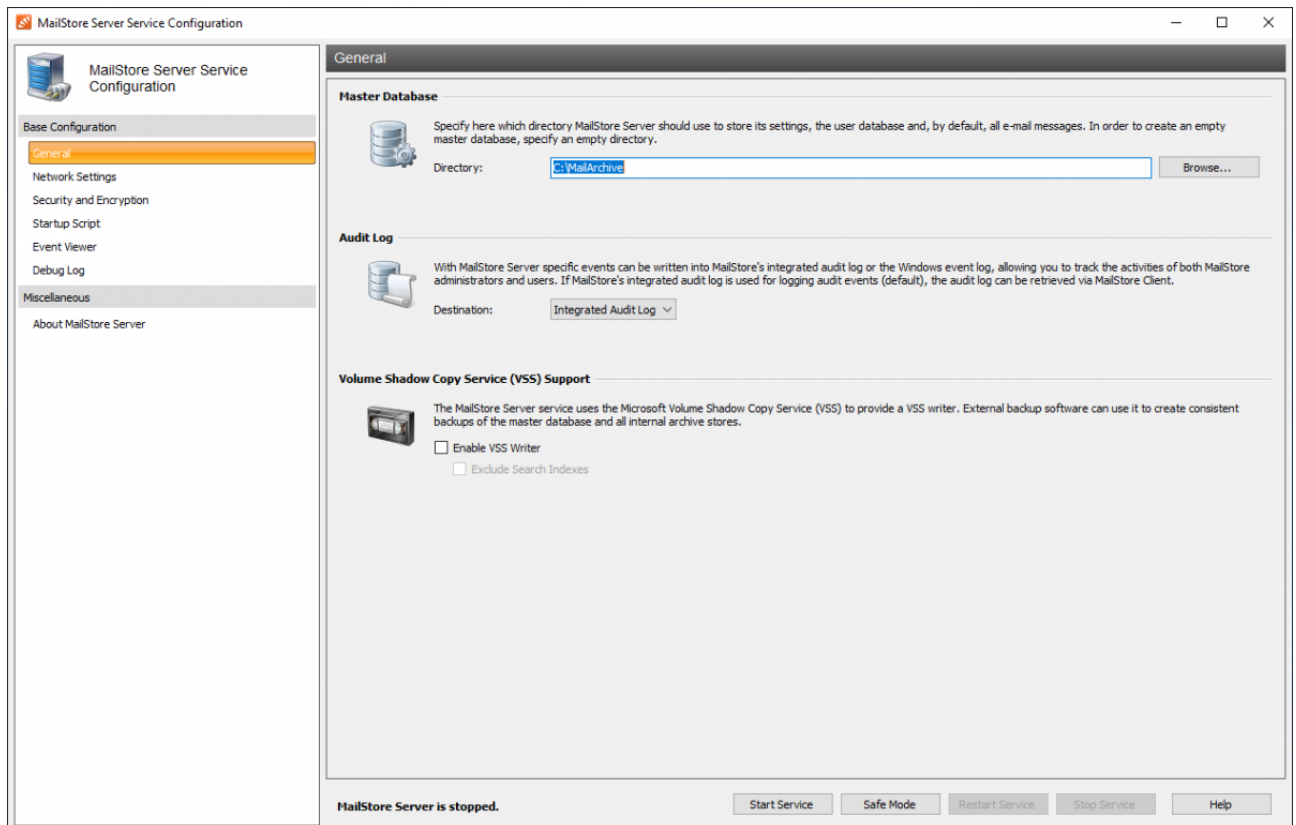
Service Configuration

6.1 MailStore Server Service Configuration

With the MailStore Server Service Configuration you can configure low level features of a MailStore Server installation as well as control the MailStore Server service. The current status of the MailStore Server service is shown at the bottom of the window.

General

On this page you can select the storage location of the master database, configure where audit events should be stored and enable or disable support for the Volume Shadow Copy Service (VSS).



Master Database

Select the storage location of an existing master database. If you chose an empty directory, a new master database will be created therein. If you want to move an existing archive to a new storage location, refer to the instructions in Moving the Archive.

Audit Log

Select the preferred location for storing audit log events.

- *Windows Event Log*
Audit events will be stored in the Windows Event Log, which allows to access and monitor audit event with other 3rd party tools
- *Integrated Audit Log*
Audit events will be stored in the current archive and MailStore administrators may use the MailStore Client to search inside the audit log.

Volume Shadow Copy Services (VSS) Support

Third party backup solutions may utilize Windows' Volume Shadow Copy Service to create consistent backups of data. Please refer to Backup and Restore to learn more about the various backup scenarios and in which enabling MailStore's VSS support might be beneficial.

The following settings are available in this section:

- *VSS Writer*
Activates the MailStore VSS Writer for enabling live backups of the archive using an external backup software.
 - *Exclude Indexes from VSS Backup*
Location of index files will not be reported by the VSS Writer.

Controlling the Service

The current status of the MailStore Server service is shown at the bottom of the window. By using the buttons you can control the MailStore Server service.

Safe Mode

The MailStore Server service can be started in *Safe Mode* to perform configuration changes or execute maintenance task without interference of background jobs or users.

While the *Safe Mode* is active:

- Only administrators can log in to MailStore
- Automatic archiving and export profiles are not started
- Jobs are not started automatically
- All internal heartbeats are disabled
- The *MailStore Server Service Configuration* cannot be closed

Network Settings

Certificate

Shows the current TLS certificate used by all integrated services. Click on the name of the TLS certificate to view further details. Using the ellipsis button (...) next to the name you can:

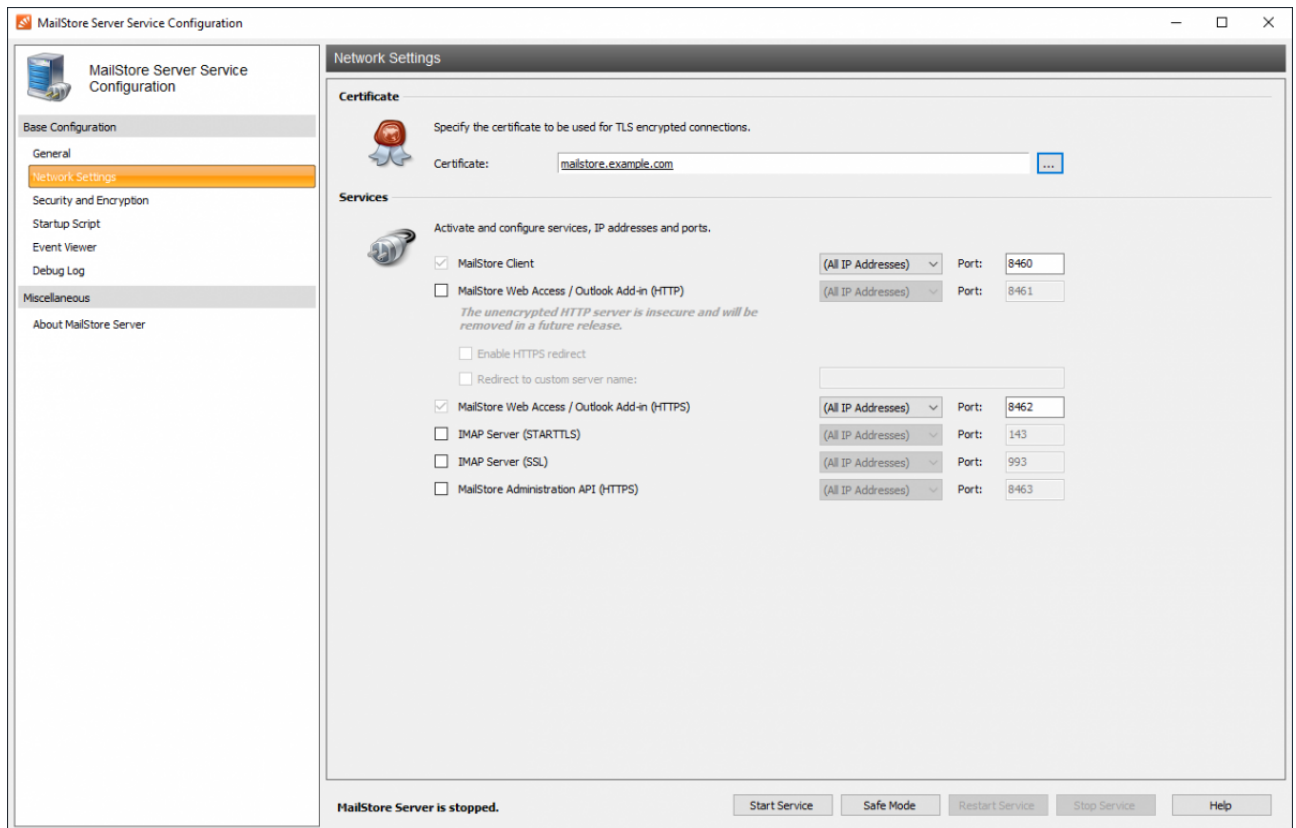
- Select a TLS certificate from the certificate store of the MailStore Server computer.
- Import a TLS certificate from a file directly into the certificate store of the MailStore Server computer. The file must be in PKCS #12 format and usually has the file extension *.pfx* or *.p12*.
- Request a TLS certificate from Let's Encrypt
- Create a new self-signed TLS certificate.

Further information about certificates and TLS security can be found in the following articles:

- Using Your Own SSL Certificate
- Enhancing SSL Security
- Using Let's Encrypt Certificates

Services

In addition to enabling and disabling individual network services provided by MailStore Server, you can choose the IP address and the port to which a service is to be bound.



- *MailStore Client*
Access for the MailStore Client application via a TLS encrypted TCP connection. This service cannot be disabled because the MailStore Client is essential for managing MailStore Server. The default TCP port is 8460.
- *MailStore Web Access / Outlook Add-In (HTTP)*
Enables archive access via an insecure HTTP connection through MailStore Web Access and the MailStore Outlook Add-in. The default TCP port is 8461.
If this service is enabled a warning will appear on the admin dashboard in MailStore Client, as this service has been marked as deprecated, and is no longer enabled by default on new installations since MailStore Server 12. It will be removed completely in a later version.
 - *Enable HTTPS redirect*
Enabling this option redirects clients from the unencrypted HTTP requests to the HTTPS port.
 - *Redirect to custom server name*
If MailStore Server should use a specific server name for the HTTPS redirect, it must be specified here.
- *MailStore Web Access / Outlook Add-In (HTTPS)*
This service provides TLS-encrypted archive access through MailStore Web Access and the MailStore Outlook Add-in. The default TCP port is 8462. This service cannot be disabled.
- *IMAP Server (STARTTLS)*
Enables the STARTTLS-encrypted archive access through the integrated IMAP server (explicit TLS). Login over unencrypted connections is not supported.
- *IMAP Server (SSL)*
Enables TLS-encrypted archive access through the integrated IMAP server (implicit TLS).
- *MailStore Administration API (HTTPS)*
Enables TLS-encrypted access to the MailStore Administration API. The default TCP port is 8463.

IP Address

The IP address on which the service accepts connections. Generally, it is recommended to bind the MailStore Server services to all IP addresses (default).

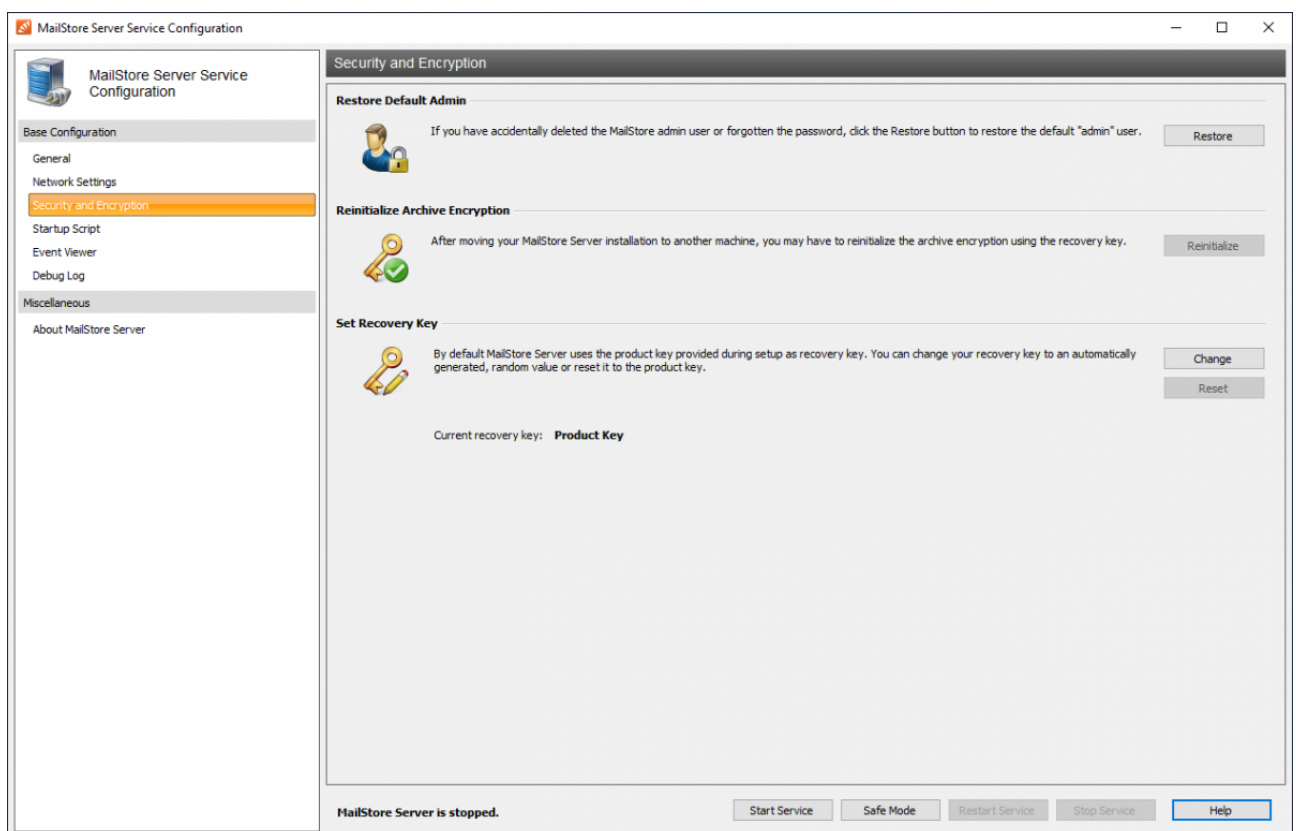
Port

Indicates the TCP port on which the service accepts connections.

Hint: If no web server other than MailStore Web Access is installed (e.g. an IIS website, Microsoft Outlook Web Access or SharePoint), you can specify the HTTP- and HTTPS standard ports (80 and 443). This way, users can access MailStore Web access directly using the URLs `http://<server name>` or `https://<server name>` without port numbers.

Security and Encryption

This page provides several security features related to archive access and encryption. Please note that you cannot use these features while the MailStore Server service is running; it has to be stopped first.



Restore Default Admin

Through this feature you can restore the default admin user *admin* with the likewise password *admin*. If the recovery key of the archive whose default admin you want to restore is not the product key of the current MailStore Server installation, you will be asked to enter the associated recovery key.

A restore of the default admin user is written into the audit log.

Reinitialize Archive Encryption

For security reasons the archive encryption is bound to the Windows installation of the MailStore Server machine. Therefore it might be necessary to reinitialize the archive encryption when moving the archive to another computer. If the recovery key of the archive whose encryption you want to reinitialize is not the product key of the current MailStore Server installation, you will be asked to enter the associated recovery key.

Set Recovery Key

The recovery key is used to authorize several security related tasks in MailStore Server, such as restoring the default admin, moving the archive to another machine or attaching archive stores from another MailStore installation. That way the number of people that may perform such tasks can be kept small and administrative archive and system duties can be kept separate.

By default, MailStore Server uses the product key provided during setup as recovery key and most security related tasks are carried out automatically without the need to enter the recovery key for authorization.

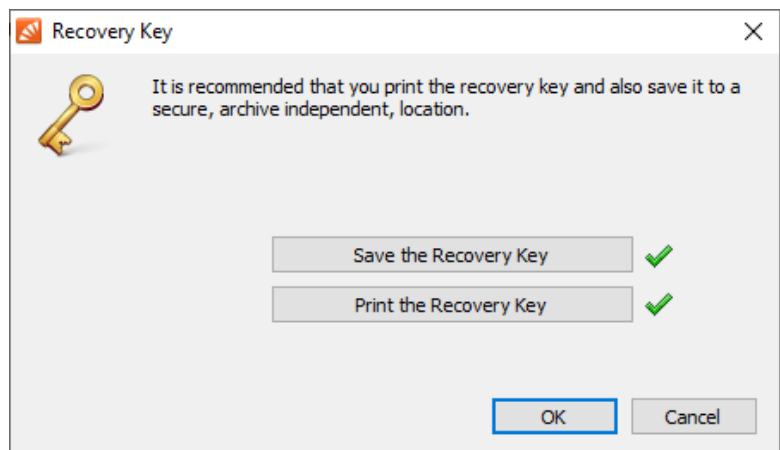
To improve security you can change your recovery key to an automatically generated, random value. In that case, every security related tasks must be authorized by entering the recovery key. For easier reference, each recovery key has a unique identifier that is displayed when the related recovery key must be provided. Only the most recent recovery key can be used for authorization.

Changing the Recovery Key

Click on *Change* to change the recovery key to an automatically generated, random value.

- You will be asked to save the recovery key to a file and/or print it. You have to choose at least one option to continue.
- After successfully changing the recovery key only the new key can be used henceforth.

Important notice: Always store the recovery key in a secure location. Without the recovery key carrying out security related tasks is no longer possible.



Resetting the Recovery Key

The MailStore Server service can execute a script before startup. The script can be used to establish a connection to a network resource using special connection parameters as described in chapter Using Network Attached Storage (NAS).

Event Viewer

Events such as starting or stopping the MailStore Server service are displayed here. If there are any errors, click on the corresponding entry to view additional details below the list.

Debug Log

On this page you can enable, view or delete all debug logs created by MailStore Server.

Enable Debug Log

Enable this feature if any problems or errors have occurred while running MailStore Server. After restarting the server service via *Restart Service* in the same window, a detailed log file is recorded. This file can be evaluated by the MailStore support team, for example.

Enable IMAP Connection Debug Log

Enable this feature if problems or errors have occurred while accessing MailStore Server using the integrated IMAP server. After restarting the server service via *Restart Service* in the same window, a detailed log file is recorded. This file can be evaluated by the MailStore support team, for example.

The table shows an overview of all debug log files. To view the contents of a debug log file in a text editor, double-click on the file name or click on *Open*. To delete a debug log file, highlight the file name and click on *Delete*.

7

Chapter

MailStore Server Administration API

7.1 Administration API - Using the API

In this chapter you can find a description of the MailStore Server Administration API. With the Administration API administrative tasks, such as managing users or storage locations, can be remote controlled from a central location. Communication with the Administration API is done using web requests through HTTPS.

For security reasons, the MailStore Server Administration API is deactivated by default and has to be activated using the MailStore Server Service Configuration. When you are connecting to the API and using a hostname other than *localhost* or *127.0.0.1* you have to change the password of the admin user before.

Executing Regular API Functions

To execute regular Management API functions, send a HTTP POST request to the following URL:

```
https://<mailstore-server>:8463/api/invoke/<function>
```

With every request to the API, the username and password of a MailStore Administrator must be submitted following the HTTP Basic Authentication specification as described in RFC 2617. When a function needs additional data, this data must be send urlencoded. The HTTP header Content-Type: application/x-www-form-urlencoded should be set.

Example

HTTP Request

```
POST /api/invoke/GetServerInfo HTTP/1.1
Authorization: Basic YWRtaW46UGFzc3cwcmQ=
User-Agent: curl/7.35.0
Host: mailstore.example.com:8463
Accept: */*
Content-Length: 0
```

HTTP Response

```
HTTP/1.1 200 OK
Cache-Control:
no-cache,private,no-store,must-revalidate,max-stale=0,post-check=0,pre-check=0
Pragma: no-cache
Content-Length: 251
Content-Type: application/json
Expires: Wed, 25 Jun 2014 14:13:43 GMT
Server: Microsoft-HTTPAPI/2.0
Date: Thu, 26 Jun 2014 14:13:43 GMT

{
  "error": null,
  "token": null,
  "statusVersion": 2,
  "statusCode": "succeeded",
  "percentProgress": null,
  "statusText": null,
  "result": {
    "version": "9.0.0.9702",
    "machineName": "MAILSTORE"
  },
  "logOutput": null
}
```

To get a list of all available functions, send a POST request to <https://<mailstore-server>:8463/api/get-metadata>.

Long Running Processes

Some API functions start a long running process that may take several minutes or even hours to complete. To keep track of the progress a unique token is returned upon initial request, which can be used to periodically poll for status updates.

The overall process is as follows:

1. Send HTTP POST to `https://<mailstore-server>:8463/api/invoke/VerifyStore` in order to execute the function.
2. Check the server's response for the keys `token`, `statusCode` and `statusVersion`.
3. To retrieve status updates, send periodic requests to `https://<mailstore-server>:8463/api/get-status` with the following parameters:

Name	Description
<code>token</code>	The received unique token for the process.
<code>lastKnownStatusVersion</code>	Value of <code>statusVersion</code> from last response.
<code>millisecondsTimeout</code>	Time in milliseconds until the the server stops waiting for a new status update to send. If a new status update is available it will be sent to the client immediately, otherwise the last status is repeated.

4. The process finished when the `statusCode` is not *running*.

Example

Initial HTTP Request

```
POST /api/invoke/VerifyStore HTTP/1.1
Authorization: Basic YWRtaW46UGFzc3cwcmQ=
User-Agent: curl/7.35.0
Host: mailstore.example.com:8463
Accept: */*
Content-Length: 5
Content-Type: application/x-www-form-urlencoded

id=11
```

Initial HTTP Response

```
HTTP/1.1 200 OK
Cache-Control:
no-cache,private,no-store,must-revalidate,max-stale=0,post-check=0,pre-check=0
Pragma: no-cache
Content-Length: 290
Content-Type: application/json
Expires: Wed, 25 Jun 2014 14:15:41 GMT
Server: Microsoft-HTTPAPI/2.0
Date: Thu, 26 Jun 2014 14:15:41 GMT

{
  "error": null,
  "token": "b3af0ebae4dd755d1a54b9756817baee",
  "statusVersion": 3,
  "statusCode": "running",
  "percentProgress": 0,
  "statusText": null,
  "result": null,
  "logOutput": "Verifying file group #11...\r\nCreating a list of
messages to be verified...\r\n"
}
```

Periodic HTTP Request of Progress

```
POST /api/get-status HTTP/1.1
Authorization: Basic YWRtaW46UGFzc3cwcmQ=
User-Agent: curl/7.35.0
Host: spe.example.com:8474
Accept: */*
Content-Length: 90
Content-Type: application/x-www-form-urlencoded

token=b3af0ebae4dd755d1a54b9756817baee&lastKnownStatusVersion=3&millisecondsTimeout=5000
```

HTTP Response to Periodic Progress Requests

```
HTTP/1.1 200 OK
Cache-Control:
no-cache,private,no-store,must-revalidate,max-stale=0,post-check=0,pre-check=0
Pragma: no-cache
Content-Length: 242
Content-Type: application/json
Expires: Wed, 25 Jun 2014 14:08:15 GMT
Server: Microsoft-HTTPAPI/2.0
Date: Thu, 26 Jun 2014 14:08:15 GMT

{
  "error": null,
  "token": "b3af0ebae4dd755d1a54b9756817baee",
  "statusVersion": 9,
  "statusCode": "running",
  "percentProgress": 0,
  "statusText": null,
  "result": null,
  "logOutput": " 400 messages verified...\r\n"
}
```

Final HTTP Response

```
HTTP/1.1 200 OK
Cache-Control:
no-cache,private,no-store,must-revalidate,max-stale=0,post-check=0,pre-check=0
Pragma: no-cache
Content-Length: 242
Content-Type: application/json
Expires: Wed, 25 Jun 2014 15:08:15 GMT
Server: Microsoft-HTTPAPI/2.0
Date: Thu, 26 Jun 2014 15:08:15 GMT

{
  "error": null,
  "token": null,
  "statusVersion": 269,
  "statusCode": "succeeded",
  "percentProgress": null,
  "statusText": null,
  "result": null,
  "logOutput": null
}
```

Error Handling

Additionally to handling protocol specific issues such as HTTP or TCP errors, developers receive detailed information from the API itself in case the request did not succeed.

In case the request was successfully be processed, the response will contain:

```
"error": null
```

Otherwise in the event of a failure the error key will have the following structure

```
"error": {  
  "message": string,  
  "details": string  
}
```

allowing developers to display a meaningful error message and further technical details.

7.2 Administration API - Function Reference

AttachStore

Attach existing archive store.

Arguments

Name	Type	Description
name	string	Meaningful name of archive store.
type	string	Type of archive store.
databaseName	string (optional)	Name of database on Microsoft SQL Server or PostgreSQL server.
databasePath	string (optional)	Path to directory in which database folder information and email meta data are stored.
contentPath	string (optional)	Path to directory in which email headers and contents are stored.
indexPath	string (optional)	Path to directory in which full text search indexes are stored.
serverName	string (optional)	Name of Microsoft SQL Server or PostgreSQL server.
userName	string (optional)	User name for accessing Microsoft SQL Server or PostgreSQL server.
password	string (optional)	Password for accessing Microsoft SQL Server or PostgreSQL server.
requestedState	string (optional)	State of archive store after attaching.

Argument Values

type

Name	Description
FileSystemInternal	Advanced file system-based archive store.
SQLServer	Microsoft SQL Server-based archive store.
PostgreSQL	PostgreSQL server-based archive store.

requestedState

Name	Description
current	Same as Normal but new messages will be archived in the archive store that is set to Current.
normal	The content of archives store is available to users and can be modified if the user has the appropriate permission.
writeProtected	The content of write protected archive stores is available to users, but cannot be modified (e.g. delete or move messages, rename or move folders)
disabled	Disabled archive stores are not in use but the instance still knows about their existence. Therefore the content is not available to users.

CancelJobAsync

Cancel a running job asynchronously.

Arguments

Name	Type	Description
id	number	The unique identifier of the job to be canceled.

ClearUserPrivilegesOnFolders

Removes all privileges of a user on all archive folders.

Arguments

Name	Type	Description
userName	string	User name of MailStore user.

CompactMasterDatabase

Compact master database.

CompactStore

Compact archive store.

Arguments

Name	Type	Description
id	number	Unique ID of archive store

CreateBackup

Create a backup of the entire archive.

Arguments

Name	Type	Description
path	string	Path to directory into which the backup should be written.
excludeSearchIndexes	bool (optional)	Indicates whether the search index files should be excluded from the backup.

CreateJob

Create a new job to execute Management API commands.

Arguments

Name	Type	Description
name	string (optional)	A meaningful name for the job. Example: <i>Daily Backup</i> .
action	string (optional)	Management API command to execute.
owner	string (optional)	Username of the job owner; must be an administrator.
timeZoneId	string (optional)	The id of the time zone the date should be converted to, e.g. <i>\$Local</i> , which represents the time zone of the operating system.
date	string (optional)	Datetime string (YYYY-MM-DDThh:mm:ss) for running the job once.
interval	number (optional)	Interval for running job.
time	string (optional)	Time for running job. Without additional parameter, this means daily execution.
dayOfWeek	string (optional)	Day of week to run job. Parameter "time" also required.
dayOfMonth	string (optional)	Day of month to run job. Parameter "time" also required. dayOfWeek can optionally be used to define further.

Use the API command `GetTimeZones` to retrieve a list of all available time zones and their ids.

Argument Values

dayOfWeek

Name	Description
Sunday	Sunday
Monday	Monday
Tuesday	Tuesday
Wednesday	Wednesday
Thursday	Thursday
Friday	Friday
Saturday	Saturday

dayOfMonth

Name	Description
1 to 31	Numeric representation of day of month.
Last	Last day of month.

interval

Name	Description
5	Every 5 minutes.
10	Every 10 minutes.
15	Every 15 minutes.
20	Every 20 minutes.
30	Every 30 minutes.
60	Every hour.
120	Every 2 hours.
180	Every 3 hours.
240	Every 4 hours.
360	Every 6 hours.
720	Every 12 hours.

CreateProfile

Create a new archiving or exporting profile.

Arguments

Name	Type	Description
properties	json	Profile properties.
raw	bool	Currently only 'true' is supported.

Argument Values

properties

To receive available profile properties create a profile of the desired type via MailStore Client and then use the `GetProfiles` method to receive supported values. The properties *id* and *version* must be omitted, the password field must be filled properly.

CreateStore

Create and attach a new archive store.

Arguments

Name	Type	Description
name	string	Meaningful name of archive store.
type	string (optional)	Type of archive store.
databaseName	string (optional)	Name of database on Microsoft SQL Server or PostgreSQL server.
databasePath	string (optional)	Path to directory in which database folder information and email meta data are stored.
contentPath	string (optional)	Path to directory in which email headers and contents are stored.
indexPath	string (optional)	Path to directory in which full text search indexes are stored.
serverName	string (optional)	Name of Microsoft SQL Server or PostgreSQL server.
userName	string (optional)	User name for accessing Microsoft SQL Server or PostgreSQL server.
password	string (optional)	Password for accessing Microsoft SQL Server or PostgreSQL server.
requestedState	string (optional)	State of archive store after attaching.

Argument Values

type

Name	Description
FileSystemInternal	Standard archive store.
SQLServer	Microsoft SQL Server-based archive store.
PostgreSQL	PostgreSQL server-based archive store.

requestedState

Name	Description
current	Same as Normal but new messages will be archived in the archive store that is set to Current.
normal	The content of archives store is available to users and can be modified if the user has the appropriate permission.
writeProtected	The content of write protected archive stores is available to users, but cannot be modified (e.g. delete or move messages, rename or move folders)
disabled	Disabled archive stores are not in use but the instance still knows about their existence. Therefore the content is not available to users.

CreateUser

Create new MailStore user. Use SetUserPrivilegesOnFolder to grant that user privileges on the user's own archive.

Arguments

Name	Type	Description
userName	string	User name of new MailStore user.
privileges	string	Comma separated list of privileges.
fullName	string (optional)	Full name of user.
distinguishedName	string (optional)	LDAP DN string.
authentication	string (optional)	Authentication setting for user: 'integrated or 'directoryServices'.
password	string (optional)	Password of new user.

Argument Values

privileges

Name	Description
none	The user is granted no global privileges. If specified, this value has to be the only value in the list.
admin	The user is granted administrator privileges. If specified, this value has to be the only value in the list.
login	The user can log on to MailStore Server.
changePassword	The user can change his own MailStore Server password. This only makes sense if the authentication is set to <i>integrated</i> .
archive	The user can run archiving profiles.
modifyArchiveProfiles	The user can create, modify and delete archiving profiles.
export	The user can run export profiles.
modifyExportProfiles	The user can create, modify and delete export profiles.
delete	The user can delete messages. Please note that a non-admin user can only delete messages in folders where he has been granted delete access. In addition, compliance settings may be in effect, keeping administrators and users from deleting messages even if they have been granted the privilege to do so.

DeleteEmptyFolders

Remove folders from folder tree that do not contain emails.

Arguments

Name	Type	Description
folder	string (optional)	Entry point in folder tree.

DeleteJob

Deletes a job.

Arguments

Name	Type	Description
id	string	The unique identifier of the job to be deleted.

DeleteMessage

Delete a single message

Arguments

Name	Type	Description
id	string	Unique ID of message. Format: <store_id>:<message_num>
reason	string	The reason why that message has to be deleted which will be written into the audit log.

DeleteProfile

Delete an archiving or exporting profile.

Arguments

Name	Type	Description
id	number	Unique ID of profile.

DeleteUser

Delete a MailStore user. Neither the user's archive nor the user's archive emails are deleted when deleting a user.

Arguments

Name	Type	Description
userName	string	User name of MailStore user.

DetachStore

Detach an archive store.

Arguments

Name	Type	Description
id	number	Unique ID of archive store.

GetActiveSessions

Get list of current user sessions.

GetChildFolders

Get child folders. Depending on compliance settings this method may return only the first folder hierarchy level.

Arguments

Name	Type	Description
<code>folder</code>	string (optional)	Parent folder whose child folders should be returned. If omitted, all archives and folder will be returned.
<code>maxLevels</code>	number (optional)	Depth of child folders.

GetComplianceConfiguration

Get current compliance configuration settings.

GetDirectoryServicesConfiguration

Get current Directory Services configuration settings.

GetFolderStatistics

Get folder statistics.

GetJobResults

Retrieves list of finished job executions.

Arguments

Name	Type	Description
<code>fromIncluding</code>	string	Beginning of time range to fetch.
<code>toExcluding</code>	string	End of time range to fetch.
<code>timeZoneId</code>	string	The id of the time zone the date should be converted to, e.g. <code>\$Local</code> , which represents the time zone of the operating system.
<code>jobId</code>	number (optional)	The job id for which to retrieve results.

Interactive Management Shell Example: `GetJobResults --fromIncluding="2016-12-01T00:00:00" --toExcluding="2016-12-31T23:59:59" --timeZoneId="$Local" --jobId=1`

Use the API command `GetTimeZones` to retrieve a list of all available time zones and their ids.

GetJobs

Retrieve list of jobs

GetMessages

Get list of messages from a folder.

Arguments

Name	Type	Description
<code>folder</code>	string (optional)	Folder whose content to list.

GetProfiles

Get list of archiving and exporting profiles.

Arguments

Name	Type	Description
raw	bool	Currently only 'true' is supported.

GetRetentionPolicies

Get the retention policies.

Example retention policies object:

```
[
  {
    "name": "Keep All Mails for 10 Years",
    "order": 1,
    "enabled": true,
    "searchCriteria": null,
    "period": 10,
    "periodInterval": "year",
    "delete": false
  }
]
```

GetServerInfo

Get MailStore Server version and machine name.

GetServiceConfiguration

Get MailStore Server service configuration. This includes the path to the Master Database, the location of the audit log, whether the different debug logs are enabled and the endpoint configuration.

GetSmtpSettings

Get current SMTP configuration.

GetStoreIndexes

Get list of full text indexes.

Arguments

Name	Type	Description
id	number (optional)	Unique ID of archive store.

GetStores

Get list of archive stores.

Arguments

Name	Type	Description
<code>includeSize</code>	bool (optional)	Includes size of archive store. Default: <i>true</i> . May be slow when running on slow hardware.

GetTimeZones

Get a list of available time zones.

The *id* of the output can be used as *timeZoneId* in `CreateJob`, `GetJobResults`, `SetJobSchedule` and `SendStatusReport` and as *timeZoneID* (with a capital *ID*) in `GetJobResults`.

GetUserInfo

Get detailed information about user.

Arguments

Name	Type	Description
<code>userName</code>	string	User name of MailStore user

GetUsers

Get list of users.

GetWorkerResults

Get results of profile executions.

Arguments

Name	Type	Description
<code>fromIncluding</code>	string	Beginning of time range to fetch.
<code>toExcluding</code>	string	End of time range to fetch.
<code>timeZoneID</code>	string	The id of the time zone the date should be converted to, e.g. <code>\$Local</code> , which represents the time zone of the operating system.
<code>profileID</code>	number (optional)	Filter results by given profile ID.
<code>userName</code>	string (optional)	Filter results by given user name.

Interactive Management Shell Example: `GetWorkerResults --fromIncluding="2016-01-01T00:00:00" --toExcluding="2016-12-31T23:59:59" --timeZoneID="$Local" --profileID=1 --userName="admin"`

Use the API command `GetTimeZones` to retrieve a list of all available time zones and their ids.

Be aware that *timeZoneID* has to be written with a capital *ID* where all other commands with a *timeZoneId* are expecting *Id*.

MaintainFileSystemDatabases

Run database maintenance on all databases of file system based archive stores.

MergeStore

Merge two archive stores.

Arguments

Name	Type	Description
<code>id</code>	number	Unique ID of destination archive store.
<code>sourceId</code>	number	Unique ID of source archive store.

MoveFolder

Move folder.

Arguments

Name	Type	Description
<code>fromFolder</code>	string	Old folder name.
<code>toFolder</code>	string	New folder name.

ProcessRetentionPolicies

Processes the configured retention policies.

RebuildSelectedStoreIndexes

Rebuild all full-text indexes selected for rebuild.

RebuildStoreIndex

Rebuild search index for given archive folder.

Arguments

Name	Type	Description
<code>id</code>	number	Unique ID of archive store.
<code>folder</code>	string	Name of folder name.

RecoverStore

Recreates a broken Firebird database from recovery records. The archive store must have been upgraded to the latest version and the recovery records must not be corrupt. The archive store must be in the *Disabled* or *Error* state.

Arguments

Name	Type	Description
<code>id</code>	number	Unique ID of archive store.
<code>recoverDeletedMessages</code>	bool (optional)	Defines whether to recover deleted messages.

When the *recoverDeletedMessages* parameter is set to *true*, only deleted messages that still have leftovers in the recovery records can be recovered. When an archive store has been compacted with *CompactStore* or recovery record files have grown to their auto-compacting size of 8 MiB these leftovers could already be removed and deleted messages cannot be recovered.

RecreateRecoveryRecords

Recreates broken Recovery Records of an archive store. Use *VerifyStore* to verify the state of the Recovery Records. Cannot be used for external archive stores that store their content in the database.

Arguments

Name	Type	Description
<code>id</code>	number	Unique ID of archive store.

RefreshAllStoreStatistics

Refresh statistics of all archive stores.

RenameJob

Rename job.

Arguments

Name	Type	Description
<code>id</code>	number (optional)	The unique identifier of the job to be renamed.
<code>name</code>	string (optional)	The new job name.

RenameStore

Rename archive store

Arguments

Name	Type	Description
id	number	Unique ID of archive store.
name	string	New name of archive store.

RenameUser

Rename a MailStore user.

Arguments

Name	Type	Description
oldUserName	string	Old user name.
newUserName	string	New user name.

RenewMasterKey

Renews the master key which is used to encrypt the encryption keys.

RepairStoreDatabase

Tries to resolve certain issues with archive store databases (e.g. missing database indexes).

Arguments

Name	Type	Description
id	number	Unique ID of archive store.

RetryOpenStores

Retry opening stores that failed previously.

RunJobAsync

Run an existing job.

Arguments

Name	Type	Description
id	number	The identifier of the job to be run.

RunProfile

Run an existing archiving or exporting profile. Only profiles that are executed on server side can be started by this command. That are all profiles which are listed under *E-Mail Servers* in the MailStore Client. Client side profiles can be started by using the MailStoreCmd and the commands *import-execute* and *export-execute*.

Arguments

Name	Type	Description
id	number	Unique profile ID.

RunTemporaryProfile

Run a temporary/non-existent profile. Only profiles that are executed on server side can be started by this command. That are all profiles which are listed under *E-Mail Servers* in the MailStore Client.

Arguments

Name	Type	Description
properties	json	Profile properties.
raw	bool	Currently only 'true' is supported.

Argument Values

properties

To receive available profile properties create a profile of the desired type via MailStore Client and use the GetProfiles method to receive supported value.

SelectAllStoreIndexesForRebuild

Select all full-text indexes for rebuild.

SendStatusReport

Send a status report to the given recipients.

Arguments

Name	Type	Description
timespan	string	Timespan that is covered by the status report.
timeZoneId	string	The id of the time zone the date should be converted to, e.g. \$Local, which represents the time zone of the operating system.
recipients	string	Comma separated list of recipients that will receive the status report.

Use the API command GetTimeZones to retrieve a list of all available time zones and their ids.

Argument Values

Timespan

Name	Description
today	The day when the status report is sent.
yesterday	The day before the status report is sent.
thisweek	The week when the status report is sent.
lastweek	The week before the status report is sent.
thismonth	The month when the status report is sent.
lastmonth	The month before the status report is sent.

SetComplianceConfiguration

Set compliance configuration settings.

Arguments

Name	Type	Description
config	json	Compliance configuration.

Argument Values

config

Use GetComplianceConfiguration to receive supported values.

Example settings object:

```
{
  "adminEmailPreviewEnabled": true,
  "legalHoldEnabled": false,
  "passwordPolicyEnabled": true,
  "logSuccessfulUserActivities": [
    "AdminRestored",
    "ComplianceChangeSettings",
    "FileGroupAttach",
    "FileGroupCreate",
    "FileGroupDetach",
    "FileGroupRename",
    "FileGroupSetProperties",
    "FileGroupSetRequestedState",
    "ProfileChangeUserName",
    "UserAdd",
    "UserDelete",
    "UserRename",
    "UserSetFolderAccess",
    "UserSetMappings",
    "UserUpdate"
  ]
}
```

SetDirectoryServicesConfiguration

Set directory services configuration settings.

Arguments

Name	Type	Description
config	json	Directory services configuration.

Argument Values

config

Use GetDirectoryServicesConfiguration to receive supported value.

SetJobEnabled

Set enabled status of a job.

Arguments

Name	Type	Description
id	number (optional)	The unique identifier of the job to be modified.
enabled	bool (optional)	Boolean value of enabled attribute.

SetJobSchedule

Modify the schedule of a job.

Arguments

Name	Type	Description
id	number	The unique identifier of the job to be modified.
timeZoneId	string	The id of the time zone the date should be converted to, e.g. \$Local, which represents the time zone of the operating system.
date	string (optional)	Datetime string (YYYY-MM-DDThh:mm:ss) for running the job once.
interval	number (optional)	Interval for running job.
time	string (optional)	Time for running job. Without additional parameter, this means daily execution.
dayOfWeek	string (optional)	Day of week to run job. Parameter "time" also required.
dayOfMonth	string (optional)	Day of month to run job. Parameter "time" also required. dayOfWeek can optionally be used to define further.

Use the API command GetTimeZones to retrieve a list of all available time zones and their ids.

Argument Values

dayOfWeek

Name	Description
Sunday	Sunday
Monday	Monday
Tuesday	Tuesday
Wednesday	Wednesday
Thursday	Thursday
Friday	Friday
Saturday	Saturday

dayOfMonth

Name	Description
1 to 31	Numeric representation of day of month.
Last	Last day of month.

interval

Name	Description
5	Every 5 minutes.
10	Every 10 minutes.
15	Every 15 minutes.
20	Every 20 minutes.
30	Every 30 minutes.
60	Every hour.
120	Every 2 hours.
180	Every 3 hours.
260	Every 4 hours.
360	Every 6 hours.
720	Every 12 hours.

SetRetentionPolicies

Set retention policies.

Arguments

Name	Type	Description
config	json	Retention policy configuration.

To get example policies use the client to create retention policies manually. Then use the API command GetRetentionPolicies to retrieve the json values.

SetSmtpSettings

Set SMTP configuration.

Arguments

Name	Type	Description
settings	json	SMTP configuration.

Argument Values

settings

Example settings object:

```
{
  "hostname": "mail.example.com",
  "port": 587,
  "protocol": "SMTP-TLS",
  "ignoreSslPolicyErrors": false,
  "authenticationRequired": true,
  "username": "sending.user@example.com",
  "password": "userpassword",
  "fromDisplayName": "Sending User",
  "fromEmailAddress": "sending.user@example.com",
  "recipientEmailAddress": "administrator@example.com"
}
```

SetStoreProperties

Set properties of archive store.

Arguments

Name	Type	Description
id	number	Set properties of archive store.
type	string (optional)	
databaseName	string (optional)	Name of database on Microsoft SQL Server or PostgreSQL server.
databasePath	string (optional)	Path to directory in which database folder information and email meta data are stored.
contentPath	string (optional)	Path to directory in which email headers and contents are stored.
indexPath	string (optional)	Path to directory in which full text search indexes are stored.
serverName	string (optional)	Name of Microsoft SQL Server or PostgreSQL server.
userName	string (optional)	User name for accessing Microsoft SQL Server or PostgreSQL server.
password	string (optional)	Password for accessing Microsoft SQL Server or PostgreSQL server.

Argument Values

type

Name	Description
FileSystemInternal	Advanced file system-based archive store.
SQLServer	Microsoft SQL Server-based archive store.
PostgreSQL	PostgreSQL server-based archive store.

SetStoreRequestedState

Set state of archive store.

Arguments

Name	Type	Description
id	number	Unique ID of archive store.
requestedState	string (optional)	State of archive store after attaching.

Argument Values

requestedState

Name	Description
current	Same as Normal but new messages will be archived in the archive store that is set to Current.
normal	The content of archives store is available to users and can be modified if the user has the appropriate permission.
writeProtected	The content of write protected archive stores is available to users, but cannot be modified (e.g. delete or move messages, rename or move folders)
disabled	Disabled archive stores are not in use but the instance still knows about their existence. Therefore the content is not available to users.

SetUserAuthentication

Set authentication settings of a MailStore user.

Arguments

Name	Type	Description
userName	string	User name of MailStore user.
authentication	string	Authentication method. Either 'integrated' or 'directoryServices'.

SetUserDistinguishedName

Set the LDAP distinguished name of a MailStore user.

Arguments

Name	Type	Description
userName	string	User name of MailStore user.
distinguishedName	string (optional)	LDAP DN string.

SetUserEmailAddresses

Set email addresses of MailStore user.

Arguments

Name	Type	Description
userName	string	User name of MailStore user.
emailAddresses	string (optional)	List of email addresses.

SetUserFullName

Set full name of MailStore user.

Arguments

Name	Type	Description
userName	string	User name of MailStore user.
fullName	string (optional)	Full name of MailStore user.

SetUserPassword

Set password of MailStore user.

Arguments

Name	Type	Description
userName	string	User name of MailStore user.
password	string	Password of MailStore user.

SetUserPop3UserNames

Set POP3 user name of MailStore user.

Arguments

Name	Type	Description
userName	string	User name of MailStore user.
pop3UserNames	string (optional)	Comma separated list of POP3 user names.

SetUserPrivileges

Set privileges of MailStore user.

Arguments

Name	Type	Description
userName	string	User name of MailStore user.
privileges	string	Comma separated list of privileges.

Argument Values

privileges

Name	Description
none	The user is granted no global privileges. If specified, this value has to be the only value in the list.
admin	The user is granted administrator privileges. If specified, this value has to be the only value in the list.
login	The user can log on to MailStore Server.
changePassword	The user can change his own MailStore Server password. This only makes sense if the authentication is set to <i>integrated</i> .
archive	The user can run archiving profiles.
modifyArchiveProfiles	The user can create, modify and delete archiving profiles.
export	The user can run export profiles.
modifyExportProfiles	The user can create, modify and delete export profiles.
delete	The user can delete messages. Please note that a non-admin user can only delete messages in folders where he has been granted delete access. In addition, compliance settings may be in effect, keeping administrators and users from deleting messages even if they have been granted the privilege to do so.

SetUserPrivilegesOnFolder

Set privileges on folder for MailStore user.

Arguments

Name	Type	Description
userName	string	User name of MailStore user.
folder	string	Folder name.
privileges	string	Comma separated list of folder privileges.

Argument Values

privileges

Name	Description
none	The user is denied access to the specified folder. If specified, this value has to be the only value in the list. This effectively removes all privileges on the specified folder.
read	The user is granted read access to the specified folder.
write	The user is granted write access to the specified folder. Messages can be moved within an archive.
delete	The user is granted delete access to the specified folder.

SyncUsersWithDirectoryServices

Sync users of MailStore instance with directory services.

Arguments

Name	Type	Description
dryRun	bool (optional)	Simulate sync only.

TestSmtpSettings

Test current SMTP configuration.

UnlockStore

Unlock a foreign archive store. In case an archive store from a foreign MailStore installation is attached, this method can be used to unlock that archive store.

Arguments

Name	Type	Description
id	number	Unique ID of archive store to unlock.
passphrase	string	Product key or recovery key of the foreign MailStore installation.

UpgradeStore

Upgrade archive store from MailStore Server 5 or older to current format.

Arguments

Name	Type	Description
id	number	Unique ID of archive store.

VerifyStore

Verify archive stores consistency.

Arguments

Name	Type	Description
id	number	The unique identifier of the archive store to be verified.
includeIndexes	bool	Defines whether to verify the search indexes as well.

VerifyStores

Verify consistency of all archive stores.

Arguments

Name	Type	Description
includeIndexes	bool	Defines whether to verify the search indexes as well.