
GFI MailArchiver for Exchange

Getting Started Guide

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1. About GFI MailArchiver

1.1 Introduction to GFI MailArchiver

GFI MailArchiver is an email archiving solution which can archive all internal and external email into a central archive store. You can then easily manage the email Archive Stores from the web-based configuration of GFI MailArchiver. You can also allow users to browse and search past emails via the web-based browse and search interface. GFI MailArchiver also provides Microsoft Outlook integration.

1.2 How does GFI MailArchiver work?

GFI MailArchiver operations can be classified in three stages:

Stage 1: **Retrieve emails from Microsoft Exchange Server**

Stage 2: **Archive emails to an Archive Store**

Stage 3: **Browse archived emails**

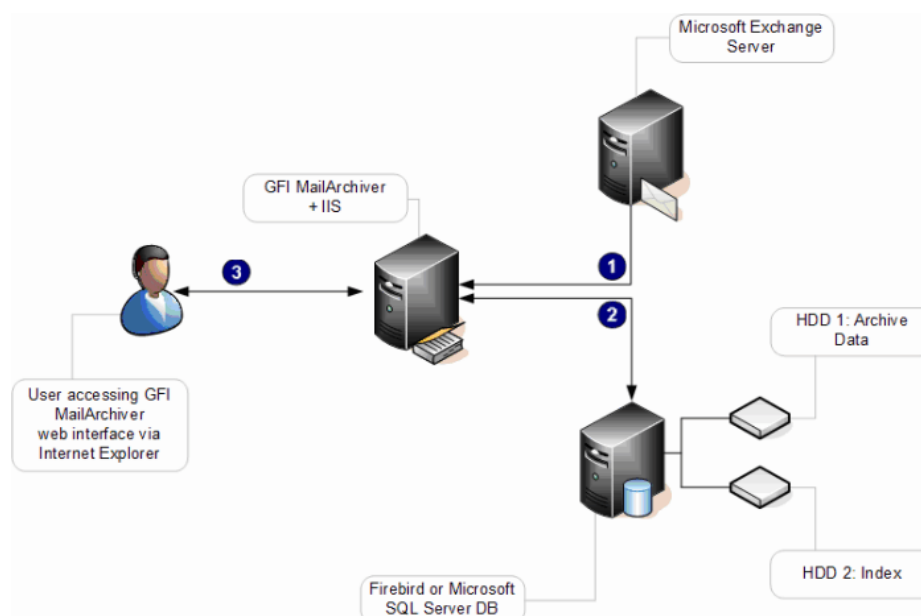


Figure 1 - Typical GFI MailArchiver installation

Stage 1: Retrieve emails

GFI MailArchiver connects to the journaling mailbox on the Microsoft Exchange Server and collects the emails.

Stage 2: Archive emails

GFI MailArchiver archives the collected emails to the active database configured, for example Microsoft SQL Server.

Stage 3: Browse archived emails

Users can browse and search for specific archived emails via the GFI MailArchiver web interface, using Microsoft Internet Explorer.

1.3 GFI MailArchiver licensing scheme

For information on GFI MailArchiver licensing, refer to:

<http://www.gfi.com/products/gfi-mailarchiver/pricing/licensing>

2. System requirements

2.1 Software

Supported operating systems

GFI MailArchiver can be installed on:

- Microsoft Windows Server 2008
- Microsoft Small Business Server (SBS) 2008
- Microsoft Windows Server 2003
- Microsoft Small Business Server (SBS) 2003
- Microsoft Windows Server 2000 (Service Pack 3 or higher)

NOTE: The server on which GFI MailArchiver is installed needs to be a Domain Controller or connected to one, since GFI MailArchiver requires access to Active Directory.

Supported mail servers

- Microsoft Exchange Server 2000 (SP3) or later.

Supported databases

- **Firebird database** - An open source database used as the default GFI MailArchiver database. Recommended for organizations with less than 25 email users and with moderate amounts of email. Bundled with and automatically configured by GFI MailArchiver.
- **Microsoft SQL Server 2000 or later** - Highly recommended for organizations with more than 25 email users. Not included with GFI MailArchiver installation and is required to be installed as a separate process.

Other required components

- Microsoft .NET Framework 2.0
- ASP.Net 2.0
- Internet Information Services (IIS) 5.0 or later - SMTP & World Wide Web services
- Microsoft Internet Explorer 5.5 or later.

NOTE: Other web browsers such as Mozilla Firefox or Google Chrome may limit the functionality of GFI MailArchiver and/or impair the user interface.

- Microsoft Data Access Components (MDAC) 2.6 or higher
- When GFI MailArchiver is NOT installed on the Microsoft Exchange server, Microsoft Exchange Server MAPI Client and

Collaboration Data Objects 1.2.1 must be installed on the GFI MailArchiver server. Download the Microsoft Exchange Server MAPI Client and Collaboration Data Objects 1.2.1 from:

<http://www.microsoft.com/downloads/details.aspx?FamilyID=E17E7F31-079A-43A9-BFF2-0A110307611E&displaylang=en>

2.2 Hardware

Processor

- **Minimum:** Intel Pentium or compatible - 2GHz 32 bit processor.
- **Recommended:** x64 architecture-based server with Intel 64 architecture or AMD64 platform.

Memory

- **Minimum:** 512MB RAM (dedicated to GFI MailArchiver)
- **Recommended:** 2GB RAM (dedicated to GFI MailArchiver)

Physical Storage

- **Minimum:** 150MB physical disk space (NTFS) for GFI MailArchiver installation. More space is required for the database (Firebird or SQL server). Storage space depends on mail volume to archive.
- **Recommended:** Server with 4 physical drives, with the ability to increase storage space on demand when required. Refer to [Installation pre-requisite: Setup database](#) section starting on page 24 in this manual for recommendations on how to set up your database.

NOTE: It is highly recommended that you store databases and indexes on separate, appropriately sized hard disks. SCSI hard disks are highly recommended.

2.3 Important settings

2.3.1 Antivirus and backup software

Anti-virus and backup software may cause GFI MailArchiver to malfunction. This occurs when such software denies access to certain files required by GFI MailArchiver.

Disable any third party anti-virus and backup software from scanning the following folders and subfolders:

GFI MailArchiver folders
<GFI MailArchiver Installation folder>
<..\Program Files\Common Files\GFI>

Also, exclude the index and the archive store locations from backups and anti-virus scans. The default index and archive store locations are:

GFI MailArchiver default index and archive store locations
<GFI MailArchiver Installation folder>\Indexes\default
<GFI MailArchiver Installation folder>\Databases\default\>

NOTE: You can change the index and archive store locations after installing GFI MailArchiver. For information refer to the [Configure archive stores](#) (starting on page 32) and [Configure search indexes](#) (starting on page 34) sections in this manual.

2.3.2 Firewall port settings

Your firewall may need to be configured to allow connections from the GFI MailArchiver Server on the following ports:

Listening Ports on the GFI MailArchiver Server:

- **Remoting (Ports 8014, 8017, 8018, 8019, 8020)** - Used for communication between GFI MailArchiver components when installed in a role based setup.

Connections established from the GFI MailArchiver Server

- **SMTP (Port 25)** - Used by GFI MailArchiver when an email needs to be restored to a user's mailbox or a notification is sent to the GFI MailArchiver Administrator.
- **HTTP (Port 80)** - Used by the GFI MailArchiver user interface and web services.
- **MAPI/RPC (Port 135)** - Used when GFI MailArchiver is installed on the same machine as Microsoft Exchange and configured to use ExOLEDB to retrieve emails.
- **IMAP (Port 143)** - Used to retrieve emails when GFI MailArchiver is not installed on the same server as Microsoft Exchange server.
- **Microsoft SQL Server (Port 1443)** - Used when GFI MailArchiver is configured to archive emails to a Microsoft SQL Server Database.
- **Microsoft Global Catalog (Port 3268)** - Used for connections done from the GFI MailArchiver Server to the Domain Controller which stores the Microsoft Global Catalog
- **<Optional> Ports 8096 to 8099** - Used by the GFI PST exporter to communicate with GFI MailArchiver when exporting data from networked computers.

2.3.3 Database settings

Microsoft SQL server settings

GFI MailArchiver requires Microsoft SQL server (if used as the archival database) to be installed in **case insensitive mode**.

This is the default installation setting of Microsoft SQL server. The Microsoft SQL server collation modes apply to all Microsoft SQL server objects including login names. In such cases if a user changes a property in the name and does not make EXACT character case matches, GFI MailArchiver will fail since it would not find the resources required.

Once installed, it is not possible to change the Microsoft SQL server collation mode easily. It requires a rebuild of the master database using advanced Microsoft SQL specific tools or methods. The best

solution is to install another instance of Microsoft SQL Server (set to operate in insensitive collation mode).

2.3.4 ASP.NET settings

For GFI MailArchiver to work, ASP.NET needs to be registered with IIS and enabled from IIS.

Register ASP.NET with IIS

If the Microsoft .NET framework is installed after IIS is installed this is automatically registered. Else, register ASP.NET with IIS by following these steps:

1. From the command prompt, navigate to:

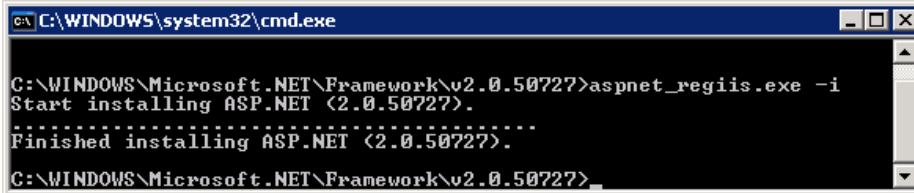
```
<WindowsDirectory>\Microsoft.NET\Framework\<v2.0.xxx  
xxx>\
```

NOTE: Replace `v2.0.xxxxx` with the folder name of .NET Framework version number.

Example:

```
C:\Windows\Microsoft.NET\Framework\v2.0.50727\
```

2. Key in `aspnet_regiis.exe -i` and press **Enter**.



```
C:\WINDOWS\system32\cmd.exe  
C:\WINDOWS\Microsoft.NET\Framework\v2.0.50727>aspnet_regiis.exe -i  
Start installing ASP.NET (2.0.50727).  
.....  
Finished installing ASP.NET (2.0.50727).  
C:\WINDOWS\Microsoft.NET\Framework\v2.0.50727>
```

Screenshot 1 - Registering ASP.NET with IIS

Enable ASP.NET from IIS

Ensure that ASP.NET is allowed by Internet Information Services (IIS) Manager.

IIS 6

1. Navigate to **Control Panel ► Administrative Tools ► Internet Information Services (IIS) Manager**.
2. Expand the local computer node and select **Web Service Extensions**.
3. In the right pane, right click **ASP.NET v2.0.xxxxx** and select **Allow**.

IIS 7

1. Navigate to **Control Panel ► Administrative Tools ► Internet Information Services (IIS) Manager**.
2. Select the local computer node and from the Features View pane launch **ISAPI and CGI Restrictions**.
3. In the Features View pane, right click **ASP.NET v2.0.xxxxx** and select **Allow**

3. New Installations

3.1 Where should GFI MailArchiver be installed?

Install GFI MailArchiver on a machine that is part of an Active Directory domain. Before proceeding with the installation, first consider the following details:

- **Email volume on your servers** - Installing GFI MailArchiver on a mail server where a high volume of emails received and processed will invariably put more load on server resources. This can cause these servers to become unresponsive and not process mail in a timely fashion.
- **Hardware and software specifications of your servers** - The hardware and software specifications listed in the [System requirements](#) section above should be considered to be over and above the requirements of other software installed on the same server. Servers which are nearing their capacity in terms of resources should not be used to install GFI MailArchiver.
- **Need to archive email from multiple sources concurrently** - Installing GFI MailArchiver on a server which is not granted access to multiple sources creates a problem in the centralization efforts of email data archival.

If all of the above details are considered not to be of significant issues then you can consider installing GFI MailArchiver on the mail server.

Example:

- If you need to archive email from one Microsoft Exchange Server, and the server is handling the email flow on your network and still has spare processing capacity, then you can consider installing GFI MailArchiver on the Microsoft Exchange Server machine directly.
- If you want to archive email from multiple Microsoft Exchange servers using IMAP, it is recommended that you install GFI MailArchiver on a separate server.

GFI MailArchiver does not require a dedicated machine when it is not installed on the mail server.

Example:

- Install GFI MailArchiver on machines running other applications such as GFI MailEssentials or GFI MailSecurity.

3.2 Installation pre-requisite: Enable Journaling

3.2.1 Setting up Journaling for Microsoft Exchange Server 2000/2003

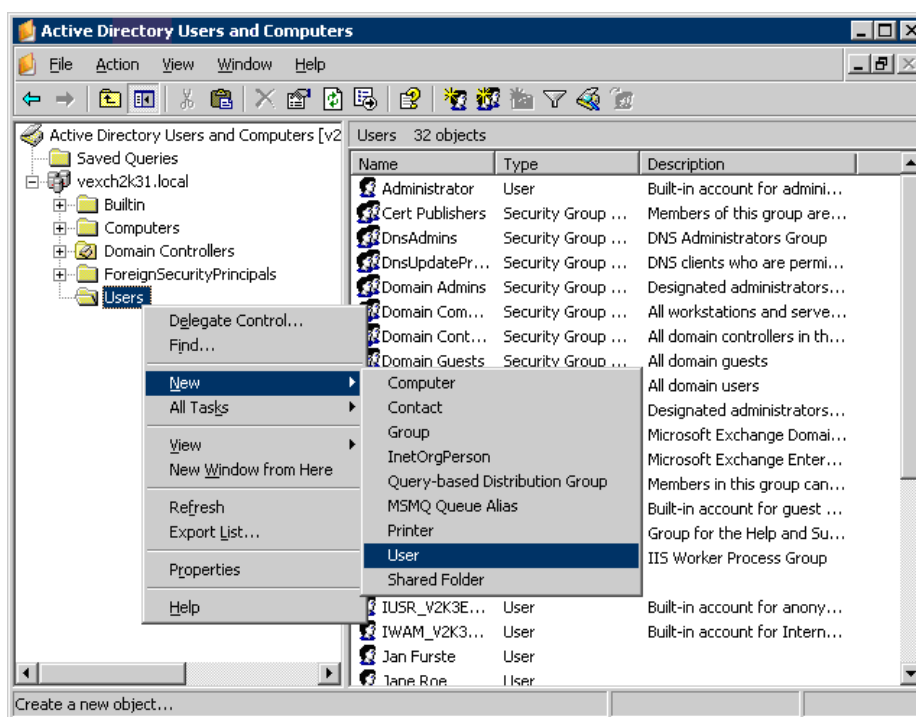
Journaling is a feature that enables the recording of all email in an organization. Microsoft Exchange journaling enables the channeling of data into an archival solution with minimum overhead.

While, by definition, journaling is the ability to record emails, archival reduces the strain of storing data through backups, removal, and storage. GFI MailArchiver uses Microsoft Exchange journaling to centralize all the emails to archive in a single mailbox.

NOTE: If journaling is not set up correctly, email archiving will NOT work.

Step 1: Create a new journaling mailbox.

1. Select **Start ► Programs ► Microsoft Exchange ► Active Directory Users and Computers.**



Screenshot 2 - Add new user in Microsoft Exchange 2003

2. Expand the domain to archive emails from, right-click **Users** node and select **New ► User**.

New Object - User

Create in: vexch2k31.local/Users

First name: journal Initials: []

Last name: mailbox

Full name: journal mailbox

User logon name: journal @vexch2k31.local

User logon name (pre-Windows 2000): VEXCH2K31\ journal

< Back Next > Cancel

Screenshot 3 - New Object - User dialog

3. Key in a relevant 'User logon name' (e.g. journal), fill in other new user details, and click **Next**.

New Object - User

Create in: vexch2k31.local/Users

Password: []

Confirm password: []

User must change password at next logon

User cannot change password

Password never expires

Account is disabled

< Back Next > Cancel

Screenshot 4 - Add a password

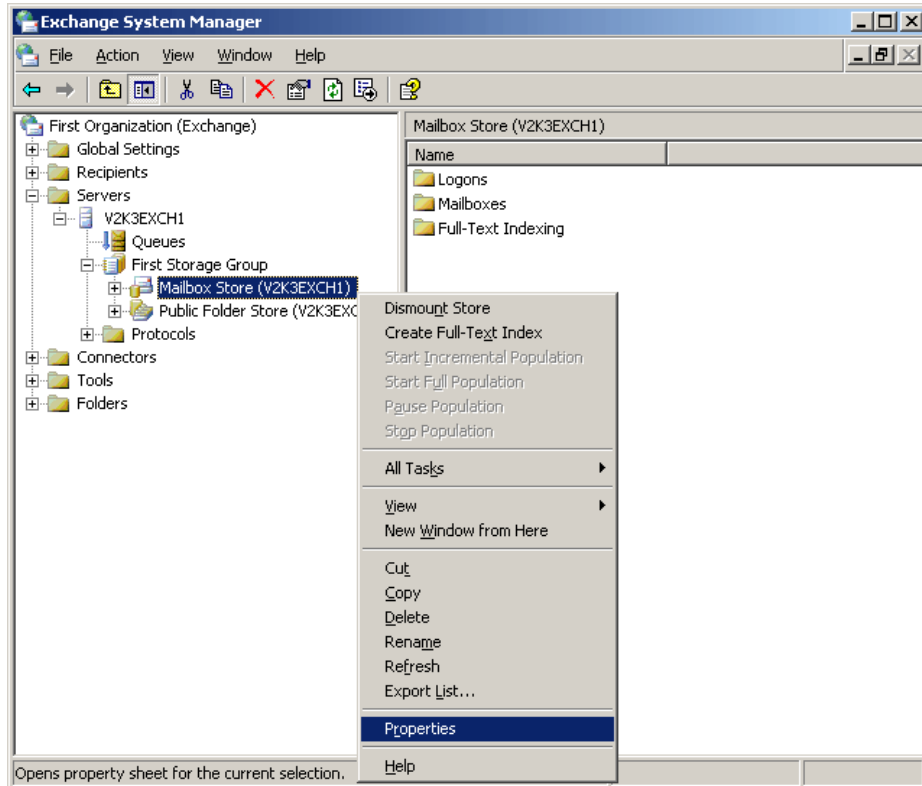
4. Key in a password, unselect **user must change password at next logon** option and enable **user cannot change password** and **password never expires** options. Click **Next** to continue setup.

NOTE: Ensure that the password keyed in meets the password complexity requirements setup for your Active Directory users.

5. Click **Next** and review the new user details. Click **Finish** to create new user.

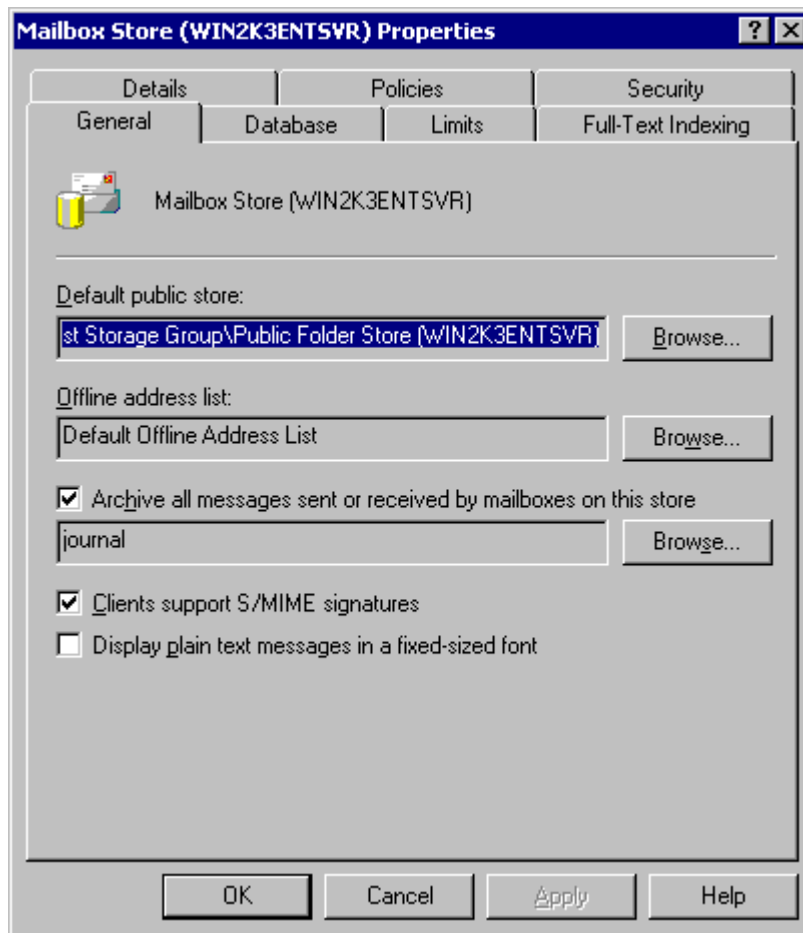
Step 2: Configure email archival to journaling mailbox

1. Select **Start ► Programs ► Microsoft Exchange ► System Manager**.



Screenshot 5 - Mailbox store node properties

2. Expand **Servers ► <Your Server name> ► Storage group**, right click **Mailbox Store** node and select **Properties**.



Screenshot 6 - Enabling journaling on a Microsoft Exchange mailbox store

3. From the **General** tab, select the **Archive all messages sent or received by mailboxes on this store** check box and click **Browse** button.
4. Select the journaling mailbox name you created in step one, for example 'journal', and click **OK**.
5. Close the **Mailbox Store Properties** dialog and the **Exchange System Manager** Management console.

Step 3: Enable BCC information journaling

IMPORTANT NOTE: It is highly recommended that you DO NOT enable this option but enable envelope journaling instead. Envelope journaling journals all the header information, not just the BCC data. For more information on envelope journaling refer to Step 4: Enable Envelope Journaling

On Microsoft Exchange Server 2000 and Microsoft Exchange Server 2003 systems, BCC information is not by default included in the journaled message. To enable BCC information journaling:

For Microsoft Exchange Server 2000 only

1. Install hot fix available from:
<http://support.microsoft.com/?kbid=810999>

For both Microsoft Exchange Server 2000 and Microsoft Exchange Server 2003.

1. From command prompt, type **regedit.exe**

2. Add the following registry key:

HKEY_LOCAL_MACHINE\System\CurrentControlSet\Services\MSExchangeTransport\Parameters

3. Add the following registry key and values:

HKEY_LOCAL_MACHINE\System\CurrentControlSet\Services\MSExchangeTransport\Parameters\

- Key name: JournalBCC
- Data type: Dword
- Data value: 1

4. Close Registry editor and from command prompt type **services.msc**. Restart **Simple Mail Transport Protocol** and the **Information Store** services.

Step 4: Enable Envelope Journaling

Envelope Journaling enables the archival of email header information and can be switched on using:

- **Microsoft Exchange Server Email Journaling Advanced Configuration** (exejcfg.exe), or
- **ADSI Editor** Management console.

Using the exejcfg.exe tool

1. Download the exejcfg.exe tool from:

<http://www.microsoft.com/downloads/details.aspx?familyid=E7F73F10-7933-40F3-B07E-EBF38DF3400D&displaylang=en>

2. From the command prompt, navigate to the folder in which you copied the exejcfg.exe tool.

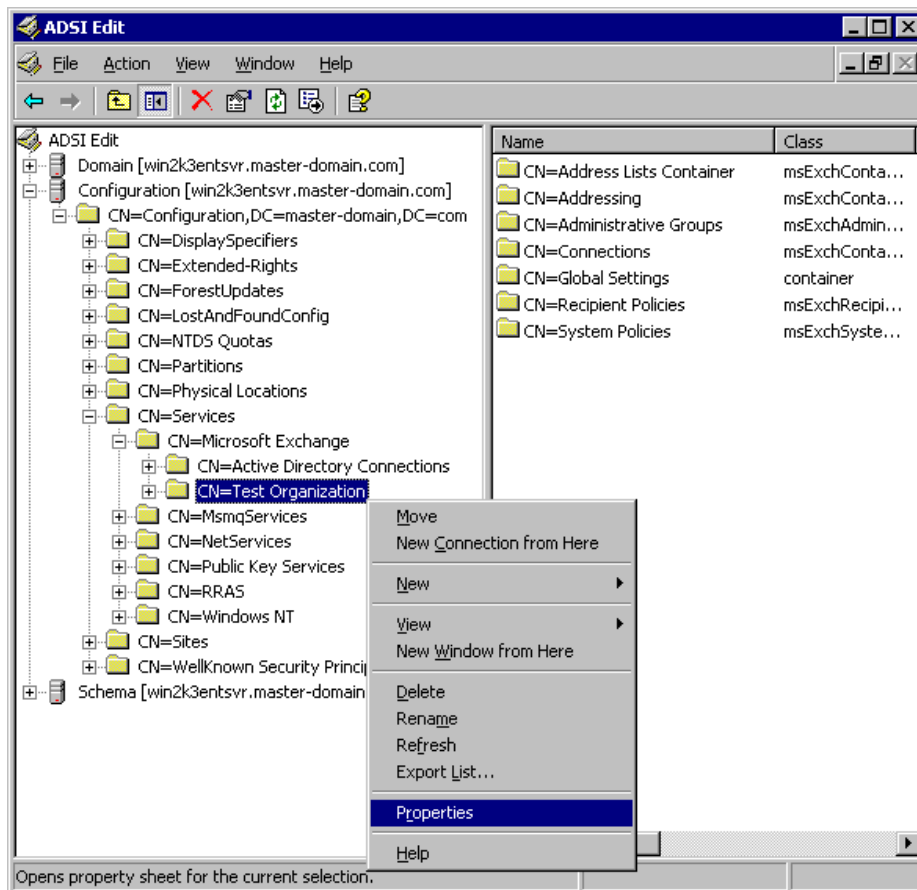
3. Type **exejcfg -e** and press **Enter**.

NOTE: exejcfg -d disables Envelope Journaling for that organization.

Using the ADSI editor

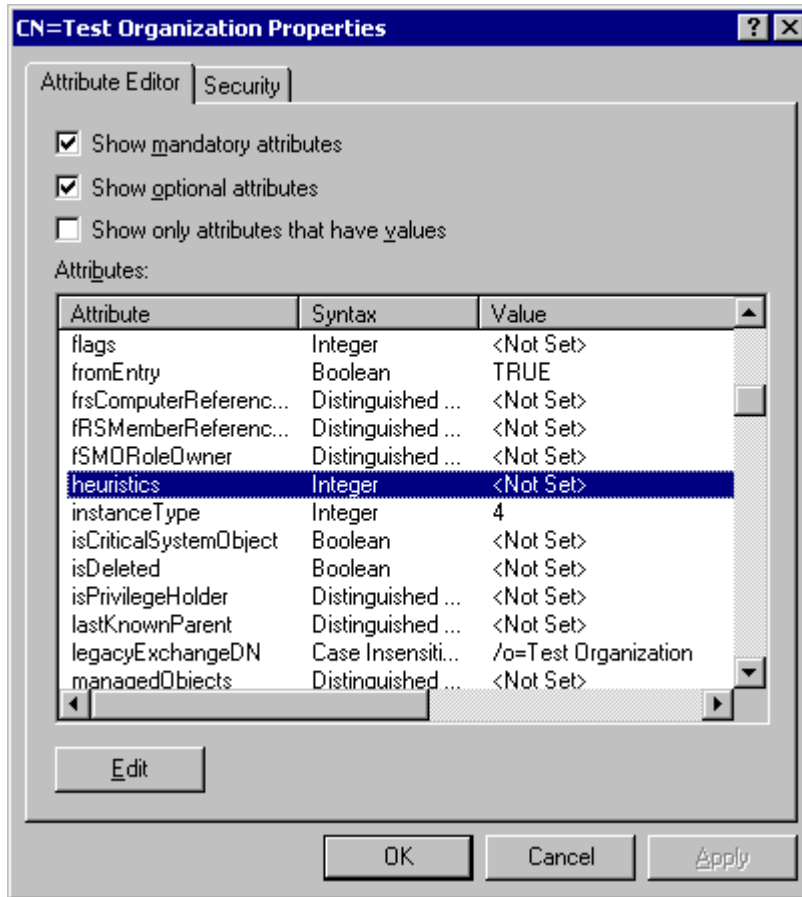
1. Locate the adsiedit.msc tool from the Windows 2000 Server resource kit or the Windows 2003 Server support tools.

2. From command prompt, navigate to the folder where adsiedit.msc is stored, type **adsiedit.msc** and then press **Enter**.



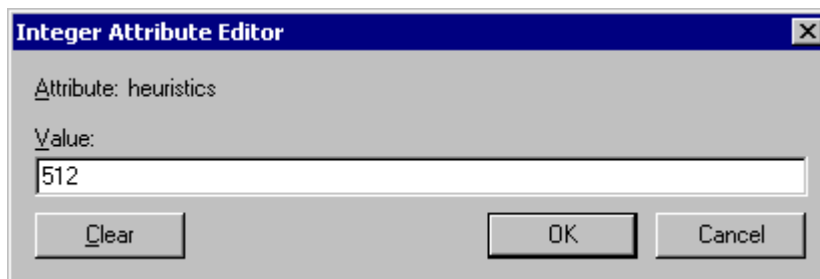
Screenshot 7 - ADSI Edit

- Expand **ADSI Edit** ► **Configuration** ► **<CN=Configuration>** ► **<CN=Services>** ► **<CN=Microsoft Exchange>** node.
- Right-click **CN<your organization name>** node and click **Properties**.



Screenshot 8 - Heuristics attribute

5. Select **heuristics** attribute from the **Attributes** list and click **Edit**.



Screenshot 9 - Editing the heuristics attribute value

6. Key in '512' and click **OK**.

7. Click **OK** to save and close the ADSIEdit console.

Note: A value of 512 enables Envelope Journaling, and a value of 0 disables Envelope Journaling.

3.2.2 Setting up journaling for Microsoft Exchange Server 2007

Journaling is a feature that enables the recording of all email in an organization. Microsoft Exchange journaling enables the channeling of data into an archival solution with minimum overhead.

While, by definition, journaling is the ability to record emails, archival reduces the strain of storing data through backups, removal, and storage. GFI MailArchiver uses Microsoft Exchange journaling to centralize all the emails to archive in a single mailbox.

NOTE: If journaling is not set up correctly, email archiving will NOT work.

Microsoft Exchange 2007 supports two types of journaling:

- **Standard journaling:** This feature enables the configuration of a Mailbox store that enables the recording of email in an organization. GFI MailArchiver can use Microsoft Exchange journaling to centralizer all the emails to archive in a single mailbox for archival. This type of journaling is also called per-mailbox database journaling.
- **Premium journaling:** Only available with the Microsoft Exchange Enterprise client access license. It enables an administrator to setup custom journaling rules such as:
 - Archive only incoming emails
 - Archive only outgoing emails
 - Archive emails for a particular group.

This journaling is also called per-recipient journaling.

GFI MailArchiver utilizes this type of journaling by detecting and displaying these rules in the Data Sources Configuration Wizard.

NOTE: If journaling is not set up correctly, email archiving will NOT work.

Which journaling method shall I use?

Choose standard journaling to archive all emails (inbound and outbound) for all users in your organization.

Choose premium journaling if you want more control over the emails to archive (e.g. only for specific users or for inbound or outbound only). Note that premium journaling requires a Microsoft Exchange Enterprise client access license.

Set up standard journaling

Step 1: Create a new journaling mailbox

1. Select **Start ► All Programs ► Microsoft Exchange Server 2007 ► Microsoft Exchange Management Console**.
2. Expand **Recipient Configuration** node and click on **Mailbox** node.
3. Select **New Mailbox...** from the **Actions** pane.
4. Select **User Mailbox** option and click **Next**.
5. Select **New user** option and click **Next**.

New Mailbox

- Introduction
- User Type
- User Information
- Mailbox Settings
- New Mailbox
- Completion

User Information
Enter the user name and account information.

Organizational unit:
test.local/Users Browse...

First name: Journaling Initials: Last name: Mailbox

Name:
Journaling Mailbox

User logon name (User Principal Name):
Journaling Mailbox @test.local

User logon name (pre-Windows 2000):
Journaling Mailbox

Password: Confirm password:
.....

User must change password at next logon

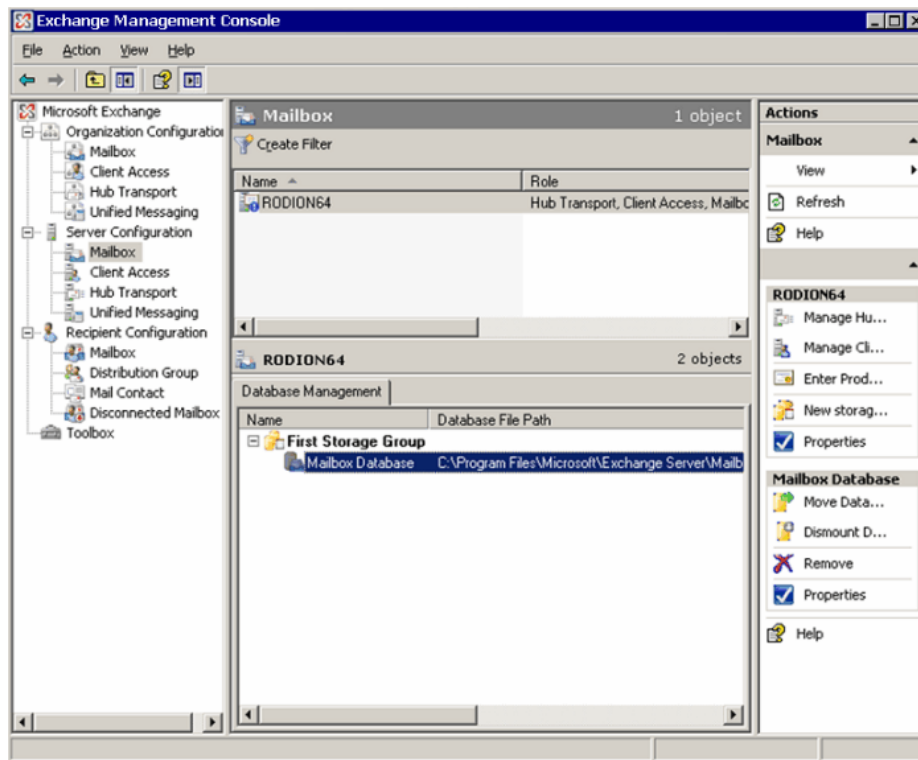
Help
 < Back
 Next >
 Cancel

Screenshot 10 - New user mailbox details

6. Key in the 'User information' details for the new user to which the new journaling mailbox will be assigned and click **Next**.
7. Ensure that the mailbox settings are correct and click **Next**.
8. Review the new mailbox summary for the new mailbox to create and click **New**.

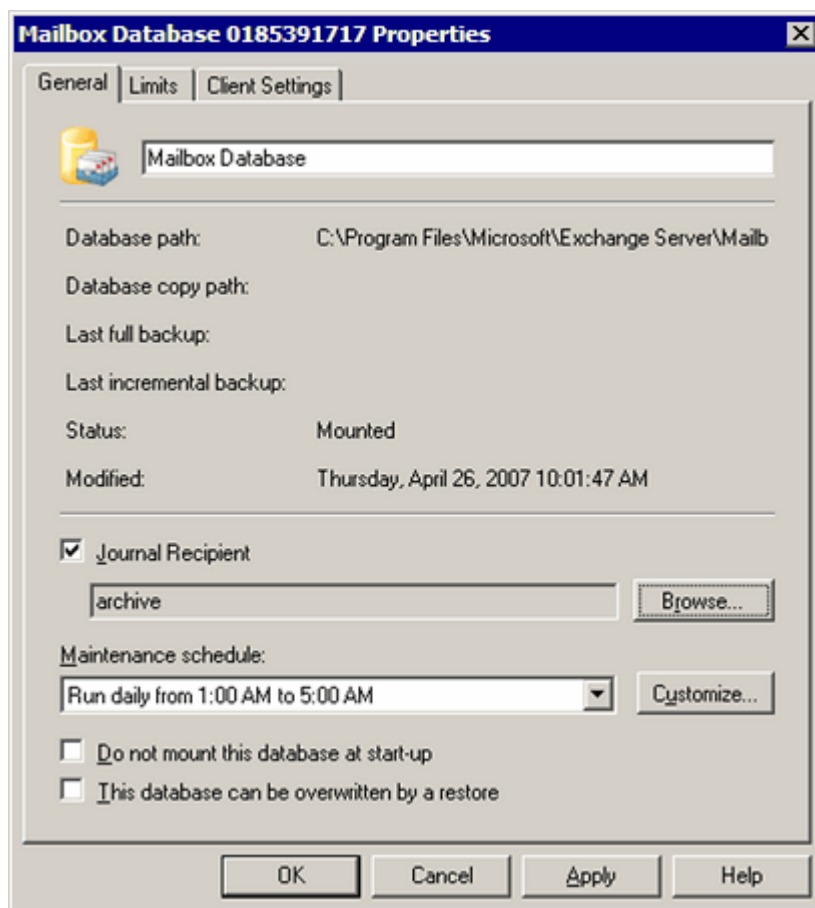
Step 2: Configure standard journaling

1. Select **Start ► All Programs ► Microsoft Exchange Server 2007 ► Microsoft Exchange Management Console**.



Screenshot 11 - Configuring a Mailbox Database

2. Expand **Microsoft Exchange** ► **Server Configuration** ► **Mailbox** node and click **Properties** from the **Actions** pane.

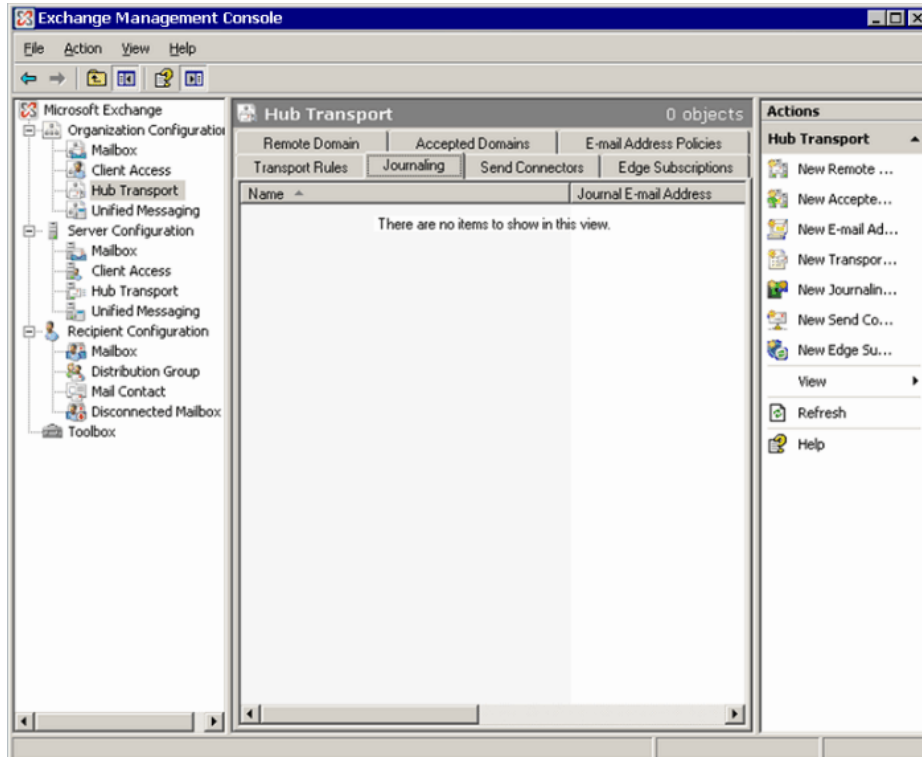


Screenshot 12 - Mailbox Database properties

3. Select **Journal Recipient** option, click **Browse**, and select mailbox previously configured from the Active Directory.
4. Click **OK** to finalize setup.

Set up premium journaling

1. Select **Start ► All Programs ► Microsoft Exchange Server 2007 ► Microsoft Exchange Management Console**.



Screenshot 13 - Configuring Journaling rules

2. Expand **Organization Configuration ► Hub Transport** node and select **Journaling** tab.
3. From the **Actions** tab and click on **New Journaling Rule**.



Screenshot 14 -Creating a new Journaling rule

4. Key in a name for the new rule and click **Browse**. Select the **Journal e-mail address**, preferably a mailbox within the existing Microsoft Exchange organization, from Active Directory.

5. <Optional> Configure:

- **Scope** - Select whether to journal all email (Global), internal or external email.
- **Journal e-mail for recipient** - Select specific recipient(s) for which this journaling rule applies.

6. Ensure that the **Enable Rule** option is enabled and click **New**.

NOTE: In Microsoft Exchange Server 2007, envelope journaling is automatically enabled by default.

3.2.3 Setting up journaling for Microsoft Exchange Server 2010

Journaling is a feature that enables the recording of all email in an organization. Microsoft Exchange journaling enables the channeling of data into an archival solution with minimum overhead.

While, by definition, journaling is the ability to record emails, archival reduces the strain of storing data through backups, removal, and storage. GFI MailArchiver uses Microsoft Exchange journaling to centralize all the emails to archive in a single mailbox.

NOTE: If journaling is not set up correctly, email archiving will NOT work.

Microsoft Exchange 2010 supports two types of journaling:

- **Standard journaling:** This feature enables the configuration of a Mailbox store that enables the recording of email in an

organization. GFI MailArchiver can use Microsoft Exchange journaling to centralize all the emails to archive in a single mailbox for archival. This type of journaling is also called per-mailbox database journaling.

- **Premium journaling:** Only available with the Microsoft Exchange Enterprise client access license. It enables an administrator to setup custom journaling rules such as:
 - Archive only incoming emails
 - Archive only outgoing emails
 - Archive emails for a particular group.

GFI MailArchiver utilizes this type of journaling by detecting and displaying these rules in the Data Sources Configuration Wizard.

NOTE: If journaling is not set up correctly, email archiving will NOT work.

Which journaling method shall I use?

Choose standard journaling to archive all emails (inbound and outbound) for all users in your organization.

Choose premium journaling if you want more control over the emails to archive (e.g. only for specific users or for inbound or outbound only).

NOTE: Premium journaling requires a Microsoft Exchange Enterprise client access license.

Set up standard journaling

Step 1: Create a new journaling mailbox

1. Launch **Microsoft Exchange Management Console**.
2. Expand **Recipient Configuration** node and click on **Mailbox** node.
3. Select **New Mailbox...** from the **Actions** pane.
4. Select **User Mailbox** option and click **Next**.
5. Select **New user** option and click **Next**.

New Mailbox

- Introduction
- User Type
- User Information**
- Mailbox Settings
- New Mailbox
- Completion

User Information
Enter the user name and account information.

Organizational unit:
test.local/Users Browse...

First name: Journaling Initials: Last name: Mailbox

Name:
Journaling Mailbox

User logon name (User Principal Name):
Journaling Mailbox @test.local

User logon name (pre-Windows 2000):
Journaling Mailbox

Password: Confirm password:

User must change password at next logon

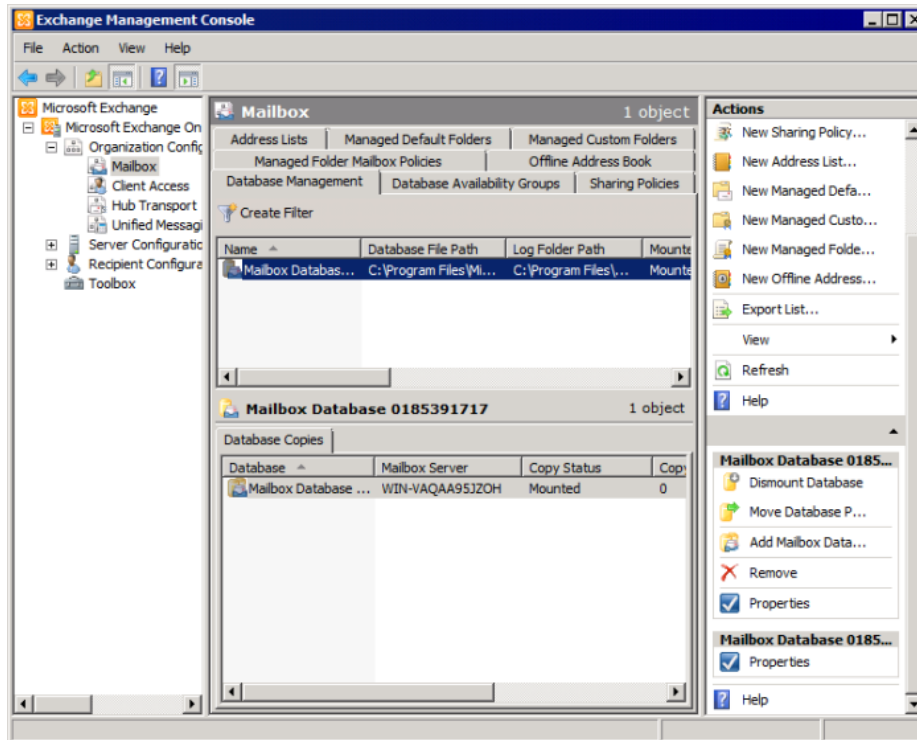
Help < Back Next > Cancel

Screenshot 15 - New user mailbox details

6. Key in the 'User information' details for the new user to which the new journaling mailbox will be assigned and click **Next**.
7. Enter an 'Alias' for the journaling mailbox and click **Next**.
8. Click Next and review the new mailbox summary for the new mailbox to create and click **New**.

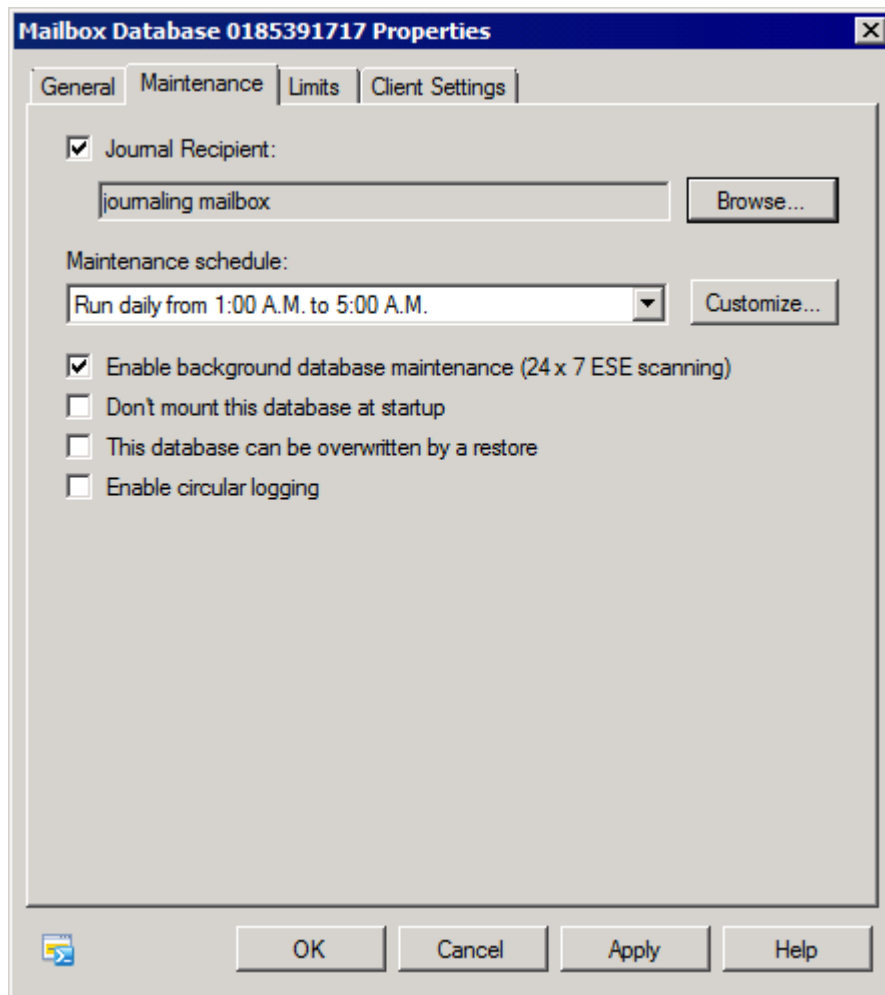
Step 2: Configure standard journaling

1. Launch **Microsoft Exchange Management Console**.



Screenshot 16 - Configuring a Mailbox Database

2. Expand **Microsoft Exchange** ► **Organization Configuration** ► **Mailbox** node. Right-click the Mailbox database and select **Properties**.

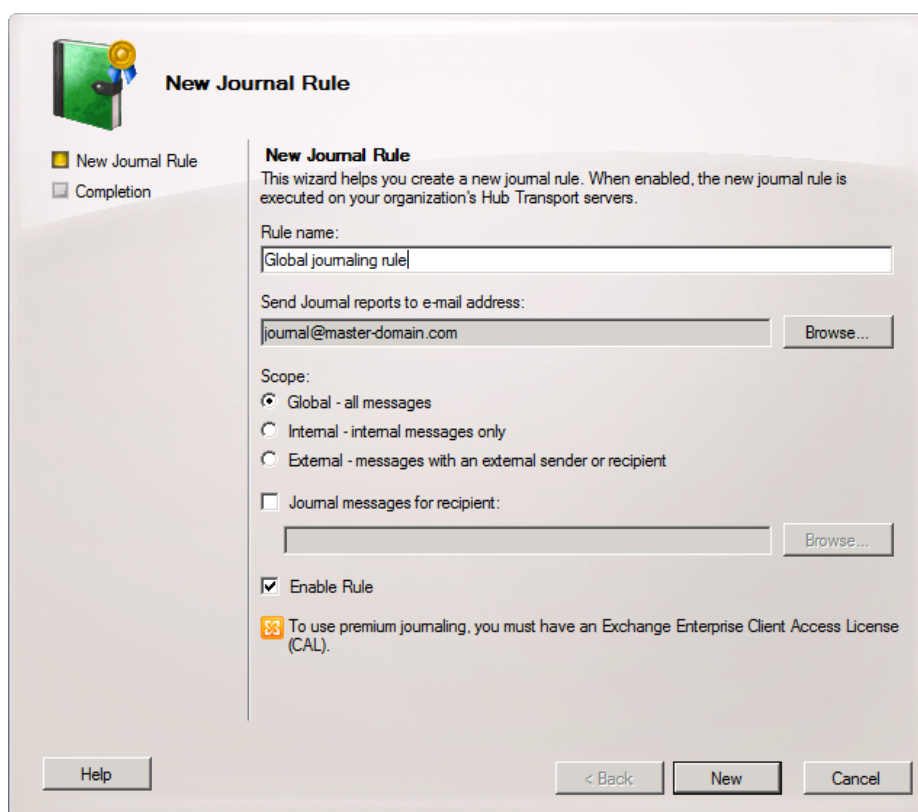


Screenshot 17 - Mailbox Database properties

3. From the mailbox database properties dialog, select the **Maintenance** tab and select the **Journal Recipient** checkbox. Click **Browse**, and select the journaling mailbox previously configured.
4. Click **OK** to finalize setup.

Set up premium journaling

1. Launch **Microsoft Exchange Management Console**.
2. Expand **Organization Configuration ► Hub Transport** node and select **Journaling** tab.
3. From the **Actions** tab, click **New Journal Rule**.



Screenshot 18 -Creating a new Journaling rule

4. Key in a name for the new rule
 5. Click **Browse** to select the journaling mailbox where to send journal reports.
 6. <Optional> Configure:
 - **Scope** - Select whether to journal all email (Global), internal or external email.
 - **Journal messages for recipient** - Select specific recipient(s) for which this journaling rule applies.
 7. Ensure that the **Enable Rule** option is enabled and click **New**.
- NOTE:** In Microsoft Exchange Server 2010, envelope journaling is automatically enabled by default.

3.3 Installation pre-requisite: Setup database

As an archiving solution, GFI MailArchiver is highly dependent on your database infrastructure setup for high performance in terms of data archival and retrieval.

3.3.1 Choosing your database backend

GFI MailArchiver can be configured to run in various hardware setups and combinations. The table below shows the typical recommended configurations. These guidelines and configurations may vary according to user activity and daily email flow.

Seats	Outlook Connector + Folder Sync	MS Exchange		Firebird	MS SQL	
		Local	Remote		Local	Remote
<50	✓	✓		✓		
51-100	✓		✓	✓		
		✓		✓		
101-150	✓	✓			✓	
		✓		✓		
150-200	✓		✓		✓	
200+	✓		✓			✓

Examples

- **Example 1:**

Network with 51-100 seats and with GFI Outlook Connector and user mailbox folder synchronization:

GFI MailArchiver installation location should be on a different server than Microsoft Exchange Server. Firebird database used as database.

- **Example 2:**

Network with 101-150 seats without GFI Outlook Connector and user mailbox folder synchronization:

Install GFI MailArchiver on the same server as Microsoft Exchange and Firebird database.

- **Example 3:**

Network with over 200 seats:

Install GFI on a different server other than Microsoft Exchange and Microsoft SQL Server. Do not use Firebird database

NOTE 1: 200+ seats does not mean that if the you have 1000 seats, the same configuration can be used. In this context, 200+ can be understood as 200-500. It is however always important to consider distributed deployment in cases of high email flow.

3.3.2 Configuring the Firebird database

GFI MailArchiver ships with a Firebird database. This database should meet the needs of organizations with few email users and an average volume of emails.

NOTE: Ensure that the size of each Firebird database never exceeds 2GB.

To minimize any potential performance issues, the following setup is strongly recommended when using the Firebird database:

- **Physical HDD 1:** Operating System and GFI MailArchiver installation.

- **Physical HDD 2:** Firebird database data store.
- **Physical HDD 3:** Mail database indexes.

The above setup reduces data read/write operations on the same physical hard disk drive to improve performance.

Important note: Failing to follow the above recommendations may result in substantial performance degradation.

3.3.3 Configuring the Microsoft SQL Server

Setting up a Microsoft SQL server is recommended for larger organizations or a substantial volume of emails to archive.

The recommended setup for GFI MailArchiver using a Microsoft SQL Server 2000/2005/2008 database is as follows:

- **Physical HDD 1:** Operating System and GFI MailArchiver installation.
- **Physical HDD 2:** Microsoft SQL Server data file (.mdf).
- **Physical HDD 3:** Microsoft SQL Server log file (.ldf)
- **Physical HDD 4:** Mail database indexes.

This configuration ensures that different processes are distributed to distinct physical hard disk drives. This eliminates performance loss due to excessive data read/write operations on the same physical hard disk drive.

Using Microsoft SQL Express

GFI MailArchiver can be used together with Microsoft SQL Express as a lower cost alternative to the full version Microsoft SQL Server. There are however a number of Microsoft SQL Server limitations to consider:

- Database size can be up to 4GB.
- It uses 1 CPU only.
- It uses a maximum of 1GB RAM.

It is therefore highly recommended that:

1. Use MS SQL and file system as the backend database. This method uses Microsoft SQL Express as the backend database and a separate location (not a database) for the binary sources files. This saves up on the Microsoft SQL Express space required for archiving.

Refer to the GFI MailArchiver manual (installed with GFI MailArchiver) for detailed information on Archive Stores.

2. Enable the **Use a new Archive Store when full** feature within **Archive Store Management**. This instructs GFI MailArchiver to automatically switch to a new database when the 4GB limit of Microsoft SQL Express is reached. This feature requires that Archive Stores are based on SQL and Filesystem.

Refer to the GFI MailArchiver manual (installed with GFI MailArchiver) for detailed information on the **Use a new Archive Store when full** feature within **Archive Store Management**

3. Monitor database growth on a periodical basis to gain an estimate of how long it will take the SQL Express database to reach its 4 GB limit. Using this estimate create enough databases and Archive stores to cater for your requirements.

Important Notes for all Microsoft SQL installations

1. Configure any Microsoft SQL Server to use Mixed Authentication mode for use it with GFI MailArchiver. Achieve this by:

- Right-click on the **SQL Server** node ► **Properties** from the Enterprise Manager
- Access **Security** tab and select **SQL Server and Windows** under Authentication.
- Save settings.

2. After the first month of archiving, note the database data file size. With this value, estimate the archive database size after six months, for example. If you estimate that your archive database will be larger than 20 GB, you should consider configuring the Archive Stores management feature of GFI MailArchiver.

3. Ensure that Journaling is enabled on Microsoft Exchange Server.

Creating databases

Microsoft SQL Server 2000

1. Select **Start ► All Programs ► Microsoft SQL Server 2000 ► SQL Management Studio**.

2. Expand the SQL Server node where you want to create the database.

3. Right-click **Databases** node, and click **New Database**.

4. <Optional> Customize the following values for performance:

- Pre-allocate space for both the data and transaction (log) files, (e.g. 500 MB for data file, and 50MB for transaction file).
- Set file growth for both data and transaction (log) files to a fixed value in megabytes, not more than 100 MB.
- Ensure that **Maximum file size** option is set to **Unrestricted file growth** for both data and transaction (log) files.

5. Key in a name for the new database in the **Name** box, for example, 'MailArchiver', and click **OK**.

Microsoft SQL Server 2005

Important Note: If you are using Microsoft SQL Express, download the Microsoft SQL Server Management Studio Express from:

<http://www.microsoft.com/downloads/details.aspx?familyid=C243A5AE-4BD1-4E3D-94B8-5A0F62BF7796&displaylang=en>

1. Select **Start ► All Programs ► Microsoft SQL Server 2005 ► SQL Management Studio**.
2. Right click **Databases** node and select **New Database...**
3. Key in a name for the new database in the Database name field, for example, 'MailArchiver'.
4. <Optional> Customize the following values for performance:
 - Pre-allocate space for both the data and transaction (log) files, (e.g. 500 MB for data file, and 50MB for transaction file).
 - Set file growth for both data and transaction (log) files to a fixed value in megabytes, not more than 100 MB.
 - Ensure that **Maximum file size** option is set to **Unrestricted file growth** for both data and transaction (log) files.
5. Click **OK** to finalize setup.

Microsoft SQL Server 2008

Important Note: If you are using Microsoft SQL Express, download the Microsoft SQL Server Management Studio Express from:

<http://www.microsoft.com/downloads/details.aspx?familyid=08E52AC2-1D62-45F6-9A4A-4B76A8564A2B&displaylang=en>










1. Select **Start ► All Programs ► Microsoft SQL Server 2008 ► SQL Management Studio**.
2. From the Object Explorer, connect to an instance of the SQL Server Database Engine and then expand that instance.
3. Right-click **Databases**, and click **New Database**.
4. In **New Database**, enter a database name.
5. <Optional> Customize the following values for performance:
 - Pre-allocate space for both the data and transaction (log) files, (e.g. 500 MB for data file, and 50MB for transaction file).
 - Set file growth for both data and transaction (log) files to a fixed value in megabytes, not more than 100 MB.
 - Ensure that **Maximum file size** option is set to **Unrestricted file growth** for both data and transaction (log) files.
6. Click **OK** to finalize setup.

3.4 Installation pre-requisite: Enable IMAP

IMAP is required when GFI MailArchiver is not installed on the same machine running Microsoft Exchange Server. The IMAP service is needed to access the 'Journaling mailbox' (refer to glossary for more information) on the remote Microsoft Exchange Server.

By default IMAP service is disabled. To enable:

1. Click **Start ► Run** and type '`Services.msc`'.

 Microsoft Exchange Acti...	Provides A...	Started	Automatic	Local System
 Microsoft Exchange Anti...	The Micros...		Automatic	Local System
 Microsoft Exchange Edg...	The Micros...	Started	Automatic	Local System
 Microsoft Exchange File ...	Microsoft E...	Started	Automatic	Local System
 Microsoft Exchange IMAP4	Provides In...	Started	Automatic	Local System
 Microsoft Exchange Info...	Manages t...	Started	Automatic	Local System
 Microsoft Exchange Mail ...	Submits me...	Started	Automatic	Local System
 Microsoft Exchange Mail...	Performs b...	Started	Automatic	Local System
 Microsoft Exchange Moni...	Allows appl...		Manual	Local System

Screenshot 19 - Enabling the IMAP service

2. Locate the 'Microsoft Exchange IMAP4' service. Right-click on the service and select **Properties**.
3. Select **Automatic** from the **Startup type** drop-down provided, click **Apply**, and click **Start**.
4. Click **OK** to save settings and close the dialog. Confirm that the service is now running.
5. By default, on Microsoft Exchange Server 2007/2010, IMAP uses SSL to secure the connection. To use simple authentication instead of SSL:
 - From the 'Microsoft Exchange Management Shell', type 'set-imapsettings -logintype plaintextlogin' and click **Enter**.
 - Restart the 'Microsoft Exchange Information Store'
 - Restart the 'Microsoft Exchange IMAP Service'.

3.5 Installation procedure

3.5.1 Important notes

1. Ensure that you are logged on as Administrator or using an account with administrative privileges.
2. Save any pending work and close all open applications on the machine.
3. Check that the machine you are installing GFI MailArchiver on meets the system and hardware requirements specified earlier in this chapter.
4. Check the Microsoft Exchange Server role:
 - GFI MailArchiver cannot be installed on the Microsoft Exchange Server 2007/2010 Edge Role, since such a server is typically deployed on a DMZ using ADAM instead of Active Directory.
 - Ensure to enable IMAP if installing on the Microsoft Exchange Server 2007/2010 Client Access Role.
5. Ensure that Journaling is enabled on Microsoft Exchange Server.

3.5.2 Installing GFI MailArchiver

1. Double-click on:
 - **mailarchiver6.exe** to install GFI MailArchiver on x86 systems
 - **mailarchiver6_x64.exe** to install GFI MailArchiver on x64 systems
2. On the **Welcome** page, click **Next**.

3. Select whether to check for a newer build of GFI MailArchiver on the GFI website. Click **Next** to continue.
4. Read the license agreement and select **I accept the terms in the license agreement** option. Click **Next** to continue.

GFI MailArchiver - InstallShield Wizard

Administrator Email
Enter administrator's email address and license key

GFI

Please enter the administrator e-mail address for notifications

Administrator Email:

If you have a license key please put it now, otherwise press Next to install an evaluation version of GFI MailArchiver

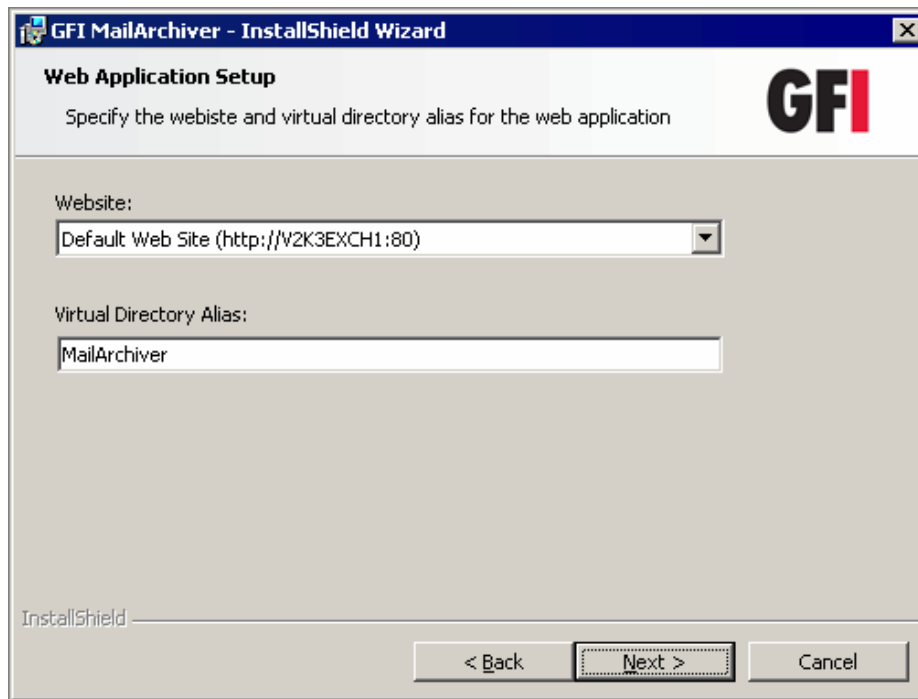
License Key:

InstallShield

< Back Next > Cancel

Screenshot 20 - Entering the administrator email address and product license key

5. Key in the administrator email address and license key.
NOTE: To evaluate GFI MailArchiver, leave the default 'evaluation' value. Click **Next** to continue.
6. Click **Next** to continue by installing GFI MailArchiver to the default folder. For an alternative location, click **Change** and select a new installation path.



Screenshot 21 - Selecting a Website and Virtual Directory

7. Select the website where you want to install the GFI MailArchiver web interface from the **Website** list. In the **Virtual Directory Alias** box (set to 'MailArchiver' by default), key in the name for the GFI MailArchiver web interface virtual folder. Click **Next** to continue.

8. Click **Install** to install GFI MailArchiver.

9. Click **Tell me more** for detailed information on configuring Microsoft Exchange server journaling. Follow the instructions to enable Microsoft Exchange Journaling and click **Next** to continue setup.

NOTE 1: For detailed instructions on how to enable journaling, refer to the [Installation pre-requisite: Enable Journaling](#) section starting on page 8 of this manual.

NOTE 2: **Next** button is disabled until the **Tell me more** button is clicked.

NOTE 3: If Journaling is already enabled on Microsoft Exchange server, select the **I do not want...** option. This will enable you to continue setup without reviewing the instructions on how to enable journaling.

10. Click **Finish** to close the installation wizard.

3.6 Post install actions

3.6.1 Enter your license key

A valid license key enables you to use GFI MailArchiver without any restrictions.

1. Click **Start** ► **All Programs** ► **GFI MailArchiver** ► **GFI MailArchiver** and key in username and password of an account with administrative privileges to access the GFI MailArchiver configuration.
2. Click **GFI MailArchiver** ► **Configuration** ► **Licensing** node.

3. Key in or paste the GFI MailArchiver license key you bought in the **License key** field then click **Verify License Key**.
4. Click **Save Settings**.

3.6.2 Configure archiving and user exclude options

By default, GFI MailArchiver archives all emails sent or received by all mail users. If all emails need to be archived then no configuration is required. To configure which emails to archive and the mailboxes to include or exclude for email archiving:

1. From the GFI MailArchiver management console, select **Configuration ► Archiving and User Exclude Options**.
2. Under Archiving Options, unselect any emails that you do not want to archive (inbound, outbound or internal).
3. Under **User Exclude or Include Options**, select **Enable Archiving Restriction** to configure which users to exclude or include in email archiving.
4. Select one of the following options:

Exclusion list

- Do NOT archive email at all if ANY of the recipients or senders are in the list below
- Always archive email but users in the list below will not be able to view it

Inclusion list

- Always archive email if ANY of the recipients or senders are in the list below
- Only archive email if all recipients and senders are in the list below

NOTE: For licensing purposes, the number of users in the Exclusion and Inclusion list are used to count the number of GFI MailArchiver licensed users. This is applicable only when the list contains Users and not email addresses.

- When using an Exclusion list, GFI MailArchiver counts the number of Active Directory mail-enabled users, less the ones in the Exclusion list for licensing purposes.
- When using an Inclusion list, GFI MailArchiver licenses the number of Active Directory mail-enabled users in the Inclusion list for licensing purposes.
- When one or more email addresses are added to the list, GFI MailArchiver counts the number of Active Directory mail-enabled users for licensing purposes.

5. Add users to whom the selected restriction shall apply in the list.
6. Click **Save Settings** to save archiving and user exclude options.

3.6.3 Configure the mail servers to archive

1. From the GFI MailArchiver management console, expand **Configuration** node and click **Mail Servers to Archive**.
2. Click **Add Mail Server**.
3. Select the type of mail server that you want to configure (local or remote) and click **Next**.

4. Select the journaling mailbox from where to archive emails and click **Next**.

5. Select:

- **ExOLEDB** - recommended when GFI MailArchiver is installed on the same machine as Microsoft Exchange Server 2000, 2003 or 2007.
- **IMAP** - Select this option when GFI MailArchiver is not installed on the same machine as Microsoft Exchange 2000, 2003 or 2007. Key in the following:
 - **Server** - IP address or server name of remote Microsoft Exchange server.
 - *<Optional>* **IMAP Port** - Automatically populated with the default IMAP port value of 143. If you connect IMAP through another port number, key it in the **IMAP Port** box.
 - *<Optional>* **SSL** - Choose this option if you are using IMAP through SSL.
 - **Journal Login** and **Password** - Key in the login name and password for the journaling mailbox to access.
 - **Mailbox\Folder** - Key in the name of the root folder in the mailbox, (usually INBOX), or the full path to the public folder (for example, Public Folders/JournalFolder), that is being used for journaling on the Microsoft Exchange Server. Click **Next** to continue.
NOTE: Using public folders is not recommended since these do not archive all types of reports.
- **Exchange Web Services** - Recommended when adding a Microsoft Exchange 2007 (SP1) or 2010 mail server. Key in:
 - **Journal Login** and **Password** - Key in the login name and password for the journaling mailbox to access.
 - **Mailbox\Folder** - Key in the name of the root folder in the mailbox, (usually INBOX), or the full path to the public folder (for example, Public Folders/JournalFolder), that is being used for journaling on the Microsoft Exchange Server. Click **Next** to continue.

Click **Next** to continue setup.

6. In the Connection test screen, click **Next**.

7. Click **Finish** to finalize setup and **Save Settings** save new mail server to archive.

3.6.4 Configure Archive Stores

Archive Stores are the GFI MailArchiver databases where emails are archived. On installing GFI MailArchiver, a Firebird database is automatically installed. To change the default database:

1. From the GFI MailArchiver management console, expand the **Configuration** node and click on **Archive Stores**.
2. Click **Add Archive Store**.
3. In the Archive Store Name field, key in a name for the new archive store, and click **Next**.

4. Select the type of archive store to add, depending on the type of setup configured in section [Installation pre-requisite: Setup database](#) on page 24 of this manual:

- **Microsoft SQL server** - To use a Microsoft SQL Server database where ALL the archive information (including original email binary source) will be stored.
- **Microsoft SQL Server database and file system** - To use a Microsoft SQL server as the backend database and a separate location for the binary sources files.
- **GFI MailArchiver database and file system** - To use a Firebird database as the backend database and a separate location for the binary sources files.

Click **Next** to continue setup.

5. Specify the location where to store archive data. Click **Next** to continue setup.

6. Specify a location where the original emails (binary source) will be stored. Also, specify login details in case of a UNC path. Click **Next** to continue setup.

7. At the verify schema screen click **Next**.

8. Specify the location where the search indexes will be stored. Click **Next** to continue setup.

NOTE: It is highly recommended to always use a different physical disk from where the Firebird or SQL server data is stored as the index location.

9. Click **Finish** to finalize setup and **Save Settings** save new archive store.

3.6.5 Configure access control

By default, an Active Directory user can browse and search only through his/her emails. Access control enables configurations where specific users or groups can access other user's emails.

1. From the GFI MailArchiver management console, expand **Configuration** node and click **Access Control**.

2. Under **Full Access Group**, select any Active Directory group to grant full access permissions to on all archived emails.

3. Under **Group Managers**, configure any group managers that should have access to the archived emails of the users part of a particular AD group. Click **Add Manager** assign group managers.

4. Under User Access Control, configure any users that should have access to the archived emails of other users. Click **Add User** to finalize user setup.

5. Click **Save Settings** to finalize access control setup.

3.6.6 Configure search indexes

Search indexes enable the timely retrieval of archived emails.

1. From the GFI MailArchiver management console, expand **Configuration** node and click on **Search Index Management**.

2. Select an index frequency:

- **Index new archived emails immediately** - Emails are indexed as soon as these are received by GFI MailArchiver. This is the default value.
- **Index new archived emails every** - Emails are indexed on a specified periodical timed schedule (e.g. every half hour, every hour, etc)
- **Index new archived emails every day at:** - Emails are indexed on a daily basis at a specified time. (e.g. daily at 00:30 am)

NOTE: Frequent email indexing requires more hardware resources, such as hard disk speed.

3.6.7 Set up retention policies

Retention policies enable you to configure how long specific emails are kept in the archive store.

1. From the GFI MailArchiver management console, expand **Configuration node** and click **Retention Policies**.
2. Click on **Add Retention Policy**.
3. Key in a name of the new policy and click **Next**.
4. Specify any subject keywords and click **Next**.
5. Specify any body keywords and click **Next**.
6. Specify any email senders and click **Next**.
7. Specify any email recipients and click **Next**.
8. Specify whether emails matching the criteria that you set up should be deleted immediately or after a number of days and click **Next**.
9. Click **Finish** to finalize retention policy setup and **Save settings** to save settings.

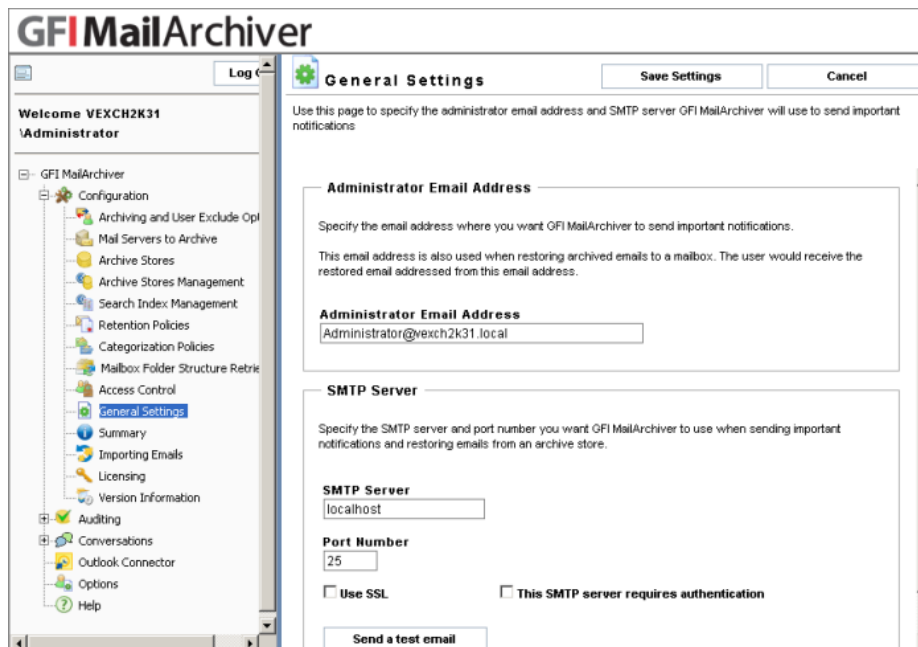
3.6.8 Configuring general settings

The **General Settings** configuration page enables you to specify the administrator email address, the SMTP server and port number details used by GFI MailArchiver to:

- Send administrative notification emails
- Restore emails through OneClick Restore.

To configure the general settings:

1. Click **GFI MailArchiver ► Configuration ► General Settings** node.



Screenshot 22 - Configuring general settings

2. Set up:

- **Administrator Email Address** - Specify the administrator email address to which notification messages are sent.
- **SMTP Server** - Key in the SMTP server name to use to send emails through.
- **Port number** - Key in the port number over which email communications are sent to the SMTP server.
- **Use SSL** - Select this option to secure communication to SMTP server.
- **This SMTP server uses authentication** - Select this option if your SMTP server requires authentication and key in the login credentials.

3. Click **Save Settings**.

3.6.9 Configuring mailbox folder structure retrieval

User mailbox structure retrieval enables users to view the folder structure set up for each individual user set up in Microsoft Exchange.

When configured, the folder structure of the users' mailbox is replicated in the GFI MailArchiver archive stores and can be viewed in the:

- Mailboxes in GFI MailArchiver user interface
- Folders created by GFI MailArchiver Outlook Connector.

How does mailbox folder structure retrieval work?

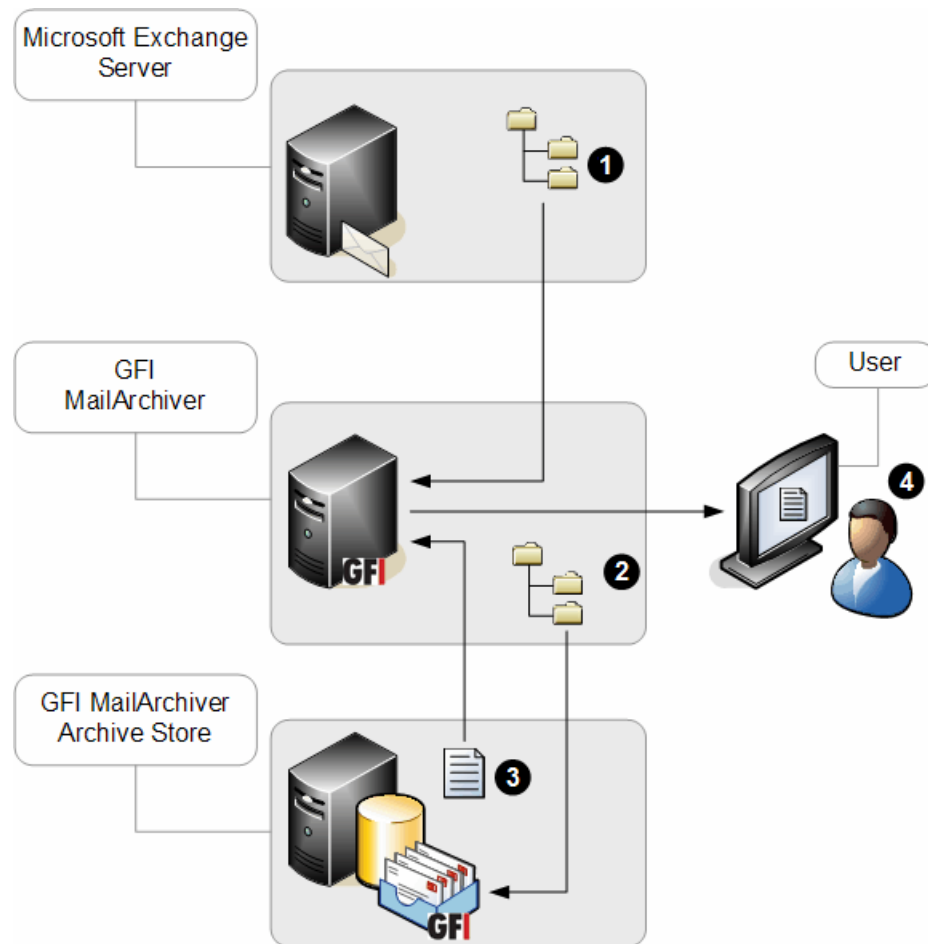


Figure 2 - User mailbox structure retrieval

- 1** Retrieve mailbox folder structure for all users.
- 2** Save retrieved mailbox folder structure within the GFI MailArchiver archive store.
- 3** GFI MailArchiver retrieves the mailbox folder structure from archive store
- 4** GFI MailArchiver displays email conversations within the retrieved archive stores to users.

Important Notes

1. If emails are manually moved from Sent Items folder to another folder, this change will not be replicated in GFI MailArchiver Archive Stores if Cached Exchange Mode is enabled on the users' Microsoft Outlook account settings. For more information about Cached Exchange Mode refer to the [General issues](#) section in Troubleshooting.

Step 1: Create a dedicated user

A dedicated user is required for User mailbox structure retrieval. The procedure how to create a user in Active Directory depends on the operating system of the domain controller:

- [Microsoft Windows Server 2000/2003](#)
- [Microsoft Windows Server 2008](#)

NOTE 1: In a Microsoft Exchange 2010 environment, skip to [Step 2: Grant user access to all users' mailboxes](#).

NOTE 2: The dedicated user does not require a mailbox to be attached.

Microsoft Windows Server 2000/2003

1. Click **Start ► Settings ► Control Panel ► Administrative Tools ► Active Directory Users and Computers**.
2. Expand **<Domain Name> ► Users** node and right click **Users ► New ► User**.
3. Key in 'First name', 'Last name', 'Full name' and 'User logon name' and click **Next**.
4. Key in 'Password' and 'Confirm password' values, unselect **User must change password at next logon** option, select **User cannot change password** and select **Password never expires**. Click **Next** to continue setup.
5. Unselect **Create an Exchange mailbox** option and click **Next**.
6. Review new user details and click **Finish** to create new user.

Proceed to [Step 2: Grant user access to all users' mailboxes](#).

Microsoft Windows Server 2008

1. Click **Start ► Run** and key in **cmd**, and **OK**.
2. Key in:

```
dsadd user <UserDN> -pwd <password> -disabled no
```

Where:

Parameter	Description
<UserDN>	Specifies the distinguished name of the user object to be added.
-pwd	Sets <password> value.
<Password>	Specifies the password to be used for the user account. If this parameter is set to *, you are prompted for a user password.

- **Example:**

```
dsadd user CN=masynch,CN=Users,DC=master-domain,DC=Com -pwd Password1 -disabled no
```

Proceed to [Step 2: Grant user access to all users' mailboxes](#).

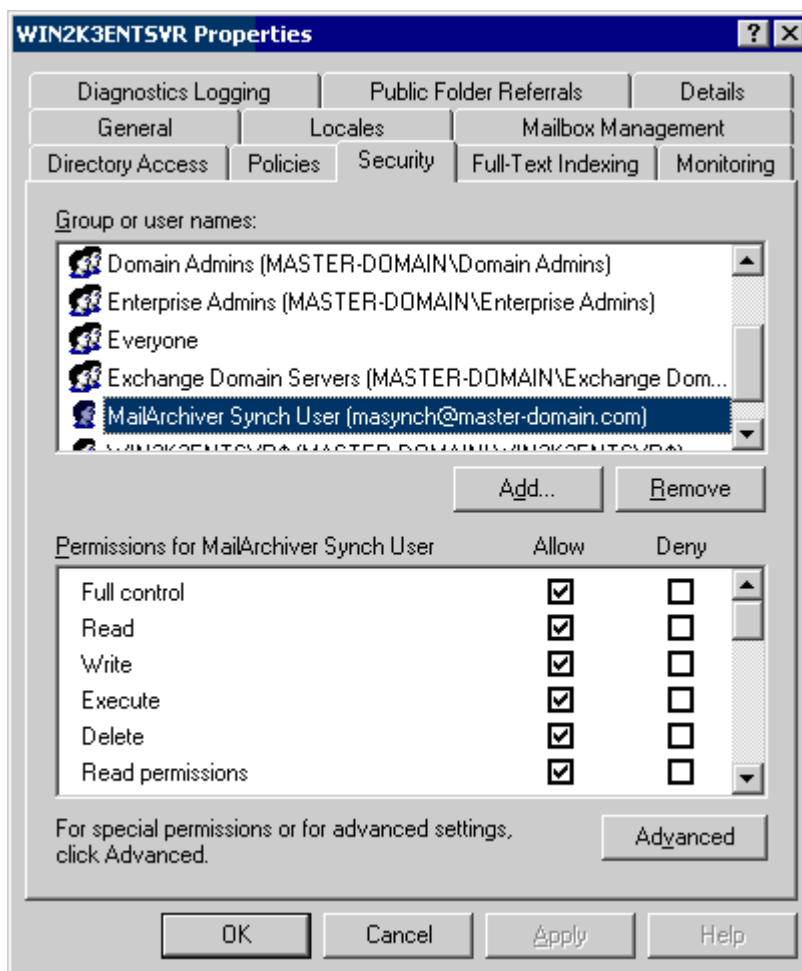
Step 2: Grant user access to all users' mailboxes

From the Microsoft Exchange Server, grant the user created in step 1 above access to all users' mailboxes. The procedure to grant access depends on the version of Microsoft Exchange Server:

- [Microsoft Exchange 2000/2003](#)
- [Microsoft Exchange 2007 \(not SP1/SP2/SP3\)](#)
- [Microsoft Exchange 2007 SP1/SP2/SP3](#)
- [Microsoft Exchange 2010](#)

Microsoft Exchange 2000/2003

1. Login to the Microsoft Exchange Server 2000/2003 machine and from the **Microsoft Exchange System Manager**, expand **Server** node from the appropriate administrative group. Right click the server and click **Properties**.
2. Select **Security** tab.
3. If the user that is allowed to access all user mailboxes is added in **Group or user names** box, then proceed to [Step 3: Assign user logon rights to the GFI MailArchiver machine](#). If the user that is allowed to access all user mailboxes is NOT added in **Group or user names** box, click **Add...** to add the user.



Screenshot 23 - Allow full control to user who has full control on all user mailboxes

4. In the permissions list, click **Allow** next to **Full Control** to grant full control permissions to the user just created.

Proceed to [Step 3: Assign user logon rights to the GFI MailArchiver machine](#).

Microsoft Exchange 2007 (not SP1/SP2/SP3)

1. Open the **Exchange Management Shell**.
2. Run the following Windows PowerShell commandlet

```
Add-ADPermission -identity "Mailbox Store" -User "Trusted User" -AccessRights GenericAll
```

- **Example:** `Add-ADPermission -Identity "Mailbox Database" -User "master-domain\masynch" -AccessRights GenericAll`

Repeat the procedure described above for each mailbox store database required.

Proceed to [Step 3: Assign user logon rights to the GFI MailArchiver machine.](#)

Microsoft Exchange 2007 SP1/SP2/SP3

1. Open the **Exchange Management Shell.**
2. Run the following Windows PowerShell commandlet:

```
foreach ($exchangeServer in Get-ExchangeServer)
{
    if ($exchangeServer.ServerRole -match
        'ClientAccess')
    {
        Add-ADPermission -Identity
            $exchangeServer.DistinguishedName -User
            'domain\user' -ExtendedRights ms-Exch-EPI-
            Impersonation
    }
}
```

- **Example:**

```
foreach ($exchangeServer in Get-ExchangeServer)
{
    if ($exchangeServer.ServerRole -match
        'ClientAccess')
    {
        Add-ADPermission -Identity
            $exchangeServer.DistinguishedName -User
            'master-domain\masynch' -ExtendedRights ms-
            Exch-EPI-Impersonation
    }
}
```

Repeat the procedure described above for each mailbox store database required.

Proceed to [Step 3: Assign user logon rights to the GFI MailArchiver machine.](#)

Microsoft Exchange 2010

1. Launch the **Exchange Management Shell.**
2. Key in:

```
New-mailbox -name "name" -userprincipalname
name@domain.com -organizationalunit users
```

- **Example:**

```
New-mailbox -name "masynch" -userprincipalname
masynch@masterdomain.com -organizationalunit
users
```

3. Key in a password and hit **Enter** to create the new user.

4. Run the following PowerShell commandlet:

```
New-ManagementScope -name "MAUMPolling" -
recipientrestrictionfilter {recipienttype -eq
"UserMailbox"}
```

5. Run the following PowerShell commandlet:

```
New-ManagementRoleAssignment -name "MAUMPollingRA"
-role:applicationimpersonation -user
"masynch@domain.com" -customrecipientwritescopes
"MAUMpolling"
```

- **Example:**

```
New-ManagementRoleAssignment -name
"MAUMPollingRA" -role:applicationimpersonation -
user "masynch@mydomain.com" -
customrecipientwritescopes "MAUMpolling"
```

Repeat the procedure described above for each mailbox store database required.

Proceed to [Step 3: Assign user logon rights to the GFI MailArchiver machine](#).

Step 3: Assign user logon rights to the GFI MailArchiver machine

The user dedicated to the User mailbox structure retrieval feature must have logon rights on the GFI MailArchiver machine. This procedure depends on which machine GFI MailArchiver is installed on:

- [GFI MailArchiver installed on a domain member server](#)
- [GFI MailArchiver installed on the domain controller](#)

GFI MailArchiver installed on a domain member server

1. From the domain controller machine, navigate to **Control Panel ► Administrative Tools ► Active Directory Users and Computers**.
2. Right-click the user dedicated to the User mailbox structure retrieval and click **Properties**.
3. Select **Account** tab and click **Log On To....**
4. Select either **All computers** to allow log in to all domain member computers or select **The following computers** and add the GFI MailArchiver server name to allow login only to the GFI MailArchiver machine.
5. Click **OK** to apply changes.
6. Load command prompt and key in **gpupdate** to refresh the local and Active Directory-based Group Policy settings.

Proceed to [Step 4: Configure Mailbox folder structure retrieval in GFI MailArchiver](#).

GFI MailArchiver installed on the domain controller

Windows Server 2003

1. Navigate to **Control Panel ► Administrative Tools** and select **Domain Controller Security Policy**.
2. Expand **Local Policies** and click **User Rights Assignment**
3. From the right pane, double click **Allow log on locally**
4. Click **Add User or Group** and key in the user configured in the GFI MailArchiver Mailbox Synchronization configuration.
5. Load command prompt and key in **gpupdate** to refresh the local and Active Directory-based Group Policy settings.

Proceed to [Step 4: Configure Mailbox folder structure retrieval in GFI MailArchiver](#).

Windows Server 2008

1. Navigate to **Start ► Run** and type **gpme.msc**.
2. In Domains/OUs tab, double click **Domain Controllers** and launch the **Default Domain Controllers Policy**.
3. Navigate to **Default Domain Controllers Policy ► Computer Configuration ► Policies ► Windows Settings ► Security Settings ► Local Policies ► User Rights Assignment**.
4. From the right pane, double click **Allow log on locally**.
5. Click **Add User or Group** and key in the user dedicated to User folder structure retrieval.
6. Load command prompt and key in **gpupdate** to refresh the local and Active Directory-based Group Policy settings.

Proceed to [Step 4: Configure Mailbox folder structure retrieval in GFI MailArchiver](#).

Step 4: Configure Mailbox folder structure retrieval in GFI MailArchiver

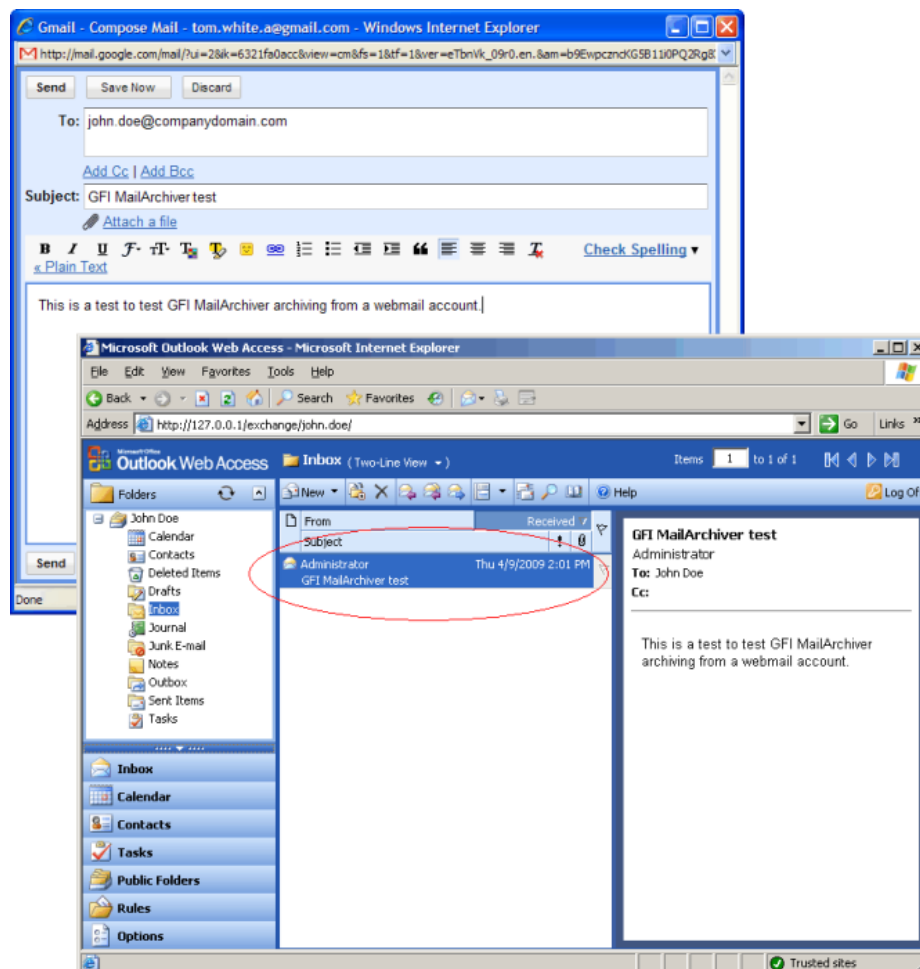
1. From GFI MailArchiver, navigate to **GFI MailArchiver ► Configuration ► Mailbox Folder Structure Retrieval**.
 2. Select **Enable GFI MailArchiver to copy the mailbox folder structure** checkbox.
 3. Select the connection method to Microsoft Exchange:
 - **Traditional Message Application Programming Interface (MAPI):** Use this option if you are using Microsoft Exchange Server 2000/2003/2007.
 - **Exchange Web Services:** Use this option if you are using Microsoft Exchange 2007 SP1 and later only.
 4. Key in the **Login Name** and **Password** for the user dedicated to Mailbox folder structure retrieval.
- NOTE:** Specify login name in domain\username format.
5. Click **Test access to mailboxes** button to test access to mailboxes. If test fails, check credentials and retest.
 6. *<Optional>* Click **Add New Policy** to create a policy that excludes specific folders from being replicated.
 - Key in policy name and click **Next**.
 - Add folders to exclude and click **Next**.

- To apply new policy to selected users only, select **Apply for selected users only** option and key in the users to which this folder applies.
 - Click **Next** and **Finish** to finalize the new policy setup.
7. Click **Save Settings** to complete setup.

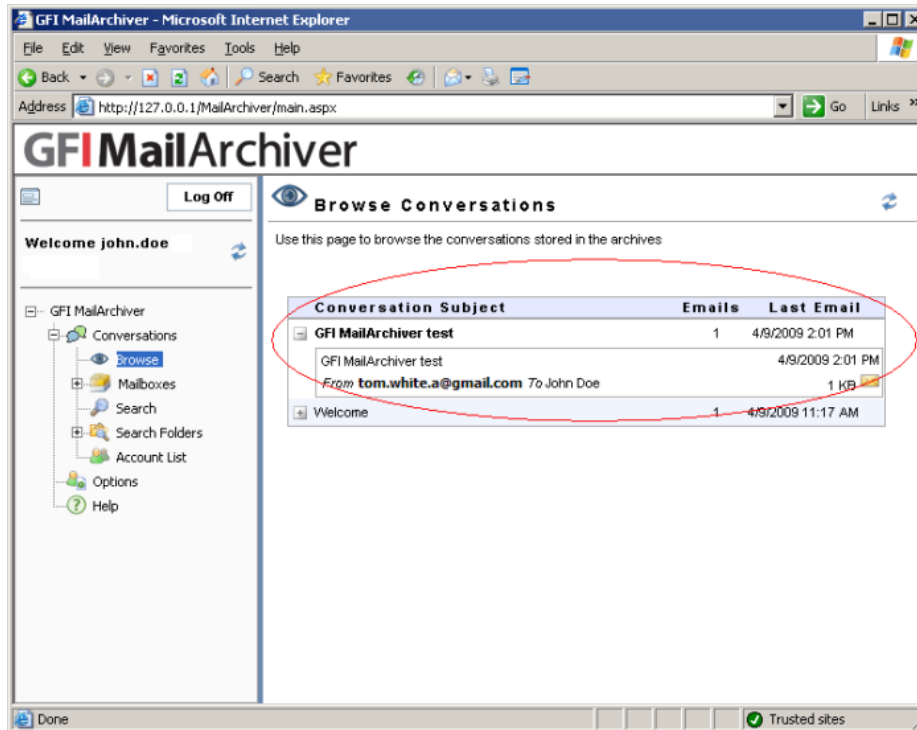
3.7 Test your setup

Test your setup to ensure that emails are archived successfully.

1. From an external account (e.g. Webmail, Hotmail, Gmail, etc) create a new email and send it to a valid email address which mailbox contents are being archived.
2. From the GFI MailArchiver management console, expand **Conversations** node and click **Browse**.
3. From the **List conversations from** option select the user for whom to browse conversations.



Screenshot 24 - Email sent from webmail to Microsoft Exchange Server email account



Screenshot 25 - Email archived by GFI MailArchiver

4. Review the conversations to ensure that emails sent are displayed in GFI MailArchiver.

• **Example:**

- Send an email from a webmail account to an email account which is being archived (e.g. john.doe@companydomain.com).
- Select **Conversations ► Browse** and select the email account to review (john.doe@companydomain.com).
- Review the conversation threads listed and locate the email sent from webmail.

In case that emails are not being archived by GFI MailArchiver:

- Ensure that your email infrastructure is working correctly by checking that the email is received by your Microsoft Exchange server and that it goes through the recipient mailbox.
- Ensure that all the installation pre-requisites starting on page 8 in this manual are completed
- Ensure that all the installation and post installation actions in this manual are completed correctly.
- Refer to the Administration and configuration guide available from: <http://www.gfi.com/mar/mar6acmanual.zip>

4. Upgrades

4.1 Upgrade procedure

4.1.1 Important notes

1. Ensure that you are logged on as Administrator or using an account with administrative privileges.
2. Before starting installation, save any other pending software and close all open applications on the machine.
3. Check that the machine you are installing GFI MailArchiver on meets the system and hardware requirements specified earlier in this chapter.
4. Ensure that Journaling is enabled on Microsoft Exchange Server. Refer to the [Installation pre-requisite: Enable Journaling](#) section starting on page 8 in this manual for information on how to check if journaling is enabled.

4.1.2 Upgrading GFI MailArchiver

1. Double-click on:
 - **mailarchiver6.exe** to install GFI MailArchiver on x86 systems.
 - **mailarchiver6_x64.exe** to install GFI MailArchiver on x64 systems.
2. On the **Welcome** page, click **Next**.
3. Select whether to check for a newer build of GFI MailArchiver on the GFI Website. Click **Next** to continue.
4. Read the license agreement and select **I accept the terms in the license agreement** option. Click **Next** to continue.
5. Select the language used by the GFI MailArchiver language analyzer to accurately index non-Roman character languages. Click **Next** to continue.

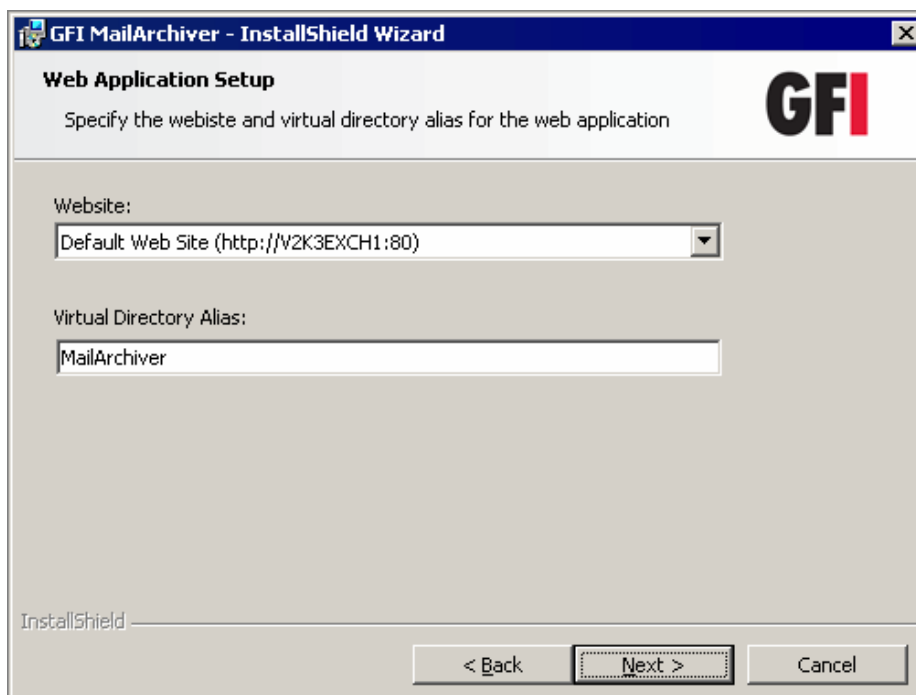


Screenshot 26 - Entering the administrator email address and product license key

6. Key in the administrator email address (used for notification messages) and license key.

NOTE: To evaluate GFI MailArchiver, leave the default 'evaluation' value. Click **Next** to continue.

7. Click **Next** to continue by installing GFI MailArchiver to the default folder. For an alternative location, click **Change** and select a new installation path.



Screenshot 27 - Selecting a Website and Virtual Directory

8. Select the website where you want to install the GFI MailArchiver web interface from the **Website** list. In the **Virtual Directory Alias** box (set to 'MailArchiver' by default), key in the name for the GFI MailArchiver web interface virtual folder. Click **Next** to continue.

9. Click **Install** to install GFI MailArchiver.

10. Click **Upgrade** to upgrade your database schema to the new GFI MailArchiver schema and click **Next** to continue setup.

NOTE 1: **Next** button is disabled until the **Tell me more** button is clicked.

NOTE 2: To continue setup without updating your database schema, select the **I do not want to upgrade the schema now** option and click **Next**.

11. Click **Finish** to close the installation wizard.

4.2 Post upgrade actions

4.2.1 Check licensing

A valid license key enables you to use GFI MailArchiver without any restrictions. If upgrading:

- **From the same version but an older build** (e.g. from version 6.0 to version 6.1), check license key. For more information on obtaining a new license key, refer to:

<http://www.gfi.com/products/gfi-mailarchiver/pricing>

- **From a previous version of GFI MailArchiver** (e.g. version 5 to version 6): follow the steps below to enter fully purchased license key for current version.

1. Click **Start** ► **All Programs** ► **GFI MailArchiver** ► **GFI MailArchiver** and key in username and password of an account with administrative privileges to access the GFI MailArchiver configuration.

2. Click **GFI MailArchiver** ► **Configuration** ► **Licensing** node.

3. Key in or paste the GFI MailArchiver license key you bought in the **License key** field then click **Verify License Key**.

4. Click **Save Settings**.

5. Deploy Outlook connector

Use the GFI MailArchiver outlook connector to access your email archives from within your Microsoft Outlook software. This connector can be installed via Active Directory Group Policy Objects (GPO) or via manual install.

5.1 System requirements

5.1.1 Software

Supported Microsoft Outlook Versions

- Microsoft Outlook 2003 (including Service Packs 1, 2, 3 or 4)
- Microsoft Outlook 2007 (including Service Packs 1 or 2)
- Microsoft Outlook 2010 (x86 and x64 versions)

Supported operating systems

GFI MailArchiver can be installed on:

- Microsoft Windows 7
- Microsoft Windows Vista
- Microsoft Windows XP
- Microsoft Windows Server 2008
- Microsoft Windows Server 2003
- Microsoft Windows Server 2000

NOTE 1: The machines where GFI MailArchiver Outlook Connector is deployed must be able to connect to the GFI MailArchiver server.

NOTE 2: GFI MailArchiver Outlook Connector cannot be installed on the Microsoft Exchange server.

NOTE 3: When using a web filtering tool, this must be configured to allow all HTTP requests between GFI MailArchiver server and GFI MailArchiver Outlook Connector. Ensure that the GFI MailArchiver server's IP address, NETBIOS name and DNS name are not blocked by the web filter. For more information, refer to:

<http://kbase.gfi.com/showarticle.asp?id=KBID003387>.

Other required components

- Microsoft Internet Explorer 5 or later.
- HTTP port 80 (or HTTPS default port 443 for secure connections) - used by GFI MailArchiver Outlook Connector to connect with GFI MailArchiver.

5.1.2 Hardware

Processor

- 1GHz processor or more.

Memory

- **Minimum:** 512MB RAM
- **Recommended:** 2GB RAM

Physical Storage

- 20MB physical disk space required for GFI MailArchiver Outlook Connector installation. More space is required to store email headers and emails for offline access.

5.2 Installing via GPO

5.2.1 Windows Server 2003

NOTE: Make sure that when deploying the 32-bit version of the GFI MailArchiver Outlook Connector, the domain policy used contains only computers with Microsoft Outlook 2010 32-bit version installed.

Also ensure to use a domain policy that applies only to computers where Microsoft Outlook 2010 64-bit version is installed when deploying GFI MailArchiver 2010 64-bit edition.

1. Navigate to `<Program Files\GFI\MailArchiver\Outlook>` and copy:

- `MAROC_32bitOutlook.msi` (Installer for Microsoft Outlook 2010 32-bit computers only)
- `MAROC_64bitOutlook.msi` (Installer for Microsoft Outlook 2010 64-bit computers only)

to a share accessible by all domains.

2. From command prompt, key in 'mmc.exe' and click Enter to launch the Microsoft Management Console.

3. Click **File ► Add/Remove Snap-in...** and click **Add...**

4. Select **Group Policy Object Editor** snap-in and click **Add**.

5. Click **Browse...** and select the domain policy to edit.

6. Select the domain policy and click **OK**.

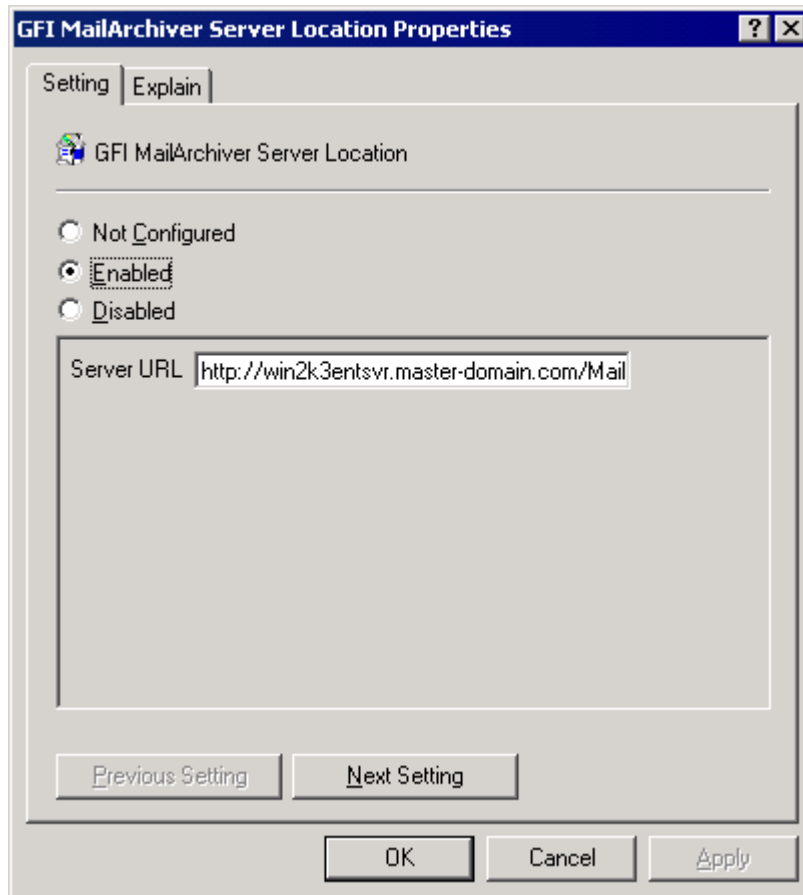
7. Click **Finish** to close 'Select Group Policy Object' dialog. Click **Close** to close 'Add standalone Snap-in' dialog and click **OK** to close 'Add/Remove Snap-in' dialog; to return to the Microsoft Management Console.

8. Navigate to **Console Root ► <domain policy> ► User Configuration**, right-click **Administrative Templates**, and select **Add/Remove Templates....**

9. Click **Add...**, browse for the file `gfiapps.adm` located in: `<Program Files\GFI\MailArchiver\Outlook>` and click **Open**.

10. Click **Close** to return to the Microsoft Management Console.

11. Expand **Console Root ► <domain policy> ► User Configuration ► Administrative Templates ► GFI Applications**.



Screenshot 28 - Defining the server URL of GFI MailArchiver in GPO

12. From the right pane, double click **GFI MailArchiver Server Location** policy and select **Enabled**. In the Server URL text box enter the URL where user machines can access GFI MailArchiver in the form `http://<hostname>/<GFI MailArchiver virtual folder name>`

For example:

`http://win2k3entsvr.master-domain.com/MailArchiver`

13. <Optional> Click **Next Setting** and configure the following settings. For each option select **Not Configured** to use the default value or click **Enable** to specify a custom value.

- **GFI MailArchiver Outlook Connector Data Path Root** - specify a different root location where store configurations and local emails are stored on client machines. For example type `'%MyDocuments%'` to store in the My Documents folder of the logged on user.
- **GFI MailArchiver Outlook Connector days span** - specify the number of days for which emails are synchronized. Only emails received within this time span are accessible through GFI MailArchiver Outlook Connector.
- **GFI MailArchiver Outlook Connector download batch size** - Specify how many emails can be downloaded during one synchronization session.
- **GFI MailArchiver Outlook Connector connection timeout** - Specify the timeout period in milliseconds for accessing data from the GFI MailArchiver server.

- **GFI MailArchiver Outlook Connector maximum offline days** - Specify the maximum number of days which a user can set for emails offline access.
- **GFI MailArchiver Outlook Connector offline support** - Enable or disable offline support. If offline support is enabled, specify the number of days to support offline access. If this setting is enabled:
 - Users are not allowed to modify offline access
 - GFI MailArchiver Outlook Connector maximum offline days setting is ignored.

14. Click **OK** when all settings are configured.

15. Select **Console Root ► <domain policy> ► Computer Configuration ► Software Settings**.

16. Right click **Software installation** and select **New ► Package...**

17. In the **Open** dialog, locate the share where msi file is saved.

NOTE: When selecting the location of the msi file ensure that this is done through 'My network locations' so that the share name in GFI MailArchiver includes the full network share location rather than the local path.

18. Choose the deployment option - select **Assigned** and **OK**.

19. GFI MailArchiver Outlook Connector will be installed the next time each client machine is started.

To check installation, from Microsoft Outlook, check that a new folder called **GFI MailArchiver Mailbox** is created.

For information on how to use the GFI MailArchiver Outlook Connector, refer to the GFI MailArchiver Outlook connector manual available from:

<http://www.gfi.com/mar/mar6ocmanual.zip>

5.2.2 Windows Server 2008

NOTE: Make sure that when deploying the 32-bit version of the GFI MailArchiver Outlook Connector, the domain policy used contains only computers with Microsoft Outlook 2010 32-bit version installed.

Also ensure to use a domain policy that applies only to computers where Microsoft Outlook 2010 64-bit version is installed when deploying GFI MailArchiver 2010 64-bit edition.

1. Navigate to *<Program Files\GFI\MailArchiver\Outlook>* and copy:

- *MAROC_32bitOutlook.msi* (Installer for Microsoft Outlook 2010 32-bit computers only)
- *MAROC_64bitOutlook.msi* (Installer for Microsoft Outlook 2010 64-bit computers only)

to a share accessible by all domains.

2. From command prompt, key in 'mmc.exe' and click Enter to launch the Microsoft Management Console.

3. Click **File ► Add/Remove Snap-in...** and click **Add...**

4. Select **Group Policy Management Editor** snap-in and click **Add**.

5. Click **Browse...** and select the domain policy to edit.

6. Select the domain policy and click **OK**.

7. Click **Finish** to close 'Select Group Policy Object' dialog. Click **Close** to close 'Add standalone Snap-in' dialog and click **OK** to close

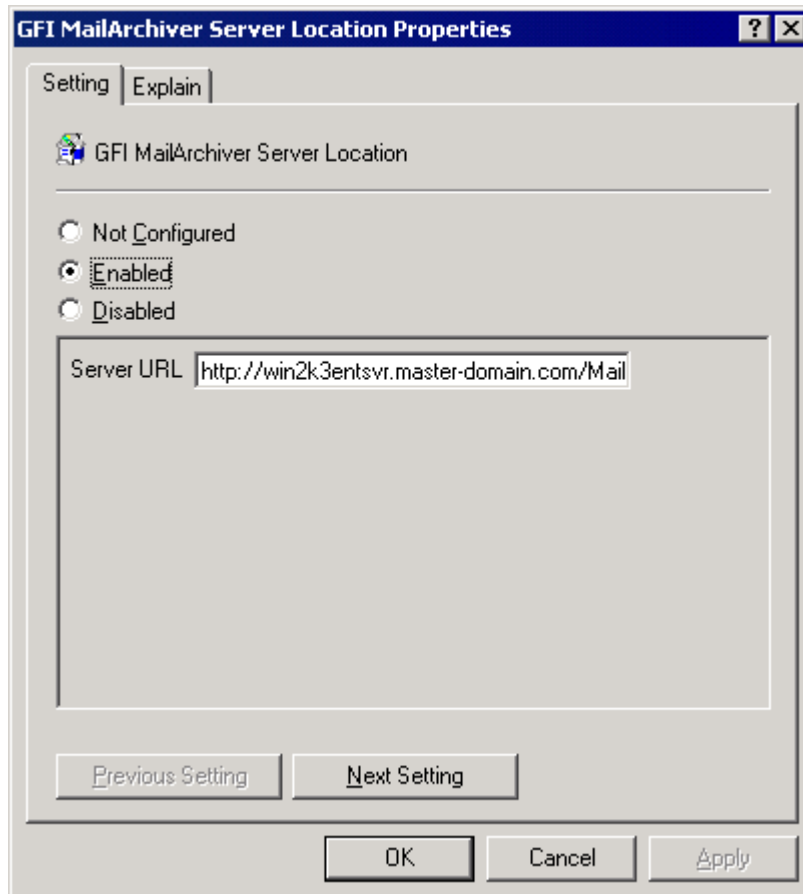
'Add/Remove Snap-in' dialog; to return to the Microsoft Management Console.

8. Navigate to **Console Root** ► **<domain policy>** ► **User Configuration** ► **Policies**, right-click **Administrative Templates**, and select **Add/Remove Templates....**

9. Click **Add...**, browse for the file `gfiapps.adm` located in: `<Program Files\GFI\MailArchiver\Outlook>` and click **Open**.

10. Click **Close** to return to the Microsoft Management Console.

11. Expand **Console Root** ► **<domain policy>** ► **User Configuration** ► **Policies** ► **Administrative Templates** ► **GFI Applications**.



Screenshot 29 - Defining the server URL of GFI MailArchiver in GPO

12. From the right pane, double click **GFI MailArchiver Server Location** policy and select **Enabled**. In the Server URL text box enter the URL where user machines can access GFI MailArchiver in the form `http://<hostname>/<GFI MailArchiver virtual folder name>`

For example:

`http://win2k3entsvr.master-domain.com/MailArchiver`

13. <Optional> Click **Next Setting** and configure the following settings. For each option select **Not Configured** to use the default value or click **Enable** to specify a custom value.

- **GFI MailArchiver Outlook Connector Data Path Root** - specify a different root location where store configurations and local emails are stored on client machines. For example type

'%MyDocuments%' to store in the My Documents folder of the logged on user.

- **GFI MailArchiver Outlook Connector days span** - specify the number of days for which emails are synchronized. Only emails received within this time span are accessible through GFI MailArchiver Outlook Connector.
- **GFI MailArchiver Outlook Connector download batch size** - Specify how many emails can be downloaded during one synchronization session.
- **GFI MailArchiver Outlook Connector connection timeout** - Specify the timeout period in milliseconds for accessing data from the GFI MailArchiver server.
- **GFI MailArchiver Outlook Connector maximum offline days** - Specify the maximum number of days which a user can set for emails offline access.
- **GFI MailArchiver Outlook Connector offline support** - Enable or disable offline support. If offline support is enabled, specify the number of days to support offline access. If this setting is enabled:
 - Users are not allowed to modify offline access
 - GFI MailArchiver Outlook Connector maximum offline days setting is ignored.

14. Click **OK** when all settings are configured.

15. Select **Console Root** ► *<domain policy>* ► **Computer Configuration** ► **Policies** ► **Software Settings**.

16. Right click **Software installation** and select **New** ► **Package...**

17. In the **Open** dialog, locate the share where msi file is saved.

NOTE: When selecting the location of the msi file ensure that this is done through 'My network locations' so that the share name in GFI MailArchiver includes the full network share location rather than the local path.

18. Choose the deployment option - select **Assigned** and **OK**.

19. GFI MailArchiver Outlook Connector will be installed the next time each client machine is started.

To check installation, from Microsoft Outlook, check that a new folder called **GFI MailArchiver Mailbox** is created.

For information on how to use the GFI MailArchiver Outlook Connector, refer to the GFI MailArchiver Outlook connector manual available from:

<http://www.gfi.com/mar/mar6ocmanual.zip>

5.3 Installing without GPO - Manual install

1. Copy:

- `MAROC_32bitOutlook.exe` (Installer for Microsoft Outlook 2010 32-bit computers only)
- `MAROC_64bitOutlook.exe` (Installer for Microsoft Outlook 2010 64-bit computers only)

located in *<Program Files\GFIMailArchiver\Outlook>* to the client machines on which you would like to install the GFI MailArchiver Outlook Connector.

2. Double click on the file and follow the wizard to install.

To check installation, from Microsoft Outlook, check that a new folder called **GFI MailArchiver Mailbox** is created.

3. <Optional>: Add the Outlook connector administrator template that will set up Outlook connector.

- From command prompt, type **mmc.exe** and click Enter.
- Click **File ► Add/Remove Snap-in...** and click **Add...**
- Select 'Group Policy Object Editor' snap-in and click **Add...**
- Click **Browse...** and select the domain policy to edit.
- Select the domain policy and click **OK**.

NOTE: Make sure that when deploying the 32-bit version of the GFI MailArchiver Outlook Connector, the domain policy used contains only computers with Microsoft Outlook 2010 32-bit version installed.

Also ensure to use a domain policy that applies only to computers where Microsoft Outlook 2010 64-bit version is installed when deploying GFI MailArchiver 2010 64-bit edition.

- Click **Finish** to close 'Select Group Policy Object' dialog. Click **Close** to close 'Add standalone Snap-in' dialog and click **OK** to close 'Add/Remove Snap-in' dialog.
- Select **Console Root ► User Configuration**, right click Administrative **Templates** and select **Add/Remove Templates...**
- Click **Add...** and browse for the file `gfiapps.adm` located in: `<<folder name>\GFI\MailArchiver\Outlook>`
- Click **Open**.

6. Role-based Installations

6.1 Introduction

Role-based Deployment allows for scalability of GFI MailArchiver in large IT infrastructures dealing with heavy email traffic. This is achieved through the deployment of multiple GFI MailArchiver instances on separate servers. Each instance is configured to fulfill diverse roles, to balance workload and collectively help for the smooth running of the email archiving process.

The following roles can currently be assigned to GFI MailArchiver instances:

- Central Configuration Service
- Data Collection
- Storage
- Search and Indexing
- User Interface and Administration
- Data Import Service

6.2 How role-based deployment works

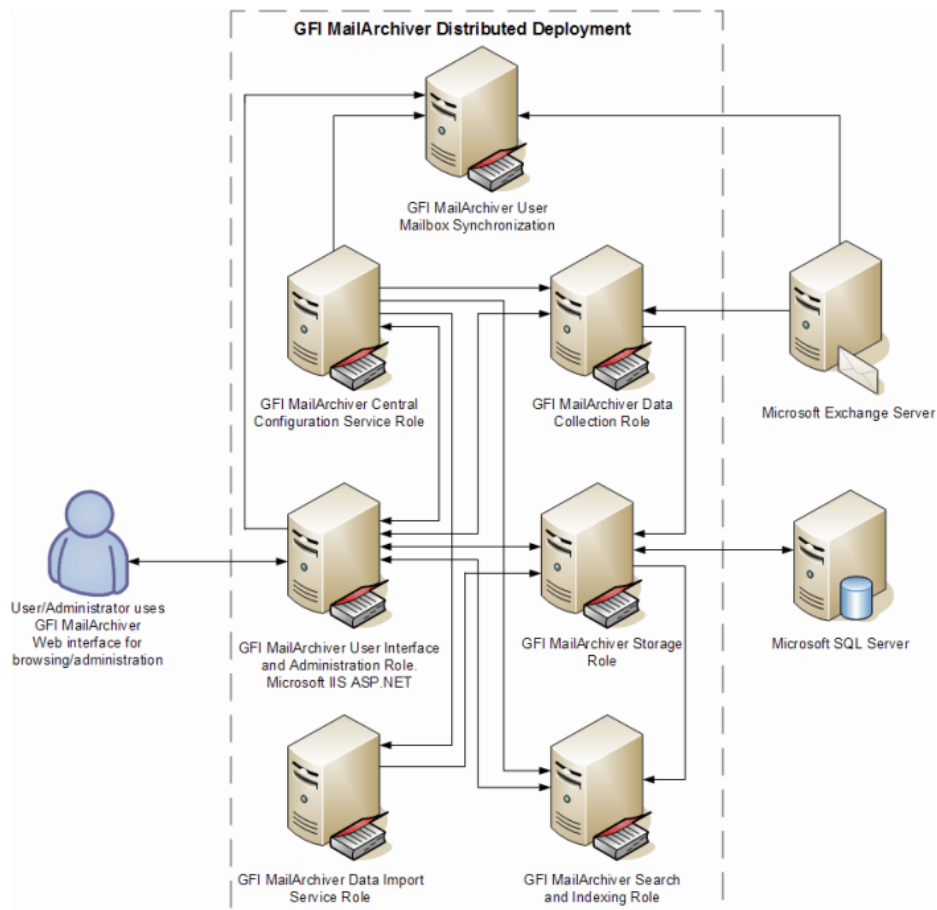


Figure 3 - How Role-based Deployment works

The GFI MailArchiver role-based deployment process in a distributed environment involves the following steps:

1. Establish the number of GFI MailArchiver instances required and the role to assign to each instance.
2. Install GFI MailArchiver on each server that will be participating in the deployment. This is a normal installation as described in the previous sections in this manual.
3. Execute the Deployment Manager Wizard on each GFI MailArchiver instance.
4. Store each server's deployment configuration file for future reference. This file may be required when updating to newer GFI MailArchiver builds or when the administrator needs to reconfigure the deployment roles.
5. Configure GFI MailArchiver from the server with the User Interface and Administration role.

NOTE 1: GFI MailArchiver instances communicate with each other over the network using the .NET Remoting protocol.

NOTE 2: A GFI MailArchiver instance can be assigned more than one role; the following roles can be assigned to more than one GFI MailArchiver instance:

- Data Collection
- User Interface and Administration

- Data Import Service

Though there may be a number of GFI MailArchiver instances distributed over the network, this fact is transparent to the administrator when it comes to configuring GFI MailArchiver, since configuration is centralized. Once the deployment process is complete, the administrator does not have to configure individual servers but can carry out all configuration through the GFI MailArchiver management console. In a distributed deployment, the GFI MailArchiver management console is accessible from the server(s) assigned the User Interface and Administration role.

6.2.1 System requirements

For the GFI MailArchiver Role-based deployment, you need:

- Hardware and software specifications as described in the 'Installing GFI MailArchiver' chapter.

NOTE 1: Role-based deployment is not supported on Windows 2000 server.

NOTE 2: For a Role-based deployment only MS SQL Server based Archive Stores are supported.

NOTE 3: If you are using a Microsoft SQL Server and NTFS file system archive store, make sure that the archived email binary source path is specified in UNC format.

- GFI MailArchiver services running under Active Directory credentials allowing communication over the network.

6.3 Installing GFI MailArchiver in a role-based environment

You assign roles to GFI MailArchiver instances by using the Deployment Manager Wizard, which simplifies and streamlines the process.

Installing GFI MailArchiver

Install GFI MailArchiver on each instance where a role will be deployed. Follow the instructions listed in [Installation procedure](#) section starting on page 29 of this manual.

Executing the Deployment Manager Wizard on each instance

You need to execute the Deployment Manager Wizard on each GFI MailArchiver instance according to the role(s) it will be assigned, in the following order:

1. Central Configuration Service
2. Storage
3. Search and Indexing
4. Data Collection (more than one allowed)
5. User Interface and Administration (more than one allowed)
6. Data Import Service (more than one allowed)
7. User Mailbox Synchronization

That is, you should first execute the wizard for the GFI MailArchiver instance which will be assigned the Central Configuration Service role,

then execute it for the GFI MailArchiver instance with the Storage role, and so on.

Launching the Deployment Manager Wizard

To launch the Deployment Manager Wizard:

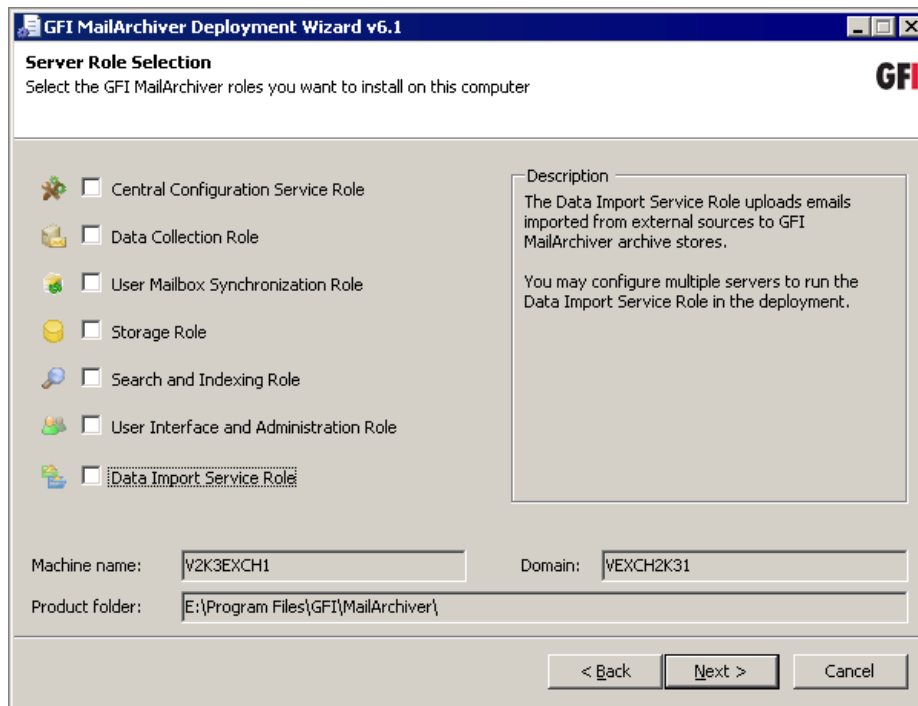
1. From Command Prompt, navigate to:

```
<Program Files Directory>\GFI\MailArchiver\DM\
```

2. Key in **deploymentmanager.exe** and press **Enter**.

Using the Deployment Manager Wizard

1. After launching the Deployment Manager Wizard you are presented with the welcome dialog. Click **Next** to continue.

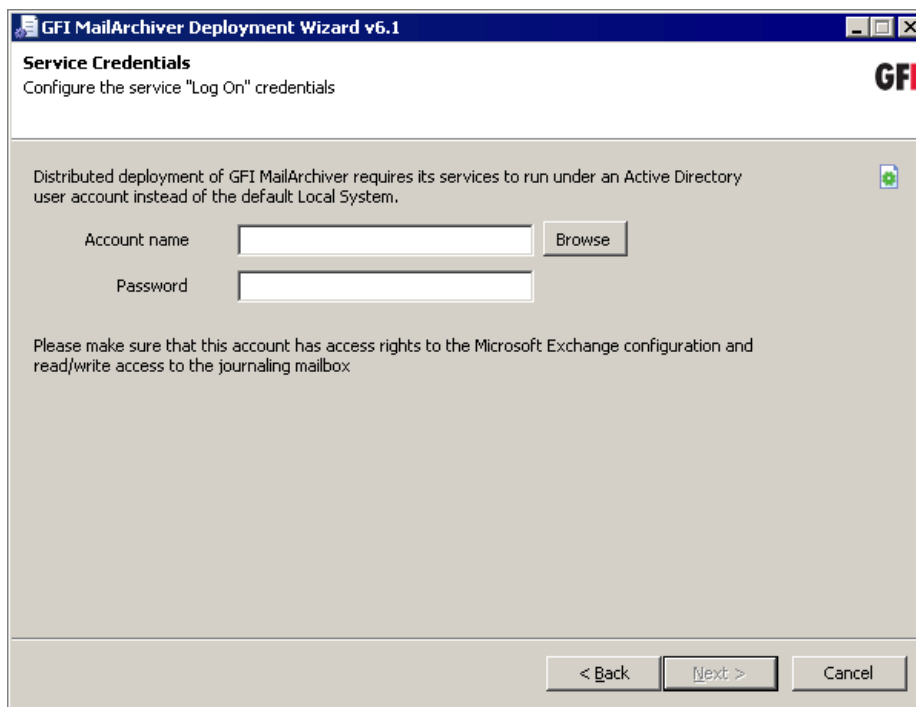


Screenshot 30 - Selecting roles

2. Specify which role(s) will be assigned to the GFI MailArchiver instance on this server and click **Next**.

NOTE: Move the mouse pointer over any role listed in the dialog to view the relevant description for that role.

3. Based on the roles selected in the previous stage, you will be asked to configure some parameters. For information on how to configure roles refer to the next sections. Click **Next** to continue.

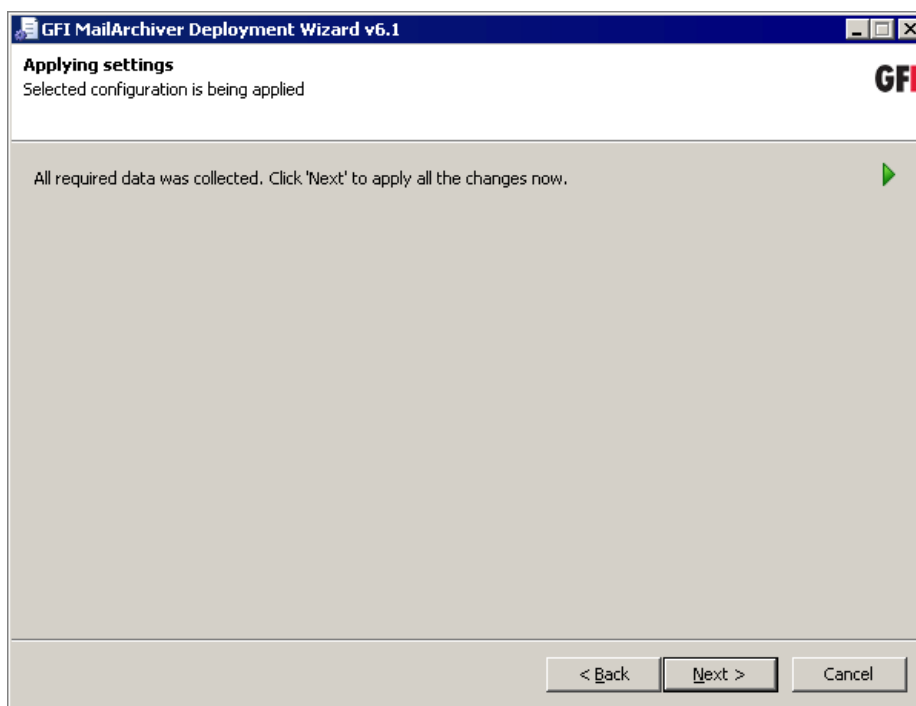


Screenshot 31 - Specify Active Directory credentials

4. Specify the Active Directory credentials under which to run GFI MailArchiver services and click **Next**.

NOTE 1: GFI MailArchiver services must run under an Active Directory user account.

NOTE 2: Specify an account that has read/write access privileges on the Microsoft Exchange configuration.



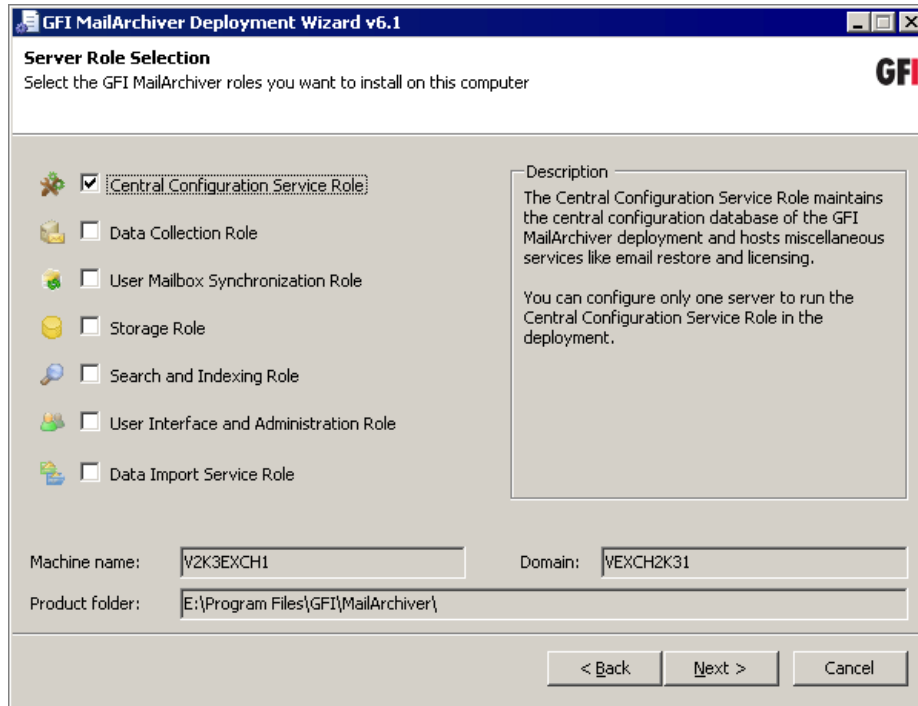
Screenshot 32 - Apply all configuration settings specified

5. Click **Next** to initiate the process and apply all specified parameters.

NOTE: During this process all GFI MailArchiver services need to be stopped and re-started. This occurs automatically and may take minutes to complete.

6. Click **Finish** to finalize your settings and close the Deployment Manager Wizard.

Assigning the Central Configuration Service Role

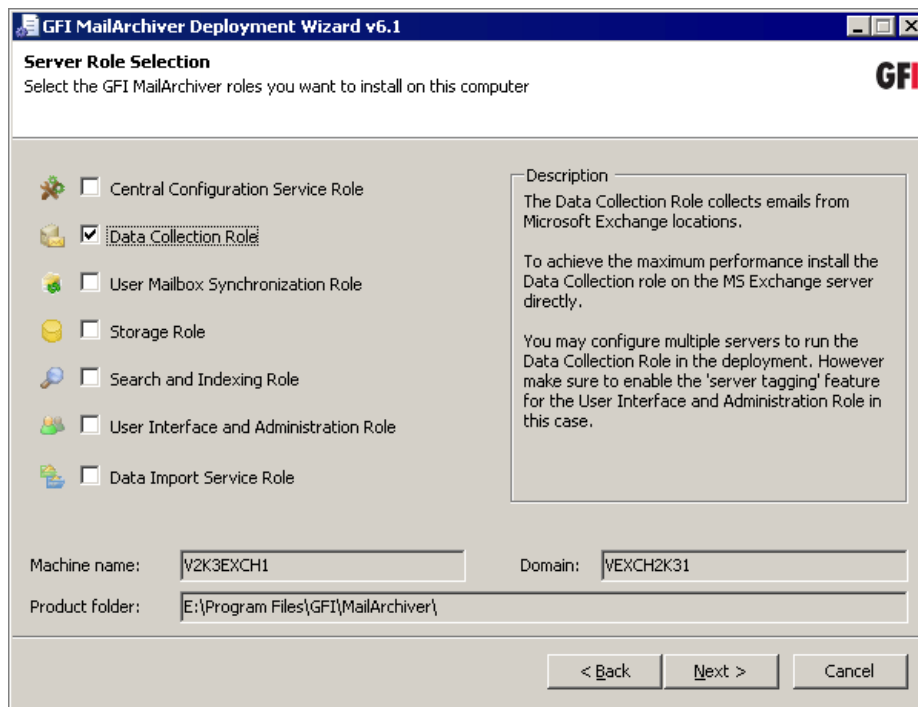


Screenshot 33 - Assigning the Central Configuration Service role

To assign the 'Central Configuration Service Role' select the appropriate option from the list of roles in the 'Server Role Selection' dialog.

The server assigned this role maintains the central configuration database of the GFI MailArchiver deployment and hosts miscellaneous services like email restore and licensing. You can only assign the 'Central Configuration Service Role' to one server in the deployment.

Assigning the Data Collection Role



Screenshot 34 - Assigning the Data Collection role

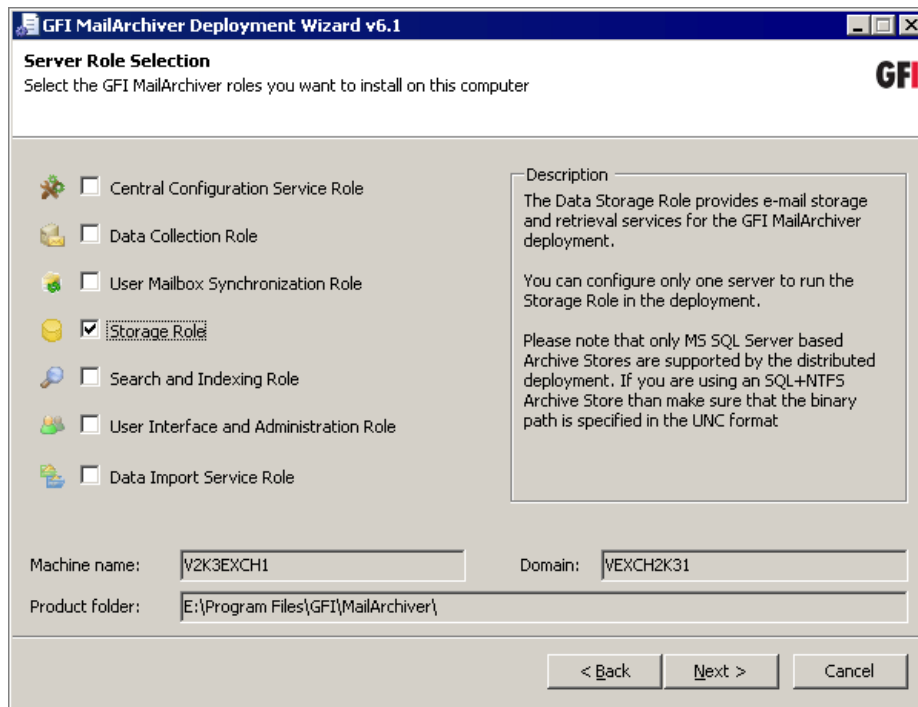
To assign the 'Data Collection Role' select the appropriate option from the list of roles in the 'Server Role Selection' dialog.

The server assigned this role collects emails, to be archived, from Microsoft Exchange locations.

To achieve maximum performance, assign the 'Data Collection Role' to a GFI MailArchiver instance residing directly on the Microsoft Exchange server.

You can assign this role to multiple servers in the deployment. However, ensure that the 'server tagging' option is enabled when assigning the 'User Interface and Administration Role'.

Assigning the Storage role

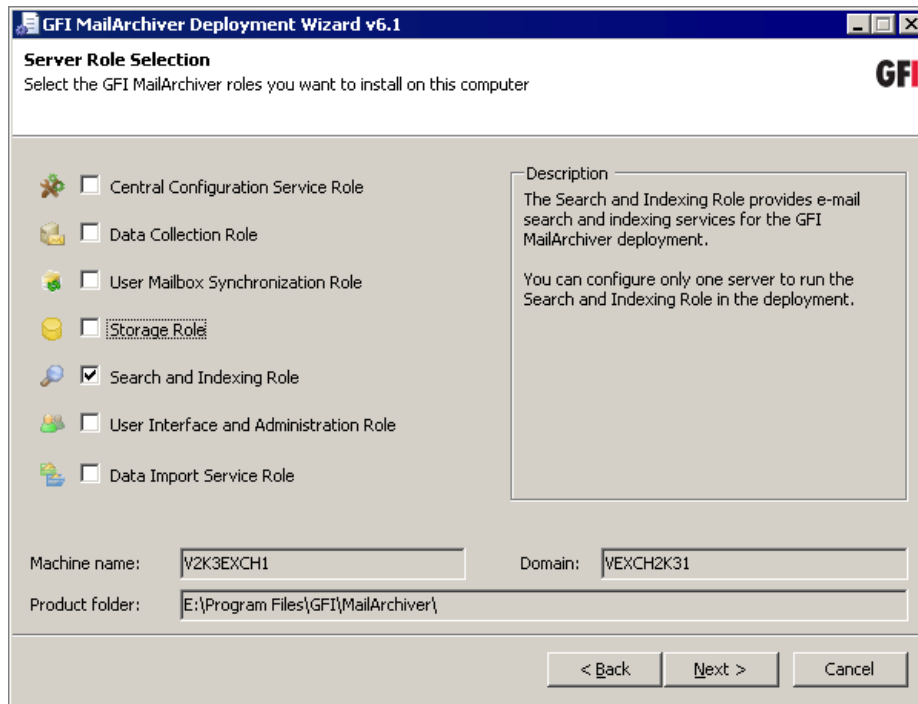


Screenshot 35 - Assigning the Storage role

To assign the 'Storage Role' select the appropriate option from the list of roles in the 'Server Role Selection' dialog. The server assigned this role provides email storage and retrieval services.

You can only assign the 'Storage Role' to one server in the deployment.

Assigning the Search and Indexing Role

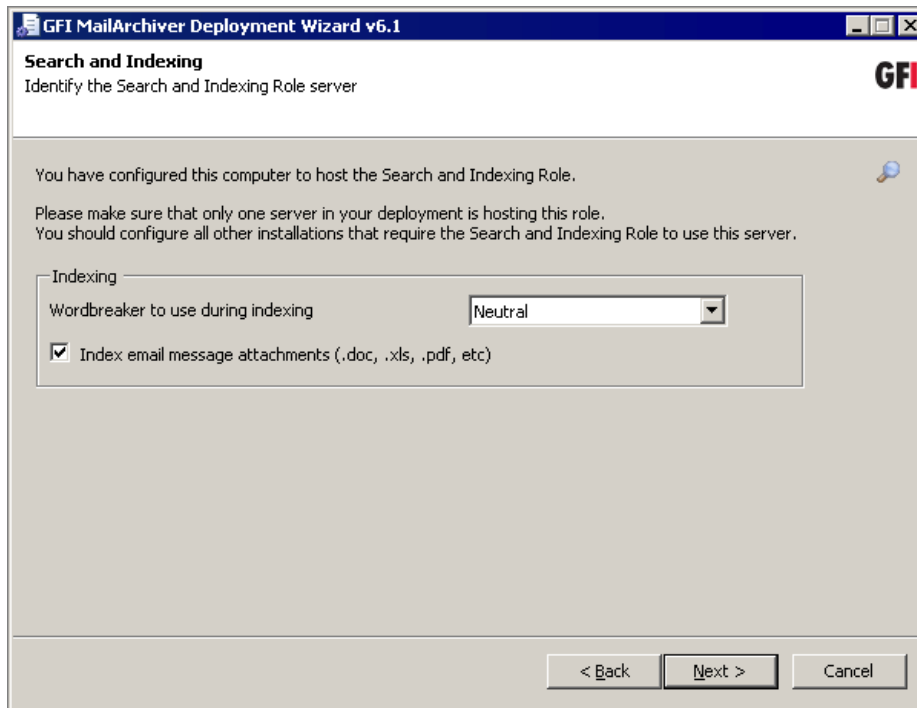


Screenshot 36 - Assigning the Search and Indexing role

To assign the 'Search and Indexing Role' select the appropriate option from the list of roles in the 'Server Role Selection' dialog.

The server assigned this role provides email search and indexing services. GFI MailArchiver creates search indexes for each archive store you configure. Each search index automatically indexes new email content archived in the corresponding archive store, to keep the search index updated and enable users to perform precise and fast searches.

You can only assign the 'Search and Indexing Role' to one server in the deployment.

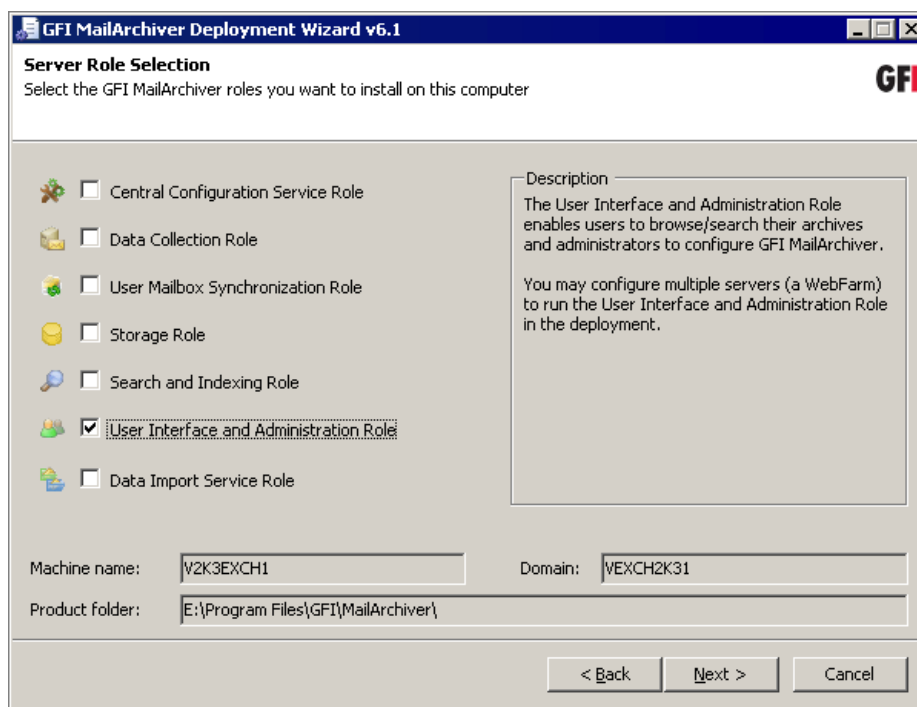


Screenshot 37 - Specify the word breaker for the Search and Indexing role

You will be prompted to specify the word breaker to use. Word breakers for each language enable the resulting terms to be more accurate for that language. If no word breaker is available for a particular language, the neutral word breaker is used. With the neutral word breaker, words are broken at neutral characters such as spaces and punctuation marks.

Select the indexing option available if you also want to index email message attachments.

Assigning the User Interface and Administration Role

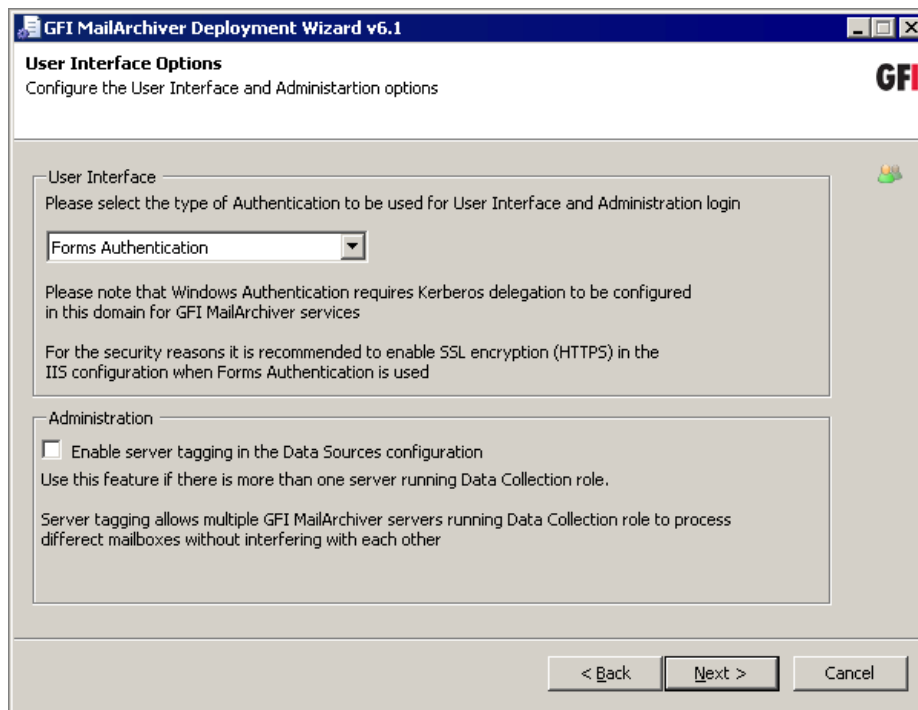


Screenshot 38 - Assigning the User Interface and Administration role

To assign the 'User Interface and Administration Role' select the appropriate option from the list of roles in the 'Server Role Selection' dialog.

The server assigned this role enables users to browse/search their archives and administrators to configure GFI MailArchiver through the management console.

You can assign the 'User Interface and Administration Role' to multiple servers in the deployment.

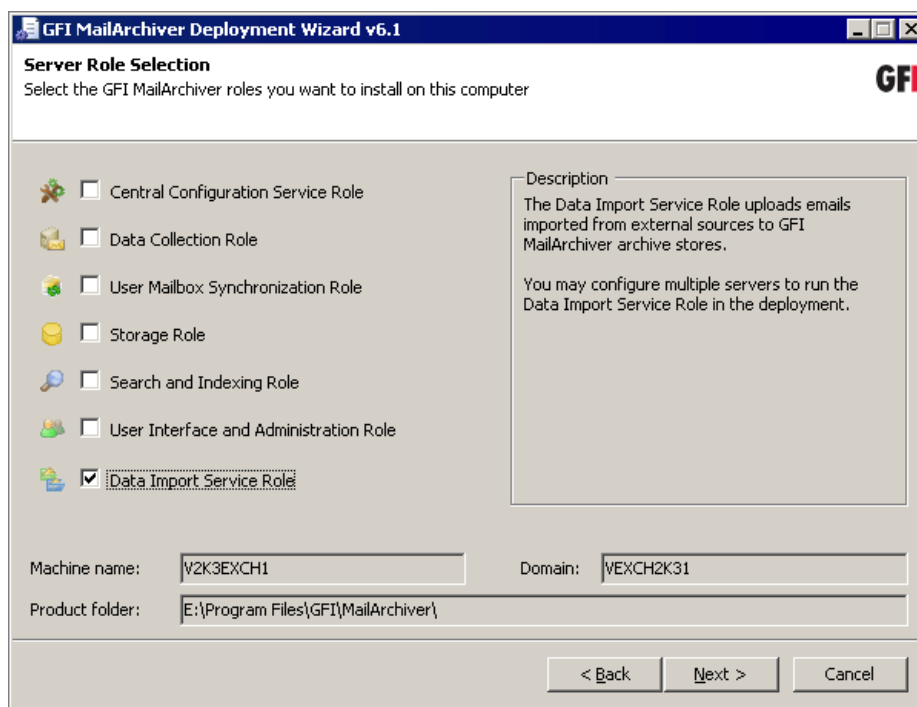


Screenshot 39 - Specify User Interface and Administration role settings

You will be prompted to specify the authentication method to use (Windows or Forms) to log in to the GFI MailArchiver management console.

If more than one server is assigned the Data Collection role, select the **Enable server tagging in the Data Sources configuration** option. Server tagging allows multiple GFI MailArchiver instances running the Data Collection role to process different mailboxes without interfering with each other.

Assigning the Data Import Service Role



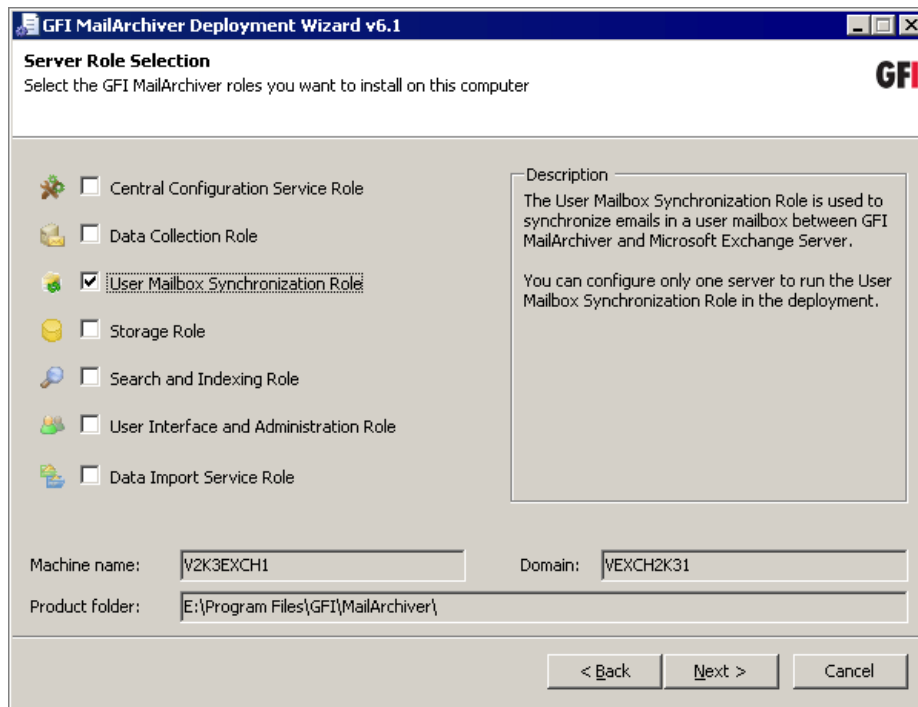
Screenshot 40 - Assigning the Data Import Service role

To assign the 'Data Import Service Role' select the appropriate option from the list of roles in the 'Server Role Selection' dialog.

The server assigned this role uploads imported emails to the GFI MailArchiver Archive Stores.

You can assign the 'Data Import Service Role' to multiple servers in the deployment.

Assigning the User Mailbox Synchronization Role

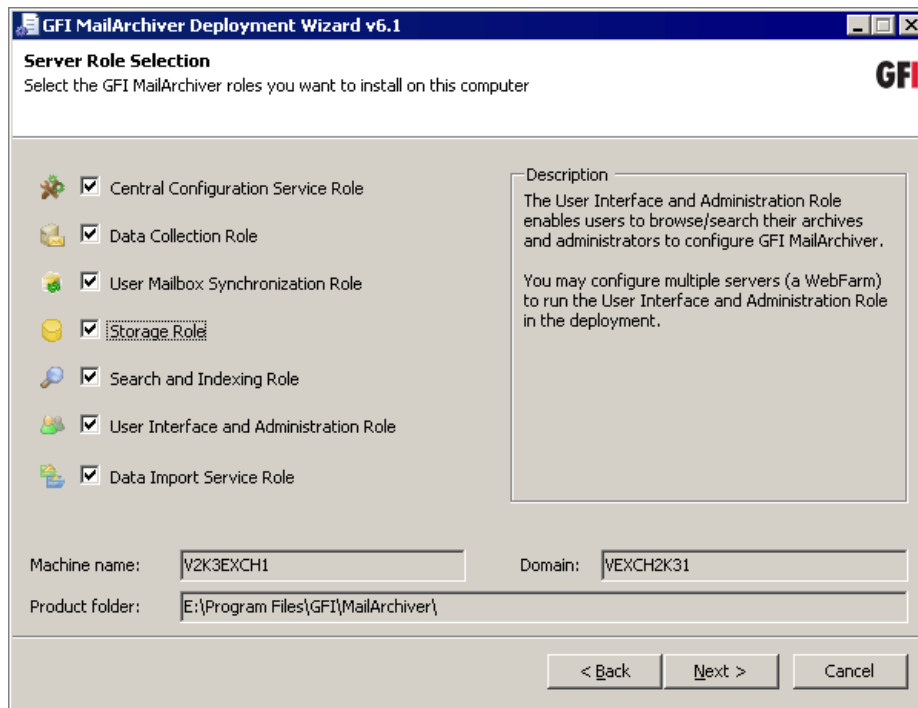


Screenshot 41 - Assigning the Data Import Service role

To assign the 'User Mailbox synchronization Role' select the appropriate option from the list of roles in the 'Server Role Selection' dialog.

The User Mailbox Synchronization role is used to synchronize emails in a user mailbox between GFI MailArchiver and Microsoft Exchange Server. You can configure only one server to run the User Mailbox Synchronization Role in the deployment.

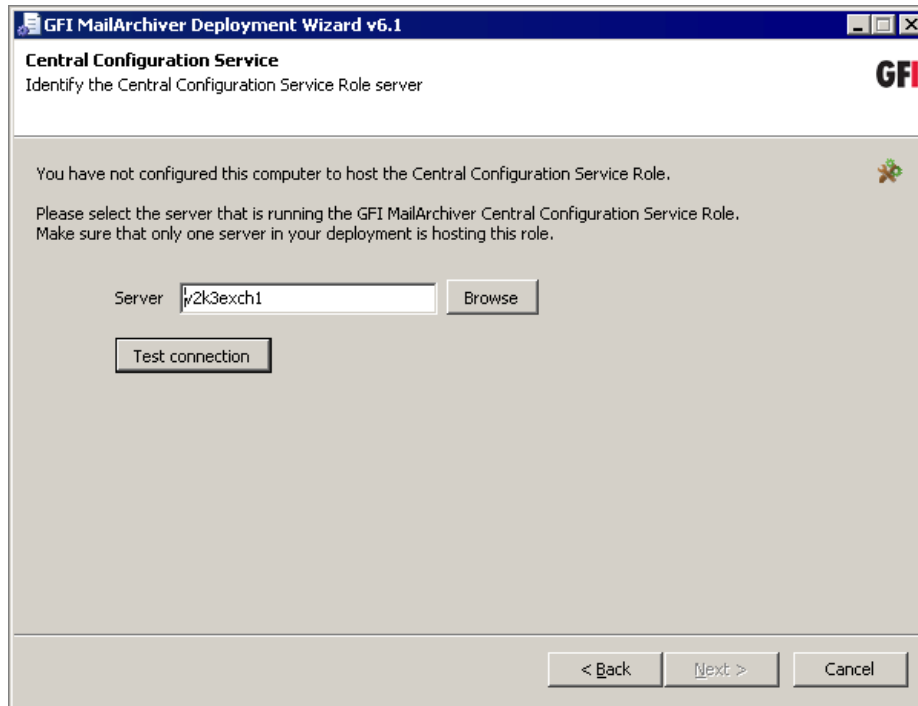
Assigning multiple roles to a server



Screenshot 42 - Assigning multiple roles

A GFI MailArchiver instance may be assigned more than one role. To assign the required roles, select the appropriate options from the list of roles in the 'Server Role Selection' dialog.

Identifying the Central Configuration Service Role server

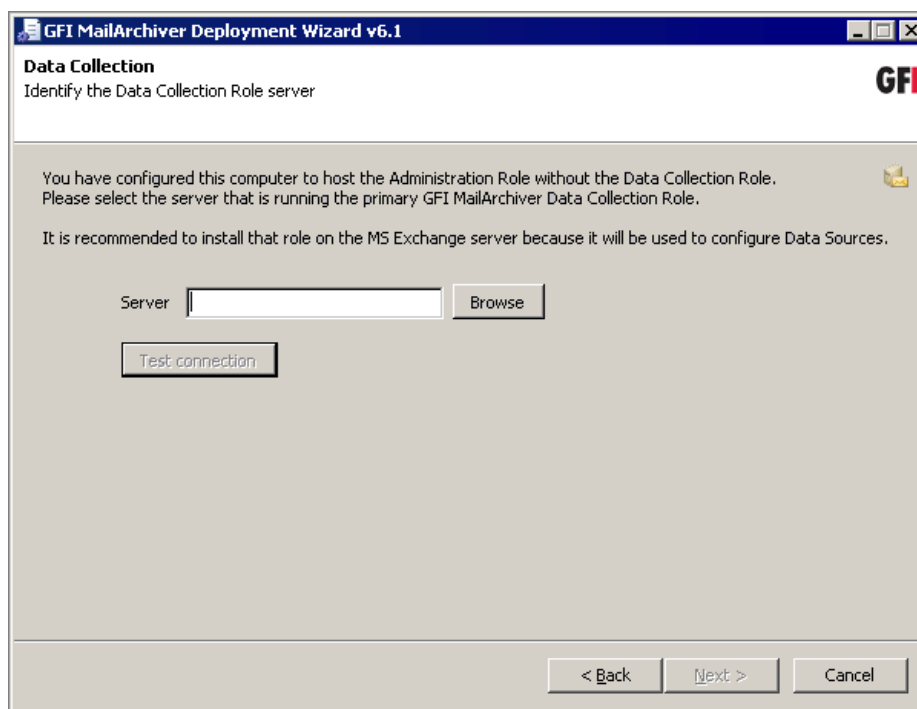


Screenshot 43 - Identifying the Central Configuration Service Role server

If you are assigning a role other than the 'Central Configuration Service Role' to a GFI MailArchiver instance, you are prompted to identify the server that has been assigned that role.

Click **Test connection** to verify that the 'Central Configuration Service Role' server you specified is accessible.

Identifying the Data Collection Role server

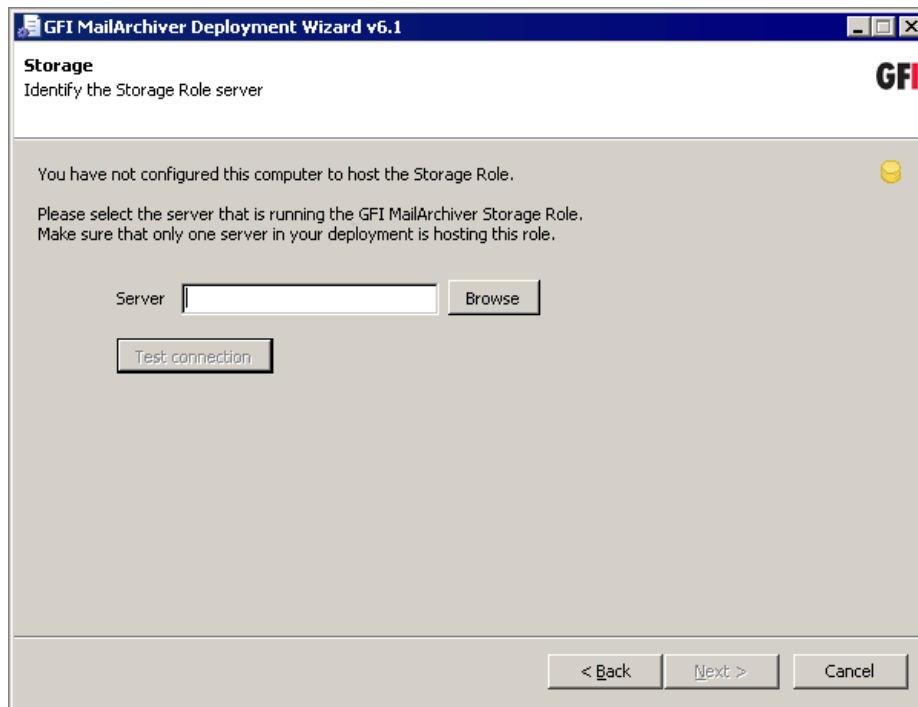


Screenshot 44 - Identifying the Data Collection Role server

If you are assigning the 'User Interface and Administration Role' to a GFI MailArchiver instance, but not the 'Data Collection Role' to the same instance, you are prompted to identify the server with the 'Data Collection Role'.

Click **Test connection** to verify that the 'Data Collection Role' server you specified is accessible.

Identifying the Storage Role server

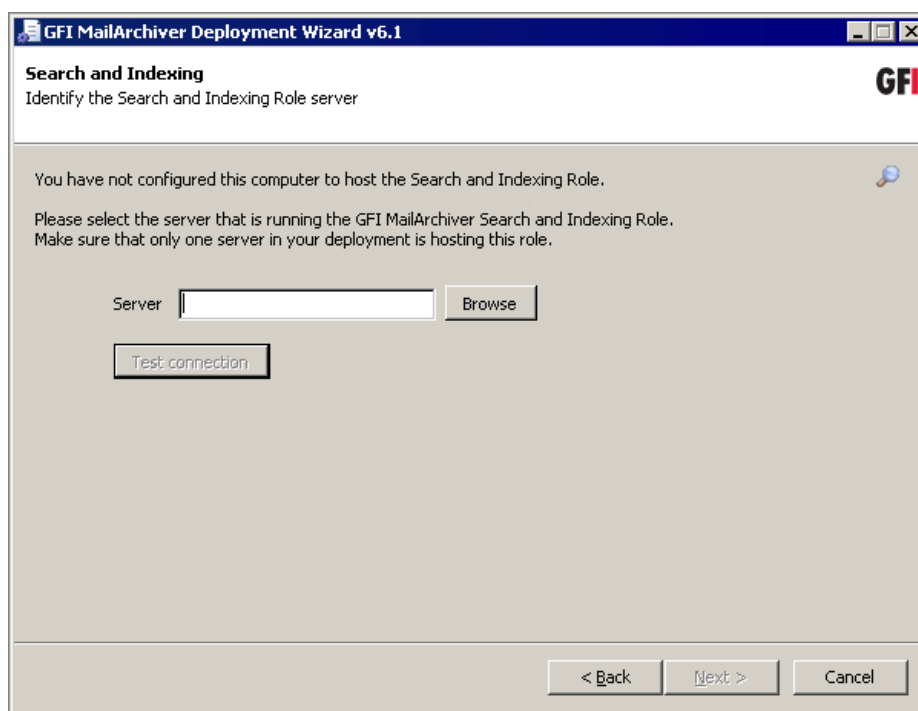


Screenshot 45 - Identifying the Storage Role server

If you are assigning a role other than the 'Storage Role' to a GFI MailArchiver instance, you are prompted to identify the server that has been assigned that role.

Click **Test connection** to verify that the 'Storage Role' server you specified is accessible.

Identifying the Search and Indexing Role server



Screenshot 46 - Identifying the Search and Indexing Role server

If you are assigning a role other than the 'Search and Indexing Role' to a GFI MailArchiver instance, you are prompted to identify the server which has been assigned that role.

Click **Test connection** to verify that the 'Search and Indexing Role' server you specified is accessible.

6.3.1 Recommended deployment scenario

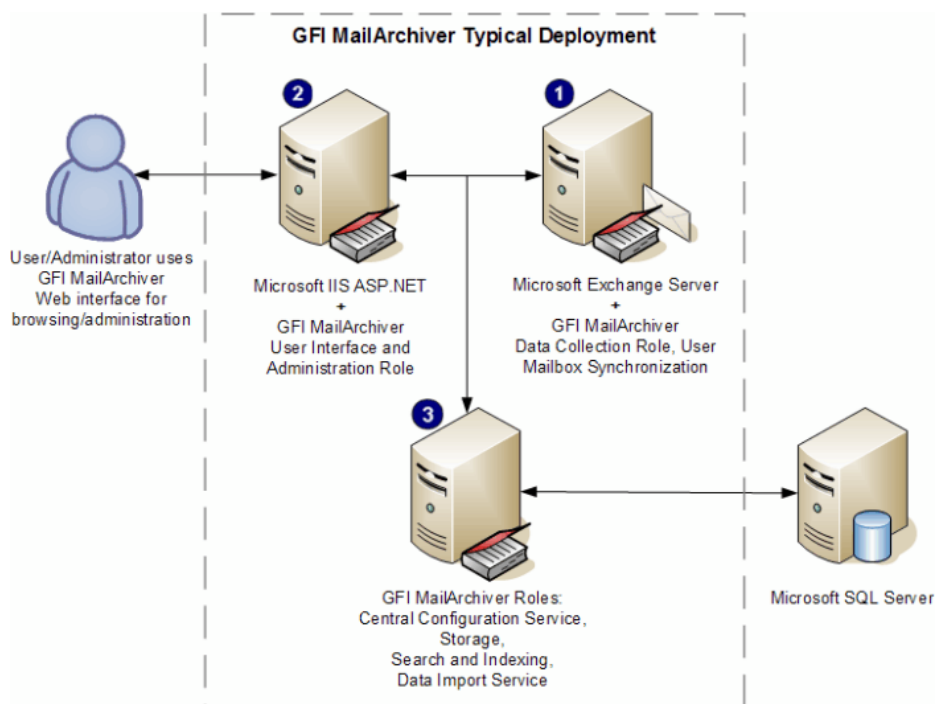


Figure 4 - Deployment scenario

This is the recommended scenario for a GFI MailArchiver distributed deployment. In this scenario, an organization will be deploying three GFI MailArchiver instances. Each instance is installed on a separate server, with each server fulfilling roles as shown in the following table:

Server ID	Role(s)
1	<ul style="list-style-type: none"> Data Collection User Mailbox Synchronization
2	<ul style="list-style-type: none"> User Interface and Administration
3	<ul style="list-style-type: none"> Central Configuration Service Storage Search and Indexing Data Import Service

NOTE: To achieve maximum performance, assign the 'Data Collection Role' and the User Mailbox synchronization roles to a GFI MailArchiver instance residing directly on the Microsoft Exchange server with the journaling mailbox.

These are the steps to follow for this deployment:

1. Install GFI MailArchiver on each server.
2. Execute the Deployment Manager Wizard on each of the three servers to assign roles to the GFI MailArchiver instances. The roles should be assigned in the order as listed in the 'Executing the

Deployment Manager Wizard on each instance' section of this chapter. Run the Deployment Manager Wizard in the order as shown in the following table:

Server ID order	Deployment Manager Wizard
3	Run Wizard to assign the following roles: <ul style="list-style-type: none"> • Central Configuration Service • Storage • Search and Indexing • Data Import Service
1	Run Wizard to assign the Data Collection role and User Mailbox synchronization roles.
2	Run Wizard to assign the User Interface and Administration role

3. Configure GFI MailArchiver through the management console, accessed from Server ID 2, which is the server with the User Interface and Administration role.

6.3.2 Alternative scenario

Another recommended scenario is to deploy servers with the following GFI MailArchiver roles:

- Server 1:
 - Central Configuration Service
 - Storage
- Server 2:
 - Search and Indexing
- Server 3:
 - Data Collection
 - User Mailbox synchronization

NOTE 1: To achieve maximum performance, assign the Data Collection role to a GFI MailArchiver instance residing directly on the Microsoft Exchange server with the journaling mailbox.

NOTE 2: You can have multiple servers assigned with the Data Collection role.

- Server 4:
 - User Interface and Administration

NOTE: You can have multiple servers assigned with the User Interface and Administration role, enabling you to set up a web farm.

- Server 5 (Temporary server):
 - Data Import Service

NOTE: This temporary server can be used when past emails (before GFI MailArchiver was installed) from PST files will be imported into the Archive Stores. Importing past emails is normally a one-time process, thus the temporary nature of this server.

7. Importing/Export emails

7.1 Importing emails

GFI MailArchiver enables you to extract emails from various email databases and to import them into the GFI MailArchiver Archive Stores.

GFI MailArchiver can import emails from the following email databases:

- Microsoft Exchange Mailboxes
- PST files locally
- PST files on the network
- GFI MailArchiver 2
- GFI MailEssentials

For detailed instructions on how to import email data to GFI MailArchiver, refer to the GFI MailArchiver Manual available from:

<http://www.gfi.com/mar/mar6acmanual.zip>

7.2 Exporting emails

GFI MailArchiver also enables you to export or restore multiple emails at a time through the GFI MailArchiver Bulk Export Tool. Through this tool, you can connect to a GFI MailArchiver installation, search for emails to export and export all of the emails in one go through a:

- Restore to a specific email address
- Download to a folder on disk in .eml or .msg format
- Download to a PST file.

The GFI MailArchiver Bulk Export Tool is useful when you want to export a set of emails that match specific search criteria, for example, to provide emails to satisfy a litigation support request.

For detailed instructions on how to export email data from GFI MailArchiver, refer to the GFI MailArchiver Administration and Configuration guide available from:

<http://www.gfi.com/mar/mar6acmanual.zip>

8. Uninstalling GFI MailArchiver

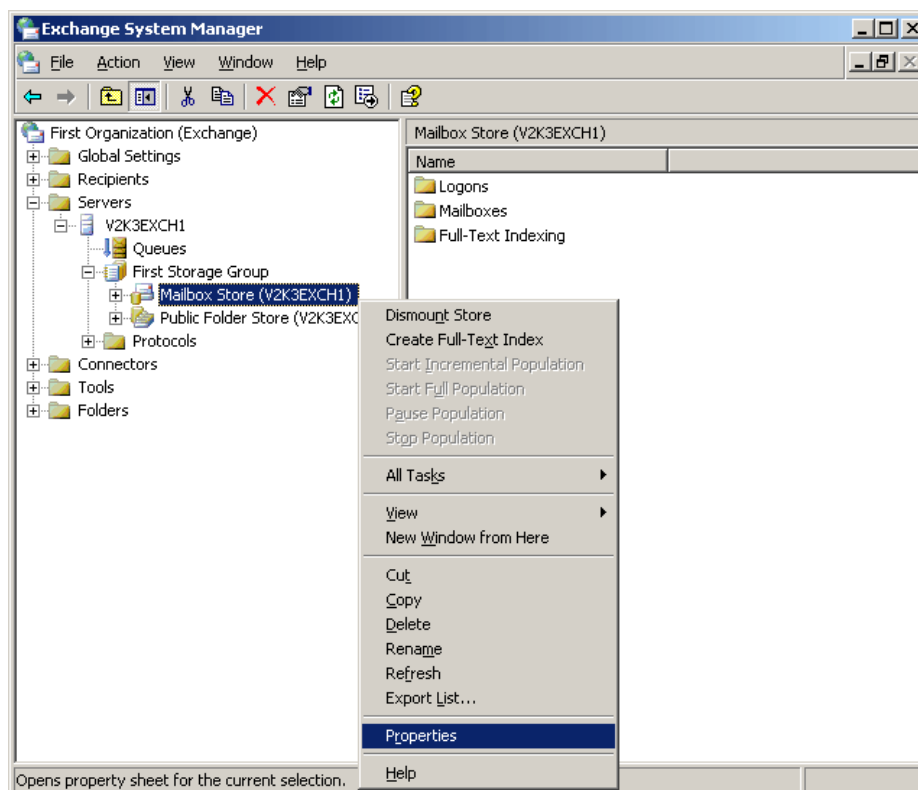
8.1 Uninstall GFI MailArchiver

1. From the **Control Panel** select **Add or Remove Programs** or **Programs and Features**.
2. Select GFI MailArchiver from the list displayed and click **Remove** or **Uninstall**.
3. Follow on-screen instructions to uninstall GFI MailArchiver.

8.2 Disabling journaling

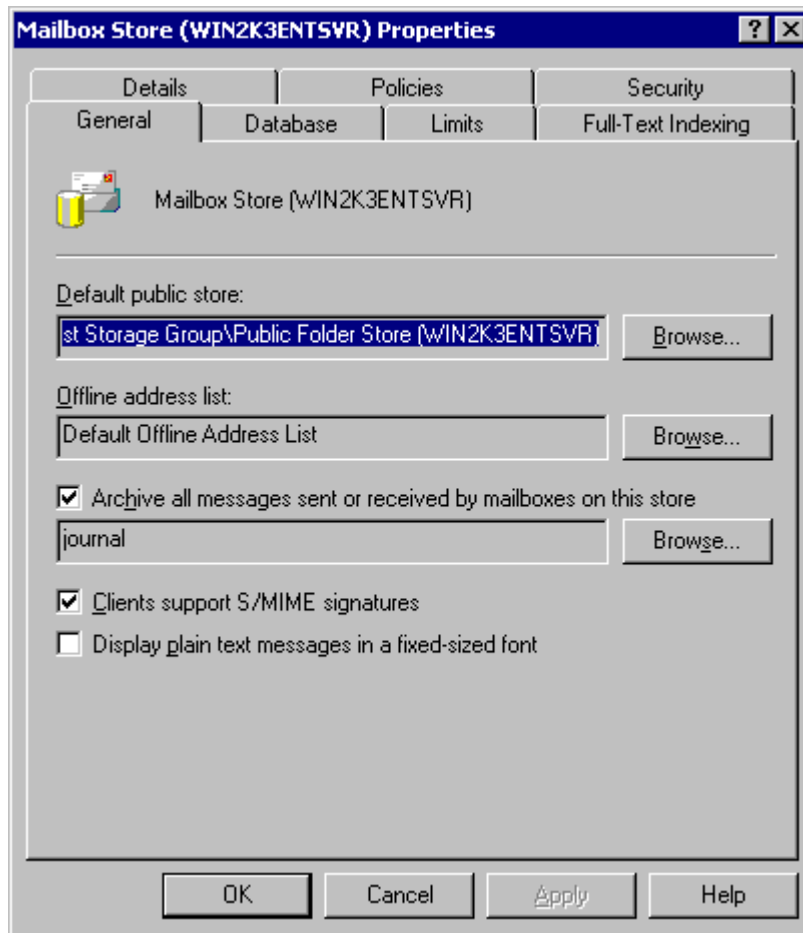
8.2.1 Microsoft Exchange Server 2000/2003

1. Select **Start ► Programs ► Microsoft Exchange ► System Manager**.



Screenshot 47 - Mailbox store node properties

2. Expand **Servers ► <Your Server name> ► Storage group**, right click **Mailbox Store** node and select **Properties**.



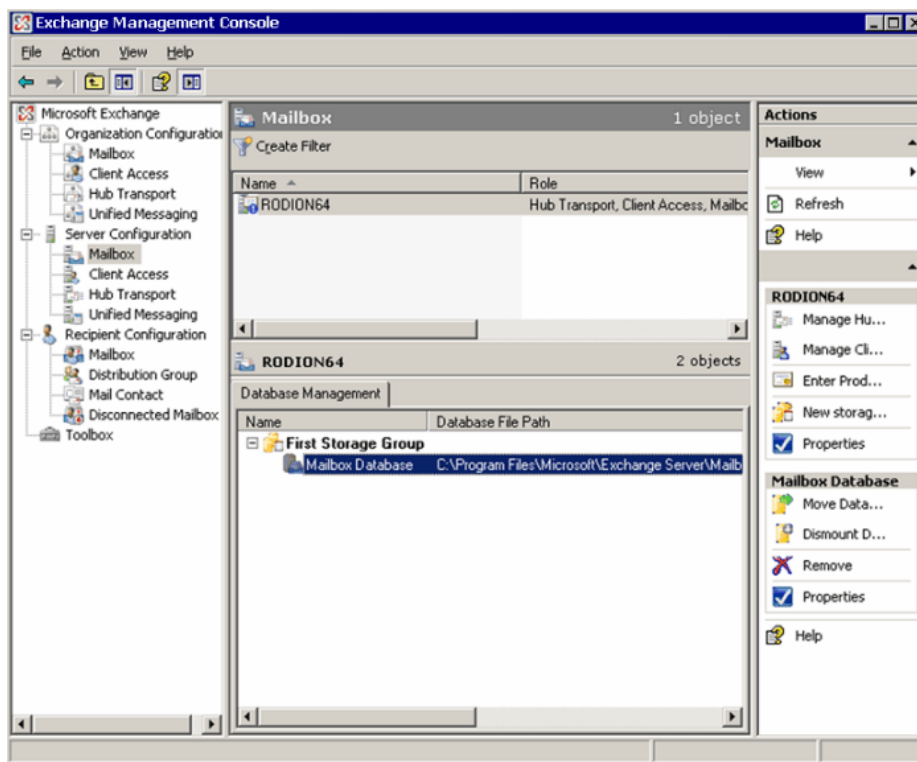
Screenshot 48 - Enabling journaling on a Microsoft Exchange mailbox store

3. From the **General** tab, unselect the **Archive all messages sent or received by mailboxes on this store** check box. Click **OK** to save settings.

8.2.2 Microsoft Exchange Server 2007

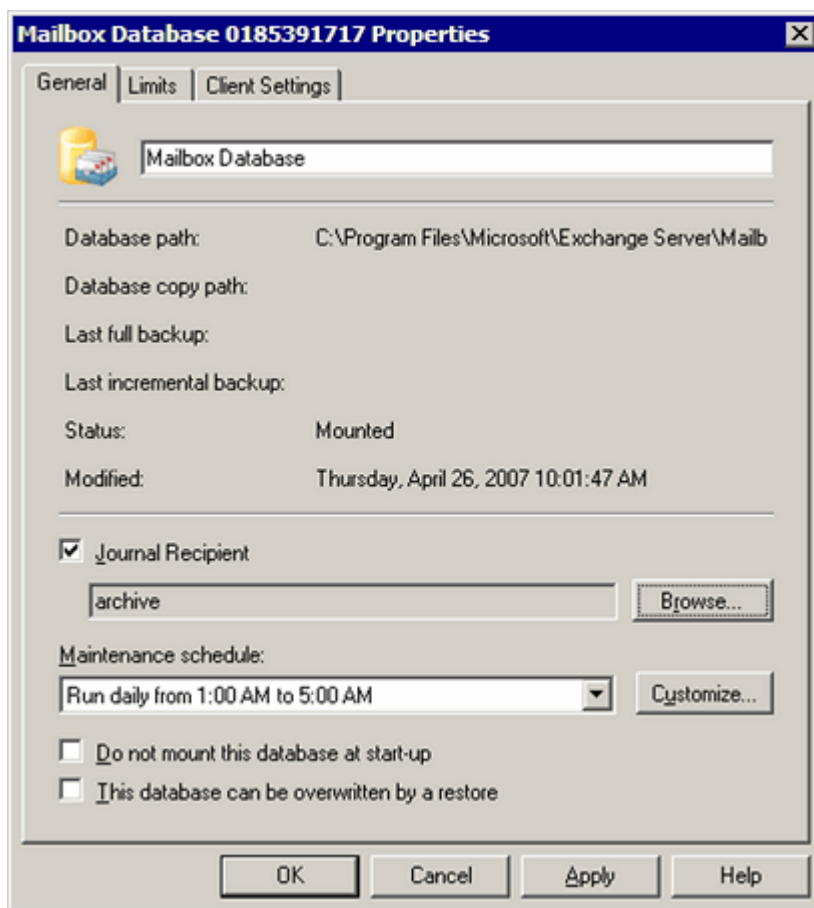
Disabling standard journaling

1. Select **Start ► All Programs ► Microsoft Exchange Server 2007 ► Microsoft Exchange Management Console**.



Screenshot 49 - Configuring a Mailbox Database

2. Expand **Microsoft Exchange** ► **Server Configuration** ► **Mailbox** node and click **Properties** from the **Actions** pane.



Screenshot 50 - Mailbox Database properties

2. Unselect **Journal Recipient** option.
3. Click **OK** to finalize setup.

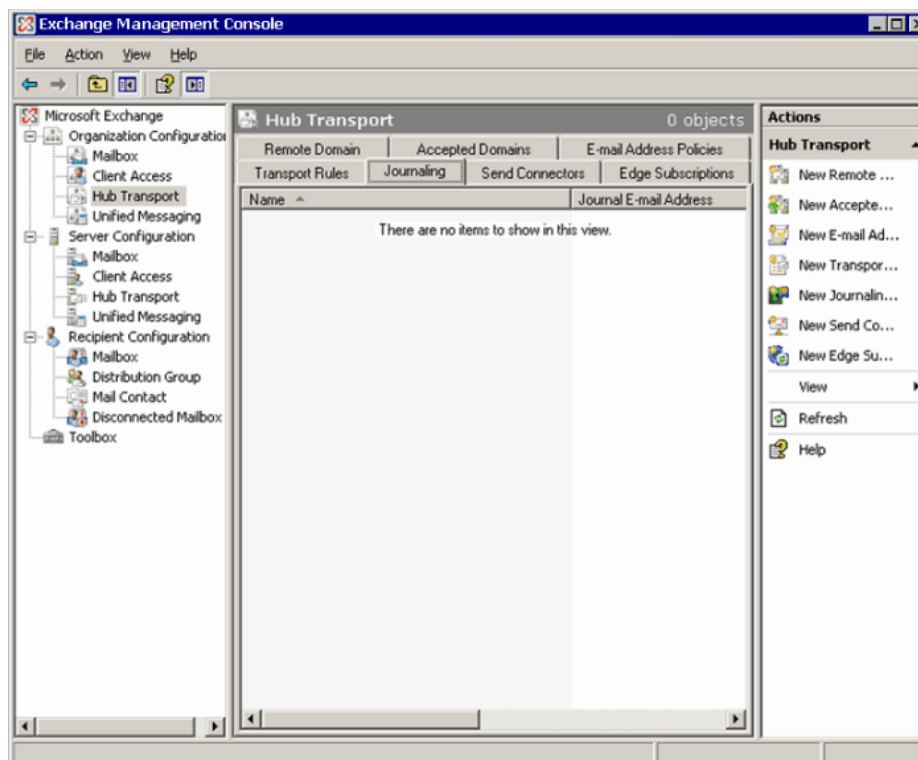
Disable standard journaling from the Microsoft Exchange Management Shell

In the Microsoft Exchange Management Shell, use the following syntax to disable a journaling rule:

```
Set-MailboxDatabase <Mailbox Database> -
JournalRecipient $Null
```

Disable premium journaling

1. Select **Start ► All Programs ► Microsoft Exchange Server 2007 ► Microsoft Exchange Management Console**.



Screenshot 51 - Configuring Journaling rules

2. Expand **Organization Configuration ► Hub Transport** node and select **Journaling** tab.
3. Right click the journal rule to remove, and click **Remove**.
4. Click **Yes** to confirm that you want to remove the journal rule.

Disable premium journaling from the Microsoft Exchange Management Shell

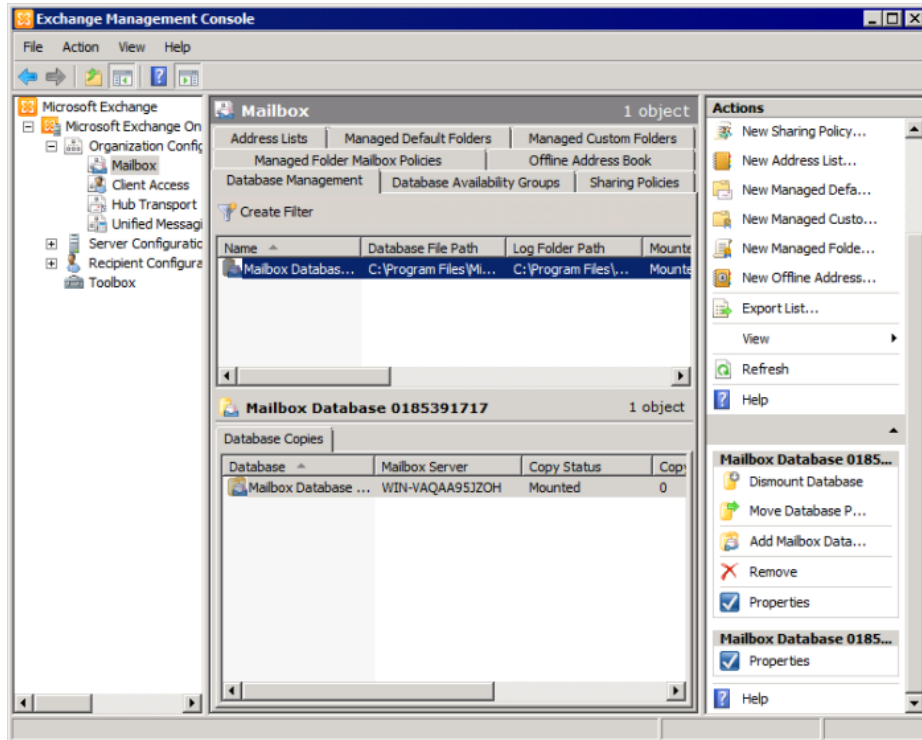
In the Microsoft Exchange Management Shell, use the following syntax to disable a journaling rule:

```
Remove-JournalRule <journal rule name>
```

8.2.3 Microsoft Exchange Server 2010

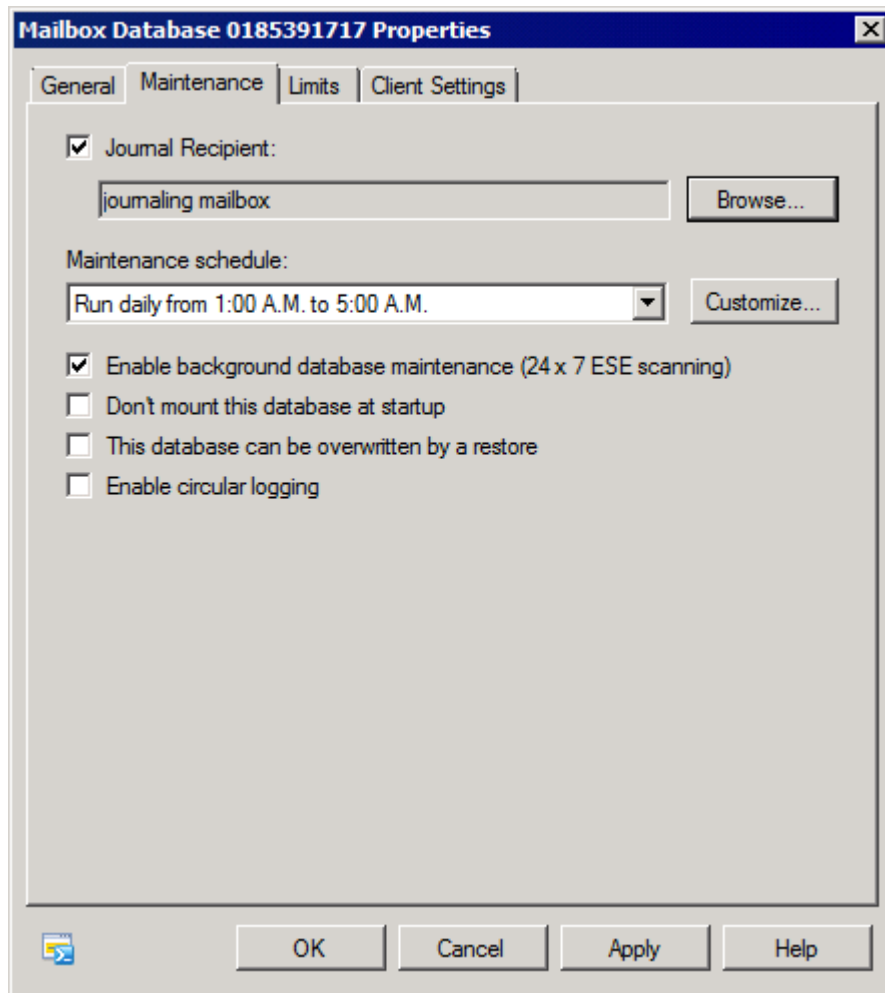
Disabling standard journaling

1. Launch the **Microsoft Exchange Management Console**.



Screenshot 52 - Configuring a Mailbox Database

2. Expand **Microsoft Exchange ► Organization Configuration ► Mailbox ► Database Management** tab and select **Properties** from the Actions pane.



Screenshot 53 - Mailbox Database properties

2. Unselect **Journal Recipient** option.
3. Click **OK** to finalize setup.

Disable standard journaling from the Microsoft Exchange Management Shell

In the Microsoft Exchange Management Shell, use the following syntax to disable standard journaling:

```
Set-MailboxDatabase <Mailbox Database> -
JournalRecipient $Null
```

Disable premium journaling

1. Launch the **Microsoft Exchange Management Console**.
2. Expand **Organization Configuration ► Hub Transport** node and select **Journal Rules** tab.
3. Right click the journal rule to remove, and click **Remove**.
4. Click **Yes** to confirm that you want to remove the journal rule.

Disable premium journaling from the Microsoft Exchange Management Shell

In the Microsoft Exchange Management Shell, use the following syntax to disable a journaling rule:

Remove-JournalRule <journal rule name>

9. Troubleshooting

9.1 Introduction

The troubleshooting chapter explains how you should go about resolving any software issues that you might encounter. The main sources of information available to users are:

- The manual - most issues can be solved by reading this manual.
- GFI Knowledge Base articles accessible from the GFI website
- Web forum
- Contacting GFI Technical Support

9.2 Common Issues

Issue encountered	Solution
<p>One of the following error messages is displayed while installing GFI MailArchiver:</p> <ul style="list-style-type: none"> • Error 1720. There is a problem with this Windows Installer package. A script required for this install to complete could not be run. Contact your support personnel or package vendor. • Setup failed to launch installation engine: Access is denied. • Error installing Ikernel.exe, access is denied. 	<ol style="list-style-type: none"> 1. Disable real-time scanning of anti-virus products or any other software scanning your machine real-time. 2. Ensure that you do not have any software that automatically removes files from the TEMP directory. 3. Log in the machine with the Domain Administrator account. 4. Download and install the latest version of Windows Scripting Host & Windows Installer for your Windows Operating System from: http://www.microsoft.com/downloads/ 5. Ensure that the following Microsoft Windows technologies are installed correctly and not corrupt: <ul style="list-style-type: none"> • Microsoft Windows Management Instrumentation (WMI) • Microsoft Windows Installer • Microsoft .Net Framework • Microsoft Data Access Components (MDAC) 6. Ensure that the following system libraries located at <Windows\System32> are correctly registered: <ul style="list-style-type: none"> • Scrrun.dll • Actxprxy.dll • urlmon.dll • Oleaut32.dll • ole32.dll • Browseui.dll • Mshtml.dll • Shdocvw.dll • Shell32.dll <p>To register a library with the operating system, perform the following steps:</p> <ol style="list-style-type: none"> 1. Click Start and select Run 2. Type cmd.exe and click Enter. 3. Type 'regsvr32 <path & filename of dll>' <p>Example: 'regsvr32 c:\windows\system32\urlmon.dll'</p> <p>Place the installation file in a temporary directory (Example C:\temp) on the machine where you are installing the GFI product.</p> <p>Also, check the Distributed Component Object Model (DCOM) permissions as explained in: http://support.microsoft.com/default.aspx?scid=kb:en-us:295278</p>
<p>During installation, the following error is displayed:</p> <ul style="list-style-type: none"> • The wizard was interrupted before GFI MailArchiver could be completely installed. • Your system has not been modified. To complete installation at another time, please run setup again. • The wizard was interrupted before GFI MailArchiver could be completely installed. 	<p>Cause: Windows Scripting Host (WSH) is outdated or corrupted.</p> <p>Solution: Install latest version of Windows Scripting Host (WSH) and reboot the machine. WSH can be downloaded from: http://www.microsoft.com/downloads/details.aspx?FamilyId=C717D943-7E4B-4622-86EB-95A22B832CAA&displaylang=en</p>
<p>GFI MailArchiver fails to authenticate when loading the web interface: Error 401.</p>	<p>Cause: This error occurs when the IIS authentication method is not configured correctly on the GFI MailArchiver server.</p> <p>Solution: Verify the IIS authentication method used.</p> <p>IIS 6</p> <ol style="list-style-type: none"> 1. Navigate to Start ► Programs ► Administrative Tools ► Internet Information Services (IIS) Manager.

	<ol style="list-style-type: none"> 2. Expand <web server name> ► Web Sites ► Default Web Site, right click MailArchiver and select Properties. 3. Select Directory Security tab and under Authentication and access control, click Edit. 4. Check the Enable anonymous access check box. 5. In the Authenticated access area, select the authentication method to use. Integrated Windows authentication is recommended. 6. Click OK twice and close Internet Information Services (IIS) Manager. <p>IIS 7</p> <ol style="list-style-type: none"> 1. Navigate to Start ► Programs ► Administrative Tools ► Internet Information Services (IIS) Manager. 2. Expand <web server name> ► Sites ► Default Web Site and select MailArchiver. 3. In the Features view, double click Authentication. 4. Click Anonymous Authentication and from the right pane select Enable. 5. Select the authentication method to use and from the right pane click Enable. Windows Authentication is recommended. 6. Close Internet Information Services (IIS) Manager.
<p>GFI MailArchiver fails to authenticate when loading the web interface: Error 4000.</p>	<p>Cause: This error occurs when another application is installed on the GFI MailArchiver server, which may be using the same ports required by GFI MailArchiver.</p> <p>Solution: Verify that the default ports used by GFI MailArchiver are not used by other software:</p> <ol style="list-style-type: none"> 1. In GFI MailArchiver server, launch Command Prompt. 2. In the command line, type netstat -abn >C:\netstat.txt. A text file named netstat.txt is created in C:\. 3. Open netstat.txt and locate the following entries under Proto column: <ul style="list-style-type: none"> • TCP 0.0.0.0: 8014 - [MArc.Core2.exe] • TCP 0.0.0.0: 8017 - [MArc.Core.exe] • TCP 0.0.0.0: 8018 - [MArc.Store.exe] • TCP 0.0.0.0: 8019 - [MArc.Search.exe] • TCP 0.0.0.0: 8020 - [MArc.MAIS.exe] <p>If any of the ports do not correspond with the executable files, the GFI MailArchiver executable file must be configured to use a different port. To change a default port:</p> <ol style="list-style-type: none"> 1. Navigate to Start ► Run and type services.msc. 2. Stop all GFI MailArchiver services. 3. Navigate to the GFI MailArchiver installation folder and backup the following files: <ul style="list-style-type: none"> • ..\Core\bin\MArc.Core.Remoting.exe.config • ..\Core\bin\MArc.UMPolling.ExPolling.exe.config • ..\Core2\bin\MArc.Core2.exe.config • ..\Core2\bin\MArc.Core2.Remoting.exe.config • ..\Mais\bin\MArc.MAIS.Remoting.exe.config • ..\Mais\bin\MArc.MAIS.exe.config • ..\Search\bin\MArc.Search.Remoting.exe.config • ..\Search\bin\MArc.Search.exe.config • ..\Store\bin\MArc.Store.Remoting.exe.config • ..\Store\bin\MArc.Store.exe.config • ..\ASPNET\remoting.config 4. Open each .config file listed in step 3 in a text editor, search for the port number to change and replace by a new port number. <p>Example: Search for 8017 and replace by 8117.</p> <p>NOTE: Ensure that the new port number is not used by any other</p>

	<p>application.</p> <p>5. When changes are made in a .config file, save the file with encoding set to UTF-8.</p> <p>6. Click Save to apply changes.</p> <p>7. When all .config files are updated, restart the GFI MailArchiver services stopped in step 2.</p> <p>8. Repeat netstat test in command prompt to confirm that the GFI MailArchiver is now using the new ports.</p>
<p>GFI MailArchiver fails to load ASP.NET. Error 404.</p>	<p>Cause 1: ASP.NET is not registered with IIS Web Server.</p> <p>Solution 1: To resolve this issue, refer to section ASP.NET settings in this manual.</p> <p>Cause 2: ASP.NET is blocked by the IIS Manager.</p> <p>Solution 2: Ensure that ASP.NET is allowed by Internet Information Services (IIS) Manager.</p> <p>IIS 6</p> <ol style="list-style-type: none"> 1. Navigate to Control Panel ► Administrative Tools ► Internet Information Services (IIS) Manager. 2. Expand the local computer node and select Web Service Extensions. 3. In the right pane, right click ASP.NET v2.0.xxxxx and select Allow. <p>IIS 7</p> <ol style="list-style-type: none"> 1. Navigate to Control Panel ► Administrative Tools ► Internet Information Services (IIS) Manager. 2. Select the local computer node and from the Features View pane launch ISAPI and CGI Restrictions. 3. In the Features View pane, right click ASP.NET v2.0.xxxxx and select Allow.

9.3 Knowledge Base

GFI maintains a Knowledge Base, which includes answers to the most common problems. If you have a problem, please consult the Knowledge Base first. The Knowledge Base always has the most up-to-date listing of technical support questions and patches. To access the Knowledge Base, visit <http://kbase.gfi.com/>.

9.4 Web Forum

User to user technical support is available via the web forum. The forum can be found at: <http://forums.gfi.com/>.

9.5 Contact technical support

If you have referred to this manual and our Knowledge Base articles, and you still cannot solve issues with the software, contact the GFI Technical Support team by filling in an online support request form or by phone.

- **Online:** Fill out the support request form on: <http://support.gfi.com/supportrequestform.asp>. Follow the instructions on this page closely to submit your support request.
- **Phone:** To obtain the correct technical support phone number for your region please visit: <http://www.gfi.com/company/contact.htm>.

NOTE: Before you contact our Technical Support team, please have your Customer ID available. Your Customer ID is the online account

number that is assigned to you when you first register your license keys in our Customer Area at: <http://customers.gfi.com>.

We will answer your query within 24 hours or less, depending on your time zone.

9.6 Build notifications

We strongly suggest that you subscribe to our build notifications list. This way, you will be immediately notified about new product builds. To subscribe to our build notifications, visit:

<http://www.gfi.com/pages/productmailing.htm>.

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