Quest® Archive Manager 5.9.1

Installation and Configuration Guide for Exchange

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Deployment models

Archive Manager can be deployed and configured in several different schemes, depending on an organization's size and type. The information in this chapter explains the most common Archive Manager configurations, but remember that each organization's needs must be assessed and addressed individually.

When choosing a basic Archive Manager configuration, it is important to know:

- The number of sites and the number of users at each site
- The number of mail servers
- The bandwidth between each site

Single-site model

The single-site model is suitable for single-site organizations as well as for organizations with high-speed and low-use WAN connections.

Hardware sizing can be roughly estimated from the number of users. For detailed recommendations, see the Hardware recommendations chapter.

Sizing is also affected by the Archive Manager message policies applied to GroupWise after Archive Manager is implemented. Specifically, hardware requirements will increase if messages are kept on the mail server for only short periods (for example, <15 days), since users will access the Archive Manager system far more extensively than if messages are kept 30 or 60 days.

> **i** | **NOTE:** Large organizations and sites with comprehensive disaster recovery (DR) requirements should consider clustering Microsoft SQL Server and Internet Information Services (IIS) if the archived information is deemed critical to the organization. The information within Archive Manager is a copy of current information and possibly all email information outside of the configured retention policy period; this may affect the requirements.

Multi-site model

The multi-site model can be used where WAN links are high-speed and low-utilization, and the remote connected sites have 100 or fewer users.

To lower the bandwidth requirements even further from the default installation, Archive Manager can be configured to 'Dataload' email messages from the remote sites at regularly scheduled times of the day.

Distributed model

The Archive Manager distributed model is best used when an organization has connected sites with more than 100 users at each, or low-bandwidth connections with potentially fewer users.

To estimate the requirements of different site configurations, see the Hardware recommendations chapter.

Mixed model

Archive Manager can also be run as a combination of the preceding models. This is useful, for example, when the distributed model is not applicable, as with a satellite site of 50 users with no email server, which does not require a dedicated Archive Manager server.

Archive Manager can be considered a "thin client" solution because it uses a Web browser for access.

Installing without Active Directory

It is possible to install Archive Manager in an environment without Active Directory, where the Archive Manager server and SQL server are parts of a workgroup, using pass-through authentication. But without a central authenticating authority like AD, a configuration like this increases the risk of authentication issues as the Archive Manager, SQL, and web services servers try to interact.

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System requirements

- GroupWise messaging system
- NetIQ eDirectory Services
- SQL Server
- Archive Manager Server operating system
- Prerequisites for servers running GroupWise Services
- Prerequisites for servers running Archive Manager services
- Prerequisites for servers running Archive Manager websites
- Attachment store types
- Web browsers
- Archive Manager rights and permissions

GroupWise messaging system

Any of:

- 18.1
- 18 SP1 - SP2
- 18
- 2014 R2 SP1 - SP3
- 2014 R2
- 2014 SP1 - SP2
- 2014
- 2012 SP1 - SP4
- 2012

See supported clients in the Prerequisites for servers running GroupWise Services section.

ℹ **NOTE:** Archive Manager is not certified for use with clustered GroupWise host systems configured for parallel processing, load balancing, or fault tolerance.

NetIQ eDirectory Services

- 9.1 SP1 - SP2, 9.1, 9.0 SP1 - SP4, 9.0 on supported platforms

SQL Server

Enterprise or Standard edition, any of:

- Microsoft SQL Server, either 32- or 64-bit version
  - 2019
  - 2017
  - 2016 SP1 - SP2
  - 2016
  - 2014 SP1 - SP3
  - 2014
  - 2012 SP1 - SP4
  - 2012

> **i** | **NOTE:** Two Archive Manager databases should not be installed to the same SQL server instance. It is fine to install two Archive Manager databases to the same machine if the machine has two or more SQL Server instances running, and each will host a single Archive Manager database.

> **i** | **NOTE:** If you are moving from one SQL server to another SQL server, the collation settings of the Aftermail_temp table and the Archive Manager database itself must match what existed when the Archive Manager database was first created. As long as the two settings are maintained as specified for Archive Manager, the SQL server that houses the Archive Manager database may have a different collation setting that may be needed for other purposes on that machine. The supported collation setting is: `SQL_Latin1_General_CP1_CI_AS`

> **i** | **NOTE:** Use of the "sa" account for operational credentials during installation is not supported.

> **i** | **NOTE:** Archive Manager supports AlwaysOn Availability Groups for SQL Server 2012 and later versions.
>
> **NOTE:** Archive Manager supports TLS 1.2 for connections to SQL Server 2008 R2 SP3 and later versions.

Archive Manager Server operating system

Any of:

- Windows Server 2019
- Windows Server 2016
- Windows Server 2012 R2
- Windows Server 2012
- Windows Server 2008 R2 SP1 or RTM (will be deprecated in the next release)
- Windows Server 2008 SP2, 64-bit version (will be deprecated in the next release)

Please verify that your mail system requirements are supported on the desired operating system.

Prerequisites for servers running GroupWise Services

Novell clients:

- Client for Open Enterprise Server 2 SP4
- Novell Client 2 SP4 for Windows Server 2008 R2 & 2012
- Novell Client 2 SP3 for Windows Server 2008 R2 & 2012
- Novell Client 2 SP2 for Windows Server 2008 & 2008 R2
- Novell Client 2 SP1 for Windows Server 2008 R2
- Novell Client 2 SP1 for Windows Server 2008

GroupWise clients:

The client version must match the server version. For example, if you are using GroupWise Server 2012, you must use GroupWise Client 12.0.0.

- 18.1.x
- 18.0.x
- 14.2.x
- 14.0.x
- 12.0.x

GroupWise Store Manager (GSM):

- Outlook MAPI and SQL Native Client are required for any GSM installation, and for TNEF. TNEF allows messages from Exchange-based mail systems to be processed with rich content, such as meeting invites.
- It is recommended that the GroupWise Store Manager (GSM) run under a separate account than all of the other Archive Manager services.

i | **NOTE:** Archive Manager is not certified for use with clustered GroupWise host systems configured for parallel processing, load balancing, or fault tolerance.

i | **NOTE:** File read, write and execute permissions are required for access to the wpdomain.db file and other associated files and folders.

i | **NOTE:** Supervisor-level permission is required for the Novell tree.

Prerequisites for servers running Archive Manager services

Any prerequisites that are required for installation are installed automatically when you run the Archive Manager Setup Wizard to install Archive Manager. If you want to install the prerequisites software prior to running the installer, see the requirements below.

Requires:

- Microsoft .NET Framework 3.5 SP1 must be pre-installed (before running the installer).
- Supported Archive Manager Server Operating System version. Please verify that your mail system requirements are supported on the desired operating system.
- Visual C++ 2012 Redistributable for Visual Studio 2012 Update 4: vcredist_x86.exe

- Visual C++ 2010 SP1 Redistributable Package: vcredist_x86.exe

- Microsoft .NET Framework 4.5.2.

- SQL Native Client (sqlncli.msi). SQL Native Client 2005 or above is required.

Enabling text-string searches and indexing of file attachments

You must install IFilters for the file types you want to search and index:

- Microsoft offers a free pack of IFilters for its Office 2010 file types at http://www.microsoft.com/en-us/download/details.aspx?id=17062, (link current as of this release). SP2 can be applied via Windows Update or downloaded at http://support.microsoft.com/kb/2687447. This Filter Pack includes IFilters for the following formats: .docx, .docm, .pptx, .pptm, .xlsx, .xlsm, .xlsb, .zip, .one, .vdx, .vsd, .vss, .vst, .vdx, .vsx, and .vtx.

- IFilters for earlier-version Office file extensions (.doc, .rtf, .xls, .ppt, etc.), and for .txt, .htm and .html files, are installed with Microsoft Windows, and so should already reside on the Archive Manager server. You can verify their installation, and track and manage your IFilters generally, with a third-party IFilter browser; several are available at little or no cost from independent vendors.

- Adobe bundles a copy of its PDF 32-bit iFilter with free Adobe Reader 11 software, and offers a free PDF iFilter 64 11.0.1 as a separate download. It is recommended that you use Adobe version 11 PDF IFilters, or FoxIt IFilters.

- The Sumatra PDF Viewer includes a PDF iFilter that can be used as an alternative to the Adoble iFilter. For more information, see Quest Knowledge Base Solution 146890.

- Installing Adobe Reader X uninstalls PDF iFilters, which then need to be reinstalled. For additional information, see www.adobe.com.

Prerequisites for servers running Archive Manager websites

- Microsoft Internet Information Services (IIS) version 10, 8.5, 8.0, 7.5 or 7.0.

  Certain role services are required to be manually selected and installed on the web server in order for the Archive Manager Website to run correctly. These roles include: Common HTTP Features; Static Content ; ASP.net; ASP; Basic Authentication; Windows Authentication; IIS Management Tools and Scripts; and IIS Management Console.

- Microsoft ASP.NET (component of Windows, any supported Windows version).

The API web service endpoint can be configured to use Windows Authentication or Anonymous Authentication. When using Anonymous Authentication, the web service application performs security checks and authenticates the client using Basic Authentication (plain text user password authentication). When using Windows Authentication, IIS handles the authentication and provides the web service application with a confirmation of the authentication attempt.

> **i** | **NOTE:** Please do not change the authentication mode to Windows Authentication in a pure Office 365 environment because no on-premises Windows logins will be archived by Archive Manager in the scenario.

Attachment store types

Some attachment store types are deprecated in Archive Manager for new installations. Existing customers on deprecated file storage types are fully supported and will continue to be supported until a migration plan is in place and a migration tool is available to move to a new storage type.

Table 1. External storage types

External Storage Type	Supported
File System	Supported.
NetApp SnapLock7.2.4	Supported.
EMC Centera 4.2.1, 4.2, 4.1, 4.0, 3.1.4, or EMC Atmos 2.0	Supported.
Caringo CAStor 6.5.4	Supported.
Hedvig Distributed Storage Platform Version 3.7.1	Supported.

Web browsers

Any of:

- Microsoft Internet Explorer 11, 10, or 9

i | **NOTE:** When using enhanced security on any server-based operating system, the Archive Manager Website must be added to the list of trusted sites to work correctly.

- Microsoft Edge

- Firefox (latest version) running on Windows or Macintosh

- Chrome (latest version) running on Windows

- Safari running on Macintosh or mobile devices

- Android browsers

Archive Manager rights and permissions

- **Administrator Account:** The account you are logged in with when you run the Archive Manager Install program.

  - The user who runs the installer must be an administrator over the local computer, as well as on the SQL Server and the GroupWise Server.

  - The account you specify during the installation must have the same permissions.

- **Service Account:** (default account name is *ArchiveMgr_Service*): Specified in the Configuration Console. Used by the Directory Connector, Alert Service, Full-Text Index, Full-Text Search and Message Retention Services.

  - Account is granted full access to the Archive Manager and AfterMail_TEMP databases by the installer.

  - Requires read access to AD, and to the Exchange Organization so it can determine Storage Group information.

  - Must be in the Users group on the local machine, and a member of the local IIS_WPG group on the Web Servers. This is typically done by the installer.

  - Is a member of ArchiveManagerServiceUsers group.

  - Should be added to the local administrators group on both E-Directory server and GroupWise server, if GroupWise and E-Directory are installed on Windows. If GroupWise and E-Directory are installed on Windows but not in the same domain as the Archive Manager server, create a local

user with the same login name and password as the service account, then add the local user to the local administrators group on the E-Directory server and GroupWise server.

- **ArchiveManagerServiceUsers Group:** A Domain Group containing the Service account.
  - Group is used by installer to apply permissions to file-system locations used by Archive Manager.

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Hardware recommendations

- Archive Manager Services server
- Archive Manager SQL database server
- Archive Manager hardware recommendations
- Sizing the Microsoft SQL database and Archive Manager attachment store

Archive Manager Services server

The services listed below are installed on the Archive Manager Services Server. These services can also be spread among other server hardware.

- **GroupWise Directory Connector (GDC):** The GDC synchronizes Archive Manager with users and security maintained in your existing GroupWise Directory store.

- **GroupWise Store Manager (GSM):** The GSM synchronizes Archive Manager with the current state of the enterprise's GroupWise mail server.

- **Data Loader:** The Data Loader populates Archive Manager with email messages from the enterprise mail server and/or other data sources.

- **Search Service:** The Search Service consists of two separate services: the **Full Text Index Service (FTI)** and the **Full Text Search Service (FTS)**. The Full Text Index Service indexes the full text of messages within the Archive Manager store, storing security context as well, for high-speed full-text searches. The Full Text Search Service performs full-text searches against the Archive Manager Full Text Index, providing results to the Archive Manager core search engine.

- **Message Retention Policy Service:** The Message Retention Policy Service deletes email messages from the archive according to the retention rules and policies defined in the Retention Policy Editor.

- **Alert Service:** The Alert Service runs SQL queries on the Archive Manager database, and WMI queries on your server and sends Alert emails.

- **Website:** The Archive Manager website allows you to search your archive and administer various components of Archive Manager. The installer can place the Archive Manager website on a different server than the services server.

Archive Manager SQL database server

The Archive Manager SQL database server performs the following function listed below:

- The Archive Manager SQL database server hosts your the Archive Manager database, which contains all message and user data, except for attachments.

Archive Manager hardware recommendations

This following section shows the estimated hardware recommendations for Archive Manager Services server and SQL database server. This are minimum recommendations and are subject to change based upon your messaging environment. For operating systems and other software requirements, see System requirements.

SQL database server

SQL Server						~100 Msg/Day Per Mailbox
Operating System	Microsoft Windows 2008R2 x64					
Light Access	**500 users**	**1000 users**	**2500 users**	**5000 users**	**7500 users**	**10,000+ users**
CPU (Total Cores)	4 x 2.4 GHz	4 x 2.4 GHz	4 x 2.4 GHz	8 x 3.0 GHz	8 x 3.0 GHz	8+ x 3.0 GHz
Memory*	8 GB	8 GB	16 GB	16 GB	32 GB	64+ GB
Moderate Access	**500 users**	**1000 users**	**2500 users**	**5000 users**	**7500 users**	**10,000+ users**
CPU (Total Cores)	4 x 2.4 GHz	4 x 2.4 GHz	4 x 2.4 GHz	8 x 3.0 GHz	8 x 3.0 GHz	12+ x 3.0 GHz
Memory*	16 GB	16 GB	32 GB	32 GB	64 GB	64+ GB
Heavy Access	**500 users**	**1000 users**	**2500 users**	**5000 users**	**7500 users**	**10,000+ users**
CPU (Total Cores)	4 x 2.4 GHz	4 x 2.4 GHz	4 x 3.0 GHz	8 x 3.0 GHz	8 x 3.2 GHz	16+ x 3.2 GHz
Memory*	16 GB	16 GB	32 GB	64 GB	64 GB	64+ GB
Disk Configuration						
OS Disk	15K SCSI, RAID 1 or RAID 5					
SQL Temp DB	Can be placed on OS Disk					
AM Database Data**	15K SCSI, RAID 0+1					
AM Database Logs	15K SCSI, RAID 1 or RAID 0+1					

- **Memory***: The total amount of required operating memory may be lower during initial archiving. As more data is archived and indexed, the memory footprint will increase.

- **AM Database Data****: Database read/write speeds are key to Archive Manager performance. The faster the data can be read from the database, the faster a request is returned to the user.

Services server

Archive Manager Server						~100 Msg/Day Per Mailbox
Operating System	Microsoft Windows 2008R2 x64					
Light Access	**500 users**	**1000 users**	**2500 users**	**5000 users**	**7500 users**	**10,000+ users**
CPU (Total Cores)*	4 x 2.4 GHz	4 x 2.4 GHz	4 x 2.4 GHz	8 x 3.0 GHz	8 x 3.0 GHz	12+ x 3.2 GHz
Memory**	8 GB	8 GB	16 GB	16 GB	16 GB	32 GB
Moderate Access	**500 users**	**1000 users**	**2500 users**	**5000 users**	**7500 users**	**10,000+ users**
CPU (Total Cores)*	4 x 2.4 GHz	4 x 2.4 GHz	4 x 2.4 GHz	8 x 3.0 GHz	8 x 3.2 GHz	16+ x 3.2 GHz
Memory**	8 GB	16 GB	16 GB	16 GB	16 GB	32 GB
Heavy Access	**500 users**	**1000 users**	**2500 users**	**5000 users**	**7500 users**	**10,000+ users**
CPU (Total Cores)*	4 x 2.4 GHz	4 x 2.4 GHz	4 x 3.0 GHz	8 x 3.2 GHz	8 x 3.2 GHz	16+ x 3.2 GHz
Memory**	8 GB	16 GB	16 GB	16 GB	32 GB	32+ GB
Disk Configuration						
OS Disk	15K SCSI, RAID 1					
Work Disk	Can be placed on OS Disk					
Index Disk(s)***	15K SCSI, RAID 0+1, 1+0, or 5					
Attachment Disk****	10K - 15K SCSI, RAID 5 or RAID 6					

- **CPU (Total Cores)***: The total amount of required CPU cores increases as the number of active threads increases. The store management service will export a single mailbox in a single thread. More active

threads allow a faster ingestion rate. Full Text Index also has the ability to run multiple processing threads. The administrator needs to find the appropriate balance.

- **Memory****: The total amount of required operating memory may be lower during initial archiving. As more data is archived and indexed, the memory footprint will increase.

- **Index Disk(s)*****: The performance of the index disk will greatly impact the general performance of the product. For best results, use dedicated attached storage. New indexing technology allows the ability to span the index across multiple disk for both performance and fault tolerance.

- **Attachment Disk******: The performance of the attachment disk has less impact on the general performance of the product, but for the fastest retrievals, a faster disk is recommended.

> **i** | **NOTE:** When running the 64-bit Archive Manager Full Text Search Service, a minimum of 8 GB RAM is recommended. The total amount of memory recommended can be calculated by determining the disk space used by the indexes (messages + attachments) in GB, dividing that number by 100, and adding it to the 8 GB RAM minimum. For example, if the total space used for your indexes is 400 GB, then you should have (8 + 400/100) or 12 GB of RAM installed on your Archive Manager system.

Dedicated IIS Server

Dedicated IIS Server*				~100 Msg/Day Per Mailbox		
Operating System	Microsoft Windows 2008R2 x64					
Light Access	**500 users**	**1000 users**	**2500 users**	**5000 users**	**7500 users**	**10,000+ users**
CPU (Total Cores)**	4 x 2.4 GHz	4 x 2.4 GHz	4 x 3.0 GHz	4 x 3.2 GHz	4 x 3.2 GHz	4+ x 3.2 GHz
Memory	4 GB	4 GB	4 GB	8 GB	8 GB	8 GB
Moderate Access	**500 users**	**1000 users**	**2500 users**	**5000 users**	**7500 users**	**10,000+ users**
CPU (Total Cores)**	4 x 2.4 GHz	4 x 2.4 GHz	4 x 3.0 GHz	4 x 3.2 GHz	8 x 3.2 GHz	8+ x 3.2 GHz
Memory	4 GB	4 GB	4 GB	8 GB	8 GB	8 GB
Heavy Access	**500 users**	**1000 users**	**2500 users**	**5000 users**	**7500 users**	**10,000+ users**
CPU (Total Cores)**	4 x 2.4 GHz	4 x 2.4 GHz	4 x 3.0 GHz	8 x 3.2 GHz	8 x 3.2 GHz	8+ x 3.2 GHz
Memory	4 GB	4 GB	4 GB	8 GB	8 GB	8+ GB
Disk Configuration						
OS Disk***	10K - 15K SCSI, RAID 1					

- **Dedicated IIS Server*:** The IIS Server can host multiple instances of the Archive Manager website. The website also supports Network Load Balancing (NLB) with IP-based affinity. Multiple web servers can be configured to host multiple Archive Manager website instances.

- **CPU (Total Cores)**:** Total cores required will vary based on message policies. If stubbing is used, consider your environment moderate access or heavy access and plan accordingly.

- **OS Disk***:** The OS disk will store attachments temporarily while users are downloading them. Disk speeds are typically not a bottleneck.

Sizing the Microsoft SQL database and Archive Manager attachment store

Archive Manager's storage recommendations must be considered when planning storage, whether the data is to be stored on the same hardware as the software or stored on a separate high-speed disk. Specifically, there needs be either capacity for growth of archive data when Archive Manager is installed or the ability to increase capacity as the archive grows, or both.

> **i** | **NOTE:** Archive Manager can easily be backed up and restored to different hardware to increase performance or capacity.

The Archive Manager database must always be stored on high performance disks, such as a local SCSI RAID 5 disk (with as many physical spindles as possible), or a fast high-speed attached disk.

The Archive Manager attachment store may be stored on a slower attached disk to reduce cost, as archived attachment retrieval is not as speed-sensitive as a database.

> **i** | **IMPORTANT:** For best performance, it is recommended that the full-text index files **not** reside on the same physical disk as other Archive Manager data repositories—neither the SQL database nor an attachment store.

Table 2. Attachment store requirements

Number of users	Number of messages (millions)	SQL Server database (GB)	Full Text Index	Attachment store (GB)
100	1	4	1.6	40
1,000	10	40	16	400
5,000	50	200	80	2,000
10,000	100	400	160	4,000

Pre-installation preparations

- Configuring the Archive Manager Services server
- Configuring the Archive Manager SQL database server

Before you installing Archive Manager, complete the following pre-installation steps:

- Update the server to the latest supported service pack levels for use with Archive Manager.
- Set up and configure the Archive Manager database server.
- Create the accounts required for Archive Manager and grant permissions.
- Configure the Novell GroupWise server.

i | **NOTE:** You can install Archive Manager Services and the Archive Manager SQL database on the same computer.

Configuring the Archive Manager Services server

i | **TIP:** See the System requirements chapter for required versions of the components cited in this section.

To configure the Archive Manager Services server:

1. Configure your antivirus software:
   - Disable real-time scanning.
   - Prevent your antivirus software from scanning the Data Load directory and the Microsoft SQL Server database files.
   - Remove Antivirus scanning from the *%temp%* directory.

2. Configure your firewall:
   - If you are installing Archive Manager from a remote computer, open port 8686 for the Installation Wizard. The port should be opened during the installation session only.
   - If you are planning to install web services and the Full-Text search service on separate computers, open port 8687 for the Archive Manager search service.
   - Note that this is not the common configuration, but it is available if needed. If an application-level firewall is installed, the Archive Manager Full-Text Search Service must be allowed to listen on port 8687.

3. Install required IFilters.
   Install third-party IFilters to enable searching attachment file formats. Searching and indexing of all attachment file types is enabled by the installation of particular IFilters for particular file types. See the System requirements above for more information about obtaining the IFilters you need.

4. Install Novell client.

5   Install GroupWise client.

> **i** | **NOTE:** Do not install Tip of the Day.

6   Verify the default mail profile.

   1   Open the **Mail** Control panel.

   2   Click the **Show Profiles...** button.

   3   Select the **Always use this profile** radio button.

   4   Select the **Novell Default Settings** profile name from the drop-down list.

   5   Click **OK**.

7   Remove Exchange Services from the GroupWise profile.
    Open the Novell Default Settings profile in the Mail control panel and make sure that there are no Exchange related services in your MAPI profile. If you see any of the following services listed in your profile, delete them from the profile before starting the GroupWise Directory Connector:

   - Microsoft Exchange Server

   - Outlook Address Book

   - Personal Address Book

8   Create DNS entry.
    Create a DNS entry for "ArchiveManager" that points to the Archive Manager web server. If necessary, refer to Microsoft's KnowledgeBase article #814591 (link current as of this document release) for more information.

Configuring the Archive Manager SQL database server

To configure the Archive Manager SQL database server:

1   Install Microsoft SQL Server.
    Ensure the folder containing the database files is not compressed.

2   Configure SQL Agent.
    Ensure SQL Agent service has started, and confirm that the start-up method is set to Automatic.

Installing and configuring Archive Manager

- Installing Archive Manager
- Configuring Archive Manager
- Useful configuration settings

Installing Archive Manager

To access the installer for Archive Manager:

1 From the Archive Manager installation CD, run the **AutoRun** program.

2 Click the **Install** tab.

3 Under Product, click the **Archive Manager** link to run setup.

The installer can be started automatically from setup, or by going to *<archive_manager_home>\Installer* after running setup.

In addition to providing a link to the Archive Manager installer, the AutoRun program provides other useful information about Archive Manger including: a link to distribute the Outlook Form, prerequisites and redistributables, integrations, documentation, information on the Archive Manger Online Community, and contact information.

ⅰ | **NOTE:** Please refer to the System requirements chapter of this guide prior to installing Archive Manager.

To Install Archive Manager:

1 On the **Welcome to the Quest® Archive Manager Setup Wizard** screen, click **Next**.

2 On the **License** screen, scroll through the license agreement and then select the **I accept the terms of the license agreement** check box and click **Next** to continue.

3 On the **SQL Server settings** screen, enter the following information:

   a **Server name:** The name of the SQL Server you plan to use.

   To specify a SQL Server availability group, enter the availability group listener name.

   b In the **Log on to the server** section, select either **Use Windows Authentication** or **Use SQL Server Authentication** and specify credentials, if required. The authentication mode you specify will be used to install the Archive Manager database.

   c **Database name:** Enter a name for the Archive Manager database.

4 Click **Next**. If no database exists, the following message is displayed:

   The specified database does not exist. Create it now?

   If a database does exist, you will be asked if you want to upgrade.

5 Click **Yes** to create a new database.

6 On the Log folder screen, click **Next** to install to the default log folder or click **Change** to select another folder.

 ! | **CAUTION: The Log folder should not be installed in the Archive Manager installation path.**

7 On the **Destination Folder** screen, click **Next** to install to the default destination folder or click **Change** to select another folder.

8 On the **Custom Setup** screen, select your environment and the product features to be installed. Each feature can be installed independently.

 Product features include:

- Exchange Environment
    - Active Directory Connector
    - Exchange Store Manager
    - Lync Store Manager
- GroupWise Environment
    - GroupWise Directory Connector Service
    - GroupWise Store Manager Service
- Data Load Service
- Full Text Index and Search Service
- Message Retention Policy Service
- Alert Service
- Website

i | **NOTE:** If your existing GroupWise users are associated with the Active Directory users, you must install the features Active Directory Connector and GroupWise Directory Connector, and set the configuration **Directory Connector with GroupWise Mailbox** to `True` on the Advanced Settings screen in the Configuration Console. For more information about this configuration, refer to the **Useful configuration settings** section in the Installation and Configuration Guide for Exchange.

9 The **Features to install** screen displays the features that you have selected for installation, and the prerequisite software that will also be installed. If the list is correct, click **Next**.

10 On the **Ready to install Quest® Archive Manager** screen, click **Install** to begin the installation. If you want to review or change any of your installation options prior to starting the installer, click **Back** to go to the previous screens.

11 The **Installing Quest® Archive Manager** screen provides installation status messages as the installation progresses.

12 The **Completed the Quest® Archive Manager Setup Wizard** screen is displayed when the installation has completed. The **Launch the Configuration Console when setup exits** check box is checked by default. If you do not want to go straight to the Configuration Console, deselect the checkbox.

 If there were any problems installing the prerequisites, a **View Installation Warnings** check box is displayed. Select this check box to get detailed list of the installation warnings.

13 Click **Finish** to exit the setup wizard and launch the Configuration Console if you have selected to do so.

i | **NOTE:** If a SQL Server availability group has been specified when you install Archive Manager, you must add the databases `Archivemanager` (the one you specified in Step 3) and `Aftermail_TEMP` to the **Availability Databases** of the owner node after the installation. To check which is the owner node with **Failover Cluster Manager,** expand the cluster name, and click **Roles**.

Configuring Archive Manager

The Archive Manager Configuration Console allows you to configure the settings needed to begin using Archive Manager. The first time you configure Archive Manager, you must walk through the screens in order by clicking **Next** after each screen.

After completing the initial configuration, the Configuration Console will switch to an edit mode where any screen can be configured in any order. In edit mode, click **Apply** to save your settings.

Configuration pages are displayed only for the features that you selected during installation.

If you are upgrading from a previous version of Archive Manager, the settings are populated with your previous selections.

> **!** | **CAUTION: Configurable paths, such as Base Data Directory, Attachment Store, Index, or Export, should not be installed in the Archive Manager installation path.**

1 The **Welcome** screen provides a list of information that you need to gather to configure Archive Manager. Review this list and click **Next** to begin configuring Archive Manager.

2 On the **License** screen, click **Browse...** to locate your license and click **Install** to install it. You can overwrite an existing license by entering a new license and installing it. Once a valid license is installed, the following information is displayed:

- **Type:** The type of license purchased.

- **Expires:** The expiration date of the license.

- **Seats Licensed:** The number of seats available from the license.

- **Seats Used:** The number of seats currently used.

License information can also be viewed at any time by clicking the Help icon and selecting the **Licenses** tab.

3 On the **Service User Credentials** screen, enter credentials for the following Archive Manager service users:

- General Service User

- Journaling Service User

- Archive Manager Administrative Group

Use the default credentials or enter new credentials. If the service accounts exist you will need to confirm the password. If it does not exist, enter the password twice and the account will be created.

4 On the **General Settings** screen, enter the directory path for the base data directory and the log path.

- **Base Data Directory: Directory Path:** The Base Data Directory path contains storage for errors, exclusions, exporting, and temporary storage for searching. Make sure to select a directory with adequate free space. Enter a directory for the Archive Manager base data directory. The default path is the following: C:\Quest\ArchiveManager

- **Log Path: Directory Path:** Enter the path to the Archive Manager log folder. The default path is the following: C:\Quest\ArchiveManager\Logs

5 On the **Novell E-Directory** screen, configure the Novell Directory Services settings.

- **NDS LDAP Server:** The name of the NDS LDAP server.

- **NDS LDAP Port:** The NDS LDAP port number.

- **NDS Login:** The path of the NDS login account. (NDS:\\TREE\Context\User)

- **NDS Password**: The password for the NDS login account.

6 On the **GroupWise Store Manager** screen, configure the GroupWise mail server.

- **GroupWise Domain Directory:** The path the domain database directory.

- **GroupWise Server Address:** This must be a primary mail server in the domain database listed above. Archive Manager creates a trusted application key in the domain, and application key only works if the mail server is local to the domain database.

- **GroupWise Port:** The GroupWise port number.

- **GroupWise Admin Console Url**: Default value is http(s)://mta_server:9710. This configuration applies only to GroupWise versions 2014 and above.

- **Archive Manager Server IP:** The IP address of the Archive Manager Services Server.

7 On the **Data Loader** screen, select a data loader group from the drop down list to run in the server.

8 On the **SMTP Mail Server** screen, enter the information for the outgoing SMTP mail server:

- **Mail Server Name:** Enter the host name of the SMTP mail server. If your mail server requires SMTP authentication, enter the login details below. Leaving these fields blank forces Archive Manager not to authenticate.

- **Mail Server Port**: Enter the port number of the SMTP mail server. The default value is 25.

- **SMTP Login:** The login name for the mail server.

- **SMTP Password:** The password for the mail server.

If your mail server requires SSL to encrypt the connection, check the checkbox **Enable SSL for SMTP**; When it is checked, you have the option to **Trust All Certificates for SMTP**.

To send messages from a proxy server, check the checkbox **Send Messages from Proxy**.

9 On the **Website** screen, enter the settings for the Archive Manager website:

- **Website Name:** Name for the Archive Manager site.

- **Host Header:** Name of the server without the protocol prefix (without "http://" or "https://").

- **IP Address:** IP address of the web server.

- **Port:** Port number (default=80) for the Archive Manager web server.

- **Reset Password:** When upgrading from a previous version of Archive Manager, to reset the Admin account password, select the Reset Password checkbox and enter a new password.

- **Admin Password:** Password for the Archive Manager administrator. You cannot leave the password blank. Note that the Archive Administrator's login name is *Admin*, and this cannot be changed at the time of installation.

- **Confirm Password:** Re-enter the administrator password.

Secondary Websites: To add secondary websites, click **Add** under the Secondary Websites section. This opens the Secondary Website Setup screen. Enter the following information:

- **Website Name:** Name for the Archive Manager site.

- **Host Header:** Name of the server without the protocol prefix (without "http://" or "https://").

- **IP Address** IP address of the web server.

- **Port:** Port number for the Archive Manager web server.

- **Share main website files:** Archive Manager will use the same files on disk. Use this option if both instances of Archive Manager use the same authentication type (e.g. Windows or Forms).

- **Create separate files for this website:** Archive Manager will create a copy of the website files for the new website. Use this option if you need different authentication schemes for each of your website instances.

To edit a website, click **Edit**. To remove a website, click **Remove**.

10 On the **Storage Location** screen, set up the location for the attachment store. Click **Add** to access the Storage Location Type screen, then select an attachment store type and configure it.

File System or other storages deployed as a file system

a   Select **File System** from the drop-down list and click **Next** to access the **File System Store Setup** screen and enter the following information.

  ▫ **Path:** Click **Browse** to select a path for the attachment store.

  ▫ **Network Share:** Enter the name of the share for the storage location.

  ▫ **Store message data for compliance:** Select this checkbox to save copies of all of the emails to be stored in external storage. This setting will apply to all storage locations.

  ▫ **Compliance Directory Path:** Enter a storage location path in this box. This can be an absolute path or a shared path with Full Control permissions to the Archive Manager Administrative Group.

  ▫ **Default Storage Location:** Select this checkbox to make the current storage location the default storage location.

b   Click **Next** to access the **Summary** screen. This screen displays a list of the selected options.

EMC Centera

a   Select **EMC Centera** from the drop-down list and click Next to access the EMC Centera Store Setup screen and enter the following information.

  ▫ **Connection String**: The connection string specifies the Centera device.

  ▫ **Store message data for compliance:** Select this checkbox to save copies of all of the emails to be stored in external storage. This setting will apply to all storage locations.

  ▫ **Default Storage Location:** Select this checkbox to make the current storage location the default storage location.

b   Click **Next** to access the **Summary** screen. This screen displays a list of the selected options.

NetApp SnapLock

a   Select **NetApp SnapLock** from the drop-down list and click Next to access the NetApp SnapLock Store Setup screen and enter the following information.

  ▫ **Share Name:** Enter the share name for the storage location.

  ▫ **Retention Mode:** Select **SnapLock Default** or **Archive Manager Default**.

  ▫ **Retention Time:** Enter the number of days, months, and years for retention. These settings are enabled only if you have selected **Archive Manager Default**.

  ▫ **Store message data for compliance:** Select this checkbox to save copies of all of the emails to be stored in external storage. This setting will apply to all storage locations.

  ▫ **Default Storage Location:** Select this checkbox to make the current storage location the default storage location.

b   Click **Next** to access the **Summary** screen. This screen displays a list of the selected options.

Caringo DX

a   Select **Caringo DX** from the drop-down list and click Next to access the Caringo DX Store Setup screen and enter the following information.

  ▫ **Hosts**: Enter the hosts to connect to. If there are multiple hosts, they should be entered in a comma-separated list.

  ▫ **Port**: The port to connect to.

  ▫ **Username**: The User Name to connect to the Caringo service.

  ▫ **Password**: The password for the account used to connect to the Caringo service.

  ▫ **Store message data for compliance:** Select this checkbox to save copies of all of the emails to be stored in external storage. This setting will apply to all storage locations.

  ▫ **Default Storage Location:** Select this checkbox to make the current storage location the default storage location.

b Click Next to access the **Caringo DX Advanced** configuration screen.

Caringo DX Advanced (Optional)

- **Cluster Name:** The name of the cluster for the Caringo DX storage location.
- **Proxy Address:** The cluster reverse proxy IP address.
- **Port:** The cluster reverse proxy access port.
- **Realm:** The Caringo security domain/realm.
- **Bucket:** The name of the container within the device.
- **Max Retries:** Maximum number of times to retry a command on a communication or server failure.
- **Max Stored Connections:** The maximum number of connections stored in the connection pool.
- **Pool Timeout:** The time in seconds that the connection pool will store an open connection.
- **Locator Retry Timeout:** The amount of time the locator should wait before retrying a previously discarded host address.
- **Hash Type:** The hash algorithm to use to verify content integrity.
- **Connection Timeout:** Time in seconds that a request will wait for a connection and for activity on a request.
- **Named:** Check to enable the use of Named objects. Uncheck to use automatically generated UUIDs (Unique User IDs).
- **Validate:** Check to enable content integrity verification.
- **Replicate:** Check to enable immediate replication of objects as they are stored.

c Click **Next** to access the **Summary** screen. This screen displays a list of the selected options.

11 On the **Full Text Index Setup** screen, the **Default Configuration** check box is selected by default. The Full Text Index will be sectioned into partitions based upon the default rollover policy. Using multiple (physical) hard disks may improve indexing and searching performance and is required for automatic index failover (recovery).

- **Index drives:** Select the drive(s) to use for indexing. Automatic index failover requires 2 or more drives to be selected.

12 The **Default Policy** screen displays mail servers that have been found with the directory connector settings entered previously. Enter the following information.

- **Create a default policy on servers defined below:** Select this check box to add a default message policy to the servers listed. Selecting this check box selects the entire server list. You may deselect individual servers.

13 On the **Advanced Settings** screen, configure the additional optional settings if needed. Click **Add** to add a configuration settings. Click **Remove** to remove a configuration setting. Click **Revert All** to go back to the original settings.

If you are doing an upgrade, your settings will be populated from the previous version of Archive Manager.

14 The **Summary** screen lists all of the settings you have entered. Click **Finish** to apply these settings in the Configuration Console.

15 Restart the Archive Manager servers.

Useful configuration settings

The following configuration settings can be added/edited in the Advanced Settings screen in the Configuration Console, if needed.

- General

- Archive Manager Database

- GroupWise Directory Connector (GDC)

- GroupWise Store Manager (GSM)

- Data Loader

- Full Text Index (FTI)

- Full Text Search (FTS)

- Website

General

- **AfterMail URL**: Sets Archive Manager website URL. This field should be auto filled by Configuration Console. If you have changed the website URL by IIS, change this setting accordingly.

- **CACHE TIME**: The time in minutes to keep the message and attachment search result in cache. The default value is 30 (minutes).

- **CommandTimeout**: The maximum time in seconds to execute a command. The default value is 600 (seconds).

Archive Manager Database

- **CleanUpTime:** Deletes all of the old temporary "scratch" tables that the program generates for searches and other functions. The script defaults to running at 12:01:01 a.m. every day. This time is configurable. Since the Retention Engine also uses temporary tables, the CleanUp script should not be run at the same time as the Retention Engine. Most administrators choose to run the CleanUp script before the Retention Engine, which may occasionally run for prolonged time periods.

GroupWise Directory Connector (GDC)

- **GroupWise Directory Connector Timer Interval:** The default value for this setting is 3600 (seconds). The value is the number of seconds that the GDC will wait after an export run has completed to run the next export.

- **GroupWise Directory Connector Reset Timer Interval:** The default value for this setting is 600 (seconds). The value is the number of seconds that the GDC will wait for a GroupWise API call to finish. If a GroupWise API method fails to return within this time, the GDC will terminate the process and start the export run over from the beginning.

GroupWise Store Manager (GSM)

- **GroupWise Store Manager No Message Stamping:** Enables or disables the message stamping. This setting defaults to True. Note that the message stamp is never used in Archive Manager.

- **GroupWise Store Manager Export Shared Folders:** Enables archiving shared GroupWise folders when set to 1. The default is 0 or off.

- **GroupWise Store Manager Log Level**:

    - 0 - Error

    - 1 - Warn

- 2 - Info (default)
- 3 - Debug
- 4 - Verbose

- **GroupWise Store Manager Max Thread Count**: The maximum number of threads that mailboxes can processed in parallel. The default value is 1.

- **Archive GroupWise Store Manager Service Timer Interval**: Sets the number of seconds that the GSM service will stop before running again. The default value is 10 (seconds).

Data Loader

- **Dataload Timer Interval:** Sets the number of seconds that the data loader will stop before running through the enabled "Dataloaders" (within the Archive manager user interface), for example, MAPI, Filesystem etc. The default value is 60 (seconds), since the MAPI32 process must have time to unload before the Dataloader processes the Mailbox on its next run. A lower value may work better in some circumstances, but in most cases 60 seconds is the optimum interval.

- **DataLoad Service Max POP Message Size**: The maximum size in MB of message processed by the POP3 data loader. The default value is 50 (MB).

- **Dataload Process Rows**: The number of database records that the data loader will process in a batch. The default value is 2500.

- **Save Excluded Emails**: Save Excluded Emails is a Boolean (true or false) parameter that determines whether File System Data Loader will save all messages that match an exclusion rule to the Exclusion directory as XML. If this feature is enabled, it also will write some metadata to the Exclusion table in Archive Manager. The default value is True.

- **ExclusionDirectory**: Specifies the location to store the excluded XML files. The default value is *C:\Quest\ArchiveManager\Exclusion*.

- **ErrorPath**: Specifies the location to store the XML files that the File System Data Loader fails to load. The default value is *C:\Quest\ArchiveManager\Error.*

- **Data Loader Worker Log Retention Days**: How many days the logs of the MAPI data loader will be kept in the log folder. The default value is 7 (days).

- **Journal Data Loader Log Level**: The log level for the MAPI data loader.
  - 0 - Error
  - 1 - Warn
  - 2 - Info (default)
  - 3 - Debug

- **POP3 Timeout Seconds**: The maximum number of seconds for the POP3 data loader to process a single message. The default value is 3000 (seconds).

Full Text Index (FTI)

- **Full Text Index Include Recipients:** Controls whether or not recipients are added to the Lucene index. The default is False. This setting has historically defaulted to false as the recipients are not searchable in Lucene, but are instead pulled from the Archive Manager database. This setting should remain false.

- **Full Text Index Max Field Length:** This setting can be used to increase or decrease the field length from the default of 100,000 for indexed terms in a single document.

- **Full Text Index Max Merge Docs:** This setting can be used to merge indexes into larger files, increasing search performance. The default is 1000000 documents per file.

- **Full Text Index Merge Factor:** This setting can be used to merge same-sized index files, increasing search performance. The default is 10 files.

- **FTI Max Buffered Docs:** Specifies how many documents Lucene can buffer in RAM before flushing them to an on-disk segment. If set to zero, flushing is triggered by size only, according to "Full Text Index Ram Buffer Size MB". The default is 0.

- **FTI Max Worker Count:** The max number of indexing workers the FTI can devote to a single partition. The default is 10.

- **FTI Max Total Indexer Threads:** Aggregate maximum total number of indexer threads the FTI is allowed to use. If "FTI Max Worker Count" times the number of active partitions exceeds this total, the FTI will scale back each partition's use of threads to try not to exceed this limit. No partition, no matter how low its IndexingPriority, will use less than 1 thread. The default value is 40.

- **FTI Commit Point Keep Count:** The number of Lucene index commit points to retain. This should only be increased above 1 if attempting to gather data on index corruption. The default is 1.

- **FTI Auto Failover:** Controls whether the FTI will initiate failover automatically. The default is True.

- **FTI Auto Repair:** Controls whether the FTI will initiate repair of corruption automatically. The default is True.

- **FTI Repair Auto Fix:** Controls whether the FTI will actually repair the corruption it identifies during a Repair operation. The default is True.

- **FTI Auto Itemize:** Controls whether the FTI will initiate itemize automatically after repair. The default is True.

- **FTI Itemize Auto Fix:** Controls whether the FTI will actually add FailedToIndex records for the items it identifies as missing during an Itemize operation. The default is True.

- **Full Text Index Ram Buffer Size MB:** Determines the amount of RAM that may be used when buffering added documents and deletions before they are flushed to the Directory. This setting corresponds directly to Lucene's SetRAMBufferSizeMB method. The default is disabled. Using the default setting is recommended.

Full Text Search (FTS)

- **Full Text Search Cache Time**: Determines the length of time, in minutes, that a Full Text Index search on the body of a message or attachment will be cached after it runs. The default value is 60 (minutes). The cache lets a user re-run the same search within the Cache Time limit, obtaining the same results, but much faster than if the search were re-run from scratch.

- **Full Text Max Results**: The maximum number of results that the FTS service retrieves. The default value is 5000.

Website

ℹ️ | **NOTE:** You need to restart IIS after changing the value of these Website settings.

- **WWW Page Size:** Determines the number of search results displayed on a single page. The default is 20. This setting affects the entire instance and is not customizable per user.

- **WWW Show Source Properties**: Enables or disables the website to show the source properties of a message. The default value is False.

- **Include Sub Folders By Default**: Determines whether to include the sub folders by default when searching messages or attachments. The default value is False.

- **Allow GW Authentication**: Identifies whether the Archive Manager web site supports GroupWise authentication. Default is False. When set to True, an authentication option appears in the Archive

Manager login page. User can select default authentication or GroupWise authentication to log into the Archive Manager web site. This configuration is only supported by GroupWise 2014 or later.

- **WWW Show SendToMe Button Only**: If it's set to True, the toolbar buttons **Reply**, **Reply to All** and **Forward** will be hidden when you view a message on the website. The default value is False.

Upgrading/Uninstalling Archive Manager

- Upgrading Archive Manager
- Uninstalling Archive Manager

⚠ CAUTION: **Before upgrading or uninstalling Archive Manager, backup your databases, attachment files, export files, index files, log files and any non-program files located in the Archive Manager installation directory. Use the configuration console to obtain the location of these files.**

Upgrading Archive Manager

When upgrading Archive Manager, please refer to the release notes for information on supported upgrade versions.

ℹ NOTE: When upgrading from version 4.8 to 5.0 or later, uninstall version 4.8 before performing the upgrade.

To upgrade Archive Manager:

1   Stop all Archive Manager services.

2   Run the AutoRun program to run the Archive Manager Installer: **ArchiveManagerInstaller.msi**.

3   Perform an installation as described in the Installing Archive Manager section.

4   Run the Archive Manager Configuration Console to configure your Archive Manager settings. Some settings will be populated with information from your previous installation. These settings can be changed if needed. You will be prompted to enter any required information.

5   Restart the Archive Manager servers.

ℹ TIP: After upgrading to Archive Manager 5.1 or later, any mail items that are not associated with a folder will be placed in an **_Orphans** mailbox the first time the Retention service runs. If you wish to delete these items, set a Delete policy in the Retention Policies section of the Administration website.

Uninstalling Archive Manager

To uninstall Archive Manager:

1   Launch the Installer used to install the current version of Archive Manager.

2   Click **Next**.

3   Click **Remove**.

Post-installation tasks

Configuring Archive Manager

After you install Archive Manager, you must perform certain configuration tasks before you can begin to use the product. Most of these necessary post-installation tasks are explained in the contents of this chapter:

- Configuring the GroupWise Directory Connector (GDC)
- Backloading your data

In addition to the above-listed tasks, you must also set up at least one Message Policy, and apply a Policy to a mail server or mailboxes.

Detailed instructions can be found in the Archive Manager Administration Guide.

To begin the initial configuration, sign in to the Quest Archive Manager web site. The default administrator account is **admin**, and the password was specified during installation. Use the domain **DEFAULT**.

Once you have signed in, click the **Administration** icon (top-right corner of the window) to go to the administrative section of the Archive Manager web site.

Configuring the GroupWise Directory Connector (GDC)

If you want to modify the defaults for the following configuration settings, add them to the Archive Manager Configuration Console and then modify the default settings.

- **GroupWise Directory Connector Timer Interval:** The default value for this setting is 3600 seconds (1 hour). The value is the number of seconds that the GDC will wait after an export run has completed to run the next export

- **GroupWise Directory Connector Reset Timer Interval:** The default value for this setting is 600 seconds (10 minutes). The value is the number of seconds that the GDC will wait for a GroupWise API call to finish. If a GroupWise API method fails to return within this time, the GDC will terminate the process and start the export run over from the beginning.

Backloading your data

Before you run the GSM for the first time, complete the following steps to ensure that all of your email data is successfully processed.

1 Add the **GroupWise Store Manager Use No Filters** configuration setting to the Configuration Console and set the value to **True**.

2 Start GSM Service to begin the initial backload of your email data.

3 Once all mailboxes have been successfully processed once with the GroupWise Store Manager Use No Filters setting enabled, change the value for the setting to **False**.

This allows other date filters to take over and process a smaller set of data instead of continually processing the full set of data.

Localizing Archive Manager website (optional)

Both the Archive Manager websites for end users and Administration can be localized using JSON files stored in the Archive Manager installation directory.

To localize the website for end users into your language:

1 In the directory *<ArchiveManager_Home>\WebSite\assets\language*, copy the file *en-US.JSON*, and paste it to the same folder.

2 Rename the copy file with your language code. For example, for French (France), rename it to *fr-fr.JSON*.

3 Translate your language file (For each line in the file, only edit the text between the quotation marks after the colon).

4 Restart IIS.

> **i** | **NOTE:** The display language of the website for end users is determined by the user's browser language, and English will be used if no resource file for the desired language can be found in the directory *<ArchiveManager_Home>\WebSite\assets\language*.

To localize the Administration website into your language:

1 Open the language file *<ArchiveManager_Home>\WebSite\Resource\Languages.xml*.

2 For each value code, add a new line with your language code as the culture name, and the translated text in your language.

3 Restart IIS.

> **i** | **NOTE:** The display language of Administration website is determined by the Archive Manager server language, and English will be used if no resource for the desired language can be found in the file *Languages.xml*.

Appendix A: Attachment store types

- Attachment store types overview
- NTFS/Windows File System
- NetApp SnapLock
- EMC Centera
- Caringo CAStor/Dell DX
- Hedvig Distributed Storage Platform
- Common scenarios for editing the configuration

Attachment store types overview

Archive Manager supports different storage types for storing attachments and compliance messages. Details on using each of the storage types are provided below. The storage types supported by Archive Manager include:

- **NTFS / Windows File System:** This is the default option, and stores files on standard disk.
- **NetApp SnapLock:** SnapLock provides fast WORM (Write Once Read Many) storage on magnetic disk. It uses non-rewritable, non-erasable disk storage protects data until a specified retention date.
- **EMC Centera:** This option uses an external EMC Centera server or cluster to store the attachments.
- **Caringo CAStor/Dell DX:** This option uses a Caringo CAStor storage cluster or Dell DX Object Storage Platform to store attachments.
- **Hedvig Distributed Storage Platform:** Works with Archive Manager as the NTFS/Windows File System.

Archive Manager allows more than one type of storage to be used on a running system. However, only one storage location can be considered the default storage location at a time.

When installing Archive Manager, you set the attachment store type on the Attachment Store Type screen. Once the product is installed, additional attachment stores can be added. This process is described below in the section Common scenarios for editing the configuration.

In all cases, Archive Manager stores each unique attachment as a single file or the equivalent unit. Archive Manager performs no compression or encryption. This is left to the underlying storage system.

Table 3. External storage type deprecation status

External Storage Type	Archive Manager Version for Deprecation
File System	Supported.
NetApp SnapLock 7.2.4	Supported.
EMC Centera 4.2.1, 4.2, 4.1, 4.0, 3.1.4, or EMC Atmos 2.0	Supported.
Caringo Castor/Dell DX	Supported.
Hedvig Distributed Storage Platform Version 3.7.1	Supported.

NTFS/Windows File System

The file system is the default storage mechanism for Archive Manager. This is a directory structure, usually in *C:\ArchiveManager\Data*, with each file stored represented by its database id and file type. For example: 34.gif

These files are stored in blocks of 1000 files per directory. Each database ID has up to twelve 0's added to the front. For example, 34 becomes 000 000 000 034, and this is converted in a directory name:

```
c:\archivemanager\data\000\000\000\000\34.gif
```

By default, the entire tree, from c:\archivemanager\data down, is set to be compressed using NTFS compression. These files will not be rewritten, so any backup scheme can be used. It is recommended that you do an incremental backup.

NetApp SnapLock

The NetApp SnapLock Setup Wizard allows you to create volumes or WORMS on which Archive Manager can put attachment stores. The volumes containing attachment stores are an effective tool for compliance.

The NetApp SnapLock Wizard is run from the Archive Manager Installer. Run the installer during the installation process, unless you already have all the necessary volumes created.

> **i** | **NOTE:** If a CIFS share is already in place, you can upgrade from a Windows file system attachment store to NetApp SnapLock by these two steps:
>
>   1   Copy the filesystem data folder (containing the archived attachments) to the NetApp CIFS share.
>
>   2   In the Archive Manager SQL database, StorageLocation Table: Change the connection string (originally in the form "DATA=\\archivemanagerserver\filesystemlocation") to point to the new CIFS share location (for example, "DATA=\\NetApp\data").

Prerequisites

- Install all of the necessary licenses for the NetApp Data ONTAP operating system.

- In DataONTAP, run the CIFS (Common Internet File System) setup. The CIFS shows the volume to the Windows system as a drive.

Running the NetApp SnapLock Setup Wizard

The NetApp SnapLock Setup Wizard is run from the Archive Manager Installer. The NetApp SnapLock Configuration screen contains a Launch SnapLock Setup Wizard button. When you launch the wizard, fill in the information on the following screens:

Login Page

- **Create New SnapLock Volume:** Select this option to create a new volume.

- **Change Retention Times:** Select this option to change the default retention times. The settings here apply only if you select **SnapLock Default** as the retention mode in the Archive Manager Installer.

- **Filer Address:** IP name or address of the machine running Data ONTAP.

- **User Name:** Account name you want to use to access the machine running Data ONTAP. This account must be an Administrator account, preferably root.

- **Password:** Password for the account used to access the machine running Data ONTAP.

- **Volume Name:** Name of the volume you want to create on the machine running Data ONTAP. Or the name of the volume for which you want to change retention times. This name is case sensitive.

Volume Properties

- **New Volume Name:** Enter the name of the volume you wish to create.
- **Number of Disks to Use:** Enter the number of disks to use on the volume. Because it is a RAID configuration, this must be an even number.
- **Create Data Loader User:** Select this box if you are not using Active Directory and need to set up a Journal User for the data loader.
- **Data Loader Log-In User Name:** Enter the name for the Journal User that you are creating.
- **Data Loader Log-In User Password:** Enter the password you want to create for the Journal User.
- **Verify Password:** Retype the password.

Click **Next** to create the volume If this is a new setup, the volume will be created instantly. If this is an existing setup, the wizard will take some time to prepare the volume for use.

Retention Time

- **Current Retention Times:** Shows the current settings for the minimum time, default time, and maximum time.
- **Set Retention Time:** Enter a number for the minimum time, default time, and maximum time. Select days, months, or years from the drop-down list.

EMC Centera

The EMC Centera is supported for the storage of attachments and compliance messages. The native Centera API is used to store attachments in the Centera cluster. Archive Manager considers the Centera to be an "always-online blind storage system." Archive Manager presents an attachment, and then receives a "ticket". To get the attachment back, Archive Manager presents the ticket and gets the attachment.

Archive Manager does not set any retention policies on the Centera. This is left to the Centera administrator.

Archive Manager supports any centera settings which can be set on the Centera connection string or in a PEA file.

Using a PEA File

When utilizing a PEA file with a Centera Configuration, it is important that the PEA file is accessible by each component that requires access to it. The Archive Manager components that will access the Centera, and therefore require access to the PEA file, are:

- Archive Data Load Service
- Archive Full-Text Index Service
- Website

As a result, the group *ArchiveManagerServiceUsers* should have permissions to access the PEA file location. The PEA file should also be present on all servers with the above Archive Manager components. (This is important if you have NLB WebServers, and/or a clustered Archive Manager installation).

If the machines are separate, then the PEA file must be either configured with a UNC path, or placed in the same local path as all machines that use the PEA file.

Caringo CAStor/Dell DX

The Caringo CAStor/Dell DX storage cluster is supported for the storage of attachments and compliance messages. The Caringo HTTP interface is used to store and retrieve items. Archive Manager considers the storage cluster to be an online blind storage system; we present an item, and receive a "ticket". To get the item back, we present the ticket and get the item. Note that performing a full text index reindex can overload the storage cluster with restore requests. Please consult Quest before doing this.

Hedvig Distributed Storage Platform

The Hedvig Distributed Storage Platform serves as a local file system when working with Archive Manager. For more information, see NTFS/Windows File System on page 33.

Common scenarios for editing the configuration

The following sections describe different scenarios for editing the configuration.

Using a NAS Box

Archive Manager's installer does not support storing attachments on a NAS box, as software is installed on the box, which is most likely not running windows.

If you want to store attachments on a NAS box, use the following workaround:

1   When installing Archive Manager, set the services to NOT start after installation. Install using a normal filesystem storage location.

2   Once Archive Manager is installed, edit the StorageLocation table and change the default storage location to point to the UNC of the NAS box. For example: DATA=\\nasbox\archivemanagerstore

3   You must ensure that all Archive Manager users, *ArchiveMgr_Service, ArchiveMgr_ESM, ArchiveMgr_Journal*, have full access to that folder.

4   Start the services. They will now load and retrieve attachments from the NAS box.

Deleting attachments from a SnapLock volume

The Archive Manager Retention Engine cannot delete attachments from a Data ONTAP device unless the retention settings in SnapLock contain a retention time that precedes or is the same as the one set in the Retention Engine. The Retention Engine generates errors when the retention settings in SnapLock for attachments on a Data ONTAP device are set at a later time than the Archive Manager retention delete policy.

Appendix B: Process overview checklist

- Pre-installation checklist
- Install Archive Manager
- Post-installation checklist

This checklist provides a high-level overview of the process for installing Archive Manager for GroupWise. Full details are provided in earlier chapters of this Guide, as cited below.

Pre-installation checklist

Table 4. Pre-Installation checklist

		Check
1.	Review your system requirements.	
	See the System requirements chapter of this *Installation Guide* for the required/supported versions of components listed below.	
2.	Configure Your Archive Manager Services Server.	
	For more details about these steps, see Configuring the Archive Manager Services server earlier in this Guide.	
	1 Install Microsoft Windows operating system.	
	2 Install anti-virus software.	
	3 Install Internet Information Server and ASP.NET.	
	4 Install Required IFilters.	
	5 Install Novell Netware Client.	
	6 Install GroupWise Client.	
	7 Verify the Default Mail Profile has all required GroupWise services, and no Exchange services.	
	8 Verify that both required versions of Microsoft .NET Framework are installed.	
	9 Create a DNS Entry for the Archive Manager Services server.	
3.	Configure the Archive Manager Database Server.	
	For more details about these steps, see Configuring the Archive Manager SQL database server earlier in this Guide.	
	1 Install the Microsoft Windows operating system.	
	2 Install Microsoft SQL Server.	
	3 Configure the SQL Agent Service.	
	4 Configure the SQL Server Data and Log directories.	

Table 4. Pre-Installation checklist

4.	Configure Your Groupwise Server.	
	1 Run GWCheck.	
	2 Set Post Office Logging to Verbose.	
5.	If you do not want Archive Manager to begin an export of all users immediately upon installation, be sure to disable store management at the server and user levels before starting the services for the first time.	

Install Archive Manager

Install Archive Manager using the instructions provided in the Installing and configuring Archive Manager chapter of this Guide.

Post-installation checklist

For details on completing the following steps, see the chapter Post-installation tasks.

Table 5. Post-Installation checklist

		Check
1.	Configure Archive Manager:	
	1 Set Up a Data Loader	
	2 Set up a Message Policy	
	3 Apply a Policy to a Mail Server or Mailbox(es).	
2.	Functionality Check for Sign In and Display.	
3.	Functionality Check for Searching.	
4.	Functionality Check for Messages.	
5.	Functionality Check for Attachments.	
6.	Functionality Check for Online Help.	
7.	Functionality Check for Mailboxes.	
8.	Functionality Check for Administrator Features.	

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