

SourceOne Email Management

Version 7.2 SP9

Administration Guide

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Preface

As part of an effort to improve the product lines, revisions of the software and hardware are periodically released. Therefore, some functions that are described in this document might not be supported by all versions of the software or hardware currently in use. The product release notes provide the most up-to-date information on product features.

Contact the technical support professional when a product does not function correctly or does not function as described in this document.

Note: This document was accurate at publication time. To find the latest version of this document, go to Online Support (<https://support.EMC.com>).

Purpose

This document includes information about administering SourceOne Email Management.

Audience

This document is part of the Dell EMC SourceOne documentation set, and is intended for use by administrators who are responsible for the processing of email, Microsoft SharePoint, or file content.

Revision history

The following table presents the revision history of this document.

Table 1 Revision history

Revision	Date	Description
01	February 3, 2020	GA release of the <i>SourceOne Email Management 7.2 SP9 Administration Guide</i> .

Related documentation

The SourceOne documentation set includes the following publications.

SourceOne Products:

- *SourceOne Products Compatibility Guide*
- *SourceOne Products Security Configuration Guide*

SourceOne Email Management:

- *SourceOne Email Management Installation Guide*
- *SourceOne Email Management Administration Guide*
- *SourceOne Email Management Release Notes*
- *SourceOne Email Management Localized Product Release Notes*
- *SourceOne Auditing and Reporting Installation and Administration Guide*
- *SourceOne Management Pack for Microsoft System Center Operations Manager Guide*
- *SourceOne Search User Guide*
- *SourceOne Disaster Recovery Solution Guide*
- *SourceOne 7.0 and later SNMP Trap Monitoring Solution Technical Notes*

SourceOne Discovery Manager:

- *SourceOne Discovery Manager Installation and Administration Guide*
- *SourceOne Discovery Manager Desktop User Guide*
- *SourceOne Discovery Manager Web Application User Guide*
- *SourceOne Discovery Manager Release Notes*
- *SourceOne Discovery Manager Localized Product Release Notes*
- *SourceOne Discovery Manager Desktop Quick Reference Cards*

SourceOne for File Systems:

- *SourceOne for File Systems Installation Guide*
- *SourceOne for File Systems Administration Guide*
- *SourceOne for File Systems Release Notes*

SourceOne Offline Access:

- *SourceOne Offline Access Installation and Administration Guide*
- *SourceOne Offline Access User Guide*
- *SourceOne Offline Access Release Notes*

SourceOne Archiving for Microsoft SharePoint:

- *SourceOne Archiving for Microsoft SharePoint Installation Guide*
- *SourceOne Archiving for Microsoft SharePoint Administration Guide*
- *SourceOne Archiving for Microsoft SharePoint Release Notes*
- *SourceOne Archiving for Microsoft SharePoint Archive Search Quick Reference Card*

SourceOne for Microsoft SharePoint Storage Management:

- *SourceOne for Microsoft SharePoint Storage Management Installation Guide*
- *SourceOne for Microsoft SharePoint Storage Management Administration Guide*
- *SourceOne for Microsoft SharePoint Storage Management Release Notes*

SourceOne Email Supervisor:

- *SourceOne Email Supervisor Installation Guide*
- *SourceOne Email Supervisor Administration Guide*
- *SourceOne Email Supervisor Web Application (Reviewer and Reports) Guide*
- *SourceOne Email Supervisor Release Notes*

Special notice conventions that are used in this document

The following conventions are used for special notices:

i | **NOTICE** Identifies content that warns of potential business or data loss.

i | **Note:** Contains information that is incidental, but not essential, to the topic.

Typographical conventions

The following type style conventions are used in this document:

Table 2 Style conventions

Bold	Used for interface elements that a user specifically selects or clicks, for example, names of buttons, fields, tab names, and menu paths.
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Table 2 Style conventions (continued)

	Also used for the name of a dialog box, page, pane, screen area with title, table label, and window.
<i>Italic</i>	Used for full titles of publications that are referenced in text.
Monospace	Used for: <ul style="list-style-type: none"> • System code • System output, such as an error message or script • Pathnames, file names, file name extensions, prompts, and syntax • Commands and options
<i>Monospace italic</i>	Used for variables.
Monospace bold	Used for user input.
[]	Square brackets enclose optional values.
	Vertical line indicates alternate selections. The vertical line means or for the alternate selections.
{ }	Braces enclose content that the user must specify, such as x, y, or z.
...	Ellipses indicate non-essential information that is omitted from the example.

You can use the following resources to find more information about this product, obtain support, and provide feedback.

Where to find product documentation

- <https://www.dell.com/support>
- <https://community.emc.com>

Where to get support

The Support website <https://www.dell.com/support> provides access to product licensing, documentation, advisories, downloads, and how-to and troubleshooting information. The information can enable you to resolve a product issue before you contact Support.

To access a product-specific page:

1. Go to <https://www.dell.com/support>.
2. In the search box, type a product name, and then from the list that appears, select the product.

Knowledgebase

The Knowledgebase contains applicable solutions that you can search for either by solution number (for example, KB000xxxxxx) or by keyword.

To search the Knowledgebase:

1. Go to <https://www.dell.com/support>.
2. On the **Support** tab, click **Knowledge Base**.
3. In the search box, type either the solution number or keywords. Optionally, you can limit the search to specific products by typing a product name in the search box, and then selecting the product from the list that appears.

Live chat


To participate in a live interactive chat with a support agent:

1. Go to <https://www.dell.com/support>.
2. On the **Support** tab, click **Contact Support**.
3. On the **Contact Information** page, click the relevant support, and then proceed.

Service requests

To obtain in-depth help from Licensing, submit a service request. To submit a service request:

1. Go to <https://www.dell.com/support>.
2. On the **Support** tab, click **Service Requests**.

 **Note:** To create a service request, you must have a valid support agreement. For details about either an account or obtaining a valid support agreement, contact a sales representative. To find the details of a service request, in the `Service Request Number` field, type the service request number, and then click the right arrow.

To review an open service request:

1. Go to <https://www.dell.com/support>.
2. On the **Support** tab, click **Service Requests**.
3. On the **Service Requests** page, under **Manage Your Service Requests**, click **View All Dell Service Requests**.

Online communities

For peer contacts, conversations, and content on product support and solutions, go to the Community Network <https://community.emc.com>. Interactively engage with customers, partners, and certified professionals online.

How to provide feedback

Feedback helps to improve the accuracy, organization, and overall quality of publications. You can send feedback to DPAD.Doc.Feedback@emc.com.

CHAPTER 1

SourceOne Overview

This section provides an overview of SourceOne. The following topics are in this section:

- [Introduction to SourceOne](#)..... 22
- [SourceOne system overview](#)..... 23
- [SourceOne user roles](#)..... 25
- [Overview of the Dell EMC SourceOne Email Management documentation set](#)..... 26
- [Other products used with SourceOne](#)..... 28

Introduction to SourceOne

SourceOne is an enterprise solution that you can use to archive content from email, file, and Microsoft SharePoint servers and can help you comply with legal requirements for archiving.

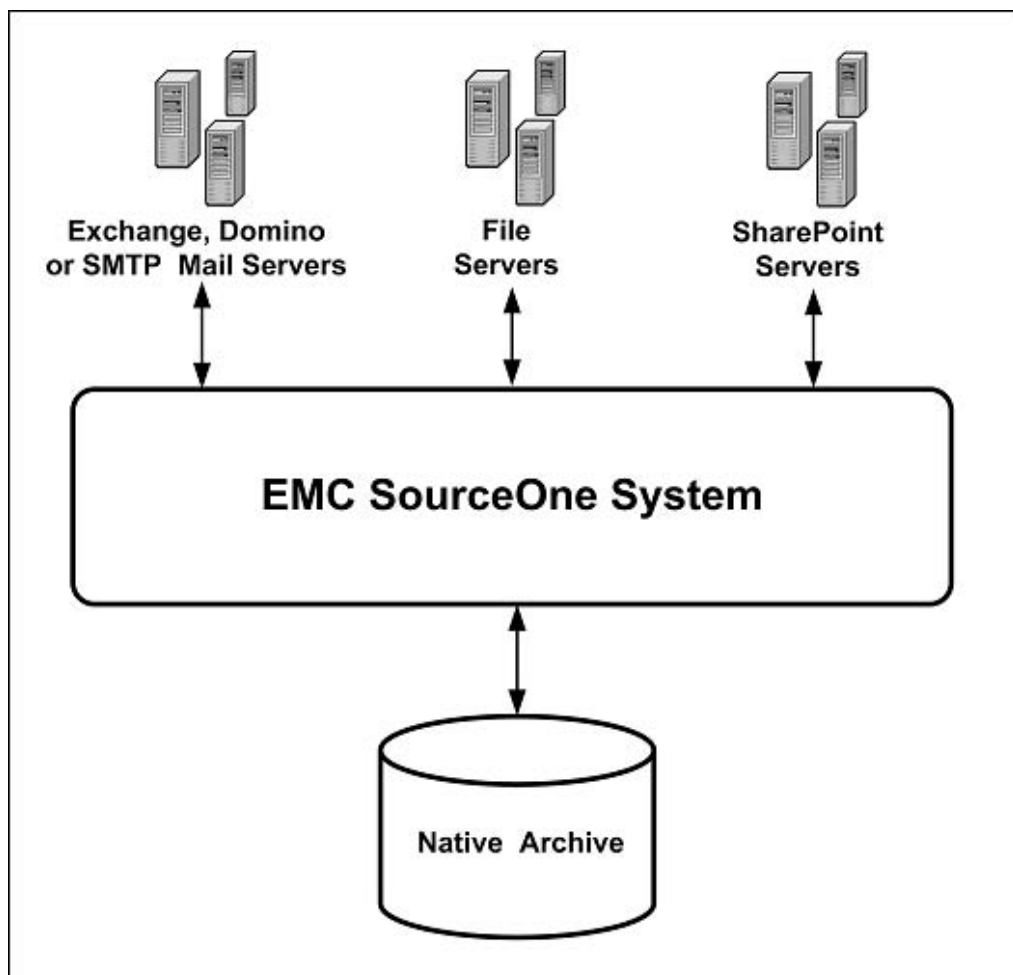
SourceOne archives and organizes content from Microsoft Exchange (Office 365 and local servers), IBM Domino, and SMTP mail servers, as well as from Microsoft SharePoint servers and file servers. Archived content is stored in the SourceOne Native Archive.

The types of content you can process depends on what SourceOne products you are using:

- Email content can be processed when you use SourceOne Email Management.
- Microsoft SharePoint content can be processed when you add SourceOne Archiving for Microsoft SharePoint to an SourceOne existing Email Management environment.
- File content can be processed when you add SourceOne for File Systems to an existing SourceOne Email Management environment.

These components appear in this figure.

Figure 1 SourceOne system overview



SourceOne system overview

You archive content, such as Microsoft SharePoint documents, IBM Domino or Microsoft Exchange email messages, or files from various sources by creating SourceOne activities.

Activities are used to perform most SourceOne processing, such as archiving messages. You create activities in the SourceOne console. After an activity is created, SourceOne work units, called jobs are created from that activity to run on one or more computers within the SourceOne system, called Worker Servers. Information about activities, jobs, and other components is stored within the activity database.

The following steps summarize how SourceOne components work together to archive content.

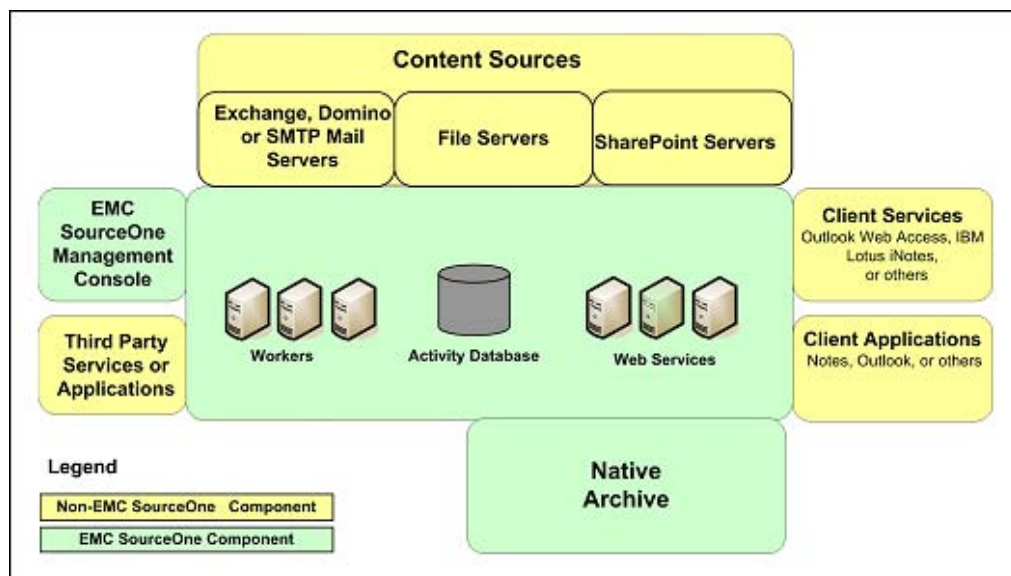
1. The SourceOne administrator using the SourceOne console creates the activity. An example of an activity would be the Journaling activity, which can be used to archive messages from a mail server, such as a Microsoft Exchange or IBM Domino mail server.
2. After an activity is created, the activity is stored in the activity database. Jobs are generated automatically to perform the work of the activity and those jobs are stored in the activity database as well.
3. Periodically, Worker Servers check the activity database for jobs they can perform. Not all Workers may be configured to perform all jobs. If a matching job is found, that job is then run on the Worker Server.

SourceOne system components

This section provides a more in-depth view of the SourceOne system components that have already been discussed and introduces additional lower-level components.

This figure displays the relationship between the SourceOne components.

Figure 2 SourceOne system components



Content sources

SourceOne can archive content from multiple sources, such as a Microsoft SharePoint server, a file server, or a mail server.

Supported mail server sources include Microsoft Exchange or IBM Domino mail servers, as well as SMTP mail servers or Instant Messaging proxy servers.

Refer to the *SourceOne Email Management Installation Guide* about SourceOne Email Management capabilities.

Refer to the *SourceOne Archiving for Microsoft SharePoint Administration Guide* for information about Microsoft SharePoint content archiving capabilities.

Refer to the *SourceOne for File Systems Administration Guide* for information about file archiving capabilities.

Content archives

SourceOne allows you to transparently manage and archive content using a wide array of storage devices, such as Dell EMC Centera or Dell EMC Symmetrix.

You can use SourceOne to manage content that is archived in the SourceOne Native Archive.

The Native Archive is a scalable and flexible archive technology that is shipped with SourceOne. The Native Archive can be configured to use a single computer, or more typically, to use many computers. The computers that are used as part of the Native Archive are referred to as Native Archive Servers.

You configure the Native Archive by configuring each of the Native Archive Servers to perform one or more server roles. These roles are: archive server, index server, search server, and retrieval server. These roles allow you to have the flexibility of having more servers for processing roles that you use often and fewer servers for roles you use less frequently.

SourceOne console

The SourceOne administrator uses the SourceOne console to configure and manage the SourceOne system. The SourceOne console is implemented as a Microsoft Management Console (MMC) 3.0 snap-in.

SourceOne web services

The SourceOne Web services enable SourceOne to support Web-based components, such as Search, the Outlook Web Access (OWA) mail client, the IBM Domino Web Access (DWA) mail client, and others.

Client applications

Client applications that work with SourceOne include IBM Lotus Notes, Microsoft Outlook, and others.

Client services

Client services that work with SourceOne include the Microsoft Outlook Web Access (OWA) mail client, the IBM Domino Web Access (DWA) mail client, and others.

SourceOne user roles

SourceOne can be used in several ways by several types of users. Each of these users may have one or more roles, from an SourceOne search user role to an SourceOne administrator role.

Depending on the size of the organization, each role may be assigned to a different individual or several roles may be assigned to a single individual. The following list describes the primary SourceOne user roles:

- **Compliance manager**—Defines regulatory compliance across the organization. The compliance manager defines corporate content policies, such as how long to retain content. Consult these policies when configuring the SourceOne system.
- **Email user**—Views, composes, and manages their messages using an email client, such as Notes or Outlook. The email user may search the SourceOne archives for messages, or if they are an Outlook user, select individual messages that they receive to SourceOne archives.
- **SharePoint user**—Views and manages Microsoft SharePoint documents. The SharePoint user may search the SourceOne archives for documents using Archive Search.
- **File user**—Views and manages files. The file user may search the SourceOne archives for files using SourceOne Search.
- **SourceOne administrator**—Manages and maintains the SourceOne installation after it is installed. This person performs maintenance and management tasks and customizes the system as needed for their environment. This person may also be the IBM Domino server, Microsoft Exchange server, or Microsoft SharePoint server administrator.
- **SourceOne installer**—Performs the initial installation and configuration of the SourceOne system. This person is often also the SourceOne administrator.
- **SourceOne legal compliance user**—Uses SourceOne Search capabilities to comply with legal requirements for archiving or discovery. Usually, this person uses the SourceOne Search capabilities as a starting point and may also use more specialized search products.
- **SourceOne Search user**—Is someone who uses SourceOne Search capabilities to find content that SourceOne archives. Microsoft SharePoint users may also use Archive Search.

Overview of the Dell EMC SourceOne Email Management documentation set

The SourceOne Email Management documentation is composed of the following books:

- *SourceOne Email Management Installation Guide*
Describes how to plan for and install SourceOne software, including SourceOne Email Management and archiving software. This book also contains platform information for use when installing other SourceOne products, such as SourceOne for Microsoft SharePoint or SourceOne for File Systems.
- *SourceOne Email Management Administration Guide*
Describes how to use, configure, troubleshoot, and manage the SourceOne Email Management software. Most of the content of this book is also available in the SourceOne Console online help.

After you have installed SourceOne Email Management, you can also install other SourceOne products. Refer to the documentation for those products for more information:

- SourceOne Discovery Manager
- SourceOne Email Supervisor
- SourceOne Offline Access
- SourceOne Archiving for Microsoft SharePoint
- SourceOne for Microsoft SharePoint Storage Management
- SourceOne for File Systems
- *SourceOne Search User Guide*
Includes information about how to use Search to search for content that has been archived. Most of the content of this book is also available in the Search online help.
- *SourceOne Auditing and Reporting Installation and Administration Guide*
Includes information about SourceOne auditing and reporting features.
- *SourceOne Disaster Recovery Solution Guide*
Includes information about how to implement a disaster recovery configuration for supported SourceOne products.
- *SourceOne Management Pack for Microsoft System Center Operations Manager Guide*
Includes information about using SourceOne products with Microsoft Systems Center Operations Manager.
- *SourceOne Email Management Release Notes*
Describes supplemental information about SourceOne Email Management.
- *SourceOne Email Management Localized Product Release Notes*
Describes supplemental localization information about the SourceOne product language support, including SourceOne Email Management, Microsoft SharePoint archiving, and file archiving.
- *SourceOne Products Compatibility Guide*
Describes the components, operating systems, and products that are supported for use with SourceOne products.
- *SourceOne Products Security Configuration Guide*
Includes information about security configuration.

Selecting what to read based on the role

The documentation for SourceOne is intended for several audiences with several roles. Read the portions that are intended for the roles you perform in the organization.

Refer to the roles in this table for a list of what portions of the documentation to read.

Table 3 Guide to using the documentation by role

If the role is _____	Read the following
All roles	All SourceOne product users must read this section which provides an introduction to the SourceOne products and introduces key concepts.
Email, Microsoft SharePoint, or file content end user	End users are not required to read the SourceOne documentation. However, the SourceOne product administrator must provide an overview of the SourceOne product features being used that impact end users. For example, if shortcuts are enabled, the administrator must explain the local shortcutting policy to end users.
Compliance manager	Compliance managers must be aware of the settings of the SourceOne system that have something to do with the corporate compliance policies and know how to review and change the settings.
SourceOne administrator	SourceOne Email Management administrators can determine what portions of this guide to read based on what content is being archived at their site. If other SourceOne products are installed, the administrator must read the administration documentation for those products as well.
SourceOne installer	<p>Users who install SourceOne Email Management must read the following:</p> <ul style="list-style-type: none"> • To install, refer to the <i>SourceOne Email Management Installation Guide</i> which describes how to install the SourceOne Email Management software. • To perform certain initial configuration and creation tasks to have a fully functional SourceOne Email Management system, refer to Planning and Initializing Content Processing section.
SourceOne legal compliance user	Users who want to perform searches of messages in the SourceOne Email Management archive for the purposes of compliance with email policies and regulations can use Discovery Manager if it is available. See the <i>SourceOne Discovery Manager User Guide</i> for more information.
SourceOne search user	Users who want to perform searches for messages in the SourceOne Email Management archive can refer to the online help within Search or read the <i>SourceOne Search User Guide</i> .

Other products used with SourceOne

The following list contains Dell EMC products that you can use to enhance the capabilities of the SourceOne Email Management system:

- **SourceOne for Microsoft SharePoint**
Adds support for Microsoft SharePoint archiving to the SourceOne Email Management system.
- **SourceOne for File Systems**
Adds support for file archiving to the SourceOne Email Management system.
- **SourceOne Discovery Manager**
Provides collection, hold, and export capabilities in response to a regulatory notice or corporate policy request for email that SourceOne Email Management archives. Discovery Manager is a separate, chargeable application option to SourceOne Email Management.
- **SourceOne Offline Access**
Provides a seamless experience to the user when retrieving shortcut messages in Microsoft Outlook. Also, you can configure SourceOne Offline Access to cache messages on users' hard drives so that users can retrieve messages when they are not connected to the network.
- **SourceOne Kazeon eDiscovery**
Enables organizations to efficiently and cost-effectively classify, manage, and retrieve data.
- **SourceOne In Place Migration Services**
A separate toolset that you can purchase to perform an In Place Migration of EmailXtender data to SourceOne Email Management.
- **DiskXtender for Windows**
Allows you to extend the capacity of SourceOne Email Management storage by automatically writing SourceOne Email Management archives to other storage media and network devices.
- **SourceOne Email Supervisor**
Enables an organization to monitor inbound and outbound email for compliance with corporate policies, as well as NASD regulations and governance mandates for email that SourceOne Email Management archives. Email Supervisor is an add-on product in the Dell EMC SourceOne family.

CHAPTER 2

Planning and Initializing Content Processing

The following sections describe how to plan and perform the initial configuration of the various parts of the SourceOne software:

- [Overview of the initialization tasks](#)..... 30
- [Verify and configure the environment for SourceOne](#)..... 30
- [Initialize the archive](#)..... 39
- [Associate mapped folders with the archive](#)..... 39
- [Review supported mail environments](#)..... 39
- [Create policies and activities](#)..... 39

Overview of the initialization tasks

After SourceOne has been installed, there are initialization tasks that must be performed before you can archive content from a Microsoft SharePoint server or an email server.

Before you begin

These tasks occur in the following order.

Procedure

1. Verify that the software environment on the Worker Servers and the Master Server are configured correctly for SourceOne.
2. Initialize an archive that contains the content to be archived.
3. Create the mapped folders that are used to access the content in the archive.
4. Review, and if required modify, the list of supported mail systems in the Global Settings dialog box of the SourceOne console to ensure that they match the environment.
5. Create the policies and activities (and email rules if used) that are used to archive content.

Verify and configure the environment for SourceOne

Verify that the software environment on the Worker Servers, the Master Server, and the Native Archive Servers are configured correctly for SourceOne.

Specifically, verify that the following tasks have been performed:

- If antivirus software is installed on a Worker Server, a Master Server, or a Native Archive Server, verify that the antivirus software is configured to work with SourceOne.
- If SourceOne is being used with Microsoft Exchange, verify that the Microsoft Exchange Active Directory environment is configured to work with SourceOne.
- If SourceOne processes Microsoft Exchange PST files in a Microsoft Exchange resource forest Active Directory configuration, verify that any needed additional tasks have been performed.
- Review the network ports that are used by SourceOne to ensure they do not conflict with other applications used by the organization.
- Verify that all computers in the environment are synchronized to ensure that there are no timing issues.

Configure antivirus software, if used

The following antivirus software can be used with Dell EMC SourceOne software:

- Symantec® Norton AntiVirus® Corporate Edition.
- McAfee® VirusScan® Enterprise.

This list of antivirus software is not exhaustive. Other antivirus software packages may also work.


When using antivirus software with Dell EMC SourceOne and archiving content from a mail server, install the antivirus software on the mail server, such as an IBM Domino mail server, or a Microsoft Exchange mail server.

Be aware that messages that contain viruses may cause errors and not be processed. For example, if a shortcut activity is run against a message containing a virus, an error is generated indicating `Shortcut failed`. Dell EMC SourceOne does not shortcut messages containing a virus.

If possible, do not install antivirus software on the Master Server, Worker Servers, or Native Archive Servers. If company policy requires you to install antivirus software on the Dell EMC SourceOne servers, configure that software as described in the following sections.

Configuring antivirus software on a mail server using SourceOne

When antivirus software is installed on an IBM Domino or Microsoft Exchange mail server, the antivirus software may remove infected messages in one or more SourceOne journaling mailboxes (databases) for that mail server, resulting in that message not being archived.

 **Note:** If you have antivirus software that is causing issues with the SourceOne software, please contact Dell EMC Technical Support.

Configuring antivirus software on a SourceOne Master Server, Worker Server, or Native Archive Server

Installing antivirus software and the mail server is recommended. Installing antivirus software on the Master Server, Worker Server, or Native Archive Server is not recommended.

Using antivirus software on a SourceOne server can affect the performance of SourceOne and cause processing problems.

When antivirus software is installed on a SourceOne server, the antivirus software may remove or modify infected messages while SourceOne processes them.

If the environment requires that antivirus software be installed on the SourceOne servers, configure the antivirus software as follows to avoid problems with the SourceOne software.

For Master Servers, Worker Servers or Native Archive Servers:

- Disable virus scanning on any Microsoft Exchange or IBM Domino email clients, such as Microsoft Outlook or Lotus Notes, that are installed on the SourceOne server.
- Disable SMTP scanning on the SourceOne server.
- Disable virus scanning on the directories and subdirectories where the SourceOne software is installed or that the SourceOne software uses, including:
 - The directory and subdirectories where the SourceOne software is installed.
 - The Native Archive:
 - work directory and subdirectories.
 - message center directory and subdirectories.
 - folder volume directory and subdirectories.
 - index directory and subdirectories.
 - If processing Office 365 email (Microsoft Exchange Online) content, those processing directories. These directories are:
 - Any source folder that the SourceOne File Mover agent uses. It is typically the SMTP drop directory that is used by IIS.
 - Any target folder that is used by the SourceOne File Mover agent. The administrator defines these folders.
 - The Journaling issues folder that is used by the SourceOne File Mover agent. The administrator defines this folder.

This process is the simplest and easiest way to protect SourceOne from potential antivirus software problems.

Configuring SourceOne for a Microsoft Exchange Active Directory environment

SourceOne works with Microsoft Exchange servers that are installed in several Active Directory environments. SourceOne requires that all the Microsoft Exchange servers be installed in the same Microsoft Exchange organization.

The following table lists the types of Exchange Active Directory configurations, and how SourceOne supports each.

Table 4 Active Directory forest configurations

Active Directory forest configuration	SourceOne configuration
<p>Single Forest A single Active Directory forest containing one or more domains. Each domain contains one or more Microsoft Exchange servers. A common global address list (GAL) is used for all domains. The list is the simplest topology and Microsoft recommends it in the document Active Directory Forest Topologies.</p>	<p>SourceOne supports single or multiple domains in a single forest as described in the <i>SourceOne Email Management Installation Guide</i>.</p>
<p>Multiple Forests (Microsoft Exchange Resource Forest) Multiple Active Directory forests are used. One forest is dedicated to running Microsoft Exchange and hosting Microsoft Exchange mailboxes. The user accounts associated with the mailboxes are contained in one or more other separate forests. This configuration is also known as a Dedicated Microsoft Exchange Forest configuration.</p>	<p>Only install SourceOne Offline Access in the forests not containing the Microsoft Exchange server. All SourceOne components must be installed in the same Active Directory forest as the Microsoft Exchange server. See the <i>SourceOne Email Management Installation Guide</i> for information about installing these components.</p>
<p>Multiple Forests (Microsoft Exchange Cross-Forest) Multiple Active Directory forests are used. Each forest contains a Microsoft Exchange server and the user accounts for users of that Microsoft Exchange server. This configuration has several disadvantages and requires extensive synchronization of active directory objects across forests and requires replication of other data.</p>	<p>SourceOne does not support this configuration. Only the Microsoft Exchange Resource Forest configuration is supported for multiple Active Directory forests.</p>

For more information about Microsoft Exchange and Active Directory configurations, consult the following Microsoft documentation:

- Active Directory Forest Topologies.
- Microsoft Exchange Server 2007, Connecting Forest Topologies.
- Planning to Deploy Microsoft Exchange in a Multiple Forest Environment.

Configuring Microsoft Exchange .pst file processing across Active Directory forests

The procedure for processing .pst files differs depending on whether you are processing within a single Active Directory forest or across multiple forests.

To process Microsoft Exchange .pst files within a single Active Directory forest, use SourceOne.

To process .pst files that are spread across multiple forests, the tasks in the following sections.

Selecting an option for multiple forest .pst file processing

In a Microsoft Exchange resource forest configuration, user accounts and user computers exist in one or more forests, referred to as user forests, and the Microsoft Exchange server and SourceOne exist in the resource forest.

The Worker Server must access not only SourceOne components in the resource forest, but also .pst files and mail accounts on computers in a user forest.

There are two options for accessing .pst files to perform PST operations in a Microsoft Exchange resource forest configuration:

- Move the .pst files to be processed from the user forest to a network share in the resource forest.
- Configure a Worker Server specifically to process .pst files in the user forest as a user in the user forest.

Option 1: Move .pst files to a share in the resource forest

If the .pst files to be processed are in a known location, move these files to a network share within the resource forest.

See the *SourceOne Email Management Installation Guide* for information about how to configure the permissions for accessing PST files on such a share using SourceOne.

Moving the files into the resource forest allows the Worker Server to access these files without performing any additional configuration of SourceOne.

If the .pst files are not in a known location, or you cannot move them into the resource forest for other reasons, use the option that is described in the following section.

Option 2: configure Worker to run under the identity of a user in the user forest

Use this option to process .pst files in a resource forest configuration if the location of the .pst files is unknown or the .pst files cannot be moved from the user forest to the resource forest.

Using this option, the Worker Server is configured to work solely with .pst files and runs as a user in the user forest so that it can access the .pst files in the user forest. This Worker Server cannot run other non-PST activities after it has been configured to process files in a user forest.

Perform the tasks in the following sections to configure the Worker Server.

Before installing the Worker Server to process .pst files

Before installing the Worker Server for remote user forest .pst processing, perform the following tasks.

Procedure

1. In **Active Directory**, select or create a service account that is a user in the user forest. Be sure this user account has adequate access permissions to enumerate the computers or shares containing the .pst files in the user forest.
2. In **Active Directory**, create a security group and add the user that you created in step 1 to that group.
3. Assign SQL permissions to the user account you created in step 1. These permissions are described in the *SourceOne Email Management Installation Guide*.
4. Add the user account that you selected or created in step 1 from the user forest to the local administrators group on the Worker Server computer.
5. Log in to the Worker as the user from the user forest as described in step 1.

6. Create the Outlook profile as described in the *SourceOne Email Management Installation Guide*.

The Outlook profile must be configured to use an account that has adequate permissions to open .pst files and enumerate the GAL (Global Address List). Also, verify that the profile can open the owner mailboxes that it should access. See the *SourceOne Email Management Installation Guide* for more information about the permissions that the SourceOne Outlook profile needs.

7. Install the Worker Server.

Installing the Worker Server

Perform the following steps to install the Worker Server to process .pst files in the user forest.

Procedure

1. Install the Worker on a computer in the Microsoft Exchange Resource forest as described in the *SourceOne Email Management Installation Guide*.
 - a. When prompted by the install to configure the service account, specify the user from the user forest that you selected or created.
 - b. When prompted by the install, specify the security group in which you placed that user account. this specification is the security group that you selected or created.
2. After you have completed the installation and rebooted the server, confirm in the event log (or in the service control manager) that the dispatcher service started successfully. If the dispatcher service does not start, review the previous steps to ensure that no errors were made.
3. Configure the .pst file processing Worker Server.

Configuring the Worker Server

After the Worker Server is installed, configure it using the SourceOne console.

About this task

Perform the following steps.

Procedure

1. Verify that the Worker Server was installed.
2. Select the types of activities that the Worker Server is permitted to perform. These activities are to include only one or more of the following .pst activities:
 - **Archive—Personal Mail Files**
 - **Find—Microsoft Office Outlook .PST**
 - **Migrate—Microsoft Office Outlook .PST**
3. If the **Migrate—Microsoft Office Outlook .PST** activity is used, verify that the user account has permissions that allow it to open the target mailboxes that are used to migrate the shortcut messages.

Configuring SourceOne Search to work across forests

This configuration is only necessary if you want to permit users to run use the SourceOne Search application within the resource forest and search, retrieve, and shortcut messages in the user forest.

About this task

To allow users to use **Search** to search, retrieve, and shortcut messages in the user forest within the Microsoft Exchange resource forest, the Search user must log in as a remote user from the

user forest. A remote user prefixes their username with the remote domain from the user forest, for example, `MyRemoteDomain\MyUsername`.

Perform the following steps to enable the ability to specify a remote domain when logging in to Search.

Procedure

1. On each Worker Server in the resource forest on which the web services software is installed, select **Administrative Tools > Computer Management** from the **Start** menu. The **Computer Management** application appears.
2. Expand the **Services and Applications** node in the **navigation** pane on the left side to display the **Internet Information Services** node.
3. Expand the **Internet Information Services** node to display the **Web Sites** node.
4. Expand the **Web Sites** node to display the **Default Web Site** node.
5. Expand the **Default Web Site** node to display the **SearchWS** node.
6. Select the **SearchWS** node and select **Properties** from the **Action** menu. The **SearchWS Properties** page appears.
7. Select the **ASP.NET** tab. On this tab, click **Edit Configuration**. The **ASP.NET Configuration Settings** page appears.
8. In the **Application settings** area, select the **ExSearchConfig.UseResourceForest** key and click **Edit**. An unnamed dialog box appears.
9. Change the displayed value from **false** to **true** and click **OK**. The unnamed dialog box closes.
10. Click **Apply** on the **ASP.NET Configuration Settings** page to apply the change to the system.
11. Click **OK** to close the **ASP.NET Configuration Settings** page.
12. Click **OK** to close the **Search WS Properties** page.
13. Select **Exit** from the **File** menu on the **Computer Management** application to close that application.

Reviewing network ports used

A variety of network ports are used by SourceOne and by other components of the content archiving environment.

This section lists the ports that are used by SourceOne and the ports that are typically used by other common components in the environment.

Check these lists of ports to ensure that there are no conflicts with other software on the system. If there is conflict, contact the network administrator to determine which ports to change.

For a complete list of port number assignments that are used for various purposes, consult the following documents that are available on the web:

- The **Internet Assigned Numbers Authority** list
- The Microsoft document **Service overview and network port requirements for the Windows Server system**

The following table lists the network ports that are used by or with SourceOne.

Table 5 SourceOne network ports

Port Number	Protocol/used by	Port usage
80	HTTP	Used by:

Table 5 SourceOne network ports (continued)

Port Number	Protocol/used by	Port usage
		<ul style="list-style-type: none"> • SourceOne web services. • Web browsers to connect to web sites. • Outlook web Access client applications to connect to a front end Microsoft Exchange server. • IBM Domino web Access client applications to connect to an IBM Domino server. <p>Port 8080 is an accepted alternate for port 80 for most uses.</p>
389	LDAP	Used by SourceOne to support LDAP queries. Also used by LDAP client applications to access an LDAP server.
443	HTTPS	<p>Used by:</p> <ul style="list-style-type: none"> • SourceOne web services. • Web browsers connecting securely to Websites. • Secure Outlook web Access client applications to connect to a front end Microsoft Exchange server. • IBM Domino web Access client applications to connect to an IBM Domino server securely. • SourceOne console to access the CTA console.
636	Secure LDAP	Used by SourceOne to support LDAP queries. Also used by secure LDAP client applications to access a directory service.
8080	HTTP	An alternate HTTP port for port 80. Refer to the description of port 80 for usage information.

Table 5 SourceOne network ports (continued)

Port Number	Protocol/used by	Port usage
1024–65535	SourceOne (DCOM)	SourceOne uses DCOM. DCOM communicates using port numbers that are chosen at random in the range of 1024 to 65535.

The following table lists other common network ports that are used by messaging components.

Table 6 Other common network ports

Port number	Protocol/used by	Port usage
25	SMTP	Used by POP3 or IMAP client applications to send SMTP messages.
110	POP3	Used by POP3 client applications to download messages from mail servers.
119	NNTP	Used by NNTP client applications to access news group servers.
143	IMAP4	Used by: <ul style="list-style-type: none"> • IMAP client applications to access IMAP servers. • IMAP client applications to access Microsoft Exchange public folders and personal folders in the default public folder tree.
465	Secure SMTP	Used by POP3 or IMAP4 client applications to send outgoing messages securely to a secure SMTP server.
563	Secure NNTP	Used by secure NNTP client applications to access news group servers.
993	Secure IMAP4	Used by: <ul style="list-style-type: none"> • Secure IMAP4 client applications to access IMAP servers. • Secure IMAP client applications to access their Microsoft Exchange personal folders and

Table 6 Other common network ports (continued)

Port number	Protocol/used by	Port usage
		public folders in the default public folder tree.
995	Secure POP3	Used by secure POP3 client applications to download messages from their mail servers.
1352	TCP/IP	Used by IBM Domino clients to access the IBM Domino server.
3268	LDAP	Used by Microsoft Exchange servers to query the Microsoft Global Catalog Server.
8080	HTTP	<p>An alternate HTTP port that is used by:</p> <ul style="list-style-type: none"> • Web browsers to connect to web sites. • Outlook web Access client applications to connect to a front end Microsoft Exchange server. <p>Port 80 is the primary port for HTTP.</p>

Verify that all computers are synchronized

Ensure that the system time for all Windows computers in the SourceOne system (Master, Worker, archive server, database server, Microsoft SharePoint servers, and so on) are synchronized. Typically, this synchronization is done using the Windows Time Service. This service continually synchronizes the system time of all computers with an authoritative computer (typically the domain controller).

Initialize the archive

After installing SourceOne, connect one or more archives to SourceOne. These archives may already be configured, or may need to be configured.

Associate mapped folders with the archive

After connecting and configuring the archive, associate mapped folders with archive folders in the archive to use it. Mapped folders allow you to handle content in the same way, regardless of what type of archive is used.

Review supported mail environments

Review, and if required modify the list of supported mail systems in the Global Settings dialog box of the SourceOne console to ensure that they match the environment.

This list controls which mail system processing activities are displayed in the SourceOne console.

Create policies and activities

After you have performed the previous initialization tasks, you can create policies and activities to cause content to be processed. Policies must be created to contain activities before the activities can be created.

- Refer to [Managing Organizational Policies](#) on page 213 for information about how to create a policy.
- Refer to [Configuring Email Activities](#) on page 323 for information about how to create SourceOne Email Management activities. When you create an email activity, you also select rules that are used to select the messages the activity processes. Refer to [Using Rules](#) on page 467 for information about how to create rules within activities.
- Refer to the *SourceOne Archiving for Microsoft SharePoint Administration Guide* for information about how to create Microsoft SharePoint content processing activities.
- Refer to the *SourceOne for File Systems Administration Guide* for information about how to create file content processing activities.

CHAPTER 3

Using the Dell EMC SourceOne Console

The following section describes how to use the Dell EMC SourceOne Console to manage the Dell EMC SourceOne system:

- [Introduction](#)42
- [Starting the SourceOne console](#).....42
- [Overview of the SourceOne Console interface](#).....43
- [Working with a Microsoft Management Console snap-in](#).....44
- [Sequence of tasks for a new installation](#).....46

Introduction

Use the SourceOne Console to configure and manage the following:

- Archives—Connect archives to SourceOne in preparation for associating mapped folders with archive folders.
- Native Archive folders—Create archive folders in the Native Archive, view the list of archive folders, and view archive folder properties.
- Mapped folders—Create mapped folders and associate them with archive folders in archives, view the list of mapped folders, and view mapped folder properties.
- Application and web server settings—Specify email environments, specify a URL for shortcut resolution (Microsoft Exchange), and set search defaults.
- Policies—Create organization policies to group related activities, view the list of policies, view the activities in a policy, edit policies, and delete policies.
- Activities—Configure activities to:
 - Journal and archive email in real-time for Microsoft Exchange, IBM Domino, and internet (SMTP) mail. This journaling and archiving is not done when the mail server receives email, but at regular intervals when the mail server is checked for new messages.
 - Archive email from selected mailboxes, PST files, and NSF files, which are based on a schedule.
 - Search for .pst files across a network.
 - Shortcut messages.
 - Update shortcuts.
 - Archive File content.
 - Archive Microsoft SharePoint content.
- Rules—Create rules to filter email messages, view the list of rule criteria that are used, edit rules, and delete rules.
- Jobs—View and filter the list of jobs, and control the status of jobs.
- Worker Servers—View a list of Workers, specify the types of jobs each Worker can run, specify the polling time, and control the status of Workers.
- Worker Groups—Create Worker groups to group Worker Servers, view the list of Worker groups, and view Worker group properties.

Starting the SourceOne console

Complete the following procedure to start the SourceOne console.

Procedure

1. Perform one of the following steps:
 - On the desktop, double-click the **EMC SourceOne Console** icon.
 - On the **Start** menu, click the **EMC SourceOne Console** icon.
 - Select **Start > All Programs > EMC SourceOne Console**.
2. In an IBM Domino and Notes environment, the first time you start the SourceOne Console, the **Enter Password** dialog box appears. Type the IBM Notes password, and then click **OK**.

On subsequent uses of the console, the login happens automatically if the password is correct and has not changed.

Loading the SourceOne console as an MMC snap-in on a 64-bit system

The Microsoft Management Console (MMC) snap-in for the SourceOne console does not appear in the default 64-bit MMC snap-in list on 64-bit systems because the SourceOne console is a 32-bit application.

Before you begin

Perform the following steps to load the SourceOne console snap-in within the MMC snap-in listing.

Procedure

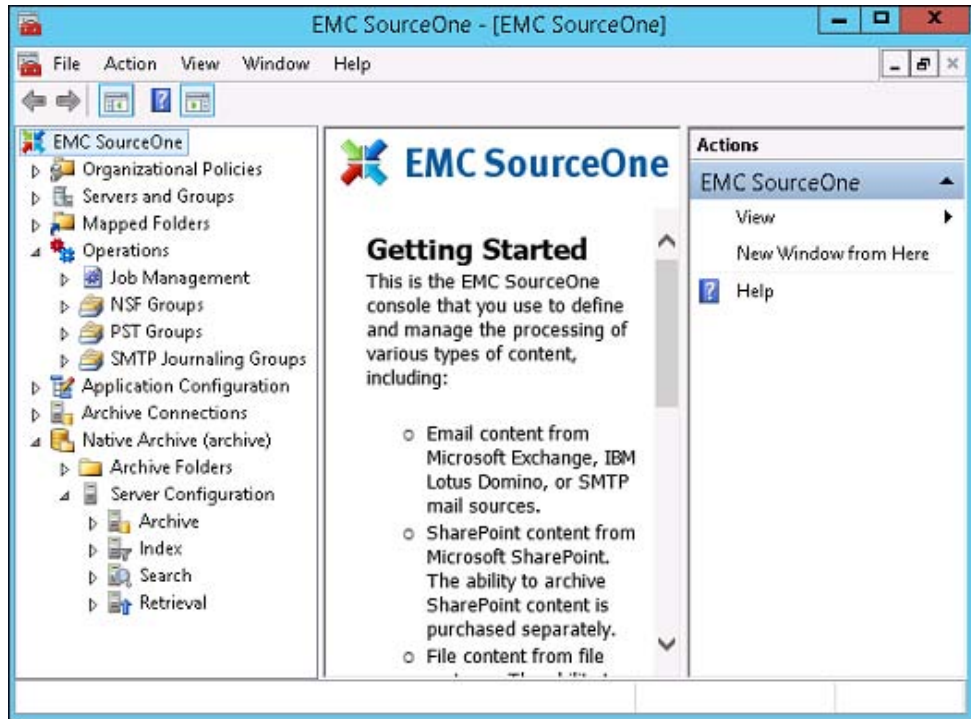
1. Start the console by typing `mmc -32` at the command line or in the **Start > Run** dialog box.
2. Add the SourceOne Console snap-in.

Overview of the SourceOne Console interface

The SourceOne Console has three main areas, which are listed as follows:

- **Tree** (left pane)—Displays expanded nodes.
- **Results** pane (center top)—Displays items when you select a node. When you select an item in the results pane, the bottom half of that pane may display details or additional items.
- **Actions** pane (right)—Displays the actions that you can perform on a selected node in the **Tree** pane, or a selected item in the **Results** pane. The **Actions** pane may display actions for the **Tree** pane and the **Results** pane simultaneously. You can hide the **Actions** pane, and use the **Action** menu or right-click menus instead.

Figure 3 SourceOne Console Main areas



Working with a Microsoft Management Console snap-in

The SourceOne Console is a Microsoft Management Console (MMC) snap-in.

You cannot add other snap-ins to the SourceOne Console.

Viewing, expanding, or collapsing nodes in the tree pane

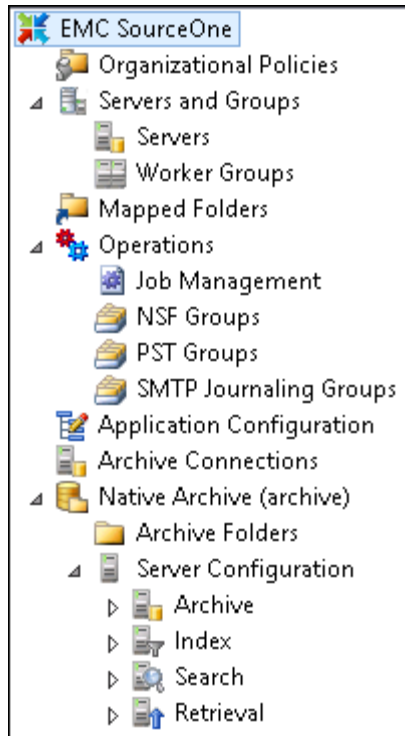
You can view, expand, or collapse the nodes that are shown in the Tree pane.

The nodes and subnodes are described in [Sequence of tasks for a new installation](#) on page 46.

Expanding nodes

Click the plus sign (+) next to a node to expand a node in the **Tree** pane. Child nodes are listed in the **Tree** pane, below parent nodes.

Figure 4 Expanded nodes in the SourceOne console



Viewing nodes

When you click a node in the **Tree** pane, the **Results** pane displays either child nodes or contents of the node.

The columns that are shown vary according to the type of item.

Collapsing nodes

Click the minus sign (-) next to the node to collapse a node in the **Tree** pane.

Sorting columns

You can sort rows of data according to a specific column.

Click a column header to toggle between ascending and descending order. A triangle indicates the sort order.

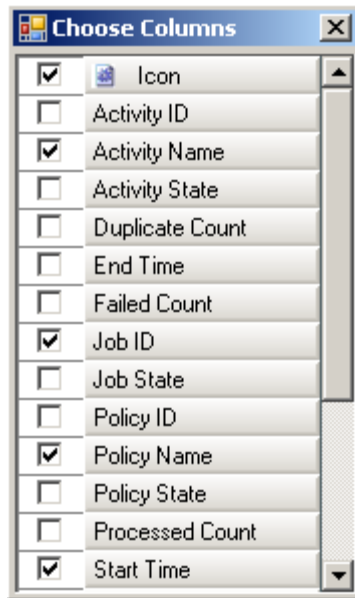
Adding or removing columns

Use the following procedure to add or remove columns in the **Results** pane.

Procedure

1. Select **Action > View > Add/Remove Columns**.
2. To add columns, in the **Choose Columns** dialog box, select the checkbox for each column you want to add. The available columns depend on the node you are viewing.

Figure 5 Choose columns—Jobs



The **Results** pane updates immediately.

3. To remove columns, in the **Choose Columns** dialog box, clear the checkbox for each column you want to remove. The **Results** pane updates immediately.

Rearranging columns

This section includes information about rearranging columns.

To rearrange columns, drag the column header left or right to a new location. Red arrows indicate where to drop the column header.

Refreshing the Results pane

This section includes information about how to refresh the **Results** pane.

Perform one of the following steps:

- Press **F5**.
- In the **Actions** pane, click the **Refresh** icon.

Sequence of tasks for a new installation

The order in which you use the nodes for a new installation is different than the order in which they appear in the SourceOne Console.

The following list describes the nodes in the order in which you use them for a new installation.

- **Archive Connections**—Use to connect the Native Archive to SourceOne.
- **Native Archive**—The **Native Archive** node has the following child nodes:
 - **Server Configuration**:
 - **Archive**

- **Index**
- **Search**
- **Retrieval**

Use the **Server Configuration** child nodes to assign roles to Native Archive servers and configure Native Archive servers.

- **Archive Folders**—Use to create folders in the Native Archive for archiving.
- **Mapped Folders**—Use to create Dell EMC SourceOne mapped folders and associate them with archive folders.
- **Servers and Groups**—Use to configure roles for Worker Servers and to create Worker groups to contain Worker Servers.
- **Application Configuration**—Use to specify settings for applications and web services, including search defaults and the URL used for shortcut resolution.
- **Operations**—The **Operations** node has the following child nodes:
 - **PST Groups**—Use to create groups of:
 - Hosts for PST discovery
 - PST files for PST archiving
 - **NSF Groups**—Use to create groups of NSF files for NSF archiving.
- **Organizational Policies**—Use to create and manage policies and activities.
- **Operations**—The **Operations** node has a **Job Management** child node. Use the **Job Management** node to monitor jobs.

CHAPTER 4

Connecting Archives

The following section describes how to connect an archive for use with Dell EMC SourceOne:

- [Introduction](#)..... 50
- [Prerequisites](#)..... 50
- [Viewing a list of archives](#)..... 50
- [Adding an archive connection](#).....50
- [Modifying archive connection properties](#).....52
- [Deleting an archive connection](#).....53

Introduction

After you have installed the SourceOne system and archiving software that you are planning to use with SourceOne, use the SourceOne Console to connect the SourceOne system to one or more archives.

Prerequisites

Before connecting archives, those archives must exist and contain one or more folders.

After you have connected one or more archives, configure those archives if they are not already configured.

Viewing a list of archives

To view a list of archives in the SourceOne Console, select the **Archive Connections** node. The **Archive Connections** area appears.

The **Archive Connections** area lists the name and type of the archive connections that have been added.

The following list describes the available types of archives:

- Native Archive—A SourceOne Native Archive.
- In Place Migrated Native Archive—A SourceOne Native Archive to be used when performing an in place migration.

SourceOne does not automatically detect archives and add them to the connection list. Only those archives that are explicitly added are listed.

Adding an archive connection

Complete the following procedure to add an archive connection.

Procedure

1. In the Dell EMC SourceOne Console, select the **Archive Connections** node.
2. Select **Action > New Archive Connection**.
3. On the **General** page of the **New Archive Connection** wizard, specify the name and type of the new archive connection.

Figure 6 New Archive Connection wizard General page

The screenshot shows a dialog box titled "New Archive Connection" with a "General" tab. The instructions read: "Specify the following information for this archive connection".

- Name:** A text box containing "Archive01".
- Description:** An empty text box.
- Type:** A dropdown menu with "Native Archive" selected. The list of options includes "Native Archive", "EmailMender 4.x", "In Place Migrated Native Archive", and "Native Archive".

At the bottom of the dialog are three buttons: "Help", "Next", and "Cancel".

- a. In the **Name** field, type a unique name for the archive connection as you want it to appear in the **Archive Connections** list.
- b. In the **Description** field, type a description for the new archive connection. This step is optional.
- c. In the **Type** field, select one of the following types of archives:
 - In Place Migrated Native Archive
 - Native Archive
- d. Click **Next**.

The next page that the **New Archive Connection** wizard displays depends on the type of archive that you selected.

4. To add the archive, you specify the SQL server and the name of the Dell EMC SourceOne archive database.

Figure 7 New Archive Connection wizard—Native Archive Configuration page

- a. Click **Browse**.
- b. Locate and select the SQL server containing the Native Archive databases to be used.

The **Database Server** field displays the selected database server.

When specifying the database server for an archive connection, you can specify either the database server name, such as `MyDBServer`, if you are using the default database instance, or a specific database instance with the database server name, such as `MyDBServer \SourceOne`.

5. In the **Database Name** field, type the name of the instance of the Dell EMC SourceOne archive database to be used, for example, `EMCSourceOneArchive`.
6. Click **Finish**.

The new archive connection now appears in the **Archive Connections** list.

Modifying archive connection properties

Perform the following procedure to modify the properties for an archive connection.

Procedure

1. In the Dell EMC SourceOne Console, select the **Archive Connections** node.
2. In the **Archive Connections** area, select the connection that you want to modify.
3. Select **Action > Properties**.
4. In the **Edit Archive Connection** wizard, edit the fields.

You cannot edit the **Name** or **Type** fields.

Deleting an archive connection

Perform the following steps to delete a connection from the Archive Connections list.

Procedure

1. In the Dell EMC SourceOne Console, select the **Archive Connections** node.
2. In the **Archive Connections** area, select the connection that you want to delete.
3. Select **Action > Delete**.

 **Note:** The archive is deleted from the **Archive Connections** list, but not from the Dell EMC SourceOne database.

CHAPTER 5

Configuring Archives

The following section describes how to configure an archive for use with Dell EMC SourceOne:

- [Overview of configuring an archive](#)..... 56
- [Configuring the Native Archive](#)..... 56
- [Configuring Native Archive Server roles](#)..... 56
- [Configuring Native Archive folders and storage](#)..... 62
- [Configuring Native Archive folder DiskXtender options](#)..... 99
- [Managing Native Archive folders](#)..... 102
- [Managing Multiple Native Archive Connections](#)..... 109
- [Archive Integrity Tool](#)..... 115
- [Searching an archive](#)..... 116
- [Moving an archive](#)..... 116
- [Retaining and disposing of archived data](#)..... 117
- [Partitioning a Native Archive database](#)..... 122
- [Adding Native Archive supplemental language support](#)..... 128

Overview of configuring an archive

When you installed SourceOne, you also installed one or more archives that SourceOne uses to store and access content. After connecting the archive, configure it before it can be used.

To configure an SourceOne Native Archive, refer to [Configuring the Native Archive](#) on page 56.

Once an archive is configured, you may need to perform other tasks relating to it, such as the following:

- To understand how an archive is searched by using SourceOne Search, refer to [Searching an archive](#) on page 116.
- To change the physical location of an archive, perform the tasks that are described in [Moving an archive](#) on page 116.
- To set up the retention and disposal of data in the archive, perform the tasks that are described in [Retaining and disposing of archived data](#) on page 117.
- To improve performance by partitioning large tables in the database that is used by the Native Archive, perform the tasks that are described in [Partitioning a Native Archive database](#) on page 122.
- To add additional language support, perform the tasks that are described in [Adding Native Archive supplemental language support](#) on page 128.

Configuring the Native Archive

Perform the following steps to configure the Native Archive to contain the content that is processed by SourceOne.

Procedure

1. Install and configure the Native Archive as described in the *SourceOne Email Management Installation Guide*.
2. Create archive folders within the Native Archive.
3. To optionally configure DiskXtender options for the Native Archive, refer to [Configuring Native Archive folder DiskXtender options](#).
4. To optionally configure archive retention and disposal for a Native Archive, refer to [Retaining and disposing of archived data](#).
5. To optionally configure partitioning of the Native Archive database, refer to [Partitioning a Native Archive database](#).
6. To optionally configure supplemental language support for the Native Archive, refer to [Adding Native Archive supplemental language support](#).
7. Associate mapped folders to the folders in the Native Archive so that SourceOne can use it.
8. Review the status of the volumes and indexes you create within the archive folders.

Configuring Native Archive Server roles

A Native Archive can be installed on one computer, or across multiple computers, depending on your processing needs.

About this task

Each computer that is part of the Native Archive is called a Native Archive Server. Each Native Archive Server has one or more processing roles that are assigned to it.

Perform the following steps to configure the Native Archive Server roles.

Procedure

1. Review the list of Native Archive Servers that are used by your Native Archive installation.
2. On each Native Archive Server, review the roles that are assigned to that server and verify that they are correct for the environment. If they are not correct, modify and correct the roles.
3. For each role assigned to a Native Archive Server, configure that server role.

Viewing the one or more servers that make up the Native Archive

View the Native Archive Servers that are installed as part of the Native Archive in either of the following ways.

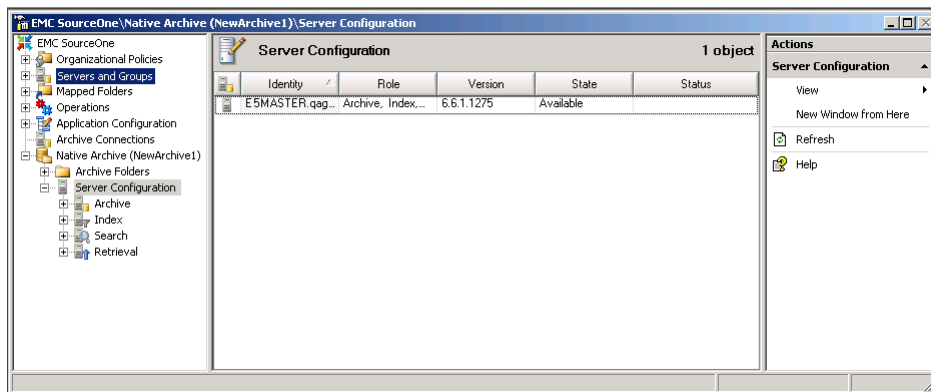
Viewing all Native Archive Servers by name

Complete the following procedure to view a list of all Native Archive Servers by name.

Procedure

1. On the **Start** menu, perform one of the following steps:
 - Click the **Dell EMC SourceOne Console** icon.
 - Select **All Programs > Dell EMC SourceOne > Dell EMC SourceOne Console**.
2. Expand the **Native Archive** node.
3. Select the **Server Configuration** node. The **Server Configuration** area lists all Native Archive Servers and their roles.

Figure 8 Server configuration list of all Native Archive Servers



The following are the columns and the information that is provided in the **Server Configuration** area for each Native Archive Server:

- **Identity**—The name of the Native Archive Server
- **Role**—One or more roles that are assigned to the Native Archive Server. Possible values are Archive, Index, Search, or Retrieval.
- **Version**—The Dell EMC SourceOne software version running on that Native Archive Server.
- **Native Archive Server State**—The current state of the Native Archive Server. Valid values are:
 - **Available**—Indicates that the server is available to accept jobs.

- Suspending for backup—Indicates that the server is in the process of suspending processing. Typically this value is used to allow server backups to occur.
- Suspended for backup—Indicates that the server has successfully suspended processing. Typically this value is used to allow server backups to occur.
- Failed to suspend request—Indicates that the server has failed to suspend processing.
- Failed to resume request—Indicates that the server has failed to resume processing.
- Resuming for backup—Indicates that the server is in the process of resuming processing after being suspended. When the server has completely resumed, the state is displayed as Available.

You suspend and resume the operation of Native Archive Servers using the provided backup and suspend scripts. You cannot suspend and resume these servers using the Dell EMC SourceOne console as you can the Worker Servers.

- Status—The status of the Native Archive Server. A value appears in this field only when a server with the Indexing role does not have adequate space in the Index Work directory for indexing operations. When there is not enough space in the Index Work directory, a message similar to the following displays:

```
Indexers running at 75% (3 of 4 index processes running)
```

This message indicates that the index server has restricted the number of processes indexing which rolls back the ability of the index server to process indexes. The amount of free space available for the processes to use determines the number of processes that can be run. When the Index Work directory size is adequately increased, the index server detects that the problem is solved, resumes running all index processes, and the Status column no longer displays the error message.

Viewing Native Archive Servers by role

To view a list of Native Archive Servers by role, select one of the following server configuration nodes in the tree pane, depending on the type of servers you want to view:

- Archive
- Index
- Search
- Retrieval

The **results** pane lists only the Native Archive Servers that are assigned to perform that role.

The title of the **results** pane changes to reflect the server role.

Assigning roles to a server

Perform the following steps to assign roles to a Native Archive Server.

Procedure

1. Display the list of Native Archive Servers
2. In the results pane, select the Native Archive Server to which you want to assign roles.
3. Select **Action > Properties**.
4. On each tab of the **Properties** dialog box, specify the roles to assign to the server. By default, all roles are assigned.

- To enable a specific role, select the **Enable** option for that role.
 - To disable a specific role, clear the **Enable** option for that role.
5. Configure each of the roles that are enabled.
 6. Click **OK** to save the changes and to close the **Properties** dialog box for the Native Archive Server.

Note: If you are changing the roles for an existing Native Archive Server, those changes may not be effective until after the SourceOne services have been stopped and restarted.
 7. Review the changes that you have made. As a result of the role assignment, the following occurs:
 - The **Server Configuration** area is updated to display the newly assigned roles for the selected Native Archive Server.
 - The **Actions** pane updates to display a Manage role-name Role action for each role that is assigned to the selected Native Archive Server. For example, if the Native Archive Server has the index role that is assigned to it, the **Actions** pane displays the **Manage Index Role** action.
 - The Native Archive Server appears in the role-specific lists.

Configuring the archive role on a Native Archive Server

Perform the following steps to configure the archive role on a Native Archive Server.

Procedure

1. Display the list of servers.
2. In the results pane, select the server that you want to configure as an archive server.
3. Select **Action > Properties**.
4. On the **Archive** tab of the server **Properties** dialog box:
 - a. Select the **Enabled** option.
 - b. The **Message Center Location** field displays the default Uniform Naming Convention (UNC) path where this archive server stores content.

To change the location:

 - a. Click **Browse**.
 - b. In the **Browse For Folder** dialog box, browse to and select the **new message center** location.
 - c. Click **OK** to close the dialog box. The **Message Center Location** field now displays the path that you specified. This path must be no longer than 1024 characters.

When specifying the path in the **Message Center Location** field, you can specify that path as a UNC path or a local path.

Note: Do not use nested network share folders as the Message Center Location for multiple archive servers. Archive services stop working when you use this configuration.

- c. In the **Volume Idle Time** field, specify how long, in hours, an open volume can be idle before the volume is automatically closed and the content is moved to the permanent archive location. The default value for the **Volume Idle Time** field is 48 hours (2 days).

You can change this field to a minimum value of 1 hour up to a maximum value of 744 hours.

d. Click **OK**.

Configuring the index role on a Native Archive Server

Perform the following steps to configure the index role on a Native Archive Server.

Procedure

1. Review the following considerations before configuring the index role on a Native Archive Server:
 - When enabling the index role on a Native Archive Server, you must have an Index Work directory on that server with at least 20 GB of free space.
 - If your organization is shortcutting content as well as indexing and searching that content, review [Best practices for deploying shortcuts](#) as part of configuring an index role on a Native Archive Server.
 - If your organization is using the User Delete capability, review the best practices for setting the values in the **Component limit per index action** area as described in [Configuring index throttling for User Delete](#).
 - Consider the indexing performance best practices as described in [Optimizing Native Archive index performance](#).
2. Display the list of servers.
3. In the **results** pane, select the server that you want to configure as an index server.
4. Select **Action > Properties**. The **Properties** dialog box appears.
5. On the **Index** tab of the server **Properties** dialog box, select the **Enabled** option and specify the archive servers that this index server processes.
 - To specify that all archive servers are processed, select **Select All**.
 - To specify that only selected archive servers are processed, select the individual archive servers from the ones listed. If the **Select All** option was previously selected, it is automatically cleared.
6. In the **Index Run Threshold** field on the **Index** tab, specify how long (in minutes) SourceOne waits before adding one or more messages to an index.
 - The default value is 45 minutes. You can change this value to a minimum value of 2 minutes up to a maximum value of 100 minutes.
 - SourceOne allows messages to collect before writing them to the index to maximize performance, because adding a single message to an index typically takes as much time as adding several 100.
7. In the **Component limit per index action** area, specify the maximum number of processes to be used for each listed index action (**Add**, **Delete**, **Repair**, or **Update**) for this index server. The maximum number of processes to be used is typed as an integer from 0 to 4.

A value of 0 specifies that the index action does not occur. A warning message appears if you type a value of 0 for one of these fields.

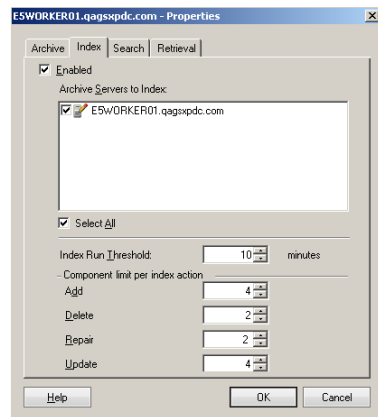
For example, a value of 0 in the **Delete** field indicates that this index server does not process any index delete requests. Similarly, a value of 4 in the **Delete** field and 0 in the **Add**, **Repair**, and **Update** fields, indicate that this index server does only process index delete requests.

Changes to these field values are applied after the index service restarts or refreshes.


The following indicates the maximum number of processes that are allocated for each index action field:

- **Add**—The maximum number of processes that are allocated to performing index add operations. The default value is 4.
- **Delete**—The maximum number of processes that are allocated for deleting indexes. The default value is 2.
- **Repair**—The maximum number of processes that are allocated to performing index refresh and index rebuild operations. The default value is 2.
- **Update**—The maximum number of processes that are allocated to performing index update operations. The default value is 4.

Figure 9 Index role properties of a Native Archive Server



8. Click **OK**.
9. Verify that the server you just assigned the index role to is allowed to use the index storage location as follows:
 - a. Select the **Properties** action on the archive folder into which the content is archived. The **Archive Folder** dialog box appears.

 **Note:** Archive folders are accessed using the **Archive Folders** node in the console.
 - b. Select the **Indexing** tab and verify that the server you have added the index role to is listed as having access to the index storage location. This information appears in the **Index Storage Locations** list on the **Indexing** tab.

Configuring the retrieval role of a Native Archive Server

Perform the following steps to configure the retrieval role on a Native Archive Server.

Procedure

1. Display the list of servers
2. In the **results** pane, select the server that you want to configure as a retrieval server.
3. Select **Action > Properties**.
4. On the **Retrieval** tab of the server **Properties** dialog box, select the **Enabled** option.

Configuring the search role of a Native Archive Server

Perform the following steps to configure the search role on a Native Archive Server.

Procedure

1. Display the list of Native Archive Servers
2. In the **results** pane, select the server that you want to configure as a search server.
3. Select **Action > Properties**.
4. On the **Search** tab of the server **Properties** dialog box, select the **Enabled** option.
5. In the **Memory Allocated to Search Results (MB)** field, specify the amount of shared memory (in MB) that the search server can allocate for queuing search results.
6. Click **OK**.

The default value is 50 MB. You can set this value to a minimum of 10 up to a maximum of 500 MB.

Configuring Native Archive folders and storage

Define archive folders within a Native Archive to contain your content. You can define up to a maximum of 200 archive folders, although typically you do not require 200.

The following sections describe how to configure various attributes of Native Archive folders including the storage locations that are associated with them.

If you are using Dell EMC DiskXtender for Windows with SourceOne Email Management, refer also to [Configuring Native Archive folder DiskXtender options](#).


Selecting the type of storage to use for the archive folder

When you create an archive folder, you select the type of storage for that folder. It is important to carefully consider what type of storage you will use because after the archive folder is created you cannot change the type of storage that is associated with it.

Available storage device options

The following lists the Storage Type option that can be selected to store the information in archive folders, and the Storage Device that is used.

- Atmos Container—Dell EMC Atmos storage devices that Dell EMC SourceOne directly accesses using RESTful Interface.
- NAS Container—Network-accessible storage, such as network shareable drives or network-attached storage devices (NAS devices).
- DiskXtender Container—Storage that is accessed using Dell EMC DiskXtender, such as Dell EMC Centera devices, NAS devices, and WORM devices.
- Centera Container—Dell EMC Centera storage devices that Dell EMC SourceOne directly accesses without the use of Dell EMC DiskXtender.
- Data Domain Storage System Container—Dell EMC Data Domain storage devices that Dell EMC SourceOne directly accesses using either NFS or CIFS file systems.

 **Note:** Performance may vary depending on whether NFS or CIFS is used.

Refer to the Data Domain documentation for which is preferred in the environment. Data Domain devices are used with Dell EMC SourceOne as storage for archive folders.

- ECS via S3 API Container—Elastic Cloud Storage (ECS) devices that Dell EMC SourceOne directly accesses using RESTful API as an Amazon S3 Proxy.
- Isilon Container—Dell EMC Isilon devices that Dell EMC SourceOne directly accesses using the OneFS distribution operating system.
- NetApp Storage System Container—NetApp storage devices that Dell EMC SourceOne directly accesses.
- ViPR via ATMOS REST Container—Dell EMC ViPR storage devices that Dell EMC SourceOne directly accesses using the RESTful Interface.
- ViPR via CAS Container—Dell EMC ViPR storage devices that Dell EMC SourceOne directly accesses using the CAS Interface.
- Virtual Container—Storage devices that are used with in-place indexing of content that is stored outside of the Dell EMC SourceOne Native Archive, such as the Dell EMC Cloud Tiering Appliance (CTA). Only the File Index in **Place-Historical** activity that is installed with SourceOne for File Systems supports this type of storage.

Comparing and selecting storage device options

Determining the best storage type for an archive folder depends on the particular goals and computing environment.


When selecting the storage type to use, be aware of the features you need in the storage device, such as whether it supports data retention, deduplication, or whether it matches the computing environment in other ways.

For detailed information about any of the storage devices, refer to the manufacturer's documentation for that device. The following lists the **Storage Type** options and when to select them:

- Atmos Container
 - You want to store the data on a supported Dell EMC Atmos storage system device.
 - You require file-level retention that is enforced on the device.
- Centera Container
 - You want to store the archived data on a supported Dell EMC Centera device without the use of DiskXtender software.
 - You do not need the added capabilities that DiskXtender provides for managing a Centera device.
 - You require file-level retention that is enforced on the device.
 - You require data-based deduplication.
 - You do not use DiskXtender software.
- Data Domain Storage System Container
 - You want to store the data on a supported Dell EMC Data Domain storage system device.
 - You require file-level retention that is enforced on the device.
 - You require data-based deduplication.
 - You do not use DiskXtender software.

Data Domain devices are used with Dell EMC SourceOne as storage for archive folders.

- DiskXtender Container
 - You want to use DiskXtender software to store the archived data on a storage device, such as a WORM, UDO, NAS, or Centera device.

- Use the added capabilities for managing a device that DiskXtender provides and that the direct support by Dell EMC SourceOne for Dell EMC Centera, Dell EMC Data Domain, Isilon, and NetApp devices does not.
- ECS via S3 API Container
 - You want to store the data on a supported ECS via S3 API storage system device.
 - You require file-level retention that is enforced on the device.
- Isilon Container
 - You want to store the data on a supported Dell EMC Isilon storage device.
 - You require file-level retention that is enforced on the device.
 - You require data-based deduplication.
 - You do not use DiskXtender software.
- NAS Container
 - You want to store the data on a NAS storage device or network share.
 - You want to use a NAS device that is not directly supported. Dell EMC Centera, Dell EMC Data Domain, Isilon, and NetApp devices are directly supported.
 - You do not require file-level retention that is enforced on the device.
 - You do not require data-based or file-based deduplication.
 -  **Note:** Data-based deduplication is generally more effective at reducing the amount of space that is used than file-based deduplication.
 - You do not use DiskXtender software.
- NetApp Storage System Container
 - You want to store the data on a NetApp storage system device.
 - You require file-level retention that is enforced on the device.
 - You do not use DiskXtender software.
- ViPR via ATMOS REST Container
 - You want to store the data on a ViPR storage system device.
 - You require file-level retention that is enforced on the device.

Dell EMC ViPR storage devices that Dell EMC SourceOne directly accesses by using the ATMOS RESTful Interface. Refer to the ViPR storage system documentation for detailed information.
- ViPR via CAS Container—Dell EMC ViPR storage devices that Dell EMC SourceOne directly accesses by using the CAS Interface. You want to store the data on a ViPR storage system device as a container storage system. Refer to the ViPR storage system documentation for detailed information.
- Virtual Container—You are using the File Index in **Place-Historical** activity with in-place indexing.

Using multiple archive folders with different storage types

You can store data using multiple storage types simultaneously, including NAS devices, devices that are accessed by using Dell EMC DiskXtender, and storage devices that Dell EMC SourceOne directly supports, such as Dell EMC Centera, Dell EMC Data Domain, Dell EMC Isilon, Dell EMC ViPR, and NetApp devices.

You can use both the direct access and DiskXtender methods to access the same storage device simultaneously. This situation may occur if you have an existing DiskXtender installation that is

used with the storage device and you want to also use direct access to the storage device for new archive folders that you create.

When you use multiple storage types, each storage type must be associated with a different Native Archive folder. You cannot mix access methods with the same Native Archive folder.

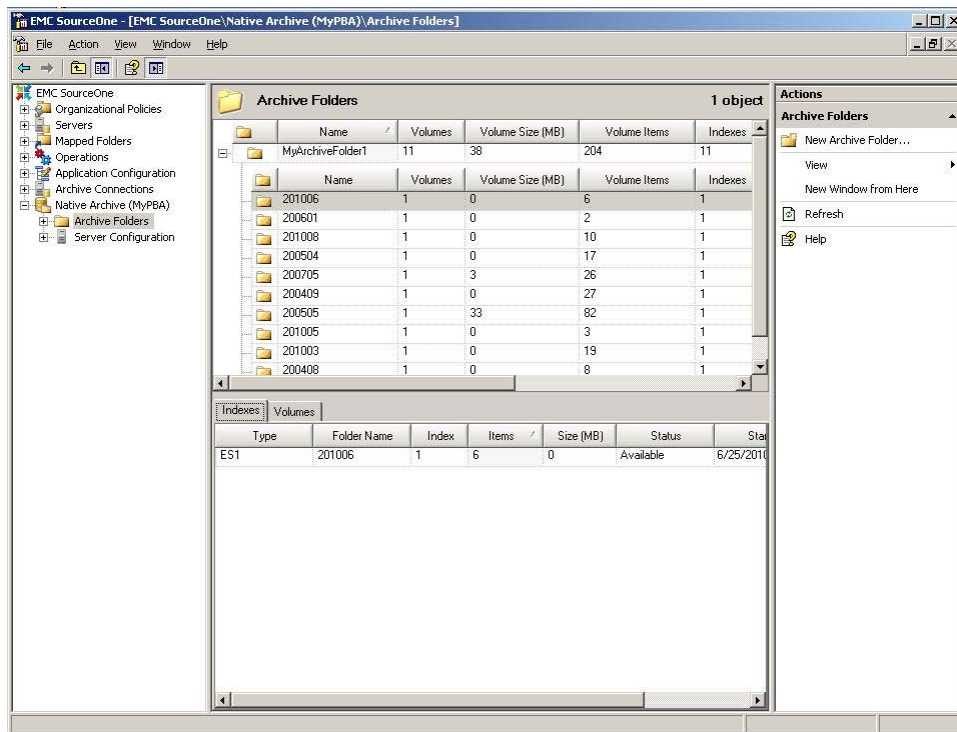
Adding archive folders

Perform the following steps to add an archive folder to a Native Archive.

Procedure

1. Select the **Archive Folders** node for the Native Archive. The **Archive Folders** area lists any folders for the selected Native Archive.

Figure 10 Archive folders in a Native Archive



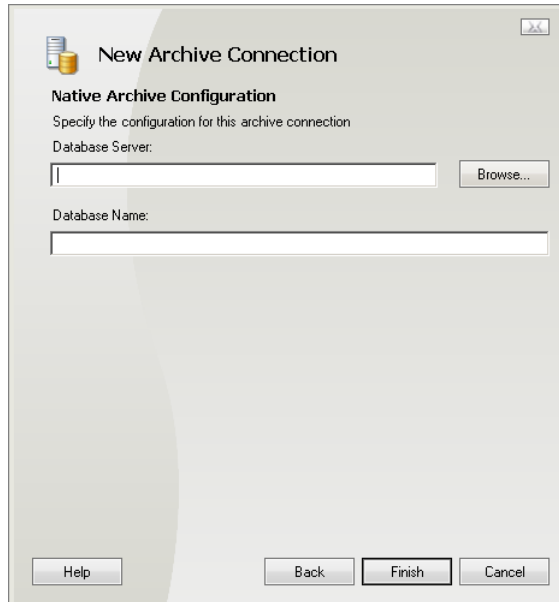
2. Select **Action > New Archive Folder**. The **New Archive Folder** wizard appears.
3. Supply values on the pages of this wizard.

Using the General page of the New Archive Folder wizard

Use the General page of the New Archive Folder wizard to specify general options for the archive folder.

About this task

Figure 11 New Archive Folder wizard General page



Perform the following tasks to specify the general options.

Procedure

1. In the **Folder Name** field, type a name for the folder.

The following are the rules for creating a valid archive folder name:

- The maximum number of characters for the folder name is 128.
- Only ASCII characters should be used for the folder name, excluding periods, multi-byte characters, and the period character. If a mapped folder and the archive folder to which it is associated both have multi-byte characters in their folder names, then an index folder cannot be created, and indexing fails.
- The folder name should meet the rules for operating system file directory names on which the folder is created.

For example, for the Windows file system, refer to the following section in the MSDN document Naming Files, Paths, and Namespaces (Windows): [File and Directory Names](#)

Naming rules might change with various operating system releases, so ensure that you follow current practices as defined by the operating system provider.

2. In the **Description** field, type a description for the folder. The maximum number of characters for the description is 1024.
3. Click **Next**. The **Storage Options** page of the **New Archive Folder** wizard displays.

Using the Storage Options page of the New Archive Folder wizard

Use the Storage Options page to select the storage and retention options for a new archive folder.

On the **Storage Options** page, in the **Storage Type** field, select one of the following as the type of storage to be used for the new archive folder:

- Atmos Container
- Centera Container
- Data Domain Storage System Container
- DiskXtender Container
- ECS via S3 API Container
- Isilon Container
- NAS Container
- NetApp Storage System Container
- ViPR via ATMOS REST Container
- ViPR via CAS Container
- Virtual Container

The other fields that are displayed on this page vary depending on which storage type option you select.

Using Atmos containers for storage

If the Storage Type is Atmos container, the New Archive Folder window displays with the Atmos Container storage options.

About this task

Figure 12 Atmos Container New Archive Folder Storage Options window

The screenshot shows the 'New Archive Folder' dialog box with the 'Storage Options' tab selected. The 'Storage Type' dropdown is set to 'Atmos Container'. Below this, there are several input fields for configuration:

- Atmos Section:**
 - Host Name / IP: [Text Input]
 - Subtenant ID: [Text Input]
 - User ID: [Text Input]
 - Shared Secret: [Text Input]
 - Enable SSL
 - Port: [Text Input, value: 80]
 - Test Connection... [Button]
- Archive Section:**
 - Fragment Chunk Size (MB): [Spin Box, value: 5]
 - Maximum Volume Size (MB): [Spin Box, value: 100]
 - Months to Retain: [Spin Box, value: 0]
 - Enable automatic disposition
 - Maximum Large File Size (MB): [Spin Box, value: 4096]

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

If the Atmos Container storage type is selected, the following fields must be defined:

Procedure

1. In the **Host Name/IP** field, specify the computer Name or IP of the Atmos Server. It can be a load balancer's address.
2. In the **Subtenant ID** field, specify the ID of the subtenant that is created in Atmos for SourceOne.
3. In the **User ID** field, specify the ID of a user for the subtenant.
4. In the **Shared Secret** field, specify the shared secret for the user.
5. Specify whether to **Enable SSL**. If SSL is enabled, HTTPS is used for data transport, otherwise, HTTP is used.
6. In the **Port** field, specify the port number for the Atmos server, the default value for http is 80 and the default value for https is 443.
7. In the **Fragment chunk size (MB)** field, specify the maximum size of bytes can be uploaded to Atmos each time. A large `.emx` file is uploaded with multiple fragment chunks. The default value is 5 MB. You can change this value to be from 1 MB up to 2048 MB (2 GB).
8. In the **Maximum Volume Size (MB)** field, specify the maximum size in MB of individual volumes in this folder. The default value is 100 MB. You can change this value to be from 10 MB up to 10,000 MB (10 GB). When a volume reaches the maximum volume, it is closed and a new volume is created. If you set the **Maximum Volume Size (MB)** field to a value greater than 2048 MB (2 GB), you receive a warning indicating that it may make the archiving and retrieval operations take longer.

Refer to the *SourceOne Email Management Administration Guide* or the SourceOne Email Management Console Online Help for guidelines on setting the value of the **Maximum Volume Size (MB)** field.

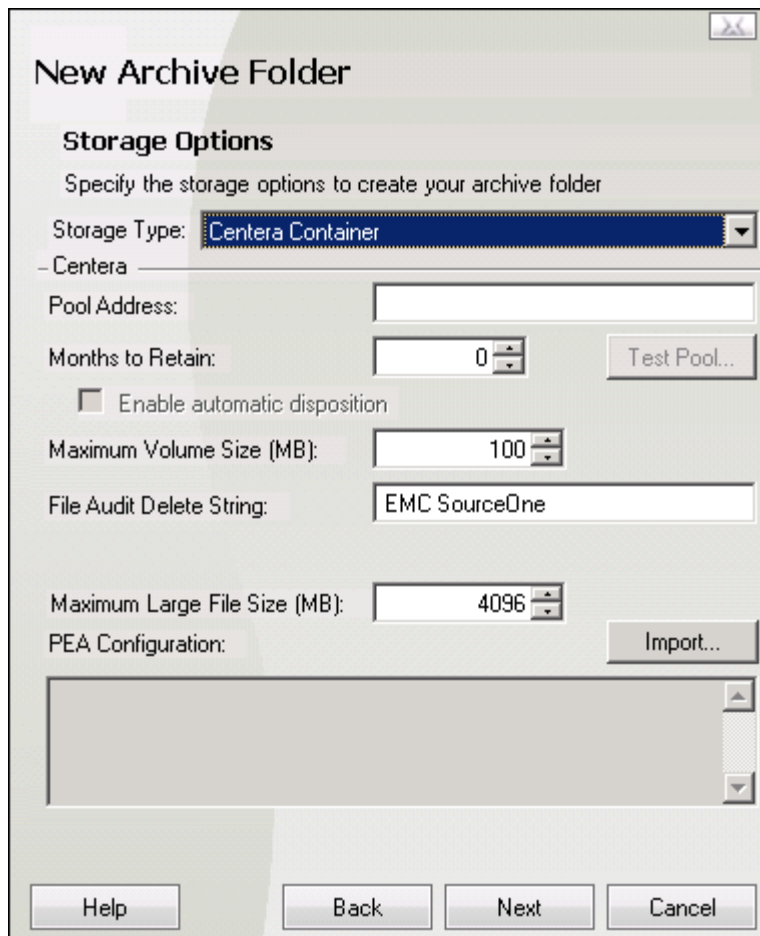
9. Specify how long data in the archive folder should be retained by typing a value in the **Months to retain** field. Valid values for the **Months to retain** field are the following:
 - The default value is 0, indicating 0 months.
 - The minimum value is 0, indicating that no retention is specified. If 0 is selected the Enable automatic disposition field cannot be used.
 - The maximum value is 1200 (indicating 100 years). Consider the following before specifying this value:
 - Be aware of the data retention settings on the Atmos device.
 - Do not enable retention on archive folders that are used for Microsoft SharePoint External BLOB Storage (EBS). For these folders, set the **Months to retain** field to 0.
10. Specify whether to enable SourceOne to dispose automatically of data in the archive folder.
11. Select the **Enable automatic disposition** field to specify that SourceOne is to dispose automatically of data in the archive folder when the data is older than the value specified in the **Months to retain** field.
12. For the **Maximum Large File Size [MB]** field, specify the maximum file size of the source file. The default value is 4 GB.

Using Centera containers for storage

The Centera Container option is selected as the storage type for the archive folder to be created.

About this task

Figure 13 Centera Container variant of the New Archive Folder Storage Options page



If Centera Container is selected as the storage type for an archive folder, the following fields must be defined.

Procedure

1. In the **Pool Address** field, specify one or more addresses to be used with the Centera device.

The address may be specified using the hostname, such as mycomputer.emc.com or can be specified using the dotted decimal format, such as 8.10.444.122.

To specify multiple addresses in either form, separate the addresses with a comma, for example, node1.emc.com,node2.emc.com.

A best practice is to use the hostname address form when possible so that if an IP address changes for a server, the **Pool Address** field value must not be changed. Instead, the change can be made at the DNS server or in the local hosts file. Using hostnames also makes more sense in a disaster recovery scenario.

2. To verify the addresses in the **Pool Address** field are correct and reachable, click **Test Pool**. Any problematic addresses are identified for you to correct.

3. Specify how long to retain data in the archive folder by typing one of the following values in the **Months to retain** field:

- The default value is 0, indicating 0 months.
- The minimum value is 0, indicating that no retention is specified. If 0 is selected the **Enable automatic disposition** field cannot be used.
- The maximum value is 1200 (indicating 100 years).

Consider the following before specifying this value:

- If you are storing the data in the archive folder on a Centera storage device that is configured to support data retention, be aware of the data retention settings on that device, if any. Also be aware of the maximum time of retention that the device supports, as it differs by device.
- Do not enable retention on archive folders that are used for Microsoft SharePoint External BLOB Storage (EBS). For these folders, the **Months to retain** field should be set to 0.

4. Specify whether to enable SourceOne to dispose automatically of data in the archive folder.
5. To specify that SourceOne is to dispose of data automatically in the archive folder when the data is older than the value specified in the **Months to retain** field, select the **Enable automatic disposition** field.

6. In the **Maximum Volume Size (MB)** field, specify the maximum size (in MB) of individual volumes in this folder. The default value is 100 MB.

You can change this value to be from 10 MB up to 10,000 MB (10 GB). When a volume reaches the maximum volume, it is closed and a new volume is created.

If you set the **Maximum Volume Size (MB)** field to a value greater than 2048 (2 GB), you receive a warning indicating that it may make the archiving and retrieval operations take longer.

7. Determine whether to enable **Enable File Audit Deletes**.

When enabled, SourceOne labels all file deletions that it makes on the Centera device with a string.

By default, the file audit delete string is set to SourceOne. You can change it to another string by typing another string in the **File Audit Delete String** field.

8. For the **Maximum Large File Size [MB]** field, specify the maximum file size of the source file.

The default value is 4 GB.

9. To import a `Pool Entry Authorization (PEA)` file for use with the Centera device, click **Import**.

A **file selection** dialog box appears to enable you to select the `PEA` file. After you select a `PEA` file, this configuration is typed into the **PEA Configuration** area.

The `PEA` file allows access to data on a Centera storage device.

10. Click **Next**.

The page of the New Archive Folder wizard appears.

Using DiskXtender containers for storage

The DiskXtender Container option is selected as the storage type for the archive folder to be created.

About this task

Figure 14 DiskXtender Container variant of the New Archive Folder Storage Options page

If the DiskXtender Container storage type is selected, the following fields must be defined.

Procedure

1. In the **Archive Location** field, specify the path to the volumes for this folder.

To change the location, click **Browse** and select a new path to the volumes. The maximum number of characters for the **Archive Location** field is 1024.

When specifying the path in the **Archive Location** field, you can specify that path as a UNC path or a local path.

Note: Do not use nested network share folders as the Archive Location for multiple archive folders. Archive services stop working when you use this configuration.

2. In the **Maximum Volume Size (MB)** field, specify the maximum size (in MB) of individual volumes in this folder. The default value is 100 MB. You can change this value to be from 10 MB up to 10,000 MB (10 GB). When a volume reaches the maximum volume, it is closed and a new volume is created.
 - If you set the **Maximum Volume Size (MB)** field to a value greater than 2048 MB (2 GB), you receive a warning indicating that it may make the archiving and retrieval operations take longer.
 - If you are planning to use DiskXtender to write SourceOne files to a Centera device, change the maximum volume size to 90 MB, instead of the default size of 100 MB. There are known performance issues when retrieving volumes of 100 MB and greater from a Centera device. Setting the volume file size to 90 MB allows for slight overflow of the

volumes before they are closed, while keeping the total volume file size to fewer than 100 MB.

- Specify how long data in the archive folder should be retained by typing a value in the **Months to retain** field.

Valid values for the **Months to retain** field are the following:

- The default value is 0, indicating 0 months.
- The minimum value is 0, indicating that no retention is specified. If 0 is selected the **Enable automatic disposition** field cannot be used.
- The maximum value is 1200 (indicating 100 years).

Consider the following before specifying this value:

- If you are storing the data in the archive folder on a NAS storage device that supports data retention, be aware of the data retention settings on that device. Also, be aware of the maximum time of retention that the device supports, as it differs by device.
 - Do not enable retention on archive folders that are used for Microsoft SharePoint External BLOB Storage (EBS). For these folders, the **Months to retain** field should be set to 0.
- Specify whether to allow SourceOne to dispose of data automatically in the archive folder. Select the **Enable automatic disposition** field to specify that SourceOne automatically disposes of data in the archive folder when the data is older than the value specified in the **Months to retain** field.
 - For the **Maximum Large File Size [MB]** field, specify the maximum file size of the source file. The default value is 4 GB.
 - Select the type of media to be used by DiskXtender in the **Media Type** field. This media type must match the type that is selected in the DiskXtender configuration.
 - Specify the path the DiskXtender local extended drive in the **DiskXtender local extended drive path** field.

This path must contain the drive letter and the path, such as

```
E:\EMC SourceOne\Five Year.
```

- Select the **Purge after move** option if you want the files that are purged immediately after they are moved to media by DiskXtender.

If you do not select the **Purge after move** option, configure purge rules using the DiskXtender File System Manager Administrator as described in the DiskXtender for Windows documentation. Deleting files is usually used to avoid running out of space on the storage drive.

- Select the **Direct Read** option if you want files to be read directly from media rather than first being copied back to the extended drive and then read. If you are using DVD-R or DVD +R media, files are not marked for direct read or deleted until you complete the media. Select the **Direct Read** option if you want files to be read directly from media rather than first being copied back to the extended drive and then read. If you are using DVD-R or DVD +R media, files are not marked for direct read or deleted until you complete the media.

If you use DiskXtender to write volumes to removable media, such as DVD-R, tape, or magneto-optical media, you may want to disable direct read to avoid too many competing read and write requests to the library containing the media.

- Click **Next**. The Indexing page of the **New Archive Folder** wizard appears.

Using ECS via S3 API Container for storage

The ECS via S3 API Container option is selected as the storage type for the archive folder.

About this task

Figure 15 ECS via S3 API Container devices variant of the New Archive Folder Storage Options page

New Archive Folder

Storage Options
Specify the storage options to create your archive folder

Storage Type: ECS via S3 API Container

ECS S3 API

Host Name / IP:

Bucket:

Access Key:

Secret:

Enable SSL Port:

Archive

Fragment Chunk Size (MB):

Maximum Volume Size (MB):

Months to Retain:

Enable automatic disposition

If the ECS via S3 API Container storage type is selected, the following fields must be defined.

Procedure

1. In the **Host Name/IP** field, specify the computer Name or IP of the Elastic Cloud Storage (ECS) server. It can be a load balancer's address.
2. In the **Bucket** field, specify the name of the bucket that contains the object data that you want to use.
3. In the **Access Key** field, specify the access key for the user.
4. In the **Secret** field, specify the secret for the user.
5. Specify whether to **Enable SSL**. If SSL is enabled, HTTPS is used for data transport, otherwise, HTTP is used.
6. In the **Port** field, specify the port number for the ECS server. If SSL is enabled, the default value is 9021. If SSL is not enabled, the default value is 9020.
7. In the **Fragment chunk size (MB)** field, specify the maximum size of bytes that can be uploaded to ECS each time. A large `.emx` file is uploaded with multiple fragment chunks. The default value is 5 MB. You can change this value to be from 1 MB up to 2048 MB (2 GB).
8. In the **Maximum Volume Size (MB)** field, specify the maximum size in MB of individual volumes in this folder. The default value is 100 MB. You can change this value to be from 10 MB up to 10,000 MB (10 GB). When a volume reaches the maximum volume, it is closed and a new volume is created. If you set the **Maximum Volume Size (MB)** field to a value greater

than 2048 MB (2 GB), you receive a warning indicating that it may make the archiving and retrieval operations take longer.

See the *SourceOne Email Management Administration Guide* or the SourceOne Email Management Console Online Help for guidelines on setting the value of the **Maximum Volume Size (MB)** field.

9. Specify how long data in the archive folder should be retained by typing a value in the **Months to retain** field. Valid values for the **Months to retain** field are the following:
 - The default value is 0, indicating 0 months.
 - The minimum value is 0, indicating that no retention is specified. If 0 is selected, the Enable automatic disposition field cannot be used.
 - The maximum value is 1200 (indicating 100 years). Consider the following before specifying this value:
 - Be aware of the data retention settings on the device.
 - Do not enable retention on archive folders that are used for Microsoft SharePoint External BLOB Storage (EBS). For these folders, set the **Months to retain** field to 0.
10. To allow Dell EMC SourceOne to dispose of data automatically in the archive folder, select the **Enable automatic disposition** check box.

When you select this option, Dell EMC SourceOne automatically disposes of data in the archive folder when the data is older than the value specified in the **Months to retain** field.
11. Verify the connection by clicking **Test Connection**.
12. Click **Next**. The Indexing page of the **New Archive Folder** wizard appears.

After you finish

After you finish creating the archive folder, verify that the file exists on the storage. You can view this information from the Amazon S3 browser.

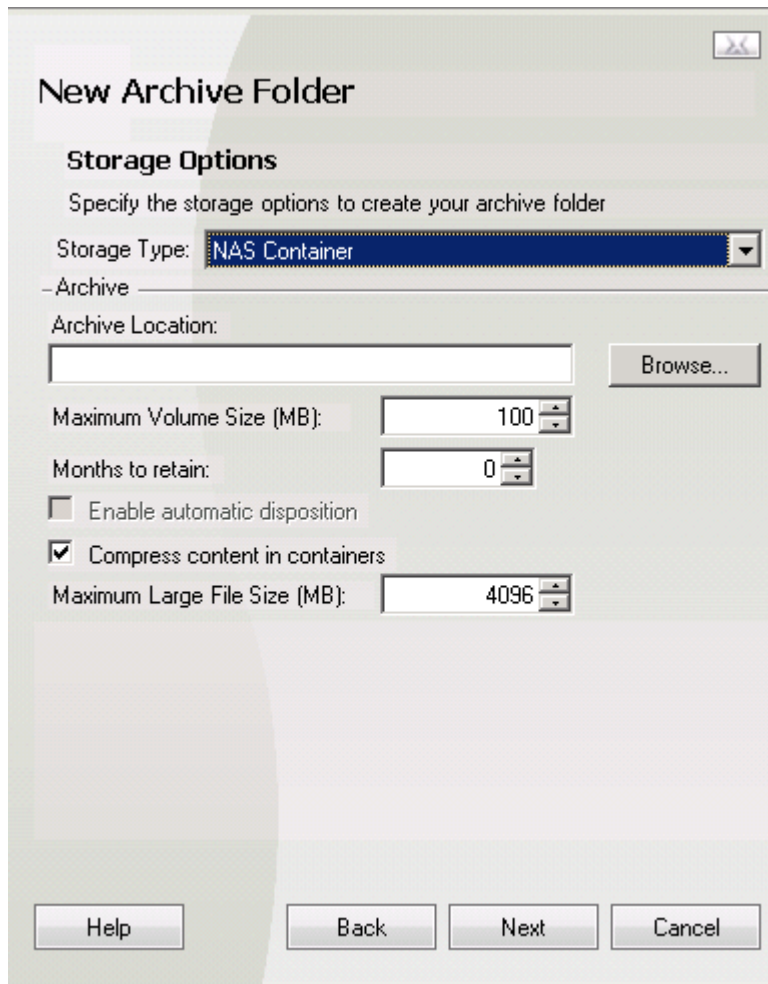
Using NAS device containers for storage

The following storage types are all NAS devices that have the same options on the Storage Options page:

About this task

- Celerra Container
- Data Domain Storage System Container
- Isilon Container
- NAS Container
- NetApp Storage System Container

Figure 16 NAS Container devices variant of the New Archive Folder Storage Options page



If the Celerra Container, Data Domain Storage System Container, Isilon Container, NAS Container, or NetApp Storage System Container storage type is selected, the following fields must be defined.

Procedure

1. In the **Archive Location** field, specify the path to the volumes for this folder.

To change the location, click **Browse** and select a new path to the volumes. The maximum number of characters for the **Archive Location** field is 1024.

When specifying the path in the **Archive Location** field, you can specify that path as a UNC path or a local path.

Note: Do not use nested network share folders as the Archive Location for multiple archive folders. Archive services stop working when you use this configuration.

2. In the **Maximum Volume Size (MB)** field, specify the maximum size (in MB) of individual volumes in this folder. The default value is 100 MB. You can change this value to be from 10 MB up to 10,000 MB (10 GB). When a volume reaches the maximum volume, it is closed and a new volume is created.

If you set the **Maximum Volume Size (MB)** field to a value greater than 2048 MB (2 GB), you receive a warning indicating that it may make the archiving and retrieval operations take longer.

3. Specify how long data in the archive folder should be retained by typing a value in the **Months to retain** field.

Valid values for the **Months to retain** field are the following:

- The default value is 0, indicating 0 months.
- The minimum value is 0, indicating that no retention is specified. If 0 is selected the **Enable automatic disposition** field cannot be used.
- The maximum value is 1200 (indicating 100 years).

Consider the following before specifying the retention value:

- After an archive folder has been marked for retention, the file cannot be modified until it has expired.
 - When calculating the months to retain value:
 - a. Determine the number of months from the current date to the date when the file was last saved.
 - b. Determine the number of months from the current date to the future date that you want to retain files for.
 - c. Add the number of months from step A and step B together to determine the value in the **Months to retain** field.
 - If you are storing the data in the archive folder on a NAS storage device that supports data retention, be aware of the following:
 - The data retention settings on that device.
 - The maximum time of retention that the device supports, as it differs by device.
 - Do not enable retention on archive folders that are used for Microsoft SharePoint External BLOB Storage (EBS). For these folders, the **Months to retain** field should be set to 0.
 - If you specify a retention period, test the retention after it is enabled to verify that it is working as you expect.
4. Select the **Enable automatic disposition** checkbox to have SourceOne automatically dispose of data in the archive folder when the data is older than the value specified in the **Months to retain** field. The **Enable automatic disposition** checkbox is not selected by default.


If you are storing the data in the archive folder on a NAS storage device that supports data retention, be aware of the data retention settings on that device. For example, Isilon does not support the automated disposal of objects after their retention has expired.

5. The **Compress content in containers** checkbox determines whether to compress the containers that are written to a device. Unless the target device supports block-level deduplication, select the checkbox to minimize the space that is taken up on the device and in the **Message Center**.


Clear the **Compress content in containers** checkbox if all the following apply:

- The target device supports block-level deduplication, for example, Isilon with OneFS 7.1 or later.
- Block-level deduplication is enabled on the device for the selected Archive Location UNC path.
- Deduplication is more effective than compression for the content being archived (consult the device documentation).
- It is acceptable for containers to take up additional space in the **Message Center**.

Otherwise, select the **Compress content in containers** checkbox.

 **Note:** If the Storage Type is Data Domain Storage System Container, the checkbox is always clear, to optimize deduplication.

When deciding to use compression, consider the following:

- The **Compress content in containers** checkbox is selected by default (except for Data Domain).
 - After the creation of the archive folder, the checkbox cannot change.
 - Turning off compression causes the containers in the Message Center to consume more space.
 - If archiving large audio and video content, and also other content, consider disabling compression for the main container and storing large compressed content outside of the container.
6. For the **Maximum Large File Size [MB]** field, specify the maximum file size of the source file. The default value is 4 GB and the maximum supported value is 20GB.
- The **Maximum Large File Size [MB]** field is used to define the maximum file size that the archive folder accepts for **File Archiving** or **File Index in Place** activities. It applies to file content only, not email, or Microsoft SharePoint content. Note that the Maximum Volume Size does not restrict the size of the file.
7. Click **Next**. The **New Archive Folder Large Content** page appears.
8. Select how to store large content:
- Select the **Store all content inside containers** option to have all content, including large content, which is stored within the container for this folder.
 - Select the **Store large content outside of containers when larger than** option to have large content:
 - Stored with the content when the large content is less than or equal to the value specified in the **KB** field.
 - Stored separately from the content when the large content is larger than the value specified in the **KB** field.
 - Specify the large content size in the **KB** field. By default, this value is 1000.
 - For large content that is stored separately, select or clear the **Compress large content** option to determine whether that content compresses.
-  **Note:** If the Storage Type is Data Domain Storage System Container, then you cannot edit settings on the **New Archive Folder Large Content** page because content is always stored inside containers to optimize deduplication.
9. Click **Next**. The Indexing page of the **New Archive Folder** wizard appears.

Using the ViPR via ATMOS REST Container for storage

If the Storage Type is ViPR via ATMOS REST Container, the New Archive Folder window displays with the ViPR via ATMOS REST Container storage options.

About this task

Figure 17 ViPR via ATMOS Rest Container variant of the New Archive Folder Storage Options page

If the ViPR via ATMOS REST Container storage type is selected, define the following fields:

Procedure

1. In the **Host Name/IP** field, specify the server Name or IP of the ViPR Server.
2. In the **User ID** field, specify the ID of a user for the subtenant.
3. In the **Shared Secret** field, specify the shared secret for the user.
4. Specify whether to Enable SSL. If SSL is enabled, HTTPS is used for data transport, otherwise, HTTP is used.
5. In the **Port** field, specify the port number for the ViPR server. The default value for http is 9022 and the default value for https is 9023.
6. In the **Fragment chunk size (MB)** field, specify the maximum size of bytes can be uploaded to ViPR each time. A large .emx file is uploaded with multiple fragment chunks. The default value is 5 MB.

You can change this value to be from 1 MB up to 2048 MB (2 GB).

7. In the **Maximum Volume Size (MB)** field, specify the maximum size (in MB) of individual volumes in this folder. The default value is 100 MB.
 - You can change this value to be from 10 MB up to 10,000 MB (10 GB). When a volume reaches the maximum volume, it is closed and a new volume is created.

- If you set the **Maximum Volume Size (MB)** field to a value greater than 2048 (2 GB), you receive a warning indicating that it may make the archiving and retrieval operations take longer.
 - Refer to the *SourceOne Email Management Administration Guide* or the SourceOne Email Management Console Online Help for guidelines on setting the value of the **Maximum Volume Size (MB)** field.
8. Specify how long data in the archive folder should be retained by typing a value in the **Months to retain** field.
- Valid values for the **Months to retain** field are the following:
- The default value is 0, indicating 0 months.
 - The minimum value is 0, indicating that no retention is specified. If 0 is selected the Enable automatic disposition field cannot be used.
 - The maximum value is 1200 (indicating 100 years).
Consider the following before specifying this value:
 - You should be aware of the data retention settings on the ViPR device.
 - Retention should not be enabled on archive folders that are used for Microsoft SharePoint External BLOB Storage (EBS). For these folders, the **Months to retain** field should be set to 0.
9. Select the **Enable automatic disposition** field to specify that SourceOne should automatically dispose of data in the archive folder when the data is older than the value specified in the **Months to retain** field.

Refer to [Retaining and disposing of archived data](#) for more information about data retention and disposal.

Using the ViPR via CAS Container for storage

If the ViPR via CAS Container option is selected, the New Archive Folder window displays with the ViPR via CAS Container storage options.

About this task

Figure 18 ViPR via CAS Container variant of the New Archive Folder Storage Options page

The screenshot shows a window titled "New Archive Folder" with a close button in the top right corner. Below the title is a section labeled "Storage Options" with the instruction "Specify the storage options to create your archive folder". The "Storage Type" dropdown menu is set to "ViPR via CAS Container". Below this, there is a section for "ViPR CAS" with several fields: "Pool Address" (empty text box), "Months to Retain" (spinner box set to 0) with a "Test Pool..." button to its right, an unchecked checkbox for "Enable automatic disposition", "Maximum Volume Size (MB)" (spinner box set to 100), and "File Audit Delete String" (text box containing "EMC SourceOne"). At the bottom of this section is a "PEA Configuration:" label and an "Import..." button. Below the "Import..." button is a large empty text area with a vertical scrollbar. At the very bottom of the window are four buttons: "Help", "Back", "Next", and "Cancel".

If **ViPR via CAS Container** is selected as the storage type for an archive folder, the following fields must be defined:

Procedure

1. In the **Pool Address** field, specify one or more addresses to be used with the Centera device. The address may be specified using the hostname, such as mycomputer.emc.com or can be specified using the dotted decimal format, such as 8.10.444.122.

The address may be specified using the hostname, such as mycomputer.emc.com or can be specified using the dotted decimal format, such as 8.10.444.122.

To specify multiple addresses in either form, separate the addresses with a comma. For example, node1.emc.com,node2.emc.com.

Note: A best practice is to use the hostname address form so that if an IP address changes for a computer, the **Pool Address** field value is not changed. Instead, the

change can be made at the DNS server or in the local hosts file. Using hostnames also makes more sense in a disaster recovery scenario.

Click **Test Pool** to verify the addresses in the **Pool Address** field are correct and currently reachable. Any problematic addresses are identified for you to correct.

2. Specify how long data in the archive folder is retained by typing a value in the **Months to retain** field.
 - The default value is 0, indicating 0 months.
 - The minimum value is 0, indicating that no retention is specified. If 0 is selected the **Enable automatic disposition** field cannot be used.
 - The maximum value is 1200 (indicating 100 years).
Consider the following before specifying this value:
 - If you are storing the data in the archive folder on a Centera ViPR storage device that is configured to support data retention, be aware of the data retention settings on that device. Also, be aware of the maximum time of retention that the device supports, as it differs by device.
 - Do not enable retention on archive folders that are used for Microsoft SharePoint External BLOB Storage (EBS). For these folders, set the **Months to retain** field to 0.
3. Specify whether to enable SourceOne to dispose of data automatically in the archive folder.
4. Specify whether to allow SourceOne to dispose of data automatically in the archive folder. Select the **Enable automatic disposition** field to specify that SourceOne should automatically dispose of data in the archive folder when the data is older than the value specified in the **Months to retain** field.
5. In the **Maximum Volume Size (MB)** field, specify the maximum size (in MB) of individual volumes in this folder. The default value is 100 MB. You can change this value to be from 10 MB up to 10,000 MB (10 GB). When a volume reaches the maximum volume, it is closed and a new volume is created.

If you set the **Maximum Volume Size (MB)** field to a value greater than 2048 MB (2 GB), you receive a warning indicating that it may make the archiving and retrieval operations take longer.
6. Determine whether to enable **Enable File Audit Deletes**. When enabled, SourceOne labels all file deletions that it makes on the Centera device with a string.
7. By default, the file audit delete string is set to SourceOne. You can change it to another string by typing another string in the **File Audit Delete String** field.
8. For the **Maximum Large File Size [MB]** field, specify the maximum file size of the source file. The default value is 4 GB.
9. Click **Import** to import a `Pool Entry Authorization` (PEA) file for use with the Centera device. A **file selection** dialog box opens to enable you to select the PEA file. After you select a PEA file, this configuration is typed into the **PEA Configuration** area.

The PEA file allows access to data on a Centera storage device.
10. Click **Next**. The page of the **New Archive Folder** wizard displays.

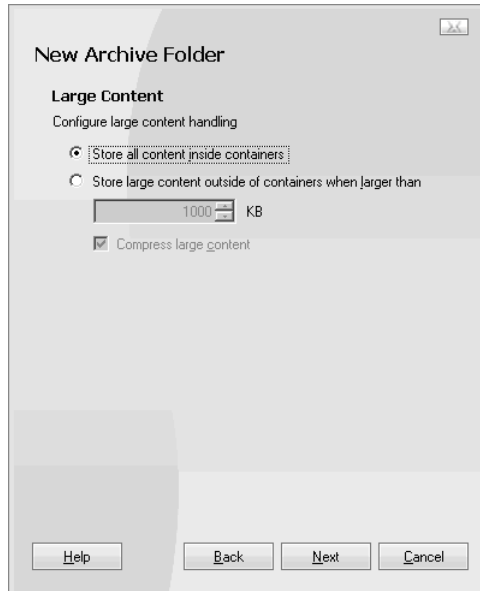
Using the Large Content page of the New Archive Folder wizard

Use the Large Content page to configure whether to store large content separate from other content in the storage container. Large files, large email attachments, or large Microsoft SharePoint attachments are all examples of large content.

Storing large content separately allows you to save storage space by allowing content addressed storage devices, such as Dell EMC Centera, to remove duplicate copies of attachments when they

are stored. However, if you do not have a device that removes duplicates, storing attachments separately may slow SourceOne performance without any benefit.

Figure 19 New Archive Folder Large Content page for most storage options



The **Large Content** page is the same for most storage option types except for the Atmos Container, the ViPR via ATMOS REST container, the Data Domain Storage System Container, and the Virtual Container storage types.

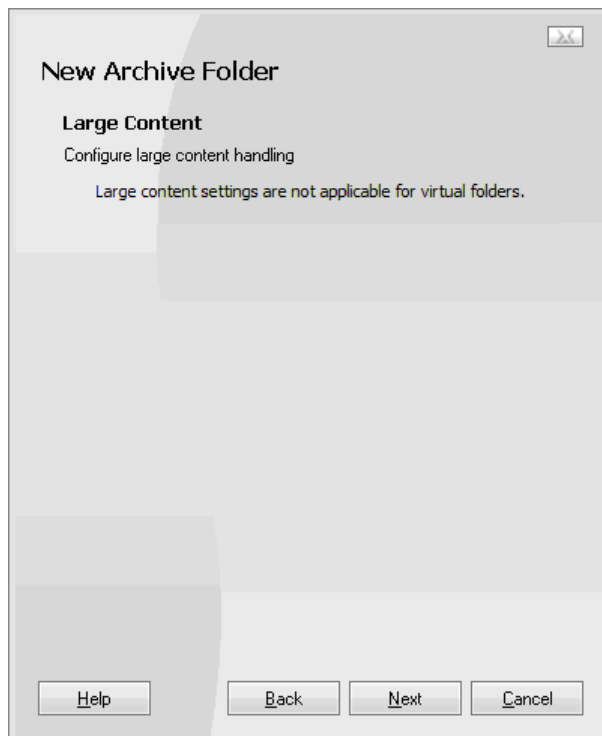
- When the **Atmos Container storage type** is selected, the **Large Content** window displays that the Large Content settings are not applicable for Atmos archive folders.
- When the **ViPR via ATMOS REST Container storage type** is selected, the **Large Content** window displays that the **Large Content** settings are not applicable for ViPR archive folders.
- When the **Data Domain Storage System Container storage type** is selected, the **Large Content** page contains only the wizard navigation buttons and the statement that large content handling that the user cannot configure.
 - ① **Note:** Data Domain content is not compressed before moving it to the Message Center directory as other content can be. Using a Data Domain storage device may require more space in the Message Center directory than using other storage devices that have compression that is enabled.
- When the **Virtual Container storage type** is selected, the **Large Content** page contains only the wizard navigation buttons and the statement that large content settings are not applicable for virtual folders.

Configuring storage of large content for all storage types except the Atmos container and the Data Domain Storage type

Perform the following steps to configure storage of large content for all storage types except the Atmos container and the Data Domain storage type.

About this task

Figure 20 New Archive Folder Large Content page for Virtual Container



Procedure

1. Select how to store large content:
 - Select the **Store all content inside containers** option to have all content, including large content, which is stored within the container for this folder.
 - Select the **Store large content outside of containers when larger than** option to have large content that is stored:
 - With the content when the large content is less than or equal to the value specified in the **KB** field. Specify the large content size in the **KB** field. By default, this value is 1000.
 - Separately from the content when the large content is larger than the value specified in the **KB** field.
Select whether to compress the content by selecting or clearing the **Compress large content** option.
Specify the large content size in the **KB** field. By default, this value is 1000.
2. Click **Next**. The **Indexing** page of the **New Archive Folder wizard** appears.

Using the Organization Options page of the New Archive Folder wizard

Specify the organizing method for the archive folder by using the **Organization Options** page.

Procedure

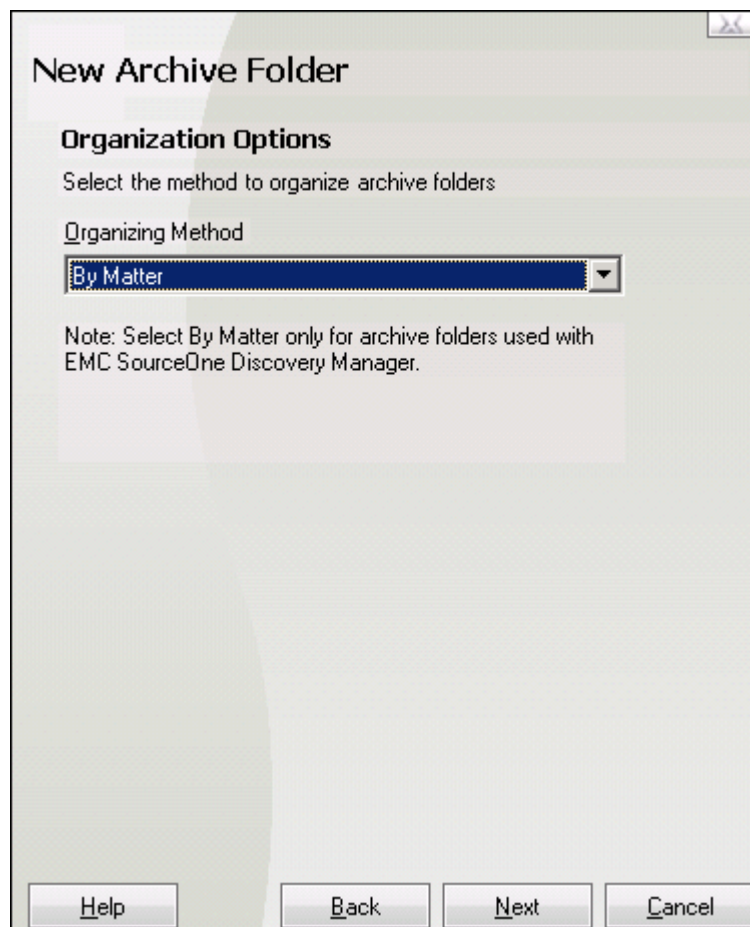
1. Select the organizing method to be used for the archive folder.
 - To have the archive folder organized by date, select **By Date**. An archive folder that is organized by date can be used with any type of mapped folder, and can be used to contain SourceOne Discovery Manager legal matters.
 - To have the archive folder organized by a legal matter, select **By Matter**. A By Matter archive folder can only be used with SourceOne Discovery Manager to store legal matters, and can only be associated with Legal Hold mapped folders.

 **Note:** Disaster Recovery is not available or supported by matter based archives.

After you have selected the organization method for an archive folder, it cannot be modified.

2. Click **Next**.

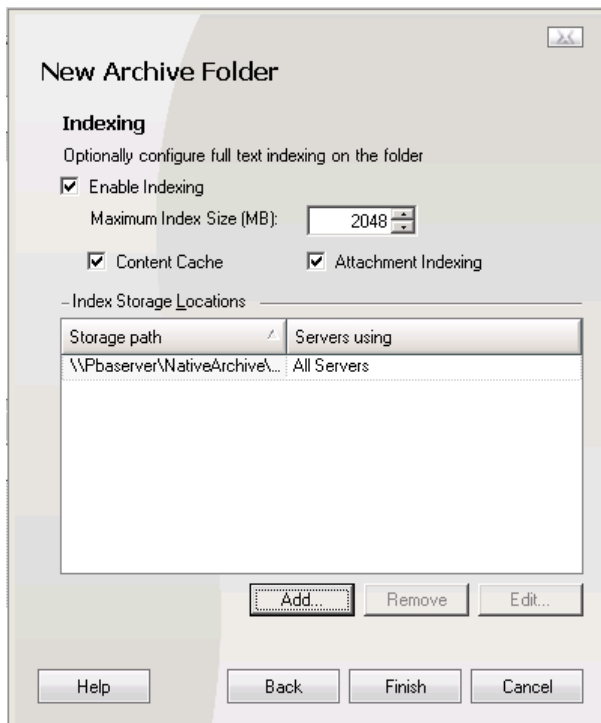
Figure 21 New Archive Folder Organization Options page



Using the Indexing page of the New Archive Folder wizard

Use the Indexing page to specify whether to have full-text indexing that is enabled for the archive folder, and the indexing options if indexing is enabled.

Figure 22 New Archive Folder wizard Indexing page



New Archive Folder wizard Indexing page

You enable or disable indexing using the Enable Indexing checkbox on the Indexing page.

- To enable full-text indexing for the archive folder, select the **Enable Indexing** checkbox. After enabling indexing, you can configure other indexing options.
 - If the **Enable Indexing** checkbox on the **New Archive Folder** page is clear, then it is impossible to search for file content that is archived to an archive folder, by file names or by pathnames.
- To index and search metadata including file names and pathnames, but not perform a full-text index of all file content:
 1. Select the **Enable Indexing** checkbox.
 2. Clear the **Content Cache** checkbox.
 3. Clear the **Attachment and File Indexing** checkbox.
 4. Clear the **Metadata Indexing** checkbox.
- To disable indexing, clear the **Enable Indexing** checkbox and click **Finish**.

Note: Do not enable indexing on archive folders that are used for Microsoft SharePoint External BLOB Storage (EBS).

Selecting indexing options

After enabling indexing, configure other indexing options by performing the following steps.

Procedure

1. In the **Maximum Index Size (MB)** field, specify the maximum size (in MB) of individual indexes in this folder. The value of the default size is 2048 MB. You can modify this value to be from 500 MB to 16,384 MB.

The indexing system uses the **Maximum Index Size (MB)** field value to determine when it is to place new volumes into a new index. In general, indexes do not exceed the specified size, but because the indexing system estimates sizes, some indexes exceed this maximum value.

2. Specify whether a content cache is created.

Creating a content cache for the index greatly improves performance when rebuilding an index because the content for the index must not be read again from the archive.

- To enable the caching of content, select the **Content Cache** checkbox. [Metadata indexing support](#) on page 87 includes more information about metadata indexing support.
- To disable the caching of content, clear the **Content Cache** checkbox.

3. Specify whether attachments and files are indexed:

- To enable the indexing of attachments, select the **Attachment and File Indexing** checkbox.
- To disable the indexing of attachments, clear the **Attachment and File Indexing** checkbox.
- If you enable attachment indexing, you can use the **Index nested subcontainers in attachments** checkbox to select whether subcontainers in attachments are indexed. By default, all new and existing indexes have disabled this option. Changing the selection of the **Index nested subcontainers in attachments** checkbox only applies to content archived and indexed after the selection was changed. Existing indexes remain as they are and must be rebuilt to be affected.

4. Specify whether to index file-specific metadata:

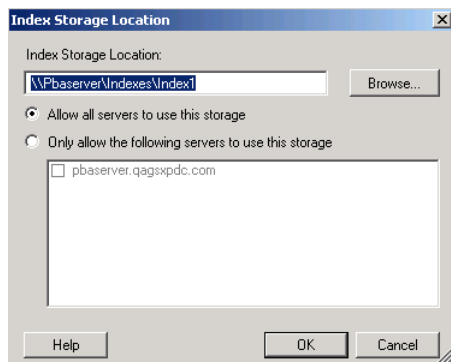
- To enable file-specific metadata indexing, select the **Metadata indexing** checkbox.
- To disable file-specific metadata indexing, clear the **Metadata indexing** checkbox.

File-specific metadata is additional information about a file that does not appear in the file body itself. This extra metadata tends to be application-specific, and not all file types support it. If the file does support it, you can typically see it in the **Details** pane of the file properties view in **Windows Explorer**.

For example, Microsoft Office documents can include **author**, **subject**, **tags**, **comments**, and other descriptive fields. Photographs can include details of the image, and the camera that took the image. Audio files can include details of the song title, album name, artist, and year recorded. If you select the **Metadata indexing** checkbox, then it results in the inclusion of this file-specific metadata in the index.

Clear is the default setting for the **Metadata indexing** checkbox because this process can slow down indexing performance and increase the size of the index, particularly for lots of small files with numerous metadata. You cannot change the Metadata indexing checkbox setting after folder creation.

5. Specify one or more storage locations for the index by clicking **Add**. The **Index Storage Location** dialog box appears.

Figure 23 Index Storage Location dialog box launched from Indexing page

6. Specify the following values in the **Index Storage Location** dialog box:

- Specify the path to the storage location by either directly editing the path in the **Index Storage Location** field, or click **Browse** to browse to the path. When specifying the path in the **Index Storage Location** field, you can specify that path as a UNC path or a local path.

Note: Do not use nested network share folders for multiple Index Storage Locations. Index services stop working when you use this configuration.

- Specify which Native Archive index servers are to use the storage location:
 - Select the **Allow all servers to use this storage** option to allow all Native Archive index servers to use the location.

Selecting this option not only allows all current index servers to use the index storage location, but also allows any index servers that are later added to use this index storage location automatically.
 - Select the **Only allow the following servers to use this storage** option to allow only the selected Native Archive index servers to use the location.

Selecting this option allows you to control which index servers have access to the index storage location and allows you to segment your index processing into groups of index servers and index storage locations.
- Click **OK** to add the location. The **Index Storage Location** dialog box closes.
- To remove an index storage location, select the location and click **Remove**.
- To change an index storage location, select the location and click **Edit**.
- When specifying the path in the **Index Storage Location** field, you can specify that path as a UNC path or a local path.

7. Click **Finish**.

Metadata indexing support

SourceOne supports all metadata for Microsoft Word, Microsoft Excel, Microsoft PowerPoint, ODF (Text), ODF (Sheet), and PDF.

Example

SourceOne supports the following metadata indexing support document types for Microsoft Word:

- Title
- Subject
- Author

- Keywords
- Comments
- Template
- Last author
- Revision number
- Application name
- Last print date
- Creation date
- Last save time
- Total editing time
- Number of pages
- Number of words
- Number of characters
- Security
- Category
- Format
- Manager
- Company
- Number of bytes
- Number of lines
- Number of paragraphs
- Number of slides
- Number of notes
- Number of hidden Slides
- Number of multimedia clips
- Hyperlink base
- Number of characters (with spaces)

Modifying archive folder properties

Perform the following steps to modify the properties for an archive folder.

Procedure

1. Select the **Archive Folders** node for the Native Archive. The **Archive Folders** area lists the folders, if any, for the selected **Native Archive** node.
2. In the **Archive Folders** area, select the folder to modify.
3. Select **Action > Properties**.
4. Modify the properties of an archive folder as described in the following sections.

Modifying general properties of archive folders

Use the General page of the New Archive Folder wizard to specify general options for the archive folder.

About this task

Perform the following steps to modify the general properties of an archive folder.

Procedure

1. Select the **General** tab of the **Archive Folder** dialog box.
2. If needed, modify the description by editing the text in the **Description** field.
3. Click **OK** to save changes.

Modifying storage option properties of an archive folder

Modify the storage option properties of an archive folder by performing the following steps.

Procedure

1. Select the **Storage Options** tab of the **Archive Folder** dialog box.
2. What fields can be modified differ depending with which storage type the archive folder was created. Follow the directions in the following sections to complete selecting the storage and retention options.

Modifying Atmos container storage properties

You can modify one or more of the following Atmos container storage properties.


Procedure

1. Modify how long data in the archive folder should be retained by typing a value in the **Months to retain** field:
 - The default value is 0, indicating the data should be retained for 0 month.
 - The minimum value is 0, indicating that there is no retention that is specified on the archive folder. If 0 is selected the **Enable automatic disposition** field cannot be used.
 - The maximum value is 1200, indicating 100 years.

Consider the following before modifying this value:

- When you make the value in the **Months to retain** field smaller, you shorten the retention period on the archive folder, and an **informational** dialog box is displayed. Shortening the retention period of an archive folder may make deletions from that archive folder behave differently than expected.

Refer to [Be aware of interactions of multiple retention settings on data](#) for more information about potential problems in shortening retention periods.

- If you are storing the data in the archive folder on a NAS storage device that supports data retention, you should be aware of the data retention settings on that device.
 -  **Note:** The maximum time of retention that the device supports, as it differs by device.
- Retention should not be enabled on archive folders that are used for Microsoft SharePoint External BLOB Storage (EBS).

For these folders, the **Months to retain** field should be set to 0.

2. Modify whether to allow SourceOne to dispose of data automatically in the archive folder.

Select the **Enable automatic disposition** field to specify that SourceOne should automatically dispose of data in the archive folder when the data is older than the value specified in the **Months to retain** field.

3. Click **OK** to save the changes.

Modifying Centera container storage properties

Modify one or more of the following Centera container storage properties by completing the following steps.

Procedure

1. Modify how long data in the archive folder is retained by typing a value in the **Months to retain** field.
 - The default value is 0, indicating the data should be retained for 0 months.
 - The minimum value is 0, indicating that there is no retention that is specified on the archive folder. If 0 is selected the **Enable automatic disposition** field cannot be used.
 - The maximum value is 1200, indicating 100 years.

Consider the following before modifying this value:

- When you make the value in the **Months to retain** field smaller, you shorten the retention period on the archive folder, and an **informational** dialog box is displayed. Shortening the retention period of an archive folder may make deletions from that archive folder behave differently than expected.
 - If you are storing the data in the archive folder on a NAS storage device that supports data retention, be aware of the data retention settings on that device. Also be aware of the maximum time of retention that the device supports, as it differs by device.
 - Do not enable retention on archive folders that are used for Microsoft SharePoint External BLOB Storage (EBS). For these folders, set the **Months to retain** field to 0.
2. Modify whether to allow SourceOne to dispose of data automatically in the archive folder. Select the **Enable automatic disposition** field to specify that SourceOne is to dispose of data automatically in the archive folder when the data is older than the value specified in the **Months to retain** field.
 3. Modify whether **Enable File Audit Deletes** is enabled or disabled. If enabled, you can modify the audit string that is written to the Centera by SourceOne using the **File Audit Delete String** field.
 4. Modify the **PEA configuration** by importing a **PEA** file. Click **Import** to import a **PEA** file to use with the Centera device. A file selection dialog box appears to allow you to select the **PEA** file to use. After selecting a **PEA** file, this configuration is typed into the **PEA Configuration** area.

The PEA file allows access to data on a Centera storage device.
 5. Click **OK** to save the changes.

Modifying DiskXtender container storage properties

Modify one or more of the following DiskXtender container storage properties.

Procedure

1. Modify how long data in the archive folder is retained by typing a value in the **Months to retain** field.
 - The default value is 0, indicating the data should be retained for 0 months.

- The minimum value is 0, indicating that there is no retention that is specified on the archive folder. If 0 is selected the **Enable automatic disposition** field cannot be used.
- The maximum value is 1200, indicating 100 years.

Consider the following before modifying this value:

- When you make the value in the **Months to retain** field smaller, you shorten the retention period on the archive folder, and an informational dialog box is displayed. Shortening the retention period of an archive folder may make deletions from that archive folder behave differently than expected.
 - If you are storing the data in the archive folder on a NAS storage device that supports data retention, be aware of the data retention settings on that device. Also, be aware of the maximum time of retention that supported by the device, as it differs by device.
 - Do not enable retention on archive folders that are used for Microsoft SharePoint External BLOB Storage (EBS). For these folders, set the **Months to retain** field to 0.
2. Modify whether to allow SourceOne to dispose of data automatically in the archive folder. Select the **Enable automatic disposition** field to specify that SourceOne is to dispose of data automatically in the archive folder when the data is older than the value specified in the **Months to retain** field.
 3. Modify whether to select the **Purge after move** option. This option is used if you want to delete the files immediately after they are moved to media by DiskXtender.
 - If you do not select the **Purge after move** option, configure delete rules using the DiskXtender File System Manager Administrator as described in the DiskXtender for Windows documentation. Deleting files is usually done to avoid running out of space on the storage drive.
 - If you are using DVD-R media, files are not marked for direct read or deleted until you finish the media.
 4. Modify whether to select the **Direct Read** option. This option is used if you want files to be read directly from media rather than first being copied back to the extended drive and then read.

If you are using DVD-R media, files are not marked for direct read or deleted until you complete the media.
 5. Click **OK** to save the changes.

Modifying NAS device container storage properties

Follow these steps to modify the NAS devices container storage properties for the following devices:

About this task

- Celerra Container
- Data Domain Storage System Container
- Isilon Container
- NAS Container
- NetApp Storage System Container

Procedure

1. Modify how long data in the archive folder is retained by typing a value in the **Months to retain** field.
 - The default value is 0, indicating the data should be retained for 0 months.

- The minimum value is 0, indicating that there is no retention that is specified on the archive folder. If 0 is selected the **Enable automatic disposition** field cannot be used.
- The maximum value is 1200, indicating 100 years.

Consider the following before modifying this value:

- When you make the value in the **Months to retain** field smaller, you shorten the retention period on the archive folder, and an informational dialog box is displayed. Shortening the retention period of an archive folder may make deletions from that archive folder behave differently than expected.
 - If you are storing the data in the archive folder on a NAS storage device that supports data retention, be aware of the data retention settings on that device, if any. Also be aware of the maximum time of retention that the device supports, as it differs by device.
 - Do not enable retention on archive folders that are used for Microsoft SharePoint External BLOB Storage (EBS). For these folders, set the **Months to retain** field to 0.
2. Modify whether to allow SourceOne to dispose of data automatically in the archive folder. Select the **Enable automatic disposition** field to specify that SourceOne is to dispose of data automatically in the archive folder when the data is older than the value specified in the **Months to retain** field.
 3. Click **OK** to save the changes.

Modifying ViPR via Atmos REST Container storage properties

You can modify one or more of the following **ViPR via Atmos REST Container** storage properties.

Procedure

1. Modify how long data in the archive folder is retained by typing a value in the **Months to retain** field.
 - The default value is 0, indicating the data should be retained for 0 months.
 - The minimum value is 0, indicating that there is no retention that is specified on the archive folder. If 0 is selected the **Enable automatic disposition** field cannot be used.
 - The maximum value is 1200, indicating 100 years.

Consider the following before modifying this value:

- When you make the value in the **Months to retain** field smaller, you shorten the retention period on the archive folder, and an informational dialog box is displayed. Shortening the retention period of an archive folder may make deletions from that archive folder behave differently than expected.

Refer to [Be aware of interactions of multiple retention settings on data](#) on page 242 for more information about potential problems in shortening retention periods.

- If you are storing the data in the archive folder on a NAS storage device that supports data retention, be aware of the data retention settings on that device, if any.
- Retention should not be enabled on archive folders that are used for Microsoft SharePoint External BLOB Storage (EBS).

For these folders, the **Months to retain** field should be set to 0. Refer to [Archive folder requirements for Microsoft SharePoint EBS content](#) on page 97 for other requirements for archive folders that contain EBS content.

2. Modify whether to allow SourceOne to dispose of data automatically in the archive folder. Select the **Enable automatic disposition** field to specify that SourceOne should automatically dispose of data in the archive folder when the data is older than the value specified in the **Months to retain** field.

3. Click **OK** to save the changes.

Modifying ViPR via CAS Container storage properties

You can modify one or more of the following **ViPR via CAS Container** properties.

Procedure

1. Modify how long data in the archive folder is retained by typing a value in the **Months to retain** field:
 - The default value is 0, indicating the data should be retained for 0 months.
 - The minimum value is 0, indicating that there is no retention that is specified on the archive folder. If 0 is selected the **Enable automatic disposition** field cannot be used.
 - The maximum value is 1200, indicating 100 years.

Consider the following before modifying this value:

- When you make the value in the **Months to retain** field smaller, you shorten the retention period on the archive folder, and an informational dialog box is displayed. Shortening the retention period of an archive folder may make deletions from that archive folder behave differently than expected.

Refer to [Be aware of interactions of multiple retention settings on data](#) on page 242 for more information about potential problems in shortening retention periods.

- If you are storing the data in the archive folder on a NAS storage device that supports data retention, be aware of the data retention settings on that device.
 - Do not enable retention on archive folders that are used for Microsoft SharePoint External BLOB Storage (EBS). For these folders, set the **Months to retain** field to 0.
2. Modify whether to allow SourceOne to dispose of data automatically in the archive folder.

Select the **Enable automatic disposition** field to specify that SourceOne should dispose of data automatically in the archive folder when the data is older than the value specified in the **Months to retain** field.
 3. Modify whether **Enable File Audit Deletes** is enabled or disabled. If enabled, you can modify the audit string that is written by using the **File Audit Delete String** field.
 4. Modify the **PEA configuration** by importing a **PEA** file.

Click **Import** to import a **PEA** file. A file selection dialog box opens to allow you to select the **PEA** file to use. Once selected, this configuration is typed into the **PEA Configuration** area.

The **PEA** file allows access to data on a storage device.
 5. Click **OK** to save the changes.

Modifying large content properties of archive folders

You can modify large content properties of an archive folder by performing the following steps.

Procedure

1. Select the **Large Content** tab of the **Archive Folder** dialog box to review the large content settings that are associated with the archive folder.
2. If the archive folder was created with the **Store large content outside of containers when larger than** option, then you can modify whether that content is compressed using the **Compress large content** option.
3. Click **OK** to confirm a change, or click **Cancel** to reject a change.

Modifying organization options properties of archive folders

You cannot modify the organization options for an archive folder after it is created. Perform the following steps to modify organization options.

Procedure

1. Select the **Organization Options** tab of the **Archive Folder** dialog box to review the organization options settings that are associated with the archive folder.
2. Click **OK** to close the **Archive Folder** dialog box.

Modifying indexing properties of archive folders

About this task

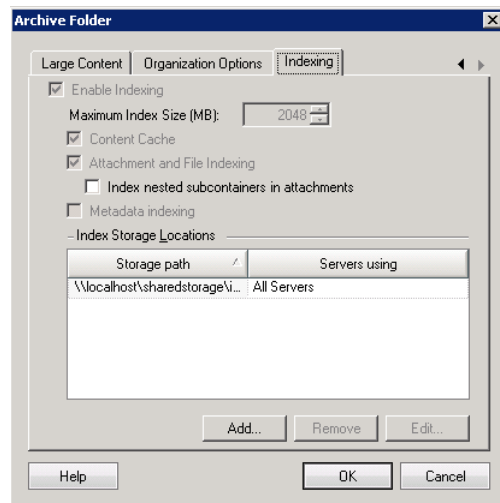
If your organization is shortcutting content as well as searching that content, review [Best practices for deploying shortcuts](#) before modifying the indexing properties of an archive folder.

Perform the following steps to modify the indexing properties of an archive folder.

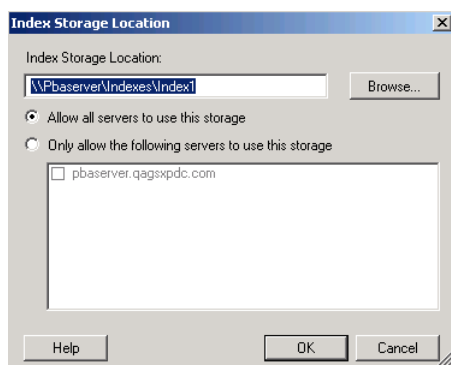
Procedure

1. Select the **Indexing** tab of the **Archive Folder** dialog box.

Figure 24 Archive Folder properties Indexing tab



2. Add, modify, or delete one or more of the index storage locations by doing one or more of the following actions:
 - To remove an index storage location, select the location and click **Remove**.
 - To add an index storage location, click **Add** and browse to the location.
 - To modify an index storage location, select it from the list in the **Index Storage Locations** area and click **Edit**. The **Index Storage Location** dialog box appears.

Figure 25 Index Storage Location dialog box launched from Indexing tab

3. Modify any of the following values in the **Index Storage Location** dialog box:
 - Modify the path to the storage location by either directly editing the path in the **Index Storage Location** field, or click **Browse** to browse to a new path. When specifying the path in the **Index Storage Location** field, you can specify that path as a UNC path or a local path. Consider the following:
 - Do not use nested network share folders for multiple Index Storage Locations. Index services stop working when you use this configuration.
 - Removing or changing the location of existing indexes can lead to the content in that index no longer being searchable, and may cause other problems when searching, indexing, or re-indexing data in those existing indexes.
 - Avoid removing or changing index storage locations that contain indexes when possible for these reasons.
 - Modify which Native Archive index servers are to use the index storage location.
 - Select the **Allow all servers to use this storage** option to allow all Native Archive index servers to use the location. Selecting this option not only allows all current index servers to use the index storage location, but also allows any index servers that are later added to use this index storage location automatically.
 - Select the **Only allow the following servers to use this storage** option to allow only the selected Native Archive index servers to use the location. Selecting this option allows you to control which index servers have access to the index storage location and allows you to segment the index processing into groups of index servers and index storage locations.
4. Click **OK** to accept the changes. The **Index Storage Location** dialog box closes.
5. Click **OK** to save changes and close the **Archive Folder** dialog box.

Deleting archive folders

Delete archive folders from the Native Archive. Before deleting those folders, be aware of the effects of that deletion.

Considerations in deleting archive folders

The following are items to consider before deleting an archive folder:

- Before deleting an archive folder, ensure that:

- All the data in that folder is going to be deleted.
 - No mapped folders are associated with that archive folder.
 - The data in that folder is not being indexed.
 - There is sufficient time to delete the archive folder before performing a backup of the system.
- Do not delete a month or folder until volumes are closed and not being indexed. If you delete a month or folder of data while the associated volume or index is active while indexing or while writing to the volume. This deletion can result in one of several types of errors, such as volume write failures, index failures, and archive failures, and may also result in only a partial deletion of the month or folder.
 - An archive folder typically contains multiple months of data which each contains one or more volumes of data. Deleting this amount of data at one time can take a long time to complete and it may appear that the console is unresponsive while this deletion occurs.
 - A better approach may be to delete each month individually from the folder and then delete the archive folder after it is empty. When the months are deleted, all indexes that are associated with the months are also deleted.
 - To make the deletion process take less time, you can schedule the deletion of the portion of the data that is in the SQL Server database to occur later.

Procedure for deleting archive folders

Perform the following steps to delete a folder from a Native Archive.

Procedure

1. Review the impact of deleting an archive folder.
2. Select the **Archive Folders** node for the Native Archive. The **Archive Folders** area lists the folders for the selected **Native Archive** node.
3. In the **Archive Folders** area, select the folder to delete.
4. Select **Action > Delete Folder**.
5. The **Delete Folder** dialog box appears. This dialog box appears so that you do not unintentionally delete a folder containing data.
6. Use the **Delete Folder** dialog box to verify that you want to delete the archive folder containing data by selecting the **I acknowledge that this action will permanently delete archive content** checkbox. This selection causes the **Yes** button to be enabled. The **No** button is enabled and selected by default.
 - Click **Yes** to confirm the deletion of a folder of data. The **Delete Folder** dialog box exits and the Folder of data and all associated volumes, indexes, and metadata are deleted.
 - Click **No** so the data is not deleted and dismiss the **Delete Folder** dialog box.

If deletion is confirmed, the deletion process begins. This action may take some time to complete if there is a large amount of data in the folder.

To make the deletion take less time, you can schedule the deletion of the metadata in the SQL Server database to occur later.

Disposing of obsolete content in archive folders

Data within archive folders can be disposed of automatically by setting the Enable automatic disposition option on the folder and specifying a certain number of months. Dell EMC SourceOne

then automatically disposes of any content in that folder that is older than the specified number of months.

About this task

Perform the following steps to dispose of data in an archive folder manually.

Procedure

1. Select the **Archive Folders** node for the Native Archive. The **Archive Folders** area lists the folders for the selected **Native Archive** node.
2. In the **Archive Folders** area, select the folder for which to dispose of data manually.
3. Select **Action > Perform Disposition**.

Environment specific information and configuration

This section describes environment specific information and configuration for Native Archive folders and storage.

Archive folder requirements for Microsoft SharePoint EBS content

Archive folders that are used to store Microsoft SharePoint External BLOB Storage (EBS) content have the following requirements:

- Do not enable retention on the archive folder.
- Do not enable indexing on the archive folder.
- Only place EBS content in the archive folder.

ATMOS configuration for a non-SEC 17 compliant tenant

Perform the following steps to configure SourceOne policies for ATMOS.

Procedure

1. Configure the default policy as follows:
 - a. Disable **Retention**.
 - b. Disable **Deletion**.
2. Create a policy, and name it, `SourceOne_Default_Policy` or give it any other name of your choice, then:
 - a. Enable **Retention** and set retention period to 1 s.
 - b. Disable **Deletion**.
3. Create a policy selector, and name it, `SourceOne_Default_Selector` or give it any other name of your choice, then:
 - a. Relate it to Policy `SourceOne_Default_Policy`.
 - b. Set the Event trigger to `ON_UMD_UPDATE`.
 - c. Set the rule as `S1ObjectType equals S1RetentionObject`.
4. Assign this selector to the Subtenant that you want to use for the SourceOne storage.

ATMOS configuration for a SEC 17 compliant tenant

Do the following for a SEC 17 compliant subtenant SourceOne:

About this task

- Enables retention and checksum when uploading an object.
- Does not support the deletion of a single message from a container file from ATMOS storage.

Perform the following procedure to configure SourceOne SEC 17 policies for ATMOS.

Procedure

1. Configure the default SEC 17 compliant policy as follows:
 - a. Set retention period to 0 s.
 - b. Disable **Deletion**.
2. Create a SEC 17 compliant policy, and name it, `SourceOne_Default_Policy` or give it any other name of your choice, then:
 - a. Enable **Retention** and set retention period to 1 s.
 - b. Disable **Deletion**.
3. Create a policy selector, and name it, `SourceOne_Default_Selector` or give it any other name of your choice, then:
 - a. Relate it to Policy `SourceOne_Default_Policy`.
 - b. Set the Event trigger to `ON_UMD_UPDATE`.
 - c. Set the rule as `s1ObjectType equals s1RetentionObject`.
4. Assign this selector to the Subtenant that you want to use for the SourceOne storage.

Configuring Isilon before use with SourceOne

Perform the following step on the Isilon server to use Isilon with SourceOne.

Procedure

1. Configure the SmartLock license for the cluster. If using compliance mode, the compliance clock must be set and a SmartLock root directory must exist.
2. Configure a SmartLock folder.
3. Ensure that the following settings are not set on the SmartLock directory when using SourceOne:
 - Default retention
 - Minimum retention
 - Maximum retention
 - Autocommit

The SmartLock directory settings can override the amount of retention SourceOne applies to a container. This setting can result in SourceOne treating a container as if retention has expired when it has not, or SourceOne retaining a container when the retention period has expired.

For example, if someone sets the autocommit setting on the SmartLock directory, SourceOne may try to delete the folder if SourceOne does not realize that the container is in retention.

Isilon folder disposition

After the retention period expires on a SourceOne container, the file becomes eligible for deletion, but the Isilon device itself does not automatically delete the container.

Perform one of the following steps to dispose of a container in SourceOne:

- Right-click the **Archive Folder** in the console and select **Perform Disposition**.
- Enable **Automatic Disposition** for the **Archive Folder** and write a script to do the disposition at scheduled times.

Deletion occurs only for folders that are out of retention. If there is a requirement to delete containers under retention, Isilon supports a privileged delete using the Isilon shell when the following conditions exist:

- The user that is performing the delete uses the ISI tool on the Isilon container.
- The Isilon container is in enterprise mode rather than compliance mode.
- The user that is performing the delete is logged in as the root user.
- The privileged delete setting on the SmartLock folder is set to **On**.

Isilon message disposition

The deletion of individual messages from a container is possible. Note the following:

- A privileged delete is only available on the Isilon device itself.
- If someone deletes a message when the parent container of the message is under retention, deletion of the message occurs in the SourceOne database and index, but not from the Isilon container.

Configuring Native Archive folder DiskXtender options

Use Dell EMC DiskXtender for Windows (DiskXtender) to extend the capacity of the Native Archive by causing the Native Archive contents to be automatically written to other storage media, such as Dell EMC Centera devices, tape, DVD-R, DVD-RAM, magneto-optical, Ultra-Density Optical (UDO), WORM, WORM-tape, and Network Attached Storage (NAS).

DiskXtender extends the storage capabilities of NTFS volumes by moving files from NTFS volumes to other storage media. However, the files still appear to be resident on the volume, and can be accessed from storage media as needed.

Configuring DiskXtender for use with Dell EMC SourceOne

To configure DiskXtender for use with Dell EMC SourceOne, perform the following steps using the DiskXtender File System Manager Administrator.

Procedure

1. Create a media service:
 - A media service provides access to the media so that DiskXtender can work with it. For some media services, like Dell EMC MediaStor™, which means placing requested media into a drive.
 - For other media services, like Dell EMC Centera or Network Attached Storage (NAS), which means providing access to a place where the data is written.

2. Create an extended drive.
3. Prepare the media.

The way that you prepare the media depends on the media service you are using. The following describes how to prepare the media for each media service:

- Dell EMC Centera—If you are using the Dell EMC Centera media service, there are no additional steps that you must take to prepare the media. Creating the virtual media or allocate it to the extended drive is not needed. EmailXtender does this process automatically for you when it begins closing volumes.
 - MediaStor or Sun StorageTek ACSLS—If you are using the MediaStor or StorageTek ACSLS media services, allocate blank media from the media service to the extended drive. When you allocate media, DiskXtender claims the media for file migration from the specified extended drive.
 - NAS or Tivoli Storage Manager (TSM)—If you are using the NAS or TSM media services, create the virtual media and allocate it to the extended drive.
4. For the remaining DiskXtender settings, leave the defaults unless instructed to change them by an Dell EMC technical representative, with the exception of the **Use special application filtering** option on the **Options** tab of the **Service Properties** dialog box. This option allows you to specify whether an application can recall or directly read a deleted file that resides on storage media:
 - If you are using virus scanning software on the storage drive, add the executable file for the virus scanning software to the **Special Application Filtering List** and set the file to **No recall**.
 - If you are using the Dell EMC Centera, MediaStor, or Sun StorageTek ACSLS media services, do not create media folders, media groups, or move rules. Also, do not label Sun StorageTek ACSLS or MediaStor media.
 5. If you are using the NAS or TSM media services:
 - Create the media folders and groups.
 - Move rules.
 - Delete rules to enable file migration and deletion.
Automatic file migration is not available when you use these media services.

You may want to create media folders for each storage drive directory for cabinets.

6. Configure the Dell EMC SourceOne storage options that are specific to DiskXtender using the Dell EMC SourceOne console, which include:
 - Specifying the Dell EMC SourceOne storage drive as the DiskXtender extended drive.
 - Specifying the media type you selected in DiskXtender.
 - Specifying the maximum volume size.

You configure these options when you create archive folders

Be aware that if using Dell EMC DiskXtender with Dell EMC Centera, and DiskXtender experiences connection issues with Centera, such as not accessing all the configured nodes, errors are generated in both Dell EMC SourceOne and DiskXtender.

A typical DiskXtender error may indicate `File fetch failed for .emx files that it is trying to retrieve based on a request that is generated from Dell EMC SourceOne.`

You can correct this problem by restarting the DiskXtender services and ensuring that the connection to the Centera device is re-established.

The errors may take time to dissipate.

Automatic file migration activities

After configuring DiskXtender, the system can begin automatically migrating volumes to media.

If you are using the NAS or TSM media services, automatic file migration is not available. Use the Dell EMC Centera, MediaStor, or Sun StorageTek ACSLS media services if you want to benefit from automatic file migration.

What SourceOne creates

As SourceOne closes volumes and copies them to the storage drive as `.emx` files, SourceOne automatically creates the necessary media folders, media groups, and move rules in DiskXtender based on the Message Center folders, collection rules, and retention periods:

- Media folders are folders on the extended drive that contain the files that DiskXtender moves to media.
- Media groups are specific groupings of media that are assigned to a media folder.
- Move rules define which files in a media folder are moved to each media group.

What SourceOne does not create

SourceOne does not create purge rules, which define which files to delete from the extended drive. Instead you select whether to delete files immediately after they are moved using the **Purge after move** option in the SourceOne Console.

If you do not select the **Purge after move** option, configure purge rules using the DiskXtender File System Manager Administrator as described in the DiskXtender for Windows documentation. Deleting files is usually needed to avoid running out of space on the storage drive.

SourceOne configures DiskXtender

SourceOne automatically configures DiskXtender by completing the following tasks.

Procedure

1. Creates one media folder for the archive folder.

The first time a volume closes in SourceOne for this archive folder, the system automatically creates a single media folder with a name using the first 12 characters of the archive folder name.

2. Creates one DiskXtender media group per folder per month.

SourceOne creates one media group for each month for each SourceOne folder and adds media to the media group. If you are using removable media through the MediaStor or Sun StorageTek ACSLS media services, then DiskXtender automatically labels blank media before adding it to the media group.

3. Creates one move rule per folder per month:

- SourceOne also creates one move rule for each month for each SourceOne folder and sets the move rule to move only `.emx` files.
- Optionally, you can have SourceOne mark all files for direct-read, or delete files immediately after they are moved to media. Do this option using the options that are described in [Using the Storage Options page of the New Archive Folder wizard](#).
- If you do not select the **Purge after move** option, configure delete rules to avoid running out of space on the storage drive.

- If you configured a retention period for a SourceOne folder, the retention period is configured for the move rule.

Consider the following:

- If you are using DVD-R media, files are not marked for direct read or deleted until you complete the media.
- If you are using DiskXtender to write volumes to removable media, such as DVD-R, DVD +R, tape, or magneto-optical, you may want to disable direct read. Disabling it avoids too many competing read and write requests to the library containing the media. Consult with a Dell EMC technical representative to determine if this strategy is for you.

Configuring media group options

Consider the following when configuring media group options:

- If you are using the Dell EMC Centera media service, set the **Maximum media simultaneously receiving files** option on the **Options** tab of the **Media Group Properties** dialog box to **4**.
- Do not change the remaining default values for the media folder, media groups, and move rules.

Note: If volumes exist on the storage drive before you extend the storage drive using DiskXtender, then DiskXtender does not move those volumes. Only volumes that close after you extend the storage drive cause automatic configuration to occur.

- Create the media folder, media group, and move rule, as well as perform the associated assignments, manually using the DiskXtender File System Manager Administrator interface.
- When a volume is saved to the extended drive, the volume is added to the move list. The volume is then moved to media when the file migration schedule is active. By default, the file migration schedule is active from 8 PM to 9 AM.
- Optionally, if the options have been selected in SourceOne, they can also be deleted and marked for direct read automatically.
If those options are not selected in SourceOne, then volumes are deleted according to the delete settings configured in DiskXtender.

Managing Native Archive folders

You can manage the Native Archive folders after they are configured by performing one or more actions that are described in this section.

Viewing Native Archive folder data and available actions

Native Archive folders contain the data that is archived in the Native Archive. This data is organized by month folders that are automatically created and populated during the archiving process. For example, the month folder 200805 would be automatically created in May of 2008.

Each month folder contains one or more volumes containing the archived data, and if selected, one or more associated full-text indexes. You can view information about volumes and indexes in the Native Archive by expanding the **Archive Folders** node and then expanding the archive folder in which the volumes and indexes are stored.

Figure 26 Viewing archive folder data

Archive Folders										3 objects
Name	Volumes	Volume Size (MB)	Volume Message	Indexes	Index Size (MB)	Index Message	Errors	Description		
AF1	11	40	160	11	13	153	5			
AF2	11	40	160	0	0	0	0			
AF3	7	3	62	7	4	48	4			
Year/Month	Volumes	Volume Size (MB)	Volume Message	Indexes	Index Size (MB)	Index Message	Errors			
200504	1	3	38	1	4	38	0			
200502	1	0	1	1	0	1	0			
200805	1	0	1	1	0	1	0			
200409	1	0	4	1	0	4	0			
200809	1	0	13	1	0	0	2			
200609	1	0	1	1	0	0	1			
200810	1	0	4	1	0	4	0			

Indexes		Volumes					
Year/Month	Volume Name	Messages	Size (MB)	Status	Start	End	
200805	20081018161417	1	5	Open	5/7/2008 2:23:32..	5/7/2008 2:23:32 PM	

You can perform the following actions on a selected month, volume, or index:

Month

- Reindex Month
- Delete Month
- Reindex Failed Documents

Volume—Close Volume

Index

- Rebuild Index—Reindexes all documents in the index. This action creates an index with new content.
- Reindex Failed Documents—Retries missing or failed documents. Missing documents are added to the existing index and documents that contain indexing errors are retried. The new version of the document replaces the old version in the index.
- Refresh from Content Cache—Recreates the index from Content Cache. Behavior differs between ISYS and ElasticSearch indexing in the following ways:
 - ISYS Indexes—Available only if Content Cache is enabled. Recreates the index from Content Cache.
 - ElasticSearch Indexes—Since Content Cache is not supported for ElasticSearch indexes, only missing documents are added to the existing index. Documents with indexing errors are not retried.

The following sections describe how to view the status of and manage the volumes and indexes in a Native Archive.

Viewing months and volumes

Perform the following steps to view the volumes in an archive folder.

Procedure

1. Select the **Archive Folders** node under the **Native Archive** node.

The **Archive Folders** area appears with two panes:

- The top pane lists the existing archive folders and can be expanded to show the months within each archive folder.

- The bottom pane lists detailed information about volumes or indexes that are part of the selected month subfolder, depending on which tab in the bottom pane is selected.

The following list describes the columns that are displayed in the top pane of the **Archive Folders** area:

- **Name**—Specifies the name of the archive folder.
 - **Year/Month**—Specifies the name of the month subfolder.
 - **Volumes**—Specifies the number of volumes in the folder or subfolder.
 - **Volume Size (MB)**—Specifies the size of the volumes listed. If there are multiple volumes, it specifies the total size of all volumes.
 - **Volume Message**—Specifies the number of content items in the volume. If there are multiple volumes, it specifies the total number of content items in all volumes.
 - **Indexes**—Specifies the number of indexes in the folder or subfolder.
 - **Index Size (MB)**—Specifies the size of the indexes listed. If there are multiple indexes, it specifies the total size of all indexes.
 - **Index Message**—Specifies the number of content items in the index. If there are multiple indexes, it specifies the total number of content items in all indexes.
 - **Errors**—Specifies the number of months or indexes that have errors. For an archive folder, this column is the total number of errors in the contained months and in the indexes.
 - **Description**—Specifies the description that is associated with the archive folder.
2. In the top pane of the **Archive Folders** area, expand the archive folder that contains the month subfolder about which you want more information and select that month subfolder.
 3. Click the **Volumes** tab to view detailed information about the volumes in the selected month subfolder. The following list describes the columns that are displayed on the **Volumes** tab:
 - **Year/Month**—The name of the month subfolder containing the volume.
 - **Volume Name**—The name of the volume.
 - **Messages**—The number of content items in the volume.
 - **Size (MB)**—The size of the volume in megabytes (MB).
 - **Status**—The status of the volume. A volume can have more than one status simultaneously. The following are the possible values:
 - **Available**—The volume is available for use. This value is the default status.
 - **Busy Trying to Record**—The system is busy trying to record the volume.
 - **Closed**—The volume is closed and cannot have content added to it.
 - **Deleted from storage**—The volume is in the process of being deleted from the archive and is not available. When this value is the status, the folder icon for the volume appears with an X on it indicating that the volume is being deleted.
 - **Deleted from SQL**—Information about the volume is in the process of being deleted from the SQL database and is not available.
 - **Failed Recording**—The volume could not be recorded.
 - **Online**—The volume is accessible.
 - **Recording**—The volume is being recorded.
 - **Record Pending**—The recording of the volume is pending.
 - **Removal Pending**—The removal of the volume is pending.

- **Start**—The date and time when the volume was opened.
- **End**—The date and time when the volume was closed.

Modify which columns are displayed in this view by selecting **Add/Remove Columns** from the **Actions** menu.

Viewing indexes

Perform the following steps to view the indexes in an archive folder.

Procedure

1. Select the **Archive Folders** node under the **Native Archive** node.

The **Archive Folders** area appears with two panes:

- The top pane lists the existing archive folders and can be expanded to show the months within each archive folder.
 - The bottom pane lists detailed information about volumes or indexes that are part of the selected month subfolder, depending on which tab in the bottom pane is selected.
2. In the top pane of the **Archive Folders** area, expand the archive folder that contains the month subfolder that contains the index about which you want more information and select that month subfolder.
 3. Click the **Indexes** tab in the bottom pane to view index information that is associated with the selected month subfolder. This table describes the columns that are displayed in this tab.

The following list describes the columns that are displayed in the top pane of the **Archive Folders** area:

- **Type**—The kind of index.
ES1—Indicates an Dell EMC SourceOne index.
- **Year/Month**—The name of the month subfolder containing the index.
- **Index**—The name of the index. This name is a sequential number that is assigned to the index when it is created.
- **Messages**—The number of content items in the index.
- **Size (MB)**—The size of the index in megabytes (MB).
- **Status**—The status of the index. Possible values are:
 - **Available**—The index is complete and is searchable. This value is the default status.
 - **Deleted**—The index is in the process of being deleted and is not searchable. When this value is the status, the folder icon for the associated volume appears with an X on it indicating that the index is being deleted.
 - **Inconsistent**—The index has inconsistencies and is not searchable.
 - **Indexing**—The index is being created and is not searchable.
 - **Missing Item**—There is a mismatch between the number of content items in the index and the number of content items in one or more volumes from which the index was created.
 - **Refreshing**—The index is in the process of being reindexed using data in the content cache and is not searchable.
 - **Reindexing**—The index is in the process of being reindexed using data in the archive and is not searchable.

- **Unperformed Transaction**—After several tries an index transaction file for the index could not be processed, and so the index transaction file was removed from the processing directory.
 - **Start**—The date and time when the index was opened.
 - **End**—The date and time when the index was closed.
4. Select **Add/Remove Columns** from the **Actions** menu to modify which columns are displayed in this view.

Understanding and correcting indexes with the Unperformed Transaction status

The Unperformed Transaction message appears on the Indexes tab on the bottom pane of the Archive Folders area. When the Unperformed Transaction status appears for an index, it indicates that after several tries an index transaction file for that index could not be processed. The index transaction file was removed from the processing directory.

Understanding index transaction files

The index transaction file contains the operations to be performed on an index. Index transaction files may have either of the following file types.

- Index transaction files with an `.xvltts` file type contain operations to add documents to an index.
- Index transaction files with a file type of `.upds` contain operations to update documents in an index.

Index transaction files are processed in the following directory:

```
\EMC SourceOne\Indexes\DropDir
```

When an index transaction file repeatedly cannot be processed, the **Unperformed Transaction** status is signaled, and the index transaction file is moved from the `\DropDir` directory to the `\Intermediary` subdirectory of the `\DropDir` directory, as in the following example:

```
\EMC SourceOne\Indexes\DropDir\Intermediary
\ArchiveFolder_201011_004.xvltts
```

Correcting an unperformed transaction

When the **Unperformed Transaction** status is signaled, check the Intermediary directory for any files and then contact Dell EMC Support for help in analyzing those files and correcting the problems so that one or more files can be processed.

If the solution to the problem is to correct the index transactions file and then reprocess it, place the corrected file in the following directory:

```
\EMC SourceOne\Indexes\DropDir
```

Dell EMC SourceOne automatically picks up the file for processing as part of regular content indexing.

Search implications of unperformed transactions

When an index transaction file cannot be processed, the content to be processed by that index transaction file has not yet been indexed.

However, you can still return search results for that unindexed content by using a search client.

Recreating indexes for a month of data

Perform the following procedure to re-create the index for a month of archived data.

Procedure

1. Select and view the month
2. Select the month to be reindexed.
3. Select **Action > Reindex Month**. The archived data is reprocessed and the resulting one or more indexes are re-created.
 - To re-create only a single index from the archive, use the **Rebuild Index** option.
 - To re-create only a single index from the content cache, use the **Refresh from content cache** option.

Deleting a month

Perform the following steps to delete a month of archived data.

Procedure

1. Review the considerations for deleting data.
2. Display the volumes by month.
3. Select the month to be deleted.
4. Select **Action > Delete Month**. The **Delete Month** dialog box appears. This dialog box appears so that you do not unintentionally delete a month of data.
5. Use the **Delete Month** dialog box to verify that you want to delete the month of data: selecting the **I acknowledge that this action will permanently delete archive content** checkbox.
 - Select the **I acknowledge that this action will permanently delete archive content** checkbox. This selection causes the **Yes** button to be enabled. The **No** button is enabled and selected by default.
 - Click **Yes** to confirm the deletion of a month of data. The **Delete Month** dialog box exits and the month and all associated volumes, indexes, and metadata are deleted.
 - Click **No** to reject deleting the data and dismiss the **Delete Month** dialog box. To improve time that is taken to delete data, schedule the deletion of archived data metadata from the SQL Server database for a non-peak time.

Closing a volume

Perform the following steps to close a volume.

Procedure

1. Display the volumes
2. Select the volume to close.
3. Select **Action > Close Volume**. The volume status is changed to **Closed** and, if required, a new volume is opened for any subsequent content that is archived.

Consider the following:

- If the volume to be closed is stored on a network storage device, such as an Dell EMC Centera, you may not be able to close the volume when that device is not reachable on

the network. If this problem occurs, resolve the network connection issue to the storage device and try to close the volume again.

- If there are volumes which have failed to close in the Native Archive and the network connection to the SQL Server database is lost and then re-established, Dell EMC SourceOne tries to close these volumes, resulting in `Failed to Record Volume` error messages to the event log.

Rebuilding an index

Perform the following steps to rebuild a single index from the archive.

Procedure

1. Display the indexes.
2. Select the index to rebuild.
3. Select **Action** > **Rebuild Index**. The index is re-created:
 - To re-create only a single index from the content cache, use the **Refresh from content cache** option.
 - To re-create all indexes that are associated with a month, use the **Reindex Month** option.

Rebuilding an index from the content cache

Complete the following procedure to refresh an index using data in the content cache rather than data in the archive.

Procedure

1. Verify that the archive folder was created with content caching enabled.
2. Display the indexes.
3. Select the index to rebuild from the content cache.
4. Select **Action** > **Refresh From content cache**. The index is re-created:
 - To re-create only a single index from the content cache, use the **Refresh from content cache** option.
 - To re-create all indexes that are associated with a month, use the **Reindex Month** option.

Reindex failed documents

Repair failed indexes by retrying only documents that are missing from the index, or documents that contain indexing errors, without having to reindex all documents in the index. Documents that contain errors are flagged with **Indexing Error**, which indicates that the indexing operation was unsuccessful. Use the **Indexing Error** field to search for documents that could not be indexed.

About this task

To reindex failed documents, perform the following steps:

Procedure

1. Display the indexes.

2. To reindex a failed document, select the index.
3. Select **Action > Reindex Failed Documents**.

This action identifies documents that are missing from the index or documents with indexing errors. A reindexed document replaces the existing copy in the index.

Managing Multiple Native Archive Connections

The SourceOne Email Management console, allows for the creation of multiple native archive connections. Each native archive connection requires a dedicated archive database and one or more native archive servers.

Install and configure multiple Native Archive connections

To add Native Archive connections, perform the following steps.

Procedure

1. Install new Archive Databases, and then configure the corresponding SQL permissions.

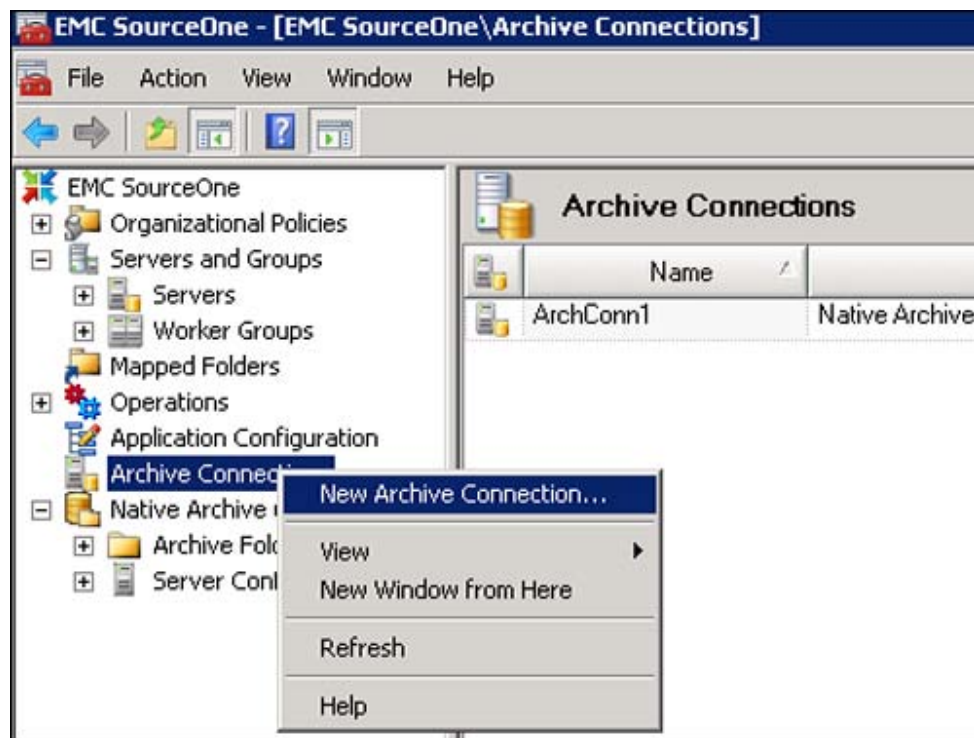
Install new Archive Databases by using either of the following methods:

- With a separate host for each database.
- On the same host with each Archive database on a dedicated drive.

The Important SQL Server considerations and the SQL Server permissions sections in the *SourceOne Email Management Installation Guide* provides details about database installation.

2. Add Archive Servers that point to the new Archive Database.
3. In the Dell EMC SourceOne Console:
 - a. Right-click **Archive Connections**.
 - b. Select **New Archive Connection**.

Figure 27 New Archive Connection



4. Type the **Archive Connection** name in the **Name** field, and then from the **Type** list, select **Native Archive**.

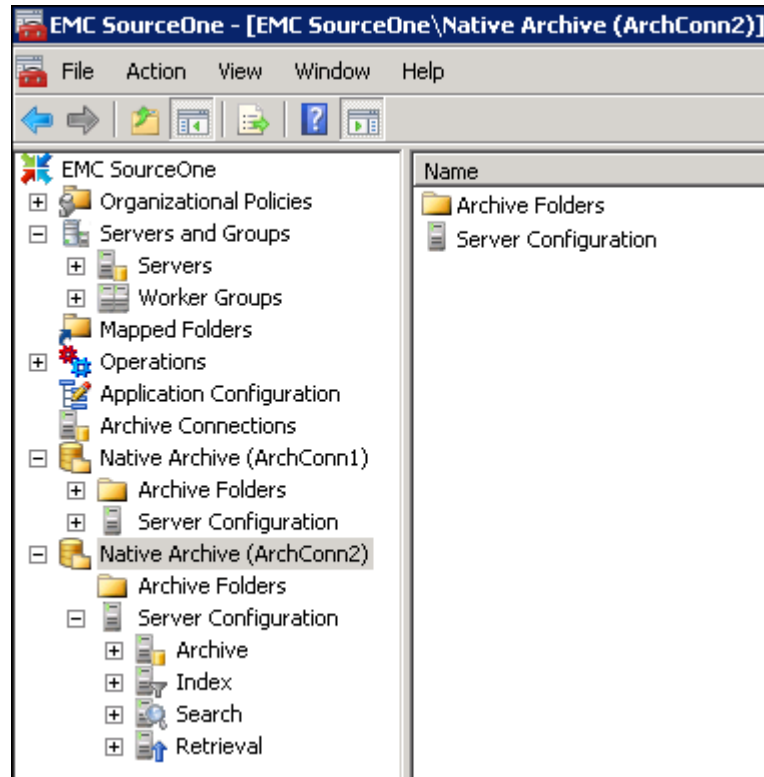
The **New Archive Connection** page appears.

Description is an optional field.

5. Click **Next**.
6. Type the **Database Server** and then **Database Name** for the new Archive Database.
7. Click **Finish**.

The creation of the new Native Archive connection occurs and appears in the **Archive Connections** node.

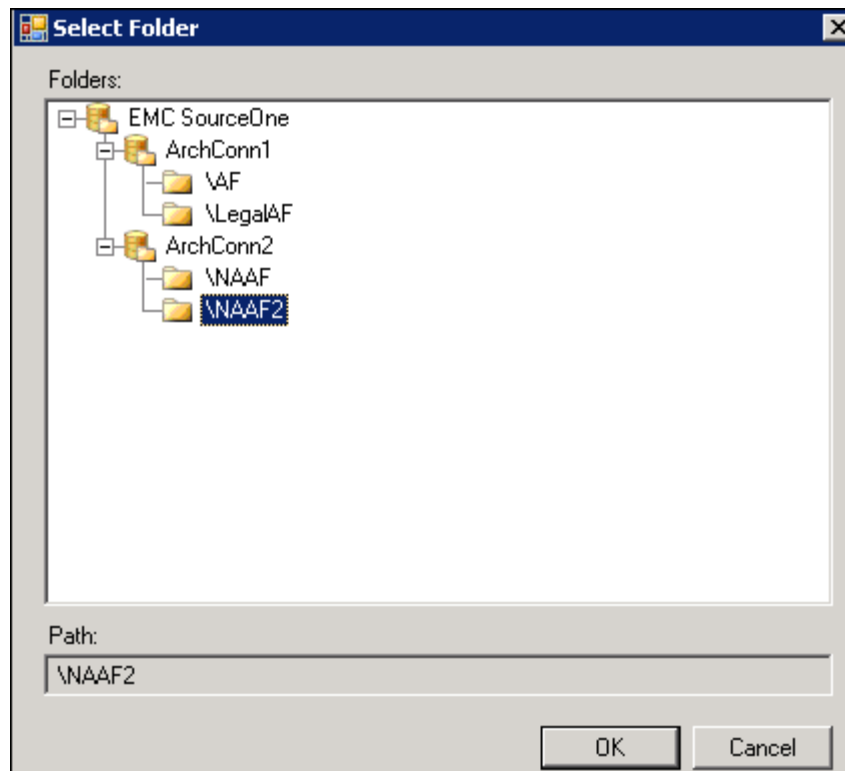
Figure 28 New Native Archive added



8. Create an archive folder in the Native Archive connection, and then create a mapped folder that maps to the new archive folders.

When browsing Archive Folders while creating a mapped folder, all the Native Archive connections appear with the archive folders.

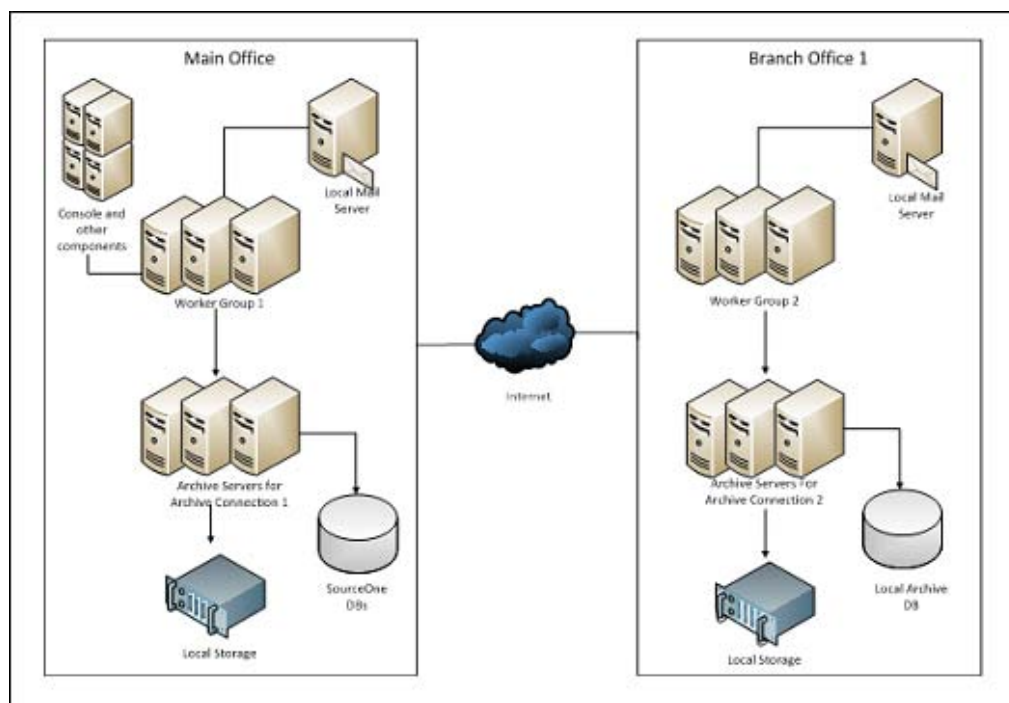
Figure 29 Select Folder window



Data segregation with Worker Group and multiple Native Archive connections

The Worker Group and the multiple Native Archive connections collectively process and store messages locally in environments that require two or more distinct locations to archive messages from a local mail server to local storage.

The following figure illustrates the supported configuration for this deployment.

Figure 30 Data segregation deployment

The *SourceOne Email Management Installation Guide* provides details on the installation, recommendations, and considerations for adding Native Archive connections.

Multiple Native Archive Configuration considerations

The message center, archive, index, or unpack locations can use a share folder. The share folder must not use multiple native archive connections because this action can result in data unavailability.

The Dell EMC SourceOne software ensures exclusive use of a network share folder by only one native archive connection by creating a unique hidden file with a name of `ES1NetworkShare.claim`.

The share folder includes message center, unpack, archive, and index locations.

When configuring a share folder to a native archive connection, the native archive connection claims the share folder preventing other native archive connection from claiming the share folder again.

The archive service stops working if it cannot claim any of the following:

- The message center for the archive server.
- The unpack location for the archive server.
- The archive locations for each archive folder.

The index service stops working if it cannot claim the index locations for each archive folder.

Archive server configuration errors

If a native archive connection cannot claim either the message center or the index unpack directories during archive server configuration, archive server configuration errors appear.

The following is the Message Center Directory error that appears:

```
The Archive Folder data is invalid for the following reasons:  
- Message Center Directory can't be claimed. It may be claimed by another  
native archive connection.
```

The following is the Archive Index Unpack Directory error that appears:

```
The Archive Folder date is invalid for the following reasons:  
- Archive Index Unpack Directory can't be claimed. It may be claimed by  
another native archive connection.
```

Archive Folder Configuration errors

If a native archive connection cannot claim either the archive or the index locations during archive folder configuration, then archive folder configuration errors appear.

The following is the Archive location error that appears:

```
The following problems were found with this Archive Folder configuration:  
- Archive Location can't be claimed. It may be claimed by another native  
archive connection.
```

The following is the Index location error that appears:

```
The following errors were identified:  
- Index Location can't be claimed. It may be claimed by another native  
archive connection.
```

New Archive Connection Configuration

During archive connection configuration, if a native archive connection cannot claim either of the following, then an archive connection configuration error appears:

- The message center or the unpack locations of each archive server.
- The archive or the index locations of each archive folder.

The following is the error message that appears:


```
This configuration is invalid for the following reasons:  
- Message Center Directory can't be claimed. It may be claimed by another  
native archive connection.  
- Index Location can't be claimed. It may be claimed by another native  
archive connection.
```

Using the network share claim functionality for multiple Native Archive connections

The SourceOne console administrator must have full access permissions to the network share folders to use the network share claim functionality in the SourceOne console.

Procedure

1. If the SourceOne console administrator does not have permission, the following steps ensure the claiming of the responding share folders to avoid a potential data unavailability issue.
 - a. Ensure that the following file does not exist in the share folder or its sub folders:
`SourceOne ES1NetworkShare.claim`
 - b. If the following file exists in the share folders, ensure that the native archive site ID in the file is the same as the current native archive site ID:
`SourceOne ES1NetworkShare.claim`
2. After saving the configuration:
 - a. Restart the archive and the index services.
 - b. Let the archive and the index services claim the new share folders. If the archive and the index services fail to claim these share folders, the archive and the index service fail to start.

 **Note:** Do not use nested network share folders as the Message Center Location, Archive Location, or Index Location.

Disclaiming a network share folder

When decommissioning occurs for an archive server or a native archive connection, SourceOne does not automatically disclaim the related claimed share folders.

To reuse these share folders for other native archive connection, manually delete the claim file in the corresponding share folders.

Archive Integrity Tool

You can use the SourceOne Archive Integrity Tool with Elasticsearch or ISYS indexes to identify and rebuild indexes. The Archive Integrity Tool now supports Elasticsearch full-text indexes. However, the Archive Integrity Tool skips any ISYS indexes that are pending conversion to Elasticsearch. The log file provides details on ISYS indexes that are skipped.

The Archive Integrity Tool includes the following updates:

- Local and SQL Server resource usage is reduced to complete operations faster.
- Logging is improved to provide consistent and uniform logging behaviors that are inline with SourceOne standard logging.

Searching an archive

After an SourceOne archive is configured and populated, you can search the contents of that archive using SourceOne Search.

When a user executes a search query, SourceOne Search dynamically determines which Archive and Archive Folder to search based on the Mapped Folder that the user performing the search selected.

Consider the following when searching an archive:

- Simple search queries are run as SQL queries of the SourceOne database.
 - Simple search queries tend to run more quickly than complex queries because they are simpler and because they do not access the archive indexes.
 - An example of a simple search query would be a search for all messages that are received by a user over a specified period of time.
- Complex search queries are run by searching the full-text indexes of the archive.
 - Complex search queries tend to run more slowly than simple search queries because they are both more complex and because they access the full-text indexes.
 - An example of a complex search query would be a search for all messages that are received by multiple users that contained a certain text string in the subject or body of the message.


To ensure the success of any search, always first verify that the full-text search capabilities of the archive are completely operational. For example, before searching a Native Archive, verify that one or more Native Archive search servers and retrieval servers are available.

Although it is possible to run a simple search of the SourceOne database even when the archive full-text search capabilities are not available, doing so is not advisable because what is considered a simple query versus a complex query can only be determined by the software when that query is run.

Moving an archive

In some situations, such as when hardware must be reallocated or replaced, you may need to move the physical location of the archive in which SourceOne stores content.

About this task

 **Note:** If you have a complex hardware and software configuration, you may want to contact Dell EMC Professional Services for assistance in moving the archive.

Perform the following steps to move an archive.

Procedure

1. Verify that there are no activities creating jobs to process content. You can use the SourceOne console to set all active activities to the suspend state.
2. Verify that there are no SourceOne jobs running on any of the Worker Servers using the SourceOne console.
3. Close any open volumes.
4. Prepare to shut down the archive servers.


Before shutting down the archive servers, coordinate the shut down of the archive servers with any related software or hardware, such as the following:

- Dell EMC DiskXtender

- Dell EMC Centera
 - Dell EMC Symmetrix hardware
 - Microsoft Windows clustering software.
5. Shut down all the Native Archive Servers.
 6. Copy the data from the current storage location to the new storage location.
 - a. Copy the data from the following folders to the new locations:
 - **Archive folder**— SourceOne volumes (container files)
 - **Index folder**— SourceOne indexes
 - **Message center folder**— SourceOne message center

These folders contain all the data in the Native Archive. You created these folders when you installed SourceOne.
 - b. Verify that the new storage folders you create are configured as described in the *SourceOne Email Management Installation Guide*.
 7. Prepare to start one or more archive servers. Before starting the archive servers, coordinate the start of the archive servers with any related software or hardware, such as the ones previously listed.
 8. Start all the Native Archive Servers.
 9. Using the SourceOne console, modify the locations for the Native Archive Servers to match where the archive is now stored:
 - If required, modify the value of the **Message Center Location** field to the new location.
 - If required, modify the value of the **Archive Location** field.
 - If required, modify the value of the **Index Storage Location** field.

When specifying the path in the **Message Center Location**, **Archive Location**, or **Index Storage Location** fields, you can specify that path as a UNC path or a local path.

 **Note:** Reset the SourceOne activities that you previously set to suspend back to their original states.

Retaining and disposing of archived data

Some organizations require that data, such as messages, be retained for a period and then disposed of after that time.

Dell EMC SourceOne supports the retention and disposal of data as described in the following sections.

Configuring data retention and disposal

Configure data retention and disposal by completing the following procedure.

Procedure

1. Specify the data retention on the archive folder in the Native Archive.

You specify how long data in the archive folder is retained by typing a value in the **Months to retain** field.
2. Determine whether you want to dispose data that is past the retention period automatically or manually:

- To dispose data manually, perform the following:
 - a. Select the archive folder containing the data to process.
 - b. Select **Action > Perform Disposition**.
- To dispose data automatically, perform the following:
 - a. Configure the scheduling of automated data disposal.
 - b. Select the **Enable automatic disposition** field on the archive folder.

Configuring the scheduling of automatic data disposal

If you decided to use automatic data disposal, install and configure the data disposal script that is scheduled to perform the disposal.

Before you begin

Perform the following tasks to configure automatic data disposal.

Procedure

1. Copy the data disposal script to the local system as described.
2. Schedule the execution of the data disposal script.
3. Review how often to schedule automatic data disposal.

Installing the SourceOne data disposal script

To install the data disposal script, copy the script to the computer on which it is scheduled to run. This script can be scheduled to run on any computer that has the SourceOne console installed.

The SourceOne data disposal script is on the SourceOne kit in the `\Utility\disposition` folder and is named `ES1_AutoDisposition.vbs`.

Scheduling the execution of the SourceOne data disposal script

Run the data disposal script regularly to determine if there is any data that is marked for disposal that needs deleting.

Before you begin

Perform the following tasks to schedule the typical execution of the data disposal script using the Microsoft Windows **Scheduled Tasks** applet.

Procedure

1. Launch the **Scheduled Tasks** applet. The **Scheduled Task** wizard appears.
2. Click **Browse** to locate the data disposal script on the local computer. The **Select Program to Schedule** dialog box appears.
3. Select the `ES1_AutoDisposition.vbs` file and click **Open**. The **ES1_AutoDisposition** task is now listed in the **Scheduled Task** wizard.
4. Select how often to perform the task by selecting one of the following time options:
 - Weekly
 - Monthly
5. Click **Next**.
6. Select the start date, time, and interval for the task and then click **Next**.
7. Specify the name and password of the user account under which this task runs and then click **Next**.

The script is to run under an account that is part of the SourceOne security group.

8. Select the **Open advanced properties for this task when I click Finish** option and then click **Finish**. The **Properties** page for the scheduled task appears.
9. On the **Task** tab, edit the string in the **Run** field to insert the `cscript` command to run the `ES1_AutoDisposition.vbs` script as a task.

For example, if the file is located in the directory `C:\scripts`, the **Run** field string appears as follows:

```
cscript C:\scripts\ES1_AutoDisposition.vbs
```

The previous example displays how this string appears for a 32-bit version of a Microsoft Windows operating system. The following example displays how this string appears for a 64-bit version of a Microsoft Windows operating system:

```
C:\Windows\SysWOW64\cscript C:\scripts\ES1_AutoDisposition.vbs
```

10. Click **OK**. The **Set Account Information** dialog box appears.
11. Type and confirm the password of the account under which the task runs.
The script is to run under an account that is part of the SourceOne security group.
12. Click **OK**. The **Properties** page for the scheduled task closes.
13. The new task now appears in the list of scheduled tasks that appears when you select **Scheduled Tasks** from the **Control** panel.

Determining how often automatic data disposal is to run

The schedule of how often automatic data disposal is to occur depends on the email archiving environment and the organization's data retention and disposal goals.

Schedule data disposal often enough that a large amount of data must not be deleted at one time, but not so often that another data disposal is scheduled to occur while the current amount of data is being deleted.

Usually, you schedule the disposal script to run weekly to detect when there is any data that needs disposal. If it makes sense in the environment, you may decide to lengthen the disposal script to a monthly interval.

Be aware that deleting a month of archived data may take a significant amount of time if you archive large quantities of data. If deleting a month of archived data does take a significant amount of time, you can schedule when that deletion is to occur.

Scheduling deletion of data from the database

When disposing of a large quantity of data, you may want to delay the deletion of the metadata from the database. Deletion of metadata may affect the performance of the overall SourceOne system, such as jobs running to do other tasks.

About this task

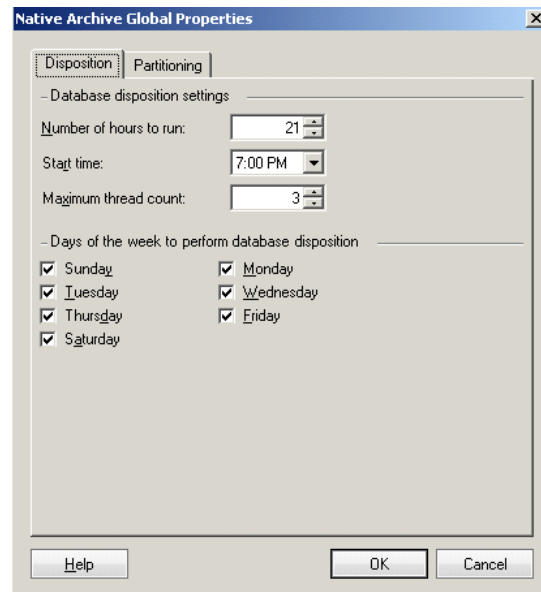
Deleting the metadata from the database later when the system is not as heavily used might be a better choice for the environment because there would be less performance impact.

Procedure

1. In the SourceOne console, select the **Native Archive** node.
2. Right-click that node and select **Properties**. The **Native Archive Global Properties** dialog box appears.

3. Select the **Disposition** tab.

Figure 31 Disposition tab of the Native Archive Properties page



4. Specify the amount of time the disposal from the database is allowed to run by typing that value as an integer from 1 to 24 in the **Number of hours to run** field. By default this value is set to the maximum of 24 hours.

If the disposal cannot be completed in the amount of time that is specified, the remaining deletions will occur the next time that the disposal is scheduled to occur.

5. Specify what time of day the database disposal is allowed to begin by selecting the time in the **Start time** field. The default value is 12:00AM (midnight) GMT.

Typically, set the time of day to be the beginning of the time when the system is under the least load.

6. Specify the maximum number of threads and processes that can be used with the **Maximum thread count** field. This value may be an integer from 1 to 10. The default value is 1.

- To increase the number of processes working to delete data in the database so that the disposal completes sooner, increase the **Maximum thread count** field value.
- If you increase this value to the point that the SQL Server is performing poorly, you may want to decrease this value.
- When you change the value of the **Maximum thread count** field, on the **Disposition** tab of the **Native Archive Global Properties** page, the change does not take effect immediately.

The new value will be available when one of the following occurs after the change has been made:

- A database disposition occurs.
- The Native Archive Servers are suspended and then resumed.
- The SourceOne Administrator service `ExAsAdmin.exe` is stopped and restarted. Be aware that stopping and restarting the SourceOne Administrator service causes several other SourceOne services to stop and restart.

7. Select the days of the week on which disposal are performed from the database in the **Days of the week to perform disposition** area. By default, all days are selected which indicates that it is performed every day.

Extending the retention period for archive folders

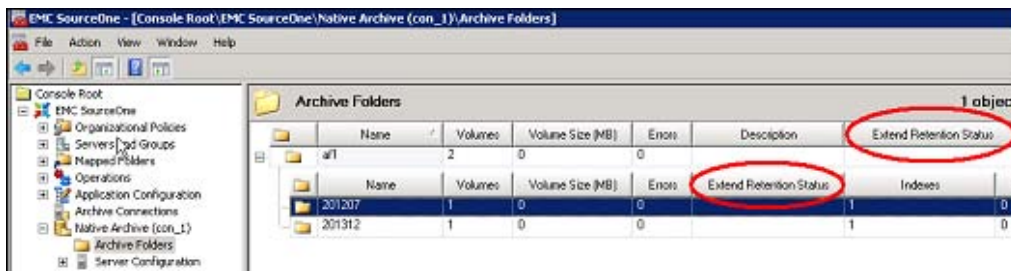
SourceOne Email Management can extend the retention period for archive folders.

In the **Archive Folder** page under the **Storage Options** tab, if you update the **Months to Retain** field then Dell EMC SourceOne does the following:

- Updates the archive folder's retention month and applies the new retention policy to any new volumes.
- Extends the retention period of every stored object.

Note: This release only supports Centera containers.

Figure 32 Extend Retention Status



The available status codes for archive folders:

- Blank—No extend retention request exists for this folder. Blank is the default status.
- Submitted—The extend retention request was submitted and is waiting to begin processing.
- Pending—The extend retention request is processing.
- Complete—The extend retention request that is completed successfully.
- Failed—An error occurred for the extend retention request.

The available status codes for month folders:

- Blank—No extend retention request exists for this folder. Blank is the default status.
- Complete—The extend retention request that is completed successfully.
- Failed—An error occurred for the extend retention request.

Only one job to extend the retention period can run at a time. Wait for the previous job to complete before extending the retention period again.

Partitioning a Native Archive database

Dell EMC SourceOne provides the ability to add partitions to tables in the Native Archive database to improve the performance and manageability of the Native Archive.

Native Archive partitioning concepts

Before deciding whether to partition the Native Archive database, be familiar with the topics in the following sections.

Prerequisites for partitioning

The Native Archive partitioning feature requires that the Dell EMC SourceOne database be installed on the Enterprise edition of Microsoft SQL Server. The Standard edition of Microsoft SQL Server does not support this feature.

If the Native Archive database is installed on the Standard edition of Microsoft SQL Server, the **Properties** menu item and the **Partitioning** tab which you use to enable database partitioning are not available.

Note: You cannot create the Native Archive database using the Standard edition of SQL Server and then add partitioning capabilities to that database by moving it to the Enterprise edition of SQL Server. The underlying schema and capabilities of the databases are different. The partitioning options are not available for databases that are initially created on the Standard edition of SQL Server and later moved to the Enterprise edition of SQL Server.

Understanding database partitioning in the Native Archive

Database partitioning is not the partitioning of the database itself, but is the partitioning of tables within the database. Database partitioning is the separation of a table or index in the database into smaller tables or indexes that act as one table or index. Partitioning is typically done only to tables that tend to grow to be large to improve the performance when using those tables. The ability to partition tables is built into the Enterprise edition of Microsoft SQL Server.

Database partitioning for the SourceOne Native Archive is the horizontal splitting of rows in a table, or an index that is defined on a table, into smaller separate logical units. Only the following tables are partitioned in the Native Archive database:

- Message
- FolderMessage
- Route

Partitions are created to contain the data for these tables. Partitions can be created using the SourceOne console either manually by the administrator or automatically based on selected criteria.

When a new partition is created, any new data to be stored in these three tables goes to the new partition. However, updates to existing information in these tables occur in the partitions in which that information exists.

Benefits of partitioning

Partition database tables when you have large amounts of data in the database.

Breaking large tables into partitions can deliver the following data management and performance benefits:

- Partitioning may improve the performance of archiving through the improved performance of database updates and insertions.

- Partitioning tables in the database may reduce the amount of time to perform data backup, index maintenance, and defragmentation of the tables in the database.
- Older partitions which are accessed less frequently can be moved to cheaper storage devices and to a less frequent maintenance cycle which can reduce database maintenance costs.

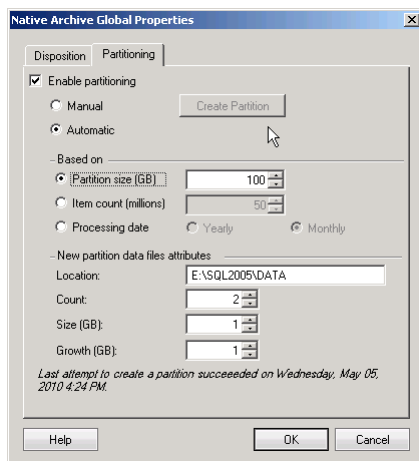
Refer to Microsoft documentation regarding *Partitioned Table and Index Concepts* for general information about the benefits of SQL Server database partitioning.

Creating partitioned tables in the Native Archive database

Native Archive database partitioning is only available if the SourceOne database is installed on the Enterprise edition of Microsoft SQL Server. If the Native Archive database is installed on the Standard edition of Microsoft SQL Server, the Properties menu item is not available.

About this task

Figure 33 Partitioning tab of the Native Archive Global Properties dialog box



Perform the following steps to create additional partitions in the Native Archive database.

Procedure

1. In the SourceOne console perform the following:
 - a. Select the **Native Archive** node.
 - b. Right-click that node.
 - c. Select **Properties**. The **Native Archive Global Properties** dialog box appears.

2. Select the **Partitioning** tab.

Native Archive database partitioning is only available if the SourceOne database is installed on the Enterprise edition of Microsoft SQL Server.

If the Native Archive database is installed on the Standard edition of Microsoft SQL Server, the **Properties** menu item is not available.

3. Select the **Enable partitioning** option to enable the use of the rest of the tab, except for the **Based on** area. The **Based on** area is only enabled when you have selected automatic partitioning.
4. Select whether to enable the automatic or manual creation of partitions:
 - Select the **Manual** option to enable the manual creation of partitions. This option is the default.

- Select the **Automatic** option to enable the automatic creation of partitions that are based on selected criteria.
5. If automatic partitioning was selected, select one of the automatic partitioning criteria in the **Based on** area. These criteria are described in the following table.

When an administrator sets the system to create partitions automatically, the partitions are typically not created immediately because it takes time for the automatic criteria to be met.

The partition is not created unless the minimum size for a partition criteria are met.

The following lists the Partitioning Criteria:

- **Partition size (GB)**—Specifies how large the current partition can be before creating a partition is tried. This value is typed as a whole number which represents the size of the partition in GB. The default value is 100, indicating 100 GB.
 - **Item count (millions)**—Specifies how many rows must be in the current partition before creating a partition is tried. This value is typed as a whole number where the number represents that many million rows in the partition. The range in values is from 50 -200. The default value is 50, indicating 50 million rows.
 - **Processing date**—Specifies whether to try creating a partition each month or each year:
 - Select the **Yearly** option to try to create a partition whenever a new year begins, assuming the current partition. Trying to create a partition will occur when the first content is inserted into the Native Archive after the new year begins according to the time on the SQL Server computer.
 - Select the **Monthly** option to try to create a partition whenever a new month begins. Trying to create the new partition will occur when the first content is inserted into the Native Archive after the new month begins according to the time on the SQL Server computer.
6. For either type of partitioning, select the attributes for the partition datafiles using the fields in the **New partition datafiles** attributes area. These datafiles are the underlying physical database for the partition.

The **partition datafile attribute** fields are described in the New Partition Datafile Attribute Fields table.


7. If you are creating partitions manually, click **Create Partition**. The values on the **Partitioning** tab are saved and SourceOne immediately tries to create the partition.

If it does not meet the minimum criteria that are described in [Partition creation criteria and status messages](#), the partition is not created.

The following lists the New partition datafile attribute fields:

- **Location**—Specifies the location of the datafiles on the SQL Server computer for the new partition:
 - By default, SourceOne assumes that the location for the partition is to be the same directory as the directory used by the primary datafile which has a file name extension of `.mdf`.
 - When you specify a location for a partition, manually verify that it is correct because SourceOne cannot validate that location. If the location is not valid, the partition is not created.
 - After a new location is specified, click either the **Create Partition** or **OK** button on the **Partitioning** tab. A warning dialog box appears indicating that you must be specifying a valid data location path.

- **Count**—Specifies the number of datafiles to be created for the new partition. Valid values are the whole numbers 1 to 8. The default number of datafiles is 1. Typically, this value is correct for most installations.
 - **Size (GB)**—Specifies the size of the underlying physical datafiles in GB created for the new partition. This value is specified as a whole number from 1 to 50.
 - **Growth (GB)**—Specifies the amount each of the partition datafiles can increase in size from their initial size in GB:
 - This value is specified as a whole number from 1 to 10. For example, if the **Size** field value is set to 25 and the **Growth** field value is set to 5. That means that when each datafile must grow it can grow in increments of 5 GB.
 - The first time each datafile grows to 30 GB, the second time each datafile grows to 35 GB, and so on.
8. Click **OK** to save the changes to the **Partitioning** tab.

 **Note:** This action does not cause a partition to be created. It only saves the changes that you have made to fields on this tab.

The **Native Archive Global Properties** dialog box closes.

9. After trying to create a partition, either manually or automatically, validate that it was created by doing either or both of the following:
- Review the status line at the bottom of the **Native Archive Global Properties** dialog box to see if the partition was recently successfully created. This status line would appear as follows:

```
Last attempt to create a partition succeeded on date-and-time
```

- Verify that a new partition was created by seeing if it exists in the directory that is specified in the **Location** field on the **Partitioning** tab. Within this directory, the new partition has a name that is formed as follows: `DatabaseName $PartitionNumber_FileNumber.ndf`
For example, a file named `ES1Archive$1_2.ndf` has this form.

If the partition was not created, verify that the existing partition meets the minimum criteria for a new partition to be created and review the event logs.

Advanced partitioning concepts

The following sections help you understand what options to select when partitioning the Native Archive database.

Understanding manual and automatic partitioning

Use Dell EMC SourceOne to create partitions in selected tables in the database. This partitioning can be performed manually or automatically.

Refer to [Creating partitioned tables in the Native Archive database](#) for detailed instructions about how to perform manual or automatic partitioning.

Manual partitioning process

When an administrator creates a partition manually by clicking the Create Partition button on the Partitioning tab of the Dell EMC SourceOne console, the following occurs.

Procedure

1. Dell EMC SourceOne immediately submits a SQL command to a stored procedure on the SQL Server to run.
2. The stored procedure verifies that the current partition meets the criteria that are must justify making a new partition. Refer to [Partition creation criteria and status messages](#) for these criteria.
3. If the criteria are met, the stored procedure immediately tries to create the new partition using the datafile attributes defined by the administrator.

The results of this action are displayed at the bottom of the **Partitioning** tab and any failures are recorded in the event log.

Automatic partitioning process

When an administrator configures partitions to be automatically created using the SourceOne console, the following occurs.

Procedure

1. SourceOne checks periodically to see whether the criteria for automatically creating a partition have been met.

There can be some latency when the new partition is created because SourceOne does not check to see if a new partition is created each time content is archived. The check could potentially degrade the performance of the SourceOne database. Instead, the check is made each time a set number of content items are ingested.

2. When the automatic partitioning criteria are met, the partition is scheduled to be created.
3. When SourceOne tries to create the partition, a stored procedure verifies that the current partition meets the criteria that are needed, to justify making a new partition. Refer to [Partition creation criteria and status messages](#) for these criteria.
4. If the criteria for creating a partition are met, the stored procedure tries to create the new partition using the datafile attributes defined by the administrator.

The results of this action are displayed at the bottom of the **Partitioning** tab and any failures are recorded in the event log.

Partition creation criteria and status messages

SourceOne only tries to create a partition when the current partition is full enough to justify creating a partition. This partition is done to protect administrators from creating unnecessary numbers of partitions.

SourceOne creates a partition unless one or both of the following is true:

- The current partition contains at least 20 GB of data.
- The current partition contains at least 10 million rows of data.

When a partition is successfully created, the following message appears at the bottom of the **Partitioning** tab of the **Native Archive Global Properties** page:

```
Last attempt to create a partition succeeded on date-and-time
```

If the partition cannot be created, the following message appears at the bottom of the **Partitioning** tab of the **Native Archive Global Properties** page:

```
Last attempt to create a partition failed on date-and-time
```

Also, a `Failed to Create Partition` message is written to the event log. This message provides additional information about why the partition could not be created. Which event log the message is written to depends on how the partition was created:

- If the attempt to create the partition was manual, the `Failed to Create Partition` message is written to the event log in the computer on which the SourceOne console is installed.
- If the attempt to create the partition was automatic, the `Failed to Create Partition` message is written to the event log in the Worker computer that began the partition creation process. This Worker computer could be any of the Worker computers in the SourceOne system which has been assigned the Native Archive role and which is ingesting content into the Native Archive.

Selecting whether to use manual or automatic partitioning

Partitions can be created manually or automatically.

Creating partitions manually has the following benefits:

- You have more control over when a partition is created because you are creating them yourself, rather than having the system decide when to create the partition.
- Manually creating partitions allows you to gain experience with what size of partition works best for the environment, and how often you must create such a partition.


Creating partitions manually does have some drawbacks that you must remember when manually creating partitions. Failing to create partitions when needed means that the partition may grow more than you want, possibly causing it to become fragmented and to perform less than optimally.

Creating partitions automatically has the following benefits:

- It is not essential that you remember to create partitions because the system is performing that task.
- Generally, using size-based automated partitioning is best because the partitions are created in a more deterministic and predictable manner.
- Size-based automated partitioning is performed by selecting the **Partition size (GB)** option on the **Partitioning** tab.
However, still monitor the creation of partitions to ensure that the automatic partitioning is occurring as you expect.

Selecting which automatic partitioning method to use

When automatic partitioning is enabled, select the method Dell EMC SourceOne uses to determine when to try to create partitions in the Native Archive database.

 **Note:** Regardless of what automatic partitioning method is selected, the current partition must meet the criteria that are described in [Partition creation criteria and status messages](#) before a partition can be created.

The following contains methods available and considerations for when they are used:

- Create partitions that are based on the size of the current partition by selecting the **Partition size (GB)** option.

Creating partitions that are based on size is the recommended method for most installations because it allows you to predict the sizes of the partitions that are created more accurately than the other methods.

- Create partitions that are based on the number of items in the current partition by selecting the **Item count** (millions) option.

Partitions created based on the number of content items that are archived may be quite variable in size. The size of the content, the number of recipients of that content, and other information, determine the amount of space that is used in the database.

For example, a partition containing information about 50 million messages sent to one or two users and stored in a single folder is small. A partition containing information about 50 million messages that are sent to many recipients and stored in 20 folders is large.

- Create partitions that are based on the current month or year by selecting the **Processing date** option.

Creating partitions each month or year typically makes sense when you expect to create partitions every month or year. Using this option makes the time at which a new partition is created more predictable.

Note: Selecting the **Processing date** option does not mean that a partition is created for every month or year, only that creating a partition at that time is tried. If the current partition is not full enough, a new partition is not created at that time.

Understanding partition datafile attributes

When you specify partition datafile attributes on the Partitioning tab of the Native Archive Global Properties page dialog box, you are specifying the following physical characteristics of the new partition to be created:

- The **Location** field specifies the directory in the SQL Server disk subsystem in which the partition datafiles are created.
- The **Count** field specifies how many datafiles are created as part of the partition. The default value for this field is 1.
- The **Size (GB)** field specifies how large each datafile is to be initially.
- The **Growth (GB)** field specifies the amount each of the datafiles can grow in size each time they must grow.

The collective size of a new partition file in the database is the total size of one or more datafiles that make up that partition. To compute the initial new partition size in GB, multiply the **Size (GB)** field value by the **Count** field value. The initial sizes of one or more partition datafiles increase as the datafiles grow.

Adding Native Archive supplemental language support

If you are planning on using the Native Archive to archive and index certain non-English languages, enable supplemental language support in the Native Archive Server operating system. Refer to the Microsoft Windows help system for information about supported languages.

Procedure

1. Select **Regional and Language Options** from the **Windows Control Panel**. The **Regional and Language Options** dialog box appears.
2. Select the **Languages** tab and verify that both of the following options are selected in the **Supplemental language support** area:
 - Install files for complex script and right-to-left languages (including Thai).
 - Install files for East Asian languages.

3. Click **Apply** to save the changes.
4. Click **OK** to save the changes and dismiss the dialog box.

CHAPTER 6

Configuring Mapped Folders

The following sections describe how to configure mapped folders in Dell EMC SourceOne:

- [Introduction to mapped folders](#)..... 132
- [Mapped folder concepts](#)..... 132
- [Viewing the list of mapped folders](#)..... 148
- [Creating and associating mapped folders](#)..... 149
- [Modifying mapped folder properties](#)..... 152
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- [Best practices for configuring Legal Hold mapped folders](#)..... 155
- [Examples of using mapped folders](#)..... 156

Introduction to mapped folders

In Dell EMC SourceOne, a mapped folder is the destination for all content.

When you create a mapped folder in SourceOne, you associated it with an archive folder that resides in an archive. You can map a maximum of ten mapped folders to a single archive folder.

An archive can be a Native Archive, including an In Place Migrated Native Archive.

The SourceOne components that are installed at the site determine the types of content that can be placed in the archive as shown in the following list:

- SourceOne Email Management—Email content
- SourceOne Archiving for Microsoft SharePoint—Microsoft SharePoint content
- SourceOne for File Systems—File content

When you create an SourceOne mapped folder, you:

- Specify a name and type for the new mapped folder.
- Associate the new mapped folder to an existing archive folder in an archive.
- Specify the accounts, users, and groups who can search the new mapped folder, and set their permissions.
 - Administrators use SourceOne Search to search for archived email content, files, and SharePoint content.
 - Users use SourceOne Search to search for archived email content and files.
 - Users use Archive Search in SharePoint to search for archived SharePoint content.

Note: SourceOne Archiving for Microsoft SharePoint includes the optional External Blob Storage (EBS) feature. EBS is storage management, not archiving. EBS uses archive folders, without indexing or retention, to store Microsoft SharePoint content in the Native Archive. For EBS, dedicate one archive folder to each Microsoft SharePoint farm. EBS does not use mapped folders. EBS content is not searchable using SourceOne Search or Archive Search. Microsoft SharePoint users access EBS content in Microsoft SharePoint, as usual.

Mapped folder concepts

The following sections outline key concepts for defining and using mapped folders.

Summary of mapped folder types and their uses

The following list describes the types of Dell EMC SourceOne mapped folders that can be created.

- Organization—Use for:
 - Microsoft SharePoint archiving, file archiving, and migrating PST files.
 - Email archiving (journaling, historical archiving, archiving PST and NSF files, and shortcutting) when you do not want users to delete mail items from the archive (compliance archiving). Users cannot delete mail items that are archived to Organization folders.

Not available for user-directed archiving (UDA) or for use as SourceOne Discovery Manager hold folders.

- Community—Use for:

- UDA of email to a public UDA folder. Allows multiple users to contribute mail to a public/shared UDA folder.
- Email archiving (journaling, historical archiving, archiving PST and NSF files, and shortcutting) when you want users to delete archived mail items.

If they have the proper folder permissions, users can delete their references to messages. The message is still retained in the archive even after a user deletes the last reference to the message. Do not use it for SourceOne Discovery Manager hold folders.

- Personal—Use for:
 - UDA of email to a personal UDA folder. Allows users to archive their own mail.
 - Email archiving (journaling, historical archiving, archiving PST and NSF files, and shortcutting) when you want users to delete archived mail items.

If they have the proper folder permissions, users can delete mail items that are archived to a Personal folder. Users can delete their references to messages. When a user deletes the last reference to a message, then the message is deleted from the archive.

- Do not use it for compliance archiving.
 - Do not use it for SourceOne Discovery Manager hold folders.
- Legal Hold—Use only for the SourceOne Discovery Manager hold folders. Do not use for general-purpose archiving or for UDA.

About user permissions on mapped folders

The following section contains information about user permissions on mapped folders.

Note: The SourceOne primary service account must have Administrator permission on every SourceOne mapped folder. The SourceOne primary service account is also used to run services that are related to SourceOne Discovery Manager task processing.

Permissions on mapped folders required by SourceOne Offline Access users

To retrieve messages from the archive, SourceOne Offline Access users must have permissions on mapped folders.

For Microsoft Outlook Delegate Access, a delegated user does not need permissions on the mapped folders. If the delegator has permissions on the mapped folders and can access shortcuts from the archive, then the delegated user can access the same shortcuts.

Permissions on mapped folders used by IBM Domino mail-in databases

The record name of the IBM Domino mail-in database must have Owner permission on all mapped folders that may be used to archive or shortcut messages for that mail-in database.

You can create a group, add all mail-in databases as members, and then give the group **Owner** permission to all mapped folders. Maintain this group to add all new mail-in databases that may have mails shortcut.

Delay in updating permissions on mapped folders

An IBM Domino or IBM Notes user continues to have mapped folder permissions for some time after being removed from an IBM Domino group.

This delay occurs by design and is due to:

- Delay in the update information available to the SourceOne Address Cache Sync.

After removing an IBM Domino user from a group, it takes time before the views update. The next Address Cache Sync picks up the changes after the views update.

- User caching in the SourceOne Search Web Service.
When a user logs in to the Search Web Service and runs a search, the list of mapped folders that the user can access is cached for 20 minutes. The mapped folder list for a user is not refreshed until this 20 minute cache timeout is reached, or until other means flush the cache, such as restarting IIS.

Permissions on mapped folders used for Microsoft SharePoint archiving

The following accounts and users must have Administrator and Read All permissions on the Organization mapped folders that are used for Microsoft SharePoint Archive activities:

- SourceOne primary service account
- SourceOne Security group
- SourceOne Admin group
- Access Account that is used by Archive Search in Microsoft SharePoint
 - ⓘ **Note:** Microsoft SharePoint users do not need permissions on mapped folders to use Archive Search in Microsoft SharePoint.
- SourceOne administrators who use SourceOne Search to search for archived Microsoft SharePoint content
 - ⓘ **Note:** Microsoft SharePoint External BLOB Storage (EBS) does not use mapped folders.

Permissions and mapped folder types used for file archiving

The following sections describe the permissions and mapped folder types that are needed for file archiving activities.

System account and administrator permissions

The following accounts and users must have Administrator and Read All permissions on the Organization mapped folders that are used for File Archive activities:

- SourceOne primary service account
- SourceOne Security group
- SourceOne Admin group
- SourceOne administrators who use SourceOne Search to search for archived file content

User permissions

To search for archived files, Dell EMC SourceOne Search users must have My Files permission on the Organization mapped folders that are used for File Archive activities.

- ⓘ **Note:** File archiving uses the Access Control List (ACL) model to assign group access, not the traditional Owner model that is used for email. Assign the My Files permission, not the Owner permission, on the Organization mapped folders that are used for file archiving.

Summary of permissions required to search for archived files

The following is a summary of whether a user can search for a particular file, or not depending on their permission on the mapped folder and the option that is selected in the Archived File Access page of the File Archive activity wizard.

Table 7 Summary: Permissions required to search for archived files

Permission on the mapped folder	File Archive activity-option on Archive File Access page		
	Permit access only to users with Administrator permissions on the mapped folder	Permit access to the original file owner	Permit access to specified users, groups, or both
Administrator	Any file (Administrator search)	Any file (Administrator search)	Any file (Administrator search)
Read All	Any file (All Items search)	Any file (All Items search)	Any file (All Items search)
Contributor	No files	No files	No files
Owner	No files	No files	No files
My Files	No files	Files that the user on the file system (My Files search) originally owns	If user is in the list of specified users/groups (My Files search), the activity archives all files
Delete	Not applicable	Not applicable	Not applicable

Permissions on mapped folders required for User Delete

To support User Delete, the use of Personal and Community mapped folders has been extended beyond User-Directed Archiving (UDA) activities to Journal, Archive-Historical, Archive-Personal Mail Files, and Shortcut-Historical activities. For those four activities, User Delete works only on mail items that are archived to Personal or Community mapped folders.

The following sections describe how to delete archived mail items.

Requirements to delete archived mail items through Dell EMC SourceOne Search

Users must have Contributor permission and Delete permission on Personal or Community mapped folders to delete mail items that were archived through the following:

- **Journaling, Archive-Historical, and Archive-Personal Mail Files** activities
- User-Directed Archiving (UDA)

i **Note:** The database update scripts add the Delete permission to existing Personal or Community mapped folders for which the user already has Contributor permission. However, for Personal or Community folders that were created after the update, add the Delete permission for each user manually.

Requirements to delete archived mail items through the mail client

Users need the Delete permission on Personal or Community mapped folders. Users do not need Contributor permission on mapped folders unless they also delete archived items through Search.

Delete permission not needed for Administrator deletes

The Delete permission is not needed for Administrator deletes that are performed in Search. The Administrator permission implicitly allows Administrator deletes.

Permissions on mapped folders required for User Directed Archiving (UDA)

To search for and read the mail items that the user directed to be archived into a user-directed archive (UDA) folder, they must have Contributor permission on the folder.

To delete their UDA mail items through Search, the user must also have Delete permission on the folder.

Non-owner searches

To allow non-owner users to perform an All Items search for items that were archived from a Public Folder, the best practice is to perform both of the following:

- Archive Public Folder content to an Dell EMC SourceOne Community mapped folder.
- Grant Read All permission on the Community folder to everyone.

Owner searches

To allow owners to perform a My Items search for items that were archived from a Public Folder to a Community folder, grant users Owner permission on the Community folder.

Permissions required by the Dell EMC SourceOne primary service account

The Dell EMC SourceOne primary service account must have the following access for Public Folder archiving:

- Administrator permission on all Community folders.
- Read All permission on all Community folders that are searchable in SourceOne Discovery Manager.

Permissions on mapped folders required for Public Folder archiving

The owner of an item in a Microsoft Exchange Public Folder is the user who created that item. The following sections describe other permission details that are needed with Public Folder archiving.

Summary of permissions that can be assigned to mapped folders

The permissions that a user has on a mapped folder determine the actions that they can perform on the contents of the mapped folder. The following list describes the permissions available on Dell EMC SourceOne mapped folders for users and groups.

- Owner—A user with **Owner** permission on a folder:
 - Can see only email items that they own.
 - Cannot delete items from the folder.
- Contributor—A user with **Contributor** permission on a folder can perform one of the following:
 - Read the email items that they directed to be archived into a user-directed archive (UDA) folder.

- Read the email items that they own, journal, or archived into a **Personal** or **Community** mapped folder.
- My Files—A user with **My Files** permission on a folder:
 - Can see only files for which they have access permission.
 - Cannot delete items from the folder.
- Read All—The **Read All** permission is meant for supervisors and management. A user with **Read All** permission on a folder:
 - Can see all items in the folder, even if they are not the owner of the email items or do not have access permission to the files or Microsoft SharePoint items.
 - Has a read-only privilege on all items in the folder.
 - Cannot delete items from the folder.

Note: If a user has both permissions, administrator permission always overrides Read All permission.

The SourceOne primary service account must have **Read All** permission on all folders that are searchable in SourceOne Discovery Manager, in Microsoft SharePoint Archive Search, and on all Legal Hold folders. The Access Account that is used by Archive Search must have **Read All** permission on all Organization folders that are used for Microsoft SharePoint Archive activities.

- Administrator—A user with **Administrator** permission on a folder:
 - Has full control over all items in the folder.
 - Can search, retrieve, and delete items in the folder.
 - Can search for all archived content types, such as email, files, Microsoft SharePoint.
- Delete—A user with **Delete** permission on a folder:
 - Can delete the email items that they directed to be archived into a user-directed archive (UDA) folder, or that can journal or be archived into a **Personal** or **Community** mapped folder. The user deletes their own references to the email items so that they no longer see those items. For a **Community** folder, the message is still retained in the archive even after a user deletes the last reference to the message. For a **Personal** folder, when the last user deletes their reference to the item, then the item is deleted from the archive.

Note: Assign the **Delete** permission to users so that they can delete items that were archived through UDA.

User permissions for mapped folder types


The following table indicates the user permissions for each type of mapped folder.

Table 8 Appropriate user permissions for folder types

Mapped folder type	User Permissions					
	Owner	Contributor	My Files	Read All	Administrator	Delete
Organization	Yes, for email content	No, not applicable	Yes, for files	Yes	Yes	No, not applicable

Table 8 Appropriate user permissions for folder types (continued)

Mapped folder type	User Permissions					
	Owner	Contributor	My Files	Read All	Administrator	Delete
Community	Yes, for email content	Yes, for email content	No, not applicable	Yes	Yes	Yes
Personal	Yes, for email content	Yes, for email content	No, not applicable	Yes	Yes	Yes
Legal Hold	No, not applicable	No, not applicable	No, not applicable	Yes (Dell EMC SourceOne primary service account)	Yes (Dell EMC SourceOne primary service account)	No, not applicable

 **Note:** The **New Folder** wizard does not validate permissions against the folder type.

Grant all Dell EMC SourceOne Search users Owner permission for mapped folders

An administrator can grant all Search users Owner permission for a mapped folder by using the All ES1 Users group.

Matter Manager Permissions

The Matter Manager Access permission allows Dell EMC SourceOne administrators to control SourceOne Discovery Manager Search permissions for individual matter managers. An SourceOne administrator must select the Matter Manager Access checkbox for a folder in order for an SourceOne Discovery Manager Matter manager to perform a search of that folder.

The All Matter Managers group and the Matter Manager Access permission enable an administrator to grant all matter managers access to search a specific mapped folder.

About mapped folder types, user permissions, and search types

The permissions that you assign to a mapped folder for a user determine which folders the user is allowed to search and which messages the user is allowed to read, retrieve, or delete.

The following table describes combinations of folder types, user permissions, and search types

Table 9 Folder types, user permissions, and search types

Mapped folder type	Permission	Search type	Description
Organization	Owner	My Items	Assign Owner permission to users who must search their own archived mail and retrieve shortcuts in an Organization folder. Owner permission is required to perform a My

Table 9 Folder types, user permissions, and search types (continued)

Mapped folder type	Permission	Search type	Description
			Items search on an Organization folder.
Organization	Contributor	My Contributed Items	Not applicable.
Organization	My Files	My Files	<p>Assign My Files permission to users who must search their own archived file content. My Files permission is required to perform a My Files search on an Organization folder that contains archived files.</p> <p>Note: Microsoft SharePoint users use Archive Search to search for archived Microsoft SharePoint content, and do not need permissions on Organization folders that are used for Microsoft SharePoint Archive activities.</p>
Organization	Administrator	Administrator	<p>Assign Administrator permission to users who must search other users' mail and delete mail from the archive. Administrator permission is required to perform an Administrator search on an Organization folder.</p> <p>Note: The Dell EMC SourceOne primary service account must have Administrator permission on all</p>

Table 9 Folder types, user permissions, and search types (continued)

Mapped folder type	Permission	Search type	Description
			Organization folders.
Organization	Read All	All Items	<p>Assign Read All permission to users who must read all mail in an Organization folder, even if they are not the owners. Read All permission is required to perform an All Items search on an Organization folder.</p> <p>Note: The Dell EMC SourceOne primary service account must have Read All permission on all Organization folders that are searchable in SourceOne Discovery Manager and in Archive Search.</p> <p>The Access Account that is used by Archive Search must have Read All permission on all Organization folders that are used for Microsoft SharePoint Archive activities.</p>
Organization	Delete	Not applicable	Not applicable.
Community	Owner	My Items	Assign Owner permission to users who must search their own mail and retrieve shortcuts in a Community folder. Owner permission is required to perform a My Items search on a Community folder.
Community	Contributor	My Contributed Items	Assign Contributor permission to users

Table 9 Folder types, user permissions, and search types (continued)

Mapped folder type	Permission	Search type	Description
			who must search their own mail, and a Community folder. Contributor permission is required to perform a My Contributed Items search on a Community folder.
Community	My Files	My Files	Not applicable.
Community	Administrator	Administrator	Assign Administrator permission to users who must search other users' mail and delete mail from a Community folder. Administrator permission is required to perform an Administrator search on a Community folder. Note: The Dell EMC SourceOne primary service account must have Administrator permission on all Community folders.
Community	Read All	All Items	Assign Read All permission to users who must read all mail in a Community folder, even if they are not the owners. Read All permission is required to perform an All Items search on a Community folder. Note: The Dell EMC SourceOne primary service account must have Read All permission on all Community folders that are

Table 9 Folder types, user permissions, and search types (continued)

Mapped folder type	Permission	Search type	Description
			<p>searchable in SourceOne Discovery Manager.</p>
Community	Delete	All search types	<p>Assign Delete permission to users who must delete their own references to messages in a Community folder. When the last reference is deleted from a message, the message is still retained in the archive.</p> <ul style="list-style-type: none"> • For deletes performed through the mail client, users need only Delete permission. • For deletes performed through Dell EMC SourceOne Search, users need Delete permission and Contributor permission.
Personal	Owner	My Items	<p>Assign Owner permission to users who must search their own mail and retrieve shortcuts in a Personal folder. Owner permission is required to perform a My Items search on a Personal folder.</p>
Personal	Contributor	My Contributed Items	<p>Assign Contributor permission to users who must search their own mail, in a Personal folder. Contributor permission is required</p>


Table 9 Folder types, user permissions, and search types (continued)

Mapped folder type	Permission	Search type	Description
			to perform a My Contributed Items search on a Personal folder.
Personal	My Files	My Files	Not applicable.
Personal	Administrator	Administrator	Assign Administrator permission to users who must search other users' mail and delete mail from a Personal folder. Administrator permission is required to perform an Administrator search on a Personal folder. Note: The Dell EMC SourceOne primary service account must have Administrator permission on all Community folders.
Personal	Read All	All Items	Assign Read All permission to users who must read all mail in a Personal folder, even if they are not the owners. Read All permission is required to perform an All Items search on a Personal folder. Note: The Dell EMC SourceOne primary service account must have Read All permission on all Personal folders that are searchable in SourceOne Discovery Manager.
Personal	Delete	Not applicable	Assign Delete permission to users

Table 9 Folder types, user permissions, and search types (continued)

Mapped folder type	Permission	Search type	Description
			<p>who must delete their own references to messages in a Personal folder. When the last reference is deleted from a message, the message is deleted from the archive.</p> <ul style="list-style-type: none"> • For deletes performed through the mail client, users only need Delete permission. • For deletes performed through Search, users need Delete permission and Contributor permission.
Legal Hold	Owner	My Items	Not applicable.
Legal Hold	Contributor	My Contributed Items	Not applicable.
Legal Hold	My Files	My Files	Not applicable.
Legal Hold	Administrator	Searchable in SourceOne Discovery Manager. Not searchable in Dell EMC SourceOne Search.	<p>Assign Administrator permission to the Dell EMC SourceOne primary service account, which must search for, read, and delete all messages in Legal Hold folders.</p> <p>Note: The Dell EMC SourceOne primary service account must have Administrator permission on all Legal Hold folders.</p>
Legal Hold	Read All	Searchable in SourceOne Discovery Manager. Not searchable in Dell	Assign Read All permission to the Dell EMC SourceOne primary service account, which must

Table 9 Folder types, user permissions, and search types (continued)

Mapped folder type	Permission	Search type	Description
		EMC SourceOne Search.	search for, read, and delete all messages in Legal Hold folders.  Note: The Dell EMC SourceOne primary service account must have Read All permission on all Legal Hold folders.
Legal Hold	Delete	Not applicable	Not applicable.

About search types for archived files

By design, the Owner field does not return results when Administrators search for owners of archived files. File archiving uses the Access Control List (ACL) model to assign group access, not the traditional Owner model that is used for email.

Use the My Files search type when you search for archived files, not the My Items search type. When you perform a My Files search, the group membership is determined, allowing a group member to see files that group has access to.

About access control for archived content

A user's ability to search for an archived item depends on the following:

- The user's ownership or permission on the item, which varies by content type.
 - For email content permissions, refer to [Understanding mapped folders, message owners, and message contributors](#) on page 145.
 - For Microsoft SharePoint content permissions, refer to the *SourceOne Archiving for Microsoft SharePoint Administration Guide*.
 - For file content permissions, archived file content uses an Access Control List (ACL) model to assign group access, not the owner model that is used for email content. You assign access to files when you create a **File Archive** activity.
 Refer to the *SourceOne for File Systems Administration Guide*.
- The user's permission on the mapped folder in which the item is archived.

Understanding mapped folders, message owners, and message contributors

Email messages that SourceOne Email Management processes can have both owners and contributors. How owners and contributors are assigned to a message is described in the following sections.

Understanding message owners

SourceOne Email Management determines when an email message belongs to a user.

Being an addressee does not determine message ownership:

- For journaled messages, ownership depends on the type of Dell EMC SourceOne mapped folder in which the message is archived:

- If you journal to an Organization mapped folder, all internal and external senders and recipients are message owners. Users are not able to delete messages that are journaled to an Organization mapped folder.
- If you journal to a Personal or Community mapped folder, only internal recipients are marked as owners of mail items. If the recipient's email address is found in the cache of internal addresses, journaling adds the user as an owner on the mail item. Recipients that are not found in the address cache are considered external recipients and are not added as owners on the mail item. If users have the folder permissions of Contributor and Delete, they can delete messages that are journaled to a Personal or Community mapped folder. This ownership ensures that a mail item is deleted from the archive only when all the internal owners have deleted the mail item.
- For messages archived through historical archiving, PST archiving, NSF archiving, or user-directed archiving (UDA), only mailbox or mail file owners are set as message owners.
- Newly discovered owners can be added as owners of a message. For example, if the same unedited message is found in another user's mailbox, then Dell EMC SourceOne adds that user as an owner of the message.

Determining ownership in this way prevents problems in the following situations:

- Archive from Drafts folder—Because intended recipients have not received the draft message, they cannot search the archive and see a draft message. Only the mailbox owner is considered an owner of the message.
- Edited messages—Assume that a message is sent to Recipient1 and Recipient2. Recipient1 edits the message and Recipient2 does not edit the message. With the new message ID algorithms based on content, both instances of the message are archived in a **Historical Archive** activity. Only the edited version of the message is discovered when Recipient1 searches the archive. Only the non-edited version of the message is discovered when Recipient2 searches the archive.

Understanding message contributors

Email messages can have contributors and owners.

In User Directed Archiving (UDA), when the owner of a message directs the message to be archived, a reference is recorded with the message for that owner. The owner is now also a contributor of the message. When a user deletes the message from the folder, the reference to the message is deleted.

The archiving activity does not set Contributor designation. It is a property of the mapped folder to which the message is archived. This activity allows several archiving activities to contribute messages to the same mapped folder on behalf of the same user.

For example, a UDA activity can archive messages to a mapped folder that applies the contributor attribute. A PST or NSF archive activity can also archive messages to the same folder and have the contributor attribute applied.

About mapped folder types and activities

The following list describes the folder types for Dell EMC SourceOne activities and applications. For most SourceOne Email Management activities, the types of mapped folders that you use depend on whether you want to allow users to delete mail items from the archive or not.

- Journal, user delete not allowed—Organization folder
- Journal, user delete allowed—Community and Personal folders
- Archive-Historical, user delete not allowed—Organization folder

- Archive-Historical, user delete allowed—Community and Personal folders
- Archive from Personal Mail Files (PST/NSF), user delete not allowed—Organization folder
- Archive from Personal Mail Files (PST/NSF), user delete allowed—Community and Personal folders
- User-Directed Archive—Community and Personal folders
- Migrate PST to Mailbox—Organization, Community, and Personal folders
- Shortcut-Historical, user delete not allowed—Organization folder
- Shortcut-Historical, user delete allowed—Community and Personal folders
- Shortcut-User-Directed Archive—Community and Personal folders
- Microsoft SharePoint Archive—Organization folder
- File Archive—Organization folder
- SourceOne Discovery Manager—Legal Hold folder

About mapped folders and user-directed archiving (UDA)

SourceOne Email Management includes the optional user-directed archiving (UDA) feature.

Folder recommendations for user-directed archiving

The following sections describe how you can use Community or Personal folders for user-directed archiving.

Using Community folders for user-directed archiving

Use Community folders for shared or public mail.

- Add both Contributor and Read All permissions for all users. This addition allows users to see only their contributed mail in a My Contributed Items search, and all mail in an All Items search.
- Add Owner permission for users if you want them to see mail items that they still own, but for which all references have been deleted.
- Add Delete permission if you want users to be allowed to delete their archived mail items through Dell EMC SourceOne Search. Users delete their own references to mail items in a Community folder. When the last reference is deleted from a mail item, the item is still retained in the archive.

Using Personal folders for user-directed archiving

Use Personal folders for personal mail.

- Add Contributor permission for all users, allowing users to see only their contributed mail in a My Contributed Items search.
- Add Read All permission for users in a supervisory position, such as Human Resources or management.
- Add Owner permission for users if you want them to see mail items that they own, for which the last reference has not yet been deleted.
- Add Delete permission if you want users to be allowed to delete their archived mail items through Dell EMC SourceOne Search. Users delete their own references to mail items in a Personal folder. When the last reference is deleted from a mail item, the item is deleted from the archive.

Archiving PST/NSF files into a user-directed archiving (UDA) folder

UDA activities archive mail into Community folders or Personal folders, which are mapped to Dell EMC SourceOne archive folders.

The Archive From Personal Mail Files (PST/NSF) activity can put messages into the same folder in Dell EMC SourceOne as the UDA Archiving activity did.

A user with Contributor permission on the folder can see only those mail items they added, and if they also have Delete permission, they can delete their reference to each mail item.

A user with Owner permission can see the mail items that they own. Initially, the user sees the same mail items as the ones with Contributor permission. When all references have been deleted from the mail items, a user with Owner permission sees the mail items.

About mapped folders and Microsoft SharePoint archiving

For Microsoft SharePoint Archive activities, create one or more mapped folders of the **Organization** type, and map them to the archive folders.

Microsoft SharePoint External BLOB Storage (EBS) does not use Dell EMC SourceOne mapped folders. EBS uses Dell EMC SourceOne archive folders. For EBS, dedicate one archive folder to each Microsoft SharePoint farm.

About mapped folders and file archiving

For File Archive activities, create one or more mapped folders of the **Organization** type and map them to the archive folders.

About mapped folders and User Delete

For users to delete archived mail items, the items must be archived to a **Personal** or **Community** mapped folder.

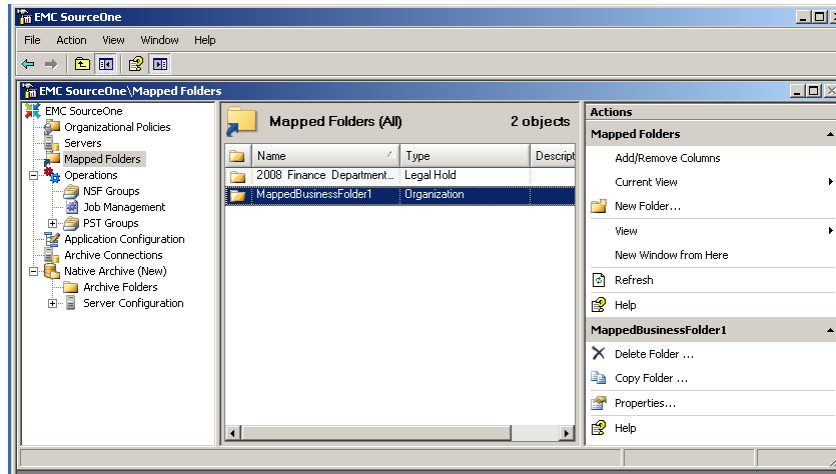
Viewing the list of mapped folders

Perform the following steps to view existing mapped folders.

Procedure

1. In the Dell EMC SourceOne console select the **Mapped Folders** node. The **Mapped Folders** area lists the defined mapped folders, if any.

Figure 34 Mapped folders list



2. Perform the following to view folders of a certain type:
 - a. In the **Actions** pane, click **Current View**.
 - b. Select one of the following options:
 - All (default)
 - Community
 - Legal Hold
 - Organization
 - Personal

Creating and associating mapped folders

Perform the following steps to create a mapped folder, associate it with an existing archive folder in an archive, and specify user permissions on the mapped folder.

Procedure

1. In the Dell EMC SourceOne console, select the **Mapped Folders** node.
2. Select **Action > New Folder**.

New Folder-General page

On the General page of the New Folder wizard, specify the name, description, and folder type of the mapped folder.

About this task

Figure 35 New Folder wizard—General page

The screenshot shows a dialog box titled "New Folder" with a "General" tab. Below the title bar, it says "Provide the following information to create your folder." There are four main input areas: "Folder Name" (text box with "New Folder"), "Description" (text area), "Archive Folder" (text box with a "Browse..." button), and "Folder Type" (dropdown menu with "Organization" selected). At the bottom, there are three buttons: "Help", "Next", and "Cancel".

Procedure

1. In the **Folder Name** field, type a name for the new mapped folder. Use alphanumeric characters. Invalid characters include:
 ; = \ / : * ? " < > |
 ⓘ **Note:** Use ASCII characters for the folder name, not multi-byte characters. If a mapped folder and the archive folder it is associated with both have multi-byte characters in the folder names, then an index folder is not created, and indexing fails.
2. In the **Description** field, type a description for the new mapped folder.
3. Click **Browse**.
4. In the **Select Folder** dialog box, select an archive folder in an archive.
5. Click **OK** to close the **Select Folder** dialog box and return to the **New Folder-General** page.
6. In the **Folder Type** field, select a type for this mapped folder.
7. Click **Next**.

New Folder-Permissions page

On the Permissions page of the New Folder wizard, specify the following:

About this task

- The users and groups who can access the folder.

- The permissions each user and group has on the folder.

Figure 36 New Folder wizard—**Permissions** page



Note: The Dell EMC SourceOne primary service account must have Administrator permission on each mapped folder.

Procedure

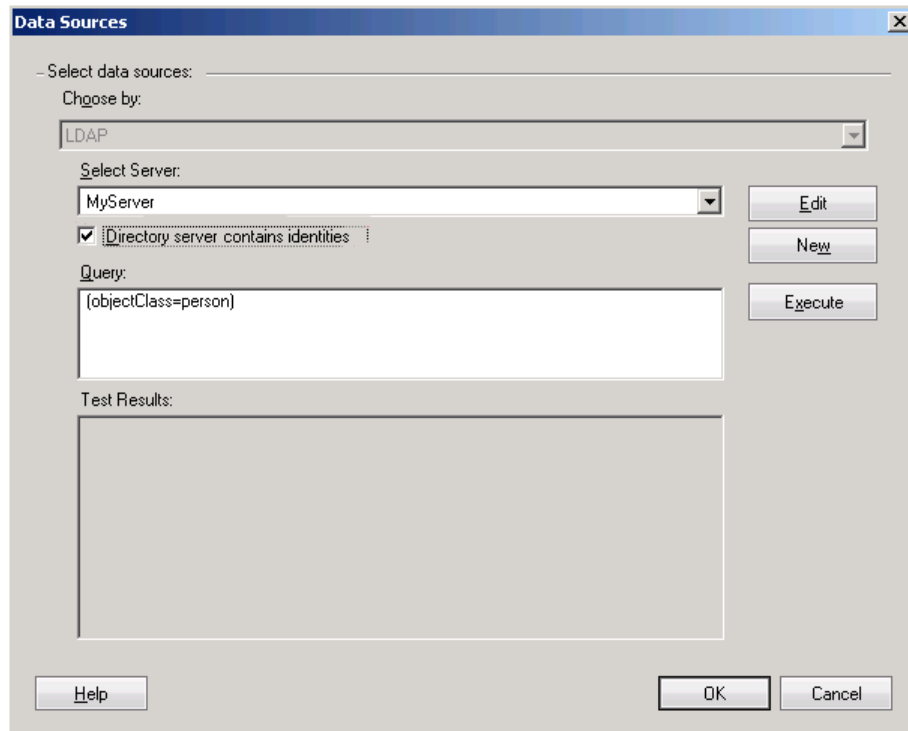
1. In the **Select user from** field, select either a directory or a group (**Active Directory**, **All ES1 Users**, **All Matter Managers**, **Domino Directory**, **Exchange Address Book**, or **LDAP Directory Lookup**).

Note: If the user or group exists in more than one domain, use the **Active Directory Select Users, Contacts or Groups** dialog box to determine the domain. Otherwise, the users and groups that are listed on the **Permissions** page are difficult to differentiate.

2. Click **Add**.

If you do not select **All ES1 Users** or **All Matter Managers** a dialog box appears. The dialog box that appears depends on what is selected in the **Select user from** field. Perform one of the following:

- If you select **Active Directory**, **Domino Directory**, or **Exchange Address Book**, select the user or group from the directory.
- If you select **LDAP Directory Lookup**, the **Data Sources** dialog box appears.

Figure 37 New Folder wizard—Data Sources—LDAP

3. In the **Group or user names** list in the **New Folder-Permissions** page, select the user or group for whom you want to specify permissions. Query-based distribution lists are supported.
4. In the **Permissions** list, select the permissions that the user or group has on the new mapped folder.
 - i **Note:** The Owner permission is the only configurable permission for the All ES1 Users group. The Matter Manager Access permission is the only configurable permission for the All Matter Managers group.
5. To remove a user or group from the list, select the user or group, and then click **Remove**.
6. Click **Finish**. The entry for the new mapped folder appears in the **Mapped Folders** list.

Modifying mapped folder properties

Follow this procedure to modify the properties of a mapped folder.

Procedure

1. In the Dell EMC SourceOne console, select the **Mapped Folders** node.
2. In the **Mapped Folders** list, select the folder that you want to modify.
3. Select **Action > Properties**.
 - i **Note:** If you assign a group to a mapped folder, and then you move that group to another organizational unit (OA) in Active Directory, reassign the group to the mapped folder.

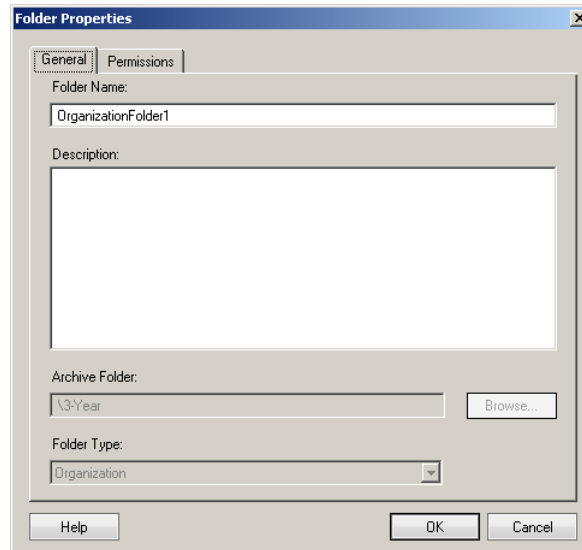
Modifying general properties of a mapped folder

Follow this procedure to modify general properties of a mapped folder.

Procedure

1. Select the **General** tab of the **Folder Properties** dialog box.

Figure 38 General tab—Folder properties



2. Edit the **Folder Name** field and the **Description** field.

You cannot edit the following fields:

- **Archive Folder**
- **Folder Type**

3. Click **OK**.

Modifying permissions on a mapped folder

The following section contains information about modifying permissions on a mapped folder.

About this task

The Dell EMC SourceOne primary service account must have **Administrator** permission on each mapped folder.

Procedure

1. Select the **Permissions** tab of the **Folder Properties** dialog box.
2. In the **Select user from** field, select one of the following directories or groups:
 - **Active Directory**
 - **All ES1 Users**
 - **All Matter Managers**
 - **Domino Directory**
 - **Exchange Address Book**
 - **LDAP Directory Lookup**

3. Click **Add**. The directory or group that is displayed depends on what is selected in the **Select user from** field.
4. Select the user or group from the directory. The name of the selected user or group appears in the **Group or user names** list.
5. In the **Group or user names** list, select the user or group for whom you want to specify permissions.
6. In the **Permissions** list, select the permissions that the user or group has on this folder.
The **Owner** permission is the only configurable permission for the **All ES1 Users** group.
The **Matter Manager Access** permission is the only configurable permission for the **All Matter Managers** group.
7. To remove a user or group from the list:
 - a. Select the user or group.
 - b. Click **Remove**.
8. To save the changes and close the dialog box, click **OK**.

Maintaining permissions on a mapped folder for a moved group

When you grant a group access to a mapped folder and move that group from one organizational unit (OU) to another in Active Directory, the users in the group lose access to the mapped folder after the next address synchronization.

About this task

Remove the group from the mapped folder permissions, and then reassign the group to the mapped folder.

Perform the following steps to maintain permissions on a mapped folder for a moved group.

Procedure

1. In the Dell EMC SourceOne console, select the **Mapped Folders** node.
2. In the **Mapped Folders** list, select the folder that you want to modify.
3. Select **Action > Properties**.
4. Select the **Permissions** tab of the **Folder Properties** dialog box.
5. To remove the group from the mapped folder, on the **Permissions** tab:
 - a. In the **Group or user names** list, select the group.
 - b. Click **Remove**.
6. To reassign the group to the mapped folder, on the **Permissions** tab:
 - a. In the **Select user from** field, select **Active Directory**.
 - b. Click **Add**.
 - c. Select the group from the directory. The name of the selected user or group appears in the **Group or user names** list.
 - d. In the **Group or user names** list, select the group.
 - e. In the **Permissions** list, select the permissions that the group has on this folder.

Copying mapped folders

Perform the following steps to copy a mapped folder.

Procedure

1. In the Dell EMC SourceOne console, select the **Mapped Folders** node.
2. In the **Mapped Folders** list, select the mapped folder that you want to copy.
3. Select **Action > Copy Folder**.

The **General** page of the **New Folder** wizard appears. The default name of the copy is **Copy of folder**. The values for **Archive Name** and **Folder Type** are the same as in the original folder.

4. Edit the fields on the **General** page
5. Click **Next**. The **Permissions** page of the **New Folder** wizard appears. Users and permissions are not copied from the original folder.
6. Edit the fields on the **Permissions** page, as described in [Modifying permissions on a mapped folder](#).
7. Click **Finish**.

Deleting mapped folders

The following sections describe how to delete mapped folders.

Effects of deleting mapped folders

Map a maximum of ten mapped folders to a single archive folder.

Assume that you map several mapped folders to a single archive folder, and then later you delete all but one of those mapped folders. The last remaining folder that is mapped to an archive folder allows access to all content in the archive folder. This behavior allows access to items in the archive that were orphaned when you deleted the other mapped folders.

Deleting mapped folders procedure

Perform the following steps to delete a mapped folder from the Mapped Folders list.

Procedure

1. In the Dell EMC SourceOne console, select the **Mapped Folders** node.
2. In the **Mapped Folders** list, select the mapped folder that you want to delete.
3. Select **Action > Delete Folder**. The **Mapped Folder** list no longer displays the name of the deleted mapped folder.

Best practices for configuring Legal Hold mapped folders

The following are best practices for configuring Legal Hold folders for SourceOne Discovery Manager:

- Create one or more archive folders for exclusive use by Legal Hold folders. Do not configure retention on Native Archive folders that are mapped to Legal Hold folders.

- You can map multiple Legal Hold folders to the same archive folder.
- You are prevented from:
 - Mapping a Legal Hold folder to an archive folder that is already mapped to a folder of another type (Organization, Personal, or Community). The potential for a retention policy to trigger the disposition of items that are on hold causes this prevention.
 - Mapping a non-Legal Hold folder to an archive folder that is already mapped to a Legal Hold folder.

If you try to perform such mappings, the following error message appears:

```
The data is invalid for the following reason: Legal Hold folders cannot coexist with other mapped folder types on the same archive folder.
```

The error appears for new mappings. It does not appear when you view properties of mapped folders where the invalid mapping exists.

Examples of using mapped folders

The following sections describe examples of how you can use mapped folders to achieve various business goals.

Example of configuring a simple email compliance archive

Business requirement

You have 10,000 employees, and must archive and retain all email messages for 2,000 users for three years.

Solution

Create an Organization folder that is named, for example, Archive, and map it to an archive folder with a three year retention. Create **Journal** activities and rules to archive the email messages for the 2,000 users to the Archive Organization folder.

The following list describes the user permissions for the Archive Organization folder:

- Owner—Users can perform a My Items search to access email in the Archive folder, where the user is an owner of the message.
- Contributor—Not applicable because there are no contributed messages in an Organization folder.
- My Files—Not applicable for email.
- Read All—Users can perform an All Items search to read all messages in the Archive folder.
- Administrator—Administrators can perform an Administrator search to read, retrieve, and delete any messages in the Archive folder.
- Delete—Not applicable for Organization folders (compliance archives).

Example of mapped folders for the convenience retention of messages

Business requirement

You have 10,000 employees, and want them all to have the option to locate and restore messages that they have deleted from their mailboxes, for up to two years.

Solution

Create an Organization folder that is named, for example, Archive, and map it to an archive folder with a two year retention. Create **Journal** activities and rules to archive the email messages for all users to the Archive Organization folder.

The user permissions for the Archive Organization folder are the same as for a simple compliance archive.

Example of mapped folders for a combined compliance and community archive

Business requirement

You have 10,000 employees, and must archive and retain all email messages for 2,000 users for three years. You also want the remaining 8,000 users to archive selected messages that are relevant to the business. These messages are retained for three years.

Solution

Create an Organization folder that is named, for example, Archive, and a Community folder that is named, for example, Company Records. Map both folders to archive folders with a three year retention. Create **Journal** activities and rules to archive the email messages for the 2,000 users to the Archive Organization folder. Create a **user-directed archiving (UDA)** activity to archive the user-selected messages for the 8,000 users to the CompanyRecords Community folder.

The user permissions for the Archive Organization folder are the same as shown.

The following list describes the user permissions for the Company Records Community folder:

- **Owner**—Users can perform a My Items search to access the email messages in the Company Records Community folder, where the user is an owner of the message. Initially, the search includes all messages originally contributed by the user through the user-directed archiving (UDA) activity. If the user also has Delete permission and deletes their reference to a message, this type of search also returns that message along with the other contributed messages.
- **Contributor**—Users can perform a My Contributed Items search to access only those messages that a user-directed archiving (UDA) activity had archived and that the user contributed to the Company Records Community folder.
- **My Files**—Not applicable for email.
- **Read All**—Users can perform an All Items search to read all messages in the Company Records folder.
- **Administrator**—Administrators can perform an Administrator search to read, retrieve, and delete any messages in the Company records folder.
- **Delete**—The user can delete their references to the messages that they contribute to the Company Records Community folder. After a user deletes their reference to a message, the user in My Contributed Items searches will no longer find that message.

Example of creating mapped folders for use with a personal archive

Business requirement

You have 10,000 employees, and want them all to store personal messages in the archive for up to two years. Also, to minimize the size of the archive, you want these users to have the option to delete the messages when they are no longer needed.

You also want the user's folder structure that is retained during archiving.

Solution

Create a Personal folder, for example named MyArchive, and map it to an archive folder with a two year retention. Create **user-directed archiving (UDA)** activities to archive personal messages for

all users to the MyArchive Personal folder. Because the **UDA** activity is configured to run against a Personal folder, the folder hierarchy for the message is preserved when the message is archived.

The following list describes the permissions on the MyArchive Personal folder:

- **Owner**—Users can perform a My Items search to access email in the MyArchive Personal folder, where the user is an owner of the message. Initially, the search includes all messages originally contributed by the user through the **UDA** activity. If the user has Delete permission, deletes their reference to a message and the message has not been removed from the archive, this type of search also returns that message and the other contributed messages.
- **Contributor**—Users can perform a My Contributed Items search to access only those messages that a **UDA** activity had archived and that the user contributed to the Company Records Community folder.
- **My Files**—Not applicable for email.
- **Read All**—Users can perform an All Items search to read all messages in the MyArchive Personal folder.
- **Administrator**—Administrators can perform an Administrator search to read, retrieve, and delete any messages in the MyArchive Personal folder.
- **Delete**—The user can delete their references to the messages that they contributed to the MyArchive Personal folder. After a user deletes their reference to a message, that message can no longer be found in the **My Contributed Items** list. If the user's reference is the last reference on the message, then the message is removed from the MyArchive Personal folder.

Example of a personal archive including existing PSTs

Business requirement

You have 10,000 employees, and want to eliminate the existing PST files for all users. Also, you want each user to store personal messages, including the messages in their existing PST files in the archive for up to two years. You want to minimize the size of the archive, so users can delete messages from their Personal archive when the messages are no longer needed.

Solution

Create a Personal folder that is named, for example, MyArchive, and map it to an archive folder with a two year retention. Create **user-directed archiving (UDA)** activities to archive personal messages for the users to the MyArchive Personal folder. Create a PST archive activity against the MyArchive Personal folder to collect messages from existing PST files.

The user permissions for the MyArchive Personal folder are the same as shown.

Example of using mapped folders for Microsoft SharePoint archiving

Business requirement

You have 10,000 employees, and want them to have the option to find their own Microsoft SharePoint content that has been archived from the Microsoft SharePoint farm, for up to two years.

Solution

Create an Organization folder that is named, for example, Microsoft SharePoint Archive, and map it to an archive folder with a two year retention. Create a **SharePoint Archive** activity to archive the Microsoft SharePoint content for all users to the Microsoft SharePoint Archive Organization folder.

The following list describes the user permissions for the Microsoft SharePoint Archive Organization folder:

- Owner—Not applicable.
- Contributor—Not applicable.
- My Files—Not applicable.
- Read All—The Access Account that is used for Archive Search in Microsoft SharePoint needs Read All permission. Microsoft SharePoint users do not need folder permissions to use Archive Search in Microsoft SharePoint.
- Administrator—Administrators can perform an Administrator search to read, retrieve, and delete any files in the Microsoft SharePoint Archive folder.
- Delete—Not applicable.

Example of using mapped folders for file archiving

Business requirement

You have 10,000 employees, and want them to have the option to find their own files that have been archived from the SourceOne for File Systems, for up to two years.

Solution

Create an Organization folder that is named, for example, File Archive, and map it to an archive folder with a two year retention. Create a **File Archive** activity to archive the files for all users to the File Archive Organization folder.

The following list describes the user permissions for the File Archive Organization folder:

- Owner—Not applicable.
- Contributor—Not applicable.
- My Files—Users can perform a My Files search to read their files in the File Archive folder.
- Read All—Users can perform an All Items search to read their files in the File Archive folder.
- Administrator—Administrators can perform an Administrator search to read, retrieve, and delete any files in the File Archive folder.
- Delete—Not applicable.

Example of using Legal Hold mapped folder for SourceOne Discovery Manager

Business requirement

You have 10,000 employees, and a legal staff that conducts investigations and must search email messages that are archived in the company. The email archive is set up as follows:

- Folder1 Community folder-All email messages deemed relevant to the business for all 10,000 users. Retention is three years.
- Folder2 Personal folder-All personal email messages for all 10,000 users. Retention is two years.

You want the legal staff to run SourceOne Discovery Manager, create legal matters, search all archived mail, and place relevant mail on hold in the matter.

Solution

Create a Legal Hold folder that is named, for example, Matters. In SourceOne Discovery Manager, the Matter Manager creates matters, and specifies the Matters folder as the hold folder for a new matter.

The following list describes the user permissions for the Folder1 Community folder and the Folder2 Personal folder for SourceOne Discovery Manager:

- Owner—Not applicable.
- Contributor—Not applicable.
- My Files—Not applicable.
- Read All—Assign Read All permission to the SourceOne primary service account which must search Folder 1 Community folder and the Folder 2 Personal folder.
- Administrator—Not applicable.
- Delete—Not applicable.

The following list describes the user permissions for the Matters Legal Hold folder for SourceOne Discovery Manager:

- Owner—Not applicable.
- Contributor—Not applicable.
- My Files—Not applicable.
- Read All—Not applicable.
- Administrator—Assign Administrator permission to the SourceOne primary service account which must read, write, and delete items in the Matters hold folder.
- Delete—Not applicable.

CHAPTER 7

Configuring Worker Servers and Worker Groups

This section describes how to configure Worker Servers and Worker groups for Dell EMC SourceOne.

- [Introduction to Servers and Groups node](#).....162
- [Viewing Workers and their roles](#)..... 162
- [Viewing or editing Worker properties](#) 163
- [Controlling Workers](#)..... 166
- [Tuning Worker Server job access to servers](#)..... 168
- [Configuring Worker groups](#)..... 170

Introduction to Servers and Groups node

Use the **Servers and Groups** node in the Dell EMC SourceOne Console to configure and control Worker Servers, create, and manage Worker groups.

- Use the **Configuration** tab of Servers to view Worker roles, specify the types of jobs that Workers can run, and control Workers.
- Use the **Tuning** tab to control how many Worker jobs can connect to a server at one time.
- Use the **Worker Groups** node to create and manage Worker groups. Create Worker groups to assign individual Workers. Activities can then be assigned to specific Worker groups.

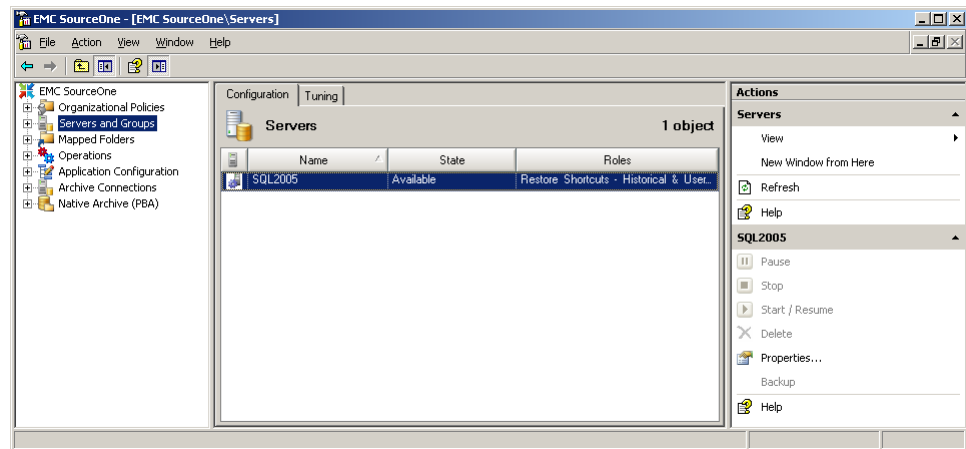
Viewing Workers and their roles

Perform the following tasks to view the list of Workers, and their roles if already assigned.

Procedure

1. In the SourceOne console, expand the **Dell EMC SourceOne** node in the left pane.
2. Click the **Servers** node.
3. Click the **Configuration** tab.

Figure 39 Viewing Workers and roles



The Servers results pane

The **Servers results** pane lists information about each Worker Server registered in the Dell EMC SourceOne system as described in this list.

- **Name**—The name of the Worker Server.
- **State**—The current state of the Worker Server. Valid values are:
 - **Available**—Indicates that the server is available to accept jobs.
 - **Working**—Indicates that the server is processing one or more jobs.
 - **Paused**—Indicates that the user has suspended the server.
 - **Off Duty**—Indicates that the server is not accepting jobs.
 - **Unresponsive**—Indicates that the server has stopped responding.

- **Restart**—Indicates that the server has just started and does not accept jobs until the dispatcher updates the server state.
- **Suspended for backup**—Indicate that server has been temporarily paused for backup operations.
- **Roles**—The types of jobs that have been assigned to each Worker Server. To assign types of jobs to a Worker, refer to [Viewing or editing Worker properties](#) on page 163.

Viewing or editing Worker properties

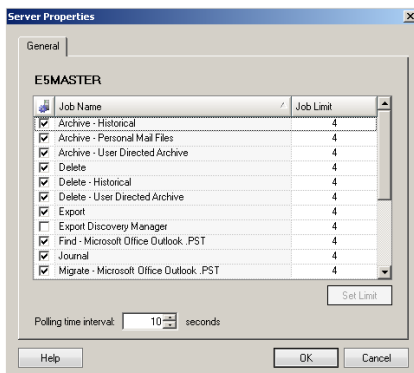
Perform the following tasks to view or edit the properties of a Worker Server.

Procedure

1. In the SourceOne console, expand the **Dell EMC SourceOne** node in the left pane.
2. Click the **Servers** node.
3. Click the **Configuration** tab.
4. Select the Worker in the list.
5. Select **Action > Properties**.

The **Server Properties** dialog box appears.

Figure 40 Server Properties (Worker roles)



6. To edit Worker properties, refer to the following sections.

Specifying types and numbers of jobs for a Worker

This section discusses the types and numbers of jobs for a Worker.

Job types

In the first column of the **Server Properties** dialog box, the selected check boxes indicate the types of jobs that the Worker is allowed to run. The job types that are available depend on the Dell EMC SourceOne components that you have installed, as described in the following table.

Table 10 SourceOne components and job types

SourceOne component	Job Types
SourceOne Email Management	<ul style="list-style-type: none"> • Archive-Historical • Archive-Personal Mail Files

Table 10 SourceOne components and job types (continued)

SourceOne component	Job Types
	<ul style="list-style-type: none"> • Archive-User Directed Archive • Delete-Historical • Delete-User Directed Archive • Delete-User Initiated Delete • Find-Microsoft Office Outlook .PST • Journal • Migrate-Microsoft Office Outlook .PST • Restore Shortcuts-Historical & User Directed Archive • Shortcut-Historical • Shortcut-User Directed Archive • Update Shortcuts-Historical & User Directed Archive <p>For descriptions of Email Management activity types, refer to Configuring Email Activities on page 323.</p>
SourceOne Archiving for Microsoft SharePoint	Microsoft SharePoint Archive
SourceOne for File Systems	<ul style="list-style-type: none"> • File Archive-Historical • File Delete-Historical • File Restore-Historical
SourceOneSearch or SourceOne Discovery Manager	<p>The users in the Search or SourceOne Discovery Manager perform activities in the Activity wizard, so the following job types do not have corresponding activities.</p> <ul style="list-style-type: none"> • Delete—A user deletes messages using Search. • Export—A user copies or restores messages to a folder using Search or copies messages to a hold folder in SourceOne Discovery Manager. • Export SourceOne Discovery Manager—A user exports messages from SourceOne Discovery Manager. • Query—A user performs a search in Search. • Query SourceOne Discovery Manager—An SourceOne Discovery Manager user performs a search in SourceOne Discovery Manager.

Job limit

The Job Limit column indicates the maximum number of jobs of each type that the Worker may run simultaneously. The default is 4 jobs.

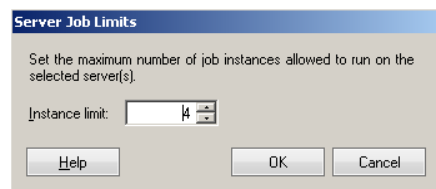
Procedure

Perform the following steps to specify the types of jobs (activities), and maximum number of jobs a Worker may run simultaneously.

Procedure

1. Access the **General** tab in the **Server Properties** dialog box.
2. For each job type, perform one of the following steps:
 - To allow the Worker to run jobs of this type, select the checkbox next to the job type.
 - To prevent the Worker from running jobs of this type, clear the checkbox next to the job type.
3. To specify the maximum number of jobs that a Worker may run simultaneously for a job type:
 - a. Perform one of the following steps:
 - Double-click the number in the Job Limit column.
 - Click the task name to highlight the line, and then click **Set Limit**. The **Server Job Limits** dialog box appears.
 - b. In the **Instance limit** field, either edit the value directly or click the increment/decrement buttons.
Valid values are integers in the range 1–25.
(Deselecting the checkbox for a job type is equivalent to an Instance limit of 0.)

Figure 41 Figure 3-31 Server Job Limits



- c. Click **OK** to close the **Server Job Limits** dialog box.
4. To change the poll time limit, refer to [Specifying the polling time interval for a Worker](#).
5. Click **OK** to save the changes and to close the **Server Properties** dialog box.

Specifying the polling time interval for a Worker

The Polling time interval field indicates how often the Job Dispatcher polls the Worker for jobs, in seconds.

- For Workers with the Search role, the default is 2 s. This short polling interval provides better responsiveness to client applications (Search, SourceOne Discovery Manager) that issue real-time interactive queries to the system through jobs.
- For other Workers, the default is 10 s.

Edit the **Polling time interval** if required to improve performance or responsiveness.

The minimum value for the **Polling time interval** field is 2 s. The maximum value is 10 s.

Considerations and recommendations

This section contains considerations and recommendations for specifying the polling time interval for a Worker.

- Consider the effects of the polling time on traffic and responsiveness:
 - A low polling time value increases traffic, and improves responsiveness.
 - A high polling time value decreases traffic, and also decreases responsiveness.
- If multiple roles, including Search, are configured on a Worker, specify the shortest polling interval.
 For example, assume WorkerA has the Delete, Export, and Query (Search) roles that are assigned to it. If these roles were on separate Workers, the default polling time values for each Worker would be 10 s, 10 s, and 2 s respectively. Set the polling time for WorkerA to be that of the Query (Search) role, which is 2 s.

Procedure

Perform the following steps to change the polling time for a Worker.

Procedure

1. Access the **General** tab in the **Server Properties** dialog box.
2. Edit the **Polling time interval** field by clicking the increment/decrement buttons or by typing the value directly.
3. Click **OK** to save the changes and to close the **Server Properties** dialog box.

Controlling Workers

Control a Worker Server by using actions to change its state.

Procedure

1. In the SourceOne console, expand the **Dell EMC SourceOne** node in the left pane.
2. Click the **Servers** node.
3. Click the **Configuration** tab.
4. Select the Worker that you want to control.
5. Select **Action > action**, where action is one of the options that are described in the following table

Table 11 Controlling Worker Servers

Action	Description	Action available when Worker is in this state	Changes Worker state to
Pause	Makes the Worker temporarily unavailable for starting new jobs.	Available, Working	Paused

Table 11 Controlling Worker Servers (continued)

Action	Description	Action available when Worker is in this state	Changes Worker state to
	<ul style="list-style-type: none"> • Pauses all running jobs on the Worker. • Use the Backup action to suspend a Worker for backup, not the Pause action. 		
Stop	Stops all jobs on the Worker. Running jobs stop and do not complete. Makes the Worker temporarily unavailable for starting new jobs.	Available, Paused, Working	Off Duty
Start/Resume	Resumes the Worker so that it can accept jobs. Resumes all paused jobs on the Worker.	Paused	<ul style="list-style-type: none"> • Working, if jobs were running when the Worker was paused • Available, if no jobs were running when the Worker was paused
Delete	Removes the Worker from the list.	Unresponsive	Removed
Backup	Makes the Worker temporarily unavailable for starting new jobs, except for search jobs, and prepares the Worker for backup. Pauses all running jobs on the Worker, except for search jobs.	Start/Resume	Suspended for Backup

The available actions vary, depending on the current state of the Worker.

To view the latest changes, press **F5**. The list may take a few moments to update.

Tuning Worker Server job access to servers

Use the Tuning tab to control how many Worker Server jobs can simultaneously connect to an IBM Domino mail server, Microsoft Exchange mail server, or Microsoft SharePoint server as described in the following sections.

Understanding the Tuning tab

Use the **Tuning** tab to control how many SourceOne jobs can simultaneously connect to the IBM Domino, Microsoft Exchange, or Microsoft SharePoint server.

The **Tuning** tab automatically updates with the servers SourceOne is accessing, when jobs created by activities connect to those servers.

The following tasks affect the **Tuning** tab:

- Historical Activities
- Shortcuts
- Delete

The **Tuning** tab is not affected by Journaling Activities.

The **Tuning** tab lists the following information about each server displayed:

- **Server**—The unique name of the server.
- **Type**—The type of server. This value is IBM Domino, Microsoft Exchange, or Microsoft SharePoint.
- **Limit**—The total number of SourceOne jobs that can simultaneously connect to the server. The default value is 4. The range for this value is 1 to 100.
You can change the default limit value that is automatically assigned to any server when it is first added to the **Tuning** tab display.

You can also change the limit value that is assigned to a specific server as described after it has been added to the **Tuning** tab display.
- **Current**—The current number of SourceOne jobs that are connecting to the server. The range for this value is 0 to 100, with 0 indicating that no SourceOne jobs are connected to the server.

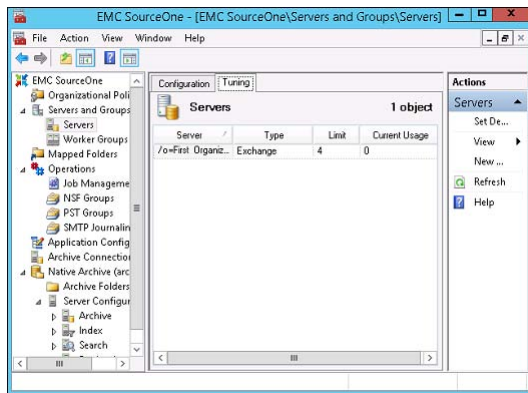
Displaying the Tuning tab

Display the Tuning tab by performing the following tasks.

Procedure

1. In the SourceOne console, expand the **Dell EMC SourceOne** node in the left pane.
2. Click the **Servers** node.
3. Click the **Tuning** tab. The **Tuning** tab appears.

Figure 42 Using the Servers node Tuning tab



Changing the tuning server limit value

By default, all servers that are added to the Tuning tab are assigned a default limit value of 4, indicating that a maximum of four jobs can access the server at one time.

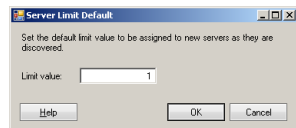
About this task

You can change this default limit value by doing the following tasks.

Procedure

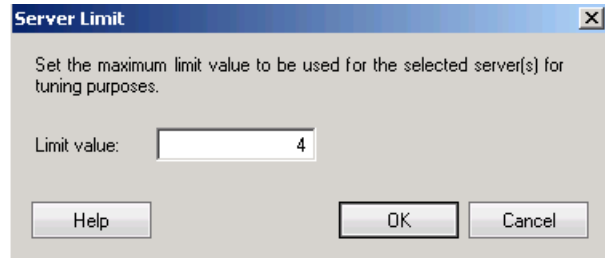
1. Open the **Tuning** tab to change the default or limit value for the tuning server:
 - a. To change the default limit value, select **Action > Set Default Limit**. The **Server Limit Default** dialog box appears.

Figure 43 Tuning tab Server Limit Default dialog box



- b. To change the limit value, select **Action > Set Limit**. The **Server Limit** dialog box appears.

Figure 44 Tuning tab Server Limit dialog box



2. Replace the value that is displayed in the **Limit value** field with a new value from 1 to 100.
3. Click **OK**.

Any servers that are added to the **Tuning** tab after this change has a limit value set to the value you have just typed.

Best practices for changing Tuning tab server limit values

Whether to change the default value for the server limit or default server limit from 4 to some other number depending on the computing environment.

- If the activity jobs connecting to the servers impacts their performance, you can reduce the number of jobs connecting to the servers by reducing the server limit value.
Note that reducing the number of jobs accessing each server may increase the time that it takes for an activity to complete. This increase in time happens because it may cause some of the activity jobs to wait to access the server.
You may also want to reduce the default server limit value so that any newly discovered servers get the reduced value automatically.
- If the current number of activity jobs connecting to the servers do not impact the servers, and activities complete in a workable amount of time, there is no must modify the server limit value.
- If the activity jobs connecting to the servers do not impact their performance, you can increase the number of jobs connecting to each server by increasing the server limit value. This process can shorten the activity completion time.
You may also want to increase the default server limit value so that any newly discovered servers get the increased value automatically.

Configuring Worker groups

Create Worker groups for which to assign individual Workers. Activities can then be assigned to specific Worker groups.

Create, edit, and delete Worker groups in the Dell EMC SourceOne Management Console.

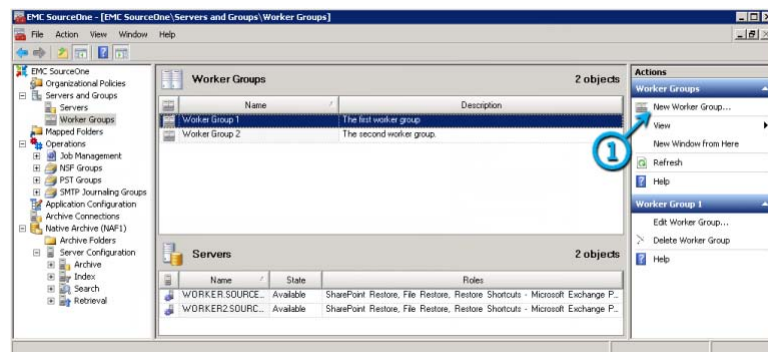
Creating a Worker group

In the Dell EMC SourceOne Management Console, create a Worker group and add Workers to the new group by performing the following tasks.

Procedure

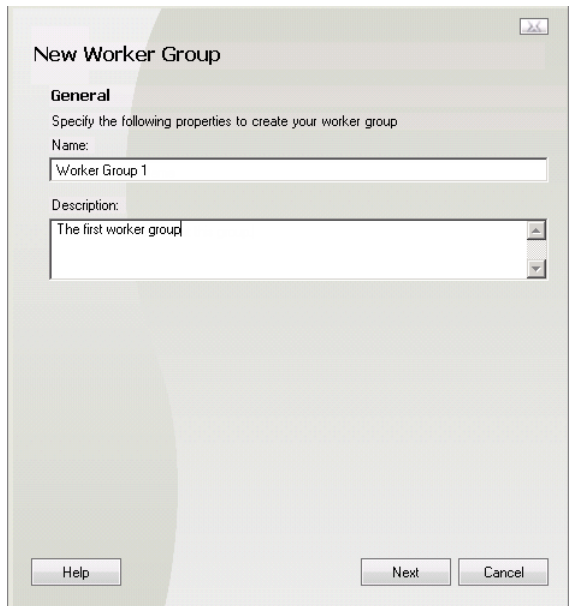
1. Start the **Worker Group Creation** wizard by selecting **Servers and Groups > Worker Groups**, and clicking **New Worker Group**. The **New Worker Group** window opens.

Figure 45 Create a Worker group



2. The **New Worker Group** window:
 - a. In the **Name** field, type the name of the Worker group.
 - b. In the **Description** field, type a description of the Worker group.

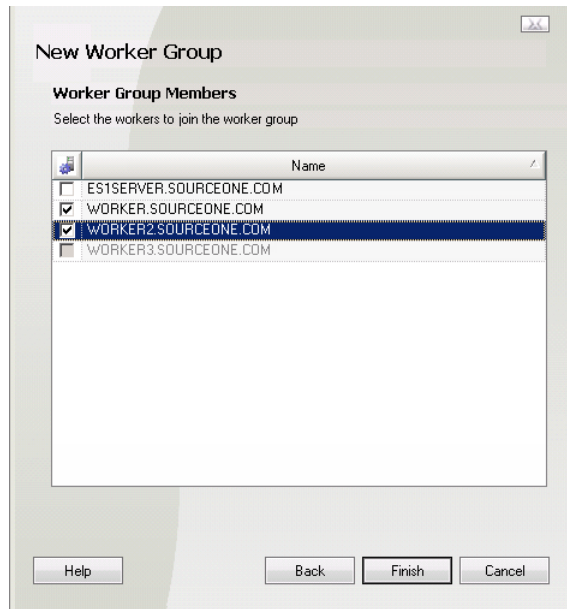
Figure 46 New Worker Group Select Workers for the Worker group—General



Note: The Worker group name is required, but the description is optional.

3. Click **Next** and select the Workers for this Worker group.
 - A Worker can only be assigned to one group. Select some Workers to join this Worker group.
 - One Worker can be assigned to only one group.
 - If a Worker is already assigned to other Worker group, it is disabled (grayed out) and cannot be selected.

Figure 47 Select Workers for the Worker group



4. Click **Finish**. If a Worker is selected for the Worker group, a dialog box that displays the following appears:

No worker is selected for this worker group. Would you like to proceed?

5. Click **Yes** to create the Worker group without Workers, or click **No** to return to the **Select Workers** window.

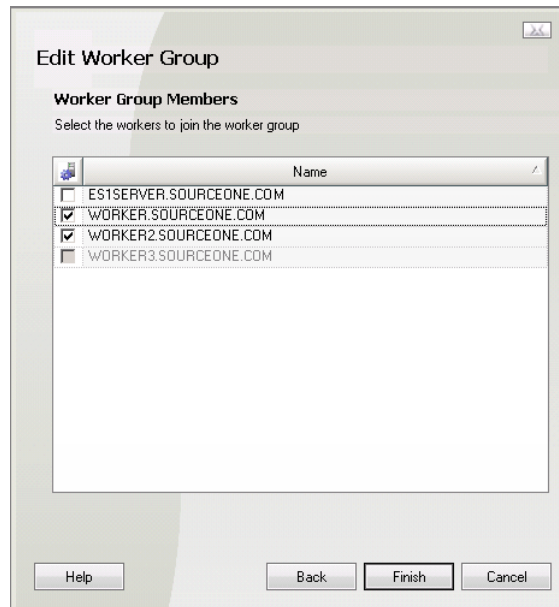
Editing a Worker group

In the Dell EMC SourceOne Management Console, edit a Worker group by performing the following tasks.

Procedure

1. Start the **Worker Group Creation** wizard by selecting **Severs and Groups > Worker Groups**, and clicking **Edit Worker Group**.
2. Change the **Worker Group Name**, and **Description**.
3. Click **Next** and select the Workers for this Worker group.

Figure 48 Worker Group Members



4. Click **Finish**.
5. If a Worker is selected for the Worker group, a dialog box that displays the following appears:

No worker is selected for this worker group. Would you like to proceed?

6. Click **Yes** to create the Worker group without Workers, or click **No** to return to the select Workers window.

Deleting a Worker group

If the following conditions are true, a Worker group cannot be deleted .

About this task

- There are jobs or activities that are associated with the Worker group, and if the activity is in any of the following states:
 - Defined
 - Active
 - Read-only
 - Suspend
- There are unassigned jobs that are associated with the Worker group.

Perform the following steps to delete a Worker group in the Dell EMC SourceOne Management Console.

Procedure

1. Start the **Worker Group Creation** wizard by selecting **Severs and Groups > Worker Groups**.
2. Select the Worker group and click **Delete**.

A dialog box that displays the following appears:

```
Are you sure you want to delete the selected worker group(s)?
```

3. Click **Yes** to confirm the deletion.

If there are activities or jobs that are associated with the Worker group being deleted, an error message appears. For example,

```
Cannot remove the selected worker group(s). The following activities or their jobs are specified to the selected worker group(s):  
Historical Archive 1, Historical Shortcut 1
```

The names of the related activities or jobs are listed in the message.

Assigning a Worker group to an activity

When creating an activity, you can assign the execution of the activity to Worker Servers in a specified Worker group.

- If an activity is specified with a Worker group, only the Worker Servers in that Worker group can process all the jobs of this activity.
- If an activity is not specified with a Worker group, any Worker Server can process all the jobs of this activity.

CHAPTER 8

Configuring Applications and Web Services

This section describes how to configure applications and Web services that are used by Dell EMC SourceOne.

- [Introduction](#)..... 176
- [Editing global settings for applications and Web services](#).....176
- [Editing settings for Retrieval Web service](#)..... 181
- [Auditing search operations](#).....182
- [Editing settings for Shortcut Web service and mobile restore](#)..... 189
- [Editing settings for Dell EMC SourceOne Web Search application](#).....192
- [Editing settings for SourceOne Web Search server](#)..... 198
- [Index Validation](#)..... 206

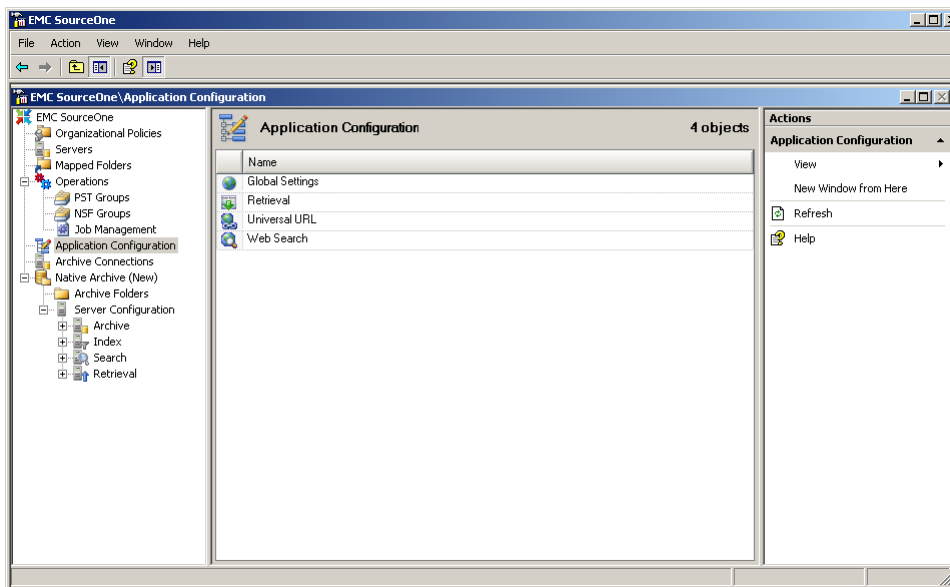
Introduction

In the SourceOne Console, use the Application Configuration node to specify settings for SourceOne applications and Web services.

The **Application Configuration** node has four subnodes:

- Global Settings
- Retrieval
- Universal URL
- Web Search

Figure 49 Application Configuration subnodes



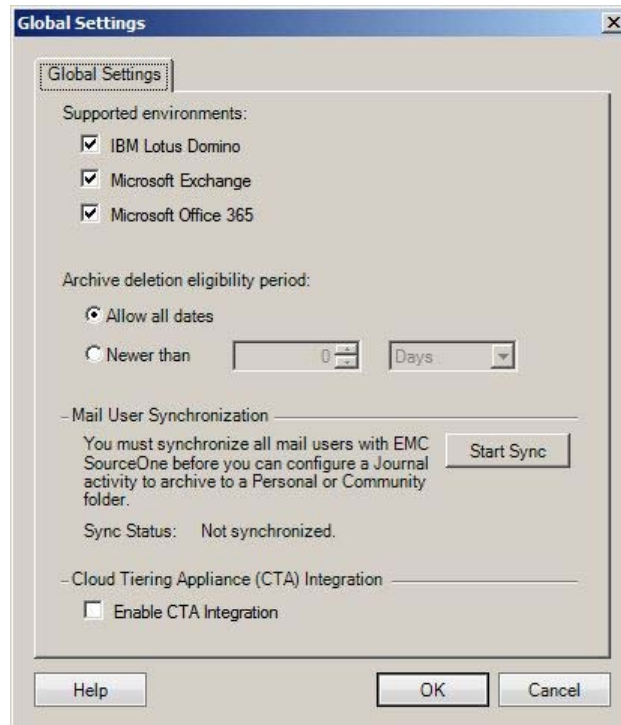
Editing global settings for applications and Web services

Perform the following steps to configure global settings for Dell EMC SourceOne applications and Web services.

Procedure

1. In the SourceOne console, expand the **Application Configuration** node.
2. Double-click the **Global Settings** node. The **Global Settings** dialog box appears.

Figure 50 Global Settings dialog box



3. Edit the settings on this page, as described in the following table.

Table 12 Global Settings properties

Field/option	Description
Supported environments	<p>Specifies the mail environments that are supported at the site. By default, all options are selected. Clear the checkbox for any mail environment that is not applicable.</p> <p>Note: If it is part of a Microsoft Exchange or IBM Domino mail environment, SourceOne Email Management supports the use of an SMTP environment. An SMTP environment without Microsoft Exchange or IBM Domino is not supported.</p> <p>The following are valid values:</p> <ul style="list-style-type: none"> • IBM Domino • Microsoft Exchange • Microsoft Office 365 <p>Also determines whether to use Microsoft Exchange or IBM Domino to resolve LDAP queries for user permissions on mapped folders. If both Microsoft Exchange and IBM Domino mail environments are selected and you run an LDAP query for mapped folder</p>

Table 12 Global Settings properties (continued)

Field/option	Description
	permissions, an error occurs for the invalid mail platform.
Archive deletion eligibility period	<p>Specifies the age of mail items that users can delete by selecting one of the following options:</p> <ul style="list-style-type: none"> • Allow all dates-(Default) Select this option if the age of the mail item does not matter. • Newer than-Select this option to restrict the activity to a sliding date window. Only those mail items that users deleted within the specified time after the Received Date are deleted from the archive. The maximum age value in the first field is 18263 days (50 years plus 13 days to account for leap years), regardless of the units you select in the second field. Negative numbers and non-numeric characters are invalid. <p>This option is used by the User Delete feature and applies to user deletions from the archive that is done through Search and the mail client. The Delete-User Initiated Delete activity uses this option. The best practice for using this option is to specify a narrow date window to limit the number of volumes, indexes, and database partitions that are affected. The Archive deletion eligibility period option is enforced for user deletes performed through:</p> <ul style="list-style-type: none"> • The mail client (processed by Delete-User Initiated Delete activities). • My Contributed Items searches in Search. <p>The Archive deletion eligibility period option is not enforced for Administrator deletes performed in Search. When you change the value of this option, existing activities continue to use the previous value. New activities use the new value.</p>
Mail User Synchronization	Specifies when to start synchronization with the User Delete feature.
Cloud Tiering Appliance (CTA) Integration	Specifies whether to enable the launching of the CTA console within the SourceOne console. It is disabled by default.

4. Apply the changes that you made on this page, as described in the following section.

Applying changes after editing environments settings

When Dell EMC SourceOne is installed, all supported mail environments that are displayed in the Global Settings dialog box are enabled by default. You can change the supported environments settings to reflect the mail environment, for example, selecting only Microsoft Exchange. Even if changes are made however, the first user that logs in to the SourceOne Search application sees both Microsoft Windows and IBM Domino as choices in the log in to: list.

About this task

Perform the following procedure on each web server on which **SourceOne Search** is installed after changing:

- The Supported environments setting in the **Global Settings** dialog box
- Default authentication environment setting in the **Client Settings** tab of the **Web Search** dialog box


For example, if you deployed four instances of SourceOne Search in a web farm, perform the following procedure on each of those four web servers. The settings can then be saved to the local settings file of each server.

Perform the following steps to apply changes.

Procedure

1. Access the SourceOne Search application.
2. Log in using the login method (Microsoft Windows or IBM Domino) for the environment.
3. Log out of the SourceOne Search application.

Subsequent SourceOne Search users see only the supported environments that are configured in the **Global Settings** dialog box.

 **Note:** If you change the supported environments settings in the future, wait at least 10 minutes for the settings to propagate through the system and repeat this procedure.

Initializing the address cache for User Delete

The **Start Sync** button in the **Global Settings** dialog box is used only for the User Delete feature

The following components use an address cache to distinguish internal recipients from external recipients:

- **Journal** activities that archive to **Personal** or **Community** mapped folders
- **Folder Conversion** utility

Before you create a **Journal** activity to a **Personal** or **Community** folder, initialize the address cache. This step synchronizes all mail users with SourceOne SourceOne, based on the mail systems you select at the top of the **Global Settings** dialog box.

If you do not initialize the address cache, then you cannot create **Journal** activities that archive to **Personal** or **Community** folders.

Also, permissions on mapped folders do not take effect until the address synchronization is complete. Users cannot search or retrieve items from those mapped folders until the synchronization completes.

After the initial synchronization completes, subsequent incremental synchronizations are faster. For example, in a large environment with more than a million addresses, the initial synchronization can take several hours, but subsequent synchronizations take less than 30 minutes.

Only initialize the address cache one time.

If you already ran the **Folder Conversion** utility, then the address cache is initialized and it is not essential that you perform the following procedure.

Best practice

Add users to the mail system at least one day before they arrive, so that their addresses are synchronized before their mail starts to be archived.

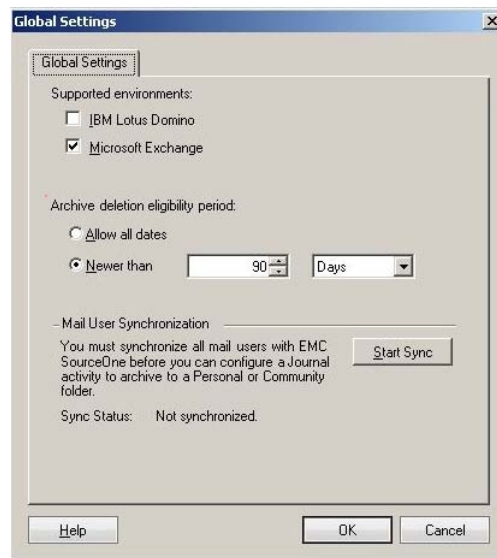
Procedure

Perform the following procedure to initialize the address cache.

Procedure

1. In the SourceOne, expand the **Application Configuration** node.
2. Double-click the **Global Settings** node. The **Global Settings** dialog box appears.

Figure 51 Global Settings properties



3. To specify the mail systems that you want to synchronize with SourceOne.
 - a. In the **Supported environments** area, select the mail systems.
 - b. Click **OK** to save the changes.

If you do not save the changes, then you are prompted to perform a save when you click the **Start Sync** button.

If you have a mixed mail environment with Microsoft Exchange and IBM Domino, then Outlook must be the default mail client.

4. Perform one of the following steps:
 - If the **Start Sync** button is disabled, then the initial synchronization is already in progress or is complete. Skip the rest of this procedure.
If you already performed the initialization for one mail system and you added a second mail system, refer to [Synchronizing the address cache after adding another mail system](#) on page 181.
 - If the **Start Sync** button is available, then the initial synchronization has not occurred. Click the **Start Sync** button.
5. Before creating a **Journal** activity to a **Personal** or **Community** folder, verify that the **Sync Status** is **Synchronization complete**.

To view an updated status, close the **Global Settings** dialog box and then reopen it.

Synchronizing the address cache after adding another mail system

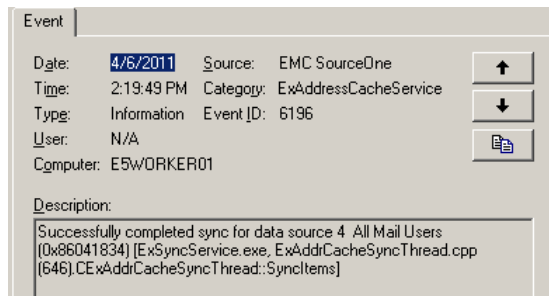
If you initialize the address cache for one mail system, then select a second mail system in the **Global Settings** dialog box, you cannot use the **Mail User Sync** button to re-initialize the address cache. The button is unavailable after the initial synchronization.

Wait for the daily address synchronization to occur before creating **Journal** activities to **Personal** or **Community** folders for the new mail system.

To verify that the daily synchronization is complete, view the event log for the following **ExAddressCacheService** status:

```
Successfully completed sync for data source All Mail Users.
```

Figure 52 Event log—Address cache synchronized successfully



If you create **Journal** activities to **Personal** or **Community** folders for the new mail system before the daily synchronization is complete, you can save the activity because an address cache exists.

Because the existing address cache does not have the addresses of the new mail system users, mail items that do not have an internal owner, and are journaled to **Personal** or **Community** folders are marked as having an unknown owner. Marking items with an unknown owner protects the mail item from being deleted. Users cannot delete the message as intended due to ownership assignments.

Editing settings for Retrieval Web service

Perform the following steps to configure settings for the Retrieval Web service.

Procedure

1. In the SourceOne console, expand the **Application Configuration** node.
2. Double-click the **Retrieval** node. The **Retrieval** dialog box appears.
3. Edit the **Security group name**.

The **Security group name** specifies the Active Directory security group whose members can retrieve messages and documents from the archive.

Click **Browse** to select the SourceOne security group, because that group contains all the SourceOne service accounts as members.

If you use a single SourceOne service account for all SourceOne services, you are not obligated to specify the **Security group name**.

4. Click **OK**.

- Restart the **Document Management Service**. If you do not restart the **Document Management Service**, then OWA users cannot access messages that have been shortcut.

Auditing search operations

The following section describes how to audit Search operations.

These auditing options do not apply to SourceOne Discovery Manager searches. Auditing is always on for SourceOne Discovery Manager search operations.

About search roles

Auditing recognizes two search roles, which are based on the type of search that is performed in SourceOne Search, as described in this table:

Table 13 Search roles and search types

Search role that is recognized by auditing and reporting	Search type in SourceOne Search	What is audited
Administrator	Administrator	All searches that are performed with the Administrator search type are audited.
Audited User	My Items, My Contributed Items, All Items	Searches performed with the My Items, My Contributed Items , or All Items search types are audited for a user only if the user is identified as an audited user. Typically, audited users are managers and executives who are required to have their searches audited.

An **Administrator** search role and an SourceOne system administrator are distinct concepts and are not necessarily the same person. A SourceOne system administrator cannot perform **Administrator** searches until they are granted **Administrator** permission on the mapped folders that they want to search.

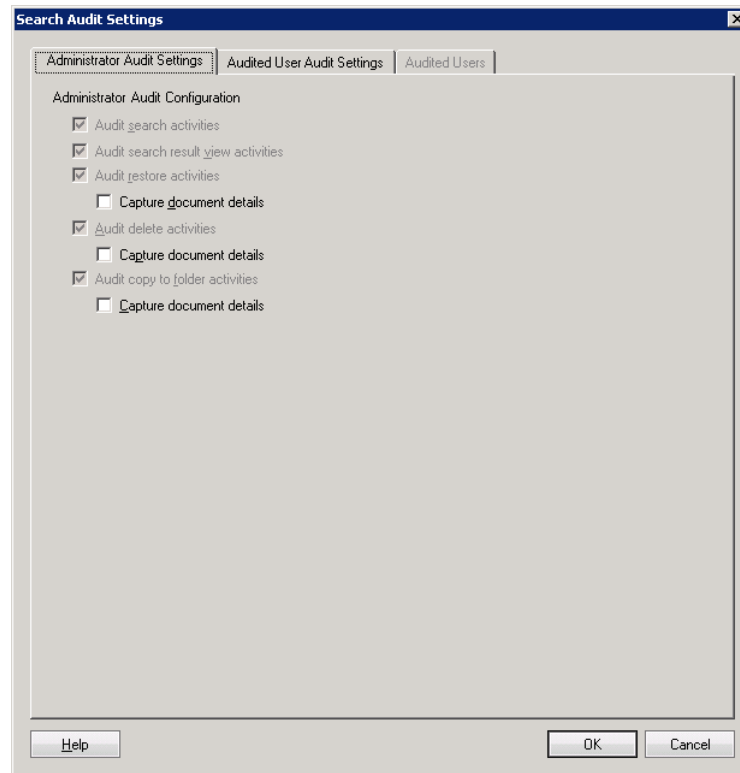
The search roles of **Administrator** and **Audited User** organize the audit options.

Auditing search operations performed by using the Administrator search type

Perform the following steps to audit search operations that were performed using the **Administrator** search type.

Procedure

- In the SourceOne console, expand the **Application Configuration** node.
- Double-click the **Search Audit Settings** node. The **Search Audit Settings** dialog box appears.
- Click the **Administrator Audit Settings** tab.

Figure 53 Administrator Audit Settings tab

4. Edit the following settings:

- **Audit search activities**—Characteristics of this feature include:
 - It audits searches of archived content that were performed using the **Administrator** search type.
 - Cannot be turned off.
 - Audited information appears in the **Search Activity** report.
 - The default value is selected.
- **Audit search result view activities**—Characteristics of this feature include:
 - Search views are always audited for the **Administrator** search type.
 - Audits the viewing and previewing of archived content that were performed using the **Administrator** search type. It records information about the document, job, and mapped folder for every document viewed.
 - Cannot be turned off.
 - Audited information appears in the **Documents Viewed** report.
 - The default value is selected.
- **Audit restore activities**—Characteristics of this feature include:
 - Audits the **Restore** operations that were performed using the **Administrator** search type.
 - Cannot be turned off.
 - Audited information appears in the **Search Restore** report.
 - The default value is selected.
- **Capture document details**—Characteristics of this feature include:

- Audits the details of the copied items.
- This option has higher system impact because SourceOne stores a summary of every document that is restored. This option can generate a large amount of data quickly if many items are restored.
- Enable this option only if you must track specific documents that are restored.
- Audited information appears in the **Documents Restored** report.
- The default value is clear.
- **Audit delete activities**—Characteristics of this feature include:
 - Audits the Delete operations that were performed using the **Administrator** search type.
 - Cannot be turned off.
 - Audited information appears in the **Search Delete** report.
 - The default value is selected.
- **Capture document details**—Characteristics of this feature include:
 - Audits details of the restored items.
 - This option has some system impact because SourceOne stores a summary of every document that is deleted. The impact can be lower for **Delete** operations than for **Restore** or **Copy To** operations, because typically fewer items are deleted per operation.
 - Enable this option, due to the destructive nature of delete operations.
 - Audited information appears in the **Documents Deleted** report.
 - The default value is clear.
- **Audit copy to folder activities**—Characteristics of this feature include:
 - Audits the **Copy To** operations that were performed using the **Administrator** search type.
 - Cannot be turned off.
 - Audited information appears in the **Search Copy** report.
 - The default value is selected.
- **Capture document details**—Characteristics of this feature include:
 - Audits details of the deleted items.
 - This option has higher system impact because SourceOne stores a summary of every document that is copied. This option can generate a large amount of data quickly if many items are copied.
 - Enable this option only if you must track specific documents that are copied.
 - Audited information appears in the **Documents Copied** report.
 - The default value is clear.

By default, all search operations are audited for the **Administrator** search type. You cannot turn off this auditing. You can choose to audit details of each type of search engine's processed items.

5. Click **OK**.

Auditing search operations performed by specific users

The following section describes how to track search operations for audited users.

About this task

Perform the following procedure to audit search operations that specific users perform.

Procedure

1. In the Dell EMC SourceOne console, expand the **Application Configuration** node.
2. Double-click the **Search Audit Settings** node. The **Search Audit Settings** dialog box appears.
3. Continue to the following sections.

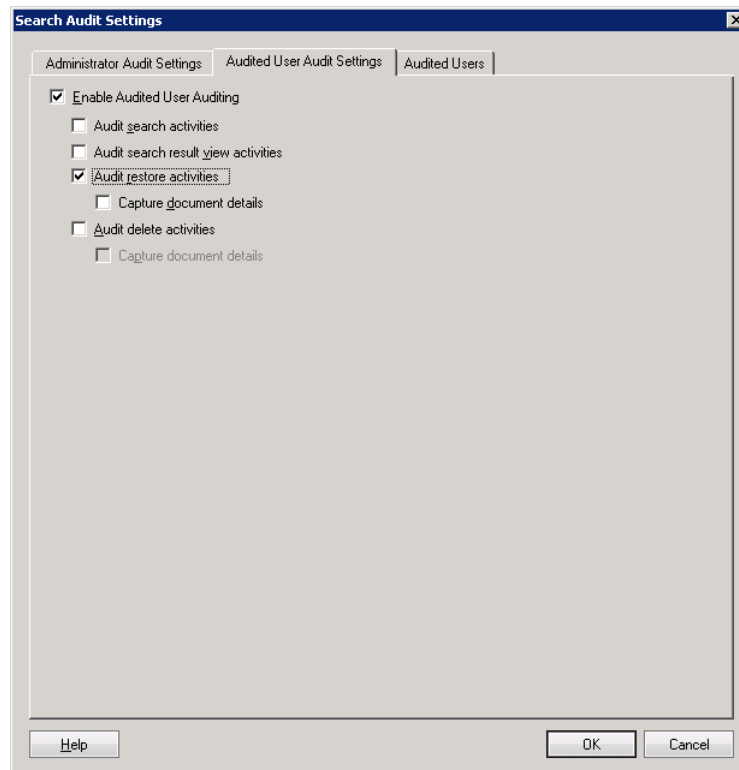
Specifying search operations to audit for audited users

Perform the following steps to specify the search operations to audit for audited users.

Procedure

1. In the **Search Audit Settings** dialog box, click the **Audited User Audit Settings** tab.

Figure 54 Audited User Audit Settings tab—Auditing enabled example



2. Edit the following settings:
 - **Enable Audited User Auditing**—Characteristics of this feature include:
 - When you select this checkbox:
 - Other checkboxes on this tab become available for editing.
 - The **Audited Users** tab becomes available.
 - The default value is clear.

- **Audit search activities**—Characteristics of this feature include:
 - Audits searches of archived content that specified users did using the **My Items, My Contributed Items**, or **All Items** search type.
 - This option has low system impact.
 - Enable this option if you must know what searches audited users performed.
 - Audited information appears in the **Search Activity** report.
 - The default value is clear.
- **Audit search result view activities**—Characteristics of this feature include:
 - Audits the viewing and previewing of archived content that specified users did using the **My Items, My Contributed Items**, or **All Items** search type.
 - It records information about the document, job, and mapped folder for every document that an audited user viewed.
 - This option has low system impact.
 - Enable this option if you must know what documents that specific users viewed, especially if archived documents contain sensitive information and it is important to know who accessed the documents.
 - Audited information appears in the **Documents Viewed** report.
 - The default value is clear.
- **Audit restore activities**—Characteristics of this feature include:
 - Audits the **Restore** operations that specified users did using the **My Items, My Contributed Items**, or **All Items** search type.
 - This option has low system impact.
 - Enable this option if you must know about the restore operations that audited users did.
 - Audited information appears in the **Search Restore** report.
 - The default value is clear.
- **Capture document details**—Characteristics of this feature include:
 - Audits details of the restored items.
 - This option has higher system impact because SourceOne stores a summary of every document that is restored. This option can generate a large amount of data quickly if large numbers of items are restored.
 - Enable this option only if you must track specific documents that are restored.
 - Audited information appears in the **Documents Restored** report.
 - The default value is clear.
- **Audit delete activities**—Characteristics of this feature include:
 - Audits the **Delete** operations that specified users did using the **My Items, My Contributed Items**, or **All Items** search type. This option has low system impact.
 - Enable this option, due to the destructive nature of delete operations.
 - Audited information appears in the **Search Deleted** report.
 - The default value is clear.
- **Capture document details**—Characteristics of this feature include:
 - Audits details of the deleted items.

- This option has some system impact because SourceOne stores a summary of every document that is deleted. The impact can be lower for **Delete** operations than for **Restore** operations, because typically fewer items are deleted per operation.
- Enable this option, due to the destructive nature of delete operations.
- Audited information appears in the **Documents Deleted** report.
- The default value is clear.

By default, search operations are not audited for users who perform searches by using the **My Items**, **My Contributed Items**, or **All Items** search types:

- You can configure auditing of selected search operations for specified users.
- You can audit details of the items that each type of search operation processes.

3. Click **OK**.

Specifying users to audit

To audit search operations that are performed using My Items, My Contributed Items, or All Items search types, explicitly identify the users. Typically, audited users are certain managers and executives who are required to have their searches to be audited.

About this task

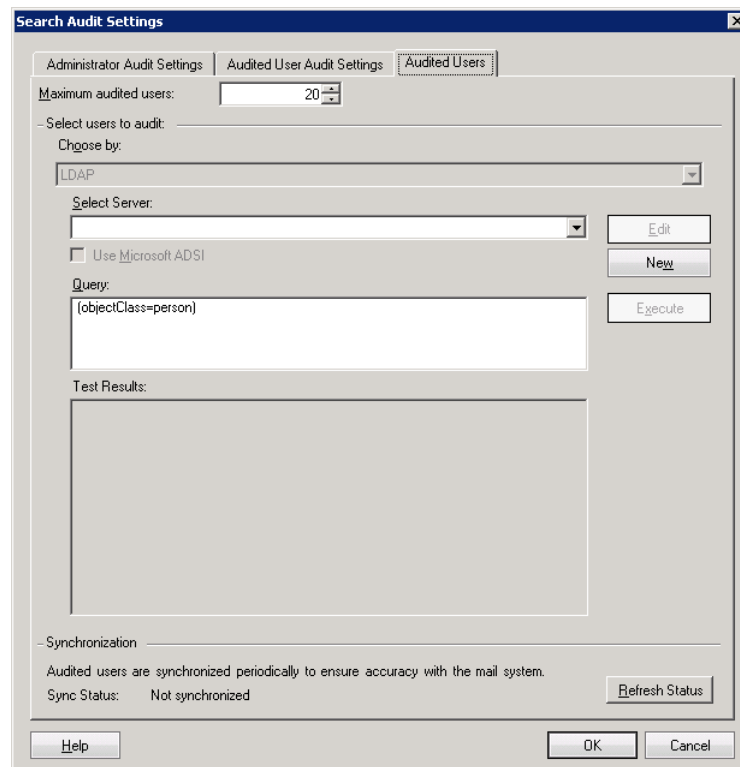
Perform the following to specify the users to audit, in the **Search Audit Settings** dialog box.

Procedure

1. Click the **Audited Users** tab.

If the **Audited Users** tab is not available, select the **Enable Audited User Auditing** checkbox on the **Audited User Audit Settings** tab.

Figure 55 Audited Users tab



2. In the **Maximum audited users** field, specify the maximum number of users to audit.
The default is 20. This value must be an integer in the range 1–50.
The maximum is 50 users to prevent performance or storage issues.
3. Create an LDAP query to specify the users that you want to audit.
4. Test the LDAP query.
5. After you save the configuration settings, the specified LDAP query is run to synchronize the users with the address cache. Audits will occur after the initial synchronization completes. The synchronization also occurs periodically according to the address cache synchronization schedule.

The **Sync Status** field shows the status of the synchronization:

- Not synchronized—The initial state, before the first synchronization occurs.
 - Complete—The synchronization was successful. The date and time of the last successful synchronization appears.
 - Failed—A synchronization error occurred. The date and time of the last successful synchronization appears.
6. Verify that the **Sync Status** field displays a status of Complete.

To display the latest status, click **Refresh Status**. The **Refresh Status** button does not do synchronization. It updates the display of the status information.

Testing the LDAP query for Audited Users

Testing the LDAP query in the Audited Users tab is optional, but it is helpful to avoid errors later when the query is synchronized with the address cache.

Procedure

1. To test the LDAP query, click **Execute**. The results are displayed in the **Test Results** area.
2. If the number of results resolves to more than the number of users who are specified in the **Maximum audited users** field, then an error appears:

```
The LDAP Query is invalid for the following reasons:
```

```
The LDAP Query resulted in more users than are allowed.
```

```
Please refine your query or increase the maximum allowed users.
```

```
Failure to do so results in errors when this query is synchronized later.
```

To fix the problem, perform one of the following steps:

- Refine the LDAP query to retrieve fewer users.
- Increase the value in the **Maximum audited users** field.

You are allowed to save changes even if the query returns more than the number of users who are specified in the **Maximum audited users** field. The set of audited users who are recognized by auditing remain unchanged until the LDAP query resolves to a count less than the value you specified in the **Maximum audited users** field. Synchronization errors are recorded in the event log in the Master Server, and the synchronization fails.

Editing settings for Shortcut Web service and mobile restore

The Dell EMC SourceOne Universal URL feature provides a platform-independent mechanism to restore shortcut email messages and files.

- Email clients such as Microsoft Entourage and OWA Light, and mobile Microsoft Exchange email clients, such as Blackberry, use the Universal URL. When a user clicks a URL link that is embedded in the body of a shortcut message, the email client starts a Web browser. In a Microsoft Exchange environment, delegated users cannot use the universal URL to resolve shortcuts in the delegate mailbox. Delegated users can use SourceOne Offline Access to resolve the shortcut.
- For SourceOne for File Systems, the Universal URL is required if you want to use the **Shortcut files** option when you create a **File Archive** activity.

In the **External URL** field, specify the **DNS CNAME** alias of the server that is running the Dell EMC SourceOne Mobile Services. Do not specify a fixed IP address or a hostname as these two can change.

If you do not configure the Universal URL or External URL, then you cannot create activities to shortcut email or files.

Persistence of configuration information

Configuration information is cached. The cache is refreshed before any mobile pages load, not just the Login page. If the configuration cache has expired, the edited list of restricted extensions takes effect on the next page load.

The following settings are reset when the user logs out and logs in again:

- Login information cookie timeout
- Session cookie timeout

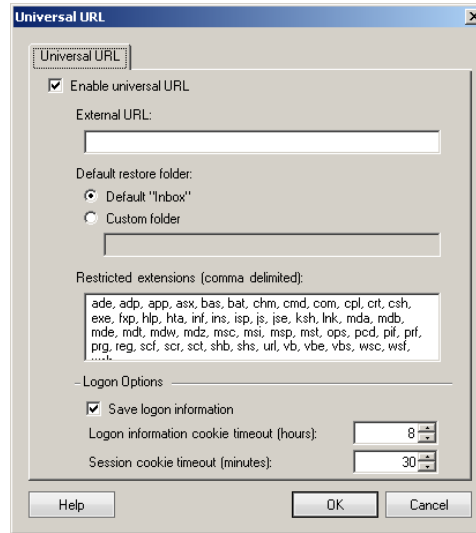
Configuring settings for the SourceOne Universal URL

Perform these steps to configure settings for the Universal URL, including mobile restore.

Procedure

1. In the SourceOne console, expand the **Application Configuration** node.
2. Double-click the **Universal URL** node. The **Universal URL** dialog box appears.

Figure 56 Universal URL properties



3. Edit the settings, as described in the following table.

Table 14 Universal URL properties

Field/option	Description	Valid range of values	Default value
Enable universal URL	Enable or disable the URL of the server on which SourceOne Mobile Services is installed for use by external clients. Note: The other options in the Universal URL dialog box are available only if the Enable universal URL checkbox is selected.	Perform one of the following steps: <ul style="list-style-type: none"> To enable the URL, select the Enable universal URL checkbox. To disable the URL, clear the Enable universal URL checkbox. 	Selected-URL of the Shortcut Web server is enabled.
External URL	In Microsoft Exchange environments, specify the URL of the server on which SourceOne Mobile Web services is installed for use by external clients. Note: Use SSL (https). Format: https:// MobileServicesServer.domain.com	Not applicable.	Blank
Default restore folder	Specify the default mail client folder in which to restore messages.	Perform one of the following steps: <ul style="list-style-type: none"> Select Default Inbox. Select Custom folder, then type the name of the custom folder. Note: Do not specify nested folders for a custom folder.	Default Inbox
Restricted extensions (comma delimited)	Lists the file name extensions to exclude from retrieval.	When adding extensions, use commas to separate extensions in the list.	See dialog box for list of extensions that are restricted by default.

Table 14 Universal URL properties (continued)

Field/option	Description	Valid range of values	Default value
Save login information	Specify whether users can save login information as a cookie on their computers.	Perform one of the following steps: <ul style="list-style-type: none"> To allow users to save login information, select the Save login information checkbox. To prevent users from saving login information, clear the Save login information checkbox. 	Selected-Users can save login information.
Login information cookie timeout (hours)	Specify how long to retain the login information cookie on users' computers.	8–720 hours (720 hours equals 30 days.)	8 (hours)
Session cookie timeout (minutes)	Specify the number of minutes before a user session times out.	30–60 (minutes)	30 (minutes)
Always restore	Adds the file directly to the Restore List Directory when a file shortcut is opened.	Blank	Blank
Always download	Pushes the file directly to the client when a file shortcut is opened.	Blank	Blank
Allow user to choose	Select to restore the files to its original location, open the file directly, or save the file: <ul style="list-style-type: none"> Add to Restore List-Adds the file to the Restore List where you can choose to restore the file to its original location. Save/Open-Save or open the file. 	Blank	Blank

Using shortcuts with email clients supported by the Universal URL feature

Email clients that the Universal URL, such as Microsoft Entourage and OWA Light, and mobile Microsoft Exchange email clients, such as Blackberry, support, typically rely on a pull mechanism to retrieve messages. Synchronization between mailbox shortcuts and the display of the retrieved shortcut messages in the email client might lag. This lag is caused by having large numbers of cached messages that are stored locally.

If the email client has that capability, users may avoid this retrieval and display lag by periodically synchronizing their email client mailbox to reduce their local cache size.

Editing settings for Dell EMC SourceOne Web Search application

The Search application caches the configuration settings, and refreshed for a user at the next login after the cache expires. By default, the cache expiration timeout is 10 minutes.

About this task

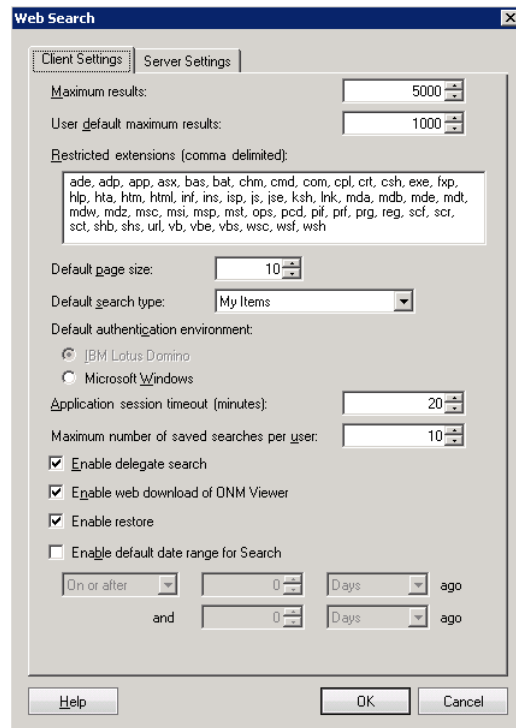
Note: The changes to these settings take effect after the web service retrieves an update from the database, which can take up to 20 minutes. Alternately, you can restart IIS using `iisreset` to force an immediate update.

Perform these steps to configure settings for the Web Search application.

Procedure

1. In the SourceOne console, expand the **Application Configuration** node.
2. Double-click the **Web Search** node. The **Web Search** dialog box appears.
3. Click the **Client Settings** tab.

Figure 57 Web Search properties—Client Settings



4. Edit the settings, as described in the following table.

Table 15 Web Search properties-Client Settings

Field/option	Description	Valid range of values	Default value
Maximum results	Specify the maximum number of items that can be returned in search results.	10–100000 (items)	5000 (items)

Table 15 Web Search properties-Client Settings (continued)





Field/option	Description	Valid range of values	Default value
User default maximum results	Specify the default maximum number of items that can be returned in search results.	10–100000 (items)  Note: This value must be less than or equal to the Maximum results value.	1000 (items)
Restricted extensions (comma delimited)	If an attachment's extension matches one in this list, in the Search preview pane: <ul style="list-style-type: none"> The attachment appears as a plain text attachment name instead of a clickable link. A warning informs the user that the attachment was blocked for security reasons, and that the attachment can be viewed by opening the native message. 	List the file name extensions of email attachment types that you do not want users to download through links in the Search preview pane. Use commas to separate extensions in the list.	See dialog box for list of extensions that are restricted by default.
Default page size	Specify the number of items to display per page in search results.	10–50 (items)	10 (items)
Default search type	Specify the default type of search. The selected type displays in the Search Type field on the Search toolbar, as described in the <i>SourceOne Search User Guide</i> .	<ul style="list-style-type: none"> Administrator All Items My Items My Contributed Items  Note: The My Files search type is not available as a default.	My Items
Default authentication environment	Select the default authentication environment. The selected environment is the default selection in the log on to field in the Search logon screen.  Note: Refer to Applying changes after editing environments settings .	<ul style="list-style-type: none"> IBM Lotus Domino Microsoft Windows 	Microsoft Windows
Application session timeout (minutes)	Specify the number of minutes before a search session times out.  Note: Refer to Changing the IIS Application Pool Idle Timeout .	20–60 (minutes)	20 (minutes)

Table 15 Web Search properties-Client Settings (continued)

Field/option	Description	Valid range of values	Default value
Maximum number of saved searches per user	<p>Specify the maximum number of searches that a user can save. This setting affects the Save Search dialog box.</p> <p>Note: A saved search includes search criteria, not results.</p>	10–50 (saved searches)	10 (saved searches)
Enable delegate search	<p>Enables/disables delegate searches in Search. This setting controls the display of the Search As button in the Search toolbar for the following search types:</p> <ul style="list-style-type: none"> • My Items • My Contributed Items • All Items <p>Delegate search (the Search As button) is never available for the following search types:</p> <ul style="list-style-type: none"> • Administrator • My Files 	<p>Perform one of the following steps:</p> <ul style="list-style-type: none"> • To enable delegate search, select the Enable delegate search checkbox. • To disable delegate search, clear the Enable delegate search checkbox. 	Selected-Users can perform delegate searches for the My Items, My Contributed Items, and All Items search types.
Enable web download of ONM Viewer	<p>The Dell EMC ONM Viewer is required to open Lotus Notes messages in search results. You can install it or allow users to download and install it. This setting controls the ability of users to download the ONM Viewer.</p> <p>Note: Due to an IBM issue, it is required that the version of the Notes client matches the server version. If not, the ONM Viewer application may fail to open messages in the Search results.</p>	<p>Perform one of the following steps:</p> <ul style="list-style-type: none"> • To allow users to download the ONM Viewer, select the Enable web download of ONM Viewer checkbox. Users are presented with the option to install the ONM Viewer the first time they try to view a Lotus Notes message. Users must have local administrator rights to install the viewer. • To prevent users from downloading the ONM Viewer, clear the Enable web download of ONM Viewer checkbox. Install the viewer according to the 	Selected-Users can download the ONM Viewer.

Table 15 Web Search properties-Client Settings (continued)

Field/option	Description	Valid range of values	Default value
		instructions in the <i>SourceOne Email Management Installation Guide</i> .	
Enable restore	<p>Controls whether archived email messages and file content can be restored using Search.</p> <ul style="list-style-type: none"> • Select the Enable restore option to allow restoring messages to mailboxes and restoring files in Search. This option is the default. For restoring messages, this option is the behavior that is seen in previous versions of Search. • Clear the Enable restore option to disallow restoring messages to mailboxes and restoring files. When this option is cleared, the restore capability is removed and disabled for all search types in Search: <ul style="list-style-type: none"> ▪ The Restore toolbar button is removed. ▪ The Restore context menu item on the search results grid is disabled. <p>This setting is recommended when using the Journal activity with Office 365 content.</p>	<ul style="list-style-type: none"> • Selected-Enables the Restore function in Search for messages and files. • Clear-Disables the Restore function in Search for messages and files. 	Selected
Enable default date range for Search	<p>An unbounded date search can adversely affect search performance. To improve search performance, you can specify a default date range. Users can override this default in search.</p>	<p>Perform one of the following steps:</p> <ul style="list-style-type: none"> • To enable a default date range, select the Enable default date range for Search checkbox, then specify the date range in the associated fields. 	Clear-A default date range is not specified.

Table 15 Web Search properties-Client Settings (continued)

Field/option	Description	Valid range of values	Default value
		<ul style="list-style-type: none"> To disable a default date range, clear the Enable default date range for Search checkbox. 	

- If you changed the Default authentication environment setting, apply the changes.

Changing the IIS Application Pool Idle Timeout

If you increase the value of the Application session timeout field in the Dell EMC SourceOne console (on the Application Configuration > Web Search > Client Settings tab), perform the following procedure for the installed version of Internet Information Services (IIS) Manager:

Procedure

- In the **Connections** pane, expand the **Servers** node and then select **Application Pools**.
- In the **Application Pools** pane, select the **Search** application pool.
- In the **Actions** pane, select **Advanced Settings**.
- In the **Advanced Settings** dialog box, increase the value of **Idle timeout** to a value that is greater than the value that you set for Application session timeout in SourceOne.
- You may need to restart the application pool.

Specifying a default date range for Search

In Dell EMC SourceOne Search, an unbounded date range can cause the search to run for a long time. To improve performance, you can use the Enable default date range for Search option to specify a default sliding date range.

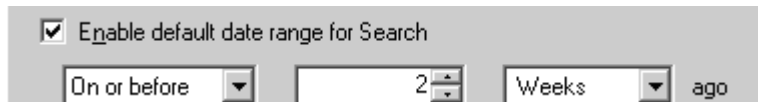
The sliding date range is based on today’s date and adjusted according to the amount of time that you specify. You can select from three date ranges:

- On or before (today’s date)
- On or after (today’s date)
- Between (two dates that are based on today’s date)

Excluding the last 2 weeks

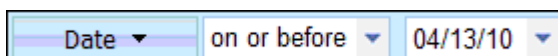
To exclude the last 2 weeks, specify On or before 2 weeks ago.

Figure 58 Example 1—On or before



In **Search**, the amount of time you specified (2 weeks) is subtracted from today’s date. If today’s date is 4/27/2010, users see the **Date** field pre-filled to on or before 04/13/10.

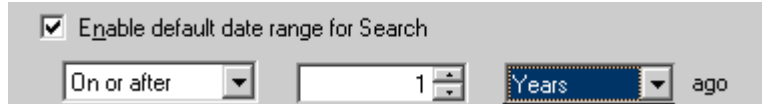
Figure 59 Example 1—Search—On or before



Limiting the search to the previous year (365 days)

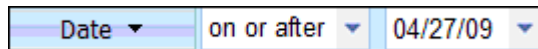
To limit search to the previous year (365 days), specify On or after 1 year ago.

Figure 60 Example 2—On or after



In **Search**, the amount of time you specified (one year) is subtracted from today's date. If today's date is 4/27/2010, users see the **Date** field pre-filled to on or after 04/27/09.

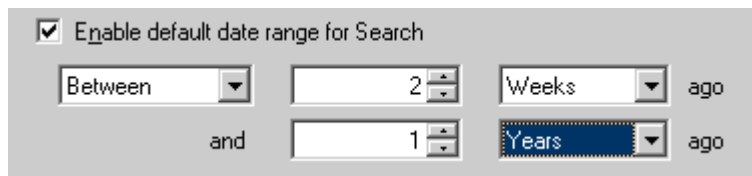
Figure 61 Example 1—Search—On or after



Limiting the search to the previous year

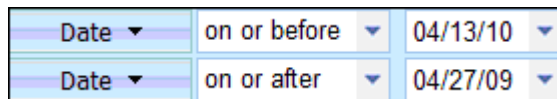
To limit search to the previous year, excluding the last 2 weeks, specify Between 2 weeks ago and 1 year ago.

Figure 62 Example 2—Between



In **Search**, two **Date** fields are displayed. If today's date is 4/27/2010, users see the first **Date** field pre-filled to on or before 04/13/10 and the second **Date** field pre-filled to on or after 4/27/09.

Figure 63 Example 1—Search—Between



Specifying a default date range

Perform the following steps to specify a default date range, in the Client Settings tab of the Web Search dialog box.

Procedure

1. Select the **Enable default date range for Search** checkbox.
2. In the **first** field, select one of the following options:
 - On or before
 - On or after
 - Between
3. Use the **second** and **third** fields to specify the date boundary.

If you selected the **Between** option in the previous step, the second and third fields define one of the date boundaries:

- a. In the **second** field, specify the amount of time.
- b. In the **third** field, select the unit of time:
 - Days
 - Weeks
 - Months
 - Years
4. If you selected the **Between** option in step 2, use the **fourth** and **fifth** fields to specify the other date boundary.
5. In the **Web Search** dialog box, click **OK** to save the changes.

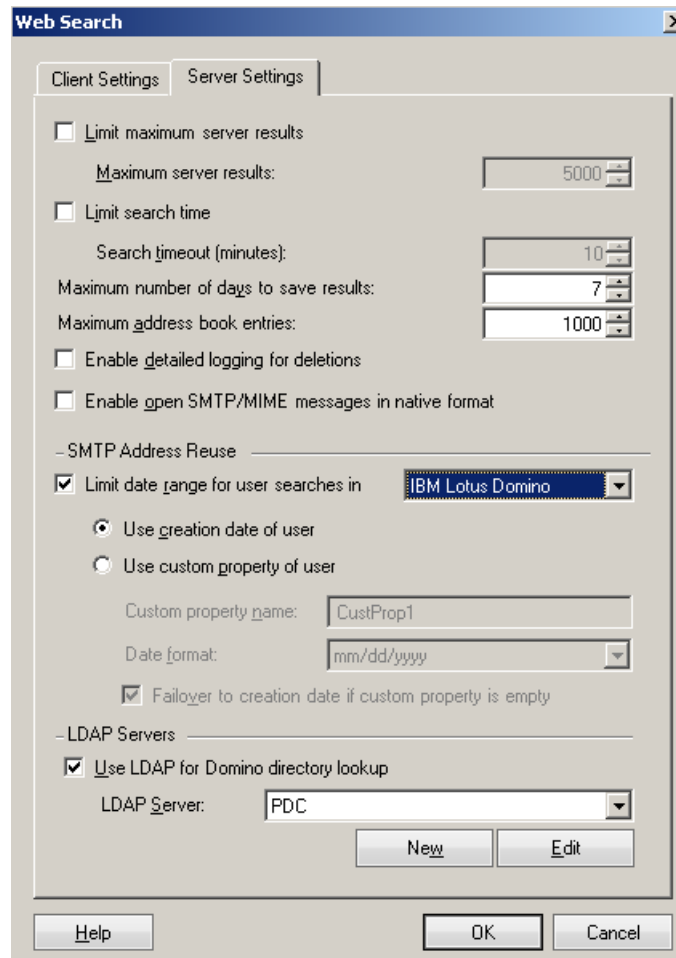
Editing settings for SourceOne Web Search server

Perform the following steps to configure settings for the Web Search server.

Procedure

1. In the SourceOne console, expand the **Application Configuration** node.
2. Double-click the **Web Search** node. The **Web Search** dialog box appears.
3. Click the **Server Settings** tab.

Figure 64 Web Search properties—Server Settings



4. Edit the settings, as described in the following table

Table 16 Web Search properties-Server Settings

Field	Description	Valid range of values	Default value
Limit maximum server results: Maximum server results	Perform one of the following: <ul style="list-style-type: none"> To allow unlimited server results, clear the Limit maximum server results checkbox. To specify the maximum number of server results, select the Limit maximum server results checkbox, then specify the maximum number of items in the Maximum server results field. 	100–100000 (items)	Clear-Limit maximum server results is clear. Selected-The Maximum server results default is 5000 (items).
Limit search time: Search timeout (minutes)	Perform one of the following: <ul style="list-style-type: none"> To allow unlimited time for a search, clear the Limit search time checkbox. To specify a search timeout, select the Limit search time checkbox, then specify the timeout in the Search timeout field. 	10–3600 (minutes)	Clear-Limit search time is clear. Selected-The Search timeout default is 10 (minutes).
Maximum number of days to save results	Specify the maximum number of days to save search results. Search results are automatically saved, along with search criteria, whenever a user logs off. These results are restored when the user logs in again.	1–30 (days)	7 (days)
Maximum address book entries	Specify the maximum number of address book entries to display in the result list. This option is only in effect when Microsoft Exchange is selected as a supported environment or when IBM Domino is selected as a supported environment and the Use LDAP for Domino address lookup option is selected. You specify the supported	50-10,000 (entries)	1000 (entries)

Table 16 Web Search properties-Server Settings (continued)

Field	Description	Valid range of values	Default value
	<p>environment on the Global Settings tab of the Application Configuration node. This option has no effect when IBM Domino is selected as a supported environment and the Use LDAP for Domino address lookup option is not selected.</p> <p>Note: Setting this value to a larger value than the default may affect the time that it takes for Search to return the results.</p>		
<p>Enable detailed logging for deletions</p>	<p>To enable or disable detailed logging for delete operations that are performed through Search, perform one of the following:</p> <ul style="list-style-type: none"> To enable detailed logging, select the Enable detailed logging for deletions checkbox To disable detailed logging, clear the Enable detailed logging for deletions checkbox <p>The change affects new Delete jobs for SourceOne SourceOne Search, not Delete jobs that are already running.</p>	<ul style="list-style-type: none"> Selected-Enabled. Clear-Disabled. 	<p>Clear-Disabled.</p>
<p>Enable open SMTP/MIME messages in native format</p>	<p>Controls how Search users open SMTP email content.</p> <ul style="list-style-type: none"> To have SMTP messages not opened in their native format, do not select the Enable open SMTP/MIME messages in native format option. This setting is the default. In this case, when a Search user logs in using their Microsoft Windows or IBM Domino 	<ul style="list-style-type: none"> Selected-Enabled. Clear-Disabled. 	<p>Clear-Disabled.</p>

Table 16 Web Search properties-Server Settings (continued)

Field	Description	Valid range of values	Default value
	<p>credentials and double-clicks an .eml message, the .eml message is converted to the user's logged in environment message type (.msg or .onm), before it is delivered to the user for download.</p> <ul style="list-style-type: none"> To allow SMTP MIME messages to be opened in their native mail format by Search, select the Enable open SMTP/MIME messages in native format option. If all user clients can be configured, setting this option may provide a better user experience than having the messages converted. When this setting is enabled, SMTP messages are not converted before they are returned to the user. The native .eml message is downloaded when a user double-clicks the .eml message. <p>Enabling this option only affects SMTP message types. If the user logs in with Windows credentials and double-clicks an IBM Domino message, IBM Domino messages are still converted to a Microsoft Exchange .msg.</p> <p>Likewise, if the user logs in using IBM Domino credentials and double-clicks a Microsoft Exchange message, that message would be converted to an IBM Domino .onm message.</p> <p>Search cannot determine if the user's computer</p>		

Table 16 Web Search properties-Server Settings (continued)

Field	Description	Valid range of values	Default value
	<p>can open the .eml file that is delivered to the user's Web browser correctly. Because it cannot do this determination, the user must have configured an application to open files with the .eml file type. Both Outlook Express and Outlook can be configured to open .eml files.</p>		
SMTP Address Reuse	<p>Refer to Configuring SMTP address reuse.</p>		Clear-Disabled.
Use LDAP for IBM Domino address lookup LDAP Server	<p>This option appears only if IBM Domino is selected as a supported environment on the Global Settings tab of the Application Configuration node. If Use LDAP for Domino address lookup is not selected, IBM Domino address lookup is performed using the native IBM Domino directory capabilities. If Use LDAP for Domino address lookup is selected, it allows the IBM Domino user to use LDAP queries for more address book searching capabilities and more details in the address book result list. Specify which LDAP server to use in the LDAP Server field. When Use LDAP for Domino address lookup is selected, you specify the source of the address picker that is used in Search, by performing one of the following tasks:</p> <ul style="list-style-type: none"> • Select a defined LDAP server from the LDAP Server field list. This list also displays any LDAP servers that were configured during the 	None.	Blank

Table 16 Web Search properties-Server Settings (continued)

Field	Description	Valid range of values	Default value
	<p>creation of an activity in the New Activity wizard.</p> <ul style="list-style-type: none"> Click New to open the LDAP Configuration dialog box and define a new LDAP server. LDAP servers that you create here are also displayed in the New Activity wizard. Refer to Specifying a new LDAP server in Microsoft Exchange. Click Edit to modify an LDAP server entry using the LDAP Configuration dialog box. Refer to Specifying a new LDAP server in Microsoft Exchange for information about the values you can modify. <p>Note: After you change the Use LDAP for Domino address lookup setting, restart the Worker services. If you have installed SourceOne Discovery Manager, restart the SourceOne Discovery Manager client computers.</p>		

Configuring SMTP address reuse

SMTP address reuse is explained in the following sections.

Overview of configuring SMTP address reuse.

If you reassign previously used SMTP addresses to new users, then configure Dell EMC SourceOne for SMTP address reuse.

- If you do not configure SMTP address reuse in Dell EMC SourceOne and reassign it to a new user, the user sees all mail sent to the SMTP address before the address was assigned to them.
- If you configure SMTP address reuse in Dell EMC SourceOne, the date ranges of My Items and My Contributed Items searches are restricted to the user's hire date. It will only return search results on or after the date. This restriction prevents the user from seeing items that were archived before their designated hire date. Administrator, All Items, and My Files searches are not affected. Also, performance is improved because fewer indexes are searched.

Use one of the following properties in the user directory (Active Directory or IBM Domino directory) as the hire date of the user:

- Creation date of user record:
 - For Active Directory/Microsoft Exchange: the **When Created** attribute of the user object in Active Directory.
 - For IBM Domino: the @Create attribute in the person record.
- A custom property.

Considerations and limitations of SMTP address reuse

It can take up to 20 minutes for Active Directory changes to take effect in the Search Web Service. To force the change to take effect immediately, you can manually restart IIS to even the Search Web Service's cache.

It can take up to ten minutes for changes to the SMTP address reuse settings in the Dell EMC SourceOne console to take effect in the Search Web Service. To force the change to take effect immediately, you can manually restart IIS to even the Search Web Service's cache.

Prerequisites for SMTP address reuse

If you plan on using a custom property as the hire date of the user, create it in the user directory before you configure SMTP address reuse in Dell EMC SourceOne.

- For Microsoft Exchange, you can repurpose an existing, unused Active Directory extension attribute or you can add a custom attribute. Refer to Microsoft documentation.
- For IBM Domino, edit the IBM Domino person template to add a custom field. Refer to IBM Domino documentation.

Note the following considerations and limitations for the custom property:

- The custom property can be a String or Date data type.
- For a String custom property, valid date formats are:
 - yyyy/mm/dd
 - dd/mm/yyyy
 - mm/dd/yyyy (Also supports values in the format m/d/yyyy)

Include all four digits of the year.

Examples of valid date formats:

07/02/2011

7/2/2011

Invalid date formats include:

m/d/yy

mm/dd/yy

Examples of invalid date formats:

07/02/11

7/2/11

- The hire date attribute for each user is interpreted as GMT/UTC time. With the native String type, you can specify only the start day. With native Date types, you can specify the exact start time:

- A custom property of String type provides a hire date with granularity up to the day, but it cannot provide a start time within that day. The day that is specified is interpreted as being in GMT time zone, starting at 12:00AM that day. For example, if the hire date is specified as 12/20/10, then all items on or after 12/20/10 at 12:00AM GMT is returned.
- To specify an exact start time, use a native UTC/GMT Date type. It also reduces the possibility of error when you set the date values for all users.

Procedure for configuring SMTP address reuse

Perform the following procedure to enable SMTP address reuse.

Procedure


1. In the Dell EMC SourceOne console, browse to the **Application Configuration > Web Search > Server Settings** tab.
2. The list box lists the mail environments that you specified in the **Supported Environments** option on the **Global Settings** dialog box.

If you have a mixed mail environment, select one mail system in the list box to configure first:

- Microsoft Exchange
- IBM Domino

If you have only one mail system, then it is already selected in the list box.


3. Select the **Limit date** range for user searches in checkbox.
4. Perform one of the following steps:
 - To use the date on which the user record was created:
 - a. Select the **Use creation date of user** option.
 - b. Click **OK**.
 - To use a custom property that you defined previously in the user directory:
 - a. Select the **Use custom property of user** option.
 - b. In the **Custom property name** field, type the name of the property that you created previously in the user directory.

 **Note:** The name that you type in this field must be the same as the name of the custom property in the user directory.
 - c. Perform one of the following steps:
 - If the custom property that you defined is a String data type, then select the format of the date in the **Date format** field:

yyyy/mm/dd

dd/mm/yyyy

mm/dd/yyyy

 **Note:** The format that you select must match the format of the value that you specified for the custom property.
 - If the custom property that you defined is a native Date data type, then ignore the **Date format** field.
 - d. To failover to the creation date of the user record, select the **Failover to creation date if custom property is empty** checkbox. Do this selection in case the custom property does not exist or it has no value or the date format is not valid.

- i **Note:** The custom property and creation date of the user are ignored when:
 - The Failover option is not selected
 - The custom property does not exist, has no value, or the date format is not valid

5. If you have a mixed mail environment, perform the following steps for the other mail system.

- i **Note:** Specify settings for each mail platform. Settings are not shared among mail platforms.

- a. Select the **Limit date range for user searches in** checkbox.
- b. To use the date on which the user record was created:
 - a. Select the **Use creation date of user** option.
 - b. Click **OK**.
- c. To use a custom property that you defined previously in the user directory:
 - a. Select the **Use custom property of user** option.
 - b. In the **Custom property name** field, type the name of the property that you created previously in the user directory.

- i **Note:** The name that you type in this field must be the same as the name of the custom property in the user directory.

- c. Perform one of the following steps:
 - If the custom property that you defined is a String data type, then select the format of the date in the **Date format** field:
 - yyyy/mm/dd
 - dd/mm/yyyy
 - mm/dd/yyyy
 - i **Note:** The format that you select must match the format of the value that you specified for the custom property.
 - If the custom property that you defined is a native Date data type, then ignore the **Date format** field.

- d. To failover to the creation date of the user record in case the custom property does not exist or it has no value or the date format is not valid, select the **Failover to creation date if custom property is empty** checkbox.

- i **Note:** If you do not select the **Failover** option, and the custom property does not exist, has no value, or the date format is not valid, the custom property and creation date of the user are ignored. All items for the user could be returned in Search.

6. Click **OK**.

Index Validation

Use the index validation feature to monitor the state of index sets and to identify and resolve issues that might lead to inaccurate search results.

With this feature, schedule an index scan or perform manual index scans. The sections that follow provide detailed instructions.

Consider the following when validating indexes within an In Place Migration (IPM) archive:

- You can scan rebuilt SourceOne indexes that reside in IPM folders.

- If an IPM archive contains a mix of formatted indexes, only SourceOne indexes are validated.
- Indexes other than SourceOne indexes are only checked to confirm that they exist on the file system.

Configuring index validation

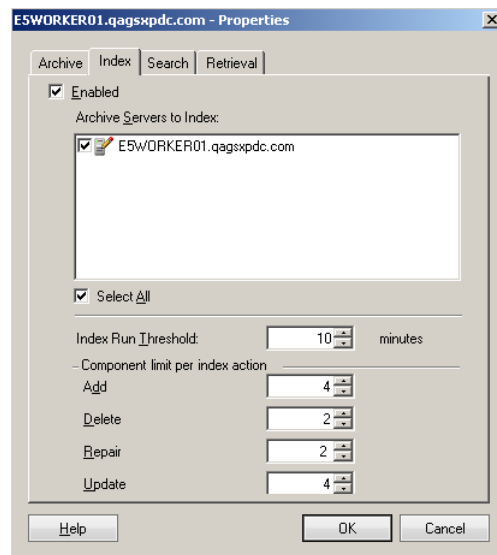
Perform the following steps to configure index validation.

Procedure

1. Ensure that at least one Native Archive server in each Native or IPM Archive Folder is configured with the index role.

Enable the index role by selecting the **Enabled** checkbox in the **Index** tab of the **Native Archive Server Properties** page.

Figure 65 Index role properties of a Native Archive Server



2. In the SourceOne console, expand the **Application Configuration** node.
3. Double-click the **Index Validation Settings** node. The **Index Validation** dialog box appears.
4. Ensure that the **Enable Index Validation** checkbox is selected.

When the **Enable Index Validation** checkbox is selected, every Native Archive server with a configured index role can validate indexes. Several index scanners that are run on those Native Archive servers.

5. Select a value for the **Scan Mode** field. The scan mode defines the level at which indexes are validated. Scan mode 1 performs the least amount of checks and scan mode 4 performs the most in depth validation. The default value for the **Scan Mode** is 2.

Note: The scan intensity is cumulative. Scan mode 2 includes checks specific to that mode plus checks from scan mode 1. Scan mode 4 contains checks from all previous modes.

The scan includes several modes:

Scan Mode 1

- For ISYS indexes:
 - Checks if the following files are present: `CORRUPT.IDX`, `MISSINGMSG.IDX`, and `CONTENTCACHEINCOMPLETE.IDX`. If these files are present, then the index is not valid.

- Checks for the availability of ISYS index sets.
- Checks for the availability of ISYS files.
- For Elasticsearch indexes:
 - Checks if the following files are present: `CORRUPT.IDX`, `MISSINGMSG.IDX`, and `CONTENTCACHEINCOMPLETE.IDX`. If these files are present, then the index is not valid.
 - Checks the status of the Elasticsearch index. For example, if the index does not exist, is closed, unavailable, or if the status of the index is red.
 - Checks if there are any unindexable documents. If some messages and documents are missing from the index, the index is not valid.

Scan Mode 2

- For ISYS indexes:
 - Checks for all ids in the content cache.
 - Checks for all ids in the ancillary database.
 - Checks that all messages in SQL are indexed.
- For Elasticsearch indexes:
 - Checks that all messages in SQL are indexed.

Scan Mode 3

- Checks for any missing business folders, BCCs, or missing owners.

Scan Mode 4

- Checks all the recipients (to/cc/bcc/unknown) for every message.

6. Optional, select the **Fix Mode** checkbox.

Note: If the Content Cache attribute is enabled and the **Fix Mode** checkbox is selected, the SourceOne software schedules an index rebuild scan of any indexes that are marked as problematic.

7. For the **Enable automatic fix when the number of problematic indexes less than or equal to** field, select a value that represents the maximum number of indexes that is scheduled to be rebuilt.

Note: An automatic fix is performed only when the number of problematic indexes are less than the specified threshold value.

8. Optional, mark the **Enable schedule scan** checkbox to schedule index scans.
9. Click **OK**.

The following figure illustrates the **Index Validation property** page.

Scheduling an index scan

Schedule an automatic index scan for all the Dell EMC SourceOne indexes.

Indexes that meet the following criteria can be scanned:

- Completed indexes that are not awaiting the addition of any new data.
- Indexes that have been idle for more than 24-hours.
- Indexes which have been updated since the last index scan.

Indexes in an In Place Migration (IPM) archive are only checked for availability. Consistency checks cannot be run for indexes in an IPM archive.

Configuring index validation

Perform the following steps to configure index validation.

Procedure

1. Ensure that at least one Native Archive server in each Native or IPM Archive Folder is configured with the index role.

You can enable the index role by selecting the **Enabled** checkbox in the **Index** tab of the **Native Archive Server Properties** page.
2. In the Dell EMC SourceOne console, expand the **Application Configuration** node.
3. Double-click the **Index Validation Setting** node. The **Index Validation** dialog box appears.
4. Mark the **Enable schedule scan** checkbox.
5. In the **Days of the week to perform index validation** section, mark the required days.
6. In the **Start time** section, select a start time to trigger the scheduled scan.
7. Click **OK**.

Manually performing an index scan

This section includes information about manually performing an index scan.

Indexes that meet the following criteria can be scanned:

- Completed indexes that are not awaiting the addition of any new data can be scanned.
- Indexes which have been updated since the last index scan.

Manually scanning an index for a month folder or a special index set

Perform the following procedure to scan an index for a month folder or a special index set manually.

Procedure

1. Ensure that at least one Native Archive server in each Native or IPM Archive Folder is configured with the index role.

You can enable the index role by selecting the **Enabled** checkbox in the **Index** tab of the **Native Archive Server Properties** page.
2. Ensure that Index validation has been configured.

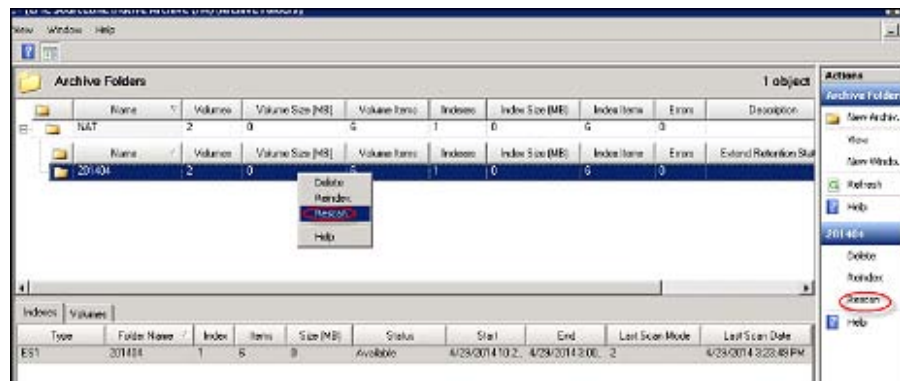
For example:
 - a. In the SourceOne console, expand the **Application Configuration** node.
 - b. Double-click the **Index Validation Settings** node. The **Index Validation** dialog box appears.
 - c. Ensure that the **Enable Index Validation** checkbox is selected.
3. In the SourceOne console:
 - a. Expand the **Native Archive Folder** node in the left pane.
 - b. Double-click **Archive Folders**.
4. To scan all indexes in a specific month folder:

- a. Select the item that you want to submit an index scan for manually. In the right pane, the name of the selected item appears.
- b. Rescan the index:

- In the right pane, select **Rescan**.
- Right-mouse click and then select **Rescan**.

The following figure illustrates an index scan that is performed on a month folder.

Figure 66 Index scan performed for a month folder



5. To scan a specific index:
 - a. Select the item that you want to submit an index scan for manually. In the right pane, the name of the selected item appears.
 - b. In the lower pane, select the **Indexes** tab. The list of indexes appears.
 - c. Select the index that you want to scan.
 - d. Scan the index:
 - In the right pane, select **Rescan**.
 - Right-mouse click and then select **Rescan**.

Reviewing the status of an index scan

Complete the following procedure using the console to review the status of every scanned index.

Procedure

1. In the Dell EMC SourceOne console, expand the **Native Archive Folder** node in the left pane.
2. Double-click **Archive Folders**.
3. Select the item that contains the indexes that you want to review. In the right pane, the name of the selected item appears.
4. In the lower pane, select the **Indexes** tab. The list of indexes appears.
5. In the bottom pane, the indexes for the selected folder display.
6. Review the Status column:
 - Available—Indicates the default status.
 - Inconsistent—Indicates that the index is incomplete. The scan mode is 1.
 - Missing items—Indicates that an index has missing messages. The scan mode is 1 and 2.

- Inconsistent content cache—Indicates that an index has a corrupt content cache. The scan mode is 1 and 2.
 - Inconsistent ancillary DB—Indicates that an index has an inconsistent ancillary database. The scan mode is 2.
 - Index unavailable—Indicates that the index set is missing or cannot be accessed. The scan mode is 1.
 - Missing business folder—Indicates that the index is missing business folders. The scan mode is 3.
 - Missing file ACE—Indicates that the index is missing the ACE file. The scan mode is 4.
 - Missing BCC recipients—Indicates that the index is missing BCC recipients. The scan mode is 3.
 - Missing owners—Indicates that the index is missing owners. The scan mode is 3.
 - Missing recipients—Indicates that the index is missing recipients. The scan mode is 4.
7. Review the Last Scan Mode column. This column records the mode of the last scan.

Scan Mode 1

- For ISYS indexes:
 - Checks if the following files are present: `CORRUPT.IDX`, `MISSINGMSG.IDX`, and `CONTENTCACHEINCOMPLETE.IDX`. If these files are present, then the index is not valid.
 - Checks for the availability of ISYS index sets.
 - Checks for the availability of ISYS files.
- For Elasticsearch indexes:
 - Checks if the following files are present: `CORRUPT.IDX`, `MISSINGMSG.IDX`, and `CONTENTCACHEINCOMPLETE.IDX`. If these files are present, then the index is not valid.
 - Checks the status of the Elasticsearch index. For example, if the index does not exist, unavailable, or if the index is closed, if the status of the index is red..
 - Checks if there are any unindexable documents. If some messages and documents are missing from the index, the index is not valid.

Scan Mode 2

- For ISYS indexes:
 - Checks for all ids in the content cache.
 - Checks for all ids in the ancillary database.
 - Checks that all messages in SQL are indexed.
- For Elasticsearch indexes:
 - Checks that all messages in SQL are indexed.

Scan Mode 3

- Checks for any missing business folders, BCCs, or missing owners.

Scan Mode 4

- Checks all the recipients (to/cc/bcc/unknown) for every message.

8. Review the Last Scan Date column. This column lists the date of the last scan:

9. Rebuild indexes to correct any of the issues that are listed in the Status column.

CHAPTER 9

Managing Organizational Policies

This section describes how to manage organizational policies within Dell EMC SourceOne.

Topics include:

- [Introduction](#)..... 214
- [Creating Organizational Policies](#).....214
- [Editing organizational policies](#)..... 215
- [Pausing organizational policies](#).....215
- [Stopping organizational policies](#)..... 216
- [Deleting organizational policies](#)..... 216

Introduction

To understand how to manage organizational policies within Dell EMC SourceOne, first, know what a policy is, what an activity is, and how they relate.

- A policy is a logical grouping of archiving configurations that you define, based on your business practices.
For example:
 - For SourceOne Email Management, define a policy for journaling (real-time archiving), and another policy for storage management.
 - For Microsoft SharePoint archiving, define a separate policy.A policy contains one or more activities.
- In a policy, an activity defines the configuration for a specific combination of task type, activity extensions, and schedule.
For example:
 - For SourceOne Email Management, you could create a policy that is called **Archiving for Asia Pacific**, which might include two activities:
 - **Journaling for Asia Pacific**
 - **Historical Archive** (Japan)
 - For Microsoft SharePoint archiving, you could create a policy that is called **SharePoint Archiving**, which might include several activities, each of which archives content from a different Microsoft SharePoint site.

Creating Organizational Policies

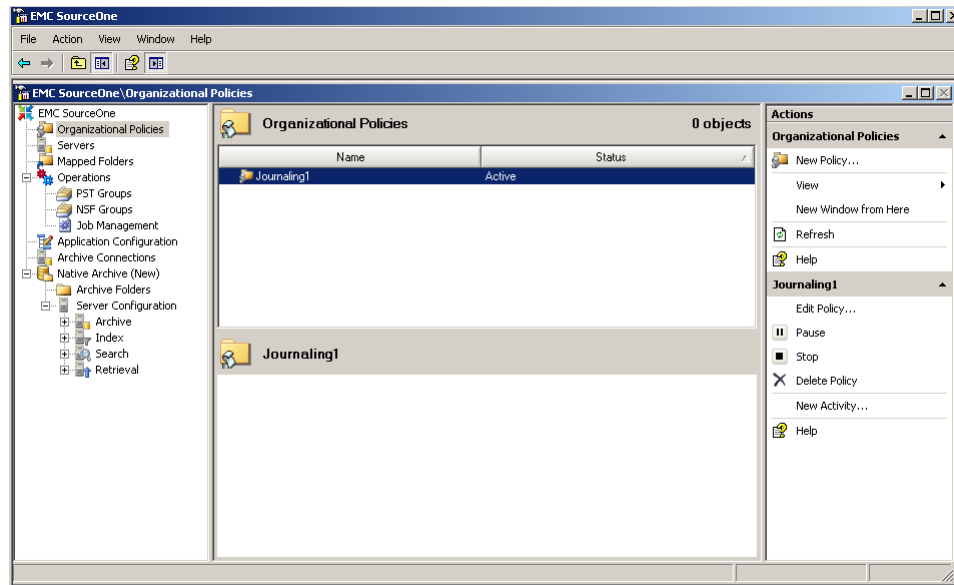
Perform the following steps to create an organizational policy.

Procedure

1. In the Dell EMC SourceOne console, select the **Organizational Policies** node.

The **Organizational Policies** area lists existing policies, if any. Expand the policy to see the activities it contains.

Figure 67 Organizational policies



2. Select **Action > New Policy**.
3. In the **New Policy** wizard:
 - a. In the **Name** field, type a name for the new policy.
You can reuse names of previously deleted policies.
 - b. In the **Description** field, type a description.
 - c. Click **Finish**.
4. Add activities to the policy. Which activities are available depends on what products are installed.

Editing organizational policies

Perform the following steps to change the description of an organizational policy.

Procedure

1. In the Dell EMC SourceOne console, select the **Organizational Policies** node.
2. In the **Organizational Policies** list, select the policy that you want to edit.
3. Select **Action > Edit Policy**.
4. In the **Edit Policy** wizard, edit the description.

Note: Do not rename a policy. Although the **Name** field is editable, problems can occur if you edit the name.

5. Click **Finish**.

Pausing organizational policies

Perform the following to pause an organizational policy and all its activities.

Procedure

1. In the Dell EMC SourceOne console, select the **Organizational Policies** node.

2. In the **Organizational Policies** list, select the policy that you want to suspend.
3. Select **Action > Pause**.

In the **Organizational Policies** area, the status of the policy, and all associated activities, change from **Active** to **Paused**.

Resuming a paused policy

Perform the following steps to resume a paused policy.

Procedure

1. Select the policy.
2. Select **Action > Resume**.

Stopping organizational policies

Perform the following steps to stop an organizational policy and all its activities.

Procedure

1. In the Dell EMC SourceOne console, select the **Organizational Policies** node.
2. In the **Organizational Policies** list, select the policy that you want to stop.
3. Select **Action > Stop**.

In the **Organizational Policies** area, the status of the policy, and all associated activities, change from **Active** to **User Terminated**.

Resuming a stopped policy

Perform the following steps to resume a stopped policy.

Procedure

1. Select the policy.
2. Select **Action > Resume**.

Deleting organizational policies

Perform the following steps to delete an organizational policy, and all its activities and rules.

Procedure

1. In the Dell EMC SourceOne console, select the **Organizational Policies** node.
2. In the **Organizational Policies** area, select the policy that you want to delete.
3. Select **Action > Delete Policy**.
4. At the following prompt, click **Yes**:

Are you sure you want to delete the selected policy?

CHAPTER 10

Managing Jobs

This section describes how to manage jobs within Dell EMC SourceOne.

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- [Viewing the list of jobs](#)..... 218
- [Refreshing a view](#)..... 220
- [Delay in start of Journaling jobs](#)..... 220
- [Adjusting a job list when the display limit is reached](#)..... 220
- [Specifying maximum number of jobs to display](#)..... 220
- [Viewing job details](#)..... 221
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About creating jobs

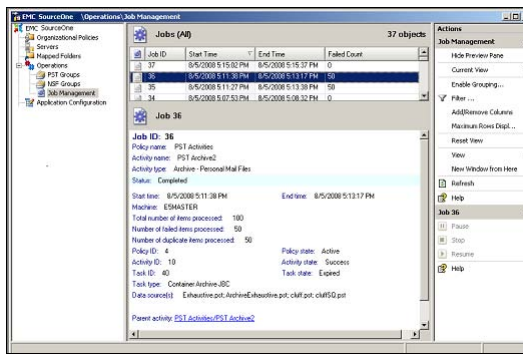
Do not create jobs directly. Jobs are generated automatically from tasks, according to the criteria you specify in policies and activities.

Viewing the list of jobs

To view a list of jobs, in the SourceOne console, expand the SourceOne > Operations > Job Management node.

The results pane lists information about jobs. The default view is the Active jobs view. The following example displays the All jobs view.

Figure 68 List of jobs



If Microsoft SharePoint Archiving is installed, then the Microsoft SharePoint Archive activity/job type appears in job information.

If SourceOne Discovery Manager is installed, then additional activities/job types are displayed in job information, with the following prefixes:

- DM_Search— SourceOne Discovery Manager search activity
- DM_Hold—Message hold activity
- DM_Export—Export items from a matter activity
- DM_Delete—Delete items activity

Job columns

The following list describes the columns that can be displayed for jobs.

Note: The current view determines the columns that appear.

- Icon—Indicates the status of the job.
- Activity ID—Number that uniquely identifies the activity in the database.
- Activity Name—Name of the activity that generated the job.
- Activity State—Status of the activity that generated the job (Active, Paused, or Suspended.).
- End Time—Date and time at which the job finished.
- Job ID—Number that uniquely identifies the job in the database.
- Job State—Status of the job, that corresponds to the icon displayed in the first column.







- Last Active—The date and time that the job was last active.
- Parent ID—The ID of the parent job. To help to distinguish each day’s run, group by Activity Name, then ParentID. This column groups all child jobs that are associated with a ParentID, including the parent job.
- Policy ID—Number that uniquely identifies the policy in the database.
- Policy Name—Name of the policy that contains the activity that generated the job.
- Policy State—Status of the policy (Active, Paused, or Suspended).
- Start Time—Date and time at which the job started.
- Task ID—Number that uniquely identifies the task in the database.
- Task State—Status of the task that is associated with the job.
- Task Type—Name of the task type, such as Journaling, Mailbox Management, or Microsoft SharePoint Archive. Dell EMC SourceOne Search also generates jobs, which the task types Query and Restore identified.
- Worker Name—Name of the Worker computer that claimed the job.

Job status icons

The icon in the first column in the jobs list indicates the state of the job. Some icons may indicate more than one state. For example, the failed, stopped, or incomplete icon indicates any of the terminated states. To display more specific states, add the **Status** column.

For details about job states, refer to the following table:

Table 17 Status Icon

Status Icon	Description
	Active-Normal, running job.
	Finished-Normal, completed job.
	Failed, stopped, or incomplete.
	Needs attention-Job that a Worker has not picked up, and processing is falling behind.
	Suspended-Normal, but paused. The job can be resumed.
	Status unknown.

Refreshing a view

To update the list of jobs and view the latest changes, select **Action > Refresh**, or press F5. The list may take a few moments to refresh.

Delay in start of Journaling jobs

Journaling jobs may take several minutes to start.

Data sources and journaling mailboxes are resolved and synchronized daily. Five minutes are added to the start time:

- To prevent the scheduled start time from occurring before an activity is saved to the database.
- To allow time for the parent job to be created.

It takes a few minutes to resolve the journaling mailboxes. Finally, the child jobs are created.

Adjusting a job list when the display limit is reached

By default, up to 1,000 jobs are displayed. If the number of jobs exceeds the maximum display limit for the view, the following message and links appears at the top of the job list.

Your search has returned more rows than can be displayed. Apply a filter or adjust the maximum number of rows to limit the number of rows.

- To change the number of jobs that are displayed, click the **maximum number of rows** link, and refer to [Specifying maximum number of jobs to display](#).
- To filter the job list, click the **filter** link, and refer to [Filtering jobs in a view](#).

Specifying maximum number of jobs to display

By default, up to 1,000 jobs are displayed.

About this task

Perform the following procedure to change the maximum number of jobs that are displayed in the job list.

Procedure

1. In the SourceOne console, expand the **Dell EMC SourceOne > Operations > Job Management** node.
2. Select **Action > Maximum Rows Displayed**. The **Maximum Rows Displayed** dialog box appears.
3. In the **Maximum Rows to Display** field, type the maximum number of jobs to display, in the range 1 to 99,999.
4. Click **OK**.

Viewing job details

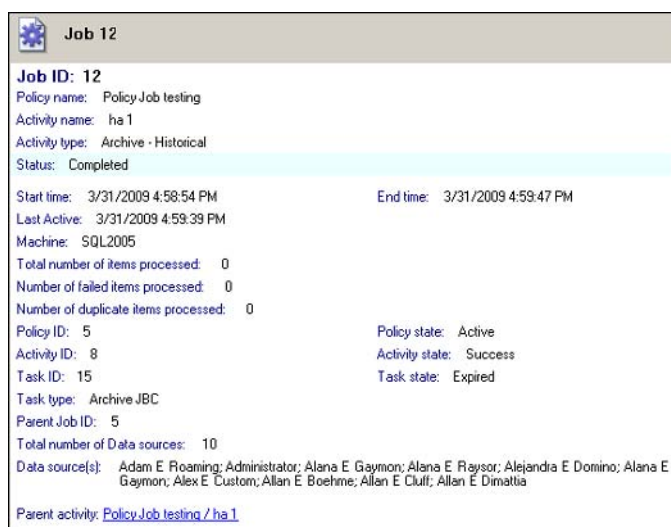
To view details about a job, complete the following procedure.

Procedure

1. In the SourceOne Console, expand the **Dell EMC SourceOne > Operations > Job Management** node.
2. If the preview pane is not visible below the jobs list, select **Action > Show Preview Pane**.
3. Select the job in the job list.

Details about the job appear in the preview pane below the list of jobs.

Figure 69 Example-Job details in the preview pane



Using the information in the preview pane, you can:

- Go to the policy and activity that generated the job by clicking the link next to the Parent activity label in the **preview** pane.
- Review other information about the job including the data sources that are associated with the job.

By design, messages that fail during journaling because they are corrupt are not processed. The detailed log contains entries for the corrupt messages. Corrupt messages are not added to the Number of failed items processed shown in the job details for the activity.

Determining number of data sources associated with a job

Review the Total number of Data sources value on the job detail page to determine the number of data sources (typically mailboxes) associated with a particular job. The information that is displayed by the Total number of Data sources field differs depending on whether the job is a parent job or a child job. Child jobs are jobs that are created to perform the work of a parent job.

- For parent jobs—The value in the **Total number of Data sources** field is the total number of data sources that are associated with all the child jobs of the selected parent job. The value in the **Data sources** field is empty. To see all data sources that are associated with the parent job, review the **Data sources** field for all the child jobs of the selected parent job.
- For child jobs—The value in the **Total number of Data sources** field is the number of data sources that are associated with the selected child job.

The **Data sources** field lists all the data sources that are associated with the selected child job.

Understanding Processed Count, Failed Count, and Duplicate Count column values

In the Job Management node, you can view details regarding the number of items that a job processes.

- **Processed Count**—Indicates the count of items that the job processes.
- **Failed Count**—Indicates the count of items that the job failed to process.
- **Duplicate Count**—During job processing, when a duplicate item exists in the database, then the duplicate count increases by one.

If a job's **Task Type** is **Query** or **Query SourceOne Discovery Manager**, then the **Processed Count**, **Failed Count**, and **Duplicate Count** columns do not update until the job completes. While the job is running, the values that appear in these columns are always zero.

Understanding items processed totals

In the Job Management node, you can view details regarding the number of items that a job processes.

- **Total number of items processed**—Indicates the total number of items that the job processes.
- **Number of failed items processed**—Indicates the total number of items that the job failed to process.
- **Number of duplicate items processed**—During job processing, when a duplicate item exists in the database, then the duplicate count increases by one. For example, consider a situation where there are three items that are named A, B, and C. If a job archives items A and B, then the details that appear in the **Job Management** node for the job are as follows:

- Total number of items processed: 2
- Number of failed items processed: 0
- Number of duplicate items processed: 0

If a subsequent job archives items A, B and C into the same archive folder, then the details that appear in the Job Management node for the job are as follows:

- Total number of items processed: 3
- Number of failed items processed: 0
- Number of duplicate items processed: 2

If a job's **Task Type** is **Query** or **Query SourceOne Discovery Manager**, then the **Total number of items processed**, **Number of failed items processed**, and **Number of duplicate items processed** totals are not updated until the job completes. While the job is running, the values that appear in these fields are always 0.

Using a different job view

The default view is the active jobs view.

About this task

Perform the following steps to use a different view.

Procedure

1. In the SourceOne Console, expand the **Dell EMC SourceOne > Operations > Job Management** node.
2. Select **Action > Current View**.
3. Select a view.

Refer to the following table for a description of each view.

Table 18 Available job views

View	Columns	Sort order	Default filter
Active Jobs	<ul style="list-style-type: none"> • Icon • Job ID • Start Time • Activity Name • Policy Name 	Start time	Filters out all non-active job states
All Jobs	<ul style="list-style-type: none"> • Icon • Job ID • Start Time • End Time 	Start time	No filter
All Jobs by Worker	Group by Worker Name, then: <ul style="list-style-type: none"> • Icon • Job ID • Start Time • Activity State • Policy State 	Worker, then Start time	No filter
Failed Jobs	<ul style="list-style-type: none"> • Icon • Job ID • Worker Name • Job State 	Start time (not in view)	Status does not contain Success

Customizing a job view

To customize the current view, refer to the following sections.

About view persistence

The changes that you make to a view persists across sessions.

The following properties of each customized view are saved automatically to the Registry:

- Columns and column order
- Group-by column

- Filter settings

Persistence is maintained per user, per view. Multiple users can customize the same view. Users see only their own customized views. Users cannot see each other’s customized views. View persistence is machine-specific and does not roam.

Adding or removing columns in a view

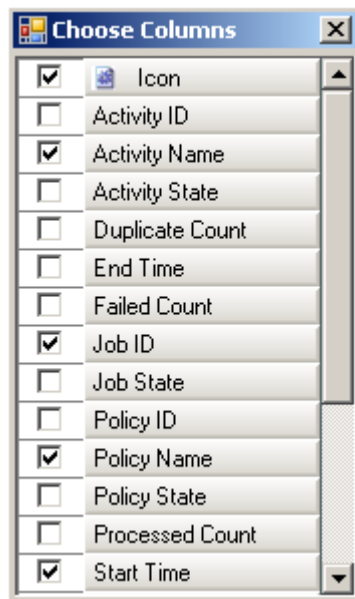
Perform the following steps to add or remove columns in a view.

Procedure

1. In the SourceOne console, expand the **Dell EMC SourceOne > Operations > Job Management** node.
2. Select **Action > Current View**.
3. Select the view in which you want to add or remove columns.
4. Select **Action > View > Add/Remove Columns**.

The **Choose Columns** dialog box appears.

Figure 70 Choose Columns dialog box



5. To add a column, select the checkbox next to that column.
6. To remove a column, clear the checkbox next to that column.

Note: Non-indexed columns are not in the default views. You can add non-indexed columns to views. However, sorting or grouping on a non-indexed column causes the view to render more slowly.

Changing the order of columns in a view

Perform the following steps to change the order of columns in a view.

Procedure

1. In the SourceOne console, expand the **Dell EMC SourceOne > Operations > Job Management** node.
2. Select **Action > Current View**.

3. Select the view that you want to customize.
4. Drag the column header to the left or right to a new location. Red arrows indicate where to drop the column header.

Changing sort order in a column

The direction of the triangle in a column header indicates the direction of sort for that column.

About this task

- Up—Rising (alphabetical)
- Down—Descending

Perform the following procedure to toggle between rising and descending sort order in a column.

Procedure

1. In the Dell EMC SourceOne console, expand the **Dell EMC SourceOne > Operations > Job Management** node.
2. Select **Action > Current View**.
3. Select the view that you want to customize.
4. Click the header of the column you want to toggle.

Grouping jobs by column

Organize the display of jobs that are based on a specific column.

About this task

Perform the following steps to group jobs by column.

Procedure

1. In the SourceOne console, expand the **Dell EMC SourceOne > Operations > Job Management** node.
2. Select **Action > Current View**.
3. Select the view that you want to customize.
4. Select **Action > Enable Grouping**.
5. Drag-and-drop the column to the indicated area above the jobs list.

The following prompt appears:

Drag a column header here to group by that column.

The jobs are now grouped under expandable rows, similar to a tree pane.

Figure 71 Group by column (task type)

Jobs 816 objects						
Task Type /						
Job ID	Start	Job State	Procs	Failed	Activity	Policy
+ Task Type : Journaling JBC (805 items)						
- Task Type : Query (8 items)						
1310	12/28/2007 01:43:57	Completed	100	0	search_restore_...	
1257	12/28/2007 12:45:20	Completed	11	0	search_restore_...	
1253	12/28/2007 12:42:15	Completed	100	0	search_restore_...	
1250	12/28/2007 12:40:11	Completed	0	0	search_restore_...	
1249	12/28/2007 12:39:36	Completed	0	0	search_restore_...	
1248	12/28/2007 12:38:55	Completed	0	0	search_restore_...	
1246	12/28/2007 12:37:45	Completed	8	0	search_restore_...	
1225	12/28/2007 12:21:20	Completed	100	0	search_restore_...	
- Task Type : Restore (3 items)						
1241	12/28/2007 12:33:54	Completed	4	4	search_restore_...	
1240	12/28/2007 12:32:59	Completed	4	4	search_restore_...	
1235	12/28/2007 12:30:56	Completed	4	0	search_restore_...	

To undo the group by column, select **Action > Disable Grouping**.

Filtering jobs in a view

To refine the information that is displayed in a view, you can create a filter. You can create one filter for each view.

About this task

In the **Actions** pane, the label (Applied) next to the **Filter** option indicates that a filter is already applied to a view.

Perform the following steps to filter the list of jobs in the current view.

Procedure

1. In the SourceOne console, expand the **Dell EMC SourceOne > Operations > Job Management** node.
2. Select **Action > Current View**.
3. Select the view that you want to filter.
4. Select **Action > Filter**.

The **Filter** dialog box appears.

Figure 72 Filter dialog box

Filter

Show items that match this filter criteria

Column	Condition	Value

Clear All Remove Edit...

- Add more criteria

Column: Condition: Value:

Activity ID Is Equal To 0

Add

Help OK Cancel

5. In the **Column** field, select the name of the column that you want to filter.
6. In the **Condition** field, select the condition to apply to the column's values. The conditions depend on the data type of the column you selected previously.
7. In the **Value** field, type or select a value for the column and the condition. Depending on the condition you selected previously, the **Value** field may not be available.
8. Click **Add**.
The new criterion appears in the list.
9. To add another criterion to the list, repeat step 5 through step 8.
The criteria displays an AND query.
Use the same column more than one time in a filter. For example, you would use the Start Time column twice to specify a date-time range.
10. To remove entries from the criteria list, perform one of the following:
 - Click **Clear All**.
 - Select the line in the list that you want to remove, then click **Remove**.
11. To edit a selected entry in the filter:
 - a. Select the entry in the criteria list.
 - b. Click **Edit**. The **Edit Filter Criteria** dialog box appears. Modify the filter entry and click **OK**.
12. Click **OK** to close the **Filter** dialog box.

Specifying conditions for string data

The following list describes the conditions available for columns that display string data:

- **Is exactly**—Includes all the string that you specify in the **Value** field
- **Is Empty**—Does not contain any data. The **Value** field is unavailable for this condition.

- Is Not Empty—Contains any data. The **Value** field is unavailable for this condition.

Specifying conditions for numeric data

The following list describes the conditions available for columns that display numeric data:

- Is Equal To—Includes only numeric data that exactly matches the number you specify in the **Value** field.
- Is Not Equal To—Includes only numeric data that does not match the number that you specify in the **Value** field.
- Is Less Than or Equal To—Includes only numeric data that is less than or equal to the number you specify in the **Value** field.
- Is Greater Than or Equal To—Includes only numeric data that is greater than or equal to the number you specify.

Specifying conditions for states


For state data, specify the following:

- Two conditions are available: Is Equal To and Is Not Equal To.
- Select a state in the **Value** field.

Specifying conditions for time data

Filter jobs by specifying a date or date range, and the time, using the conditions that are described in the following list:

- On or Before—Select this condition to specify a greater than or equals (\geq) date time.
For example, selecting this condition for the Start Time column filters jobs that were started on or before a certain date.
Select a date from the calendar and a time from the time picker. The **Value** field fills in automatically with the date and time you selected.
- On or After—Select this condition to specify a greater than or equals (\geq) date time.
For example, selecting this condition for the Start Time column will filter jobs that were started on or after a certain date.
Select a date from the calendar and a time from the time picker. The **Value** field fills in automatically with the date and time you selected.
- Is Empty—Select this condition to test that the column is blank. The **Value** field is unavailable for this condition.
- Is Not Empty—Select this condition to test that the column is not blank. The **Value** field is unavailable for this condition.

 **Note:** The default date and time is that of the local computer.

You can use combinations of datetime conditions in a filter.

To filter jobs that were created between two dates, use the same datetime column twice: one time with the On or after condition and one time with the On or before condition.

The following example filters jobs that started between May 5, 2007 and August 22, 2007:

```
Start Time
On or after
05/05/2007
Start Time
On or before
```

08/22/2007

Filtering on activity type example

To filter on activity type, use the Task Type column.

About this task

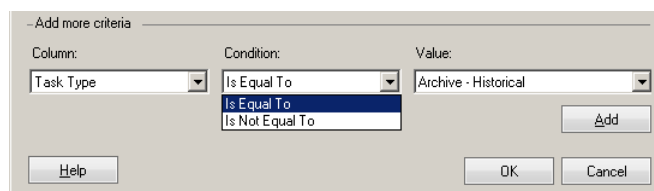
Filtering is useful when you want to view only one type of activity, or you want to exclude specific activity types. For example, you can exclude user searches and exports.

In the **Filter** dialog box, perform the following tasks.

Procedure

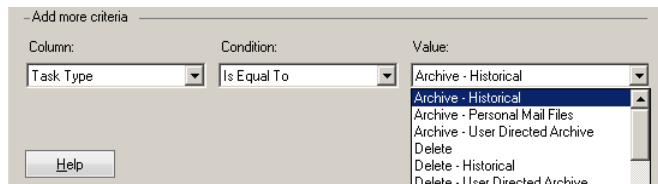
1. In the **Column** field, select **Task Type**.
2. In the **Condition** field, select a condition:
 - To display only a one task type, select the **Is Equal To** condition.
 - To exclude a task type, select the **Is Not Equal To** condition.

Figure 73 Filter on Task Type—Conditions



3. In the **Value** field, select the task type.

Figure 74 Filter on Task Type—Value



4. Click **Add**.
5. To add another criterion to the list, repeat this procedure.

For example, to filter out all user Search jobs:

- Column = Task Type
- Condition = Is Not Equal
- Value = Query

Job states

The following list describes the job states available for the Status column.

Note: When a child job is in any state other than successful completion (except Taken, Available, Active, Suspended, or Waiting for Resource), the parent job is marked as failed.

- **Active**—A Worker is processing the job.
- **Available**—Job was generated and is available for a Worker to pick it up and begin processing it.

- **Completed**—The job has finished. This state does not imply success or failure.
- **Dispatcher Terminated**—The job was instructed to terminate itself by Job Dispatcher but was unable to, so Job Dispatcher forcibly terminated the job.
- **Expired**—The job was never dispatched because the Job Dispatcher became aware of the job after the job’s end time had passed.
- **Failed**—The job never ran or failed to run.
- **Incomplete**—The job did not complete within the time allotted for it to run.
- **Self Terminated**—The job was instructed to terminate itself by Job Dispatcher and did so successfully.
- **Suspended**—An administrator paused the job. It can be resumed.
- **Taken**—A Worker picked up the job, and the Worker is preparing to start it. The activity component has not started working yet.
- **Unknown**—The job is in an undefined state.
- **User Terminated**—An administrator stopped the job using the Dell EMC SourceOne console.
- **Waiting for Resource**—The job is waiting for a Worker to become available.

Managing custom views

The following section describes how to manage a custom view.

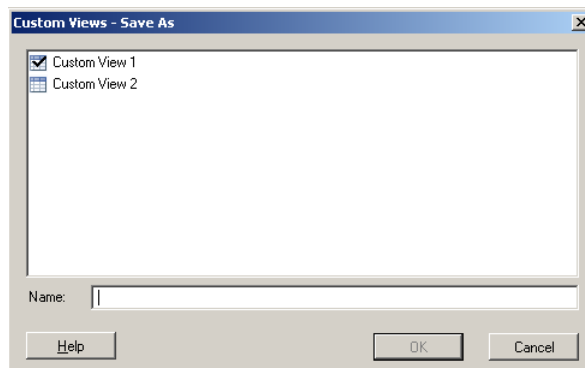
Saving a custom view

Perform the following steps to save the changes you made to the current view.

Procedure

1. Select **Action > Current View > Save As**.
2. In the **Custom Views-Save As** dialog box.
 - a. Type a name for the custom view.
 - b. Click **OK**.

Figure 75 Custom Views—Save As



The name of the custom view is added to the **Action > Current View** menu. The **Current View** menu lists the names of the five most recently used custom views.

Opening a custom view

Perform the following steps to open a saved custom view.

Procedure

1. Select **Action > Current View > Custom Views**.
2. In the **Custom Views** dialog box, select a custom view, and then click **Open**.

Alternatively, select **Action > Current View > name of custom view**. The **Current View** menu lists the names of the five most recently used custom views.

Renaming a custom view

Perform the following steps to rename a custom view.

Procedure

1. Select **Action > Current View > Custom Views**.
2. In the **Custom Views** dialog box, select a custom view, then right-click and select **Rename**.
3. Edit the name of the custom view.

Deleting a custom view

Perform the following steps to delete one or more custom views.


Procedure

1. Select **Action > Current View > Custom Views**.
2. In the **Custom Views** dialog box, select the views, then right-click and select **Delete**.

Resetting a view

Resetting a view cancels all changes that you made to the current view, and changes it to the default view.

About this task

 **Note:** **Reset View** only works while you are still in the view. If you change a view, select another view, and come back to the view you changed, you will still see the changes after using **Reset View**.

Perform the following procedure to reset a view.

Procedure

1. In the Dell EMC SourceOne console, expand the **Dell EMC SourceOne > Operations > Job Management** node.
2. Select **Action > Current View**.
3. Select the view that you want to reset.
4. Select **Action > Reset View**.

Controlling jobs

The following section contains information about controlling jobs.

Active and inactive jobs

You can change the state of an active job. You cannot change the state of an inactive job.

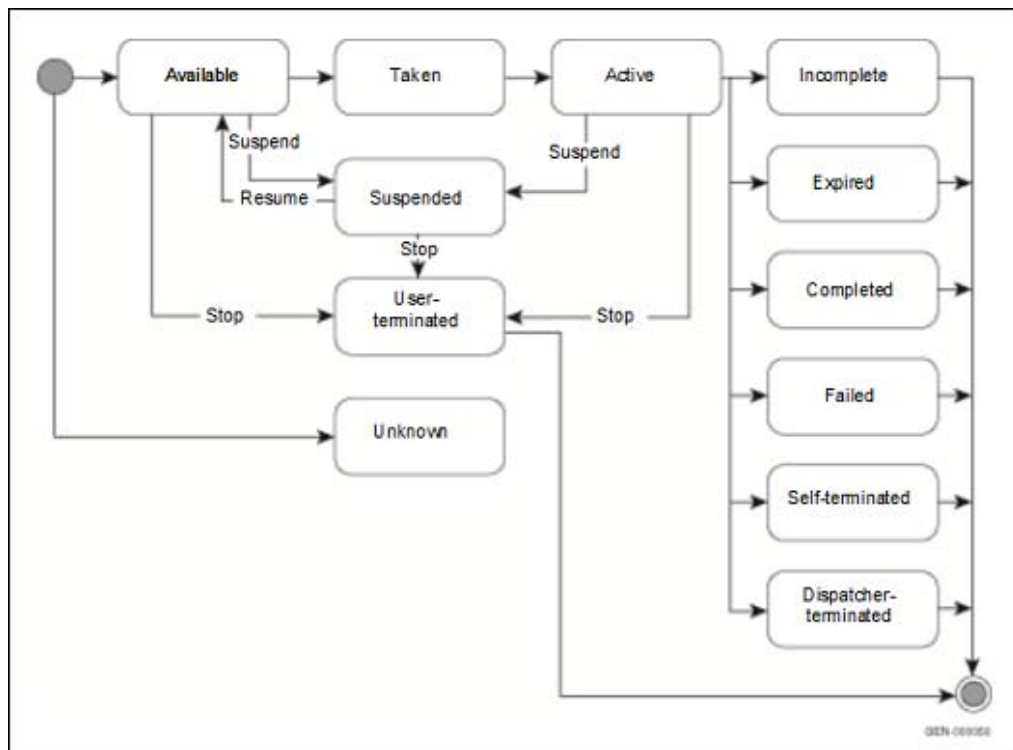
About changing job states

To control a selected active job, perform the following actions:

- Stop
- Pause
- Resume

The following figure illustrates the state changes. Unlabeled arrows represent changes that are made by the Dell EMC SourceOne system:

Figure 76 Controlling job states



Controlling jobs procedure

Perform the following tasks to control a job.

Procedure

1. In the SourceOne Console, expand the **Dell EMC SourceOne > Operations > Job Management** node.
2. In the job list, select the jobs that you want to control.
To select more than one job, refer to this list:

- Single job—**Click**
- Multiple non-contiguous jobs—**Ctrl-Click**
- Multiple contiguous jobs (range)—**Shift-Click**
- From current selection to end of list—**Ctrl-Shift-End**
- From current selection to top of list—**Ctrl-Shift-Home**

When you select multiple jobs, if at least one job in the selection is eligible for the action, the **Stop**, **Pause**, or **Resume** action is enabled. The action is applied only to the eligible jobs in the selection.

3. Select **Action**, then select the action that you want to apply to the selected jobs, as described in the following list:
 - **Stop**—Terminates the running job. The job does not complete.
The **Stop** action is available when a job is in the following states:
 - **Active**
 - **Available**
 - **Paused**
 The **Stop** action changes the job state to **User Terminated**.
 - **Pause**—Temporarily suspends the running job. The job can be resumed later.
The **Pause** action is available when a job is in the following states:
 - **Active**
 - **Available**
 The **Pause** action changes the job state to **Paused**.
 - **Resume**—Reactivates a paused job. The job continues running from the point at which it was paused.
The **Resume** action is available when a job is in the **Paused** state.
The **Resume** action changes the job state to **Active**.

The available actions vary depending on the current state of the job.
4. To update the list of jobs and view the latest changes, press **F5** or select **Action > Refresh**. The list may take a few moments to refresh.

CHAPTER 11

Using Job Logs

This section includes information about enabling and using job logs. Topics include:

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- [Enabling and disabling job logging](#)..... 236
- [Viewing job logs](#).....236
- [Where to find job logs](#).....237
- [Understanding information in the job log](#)..... 237
- [Computing mailbox reduction from email activities](#).....239

Introduction to job logs

Certain activities allow you to create log files that contain more information about the content processing that jobs perform. This information is more detailed than the summary information displayed by the **Job Details** area for that job.

This more detailed information is useful in understanding how the job processes content. And if you encounter problems in processing, may be useful in detecting and correcting such problems.

It is important to note that a single activity may create multiple jobs, and each job has their own job log.

Enabling and disabling job logging

To enable the creation of job logs, select the **Enable Detailed Logging** option on the **Activity Name** page for the activities which support this option.

The following activities support the **Enable Detailed Logging** option:

- Archive-Historical
- Archive-Personal Mail Files
- Archive-User Directed Archive
- Delete-Historical
- Delete-User Directed Archive
- File Archive-Historical
- File Delete-Historical
- File Restore-Historical
- Migrate-Microsoft Office Outlook .PST
- Microsoft SharePoint Archive
- Shortcut-Historical
- Shortcut-User Directed Archive
- Update Shortcut-Historical

Normally, you do not have the creation of job logs enabled because collecting this data consumes some system resources. Enable it only when you need detailed information about the message processing for that job.

To disable the creation of job logs, click the **Enable Detailed Logging** option so that it is no longer selected on the **Activity Name** page.

Viewing job logs

View job log information by performing the following tasks.

Procedure

1. Select the job about which you want to view log information by using the SourceOne console and browsing to the **Job Management** node.
2. Select the job from the job list that is displayed in the **Preview** pane. If the **preview** pane is not visible below the job list, select **Action > Show Preview Pane**.
3. In the **Jobs Detail** area, select the **For more detailed job information, click here** link. The log file displays.

If the link is not displayed, job logging was not enabled for this job.

Where to find job logs


Job log messages are written to files in the job logging directory that is specified during installation of the Worker.

By default, this directory is:

mapped-network-drive: \EMC SourceOne\JobLogs\

The *SourceOne Email Management Installation Guide* describes setting the job log file directory during the installation process.

The log file name is formed by taking the job identifier, expressed in hexadecimal, and prefixing it to the name DETMSG and then adding the .log file name extension. For example, the log file for the job with the identifier 123456 would be 1E240DETMMSG.log.

 **Note:** The job identifier is expressed as a decimal number in the SourceOne console.

Understanding information in the job log

Each job log file has three separate sections.

Understanding job initialization information

The initialization information for a job is very similar for all jobs and contains the following:

- The job number and when it started.
- Whether the input provider could be successfully accessed.
- The container that is processed.
- The size of the container before beginning the job processing.

This example displays the initialization information for an **Archive-Historical** activity job that is used to archive mail from an IBM Domino mail server.

Example-Job initialization information in an Archive-Historical job log

Example of job initialization information.

```
Mailbox operations Job: 101 started at Saturday, 26 July 2008 12:16:11.
Folders to Process:
Input provider 'ExNotesProvider.CoExNotesProvider' is successfully initialized.

Processing Mail Container: Alana N Raysor/QAE5 (CN=Alana N Raysor/O=QAE5)
  Mailbox size before archiving messages: 18.63MB

  Processing Folder: (Mail Threads), Type: 32768
  Archive ->MsgId: 47A0B97E9D3876AE6CD93B1D2A551D669F8AE38CEA1677B000,
  Subject: : Message 16 Date: 2007-05-21T17:53:04
.
```

Understanding job processing information

The processing information for a job is very similar for all jobs and contains the following:

- The name of the container that is being processed.
- The content in the container that was processed and how it was processed.

- Summary information about the processing of each container.

In Job processing information in an **Archive-Historical** job log, the following messages appear:

- The name of the mail folder being processed. The log displays that the Mail Threads folder was being processed:

```
Processing Folder: (Mail Threads), Type: 32768
```

- The messages in the folder that are being processed and how they are processed. It indicates that a message was archived from the mailbox:

```
Archive ->MsgId: 47A0B97E9D3876AE6CD93B1D2A551D669F8AE38CEA1677B000,  
Subject: : Message 16 Date: 2007-05-21T17:53:04
```

In another log file, the following message indicates that a message was shortcut:

```
Shortcut ->MsgId: 48AC54EB539F61A89DA85A342B13F12321372B6ED3BC165300,  
Subject: Multi WMF Images Date: 2007-12-07T17:31:23
```

In another log file, the following message indicates that a message was deleted:

```
Delete -> MsgId: N/A, Subject: What is the form of a draft message Date:  
2008-07-31T22:14:51  
Message deleted. Subject: What is the form of a draft message, Date:  
2008-07-31T22:14:51
```

- After the processing for each mailbox is completed, summary information for each mailbox appears before processing begins on the next mailbox. The summary information for the Mail Threads mailbox is shown in the following log:

```
Mailbox size after archiving messages: 19.13MB  
Job(101) -> Total messages processed: 38 Size: 5.63 MB
```

- Any errors that are encountered during processing would also be listed with the job processing messages.

In the following log, a message about the successful creation of a message shortcut with an unsuccessful creation of a message shortcut after:

```
Shortcut ->MsgId: 47A0B8B0BD3F5CFD331DC7ED391DC56EEABFF5DFB88D566500,  
Subject: Fw: Message 10 Date: 2007-05-21T17:49:38
```

```
Shortcutting message failed. MsgId:  
47A0B92F9C0FC5E425DA6069AF272E14DA102EE84F7D069400, Subject: Message 15  
Date: 2007-05-21T17:51:44
```

Example-Job processing information in an Archive-Historical job log

The following is an example.

```
.  
.
Processing Folder: (Mail Threads), Type: 32768
Archive ->MsgId:
47A0B97E9D3876AE6CD93B1D2A551D669F8AE38CEA1677B000, Subject: : Message 16 Date:
2007-05-21T17:53:04
Archive ->MsgId:
47A0BF521BC2421267D06CD5E6FF8516ACC0C087E115538F00, Subject: Message 17 Date:
2007-05-21T18:17:55
Archive ->MsgId:
47A0B4F8083E0F5D78B1AC786A899A47B25EB8FBDAEB1AA500, Subject: message 9 Date:
2007-05-21T17:33:44
Archive ->MsgId:
47A0B561CFCD33D52DF4C1ABEFD58BCF1E9A448B2AC8360B00, Subject: Message 10 Date:
2007-05-21T17:35:31
```

```

Archive ->MsgId:
47A0B9E0DC2E31FB3AC130ADC08217375A0442D0C3D8BA5100, 88BF9308DC055BAA724200,
Subject: New Todo 5 Date: 2008-07-26T15:22:09
Archive ->MsgId:
49E358A1704EDA92098A2DDE7B052816F9EE21A11CE253B000, Subject: New Todo 3 Date:
2008-07-26T15:22:09
Processing Folder: ($All), Type: 262144
Processing Folder: ($Calendar), Type: 1
Processing Folder: ($Contacts), Type: 2
Processing Folder: ($Drafts), Type: 8
Mailbox size after archiving messages: 19.13MB
Job(101) -> Total messages processed: 38 Size: 5.63 MB
.
.
.

```

Understanding job summary information

The summary information for a job contains similar information for all jobs.

The job summary information lists the following:

- The size of the container after processing the content.
For example, the log displays that the mailbox size was 3.26 MB after being processed:

```
Mailbox size after archiving messages: 3.26MB
```

- The total number of pieces of content that the job processed and their total size.
For example, the log file indicates that job 175 processed a total of 6 messages, with a total size of 3.25 MB.

```
Job(175) -> Total messages processed: 6 Size: 3.25 MB
```

- The number of containers that are processed and the number of pieces of content in those containers that were processed.
For example, the log file indicates that two mail containers (mailboxes) were processed.

```
Total mail containers: 2
```

Example-Job summary information in an Archive-Historical job log

The following is an example.

```

.
.
.
Mailbox size after archiving messages: 3.26MB
Job(175) -> Total messages processed: 6 Size: 3.25 MB
Total mail containers: 2 Total messages processed: 6 Size: 3.25 MB

```

Computing mailbox reduction from email activities

The following activities can create jobs which reduce the amount of storage that is used by a mailbox.

About this task

- Delete-Historical
- Delete-User Directed Archive
- Migrate-Microsoft Office Outlook .PST
- Shortcut-Historical

- **Shortcut-User Directed Archive**

You can determine how much storage was reduced for a mailbox by analyzing the job log for the job that processed that mailbox and comparing the size of the mailbox before and after processing.

To compute mailbox reduction from email activities:

Procedure

1. Locate the log message listing the size of the mailbox before processing. For example:

```
Mailbox size before archiving messages: 17.34MB
```

2. Locate the log message listing the size of the mailbox after processing. For example:

```
Mailbox size after archiving messages: 17.05MB
```

3. Subtract one from the other.

For example, 17.34-17.05 indicates that 0.29 MB that the message saved deletions.

Example-Job log from a Delete-Historical activity

The following is an example.

```
Mailbox operations Job: 212 started at Thursday, 31 July 2008 18:20:29.

Folders to Process:
Input provider 'ExNotesProvider.CoExNotesProvider' is successfully initialized.

Processing Mail Container: Alana N Raysor/QAE5 (CN=Alana N Raysor/O=QAE5)

Mailbox size before archiving messages: 17.34MB

Processing Folder: ($Calendar), Type: 1
Processing Folder: ($Drafts), Type: 8
  Delete -> MsgId: N/A, Subject: What is the form of a draft message Date:
2008-07-31T22:14:51
  Message deleted. Subject: What is the form of a draft message, Date:
2008-07-31T22:14:51
Processing Folder: ($Inbox), Type: 16
Processing Folder: ($JunkMail), Type: 1024
Processing Folder: ($Sent), Type: 256
  Delete -> MsgId: N/A, Subject: Delivery Failure Report message Date:
2008-07-31T22:14:51
  Message deleted. Subject: Delivery Failure Report message, Date:
2008-07-31T22:14:51
  Delete -> MsgId: N/A, Subject: A message for Ted to Reply to Date:
2008-07-31T22:14:51
  Delete -> MsgId: N/A, Subject: A 2nd message for Ted to Reply to that has
attachment Date: 2008-07-31T22:14:52
  Message deleted. Subject: A 2nd message for Ted to Reply to that has
attachment, Date: 2008-07-31T22:14:52
  Message deleted. Subject: A message for Ted to Reply to , Date:
2008-07-31T22:14:51
Processing Folder: ($SoftDeletions), Type: 270340
Processing Folder: ($ToDo), Type: 512
Processing Folder: ($Trash), Type: 4Certain

Mailbox size after archiving messages: 17.05MB
Job(212) -> Total messages processed: 4 Size: 0.00 MB
Total mail containers: 0 Total messages processed: 4 Size: 0.00 MB
```


CHAPTER 12

Best Practices

This section describes best practices for using Dell EMC SourceOne.

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Best practices for data retention and disposal

Dell EMC SourceOne supports the retention and disposal of data it archives. Review the best practices in the following sections for data retention and disposal with Dell EMC SourceOne.

Apply your organization's policies for retention and disposal to SourceOne data

Some organizations require that data, such as the content archived by SourceOne, be retained for a period and then disposed of after that time. Review the organization's policies for the retention and disposal of data practices before setting these options in SourceOne because these policies have a direct effect on how you configure SourceOne.

Understanding how deletions occur and affect performance

Data can be deleted from the archive by deleting a month of data, or by disposing of the data manually or automatically. When you dispose of data from the archive, you delete data from the following locations.

- Archived data is deleted from the archive storage location, if possible. Some storage devices may be configured to restrict data deletions.
- Metadata that is associated with the archived data is deleted from the SQL database.
- Indexes that are associated with the data are deleted from the index storage location (if you created indexes).

While this data is being deleted, an X appears on the folder icon on the folder that contains the data on the **Archive Folders** page. It is displayed when the **Archive Folders** node is selected in the SourceOne console. If the data cannot be deleted, an X and an exclamation point (!) are displayed on the folder icon. Also, a message about the error is written to the event log in the Native Archive computer with the archive role installed.

When disposing of a large quantity of data, you may want to delay the deletion of the metadata from the database. That deletion may affect the performance of the overall SourceOne system, such as jobs running to do other tasks. Deleting the metadata from the database later when the system is not as heavily used may be a better choice for the environment because there would be less of an impact on performance.

Be aware of interactions of multiple retention settings on data

If you set a retention period on data using SourceOne and also set it using a storage device such as Dell EMC Centera, be aware of the possible interactions of those retention settings.

- Because retention is time-based, it is important that both the storage device and the SourceOne computers have their system times synchronized.
- If the SourceOne retention on the archive folder is longer than the storage device retention on the folder, there are no potential deletion problems. When the SourceOne retention period on the data has elapsed, the data in the folder can be deleted manually or automatically using the automatic disposition feature.
- If the SourceOne retention on the archive folder is shorter than the storage device retention on the folder, and the storage device is configured to enforce that retention, there is a potential deletion problem. The SourceOne retention can be shorter either initially or as a result of modifying the retention on the archive folder. An example of the storage device that is configured to enforce the retention is when an Dell EMC Centera device is set to Compliance Plus mode.

Consider the following:

- When the SourceOne retention period on the data has elapsed, the SourceOne administrator may try to delete the data in the folder, either manually or automatically using the automatic disposition feature.
- When SourceOne tries to delete, the storage device does not permit the deletion to occur because the data is marked to be retained.
- When the deletion cannot occur, SourceOne writes an error indicating that the folder was not deleted to the event log in the computer which has the Native Archive role installed.

Common guidelines for specifying archive location paths

How you specify the path to an archive location using the SourceOne console can affect the network usage of the Native Archive when all SourceOne components are installed on a single computer. The following file locations are affected:

- **Archive Location** field on the **Archive Folder Storage Options** page
- **Index Storage Location** field on the **Archive Folder Indexing** page
- **Message Center Location** field on the Archive folder on the Archive tab of the **Server Properties** dialog box

Specify all these locations as either Uniform Naming Convention (UNC) paths or as local paths, using the following guidelines:

- Specify these paths as UNC paths when SourceOne components are installed on several computers. This specification is a typical configuration for medium to large installations. When specifying UNC paths for shared locations, you may want to specify them using a DNS server alias rather than the actual server name. Locations can include: The Archive Location, the Index Storage Location, or the Message Center Location.

Using a DNS server alias for shared locations, including NAS device locations, allows for a more flexible installation that helps to change the back-end storage in the future. Consult with the network administrator for what form of UNC path to use in the environment.

The following are examples of UNC paths:

```
\\Server\ShareName
\\DNSServerAliasOfServerorNAS\ShareName
```

When adding a UNC path, to avoid indexing issues, remove any trailing backslash (\) characters.

- Specify these paths as local paths when all SourceOne components are installed on a single computer. Specifying UNC paths for these locations when using a single computer installation may incur additional and unnecessary network bandwidth. The following is an example of a local path:

```
D:\myfolder\
```

When specifying local paths, do not use mapped drives unless they are always defined for the SourceOne system, and are not defined only for a particular user or group of users.

Optimizing Native Archive index performance

One or more Native Archive Servers that have the index role are enabled to perform index processing for the Native Archive. The ability to use multiple servers to perform the same logical function is called horizontal scalability. The Native Archive allows horizontal scalability for all Native Archive Server roles, so you can have one or more Native Archive Servers indexing, archiving, searching, or retrieval roles.

If the current indexing performance is not adequate, you can improve that indexing performance by increasing the number of Native Archive Servers that have the indexing role enabled.

However, when this increase is done, consider adding additional index storage locations as these locations can also help improve index processing. Also, you can control which indexing operations are available on each indexing server, and balance the resources available to those operations on a per server basis.

Reviewing the index server and index storage location configuration

A Native Archive Server with the index role selected performs the index processing for the Native Archive. This index server writes files to, and reads files from, one or more network file shares that are defined as index storage locations.

The Native Archive supports multiple index servers and multiple index storage locations to make index processing scalable. This support allows the administrator to configure the Native Archive to spread index processing across multiple servers and multiple disks.

When looking to improve index processing performance, the administrator is to consider the topics in the following sections.

Is index processing causing system problems?

Review the state of indexes, Worker event logs, and overall system performance to see if they indicate the problems as described in the following:

- Indexing performance remains slow even after adding an additional index server. The additional index server may have solved a lack of processing ability, but you may still be having problems with indexing storage.
- One or more index storage locations are filled or nearly filled with data.
- Inconsistent indexes appear in the SourceOne console. Inconsistent indexes can be created when SourceOne cannot write to the index storage location. Inconsistent indexes cannot be searched.
- Delayed Write Failed error messages are displayed in the event log on an index server. This indicates that SourceOne cannot write to the index and may result in indexes becoming inconsistent.

This is a warning level message and may have one of several event sources depending on your environment. The following is an example of such a message:

```
Event Type:      Warning
Event Source:    MRxSmb
Description:
{Delayed Write Failed} Windows was unable to save all the data for the file
\Device\LanmanRedirector. The data has been lost. This error may be caused
by a failure of your computer hardware or network connection. Please try to
save this file elsewhere.
```

If these problems exist, adding additional index storage locations may solve these problems.

Are there enough computing resources for index processing?

Review the computing power of the servers being used to process the indexes to see if they are sufficient.

If there is not enough computing power available, add additional index servers. When you add index servers you may also be obligated to add index storage locations to work with those servers.

Assign additional computing resources by:

- Adding the index role to one or more existing Native Archive Servers
- Or adding one or more new servers to the Native Archive and assigning the index role to them

The hardware and software environment determines which choice makes sense.

Are there enough disk resources for index processing?

Review the index storage locations available to the index servers to see if they are sufficient. Indications of insufficient disk resources would include the following:

- Little free space available on any of the index storage locations
- Encountering any of the conditions that are described in the following:
 - Indexing performance remains slow even after adding an additional index server. The additional index server may have solved a lack of processing ability, but you may still be having problems with indexing storage.
 - One or more index storage locations are filled or nearly filled with data.
 - Inconsistent indexes appear in the SourceOne console. Inconsistent indexes can be created when SourceOne cannot write to the index storage location. Inconsistent indexes cannot be searched.
 - Delayed Write Failed error messages are displayed in the event log on an index server. This indicates that SourceOne cannot write to the index and may result in indexes becoming inconsistent.
This is a warning level message and may have one of several event sources depending on your environment. The following is an example of such a message:

```
Event Type:      Warning
Event Source:    MRxSmb
Description:
{Delayed Write Failed} Windows was unable to save all the data for the
file \Device\LanmanRedirector. The data has been lost. This error may be
caused by a failure of your computer hardware or network connection.
Please try to save this file elsewhere.
```

If there are not sufficient disk resources, add additional index storage locations or reduce the number of index servers accessing the problematic index storage location.

You assign additional disk resources by adding additional index storage locations and making those resources available to the indexing servers. You assign index storage locations when you create an archive folder or modify an archive folder.

- Assign index storage locations when you create an archive folder.
- Modify archive folder to assign additional index storage locations.

Are disk resources structured effectively for index processing?

Review which index storage locations are available to which index servers to see if they are structured effectively. If certain index storage locations are under or over used, modify which index storage locations are available to each index server to correct the problem.

Overused index storage locations can cause the problems that are described below:

- Indexing performance remains slow even after adding an additional index server. The additional index server may have solved a lack of processing ability, but you may still be having problems with indexing storage.
- One or more index storage locations are filled or nearly filled with data.
- Inconsistent indexes appear in the SourceOne console. Inconsistent indexes can be created when SourceOne cannot write to the index storage location. Inconsistent indexes cannot be searched.
- Delayed Write Failed error messages are displayed in the event log on an index server. This indicates that SourceOne cannot write to the index and may result in indexes becoming inconsistent.

This is a warning level message and may have one of several event sources depending on your environment. The following is an example of such a message:

```
Event Type:      Warning
Event Source:    MRxSmb
Description:
{Delayed Write Failed} Windows was unable to save all the data for the file
\Device\LanmanRedirector. The data has been lost. This error may be caused
by a failure of your computer hardware or network connection. Please try to
save this file elsewhere.
```

Make an index storage location available either to all index servers or only to selected index servers. For example, if you have six index servers and two index storage locations, you could select three index servers to use one storage location and have the other three index servers use the other. Alternatively, you could have all index servers access all index storage locations. The hardware and software configuration determines which configuration makes sense.

Select which index storage locations are available to which index servers when you create an archive folder or modify an archive folder.

Conditions that indicate you may want to add index storage locations

Consider adding index storage locations and associating them with index servers if any of the following occur:

- Indexing performance remains slow even after adding an additional index server. The additional index server may have solved a lack of processing ability, but you may still be having problems with indexing storage.
- One or more index storage locations are filled or nearly filled with data.
- Inconsistent indexes appear in the SourceOne console. Inconsistent indexes can be created when SourceOne cannot write to the index storage location. Inconsistent indexes cannot be searched.
- Delayed Write Failed error messages are displayed in the event log on an index server. This indicates that SourceOne cannot write to the index and may result in indexes becoming inconsistent.

This is a warning level message and may have one of several event sources depending on your environment. The following is an example of such a message:

```
Event Type:      Warning
Event Source:    MRxSmb
Description:
{Delayed Write Failed} Windows was unable to save all the data for the file
\Device\LanmanRedirector. The data has been lost. This error may be caused
by a failure of your computer hardware or network connection. Please try to
save this file elsewhere.
```

Tuning index operation performance

Tune the performance of index operation processing by using the Component limit per index action area on the Index tab of the Properties page for a selected Native Archive index server.

This area allows you to specify the maximum number of processes to be used on the specified index server for each of the possible index actions:

- Add
- Delete
- Repair
- Update

The default values for the index processing operations are adequate for typical installations however, if you are experiencing indexing performance problems or other problems, you may want to change these values.

Configuring index operation performance for User Delete scenario

Sometimes, when deploying the User Delete capability to many users, or a small number, an administrator may want to modify the index performance settings as follows, depending on the number of index servers available.

- If a single Native Archive index server handles several index operations, reduce the value of the **Delete index action** field to 1 on that server to limit the number of resources that are used to process delete requests. This reduction decreases the chance that users of the User Delete capability overburdens that index server.
- If there are multiple Native Archive index servers, dedicate one or more servers to process only index deletions. Do this dedication by setting a value of 4 in the **Delete** field and 0 in the **Add**, **Repair**, and **Update** fields on the index server. If the dedicated index deletion server absorbs the additional processing that is used by the User Delete capability, other servers could retain their default index settings.

Configuring index operation performance to reduce rebuild backlog scenario

In this scenario, an administrator has a backlog of indexes that must be rebuilt, and wants to reduce this backlog during the weekends when users are not heavily using the system.

To reduce the number of indexes that must be rebuilt in the system, the administrator temporarily increases the value of the **Repair** field to the maximum of 4 on all their index servers. Schedule the value to increase during the weekend. They increase the value so that as many indexes as possible are rebuilt.

At the end of the weekend, the administrator resets the value of the **Repair** field to the previous value (lower than 4) on those index servers. Other indexing operations are not slowed during the work week now.

Best practices for setting the volume size

The Maximum Volume Size (MB) field on the Archive Folder Storage Options page allows you to specify the maximum size (in MB) of individual volumes in the archive folder. When a volume reaches the maximum volume size, it is closed and a new volume is created.

The default value for this field is 100 MB. You can change this default value to be from 10 MB up to 10,000 MB (10 GB).

Be aware of the following effects of setting the value of the **Maximum Volume Size (MB)** field:

- After the value of the **Maximum Volume Size (MB)** field is set, it cannot be changed using the SourceOne console.
- If you are planning to use DiskXtender to write SourceOne files to a Centera device, change the value of the **Maximum Volume Size (MB)** field to 90 MB. There are known performance issues when retrieving volumes of 100 MB and greater from a Centera device. Setting the volume file size to 90 MB allows for slight overflow of the volumes before they are closed, while keeping the total volume file size to under 100 MB.
- If you set the **Maximum Volume Size (MB)** field to a value greater than 2048 (2 GB), you receive a warning indicating that it may make the archiving and retrieval operations take longer.
- Setting a higher value on the **Maximum Volume Size (MB)** field has the following effects:

- Fewer volumes are created, but each volume is larger.
- While those volumes are open, the Native Archive message center directory has more temporary files in it than if the volumes were smaller. The message center directory uses more space than when the volumes were smaller.
- Deletions of individual objects (such as messages or documents) from a volume, take longer when the volume from which they are deleted is larger.
- Setting a lower value on the **Maximum Volume Size (MB)** field has the reverse effects of setting a higher value:
 - More volumes are created, but those volumes are smaller.
 - While those volumes are open, the Native Archive message center directory has fewer temporary files in it than if the volumes were larger. The message center directory requires less space than when the volumes were larger.
 - Deletions of individual objects (such as messages or documents) from a volume takes less time when the volume from which they are deleted is smaller.

Best practices for selecting indexing of nested attachments

If attachment indexing is enabled, you can use the Index nested subcontainers in attachments option to select whether to index subcontainers in attachments or not.

Selecting the **Enable indexing** option on the **archive folder indexing** page causes any content that is archived in that archive folder to be indexed. Also, selecting the **Attachment Indexing** option causes attachments to that content to be indexed.

If a content attachment contains a file container, such as the ones created by PKZIP for Windows, the files in that container are indexed if the Index nested subcontainers in attachments option is selected. This indexing includes file containers nested in other file containers if those file containers are not password-protected.

All new and existing indexes disable this option by default.

Consider the following information when using this option:

- When the **Index nested subcontainers in attachments** option is selected, it will only apply to content archived and indexed after the selection was changed in the Dell EMC SourceOne console. Existing indexes remain as they are, and must be rebuilt for the change to the option to affect them.
- If the **Index nested subcontainers in attachments** option is changed while an archive folder is having content archived into it, rebuild one or more indexes for that archive folder. Rebuild them so that all content in one or more associated indexes has the attachment subcontainers that are processed in the same way.
- If the content you are indexing contains many nested subcontainers, you may find that enabling this option causes the indexing to take more time to complete. Because you are enabling the potential indexing of more content, more indexes may be created and can consume more disk space.
- Password protected containers or subcontainers cannot be accessed for indexing and so are not indexed.

Best practices for selecting archive folder organization options

The Dell EMC SourceOne Native Archive contains data in archive folders. Its organization can be either monthly (using the By Date option) or by legal matter (using the By Matter option) using the Organization Options page of the New Archive Folder wizard.

- If you are creating an archive folder to contain any other kind of data aside from a legal matter, select the **By Date** option.
- If you are creating an archive folder to contain a legal matter that SourceOne Discovery Manager created, you can select either the **By Date** or **By Matter** option.

Advantages of using archive folders organized by matter

When creating and selecting archive folders to contain legal matters that were created using SourceOne Discovery Manager, there are advantages to using archive folders organized by matter rather than using archive folders organized by date.

Matters are deleted more quickly

Legal matters that are stored in an archive folder that is organized by matter are deleted more quickly than the ones stored in an archive folder that is organized by date. The Dell EMC SourceOne system can access and delete the matter content more efficiently.

Matter indexes can be managed more easily

If the related archive folders are organized by matter rather than by date, managing the indexes of a matter can be done more easily.

There is only a single folder of indexes to manage, rather than several folders of indexes if the archive folders are organized by date.

Indexes may require management, such as being deleted or rebuilt. Performing these tasks on a single folder of indexes, created from a single archive folder that is organized by matter, is easier than performing the tasks on typically multiple folders of indexes. The multiple folders of indexes are created from multiple archive folders that are organized by date.

If the contents of the matter spans several months or years of time, the chances of the task being easier is especially likely. If the archive folder is organized by date, it would cause the matter to be spread across several month folders.

For example, if the content that is part of a matter was created during a 6 month period, the matter would be contained in one matter folder if the archive folder is organized by matter. If the archive folder is organized by date, it would be contained in six month folders. If the archive folder is organized by matter, the minimum number of indexes to be managed would be one index. Six indexes the minimum number.

Matter Indexes are quicker to search

Indexes that are generated from archive folders that are organized by matter are quicker to search than the archive folders organized by date. The indexes that are generated from an archive folder that is organized by matter are quicker to search for the following two reasons:

- Only one folder of indexes must be searched rather than several folders of indexes as would typically be the case for archive folders that are organized by date. Searching fewer indexes allows the search to complete more quickly.

- Because the indexes are created from an archive folder that is organized by matter, the indexes contain only data about the matter. No extraneous information must be searched, and the search can then complete more quickly.

Restrictions on using archive folders organized by matter

There are some restrictions to using archive folders organized by matter. Using archive folders that are organized by date are made to be a better choice. These restrictions are described in the following sections.

Only Legal Hold mapped folders can be used with archive folders organized by matter

Only Legal Hold mapped folders can be associated with archive folders organized by matter.

If you create a mapped folder that is not a Legal Hold mapped folder, and associate it with an archive folder that is organized by matter, the following message is issued:

```
Archive folders created with the By Matter option cannot be used with this type of mapped folder. Select an archive folder created with the By Date option for this type of mapped folder.
```

Virtual Container storage types not supported for archive folders organized by matter

Only create archive folders that are organized by matter if the storage type of the archive folder has not been set to be Virtual Container.

If the storage type is set to **Virtual Container** on the **Storage Options** page, the following message is issued when you try to select the **By Matter** option on the **Organization Options** page:

```
Virtual archive folders cannot be organized by matter. Select another organizing method.
```

Retention cannot be set on archive folders organized by matter

Only create archive folders that are organized by matter if retention has not been specified for that archive folder.

If the **Months to retain** field on the **Storage Options** page has been set to a value other than 0, the following message is issued when you try to select the **By Matter** option on the **Organization Options** page:

```
Archive folders that have retention enabled cannot be organized by matter. Select another organizing method.
```

Archive folders organized by matter use different deletion processes than folders organized by date

Archive folders that are organized by matter follow a different deletion process than folders that are organized by date.

- Archive folders that are organized by date can be deleted from the Dell EMC SourceOne console using the **Delete Folder** action. They can be organized even if they contain subfolders of data (months or matters) and are associated with a mapped folder. Refer to the section [Deleting archive folders in Configuring Archives](#) for more information about deleting archive folders, including best practices.
- Archive folders that are organized by matter can be deleted from the Dell EMC SourceOne console only when the following is true:
No matters are stored in the archive folder. You can delete matters within SourceOne Discovery Manager.

After this condition is met, you can use the **Delete Folder** action to delete the archive folder that is organized by matter. If this condition is not met, the **Delete Folder** action is not available for use when the archive folder that is organized by matter is selected.

Best practices for tuning job access to servers

Use the Servers node in the Dell EMC SourceOne console to control Worker Servers. You can use the Tuning tab that the Servers node displays to control how many SourceOne jobs can simultaneously connect to the IBM Domino, Microsoft Exchange, or Microsoft SharePoint servers.

The following are the conditions that may cause you to increase to decrease the number of jobs that you allow to access the mail server simultaneously:

- If the jobs connecting to the Microsoft SharePoint or Mail servers affect their performance significantly, reduce the number of jobs connecting to each of these servers by reducing the server limit value.
 - ① **Note:** Reducing the number of jobs able to access each server may increase the time that it takes for an activity to complete. It increases because it can cause some of the activity jobs to wait to access the server.
- If the current number of activity jobs connecting to the servers does not affect them, and activities complete in a workable amount of time, modifying the server limit value is not mandatory.
- If the activity jobs connecting to the servers do not affect their performance, and you want to shorten the time of an activity's completion, increase the number of jobs connecting to each server. Increase the number of jobs by increasing the server limit value. You may also want to increase the default server limit value so that any newly discovered mail servers get the increased value automatically.

Being aware of interaction between SourceOne tasks and other scheduled tasks

SourceOne uses the Microsoft Windows scheduler to schedule jobs. These jobs all are named with the prefix ExTask followed by a number, such as ExTask1132 or ExTask1133.

Verify that no other scheduled tasks are created with the same name prefix as the SourceOne task names. Creating scheduled tasks with names in this form can cause the SourceOne job scheduler to delete them by mistake when it performs certain maintenance tasks.

Best practices in email identity management

To conduct effective and complete compliance or legal discovery searches on a specific person, all known variations of the system identifiers that are associated with the person must be available for use as search criteria.

When running searches, Dell EMC SourceOne uses the address information that is stored in the current global address book for the mail environment. Because Dell EMC SourceOne does not programmatically maintain historical address information, it is up to companies to manage this information themselves. This document provides recommendations on how to maintain this information and conduct effective compliance or legal discovery search results.

What is identity management?

In a typical environment, users are added and deleted from global address books daily. Email address information for a user can change over time due to name changes, company mergers and

acquisitions, the use of aliases, and other factors. Identity management consists of managing the correlation between a real person and the system identifiers that are associated with that person over time.

These recommendations assume that you are starting from a particular point in time and want to set up a method to capture and manage historical address information in the future. For environments that require assistance with discovering historical address information over a specific period in the past, contact Dell EMC Professional Services.

Managing historical address information

Employ a method to track when former employees are removed from the Global Address List (GAL) in Microsoft Exchange, or the Name and Address Book (NAB) in IBM Domino. Track changes to user address information which occur over time, for example, domain name changes due to company mergers, name changes, email address formatting changes. At a minimum, the method is to include the following information:

- Name
- Employee ID
- All address forms used and effective dates for each

For example, address information for an IBM Domino user who is named John Doe could include the SMTP, domain and canonical forms of the address that follows:

- SMTP—John_Doe@legato.com, john.doe@emc.com
- Domain—John Doe/Boston/Legato/EMC
- Canonical—CN=John Doe/OU=Boston/OU=Legato/O=Dell EMC

Similarly, address information for a Microsoft Exchange user who is named John Doe could include the SMTP, canonical/Distinguished Name, and X.500/Distinguished Name forms of the address following:

- SMTP—John_Doe@legato.com, john.doe@emc.com
- Canonical/Distinguished Name—/O=Dell EMC/OU=Legato/OU=Boston/CN=recipients/CN=JohnDoe
- X500/Distinguished Name—/O=Dell EMC/OU=Legato/OU=Seattle/CN=recipients/CN=JohnDoe

Configuring legacy addresses for existing users

For users who still exist in the Microsoft Exchange Global Address List (GAL) or IBM Domino Name and Address Book (NAB), you can include other known addresses as a legacy address in the properties of the corresponding user on the mail server. When Dell EMC SourceOne runs a search, it automatically includes the legacy address information in the search.

For example, if employee Jane Doe marries and changes her name to Jane Smith, you can make the name change to Jane.Smith@emc.com in the GAL or NAB. You can also add the legacy address Jane.Doe@emc.com to the properties for Jane Smith on the mail server. Subsequent searches on Jane.Smith@emc.com return email that is addressed to both Jane.Smith@emc.com and Jane.Doe@emc.com.

Configuring legacy addresses in Microsoft Exchange

Perform the following steps to add legacy email address information for a user in Microsoft Exchange.

Procedure

1. Log in to the domain with an account that has Microsoft Exchange administrator rights, and view the properties of the user to whose profile you want to add a legacy address.

Access user properties by selecting **Active Directory Users and Computers** from the **Administrative Tools** menu, expanding the **Users** node (beneath the **domain server** node), and double-clicking a username.
2. Activate the **E-mail Addresses** tab and click the **New** button. The **New E-mail Address** dialog box appears.
3. Open the **Other Address Properties** dialog box, select **Custom Address** and click **OK**.
4. In the email address text box, type the user's legacy address.
5. In the email type text box, type **LEGACY**.
6. Click **OK**.
7. Repeat the previous steps for additional legacy addresses you want to include.

Configuring legacy addresses in IBM Domino

Perform the following steps to add legacy email address information for a user in Microsoft Exchange.

Procedure

1. From the **Start** menu, select **Programs > Lotus Applications > Lotus Domino Administrator**.
2. Type the password when prompted. The **Domino Administrator** appears.
3. Click the **People and Groups** tab.
4. Expand **Domino Directories**, and then expand the address book.
5. Click **People**. Contacts appear in the main pane.
6. Double-click the user to whose profile you want to add a legacy address. The person record appears, starting with the **Basics** tab.
7. Double-click within the **Short name/User ID** area so that it becomes editable.
8. Move to a new line, and type the legacy address.
9. Click **Save and Close** to save changes and return to the **Administration-People & Groups** page.

Best practices for using rules in email activities

Activities that allow you to archive email messages also allow you to use rules to determine which messages are archived and into what folder the messages are archived.

Best practices for setting date formats on Workers processing IBM Domino content

Do not set the Microsoft Windows short date format on computers that are used to perform IBM Domino message processing activities to the following value. It is set by using the Regional and Language Options applet in the Control Panel.

```
dd-mmm-yy (for example 21/Jun/12)
```

This short date format causes those activities to process incorrectly.

When best to use LDAP queries to select data sources

There are situations when a Lightweight Directory Access Protocol (LDAP) query is the best, or only, method to use to select a data source for an activity.

Review the following information to select when and how to use LDAP queries with Dell EMC SourceOne:

- For summary information about how to create an LDAP query for use by Dell EMC SourceOne, refer to [Selecting data sources using LDAP overview](#).
- For detailed information about creating LDAP queries refer to the RFC 1650 and RFC 2252 specifications at:

http://ldapman.org/ldap_rfcs.html

Additionally, you may want to review one of the many books on using LDAP.

Use LDAP query to focus data source and improve processing speed

When you select the data source for an activity, you can select it from a server hierarchy, from the address book, or as a result of an LDAP query.

Using an LDAP query to select the data source for an activity can shorten the amount of time it takes for the activity to complete because it can eliminate unnecessary processing.

- When creating an archive activity, rather than selecting the mail server from which to archive and then using rules to fine tune which messages in which mailboxes you want to archive, use an LDAP query. The LDAP query allows you to select the mailboxes you are interested in and limit or avoid the overhead of server or address book lookup and rule processing.

Define the data source as precisely as possible so that any rule you define must review as small a group of messages as possible to find matches for the rule. Sometimes, you do not create any rules at all.

- When creating a shortcut activity, rather than selecting a data source by server hierarchy or by address book, use an LDAP query. The LDAP query allows you to select the mailboxes you are interested in, thus limiting or avoiding the overhead of server or address book lookup.

Use LDAP query for related activities

If several activities are related and you want to use an LDAP query to select the data source for one of them, consider using the LDAP query to select it for all activities.

Reusing the same LDAP query for a data source in related activities makes maintaining those activities easier. If you must modify the LDAP query for one of the activities, you can more easily modify it for the related activities. For example, if you want to both archive and shortcut messages from the same data source, use the same LDAP query to select the data source in both cases.

Use LDAP query to process mailboxes excluded from a distribution list or group

Sometimes, you may want to archive or shortcut messages that are based not on what mailboxes are in a distribution list or group, but on what mailboxes a distribution list or group excludes. For example, you may want to have all messages to members of the temporary-employee distribution list or group that is archived into one folder and messages to all other employees archived in another folder.

An LDAP query is the easiest and most maintainable way to archive or shortcut messages that are based on what mailboxes are not listed in a distribution list or group. Note that you can define rules only to archive what is in a distribution list, not on what is not in a distribution list.

LDAP query data source example

The following is an example of using an LDAP query to select a data source.

In this example, the Dell EMC SourceOne administrator wants to process messages on a Microsoft Exchange mail server as follows:

- Separate email addresses into two groups using a distribution list:
 - Email addresses in the distribution list constitute one group. This group of messages are retained for seven years.
 - Any email that was sent to an address that was not part of the seven year retention distribution list would be part of the other group. It would be retained for three rather than seven years.
- Archive email messages into two different folders with different retention periods. One set of email messages are retained for seven years and all other email is retained for three years.
- Shortcut the email messages in both the seven year retention folder and the three year retention folder.

To perform the tasks described above, the administrator does the following:

- Creates and runs two **Archive-Historical** activities for each Microsoft Exchange server:
 - An **Archive-Historical** activity to archive messages that are sent to members of the seven year retention distribution list. The data source for this activity is selected using the following LDAP query:


```
( & ( msExchHomeServerName = / o = suxen / ou = First Administrative Group /
cn = Configuration / cn = Servers
/ cn = ABCENEX2003 ) ( memberof = CN = 7 Years DL ,
OU = USOperations , DC = abcen , DC = Dell EMC , DC = com ) )
```

- An **Archive-Historical** activity to archive messages that are sent to all email addresses that are not part of the seven year retention distribution list.

```
( & ( msExchHomeServerName = / o = suxen / ou = First Administrative Group /
cn = Configuration / cn = Servers
```

```
/cn=ABCENEX2003)(!memberof=CN=7 Years DL,
OU=USOperations,DC=abcen,DC=Dell EMC,DC=com)
```

- Creates and runs two **Shortcut-Historical** activities for each Microsoft Exchange server:
 - A **Shortcut-Historical** activity to shortcut messages sent to members of the seven year retention distribution list. The data source for this activity is selected using the same LDAP query that is used for the seven year retention **Archive-Historical** activity.
 - A **Shortcut-Historical** activity to shortcut messages sent to all email addresses that are not part of the seven year retention distribution list. The data source for this activity is selected using the same LDAP query that is used for the non-seven year retention **Archive-Historical** activity.

 **Note:** The previously listed LDAP queries do not work across multiple domains it does not function in an environment with multiple domains in a single forest.

To modify the previous LDAP queries to work across multiple domains, select the **Active Directory** global catalog as the LDAP server for the queries. The global catalog contains objects from multiple domains in the same forest. When you select the global catalog as the LDAP server, the port number must be changed from 389 to 3268 and the search base distinguished name must be left blank.

Avoid using Microsoft Exchange distribution lists or IBM Domino groups when defining folder permissions or activities using LDAP

Using Microsoft Exchange distribution lists or IBM Domino groups within LDAP queries can cause problems when defining folder permissions or archiving activities.

When an LDAP query contains a Microsoft Exchange distribution list or an IBM Domino group (such as `CN=GroupName`), LDAP returns only the name of that list or group.

- When such a query is used within SourceOne, rather than within address rules, only the list or group name is returned.
- When such a query is used in within a rule, SourceOne automatically expands that list or group name to list the members of that list or group before processing the rule.

Do not use distribution lists or groups within an LDAP query when defining folder permissions or archiving activities. It causes only the list or group name to be processed instead of the list of users who are members of that list or group.

Instead, select the distribution list or group from the Microsoft Exchange Global Address List (GAL) or the IBM Domino Directory, which causes all members of the list or group to be used.

Review existing LDAP server settings after upgrade

After upgrading SourceOne Email Management, review the values of the following LDAP server options to ensure that they are correct for the environment:

- Review the **Use Microsoft ADSI** option value on the **Select Data Sources** dialog box.
- Review the **Server supports Microsoft ADSI search** option value on the **LDAP Server Configuration** dialog box.

After upgrading SourceOne Email Management, the LDAP server options have the following values for each LDAP server:

- By default, the new **Server supports Microsoft ADSI search** option on the **LDAP Server Configuration** dialog box is not enabled.
- The existing value (enabled or not enabled) for the **Use Microsoft ADSI** option on the **Select Data Sources** dialog box is retained after the upgrade.

- If this option had not been enabled before the upgrade, it is still marked as not enabled.
- If this option had been enabled before the upgrade, it remains enabled, but is grayed out to indicate that the administrator is to review the setting and perhaps modify it.
To enable the use of the **Use Microsoft ADSI** option, modify the value of the **Server supports Microsoft ADSI** option on the **LDAP Server Configuration** dialog box for that LDAP server. It causes the **Use Microsoft ADSI** option to be editable for that server.
After modifying the value of the **Server supports Microsoft ADSI** option to enable **Use Microsoft ADSI**, verify that **Server supports Microsoft ADSI** is set correctly (enabled or disabled) for the LDAP server.

Best practices for deploying shortcuts

Use Dell EMC SourceOne's ability to shortcut IBM Domino or Microsoft Exchange messages and attachments to reduce the amount of storage that is needed for email within an organization significantly. When a shortcut is created, a message or message attachment is removed from a Microsoft Exchange or IBM Domino server. It is then replaced with a much smaller (about 4 KB) message shortcut which points to the full message or attachment in the SourceOne archive.

Deploy shortcuts in an organization using a strategy that accounts for both technical issues and the impact on email users. Not having a shortcutting strategy can cause problems for email server administrators, SourceOne administrators, and email users. These problems may include:

- Performance problems for an SourceOne server or email server when trying to create or restore shortcuts.
- Users being unable to restore shortcuts using their email client.
- Users having long email synchronization times when using Notes local replicas or Outlook cache mode.

Shortcutting best practices for both Microsoft Exchange and IBM Domino environments

The following best practices apply to environments that contain Microsoft Exchange servers, IBM Domino servers, or both.

Create and publish a plan for deploying shortcuts

Before you deploy shortcuts in the organization, create and publish a plan for that deployment. Creating and deploying with a plan makes using shortcuts as seamless as possible for the email users while providing maximum savings in message storage. The deployment plan is to, at minimum, cover the topics in the following sections.

Preparing for shortcutting messages

List any preparations you must make before beginning to shortcut messages. Preparations may include the following:

- Setting up a pilot environment in which to test the shortcutting procedures.
- Verifying that the Dell EMC SourceOne is archiving all messages as you would expect before beginning the shortcutting process.
- Installing any needed support for mobile users who routinely work disconnected from the email server. Installation may include creating local mail file replicas for IBM Domino mobile users.

Processes used to create shortcuts

List the processes you use to create shortcuts.

- The process that is initially used to create the shortcuts, including:
 - When you initially run Dell EMC SourceOne to create the shortcuts, for example, at midnight every night.
 - What criteria you initially use to create the shortcuts. For example, you may determine that you create shortcuts for all messages more than three years old first. When that is complete, create shortcuts for all messages that are more than two years old, and so on.
- The process that you use to continue to create shortcuts.

After all shortcuts are initially created, continue to create shortcuts as needed. Schedule when that processing occurs and what criteria you use for selecting the messages to be shortcut. For example, you may want to shortcut all messages with large attachments that are older than 90 days.

Communicating with email users about shortcut usage and impact

List what information you want to communicate to users and how and when those communications occur. This information may include the following:

- What a shortcut is and how it helps keep email accounts smaller and more manageable.
- Any changes in the user environment that is made to accommodate shortcuts, such as creating local mail file replicas.
- What criteria you are using to determine what messages are shortcut. For example, criteria may include what message size and message age qualifies a message for being shortcut.
- When shortcuts are enabled for email users.

Shortcut large and rarely accessed messages

When you create message shortcuts, you want to reduce email storage without inconveniencing email users. You can reduce email storage by shortcutting messages that are both large and rarely accessed.

- Large messages have attachments that are larger than 100 KB.

Shortcutting large messages allows you to maximize the amount of storage you reclaim while shortcutting relatively few messages. It happens because, although large messages are not numerous, their size causes them to occupy a large amount of email storage.

If using Outlook cache mode or IBM Domino local mail file replicas, shortcutting only large messages reduces the number of shortcuts that must be created and synchronized between email clients and email servers.

Note: Shortcut message attachments only. Shortcutting the body of a message is not done. There is very little storage savings in shortcutting message bodies and creating such shortcuts inconveniences users.

- Rarely accessed messages are typically messages that are older than 90 days.

Shortcutting rarely accessed messages allows you to shortcut messages that users does not often restore from the SourceOne archive. User email performance do not heavily affect these shortcuts.

Avoid creating shortcuts to email messages that are actively used (newer than 90 days) for the following reasons:

- Any storage savings gained from shortcutting newer active messages is only temporary and is lost when the message is opened and restored.

SourceOne will continually process active messages, either to create shortcuts to the message after it is restored, or to restore the message after the corresponding shortcut is opened. It may affect the performance of SourceOne and possibly affect the performance of the mail server.

Use a phased approach: shortcut the oldest messages first

When rolling out the initial use of shortcuts in an organization, create the shortcuts incrementally. Typically you perform incremental shortcutting by processing the oldest email messages first, and more recent messages later. The more email messages that you have stored on the servers, the more valuable it is to use an incremental approach.

For example, you could initially shortcut attachments to messages that were older than 730 days. After those shortcuts were created, you could shortcut all messages that were older than 670 days, in 90 day increments until you have reached the shortcut policy goal. For example, having all messages older than 90 days shortcut.

Using an incremental approach that is based on message age has the following advantages:

- Shortcutting older email messages first allows you to process the majority of email messages and reclaim valuable email storage while impacting relatively few email users. Also, because these messages are less likely to be opened as a result of them being older, very few of the shortcuts that you create are restored and must be re-created.
- Shortcutting email messages in smaller more manageable groups that are based on message age allows you to spread out the processing Dell EMC SourceOne performs to create the shortcuts.
- An incremental approach to shortcutting allows email shortcuts to be synchronized between the email client and the email server in small amounts after each batch of shortcuts is created. This approach minimizes the delay the email client experiences when opening and synchronizing with the email server.

Avoid taking a large archive of messages and shortcut all messages for all users that are older than 90 days at one time. Doing so will cause shortcut creation to take a very long time and causes users to have a long wait while their mailboxes initially open and synchronize after the shortcuts are created.

Delete messages and shortcuts from mail server if possible

Another strategy for reducing email storage is to use SourceOne to delete older messages and shortcuts from the mail server (typically messages older than a year or more). Typically, SourceOne archives these messages so the messages are not lost.

Verify that SourceOne has archived messages before deleting them from the mail server. Also, consider the organization's email retention plans when considering deleting messages from the mail server.

You delete messages and shortcuts using the **Delete** activity.

Users wanting access to these messages can search for them by performing an end-user search using Search. If the organization does not want to allow user access, then an administrator can perform an administrative search using Search to search for user email on request.

Use the SourceOne Offline Access plug-in to resend shortcut messages

SourceOne in a Microsoft Exchange environment does not support Microsoft Outlook resend functionality on an unresolved shortcut message.

If a shortcut message is resent without using the SourceOne Offline Access plug-in, it is resent with the same message ID as the original message. As a result, the recent message is skipped by all

archiving and shortcutting jobs. Also, if you run a restore job, this recent message is replaced by the original message in the mailbox. This action produces duplicate copies of the same message and the recent message is lost.

To prevent this problem, disable the resend feature in Microsoft Outlook or use the SourceOne Offline Access plug-in to resend shortcut messages in Microsoft Exchange environments.

Shortcutting best practices for IBM Domino environments

This section contains shortcutting best practices that apply only to environments that contain IBM Domino servers.

Use local mail file replicas

Use local mail file replicas to minimize the amount of shortcut retrieval performed. Replication is a native capability of IBM Domino. When you create a local replica of the mail file, the Shortcut Extension Manager add-in replaces the shortcut stub within the Notes message. It replaces the shortcut stub with the original message before IBM Domino replicates the message to the local replica.

Ideally, do not begin shortcutting messages until existing users who require local replicas create them. The creation of local replicas containing shortcuts has a high performance impact because every shortcut must be retrieved when creating the replica.

Configure a SourceOne server locator record for each IBM Domino server

By default, Dell EMC SourceOne shortcuts use a single SourceOne server locator record in the public name and address book (NAB). This locator record is an IBM Domino person record with the name SourceOne Shortcut. The Comments field in the Miscellaneous tab for this user contains a list of SourceOne shortcut retrieval servers for all IBM Domino servers.

About this task

In an environment using one SourceOne server, a single locator record is sufficient. However, in environments with multiple SourceOne servers, specify a separate SourceOne server locator record for each IBM Domino server so that shortcuts are requested first from the SourceOne server that is associated with each IBM Domino server, limiting the amount of failover.

Specify additional locator records using the `notes.ini` variable *ExShortcutServerLocatorPerson*. This variable overrides the default locator record and allows each IBM Domino server to have its own person record and, therefore, its own list of SourceOne servers to retrieve shortcuts.

Perform the following steps to create a shortcut locator record.

Procedure

1. Create a person record in the public NAB (such as DominoServer1 Shortcut).
2. Modify the person record to add a list of SourceOne servers in the wanted search order to the **Comments** field on the **Miscellaneous** tab.
3. Define the *ExShortcutServerLocatorPerson* variable to indicate the new person record by adding that variable to the `notes.ini` file on the IBM Domino server as follows:

```
ExShortcutServerLocatorPerson=DominoServer1 Shortcut
```

Disable transaction logging in ExShortcut.nsf in high volume environments

The Dell EMC SourceOne shortcut cache database, ExShortcut.nsf, is created the first time the IBM Domino server is run after installing the SourceOne shortcut extension manager. In high

volume email environments, disable database transaction logging of the SourceOne shortcut cache database.

About this task

Disable transaction logging of the SourceOne shortcut cache database, `ExShortcut.nsf`, by completing the following task.

Procedure

1. After installing the SourceOne shortcut extension manager, delete the existing SourceOne shortcut cache database, `ExShortcut.nsf`. This file was created when you installed the SourceOne shortcut extension manager.
2. Type the following line to the IBM Domino server `notes.ini` file:

```
ExDisableShortcutTXNLogging=1
```

3. Restart the IBM Domino server.

Exclude selected IBM Domino tasks from retrieving shortcuts

IBM Domino server tasks, such as Adminp or the agent manager, can create server performance problems when they access documents that have been shortcut. When these tasks access documents that have been shortcut, they can cause those shortcuts to be restored immediately from the SourceOne server. This restoration could potentially cause a performance problem on the IBM Domino server, the SourceOne server, or both.

About this task

To prevent this problem, exclude selected IBM Domino tasks from restoring shortcuts. Note that SourceOne does not exclude the IBM Domino agent manager automatically. Also, it is not mandatory that the IBM Domino agent manager be specified.


You exclude tasks from restoring shortcuts by specifying the `EmailXtenderShortcutExclude` variable in the IBM Domino server `notes.ini` file by completing the following task.

Procedure

1. Identify the tasks that you want to exclude from shortcut processing. Typically at least the Adminp task is excluded.
2. Modify the `notes.ini` file on the IBM Domino server to add the `EmailXtenderShortcutExclude` variable. The value for this variable is the name of one or more excluded executables. If multiple executables are listed, they are separated with commas.
3. Restart the IBM Domino server.

For example, adding the following line to the `notes.ini` file excludes the Adminp and Example tasks from restoring shortcuts:

```
EmailXtenderShortcutExclude=Adminp,Example
```

 **Note:** The Example task is not an actual task and is shown only to illustrate the comma list syntax.

When a task is excluded from restoring shortcuts, a message indicating that action is written to the IBM Domino server console log. Review the log to see what tasks are excluded from restoring shortcuts.

Best practices for using Legal Hold folders

There are several best practices that you can follow when using Legal Hold folders.

Refer to [Configuring Mapped Folders](#) for a list of these best practices.

Understanding historical archiving from Sent or Sent Items

Use the Archive-Historical activity to archive messages from the Notes Sent view or the Outlook Sent Items folder. When you use the Archive-Historical activity to archive items from this view or folder, it is important to understand the following:

- The recipients that are listed on the message may not necessarily have received the items in the **Sent view or Sent Items** folder. Typically these messages are received, but if the mail server encounters a problem, the intended recipients may not receive them.
- When you use the **Archive-Historical** activity to archive messages from the **Sent view or Sent Items** folder, and they contain one or more distribution lists, the users in those distribution lists are not listed as recipients in the Dell EMC SourceOne archive. They are also not listed as owners of the message.
- A Notes message that is archived from the **Notes Sent** view can appear in an archive as two messages with different Message IDs. This situation occurs when:
 - The Notes message is sent to an external and an internal address.
 - The Notes message is journaled.
 - The Notes message is archived by using an **Archive-Historical** or a **Shortcut-Historical** activity.

Messages that are sent to external and internal addresses include different content which results in the creation of different Message IDs. Messages that are sent to external addresses contain MIME. Messages that are sent to internal addresses do not contain MIME.

Improving Office 365 journaling performance by increasing target folders used

If needed, increase the performance of a Journal activity processing Office 365 content by increasing the number of target folders that are used by the Journal activity.

One processing job is created for each defined target folder for that activity, so to have more messages that are processed simultaneously, increase the number of target folders in use.

Refer to [Modifying SMTP Journaling Groups](#) for how to increase the number of target folders used.

Optimizing SourceOne Search behavior for use with Office 365 content

How SourceOne Search handles Office 365 email content can be modified by using the Web Search dialog box from the Application Configuration node of the SourceOne console.

Recommendations for improving User Delete performance

The following sections discuss how to improve the performance of User Delete activities.

Folder Conversion utility

The Folder Conversion utility affects the performance of the following:

- SQL Server, due to metadata updates to the SourceOne Archive database.
- SourceOne Native Archive Server with the Index role, due to ownership updates.

To improve performance for folder conversion:

- Add SourceOne Native Archive Servers that have the Index role.
- Use the Folder Conversion utility to schedule folder conversion for off-peak hours.
- If you plan to run folder conversion during peak hours, use the Folder Conversion utility to reduce the number of threads.
- After folder conversion completes, run database maintenance on the SQL Server.

Journaling to Personal or Community mapped folders

Journaling to a Personal or Community folder rather than an Organization folder affects the performance of the following:

- SourceOne jobs, due to longer runtimes.
- SQL Server, due to metadata being added to the SourceOne Archive database.

To improve performance of journaling to a **Personal** or **Community** mapped folder:

- Increase the number of Journaling jobs on SourceOne Workers.
- Add SourceOne Workers.

Message deletion through the mail client (Delete-User Initiated Delete activity)

The Delete-User Initiated Delete activity processes user requests to delete messages through the mail client.

About this task

Perform the following to improve the performance of the **Delete-User Initiated Delete** activity.

Procedure

1. Schedule the **Delete-User Initiated Delete** activity to run at a time when other activities are not running.
2. Increase the number of connections to the mail server. Refer to [Tuning Worker Server job access to servers](#).
3. Increase the number of **Delete-User Initiated Delete** jobs on SourceOne Workers.

4. Add SourceOne Workers.
5. Add SourceOne Native Archive Servers that have the Archive role.

Message deletion through SourceOne Search

Perform the following to improve the performance of message deletions through Dell EMC SourceOne Search.

Procedure

1. Increase the number of Delete jobs on SourceOne Workers.
2. Add SourceOne Workers.
3. Add SourceOne Native Archive Servers that have the Archive role.

CHAPTER 13

Configuring a Cloud Tiering Appliance Integration

The following section describes the integration of Dell EMC Cloud Tiering Appliance (CTA) with Dell EMC SourceOne:

- [Enabling Cloud Tiering Appliance integration](#).....266
- [Managing Cloud Tiering Appliance server consoles](#)..... 266

Enabling Cloud Tiering Appliance integration

You can enable the use of the Dell EMC Cloud Tiering Appliance (CTA) console while within the Dell EMC SourceOne Console. Then use the CTA console to manage CTA servers while within the SourceOne console.

When integration is enabled, the **Cloud Tiering Appliance (CTA)** node is added to the list of nodes in the SourceOne Console.

Enable and disable the use of CTA consoles within the SourceOne Console using the **Global Settings** page of the **Application Configuration** node.

Managing Cloud Tiering Appliance server consoles

You can add, modify, or delete Cloud Tiering Appliance (CTA) server consoles from the list of the ones that can be launched from SourceOne Email Management.

The following sections describe how to manage access to CTA server consoles.

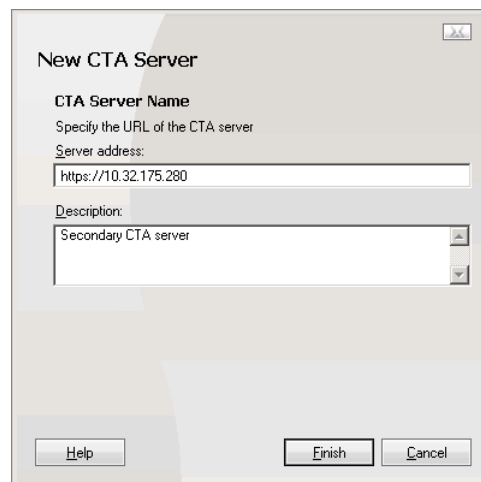
Adding a Cloud Tiering Appliance server console

Perform the following steps to add an Dell EMC Cloud Tiering Appliance (CTA) server console.

Procedure

1. Verify that CTA integration is enabled.
2. Select the **New CTA Server** action in the SourceOne console, or right-click the **Cloud Tiering Appliance (CTA)** node and select **New CTA Server**. The **New CTA Server** dialog box appears.

Figure 77 New CTA Server dialog box

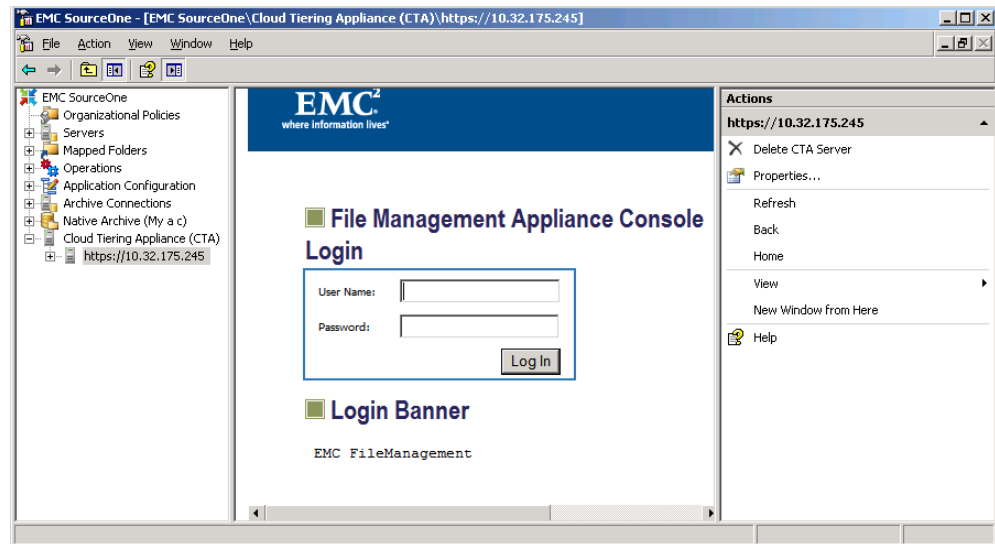


3. In the **New CTA Server** dialog box, type the location of the CTA server console web page in the **Server address** field. The server address that you type is not validated as being the location of a CTA server, so ensure that you type it accurately.
4. Optionally, type a description for this server console in the **Description** field.
5. Click **Finish**.

A maximum of 20 CTA servers can be configured at one time. An error appears if you try to configure more than 20 servers.

The server console is added as a node under the **Cloud Tiering Appliance (CTA)** node in the SourceOne Console and that CTA Server console web page appears.

Figure 78 CTA Server console displayed within Dell EMC SourceOne



Modifying the description of a Cloud Tiering Appliance server console

Modify the description of an Dell EMC Cloud Tiering Appliance (CTA) server console, but not the server address. If the specified server address has changed, delete the CTA server and add it again to the Dell EMC SourceOne console.

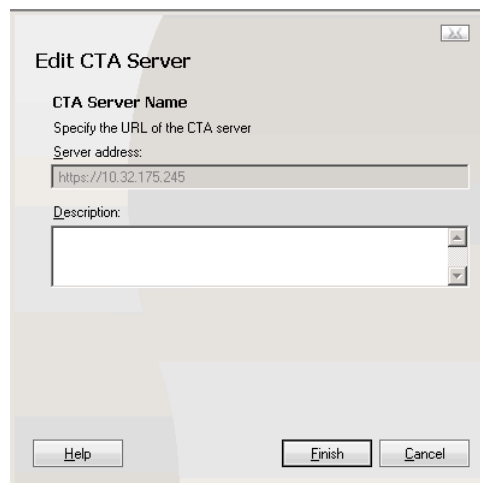
About this task

Perform the following steps to modify the description of a CTA server.

Procedure

1. Select the server console to be modified under the **Cloud Tiering Appliance (CTA)** node.
2. Select the **Properties** action in the SourceOne console, or right-click the selected **CTA console** node and select **Properties**. The **Edit CTA Server** dialog box appears.

Figure 79 Edit CTA Server dialog box



3. On the **Edit CTA Server** dialog box, modify the contents of the **Description** field.

4. Click **Finish**.

Deleting a Cloud Tiering Appliance server console

Perform the following steps to delete an Dell EMC Cloud Tiering Appliance (CTA) server console.

Procedure

1. Select the server to be deleted under the **Cloud Tiering Appliance (CTA)** node.
2. Select the **Delete CTA Server** action in the Dell EMC SourceOne console, or right-click the selected **CTA console** node and select **Delete CTA Server**. A **Delete CTA Server** dialog box appears that displays the following:

Are you sure you want to delete the selected CTA server?

3. Click **Yes** to continue the deletion.

The CTA server console is deleted from the list of server consoles under the **Cloud Tiering Appliance (CTA)** node.

CHAPTER 14

Maintaining Dell EMC SourceOne

This section includes information about maintenance tasks. Topics include:

- [Daily Maintenance Tasks \(common and email-specific\)](#)270
- [Performing a backup of a SourceOne system](#) 274
- [Restoring an SourceOne system after backup](#) 281
- [Maintaining the SourceOne databases \(common\)](#) 282
- [Infrequent Maintenance Tasks \(common and email-specific\)](#)295

Daily Maintenance Tasks (common and email-specific)

To ensure that SourceOne is functioning correctly and that content is being processed and archived as you intend, verify the health and correct operation of the EmailXtender system daily. Do this verification by performing the maintenance tasks in the following sections.

As well as the daily tasks, there are other less frequent tasks that must be performed regularly:

- Perform backups of the SourceOne system.
- Perform database maintenance.
- Perform other less frequent maintenance tasks.

The following are daily maintenance tasks for a SourceOne system:

- Review the status of all SourceOne system computers.
- Review the status of all SourceOne jobs.
- Review the event logs for potential problems relating to SourceOne.
- Review the storage that the SourceOne archive occupies.
- Review the status of storage volumes and searchable indexes.
- Email-specific: Review journaling mailboxes to see if there are any unprocessed messages.
- Email-specific: Review **Journal** activity directories for SMTP messages that must be manually reprocessed.
 - For messages encountered when using the **Journal** activity with the SMTP data source type.
 - For messages encountered when using the **Journal** activity with the Microsoft Office 365 data source type, refer to the section on reprocessing Office 365 Microsoft Exchange journal reports.

Review status of all SourceOne system computers

Review the network status of all SourceOne system computers to ensure there are no connectivity problems.

About this task

Perform the following steps to review the status of all SourceOne computers.

Procedure

1. Use a network management tool (such as the ping command) to verify network connectivity to all computers used by SourceOne:
 - SourceOne Master Server and Worker Server computers
 - SourceOne database server computers
 - SourceOne Native Archive Servers
 - Any other servers with which the SourceOne system interacts (such as mail servers or Microsoft SharePoint servers)
 - The primary domain controller for the domain in which the SourceOne system is used
2. Use the **Servers** node of the SourceOne console to review the status of the Worker computers.

Changing or duplicating MAC addresses of SourceOne servers can cause problems for Worker Servers or Native Archive Servers.

Review activity job status

Review the status of all jobs that Dell EMC SourceOne activities created to ensure that they are functioning correctly.

Use the **Job Management** node of the SourceOne console to review the status of the activity jobs.

At a minimum, review the following status fields:

- Review the **Activity State** field to ensure that the activity is correct.
- Review the **Job State** field to ensure that the jobs are completed as expected.

If the status fields indicate a problem, gather additional information by performing the following:

- Review the event log for the Worker on which the job ran.
- Review the job log file for the job if it was enabled.

Review event logs

Events that can affect the Dell EMC SourceOne system are reported in the EMC, Application, and System event logs. Periodically review those logs to examine if any unexplained or problematic events have occurred in SourceOne, or any of the software SourceOne uses, or the operating system.

About this task

It can be useful to create the MMC application that loads the event logs from all the computers you monitor.

Perform the following procedure to view these event logs using the Microsoft Windows Event Viewer.

Procedure

1. On the computer on which you want to view the event log, select **Programs > Administrative Tools > Event Viewer** from the **Start** menu.

The **Event Viewer** appears. The left pane lists the following event logs: Application, Security, System, and EMC.

SourceOne installed the EMC log. The other logs are installed as part of the operating system.

2. To see a list of events in a log, click the log in the left pane.
3. To see the details of an event:
 - a. In the right pane, right-click the event.
 - b. Select **Properties** from the **shortcut** menu.

Sometimes, Dell EMC Support personnel may direct you to also review other information or log files that are associated with the product.

Review available storage space

As content is archived, the amount of space that Dell EMC SourceOne used to contain those messages grows. Review the amount of storage that is used and available on the servers you use to store SourceOne content including database servers or Native Archive computers.

If the computers containing the messages or their associated databases run out of space, SourceOne can no longer archive messages.

Review storage volumes and searchable index status

Review the creation of archival storage volumes and searchable indexes to ensure that they are performing as expected.

Review the status of volumes and indexes using the SourceOne console.

In the Native Archive, many open volumes may indicate that SourceOne is having problems closing volumes. It may indicate that something is wrong with the storage drive which is the extended drive, if you are using DiskXtender. It may also indicate that the drive to which the volume is being written may be full.

Email-specific: Review journaling mailboxes or databases for unprocessed messages

Sometimes, Dell EMC SourceOne may encounter a problem transferring a message from a Microsoft Exchange journaling mailbox or an IBM Domino journaling database to SourceOne. SourceOne then does not process these messages.

The handling of these messages is different for each type of mail server:

- Messages that could not be transferred from a Microsoft Exchange mail server are moved to the Sent Items folder of the Microsoft Exchange journaling mailbox for processing later. The SourceOne administrator must review the Sent Items folder for these messages periodically and copy them to the Inbox folder of the journaling mailbox to try to reprocess them.

If a message remains in the Inbox folder for a day or more, it indicates that there is a problem either with the message or the system. Have the administrator check the event log for a possible problem.

- Messages that could not be transferred from an IBM Domino mail server are moved to the Bad Documents Folder of the IBM Domino journaling database. Periodically, the `ExProcBadDocs.exe` agent takes messages from the Bad Documents Folder, places them in an NSF file and then places the NSF file into a message as an attachment. It then puts that message back in the All Documents view of the journaling database for processing.

If a message from an IBM Domino mail server still cannot be processed, it is placed in the Bad Data Folder. An administrator must check the Bad Data Folder for these messages periodically and copy them back to the All Documents view of the journaling database to try to process them.

If a message remains in the Microsoft Exchange Inbox folder or the IBM Domino All Documents view for a day or more, it indicates that there is a problem either with the message or the system. Have the administrator check the event log for a possible problem.

Email-specific: Reprocessing Journal activity SMTP messages

Sometimes, the Journal activity cannot process certain SMTP messages and so places them into a different folder for manual reprocessing.

The following section describes how to reprocess those SMTP messages.

Overview of reprocessing SMTP messages

When SMTP is selected as the data source type for a Journal activity, the Journal activity receives that content as an SMTP message.

When the **Journal** activity cannot process an SMTP message, that message is placed in the Baddir folder that is created within the Drop directory where the Journal activity accessed the SMTP message originally.

The message is moved to the Baddir folder so that the following occurs:

- SourceOne Email Management does not continually process the message.
- The administrator can easily find the message for manual reprocessing.

The Baddir directory is created as a subdirectory of the IIS SMTP Drop directory (`\Inetpub\Mailroot\Drop\Baddir`) the first time the **Journal** activity cannot process an SMTP message.

Often, reprocessing a message corrects the processing problem because many problems are temporary.

The following sections describe why SMTP messages may be reprocessed and how to process it.

Causes for SMTP messages to not be processed

The following are reasons the Journal activity may not process an SMTP message:

- There is a problem with the format of the message.
- The message cannot be separated into its components by the SourceOne Email Management unpacker.
- The SMTP message cannot be placed in the Native Archive for some reason, such as having a network issue.
- One or more data source directories had a network connection problem and SourceOne Email Management could not access them.
- One or more SourceOne Email Management servers failed during processing, possibly because of operating system problems.


SMTP message reprocessing procedure

Perform the following steps to reprocess SMTP messages that the Journal activity could not process initially.

Procedure

1. Go to one or more Baddir directories for the **Journal** activity for the SMTP data source.

SourceOne Email Management creates a Baddir directory when needed as a subdirectory of each specified data source directory (typically the IIS Drop directory). Each of these Baddir directories must be reviewed for messages that may need reprocessing.

 **Note:** There are possibly several Baddir directories for the **Journal** activity when SMTP is selected one for each Drop directory. However, only one Journaling issues folder when Microsoft Office 365 is selected as the data source for the **Journal** activity.

2. Select an SMTP message from one or more Baddir directories and move it to the data source directory specified for this activity so that it is processed again.
3. If the SMTP message is not processed after several tries, record any event log messages about the processing of the SMTP message and contact Dell EMC Software Support for assistance.

Performing a backup of a SourceOne system

Because the SourceOne SourceOne system is a distributed system that is composed of many components, performing a backup of those components must be done in a particular order to be successful.

About this task

To perform a backup of the SourceOne system, suspend the operations of the various components in the correct order. After the backup has completed, you can then resume the operation of those components again in the correct order.

The following is the ordered procedure for performing a backup of a SourceOne system.

Procedure

1. Before beginning the backup process, review how SourceOne behavior is changed during the backup procedure.
2. If not previously installed, install the SourceOne scripts for performing a backup of the SourceOne system.
3. Suspend any other applications that use SourceOne, such as Discovery Manager, before suspending SourceOne.
4. Suspend the operation of the SourceOne activities and Workers.
5. Suspend the operation of the archives you are using with the SourceOne system.
6. Perform a backup of the SourceOne system and archive computers.
7. When the backup has completed on all computers, resume the operation of the archives.
8. Resume the operation of the SourceOne system.
9. Verify the operation of the SourceOne system after it has resumed operation.
10. Resume any other applications that use SourceOne, such as Discovery Manager, after resuming SourceOne itself.

SourceOne behavior during the backup process

While the Dell EMC SourceOne system is suspended and being backed up, the following changes in behavior occur:

- The current state of the SourceOne system, activities, or jobs can be viewed, but should not be changed. Worker Servers cannot be added or removed from the system.
- If their schedule causes them to expire while the backup is taking place, scheduled jobs may expire during the backup.
- Jobs will be suspended and will maintain their state without any failure or loss of data when they resume after the backup is complete.
- Which jobs are suspended depends on which suspend script is used:
 - If the `ES1_ActivitySuspend.vbs` script is used to suspend activities for backup, all user started jobs are suspended.

- If the `ES1_ActivityBackupSuspend.vbs` script is used to suspend activities for backup, all user started jobs except SourceOne Search jobs are suspended. During this suspension, user interactions with the SourceOne Search application can occur and the jobs that are created as a result of that interaction function correctly during the backup process. All other job types are suspended.
- Administrators are to review the SourceOne system to verify that no Native Archive folders are in the process of being deleted before beginning the backup process. If a Native Archive folder is being deleted when the backup process occurs, the deletion will pause and then continue to occur after the SourceOne system is restored. However, pausing and continuing the deletion may cause problems and should be avoided.

Installing and using the SourceOne suspend for backup scripts

The Dell EMC SourceOne backup scripts that are used to suspend and resume the SourceOne system and Native Archive. They are on the SourceOne kit in the `\Utility\Backup` folder and named as described in this table.

Table 19 SourceOne backup scripts

File	Description	
<code>ES1_ActivitySuspend.vbs</code>	Suspends all Workers before backup, does not allow searches	
<code>ES1_ActivityBackupSuspend.vbs</code>	Suspends all Workers before backup, but allows searches	
<code>ES1_NativeArchiveSuspend.vbs</code>	Suspends the Native Archive before backup	
<code>ES1_NativeArchiveResume.vbs</code>	Resumes the Native Archive from a suspended state	
<code>ES1_ActivityResume.vbs</code>	Resumes Workers from a suspended state	

These scripts are provided as Microsoft Visual Basic Scripting Edition (VBScript) source files. Use the `cscript` command to run these scripts from the command line as follows:

```
C:\> cscript ES1_ActivitySuspend.vbs
```

The previous example displays how to run this command on a 32-bit version of a Microsoft Windows operating system. The following example displays how to run this command on a 64-bit version of a Microsoft Windows operating system:

```
C:\> C:\Windows\SysWOW64\cscript ES1_ActivitySuspend.vbs
```

These scripts can be run from any computer that has the SourceOne console that is installed using an account that is part of the SourceOne security group. Refer to the *SourceOne Email Management Installation Guide* for more information about the SourceOne security group.

These scripts can be used as is, or customized and integrated into existing backup procedures. The scripts do not use command line parameters, so any changes to the scripts must be made by editing the scripts. The script variables that administrators are most likely to change are defined in the scripts as global variables and are described in this table.

Table 20 Frequently modified backup script variables

Variable	Description	
timeout	The amount of time in seconds that, if it does not complete, the script waits before exiting. If the value is set to a value of 0 or less, the script does not exit until it completes. The default value is 3600 (1 hour). If you do not want the script to wait for an hour, you can shorten this time by reducing the value to a shorter period.	
pollInterval	The amount of time in seconds that the script wait before polling the Worker Server state. The default value is 10.	

Suspending applications that use SourceOne

Before suspending the Dell EMC SourceOne system, suspend any other applications that use SourceOne, such as SourceOne Discovery Manager. This suspension prevents the application from logging any errors because it cannot reach SourceOne while it is in a suspended state.

While these applications are suspended, you may want to take the opportunity to backup any data associated with these applications.

Suspending the SourceOne activities

The first step in performing a backup of Dell EMC SourceOne is to suspend the operation of the SourceOne activities as follows.

Procedure

1. Verify that no Native Archive archive folders are in the process of being deleted before beginning the suspension and backup process. If an archive folder is in the process of being deleted, wait for the deletion to complete before suspending the system.
2. Use an account that is part of the SourceOne security group to log in to the computer on which the SourceOne console is installed and where the `ES1_ActivitySuspend.vbs` script is run.
3. Open a command prompt window by selecting **Programs > Accessories > Command Prompt** from the **Start** menu. The `cmd.exe` window appears.
4. In the `cmd.exe` window, use the `cscript` command to run one of the scripts to suspend SourceOne activities and Worker operations:
 - Run the `ES1_ActivitySuspend.vbs` script to suspend all activities, including SourceOne Search.
 - Use the `ES1_ActivityBackupSuspend.vbs` script to suspend all activities for backup, but allow SourceOne Search searches to occur.

The following is an example of running the `ES1_ActivitySuspend.vbs` script:

```
C:\> cscript ES1_ActivitySuspend.vbs
```

5. If the script was successful, review the output of the script to determine:

- The following message indicates that the Workers and activities have been successfully suspended, and then lists the suspended Workers:

```
All workers suspended successfully.
Worker status report:
Worker 'ALPHA': Suspended
Worker 'BETA': Suspended
Worker 'GAMMA': Suspended
```

Continue with the backup procedure by suspending the installed SourceOne archives

- The following message indicates that one or more Workers could not be successfully suspended before the script exited:

```
Timeout occurred while waiting for workers to suspend
Worker status report:
Worker 'ALPHA': Suspended
Worker 'BETA': Available
Worker 'GAMMA': Suspended
```

The previous message indicates that there was a problem suspending the activities and Workers. The status message in this case indicates that the Worker Server BETA was not suspended. Do the following to correct this problem:

- Review the state of the SourceOne system and correct any problems that you encounter that may have caused one or more Workers to be unable to suspend, then rerun the script.
- If no problem can be found, edit the `ES1_ActivitySuspend.vbs` or the `ES1_ActivityBackupSuspend.vbs` script. Also, increase the value of the timeout variable to allow the activities and Workers more time to suspend and then rerun the script.

Suspending SourceOne archives

After suspending the Dell EMC SourceOne Workers and activities, the next step is to suspend the archives that are used with SourceOne. The process for suspending an archive is different for each type of archive and is described in the following list:

About this task

For the SourceOne Native Archive, suspend the SourceOne Native Archive.

Perform the following steps to suspend SourceOne Native Archives.

Procedure

- Use an account that is part of the SourceOne security group to log in to the computer on which the SourceOne console is installed and where the `ES1_NativeArchiveSuspend.vbs` script is run.
- Open a command prompt window by selecting **Programs > Accessories > Command Prompt** from the **Start** menu. The `cmd.exe` window appears.
- In the `cmd.exe` window, use the `cscript` command to run the `ES1_NativeArchiveSuspend.vbs` script to suspend all Native Archive Servers and operations:

```
C:\> cscript ES1_NativeArchiveSuspend.vbs
```

- If the script is successful, review the output of the script to determine:

- The following message indicates that an archive has been successfully suspended:

```
All archives suspended successfully.
Archive status report:
Archive 'NativeArchive1': Suspended
```

Continue with the backup procedure by performing the backup as described in the following section:

- The following message indicates that an archive could not be successfully suspended before the script exited:

```
Timeout occurred while waiting for archives to suspend.
Archive status report:
Archive 'NativeArchive1': Available
```

The previous message indicates that there was a problem suspending the archive. The status message in this case indicates that the archive NativeArchive1 was not suspended. Perform the following to correct this problem:

- a. Review the state of the Native Archive and servers, and correct any problems that you encounter that may have caused them to be unable to suspend, then rerun the script as described in step 1.
- b. If no problem could be found, edit the `ES1_NativeArchiveSuspend.vbs` script. Also, increase the value of the timeout variable to allow the archive more time to suspend and then rerun the script as described in step 1.

Performing the SourceOne backup

Use the preferred backup solution, such as the NetWorker backup and recovery software, to perform the backup of the SourceOne system and archives.

About this task

Ensure you include the following in the backup of the SourceOne system and one or more archives:

- The Microsoft SQL Server databases that are used by the SourceOne system, and if used, the Discovery Manager:
 - Activity database-Dell EMC SourceOne system database.
 - Search database-Dell EMC SourceOne Search database.
 - Native Archive database.
 - Discovery Manager database. This database is only available if you have installed Discovery Manager.
- One or more archives that are used by SourceOne:
 - The Native Archive. A backup of the Native Archive includes backing up the following:
 - The Native Archive database.
 - One or more Native Archive message center directories.
 - One or more Native Archive container file (volume) locations, including container files that are stored on Centera or other devices.
 - One or more Native Archive index locations when indexes have been created.
 - The EmailXtender 4.x archive. Perform a backup of the EmailXtender system and archive, including the database, as directed in the EmailXtender Administrator's Guide. To reduce downtime, have the EmailXtender backup occur simultaneously as the SourceOne system backup.

After the backup has completed on all SourceOne system and archive computers, resume the operation of the SourceOne system as follows.

Procedure

1. Resume the archive processing.
2. Resume the activity processing.

Resuming operation of the SourceOne archives

To resume the operation of SourceOne after performing a backup, first resume the operation of the SourceOne archive.

About this task

Continue the backup procedure by resuming operations of the SourceOne activities. Perform the following steps to resume operation of the Native Archives.

Procedure

1. Use an account that is part of the SourceOne security group to log in to the computer on which the SourceOne console is installed and where the `ES1_NativeArchiveResume.vbs` script is run.
2. Open a command prompt window by selecting **Programs > Accessories > Command Prompt** from the **Start** menu. The `cmd.exe` window appears.
3. In the `cmd.exe` window, use the `cscript` command to run the `ES1_NativeArchiveResume.vbs` script to resume all Native Archive Servers and operations:

```
C:\> cscript ES1_NativeArchiveResume.vbs
```

4. If the script was successful, review the output of the script to determine:
 - The following message indicates that the archives have successfully resumed operation:

```
All archives resumed successfully.
Archive status report:
Archive 'NativeArchive1': Available
```

Continue to resume operation of SourceOne.

- The following message indicates that a Native Archive archive could not successfully resume operation before the script exited:

```
Timeout occurred while waiting for archives to resume.
Archive status report:
Archive 'NativeArchive1': Suspended
```

The previous message indicates that there was a problem resuming operation of the archives. The status message in this case indicates that the archive `NativeArchive1` is suspended and not available. Perform the following to correct this problem:

- a. Review the state of the SourceOne Native Archive and servers. Correct any problems that you encounter that may have caused the Native Archive and servers to be unable to resume operation, then rerun the script as described in step 1.

- b. If no problem can be found, edit the `ES1_NativeArchiveResume.vbs` script and increase the value of the timeout variable. These two actions allow the archive more time to resume operation and then rerun the script as described in step 1.

Resuming operation of the SourceOne system

The final step in resuming operation of the SourceOne system after performing a backup is to resume the operation of the SourceOne activities and Worker Servers.

About this task

Perform the following steps to resume the operation of the activities and Worker Servers.

Procedure

1. Use an account that is part of the SourceOne security group to log in to the computer on which the SourceOne console is installed and where the `ES1_ActivityResume.vbs` script is run.
2. Open a **command prompt** window by selecting **Programs > Accessories > Command Prompt** from the **Start** menu. The `cmd.exe` window appears.
3. In the `cmd.exe` window, use the `cscript` command to run the `ES1_ActivityResume.vbs` script to resume operation of all SourceOne activities and Workers:

```
C:\> cscript ES1_ActivityResume.vbs
```

4. If the script was successful, review the output of the script to determine:
 - The following message indicates that the Workers and activities have successfully resumed operation:

```
All workers resumed successfully.
Worker status report:
Worker 'ALPHA': Available
Worker 'BETA': Available
Worker 'GAMMA': Available
```

The SourceOne system has resumed operation.

Verify that SourceOne has completely resumed operation.

- The following message indicates that one or more Workers could not successfully resume operation before the script exited:

```
Timeout occurred while waiting for workers to resume
Worker status report:
Worker 'ALPHA': Suspended
Worker 'BETA': Available
Worker 'GAMMA': Available
```

The previous message indicates that there was a problem resuming operation of one or more Workers. The status message in this case indicates that the Worker Server ALPHA is still suspended and is not available. Perform the following to correct this problem:

- a. Review the state of the SourceOne system, and correct any problems that you encounter that may have caused the system to be unable to resume operation. Then rerun the script as described in step 1.

- b. If no problem can be found, edit the `ES1_ActivityResume.vbs` script and increase the value of the timeout variable. This step allows the activities more time to resume operation and then rerun the script as described in step 1.

Verifying successful operation of SourceOne after the backup

After the SourceOne system has resumed operation, review the system status to ensure everything has resumed correctly by performing the tasks in the system maintenance checklist.

Review job status to ensure that no jobs that were scheduled to run expired during the backup. If one or more jobs had expired, determine whether to rescheduled or not.

Resuming applications that use SourceOne

After resuming the SourceOne system, resume any other applications that use SourceOne, such as Discovery Manager. Resuming dependent applications after you have resumed the SourceOne system prevents those applications from logging errors because they cannot reach SourceOne while it is in a suspended state.

Restoring an SourceOne system after backup

When restoring an SourceOne system from backup you must restore the entire system, even if only one component needs restoration. Restoring the entire system from backup keeps all the components synchronized.

About this task

Restore a SourceOne system from backup by completing the following tasks.

Procedure

1. If the SourceOne system is running, suspend the system.
2. Perform the restoration using the same solution to restore the SourceOne system and archives as you did to back them up.
3. Remove any existing files from the following locations before you restore files to those locations:
 - One or more Native Archive message center directories.
 - One or more Native Archive container file volume locations, including container files that are stored to Centera or other devices using DiskXtender.
 - One or more Native Archive index locations when indexes have been created.
4. Restore the Microsoft SQL Server databases that the SourceOne system uses, and if used, the Discovery Manager:
 - Activity database-Dell EMC SourceOne system database.
 - Search database-Dell EMC SourceOne Search database.
 - Native Archive database.
 - Discovery Manager database. This database is only available if you have installed Discovery Manager.
5. Restore one or more archives that SourceOne uses:
 - The Native Archive, including the following:

- The Native Archive database.
 - One or more Native Archive message center directories.
 - One or more Native Archive container file volume locations, including container files that are stored to Centera or other devices using DiskXtender.
 - One or more Native Archive index locations when indexes have been created.
- The EmailXtender 4.x archive. Restore the EmailXtender system and archive, including the database, as directed in the EmailXtender Administrator's Guide. To reduce downtime, you can have the EmailXtender restoration occur simultaneously as the SourceOne system restoration.
6. Resume the suspended SourceOne system as described in the following sections, in the following order:
 - a. Resume the operation of the SourceOne archives.
 - b. Resume the operation of the SourceOne system.
 - c. Resume the applications that use SourceOne.

Considerations for restoring Native Archive with multiple index storage locations

If you are using the Native Archive and you have multiple index storage locations that are defined, take additional precautions when restoring the Native Archive from backup.

Native Archive indexes are numbered sequentially as they are generated and information about the indexes is stored in the Native Archive database.

When restoring the Native Archive from backup in two or more index storage locations, ensure that the numbered indexes in the storage locations match their data in the Native Archive database. The data is for the recovery point objective (RPO).

Maintaining the SourceOne databases (common)

Part of maintaining the SourceOne system includes maintaining the SourceOne Email Management databases, and if that product is installed, the Discovery Manager database.

When you first install the SourceOne products, performing database maintenance is not urgent because there is not a large amount of data that is stored in the databases. However, after the products are in frequent use, perform database maintenance regularly.

Refer to the following sections for important database maintenance concepts and processes.

Database maintenance concepts

Understand core concepts about databases and their need for maintenance before performing that maintenance. Refer to the following sections for those concepts.

Why is database maintenance required?

Microsoft SQL Server databases that have a high volume of activity require frequent maintenance. If the databases are not regularly maintained to avoid these problems, index fragmentation and out-of-date statistics can degrade performance.

The Native Archive, Activity, and Discovery Manager databases are high-volume databases and require the maintenance that is previously described to avoid performance degradation.

More about index defragmentation

Index fragmentation occurs when the logical and physical structure of the database gets out of order. Indexes in high-volume databases become fragmented due to the high volume of data being inserted, deleted, and updated. When a database becomes fragmented, the performance of that database degrades.

The performance impact of fragmented indexes is more significant with operations that cause SQL Server to process large amounts of data, such as archiving, searching, exporting, or disposing of large amounts of data. However, even if you are not processing large amounts of data, defragmenting indexes is still necessary and allows you to optimize the system performance.

More about updating statistics

SQL Server collects and uses statistics about the distribution of data in table indexes to build efficient query plans that improve the performance of database queries. Indexes in high-volume databases require frequent updates to these statistics because such tables often change which causes the statistics to become out-of-date. If the statistics are not updated regularly, query, retrieval, and archive performance degrades, especially when performing operations on large amounts of data such as large queries and large retrievals.

Although the SourceOne databases are created with the auto update statistics option enabled so that statistics get automatically updated, it is still necessary to perform additional updates to those statistics. It is still necessary because the SourceOne database statistics can get outdated more often than the auto update option can update them.

Which SourceOne databases need maintenance?

SourceOne Email Management installs the following SQL Server databases:

- Native Archive database.
- Activity database.
- Search database.
Discovery Manager installs a single SQL Server database.
- Discovery Manager.

The Native Archive, Activity, and Discovery Manager databases are high-volume databases that require frequent maintenance as described in this section.

The data in the Search database is temporary, so maintenance tasks such as index defragmentation and updating statistics may not be necessary for that database.

When and how often is maintenance to occur?

Typically, the best time to perform the database maintenance tasks is immediately after you have backed up the database and the SourceOne system is in a suspended state.

Typically, for high-volume databases such as those used by SourceOne Email Management and Discovery Manager, perform maintenance tasks at the specified intervals that are described in the following sections.

Weekly database maintenance tasks

As general guidance, maintenance can be performed as often as three times a week if the system is very active, such as a system processing over 100,000 documents a day.

About this task

The interval at which you must perform maintenance may vary depending on several factors, such as:

- The amount of content you are archiving.
- How much and how often you are regularly conducting searches.
- How much time you have available in the maintenance window to perform the maintenance tasks.

Perform the following tasks on a weekly basis to ensure the functionality of the system.

Procedure

1. Defragment the indexes for the following SourceOne Email Management databases using the provided database maintenance tools:
 - Native Archive database.
 - Activity database.
2. Defragment the indexes for the SourceOne Discovery Manager database, if it is installed.
3. Update statistics for the following SourceOne Email Management databases using the provided database maintenance tools:
 - Native Archive database.
 - Activity database.
4. Update statistics for the SourceOne Discovery Manager database, if it is installed.

Monthly database maintenance tasks

About this task

Whether one time a month is the correct interval for the installation or not depends on several factors, such as:

- The amount of content you are archiving.
- How much and how often you are regularly conducting searches.
- How much time you have available in the maintenance window for these tasks.

Perform the following tasks on a monthly basis to ensure the functionality of the system.

Procedure

1. Review the disk space available for each of the following databases to ensure that you have enough physical space to allow for database growth:
 - Native Archive database.
 - Activity database.
 - Search database.
 - Discovery Manager database, if installed.
2. Review database integrity for each of the following databases:
 - Native Archive database.
 - Activity database.
 - Discovery Manager database, if installed.

Refer to the SQL Server documentation or the following article for more information about checking database integrity:

3. Review whether to increase the sizes of the following databases or the growth value for these databases using SQL Server Management Studio:

- Native Archive database.
- Activity database.
- Discovery Manager database, if installed.
Refer to the Microsoft SQL Server documentation for more information about how to increase the size or growth value of a database.

By default, SourceOne creates the databases with an initial size of 1 GB and a growth value of 100 MB.

It is recommended that you increase the growth value from 100 MB to 1 GB after installation. It may be required that you increase the growth value to greater than 1 GB depending on the monthly growth pattern of the database. Increasing these values may help limit physical fragmentation of the database.

Although the SourceOne database files are configured with the auto grow option, SourceOne recommends that you review whether to increase the database file size. Doing this review limits the physical fragmentation of the database that can occur when the database files auto grow often.

Database maintenance guidelines and best practices

The following sections list guidelines and best practices for performing maintenance of the SourceOne databases.

Microsoft guidelines for SQL Server database maintenance

Microsoft provides guidance on how to perform SQL Server database maintenance. This guidance is specific to the version and edition of SQL Server used:

- Refer to the following article for overall database maintenance information:
<http://msdn.microsoft.com/en-us/library/ms178081.aspx>
- Refer to the Microsoft SQL Server documentation or the following online article for the procedure to defragment an index:
<http://msdn.microsoft.com/en-us/library/ms188917%28v=SQL.90%29.aspx>
Refer especially to section D of this online article for a sample script for use in defragmenting an index.
- Refer to the Microsoft SQL Server documentation or the following online article for the procedure to update statistics:
<http://msdn.microsoft.com/en-us/library/ms187348%28v=SQL.90%29.aspx>

You can also use the SourceOne tools for maintenance of the SourceOne Email Management or SourceOne Discovery Manager databases.

SourceOne guidelines for maintaining SourceOne databases

Consider the following guidelines before performing maintenance on the SourceOne databases. These guidelines are described in the following sections.

Guidelines for preparing to maintain the databases

The following are guidelines for how to prepare to perform database maintenance:

- How you prepare the databases before performing database maintenance differs depending on the edition of SQL Server you are using:


- The Standard edition of SQL Server requires that the database be suspended and offline for index maintenance. Failure to suspend the system may cause problems as tables in the database are locked. This problem means that SourceOne and Discovery Manager, if installed, must be in a suspended state as well and that no activity, including searches or shortcut retrievals, can be performed.
- Even with the Enterprise edition of SQL Server, Dell EMC recommends that the database be suspended and offline for index maintenance.

However, Enterprise edition does support index maintenance while the database is online, with the caveat that database performance is degraded while the maintenance is taking place. This degraded performance may cause slow retrieval of shortcuts, and may even cause such retrievals to be unable to complete in the allotted time and timeout.

If you allow the database to be online then shortcut retrievals can be performed, although no other activity can be performed.

- If there are multiple SourceOne products that are installed, such as SourceOne Email Management and Discovery Manager, the database maintenance of both products are coordinated. They are coordinated so that the impact of the maintenance is minimized for all users.
- When running the database maintenance scripts on SourceOne Email Management databases, you need sufficient space in the tempdb database for the processing to occur. When the script rebuilds an index, the tempdb database is used for sorting operations. If the rebuild is being done while in online mode, the SQL Server in the target database maintains a copy of the index for availability while the rebuild occurs.

In a typical partitioned database using the default partition size, the tempdb database size is to be large enough to contain as much as 20% of the size of the database being processed.

 **Note:** This process is added to whatever other use is being made of the tempdb database.

- If there are any groups or software monitoring the database resource usage, such as usage of tempdb, or log space, make them aware of when you are performing database maintenance. Doing this action helps to prevent unnecessary alerts. It may be required that the groups or software adjust the alerts to consider database maintenance, or to create exceptions for the database maintenance operations.

Performing database maintenance can cause high disk I/O on the database server and may cause the monitoring group or software to issue an alert of some kind.

- Be aware that when performing index maintenance, SQL Server may increase the amount of log space used. This increase can cause the log file in the database to grow.
- Performing database maintenance with the database in offline mode is preferred because it allows complete maintenance to be performed. If you cannot perform the database maintenance in offline mode, still try to perform it regularly. For example, you could perform maintenance in online mode twice, and then the third time perform it in offline mode.

Guidelines for when or how often to maintain the databases

The following are guidelines on when, or how often to perform database maintenance and how often to perform it:

- Typically, the best time to perform database maintenance is immediately after you have backed up the database and the SourceOne system and Discovery Manager, if installed, are already in a suspended state.
- Database maintenance tasks are performed when no other heavy processing is occurring on the database server, such as when SourceOne is performing archiving activities. The reason is

that performing tasks such as defragmenting indexes and updating database statistics make heavy use of the database server disks and CPU.

- Maintenance tasks such as updating statistics or defragmenting indexes can be interrupted with no damage to the system. Such interruptions may be necessary when a higher priority operation must complete, so the maintenance task must be interrupted and delayed until a more suitable time.
- On high volume systems that are ingesting 100,000 or more documents a day, performing index maintenance more often than one time a week may be warranted.

Guidelines for defragmenting the indexes in the databases

The following are guidelines for defragmenting the indexes in the databases:


- If you are using the Enterprise edition of SQL Server, you can use partitioning to shorten the time it takes to defragment the indexes. The reason is that the most recently created partition contains most of the fragmentation.
- Typically, if you defragment the indexes before updating the statistics, you gain the largest benefit to the system .
- The Archive database indexes are more likely to be fragmented than the Activity or Discovery Manager database indexes. This increased chance is because the volume of data that is inserted or updated into the Archive database causes the indexes to be frequently and heavily fragmented. More so than the ones in the Activity or Discovery Manager database indexes.

Typically, the indexes for the following tables in the Archive database tend to be candidates for being highly fragmented and so must often be defragmented or rebuilt:

- Message
- FolderMessage
- Route
- FTIndexUpdate
- MessageExtension
- EmailAddress

Other guidelines for maintaining the databases

The following are other database maintenance guidelines:

- It may be required that you move the SourceOne databases from one SQL Server to another after they are installed.
Contact the Dell EMC representative if you need assistance to move the SourceOne databases.
- Updating statistics can be a time-consuming operation. Schedule this maintenance task with that in mind.
-  **Note:** The SourceOne Email Management database maintenance scripts will timeout after approximately 12 hours to prevent them from running too long and consuming too many resources. If a timeout occurs, you can run the script again and it starts where it left off.
- If database performance has become seriously degraded, and you are seeing higher than normal disk usage and CPU usage, you can improve performance more quickly by defragmenting the indexes and not updating statistics.
- After database performance has improved, defragment the indexes and update the statistics when possible.

Installing and using the SourceOne database maintenance tools

SourceOne includes scripts which allow you to maintain the indexes of the Archive, Activity, and Discovery Manager databases. No scripts are provided for maintaining the Search database.

Refer to the following sections for how to install and use these maintenance scripts.

Installing the database maintenance scripts

The database maintenance scripts for the Archive, Activity, and Discovery Manager databases are very similar, so the options and output from the selected options are very similar. The primary difference between the output of the scripts is seen when the Archive database is partitioned, because the Activity and Discovery Manager databases cannot be partitioned.

To install these scripts, copy the following directories, and the files they contain, from the installation kit to a directory on the SQL Server computer:

- \Setup\Database\Utilities\Maintenance\Activity
- \Setup\Database\Utilities\Maintenance\Archive
- \Setup\Database\Utilities\Maintenance\DiscoveryManager

These directories contains the Activity, Archive, and Discovery Manager database maintenance scripts and the associated Visual Basic scripts that those scripts need as follows:

- \Activity\ES1_ActivityDB_Helper.vbs
- \Activity\ES1_ActivityDB_Maintenance_mssql.bat
- \Archive\ES1_ArchiveDB_Helper.vbs
- \Archive\ES1_ArchiveDB_Maintenance_mssql.bat
- \DiscoveryManager\ES1_DMDB_Helper.vbs
- \DiscoveryManager\ES1_DMDB_Maintenance_mssql.bat

The **Visual Basic** files in these directories are used only to redirect output to log files as well as to the terminal screen and do not perform any other function.


Using the database maintenance scripts

Perform the following tasks for the Activity, Archive, and Discovery Manager databases to run the database maintenance scripts.

Procedure

1. Review the script guidelines before you run the scripts.
2. Verify that the SourceOne system is in a suspended state as it would be for backing up the system. The ability to perform searches while the system is suspended depends on which script you used to suspend the system:
 - If you suspend the system using the `ES1_ActivitySuspend.vbs` script before performing database maintenance, only shortcut retrieval is possible.
 - If you suspend the system using the `ES1_ActivityBackupSuspend.vbs` script before performing database maintenance, both shortcut retrieval and **Search** searches are possible elsewhere.
3. Log in to an account on the SQL Server computer that has the **Alter and View Database State** permissions for the specific database you are processing (Archive, Activity, or Discovery Manager).
4. Run the `batch` file either by running it from the DOS command prompt or by double-clicking the file name:

- Execute `ES1_ActivityDB_Maintenance_mssql.bat` to maintain the Activity database.
- Execute `ES1_ArchiveDB_Maintenance_mssql.bat` to maintain the Archive database.
- Execute `ES1_DMDB_Maintenance_mssql.bat` to maintain the Discovery Manager database.

 **Note:** If the batch file is run from a CD, or any other read-only location, it fails with an access denied message.

5. Review the guidelines for performing database maintenance that are printed when the script runs:
 - Database maintenance, being a very resource intensive process causing high disk and CPU usage on SQL Server, performed it in off-peak hours.
 - Both index maintenance and update statistics steps can be time consuming, depending on the maintenance state and size of the database.
 - SourceOne administrative activities must not be operational during maintenance.
 - To reduce maintenance time and increase the quality of the maintenance, the maintenance process is performed in offline mode. However, offline maintenance affects the performance of the SourceOne operations such as user searches and shortcut retrieval.
 - Online database maintenance mode is supported only in SQL Server Enterprise edition. Only offline mode is supported using SQL Server Standard edition.
6. In response to the prompt, specify the instance name for the SQL Server on which the database is installed.
7. In response to the prompt, specify the name of the database to process. The default database name is either ES1Archive, ES1Activity, or Discovery Manager depending on the script used.
8. In response to the prompt, specify whether to display a report on index fragmentation and to display the maintenance steps before performing the steps. The default is to display the report and simulated maintenance steps before actually performing those steps.
9. In response to the prompt, specify whether to rebuild indexes in online or offline mode, if the indexes must be rebuilt. The default is online mode.

The maintenance script defragments or rebuilds indexes that are based on the amount of fragmentation that is detected in the index:

- 0–9% fragmentation, no processing is done or needed.
- 10–30% fragmentation, the index is defragmented.
- Greater than 30% fragmentation, the index is rebuilt.

While rebuilding the index in online or offline mode, no historical archiving, journaling, shortcut creation, or administrative search activities can be performed. Also, administrative searches, such as long-running Discovery Manager searches or Administrative searches must not be run during index maintenance. They should not be running because these activities and the index maintenance operations contends for the same resources, and may cause the activities to timeout or fail.

Refer to the following table to decide whether to allow the script to maintain the database in online or offline mode.

Table 21 Selecting whether to use online or offline mode for database maintenance

Using online mode	Using offline mode	
Requires the use of SQL Server Enterprise edition.	Requires the use of either the Enterprise edition or Standard edition of SQL Server.	
The index maintenance process completes more slowly than in offline mode.	The index maintenance process completes more quickly than in online mode.	
User searches and shortcut retrievals are more likely to complete without delays, timeouts, or signaling errors.	User searches and shortcut retrievals are less likely to complete without delays, timeouts, or signaling errors. When using offline mode, tables are locked and so operations using those tables cannot complete.	
A less complete maintenance of the database is possible.	A complete and higher quality maintenance of the database is possible while the database is offline.	

10. In response to the prompt, specify whether to update the SQL statistics after the indexes are defragmented or rebuilt. The default is to update the statistics.

If you have sufficient time, it is always best to perform the statistics update immediately after defragmenting or rebuilding the indexes, as it makes the statistics update as effective as possible.
11. In response to the prompt, specify whether to perform the maintenance steps that were listed in the simulation, or not do them. The default is to perform them.
12. Review the resulting log file from the maintenance run. This file records the data about the maintenance processing that is written to the screen as the processing occurs.

This file is created in the current working directory and has the same name as the batch script you ran, but with a `.log` file name extension, as one of the following:

- `ES1_ActivityDB_Maintenance_mssql.log`
- `ES1_ArchiveDB_Maintenance_mssql.log`
- `ES1_DMDB_Maintenance_mssql.log`

Note: The log file contains data about multiple runs of the maintenance utility. This information is also stored in the database that was processed.

Scheduling database maintenance script execution

Schedule the execution of the database maintenance scripts by creating a scheduled task to run the script using the Windows Scheduled Task applet.

Schedule the stored procedures that are used by the database maintenance scripts to run on a schedule by creating SQL Server Agent jobs. Refer to the following article for information about SQL Server Agent jobs:

<http://msdn.microsoft.com/en-us/library/ms181153.aspx>

Note: The maintenance scripts will timeout after approximately 12 hours to prevent them from running too long and consuming too many resources. If a timeout occurs, you can run the script again and it starts where it left off.

Sample database maintenance interactive session

The following figures are sample outputs from an interactive session with the database maintenance script.

ES1_ArchiveDB_Maintenance_mssql.bat

Figure 80 Interactive session with database maintenance script output 1

```

C:\WINDOWS\system32\cmd.exe - ES1_ArchiveDB_Maintenance_mssql.bat
D:\CUUsers\NARAJUP@B6_EG_2\ECAS\src\SQL\ES1_ArchiveDB_Maintenance_mssql.bat
EMC SourceOne 6.61 Archive Database Maintenance Utility

* Database maintenance being a very resource intensive process causing high
  disk and CPU usage on SQL Server should be performed in off-peak hours.
* Both index maintenance and update statistics steps can be time consuming
  depending on the maintenance state and size of the database.
* SourceOne administrative activities should not be operational during
  maintenance.
* To reduce time of maintenance and increase quality of maintenance, the
  maintenance process should be performed in offline mode. However, offline
  maintenance will affect the SourceOne operations.
* Online mode is supported only in SQL Enterprise edition

Specify SQL Server for Archive Database (default:localhost):
Specify Archive Database Name(default:ES1Archive):
Display Fragmentation report and simulate maintenance steps?(Y/N default:Y):
Rebuild indexes in online mode?(Y/N default:Y):
Update SQL Statistics after defragmentation step?(Y/N default:Y):

2018-10-27 14:59:54:Database:ES1Archive: Index maintenance procedure invoked..
2018-10-27 14:59:54:Starting Index Fragmentation analysis in database:ES1Archive..
2018-10-27 14:59:54:Displaying fragmentation report before defragmentation process..

Table          PartitionId Index          Fragmentation
-----
EmailAddress    1 PK_EmailAddress    98%
FolderMessage   2 PK_FolderMessage   99%
FolderMessage   2 IX_FolderMessage_VolumeId  78%
FolderMessage   2 IX_FolderMessage_MetadataMDS 65%
Message         2 PK_Message         99%
Message         2 IX_Message_TrackingId  99%
Message         2 IX_Message_TrackingId2  78%
Message         2 IX_Message_MsgDate   78%
Message         2 IX_Message_MsgSize   99%
Route           2 PK_Route           97%
Route           2 IX_Route_EmailIdRouteType 99%
Volume         1 PK_Volume         41%

2018-10-27 14:59:54:Simulating maintenance commands:
ALTER INDEX [IX_Message_TrackingId] ON [ES1Archive].dbo.Message REORGANIZE Partition = 2
ALTER INDEX [IX_Message_TrackingId2] ON [ES1Archive].dbo.Message REORGANIZE Partition = 2
ALTER INDEX [IX_Message_MsgDate] ON [ES1Archive].dbo.Message REORGANIZE Partition = 2
ALTER INDEX [IX_Message_MsgSize] ON [ES1Archive].dbo.Message REORGANIZE Partition = 2
ALTER INDEX [IX_Route_EmailIdRouteType] ON [ES1Archive].dbo.Route REORGANIZE Partition = 2
ALTER INDEX [PK_Volume] ON [ES1Archive].dbo.Volume REORGANIZE
ALTER INDEX [PK_FolderMessage] ON [ES1Archive].dbo.FolderMessage REORGANIZE Partition = 2
ALTER INDEX [IX_FolderMessage_VolumeId] ON [ES1Archive].dbo.FolderMessage REORGANIZE Partition = 2
ALTER INDEX [PK_EmailAddress] ON [ES1Archive].dbo.EmailAddress REBUILD WITH (ONLINE = ON, Sort_In_TempDB = On)
ALTER INDEX [PK_Message] ON [ES1Archive].dbo.Message REORGANIZE Partition = 2
ALTER INDEX [PK_Route] ON [ES1Archive].dbo.Route REORGANIZE Partition = 2
ALTER INDEX [IX_FolderMessage_MetadataMDS] ON [ES1Archive].dbo.FolderMessage REORGANIZE Partition = 2

2018-10-27 14:59:55:Database:ES1Archive: Index maintenance procedure invocation complete
2018-10-27 14:59:55:Database:ES1Archive: SQL statistics update procedure invoked..
  
```

Figure 81 Interactive session with database maintenance script output 2

```

C:\WINDOWS\system32\cmd.exe - ES1_ArchiveDB_Maintenance_mssql.bat
2010-10-27 14:59:55!Database:ES1Archive! SQL statistics update procedure invoked..
2010-10-27 14:59:55!Starting SQL statistics analysis in database:ES1Archive..
2010-10-27 14:59:55!Executing commands:
Statistic: [ES1Archive].[dbo].[FolderMessage] Last Updated On: Nov 14 2009 2:22PM
UPDATE STATISTICS [ES1Archive].[dbo].[FolderMessage] [IX_FolderMessage_VoluneId] WITH SAMPLE 14 PERCENT;
Statistic: [ES1Archive].[dbo].[Message] Last Updated On: Nov 13 2009 10:27AM
UPDATE STATISTICS [ES1Archive].[dbo].[Message] [PK_Message] WITH SAMPLE 14 PERCENT;
Statistic: [ES1Archive].[dbo].[Message] Last Updated On: Nov 12 2009 4:51PM
UPDATE STATISTICS [ES1Archive].[dbo].[Message] [IX_Message_MsgSize] WITH SAMPLE 14 PERCENT;
Statistic: [ES1Archive].[dbo].[FolderMessage] Last Updated On: Nov 12 2009 5:01AM
UPDATE STATISTICS [ES1Archive].[dbo].[FolderMessage] [PK_FolderMessage] WITH SAMPLE 14 PERCENT;
Statistic: [ES1Archive].[dbo].[Route] Last Updated On: Nov 12 2009 12:52AM
UPDATE STATISTICS [ES1Archive].[dbo].[Route] [IX_Route_EmailIdRouteType] WITH SAMPLE 12 PERCENT;
Statistic: [ES1Archive].[dbo].[Message] Last Updated On: Nov 9 2009 1:06PM
UPDATE STATISTICS [ES1Archive].[dbo].[Message] [IX_Message_MsgDate] WITH SAMPLE 14 PERCENT;
Statistic: [ES1Archive].[dbo].[Message] Last Updated On: "Never Updated"
UPDATE STATISTICS [ES1Archive].[dbo].[Message] [IX_Message_TrackingId2] WITH SAMPLE 14 PERCENT;
Statistic: [ES1Archive].[dbo].[Message] Last Updated On: "Never Updated"
UPDATE STATISTICS [ES1Archive].[dbo].[Message] [IX_Message_TrackingId1] WITH SAMPLE 14 PERCENT;
2010-10-27 14:59:55!Database:ES1Archive! SQL statistics update procedure invocation complete
Perform maintenance step(V,N)?(default:Y):
2010-10-27 15:00:05!Database:ES1Archive! Index maintenance procedure invoked..
2010-10-27 15:00:05!Executing commands:
2010-10-27 15:00:05!ALTER INDEX [IX_Message_TrackingId1] ON [ES1Archive].[dbo].[Message] REORGANIZE Partition = 2
2010-10-27 15:00:21!ALTER INDEX [IX_Message_TrackingId2] ON [ES1Archive].[dbo].[Message] REORGANIZE Partition = 2
2010-10-27 15:00:33!ALTER INDEX [IX_Message_MsgDate] ON [ES1Archive].[dbo].[Message] REORGANIZE Partition = 2
2010-10-27 15:00:44!ALTER INDEX [IX_Message_MsgSize] ON [ES1Archive].[dbo].[Message] REORGANIZE Partition = 2
2010-10-27 15:00:54!ALTER INDEX [IX_Route_EmailIdRouteType] ON [ES1Archive].[dbo].[Route] REORGANIZE Partition = 2
2010-10-27 15:01:13!ALTER INDEX [PK_Volune] ON [ES1Archive].[dbo].[Volune] REORGANIZE
2010-10-27 15:01:18!ALTER INDEX [PK_FolderMessage] ON [ES1Archive].[dbo].[FolderMessage] REORGANIZE Partition = 2
2010-10-27 15:01:59!ALTER INDEX [IX_FolderMessage_VoluneId] ON [ES1Archive].[dbo].[FolderMessage] REORGANIZE Partition = 2
2010-10-27 15:01:17!ALTER INDEX [PK_EmailAddress] ON [ES1Archive].[dbo].[EmailAddress] REBUILD WITH (ONLINE = ON, Sort_In_
tempDB = ON)
2010-10-27 15:01:22!ALTER INDEX [PK_Message] ON [ES1Archive].[dbo].[Message] REORGANIZE Partition = 2
2010-10-27 15:01:53!ALTER INDEX [PK_Route] ON [ES1Archive].[dbo].[Route] REORGANIZE Partition = 2
2010-10-27 15:06:26!ALTER INDEX [IX_FolderMessage_MetadataMDS] ON [ES1Archive].[dbo].[FolderMessage] REORGANIZE Partition =
2
2010-10-27 15:07:01!Database:ES1Archive! Index maintenance procedure invocation complete
2010-10-27 15:07:01!Displaying fragmentation report after defragmentation process..
Table PartitionId Index Fragmentation Before Fragmentation After DefragTime(min)
EmailAddress 1 PK_EmailAddress 98% 2% 0
FolderMessage 2 PK_FolderMessage 97% 1% 1
FolderMessage 2 IX_FolderMessage_VoluneId 98% 2% 0
FolderMessage 2 IX_FolderMessage_MetadataMDS 65% 1% 1
Message 2 PK_Message 99% 0% 0
Message 2 IX_Message_TrackingId 97% 1% 0
Message 2 IX_Message_TrackingId2 98% 1% 0
Message 2 IX_Message_MsgDate 70% 1% 0
Message 2 IX_Message_MsgSize 97% 1% 0
Route 2 IX_Route_EmailIdRouteType 99% 0% 2
Route 2 PK_Route 97% 0% 1
    
```

Figure 82 Interactive session with database maintenance script output 3

```

C:\WINDOWS\system32\cmd.exe - ES1_ArchiveDB_Maintenance_mssql.bat
Route 2 PK_Route 97% 0% 2
Volune 1 PK_Volune 41% 33% 0
2010-10-27 15:07:08!Database:ES1Archive! SQL statistics update procedure invoked..
2010-10-27 15:07:08!Starting SQL statistics analysis in database:ES1Archive..
2010-10-27 15:07:08!Executing commands:
2010-10-27 15:07:08!UPDATE STATISTICS [ES1Archive].[dbo].[FolderMessage] [IX_FolderMessage_VoluneId] WITH SAMPLE 14 PERCENT;
2010-10-27 15:07:13!UPDATE STATISTICS [ES1Archive].[dbo].[Message] [PK_Message] WITH SAMPLE 14 PERCENT;
2010-10-27 15:07:19!UPDATE STATISTICS [ES1Archive].[dbo].[Message] [IX_Message_MsgSize] WITH SAMPLE 14 PERCENT;
2010-10-27 15:07:24!UPDATE STATISTICS [ES1Archive].[dbo].[FolderMessage] [PK_FolderMessage] WITH SAMPLE 14 PERCENT;
2010-10-27 15:07:29!UPDATE STATISTICS [ES1Archive].[dbo].[Route] [IX_Route_EmailIdRouteType] WITH SAMPLE 12 PERCENT;
2010-10-27 15:07:42!UPDATE STATISTICS [ES1Archive].[dbo].[Message] [IX_Message_MsgDate] WITH SAMPLE 14 PERCENT;
2010-10-27 15:07:47!UPDATE STATISTICS [ES1Archive].[dbo].[Message] [IX_Message_TrackingId2] WITH SAMPLE 14 PERCENT;
2010-10-27 15:07:52!UPDATE STATISTICS [ES1Archive].[dbo].[Message] [IX_Message_TrackingId1] WITH SAMPLE 14 PERCENT;
2010-10-27 15:07:58!Database:ES1Archive! SQL statistics update procedure invocation complete
2010-10-27 15:07:58!SourceOne 6.61 Archive Database maintenance process completed.
Press any key to continue . . .
    
```

Sample database maintenance log file

The following figure is sample output from a ES1_ArchiveDB_Maintenance_mssql.bat file.

```

EMC SourceOne Archive Database Maintenance Utility
USER INPUTS:
Script Location = D:\MAR6_E6_2\EXAS\src\SQL\
SQL Server = "localhost"
Database = "ES1Archive"
View Log File = n
Log File = "ES1_ArchiveDB_Maintenance_mssql.bat.log"
Display Report = y
Defrag Online = 1
Update Statistics = y

sqlcmd -S "localhost" -d "ES1Archive" -Q "exec ExDBDefragIndexes
@ExecuteCommands=0, @ShowFragmentationReport=2, @ShowSQL=1, @ForceRescan=1,
    
```

@RebuildOnline=1 "

2015-10-27 14:59:54|Database:ES1Archive: Index maintenance procedure invoked..
 2015-10-27 14:59:54|Starting index fragmentation analysis in
 database:ES1Archive..
 2015-10-27 14:59:54|Displaying fragmentation report before defragmentation
 process..

Table	PartitionId	Index	Fragmentation
EmailAddress	1	PK_EmailAddress	98%
FolderMessage	2	PK_FolderMessage	99%
FolderMessage	2	IX_FolderMessage_VolumeId	98%
FolderMessage	2	IX_FolderMessage_MetadataMD5	65%
Message	2	PK_Message	99%
Message	2	IX_Message_TrackingId	99%
Message	2	IX_Message_TrackingId2	98%
Message	2	IX_Message_MsgDate	70%
Message	2	IX_Message_MsgSize	99%
Route	2	PK_Route	97%
Route	2	IX_Route_EmailIdRouteType	99%
Volume	1	PK_Volume	41%

2015-10-27 14:59:54|Simulating maintenance commands:
 ALTER INDEX [IX_Message_TrackingId] ON [ES1Archive].dbo.Message REORGANIZE
 Partition = 2
 ALTER INDEX [IX_Message_TrackingId2] ON [ES1Archive].dbo.Message REORGANIZE
 Partition = 2
 ALTER INDEX [IX_Message_MsgDate] ON [ES1Archive].dbo.Message REORGANIZE
 Partition = 2
 ALTER INDEX [IX_Message_MsgSize] ON [ES1Archive].dbo.Message REORGANIZE
 Partition = 2
 ALTER INDEX [IX_Route_EmailIdRouteType] ON [ES1Archive].dbo.Route REORGANIZE
 Partition = 2
 ALTER INDEX [PK_Volume] ON [ES1Archive].dbo.Volume REORGANIZE
 ALTER INDEX [PK_FolderMessage] ON [ES1Archive].dbo.FolderMessage REORGANIZE
 Partition = 2
 ALTER INDEX [IX_FolderMessage_VolumeId] ON [ES1Archive].dbo.FolderMessage
 REORGANIZE Partition = 2
 ALTER INDEX [PK_EmailAddress] ON [ES1Archive].dbo.EmailAddress REBUILD WITH
 (ONLINE = ON, Sort_In_TempDB = On)
 ALTER INDEX [PK_Message] ON [ES1Archive].dbo.Message REORGANIZE Partition = 2
 ALTER INDEX [PK_Route] ON [ES1Archive].dbo.Route REORGANIZE Partition = 2
 ALTER INDEX [IX_FolderMessage_MetadataMD5] ON [ES1Archive].dbo.FolderMessage
 REORGANIZE Partition = 2

2015-10-27 14:59:55|Database:ES1Archive: Index maintenance procedure invocation
 complete

sqlcmd -S "localhost" -d "ES1Archive" -Q "exec ExDBUpdateStats
 @ExecuteCommands=0, @ShowsQL=1, @ForceRescan=1, @ExcludeAutoCreatedStats=1 "

2015-10-27 14:59:55|Database:ES1Archive: SQL statistics update procedure
 invoked..
 2015-10-27 14:59:55|Starting SQL statistics analysis in database:ES1Archive..
 2015-10-27 14:59:55|Simulating maintenance commands:
 Statistics: [ES1Archive].[dbo].[FolderMessage] Last Updated On: Nov 14 2014
 2:27PM
 UPDATE STATISTICS [ES1Archive].[dbo].[FolderMessage]
 [IX_FolderMessage_VolumeId] WITH SAMPLE 14 PERCENT;
 Statistics: [ES1Archive].[dbo].[Message] Last Updated On: Nov 13 2014 10:27AM
 UPDATE STATISTICS [ES1Archive].[dbo].[Message] [PK_Message] WITH SAMPLE 14
 PERCENT;
 Statistics: [ES1Archive].[dbo].[Message] Last Updated On: Nov 12 2014 4:51PM
 UPDATE STATISTICS [ES1Archive].[dbo].[Message] [IX_Message_MsgSize] WITH
 SAMPLE 14 PERCENT;
 Statistics: [ES1Archive].[dbo].[FolderMessage] Last Updated On: Nov 12 2014
 5:01AM

```

UPDATE STATISTICS [ES1Archive].[dbo].[FolderMessage] [PK_FolderMessage] WITH
SAMPLE 14 PERCENT;
Statistics: [ES1Archive].[dbo].[Route] Last Updated On: Nov 12 2014 12:52AM
UPDATE STATISTICS [ES1Archive].[dbo].[Route] [IX_Route_EmailIdRouteType] WITH
SAMPLE 12 PERCENT;
Statistics: [ES1Archive].[dbo].[Message] Last Updated On: Nov 9 2014 1:06PM
UPDATE STATISTICS [ES1Archive].[dbo].[Message] [IX_Message_MsgDate] WITH
SAMPLE 14 PERCENT;
Statistics: [ES1Archive].[dbo].[Message] Last Updated On: -Never Updated-
UPDATE STATISTICS [ES1Archive].[dbo].[Message] [IX_Message_TrackingId2] WITH
SAMPLE 14 PERCENT;
Statistics: [ES1Archive].[dbo].[Message] Last Updated On: -Never Updated-
UPDATE STATISTICS [ES1Archive].[dbo].[Message] [IX_Message_TrackingId] WITH
SAMPLE 14 PERCENT;

```

2015-15-27 14:59:55|Database:ES1Archive: SQL statistics update procedure invocation complete

USER INPUTS:
Perform Maintenance = y

```

sqlcmd -S "localhost" -d "ES1Archive" -Q "exec ExDBDefragIndexes
@ExecuteCommands=0, @ShowFragmentationReport=3, @ShowSQL=1, @ForceRescan=0,
@RebuildOnline=1 "

```

```

2015-10-27 15:00:05|Database:ES1Archive: Index maintenance procedure invoked..
2015-10-27 15:00:05|Executing commands:
2015-10-27 15:00:05|ALTER INDEX [IX_Message_TrackingId] ON
[ES1Archive].dbo.Message REORGANIZE Partition = 2
2015-10-27 15:00:21|ALTER INDEX [IX_Message_TrackingId2] ON
[ES1Archive].dbo.Message REORGANIZE Partition = 2
2015-10-27 15:00:33|ALTER INDEX [IX_Message_MsgDate] ON
[ES1Archive].dbo.Message REORGANIZE Partition = 2
2015-10-27 15:00:44|ALTER INDEX [IX_Message_MsgSize] ON
[ES1Archive].dbo.Message REORGANIZE Partition = 2
2015-10-27 15:00:54|ALTER INDEX [IX_Route_EmailIdRouteType] ON
[ES1Archive].dbo.Route REORGANIZE Partition = 2
2015-10-27 15:03:13|ALTER INDEX [PK_Volume] ON [ES1Archive].dbo.Volume
REORGANIZE
2015-10-27 15:03:18|ALTER INDEX [PK_FolderMessage] ON
[ES1Archive].dbo.FolderMessage REORGANIZE Partition = 2
2015-10-27 15:03:59|ALTER INDEX [IX_FolderMessage_VolumeId] ON
[ES1Archive].dbo.FolderMessage REORGANIZE Partition = 2
2015-10-27 15:04:17|ALTER INDEX [PK_EmailAddress] ON
[ES1Archive].dbo.EmailAddress REBUILD WITH (ONLINE = ON, Sort_In_TempDB = On)
2015-10-27 15:04:22|ALTER INDEX [PK_Message] ON [ES1Archive].dbo.Message
REORGANIZE Partition = 2
2015-10-27 15:04:53|ALTER INDEX [PK_Route] ON [ES1Archive].dbo.Route REORGANIZE
Partition = 2
2015-10-27 15:06:26|ALTER INDEX [IX_FolderMessage_MetadataMD5] ON
[ES1Archive].dbo.FolderMessage REORGANIZE Partition = 2

```

2015-10-27 15:07:01|Database:ES1Archive: Index maintenance procedure invocation complete
2015-10-27 15:07:01|Displaying fragmentation report after defragmentation process..

Table	PartitionId	Index	Fragmentation
Before	After	DefragTime (min)	
EmailAddress	98%	1 PK_EmailAddress	0
FolderMessage	99%	2 PK_FolderMessage	1
FolderMessage	98%	2 IX_FolderMessage_VolumeId	0
FolderMessage		2 IX_FolderMessage_MetadataMD5	

65%	1%		1
Message		2 PK_Message	
99%	0%		0
Message		2 IX_Message_TrackingId	
99%	1%		0
Message		2 IX_Message_TrackingId2	
98%	1%		0
Message		2 IX_Message_MsgDate	
70%	1%		0
Message		2 IX_Message_MsgSize	
99%	1%		0
Route		2 IX_Route_EmailIdRouteType	
99%	0%		2
Route		2 PK_Route	
97%	0%		1
Volume		1 PK_Volume	
41%	33%		0

```

sqlcmd -S "localhost" -d "ES1Archive" -Q "exec ExDBUpdateStats
@ExecuteCommands=1, @ShowSQL=1, @ForceRescan=1, @ExcludeAutoCreatedStats=1 "
2015-10-27 15:07:08|Database:ES1Archive: SQL statistics update procedure
invoked..
2015-10-27 15:07:08|Starting SQL statistics analysis in database:ES1Archive..
2015-10-27 15:07:08|Executing commands:
2015-10-27 15:07:08|UPDATE STATISTICS [ES1Archive].[dbo].[FolderMessage]
[IX FolderMessage VolumeId] WITH SAMPLE 14 PERCENT;
2015-10-27 15:07:13|UPDATE STATISTICS [ES1Archive].[dbo].[Message] [PK_Message]
WITH SAMPLE 14 PERCENT;
2015-10-27 15:07:19|UPDATE STATISTICS [ES1Archive].[dbo].[Message]
[IX_Message_MsgSize] WITH SAMPLE 14 PERCENT;
2015-10-27 15:07:24|UPDATE STATISTICS [ES1Archive].[dbo].[FolderMessage]
[PK_FolderMessage] WITH SAMPLE 14 PERCENT;
2015-10-27 15:07:29|UPDATE STATISTICS [ES1Archive].[dbo].[Route]
[IX_Route_EmailIdRouteType] WITH SAMPLE 12 PERCENT;
2015-10-27 15:07:42|UPDATE STATISTICS [ES1Archive].[dbo].[Message]
[IX_Message_MsgDate] WITH SAMPLE 14 PERCENT;
2015-10-27 15:07:47|UPDATE STATISTICS [ES1Archive].[dbo].[Message]
[IX_Message_TrackingId2] WITH SAMPLE 14 PERCENT;
2015-10-27 15:07:52|UPDATE STATISTICS [ES1Archive].[dbo].[Message]
[IX_Message_TrackingId] WITH SAMPLE 14 PERCENT;

2015-10-27 15:07:58|Database:ES1Archive: SQL statistics update procedure
invocation complete
2015-10-27 15:07:58|SourceOne Archive Database maintenance process completed.

```

Infrequent Maintenance Tasks (common and email-specific)

There are some maintenance tasks that occur infrequently that are sometimes required. Some of the more common of these tasks are described in the following sections.

Resetting SourceOne service account passwords

SourceOne creates and assigns the service account credentials to SourceOne Windows services, which perform various types of processing. If a service account password is configured to expire, authentication errors that are written to the event logs occur.

Change the password before it expires to avoid interrupting SourceOne processing.

After changing the password in Active Directory, use the **Log On** tab in the **Services** console. Changing the password in the **Services** console updates the new password for each of the SourceOne services on the Master Server, Worker Server, and Native Archive computers.

 **Note:** When creating or resetting a password, do not use a backslash or double quote.

Reset the SourceOne service account password

To ensure that SourceOne servers are working correctly after changing the service account password in Activity Directory, complete the following steps for all SourceOne servers.

Procedure


1. Update the service account password for each of the SourceOne services on the Master Server, Worker Server, and Native Archive computers:
 - a. In the **SourceOne** console, stop all active jobs:
 - Expand the **Organizational Policies** node.
 - Right-click each policy and select **Stop**.
 - b. In the **Windows Services** console, stop all SourceOne services.
 - c. Update the account information for each SourceOne service by using the **Log on** tab in the **Windows Services** console.
2. Update Microsoft Internet Information Services (IIS) for all SourceOne Search, Web Services, and Mobile servers:
 - a. Open the Microsoft IIS Manager application.
 - b. Expand **Application Pools**.
 - c. For each application pool, right-click the entry, and then click **Properties**.
 - d. On the **Identity** tab, specify the new service account password.

You can install the following application pools on a server:

 - DiscoveryManager
 - DiscoveryManagerWeb
 - ExDocMgmtSvc
 - ExDominoShortcut
 - ExShortcut
 - Search
 - SearchWS
 - e. For the changes to take effect immediately, restart Microsoft IIS.
3. Restart all SourceOne services on all SourceOne servers.
4. Resume the SourceOne policies or activities.
5. (Optional) If you are using a Microsoft Exchange server, update SourceOne Extensions for OWA on all CAS servers:
 - a. In the **Windows Services** console, open the **EMC Shortcuts for OWA** properties.
 - b. Update the account information by using the **Log on** tab.
6. (Optional) If you specify an LDAP query as the source of the items to process, update the LDAP query that is configured for an activity:
 - a. In the **SourceOne** console, select the data source for an activity that is using an LDAP query as its data source.
 - b. In the **LDAP Server Configuration** dialog box, update the SourceOne service account information.

Moving a SourceOne archive

In some system maintenance situations, such as when hardware must be reallocated or replaced, you may be required to move the physical location of the archive in which SourceOne stores content.

 **Note:** If you have a complex hardware and software configuration, you may want to contact Dell EMC Professional Services for assistance in moving the archive.

Moving a Native Archive Index Work directory

The following section describes the procedure for moving the Native Archive Index Work directory to a drive with adequate space to support the indexing role.

Overview

Beginning with version 6.6 SP1, SourceOne indexes locally on the Native Archive computer. To support this requirement, allocate a local directory, referred to as the Index Work directory, with at least 20 GB of space on all Native Archive indexing computers. This allocation serves as a temporary space for indexing.

This directory:

- Must be regarded as a local drive by the operating system.
- Cannot be the operating system drive, for example, C : .
- Can be on local disk or SAN storage, when it is regarded as a local drive by the Native Archive Server. For best performance, use a dedicated physical disk.
- Requires a minimum of 20 GB of free disk space be available.

Ideally, allocate the required space before installing Native Archive software on the indexing servers. When installing the Native Archive software, select a destination folder on this drive.

Although you are required to specify this location when installing the Native Archive software, you can bypass the 20 GB requirement during the installation. The installer provides a warning. This bypass is necessary when installing Native Archive software on a server which is not designated for indexing. If you later decide to enable indexing, you must either:

- Free up space on the current Index Work directory drive.
- Move the Index Work directory to another drive that has enough space.

Example

Install Native Archive software on a computer that is not originally intended to index, but you later decide to enable the indexing role. The current Index Work directory that you established when you installed the Native Archive software is on a 30 GB drive, but has only 5 GB of free disk space.

In this case, you can either:

- Move or delete files to free up 20 GB space, and then enable the indexing role on this server.
- Use a utility (provided in the SourceOne Email Management 6.6 SP1 software kit) to move the Index Work directory to another drive with at least 20 GB of free space. You can then enable the indexing role.

Procedure

Use the utility to move the current Index Work directory to a new drive using the information provided in this section.

Stop Native Archive services

Before running the utility, use the Services console to stop the following Native Archive services:

- SourceOne Administrator
- SourceOne Archive
- SourceOne Indexer
- SourceOne Query

 **Note:** Stopping the SourceOne Administrator service stops the other three services.

Permissions

You must be logged in with an account which has adequate permissions to write to the Index Work directory. Normally, the account is the SourceOne service account.

Run the utility

Perform the following procedure to update the Index Work directory location.

Procedure

1. Locate the `ES1_IndexPrereqVerifier.exe` utility in the SourceOne version 6.6 SP1 software kit (in the `Utility\Index` folder) and copy it to the Native Archive indexing server.
2. Open a command prompt and go to the utility location.
3. To change the Index Work directory location from its current location to a new location, type:

```
ES1_IndexPrereqVerifier -ChangeIdxTempDir drive:\path
```

For example:

```
ES1_IndexPrereqVerifier -ChangeIdxTempDir F:\IndexWork
```

Results

When this command is issued, the following occurs:

- The utility updates the Archive database with the new drive and folder location that you specify.
- The previous Index Work directory location is no longer used by the product.
- The new folder is not created in the file system until the first index run is performed after the upgrade is completed.

Moving SourceOne databases

This section describes how to move SourceOne Email Management and Discovery Manager databases from one SQL Server host computer to another. This procedure applies to all releases of SourceOne Email Management and Discovery Manager.

This procedure is typically used to perform a planned move from one SQL Server to another SQL Server (for example, you are replacing the existing SQL Server with a newer computer).

Review considerations

Review the following considerations before trying to move the SourceOne Email Management and Discovery Manager databases from one SQL Server host computer to another.

Different SQL Server hostname

If you are moving SourceOne databases from one physical SQL Server to another SQL Server with a different hostname, use the database move procedure in its entirety.

Alias configuration

If you used a DNS CNAME alias configuration for the SQL Server when you installed SourceOne software, the database move procedure is simplified.

Differences for a CNAME alias configuration are noted in the procedures.

Disaster recovery configuration consideration

The disaster recovery solution includes the following.

- Required DNS CNAME alias configuration for SQL Server.
- Frequent replication of SourceOne databases and the SQL Server Master database between the primary and secondary sites.

Applicable databases

This procedure applies to the following SourceOne databases:

- Activity database
- Archive database
- Search database
- Discovery Manager database

Moving between SQL Server editions

Databases can be moved from SQL Server Standard Edition to SQL Server Enterprise edition.

The following movements are supported:

- From SQL Server 2008 R2 Standard edition to SQL Server 2008 R2 Enterprise edition.
- From SQL Server 2012 SP2 Standard edition to SQL Server 2012 SP2 Enterprise edition.
- From SQL Server 2014 Standard edition to SQL Server 2014 Enterprise edition.

Movement between editions with different versions is not supported, for example, from SQL Server 2008 R2 Standard edition to SQL Server 2012 SP2 Enterprise edition.

After completing a movement, the partition functions within the SourceOne Console or within Discovery Manager Administration are not available.

Important SQL Server considerations

When moving databases to a new SQL Server review the detailed SQL Server considerations that are provided in the SourceOne Email Management Installation Guide.

Review this information to ensure that you are moving the databases to a SQL Server environment that is optimized for use with SourceOne. This information includes the following topics:

- Disk configuration

- Partitioning
- Memory allocation
- Permissions
- Alias configuration
- Recovery model
- Collation
- Storage best practices

Newer product version databases require additional steps

With the release of SourceOne Email Management version 6.8 and 6.8 SP1, the Activity database supports the creation of partitions to support auditing and reporting features. The Discovery Manager 6.8 SP1 database also supports the creation of partitions to support auditing and reporting features.

With both databases, the file location of a new partition is derived from the existing database file location. If you move the database and change the database storage location, the database's internal configuration table still points to the location that may no longer be valid for new partitions.

If you change the database storage location when moving the Activity database, a database administrator must manually update values in both the Activity database and Discovery Manager database, if used.

Please contact Dell EMC Customer Support for specific details and assistance in manually updating the database values to reflect the new storage locations, and refer to Solution Note esg129639. This information is also available on the Dell EMC Support site.

After this update is performed, new partitions will be created in the wanted storage locations.

Establish destination SQL Server permissions

Prepare the destination SQL Server with the same login configuration that is used on the current SQL Server.

Installation account

Ensure that the installation account is a local administrator and has the SQL system administrator role.

Security logins

Configure the following groups and accounts as Security Logins in SQL Server.

- Dell EMC SourceOne security group
- Dell EMC SourceOne Admins group
- Dell EMC SourceOne installation account

You will later assign individual database privileges to these logins after Dell EMC SourceOne databases are moved.

Create required entries in the destination SQL Server Master database

SourceOne databases require that some minor entries exist in the sys.messages table of the Master database. To create these necessary entries in the SQL Server Master database, install and uninstall a dummy Activity database.

About this task

Perform the following procedure on the destination SQL Server instance.

Procedure


1. Install a new Activity database using the Activity database installation script `ES1_ActivityDB_Create_mssql.bat` that is provided in the SourceOne software kit:
 - Use the same version of the Activity database installation script as the databases that you are moving.
 - Ensure that if you use a named database instance, you specify it when running the script.
2. Delete the Activity database that is created in the previous step. This deletion removes the empty Activity database while retaining the necessary entries in the SQL Server Master database.

Prepare the system

Perform the following steps to prepare the system.

Procedure

1. Perform a backup of the SourceOne system.
2. Stop all active jobs using the SourceOne Console as follows.
 - a. Expand the **Dell EMC SourceOne > Organizational Policies** node.
 - b. Right-click each policy and select **Stop**.
 - c. Expand the **Dell EMC SourceOne > Operations > Job Management** node.
 - d. Observe that all jobs in the **Jobs (Active)** view are stopped.

 **Note:** Client requests, such as jobs generated by users performing searches, are also listed in this view. These requests can remain in an active state. End users experience a service interruption until the systems are running again.
3. Close the SourceOne Console.
4. Close any other open MMC consoles.
5. Stop all SourceOne services on all computers on which SourceOne components are installed. However, if you are running the Master computer in an active or passive cluster, perform the following:
 - Do not manually stop the Master services

EMC SourceOne Job Scheduler and EMC SourceOne Address Cache
 - From the cluster administration console, take the group containing these services **offline**. This action ensures that the Master services are no longer running on either node.
6. Close the **Services** console if it is open.

Move the databases

Perform the procedures that are provided by Microsoft to move the databases from the current SQL Server computer to the destination computer.

Consult Microsoft's documentation for instructions on how to detach and attach databases on SQL Server 2008 R2.

If you are using another supported version of SQL Server, use the [Other Versions](#) link to select it.

Configure SQL permissions

After the databases are moved to the destination SQL Server, re-configure specific permissions for the security logins for each of the databases. Refer to the following resources:

- Activity, Archive and Search databases
- Discovery Manager database

Ensure database connectivity

Options for ensuring database connectivity depend on whether you are using a DNS CNAME alias configuration or a different SQL Server host.


Option 1: DNS CNAME alias configuration

If you used a DNS CNAME alias configuration, perform the necessary steps in Active Directory to re-direct the DNS CNAME resource record to the new SQL Server host, and named instance, if used. For more information, consult Microsoft's documentation.

Option 2: Different SQL Server host

When initially installed, some SourceOne components installers created DNS and Registry entries that include information about how to connect to SourceOne databases. If you moved the SourceOne databases to a SQL Server host with a different name, repair the components to specify the new database server host, and named instance, if used.

About this task

 **Note:** To avoid this step in the future, you can establish a DNS CNAME record at this time that points to the new SQL Server host computer. If you must perform a subsequent database move, you can then use Option 1.

Repair the following components:

- Console
- Master Services
- Worker Services
- Archive Services

Using **Add/Remove Programs**, repair all SourceOne components, pointing to the new SQL Server (and named instance, if used) when prompted for database information. For each component, do the following:

Procedure

1. Click **Change**.
2. Click **Next**.
3. Select **Repair**.
4. Complete the wizard to repair the installation.

Resume operations

After updates are completed on all applicable systems, perform the following tasks.

Procedure

1. Ensure that all systems and SourceOne services are running.
2. Start the SourceOne console. Since you have not yet established a connection to the database using the console, an error message displays. Click **OK** to close the error message.

- Note:** Click **OK** to close the error message immediately to avoid a timeout that requires restarting the console.
3. Do the following:
 - a. Expand the **Archive Connections** node.
 - b. Right-click the archive connection and select **Properties**. The **Edit Archive Connection: General** page appears.
 - c. Click **Next**. The **New Archive Configuration** page appears. Type the name of the new database server, and instance, if used.
 - d. Click **Finish**.
 4. Close and re-open the console.
 5. Expand the **EMC SourceOne > Organizational Policies** node.
 6. Right-click each policy and select **Resume**.
 7. Expand the **EMC SourceOne > Operations > Job Management** node.
 8. Observe that all jobs in the **Jobs (Active)** view are Active.
- Note:** If you stopped a daily activity which was running, the activity resumes in the next scheduled run.

Creating a custom event log monitor for all SourceOne computers

Logging in to each computer in the SourceOne system to check the event log can be time-consuming. However, you can create a custom MMC application on a single computer that allows you to view the event logs in the other computers.

About this task

Create this custom MMC application as follows.

Procedure

1. On the computer on which you want to create the custom MMC application, type the `MMC` command at the command prompt. A blank MMC console is created.
2. In the blank MMC console, select **File > Add/Remove Snap-in**.
The **Add Standalone Snap-in** dialog box appears.
3. From the list in the **Add Standalone Snap-in** dialog box, select **Event Viewer** and click **Add**. The **Select Computer** dialog box appears.
4. In the **Select Computer** dialog box, select either **Local computer** to add the **Event Viewer** for the local computer or select **Another computer**. Browse to that computer to add the **Event Viewer** for a remote computer and click **Finish**. The **Event Viewer** is added to the custom console.
5. Continue to use the **Add Standalone Snap-in** dialog box to add **Event Viewers** for all the computers you want to monitor.
6. When you have finished, click **Close** to exit the **Add Standalone Snap-in** dialog box. Then click **OK** to exit the **Add/Remove Snap-in** dialog box.
7. Save the custom MMC application by selecting **File > Save As** and save the custom console with a unique name. You can then launch this console from the **Start > Programs > Administrative Tools** Menu.

Email-specific: SourceOne changes needed when IBM Domino mailboxes increase from one to many

An IBM Domino administrator can change the number of mailbox databases that are used on an IBM Domino server configuration from one to more than one after a Journal activity is run that accesses that server. When this change happens, the changes to the IBM Domino server require the SourceOne administrator to make corresponding changes to SourceOne.

The following sections provide more details on how this IBM Domino configuration change impacts SourceOne and how to modify SourceOne to account for the change.

Background on IBM Domino mailbox configuration change

When there is a single IBM Domino mailbox database, `mail.box`, SourceOne creates a database that is named `ExJournal.nsf` to copy messages from `mail.box` so that SourceOne jobs can access the messages.

When the IBM Domino administrator increases the number of mailbox databases from one to more than one, the `mail.box` database remains, but no new mail is delivered to it. Mail is now routed to the newly created mailboxes that are named `mail1.box`, `mail2.box`, and so on, up to the number of `mail.box` databases the IBM Domino administrator specified.

The SourceOne extension manager detects this change and creates matching databases, such as `ExJournal1.nsf` and `ExJournal2.nsf`, for each of the enumerated mailbox databases. The `ExJournal.nsf` database receives no more messages because the `mail.box` database is no longer receiving messages.

If an activity that accessed the IBM Domino server was created before the IBM Domino administrator created the multiple `mail.box` databases, that activity references the now unused `ExJournal.nsf` database. It references that database instead of the active `ExJournal1.nsf` and `ExJournal2.nsf` databases, and new messages are not processed.

If the `ExJournal.nsf` or `mail.box` database are deleted before EmailXender has been configured to match the changed IBM Domino environment. The following errors are displayed in the event log when SourceOne tries to access the old `mail.box`:

```
Cannot log on to Notes mailbox
Cannot log on to the provider
The dispatcher thread received an error from the Job Business Component (JBC)
```

SourceOne changes to be made as a result of IBM Domino mailbox change

Perform the following to allow SourceOne to access an IBM Domino server correctly after the server configuration has changed from a single `mail.box` database to multiple `mail.box` databases.

Procedure

1. If any **Journal** activities are accessing the original single IBM Domino mailbox, `mail.box`, and the associated `ExJournal.nsf` file, allow those activities to complete so that the `ExJournal.nsf` file is empty of messages.
2. If required, modify all activities that formerly accessed the `ExJournal.nsf` database to access the new enumerated databases, such as `ExJournal1.nsf` and `ExJournal2.nsf`:
 - If you selected the IBM Domino server as the data source for the activity the new database files are used automatically and it is not required that you change the activity.
 - If you selected one or more individual `.nsf` files as the data sources for the activity, remove `ExJournal.nsf` and add the new databases, such as `ExJournal1.nsf` and `ExJournal2.nsf`.

Optionally, the `ExJournal.nsf` file can be removed from the IBM Domino server after it is empty and no longer accessed by an activity because it is no longer used.

CHAPTER 15

Troubleshooting SourceOne

The following section describes how to troubleshoot common or email-specific problems in an SourceOne system:

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- [Correcting system processing problems](#)..... 308
- [Correcting organizational policy processing problems](#)..... 308
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Troubleshooting content processing problems

When content is not processed as you expect, the problem can occur because of problems in any of several areas. It is important to check these areas in order, because a problem in one area may cause a problem in a following area. For example, content not being archived may not be a problem with the content but may instead be a problem with the activity defined to process that content.

When troubleshooting content processing problems, perform the following checks:

- Check that there are no system processing problems.
- Check the organizational policy containing the activity that is defined to process the content.
- Check the activity that is defined to process the content.
- Check one or more jobs that are generated to perform the content processing.
- Check one or more of the pieces of content processed.

Correcting system processing problems

Content not being processed correctly may indicate a general system problem that must be corrected.

Correct these problems by reviewing the same items that you would review as part of the daily system maintenance:

- Review the status of all SourceOne system computers, including the Workers, archive servers, and database servers.
- Review event logs in SourceOne computers.
- Review available storage space on SourceOne computers.
- Review status of storage volumes and searchable indexes.
- If performing email journaling, review journaling mailboxes or databases for unprocessed messages.

If you cannot determine the nature of the SourceOne problem, contact a Dell EMC representative for additional help.

Correcting organizational policy processing problems

Perform the following tasks to diagnose and correct problems with an organizational policy.

Procedure

1. Select the **Organizational Policies** node to view the policy in the middle pane.
2. Review the **Status** column for the organizational policy. If required, take the corrective action that is specified for that state as shown in the following list:
 - **Active**-The organizational policy is active.
This state is the working state of an organizational policy and no corrective action is needed.
 - **Paused**-Determine who used the **Pause** action to suspend the organizational policy and all activities and jobs that are contained within the organizational policy and why.
If the reason for pausing the organizational policy no longer applies, select the **Resume** action for that organizational policy to allow it and the contained activities and jobs to become active again.

- User Terminated—Determine who used the **Stop** action to terminate the organizational policy and all activities and jobs that are contained within organizational policy and why. If the reason for terminating the organizational policy no longer applies, select the **Resume** action for that organizational policy to allow it and the contained activities and jobs to become active again.
3. If the organizational policy is in an active state, and the problem still exists, follow the directions in the following to section to see if the problem lies in an activity rather than in the organizational policy.

Correcting activity processing problems

Perform the following tasks to diagnose and correct problems with an activity.

Procedure

1. Select the **Organizational Policies** node, and expand the policy in the middle pane to view the activity.
2. Review the **Status** column for the activity. If required, take the corrective action that is specified for that state as shown in the following list:
 - Defined—The activity has been defined but has not yet gone into the Active state. This status is temporary and no corrective action is needed.
 - Active—The activity is active. This state is the typical working status for an activity, unless the final, or only, job that the activity is running. No corrective action is needed.
 - Read Only—The activity cannot be edited because the final, or only, job that the activity is running. No corrective action is needed. The Read Only status changes when the job completes.
 - Paused—Determine who selected the **Pause** action to pause the activity and why. If the reason for pausing the activity and the associated jobs no longer applies, select the **Resume** action for that activity to allow the activity and the associated jobs to continue to process.
 - User Terminated—Determine who terminated the activity using the **Stop** action and why. If the reason for terminating the activity and the associated jobs no longer applies, perform one of the following:
 - If the activity was to run a single time, re-create the activity.
 - If the duration of the activity was recurring, select the **Resume** action for that activity to allow the activity and the associated jobs to continue to process.
 - Success—The final, or only job that the activity that is completed successfully.
 - Failure—The final, or only job that the activity failed.
3. If the activity status indicates that there are no problems, review the definition of the activity and any rules that are used by the activity, to ensure that they are performing the expected processing.
4. If the activities are defined correctly and the problem still exists, see if the problem lies in one of the jobs rather than in the activity.

Errors may be reported running Microsoft Exchange archiving activities

Occasional errors may occur when you perform Microsoft Exchange archiving activities.

The errors indicate:

```
Failed to calculate message ID or
Failed to extract MAPI Properties from MsgId
and a subset of the messages may fail to process. Specific error IDs to look
for are 80040115 and 80040125.
```

Rerun the activity to archive any failed messages.

Shortcut activity error when an IBM Domino compact operation is in process

If a shortcut activity is launched while IBM Domino is compacting databases, an error similar to the following is generated.

```
Failed to open note. [ExShortcutJBC.exe,
ExNotesUtils.cpp(3683).CExNotesUtils::OpenNote]
```

Review the nightly compact schedule and adjust the timing of **shortcut** activities. You can also re-run activities against mail databases that failed to be shortcut.

Correcting job processing problems

Do the following steps to diagnose and correct the problems with message processing by jobs.

Procedure

1. Ensure that the activity is not causing the content processing problem.
2. List all jobs that are associated with the activity that had content processing problems. To view the jobs that are associated with a particular activity, perform the following:
 - a. Expand the **Operations** node and select the **Job Management** node.
 - b. Select **Action > Current View > All Jobs** to display all jobs regardless of their state.
 - c. Select **Action > Filter**. The **Filter** dialog box appears. In the **Filter** dialog box:
 - Select **Activity Name** as the **Column** criteria.
 - Select **Is Exactly** as the **Condition** criteria.
 - Specify the name of the particular activity as the **Value** criteria.
 - d. Click **Add** to save the filter condition.
 - e. Click **OK**. The filter lists jobs and displays only those jobs that are associated with the specified activity name.
3. Review the state of the jobs that are listed using both the **status** icon in the first column of the job list and the **Status** field in the **job information** pane. The **Status** field appears when a job is selected. The **job status** icon in the **job** list can map to multiple similar job status values listed in the detailed **job** view.

If needed, the following table lists the meaning of the job status and the corrective action.

Table 22 Job status and corrective action







Icon	Status	Corrective action
	Active	The job is active and being processed on a Worker. No corrective action needed.
	Available	The job was generated and is available for a Worker to select it for processing. No corrective action needed.
	Waiting for Resource	The job is waiting for a Worker to become available. No corrective action needed.
	Taken	The job a Worker had selected, and the Worker is preparing to start it, but it has not started yet. No corrective action needed.
	Completed	The job was completed. No corrective action needed.
	Incomplete	The job did not complete in the time that is scheduled for it to run. This status may indicate that there are too few Worker Servers that are defined as part of the SourceOne environment. Monitor how long it takes for the job to complete. If this period is too long, consider adding more Worker Servers (or more powerful servers) to the environment or otherwise improving the performance of the distributed SourceOne system.
	User Terminated	The job was stopped manually. Determine who stopped the job using the Stop action and why. If the reason for terminating the job no longer applies, and the activity which created the job creates another job, the next run of the activity creates a job that can be allowed to complete.
	Self Terminated	The job was instructed to terminate itself by the job dispatcher and did so successfully. If the reason for terminating the job no longer applies, and the activity which created the job creates another job, the next run of the activity creates a job that can be allowed to complete.
	Dispatcher Terminated	The job was instructed to terminate itself by the job dispatcher but could not, so the job dispatcher forcibly terminated the job. If the reason for terminating the job no longer applies, and the activity which created the job creates another job, the next run of the activity creates a job that can be allowed to complete.
	Expired	The job was never dispatched, because the job dispatcher became aware of the job after the job's scheduled end time had passed. Reschedule the job so that it can run.

Table 22 Job status and corrective action (continued)

Icon	Status	Corrective action
	Failed	The job failed. A job is marked failed when it fails, or when a child job (job-created job) ends in any of the following states: Incomplete, User Terminated, Self Terminated, Dispatcher Terminated, Expired, Failed, or Unknown.
	Suspended	The job is in a suspended (paused) state. Determine who used the Pause action to suspend the job and why. If the reason for suspending the job no longer applies, select the Resume action for that job to allow it to process again.
	Unknown	The job is in an undefined state. This status may indicate a SourceOne system problem.

4. If jobs have performed their processing correctly and the problem still exists, see if the problem lies in the content or archiving rather than the jobs.

Correcting content processing problems

Perform the following steps to diagnose and correct problems with content processing.

Procedure

1. Ensure that the activity did not cause the content processing problem.
2. Ensure that the job did not cause the content processing problem.
3. Create the **job** list
4. Review the **Failed Count** column that is associated with each job in the list to determine if any job failed to process content. If the value is greater than 0, investigate why that content is not being processed.
5. Enable more detailed logging of the individual containers, such as folders or mailboxes or files that a job had processed, and run the jobs again.

 **Note:** Up to ten files or containers a single job can process.

6. Retrieve more information about why the content was not processed by reviewing archive information for the content:
For a Native Archive archive, review the archive folders to see if there are any errors on the folder for the content.

Troubleshooting SourceOne server network problems

SourceOne uses the Media Access Control (MAC) address of a computer to identify the following servers on the network uniquely:

- Worker Servers.
- Native Archive Servers.

If these types of servers have multiple network MAC addresses installed, the first MAC address that is encountered is used by SourceOne.

The following sections describe two common problems that can occur with MAC address changes and SourceOne.

Problems when network MAC address changes

When the network Media Access Control (MAC) address of an existing SourceOne server changes, either physically or in a virtual environment, SourceOne cannot correctly recognize that Worker Server, or Native Archive Server.

Scenario

For example, if you change the Media Access Control (MAC) address of a Worker Server, the SourceOne console displays two entries for that server on the Configuration tab of the Server node. Both entries have the same server name, but different Server ID values and different MAC addresses:

- The entry with the original MAC address contains all the existing SourceOne configuration data, such as what types of jobs the Worker Server could process, but has a state of **Unavailable**. It was this state because that MAC address is not on the network.
- The entry with the new MAC address has a state of **Available** because it is on the network, but contains none of the existing SourceOne configuration data. It does not have this data because it is treated as a new server.

Solution

Perform one of the following steps to correct this problem:

- If possible, set the Media Access Control (MAC) address of the new network interface to be the same as the old MAC address.
- If you cannot change the MAC address, reinstall the server as whatever type of SourceOne server it was formerly, including doing all the configuration you had previously performed on the server.

Problems when there are multiple servers with the same MAC address

When the network Media Access Control (MAC) address of an existing SourceOne server is duplicated, SourceOne cannot correctly recognize that server which can cause problems. It is

duplicated so that there are two SourceOne servers with the same MAC address, either physically or in a virtual environment.

Solution

To correct this problem, ensure that the Media Access Control (MAC) addresses of all SourceOne servers are unique.

Troubleshooting search problems

The following information helps you troubleshoot problems that you may encounter when using SourceOne Search to search for and retrieve messages.

Connecting to web server

This section contains information that helps you to troubleshoot problems that might occur when connecting to the Web server.

User cannot access the SourceOne Search login page

The following issues prevent a user from accessing the Search login page:

- The user typed the wrong URL.
- A `Page Not Found` error means that the `ASP.NET 2.0` web extension is missing or prohibited.
- A `Service Unavailable` error means that a pre-installation configuration step was not completed correctly, such as setting up accounts and permissions, or that you must restart a service.
- Problems exist in the environment or with network load balancing.

Authenticating users

Refer to the following section for information about troubleshooting Search login problems.

User cannot log in

The following issues prevent a user from logging in to Search.

- The Search application Web service has been configured with the wrong URL.
- SSL is not configured, but the **SSL** checkbox was selected at installation.
- Login to Microsoft Windows or IBM Domino fails.

The `ExSearchService.exe.log` contains more information.

Selecting search folders

The information in this section helps you troubleshoot problems that you might encounter when selecting search folders.

User cannot see any folders

The `There are no available folders to search` error indicates one or more of the following problems.

- Mapped folders do not exist for the archive folders.
- Folder permissions were not set for the user.

- The folder permissions that were set for the user are not correct for the type of search that the user is performing.

The `ExSearchWebService.log` contains more information.

Searching

Refer to the following sections for troubleshooting problems that may occur when searching.

Errors occur while running a search

If errors occur while a search is running, review the following logs:

- `ExJBQuery.exe.log`.
- Provider-specific logs, such as `ExAsQuery.exe.log` for the Native Archive.

No search results

If no search results are returned, verify the following:

- The correct search fields were used.
- The criteria that is typed in the search fields is correct.
- The user selected the correct search type.

Wrong search results

If wrong search results are returned, verify the following:

- The correct search fields were used.
- The criteria that are typed in the search fields is correct.
- The user selected the correct search type.
- Understand that the differences in search results may be due to the type of archive like the Native Archive.
- Understand that search results depend on whether the archive is full-text indexed.
- Understand that some search fields search against the database, a relational search, and other search fields search against the index, a full-text index search. The **Always search embedded messages** option also affects whether a relational search or a full-text index search is run.

Working with search results

Refer to the following sections for troubleshooting problems that may occur when working with search results.

Errors when viewing messages

If errors occur when users view messages, verify the following:

- The SourceOne Retrieval Service is running.
- The Search application Web service is running.
- The native email client is installed on the user computer.
- If users cannot open **Notes** messages, verify that the ONM Viewer is installed on user computers, and the **Notes** client.

Errors when restoring messages

If errors occur when users restore messages, verify that the email system (Microsoft Exchange or IBM Domino) is not experiencing problems.

The `ExJBRestore.exe.log` file contains more information.

Errors when copying messages

The `ExJBRestore.exe.log` file contains more information.

Errors when deleting messages


If errors occur when users delete messages, determine the following.

- Which search type was used to perform the delete: Administrator or My Contributed Items.
- The archive type. For example, the Native Archive.

The `ExJBDeleteFromArchive.exe.log` file contains more information.

Troubleshooting SourceOne Search problems using logging

Refer to the following sections for troubleshooting SourceOne signals search problems using two types of logging.

 **Note:** By design, search errors are displayed to the user instead of being logged to the event log, to prevent the server event log from filling up.

The SourceOne Search Web Service:

- Uses standard SourceOne logging and event logging.
- Can use IIS logging.

The SourceOne Search application server uses only IIS logging.

Standard SourceOne logging

Standard SourceOne logging creates a log for each Search component.

Search components on SourceOne Worker

The following table lists the Search components and associated log files on the SourceOne Worker.

Table 23 SourceOne Search components on SourceOne Worker

SourceOne Search component	Log file
Search Web Service	<code>ExSearchWebService.log</code>
Search Service	<code>ExSearchService.exe.log</code>
Search JBC	<code>ExJBQuery.exe.log</code>

Search components on SourceOne Native Archive Server

The following table lists the Search components and associated log files on the Native Archive.

Table 24 SourceOne Search components on SourceOne Native Archive

SourceOne Search component	Log file	
Search Query Service	ExAsQuery.exe.log	
ISYS Searcher	ExAsSrchexe.log	

IIS logging

Perform the following procedure to configure IIS logging for the Search Web service or the Search Web application.

Procedure

1. Open the `web.config` file on the server running the service or application you want to configure. Default locations for the `web.config` files are:

- **Search Web service:**
C:\Program Files\EMC SourceOne\Search\WebApp
- **Search Web application:**
C:\Program Files\EMC SourceOne\SearchWS\WebServer

2. Add or edit the following entry in the `web.config` file:

```
<trace enabled="true" requestLimit="100" pageOutput="false"
traceMode="SortByTime" localOnly="true"/>
```

To view the resulting `trace.axd` log file, type the URL in a Web browser:

- **Search Web Service:**
`http://localhost/ExSearch/trace.axd`
- **Search application server:**
`http://localhost/ExSearchApp/trace.axd`

Troubleshooting OWA shortcut problems (email-specific)

Sometimes, SourceOne shortcuts do not work as expected when used with Outlook Web Access (OWA). Often, the problem is linked to a particular version of OWA.

Troubleshooting OWA shortcut retrieval problems

The following sections identify known problems when using Outlook Web Access to retrieve shortcuts that are created using SourceOne, and provide workarounds when possible.

Users cannot retrieve OWA shortcuts after an administrator has changed the value of the Security group name field

If an administrator modifies the Security group name field on the Retrieval tab of the Retrieval dialog box, the administrator must restart the Document Management Service. They can access it from the Retrieval node under the Application Configuration node in the SourceOne console.

Failure to restart the Document Management Service causes OWA users to be unable to retrieve shortcuts until that service is restarted.

Users cannot retrieve shortcuts when OWA access is configured at the root URL

Users have problems retrieving shortcuts when an administrator has configured Outlook Web Access (OWA) at the root URL.

If an administrator wants to provide OWA access at the root URL instead of using a virtual directory (that is, using `https://email.company.com` instead of `https://email.company.com/exchange`), the administrator must add an entry to the OWA `web.config` file for the ExOwaForm application on the OWA server.

Perform this by adding the following line in the `<appSettings> </appSettings>` section:

```
<add key="NoVirtualDir" value="true"/>
```

Users cannot retrieve shortcuts using OWA on a Macintosh computer

Users of Outlook Web Access (OWA) on a Macintosh computer cannot restore SourceOne shortcuts.

Retrieving OWA shortcuts may cause error when multiple IIS web sites used

When an EMC SourceOne system has external and internal Outlook Web Access (OWA) web sites in use, and shortcutting has been enabled, the HTTP 403 error can be returned. It can be returned when a user tries to resolve a shortcut message using the external OWA website. The external OWA website not having the ExOwaForm virtual directory that is installed causes this process to happen.

About this task

To workaround this problem, install shortcut support on the external website that is causing the error as follows.

Procedure

1. Verify that you can retrieve shortcuts using OWA on the internal IIS website on which EMC SourceOne OWA support was installed.
2. Open the **Internet Information Services (IIS) Manager** application on the Microsoft Exchange Back-End Server.
3. On the left pane of the IIS Manager, expand the Web Sites folder.

4. Within the Web Sites folder, expand the Internal website which contains the ExOwaForm virtual directory.
5. Right-click the **ExOwaForm** virtual directory, select **All Tasks** from the **context** menu, and select **Save Configuration to a File**. The **Save Configuration to a File** dialog box appears.
6. In the **Save Configuration to a File** dialog box:
 - a. In the **File name** field, type **ExOwaForm** as the name.
 - b. In the **Path** field, type or browse to the location where you want to save the file and click **OK**.
The file **ExOwaForm.xml** is created in the location you specified and the **Save Configuration to a File** dialog box exits.
7. Right-click the external website on which you want to enable the ability to restore shortcuts when using OWA.
8. Select **New > Virtual Directory (from file)** from the **context** menu. The **Import Configuration** dialog box appears.
9. In the **Import Configuration** dialog box:
 - a. Specify the previously saved **ExOwaForm XML** file in the **File** field and click **Read File**.
 - b. Select the ExOwaForm configuration that is listed in the **Location** area, and click **OK**.
The new ExOwaForm virtual directory is created within the selected website, and the **Import Configuration** dialog box exits.
10. Reset the IIS services by typing the **IISRESET** command at the command line on the Microsoft Exchange Back-End Server.

Troubleshooting OWA shortcut viewing problems

The following sections identify known problems with viewing EMC SourceOne shortcuts when using Outlook Web Access, and provide workarounds when possible.

Users cannot view shortcut messages in the reading pane when using OWA 2010

Users cannot view shortcut messages in the **reading** pane when using OWA 2010.

To work around this problem, users are to open the shortcut message to view it when using OWA 2010.

Users cannot view shortcut meeting or appointment attachments using OWA 2007 or OWA 2010

OWA 2007 and OWA 2010 do not support custom forms for the calendar folder, which affects EMC SourceOne shortcut processing.

When you open an appointment or meeting that has been shortcut, any attachments that are part of that appointment or meeting appear. However, because forms are not supported, those shortcut attachments do not appear. Only the shortcut stub appears.

Saving the shortcut stub to disk as an HTML file and then opening it is not always a valid workaround. It is not always valid because the OWA Safe HTML filtering feature may change the HTML in the stub, causing the link to no longer function.

The best workaround is to use Outlook to open appointments or meetings that have been shortcut.

Troubleshooting other OWA shortcut problems

The following sections identify other problems when using Outlook Web Access with EMC SourceOne shortcuts, and provide workarounds when possible.

Cannot use Previous and Next buttons to browse shortcut messages in OWA

After opening a shortcut message in OWA, you cannot use the Previous and Next buttons to go to the next shortcut message. Adjacent messages which are not shortcut are not subject to this limitation.

To workaroud this problem, close the open message and select the wanted message to view from the list instead.

Garbled multibyte text displayed in OWA shortcut stub attachment

Under some conditions, Outlook Web Access (OWA) users may observe garbled multibyte character text that is displayed when they open a shortcut stub attachment in OWA.

If this character text appears, set the browser character encoding to be Unicode (UTF-8).

Troubleshooting Journal activities with Office 365 content

When you use the Journal activity to process email messages from an Office 365 environment, errors may be written to the event log indicating a situation that must be corrected. This event log is on the Master Server on which the File Mover agent was installed.

Generally, event log messages are concerned with either connectivity to the source and target directories that are used by the SMTP journal group, or problems with disk space amounts remaining in target directories. The **File Mover agent** issues these event log messages only when you have defined separate source directories and target folders.

Troubleshooting User Delete issues

The following sections provide suggestions for how to troubleshoot issues with the User Delete activity.

Troubleshooting mapping folders for User Delete

If the Delete permission does not display in the Permissions tab of the Folder Properties dialog box, run the upgrade scripts for the EMC SourceOne Activity database.

Troubleshooting the Folder Conversion utility for User Delete

The following section lists common problems and solutions with using the Folder Conversion utility.

Problem 1

Errors during Initialization (-init) appear in the ES1NaFolderConvert.exe.log, and the utility stops processing and exits. The utility's actions may be due to a database connection problem.

Solution

Rerun the Folder Conversion utility using -init.

Processing continues from where the utility left off

Problem 2

Errors during update of ownership appear in the ExAsAdmin.exe.log as FolderConvert command failed.

Solution

Run the utility using `-rerun`.

The failed `FolderConvert` command is reprocessed.

Problem 3

Errors while the Native Archive Server is suspended. Ownership updates stop.

Solution

Ownership updates resume when you resume the Native Archive Server using the suspend resume script.

Problem 4

The load on the SQL server is too high.

Solution

Run the Folder Conversion utility using `-ctrl` and the parameters to:

- Reduce the number of threads performing the conversion.
- Schedule the conversion in off-peak hours.

Troubleshooting EMC SourceOne Search use with User Delete

Troubleshoot the issues that are described in the following sections with EMC SourceOne Search when using the User Delete activity.

Delete jobs fail

If Delete jobs fail, review the following:

- The EMC Event log for errors.
- The `ExDeleteFromArchiveJBC.exe.log` for information about deletes performed through Search.

Individual items fail to be deleted

The errors and solutions that are shown in the following section are displayed in either of the following locations:

- The **Failure Report** dialog box in Search.
- The detailed log file for the Delete job in the EMC SourceOne console.

Error

Delete window expired. Items older than <X> days cannot be deleted
The item is no longer eligible for deletion that is based on its age.

Solution

Instruct users to choose items to delete that are within the date window that you defined in the **Archive deletion eligibility period** field.

Error

Failed to retrieve item

Either there is a problem retrieving the item from the Archive service, or the item no longer exists in the archive.

Solution

Verify that the Archive service is running.

Error

Permission denied

The user has **Contributor** permission but does not have **Delete** permission on the mapped folder.

Solution

Grant the user **Delete** permission on the mapped folder. For example, if a user has **Contributor** permission on both Folder1 and Folder2, but **Delete** permission on Folder1 only, then:

- The **Delete** option is still enabled in Search.
- The user can find items in both folders and select items from both folders to delete.
- Items from Folder2 fail to be deleted, with a Permission denied error reported in the **Delete Status Details** dialog box.

Error

Failed to delete item

A general or unexpected failure.

Solution

Look in the Detailed Log File, which displays more information about the error, including the failure error code and an error string if available.

If the Detailed Log File does not exist because you did not enable it, or if you need more information, look in the `ExDeleteFromArchiveJBC.exe.log`.

Deleted mail item still appears in search results after 24 hours

If the **Delete status** dialog box in Search reports that the mail item was successfully deleted, but the item is still appearing in search results after 24 hours, do as follows.

- Look in the Detailed Log File to verify that the mail item has a status of **Deleted**.
- Examine your Native Archive Servers that have the Archive and Index roles. Within the 24 hours after a mail item is successfully deleted, the Native Archive Server removes the message/reference from SQL, posted an update to the index, and zeroed out the item in the container (if applicable). To determine if errors were encountered during this process:
 - Look in the Event Log on your Native Archive Servers.
 - Look in the `ExAsArchive.exe.log` for additional error information.

CHAPTER 16

Configuring Email Activities

The following section describes how to configure and manage email activities.

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Introduction to activities

A policy can group one or more activities. An activity is a user-named definition for performing a specific type of work with Dell EMC SourceOne, including the environment that it is performed in and when it is performed. Activities, like policies, are defined using the Dell EMC SourceOne console.

For example, you could create a policy that is called Archiving for Asia Pacific, which might include two activities: **Journaling** for Asia Pacific which uses the **Journal** activity type and **Historical Archive (Japan)** which uses the **Archive-Historical** activity type.

Prerequisites

Ensure that the following prerequisites are met before creating an activity:

- Verify that the Dell EMC SourceOne system is ready to create the activity.
- Review the description of the activity type to ensure that you are aware of all considerations and limitations of the activity and also review the lists in the following section.
- Review the description of the activity type to ensure you have performed any other necessary tasks before creating an activity of that type. The following are examples of such tasks:
 - Before archiving personal mail files or creating PST activities, create NSF groups or PST groups.
 - Before creating shortcut activities or Migrate PST activities, specify the universal shortcut URL in the **Application Configuration** node.
 - Before creating UDA activities, create the UDA folders.
 - Before creating **Journal** activities to process Microsoft Office 365 email content, create SMTP Journal groups.

Considerations and limitations for activities

Review the following sections to see if any of the listed considerations and limitations pertains to the activity you plan to create.

General activity considerations and limitations

If a single activity consumes the CPU on an Dell EMC SourceOne Worker computer, break that activity into a set of smaller activities that process separately and not completely consume the CPU.

For example, rather than shortcut all messages that are older than 30 days, have several activities that shortcut these messages in smaller groups. For example, using a single activity to shortcut at one time all the email in a company that is older than 30 days could cause the CPU on a Worker to be completely consumed.

Email-specific activity considerations and limitations

Review the following email-specific considerations and limitations to see if any pertain to the activity you plan to create:

- Dell EMC SourceOne has a limitation, which is identified through testing, of 140MB for archiving large embedded messages. Embedded messages below this threshold can be successfully archived.
- Email messages with attachments greater than 2 GB cannot be archived reliably.

- In environments which include Microsoft Exchange 2010, Microsoft Exchange converts the canonical addresses in journaled messages to SMTP addresses. The conversion causes those journaled messages to be duplicated across Microsoft Exchange 2010 servers and between the journaling mailbox and the user mailboxes as follows:
 - If a message is journaled on Microsoft Exchange 2010 and archived by Dell EMC SourceOne, and then later archived by a historical archiving task, the duplicate message is archived.
 - If a message is journaled, and archived, from both Microsoft Exchange 2007 and Microsoft Exchange 2010, the duplicate message is archived.

When duplicate messages are archived, it can result in a larger than expected archive, and in duplicate messages being displayed in search results.

This duplication occurs in the following environments:

- Microsoft Exchange 2010 only environment
- Microsoft Exchange 2010 with Exchange 2007 environment

Microsoft has released an Interim Update for this issue. Customers can request KB978871 from Microsoft, without charge, to receive the Interim Update. After you apply the Interim Update on all Microsoft Exchange 2010 servers, the routes remain as canonical addresses and not SMTP addresses. The messages will now correctly have duplicates removed across Microsoft Exchange 2010 servers and between the journaling mailbox and the user mailboxes.

If you do not want to apply this fix, you can minimize the chances of duplicate archived messages by performing either **Journal** or **Archive-Historical** activities, but not both.

- IBM Domino groups are not expanded in journaled messages.

Summary of activity types

The following section summarizes the types of activities you can create.

The Dell EMC SourceOne products that are installed determine the activity types available for you to select:

- If SourceOne Email Management is installed, refer to the following list for the description of activity types for processing email content. The email platforms that are enabled also modify the available activity types that the SourceOne console displays.

Review, and if required modify, the list of supported mail systems in the **Global Settings** dialog box of the SourceOne console to ensure that they match the environment:

- **Archive-Historical**—Archives items that are stored on a mail server.
- **Archive-Microsoft Exchange Public Folder**—Archives items that are stored in a Microsoft Exchange public folder.
- **Archive-Personal Mail Files**—Archives items that are stored in Microsoft Office Outlook .PST files or IBM Domino Notes .NSF files.

If you are processing Microsoft Exchange .PST files in a multiple forest **Active Directory** environment, you might want to perform the additional configuration tasks before using this .PST processing activity.

- **Archive-User Directed Archive**—Archives items that are stored in user-directed archive folders.
- **Delete-Historical**—Deletes items from mailboxes on a mail server.
- **Delete-Microsoft Exchange Public Folder**—Deletes items from public folders on an Exchange mail server.

- **Delete-User Directed Archive**—Deletes items from user-directed archive folders.
- **Delete-User Initiated Delete**—Processes requests in user mailboxes to delete messages from the archive.

The **Delete-User Initiated Delete** activity is for use in **Microsoft Exchange** environments only. You are not prevented from creating this activity in an IBM Domino-only environment. If you do create this activity in a Domino-only environment, the following error is recorded in the logs when the activity tries to run:

Not implemented

- **Find-Microsoft Office Outlook .PST**—Searches, discovers, and tries to determine ownership of Microsoft Office Outlook .PST files for SourceOne to process.

If you are processing Exchange .PST files in a multiple forest **Active Directory** environment, you might want to perform the additional configuration tasks before using this .PST processing activity.

- **Journal**—**Journals items**, as an IBM Domino, Microsoft Exchange, Microsoft Exchange Online, or SMTP mail server receives them.

You can:

- Journal Exchange Online content from an Office 365 environment.
- Allowing users to delete mail items that have been journaled.
- **Migrate-Microsoft Office Outlook .PST**—Shortcuts and moves messages to a specified folder, and optionally deletes a Microsoft Office Outlook .PST file after it has been archived.
If you are processing Exchange .PST files in a multiple forest Active Directory environment, you might want to perform the additional configuration tasks before using this .PST processing activity.
- **Shortcut-Historical**—Replaces archived messages on a mail server with shortcuts to those messages in the SourceOne Native Archive.
- **Shortcut-Microsoft Exchange Public Folder**—Replaces archived messages in Microsoft Exchange public folders with shortcuts to those messages in the SourceOne Native Archive.
- **Restore Shortcuts-Microsoft Exchange Public Folder**—Restores messages that were shortcut from Microsoft Exchange public folders by replacing the shortcut messages with the original messages.
- **Restore Shortcuts-Historical & User Directed Archive**—Restores messages that were shortcut by replacing the shortcut messages with the original messages.
- **Shortcut-User Directed Archive**—Replaces archived messages in user-directed archive folders with shortcuts to those messages in the SourceOne Native Archive.
- **Update Shortcuts-Historical & User Directed Archive**—Updates out-of-date information about shortcuts to Microsoft Exchange messages.

Summary of New Activity wizard pages for email activities

This section summarizes the New Activity wizard pages for each of the SourceOne Email Management activity types.

Use the **New Activity** wizard to create activities. The pages that appear in the **New Activity** wizard depend on the activity type that you select. Not all pages appear for every activity type.

The **New Activity** wizard pages and activity types table lists the pages in the **New Activity** wizard in the order in which they are displayed by the wizard (top to bottom) for each **Email Management** activity.

The following table displays the **New Activity** wizard pages and associated activity types.

If a page is used for an activity, the word **Yes** occurs in the column for that activity.

Table 25 New Activity wizard pages and activity types-Archive

Page in New Activity wizard	Archive-Historical	Archive-Microsoft Exchange Public Folder	Archive-Personal Mail Files	Archive-User Directed Archive
Activity Type	Yes	Yes	Yes	Yes
Data Source Types	Yes		Yes	Yes
Journaling Method (IBM Domino)				
Select Data Sources	Yes	Yes		Yes
Group Options			Yes	
Item Types	Yes	Yes	Yes	Yes
Folders	Yes		Yes	
User Created Folders	Yes		Yes	
Dates	Yes	Yes	Yes	Yes
Attachments Filter	Yes	Yes	Yes	Yes
Message Types Filter	Yes	Yes	Yes	Yes
Properties				Yes
Message Size Filter	Yes	Yes	Yes	Yes
Mapped Folder(s)				
Shortcut Options (Microsoft Exchange)				
Post Processing			Yes	
Business Components:	Yes	Yes	Yes	
Specify Filtering Rules	Yes	Yes	Yes	
Delete Options				
Schedule	Yes	Yes	Yes	Yes
Select Worker Group	Yes	Yes	Yes	Yes
Activity Name	Yes	Yes	Yes	Yes
Summary	Yes	Yes	Yes	Yes

Table 26 New Activity wizard pages and activity types-Delete, Find, Journal, Migrate

Page in New Activity wizard	Delete-Historical	Delete-Microsoft Exchange Public Folder	Delete-User Directed Archive	Find-Microsoft Outlook PST	Journal	Migrate-Microsoft Outlook PST
Activity Type	Yes	Yes	Yes	Yes	Yes	Yes

Table 26 New Activity wizard pages and activity types-Delete, Find, Journal, Migrate (continued)

Page in New Activity wizard	Delete-Historical	Delete-Microsoft Exchange Public Folder	Delete-User Directed Archive	Find-Microsoft Outlook PST	Journal	Migrate-Microsoft Outlook PST
Data Source Types	Yes		Yes		Yes	
Journaling Method (IBM Domino)					Yes	
Select Data Sources	Yes	Yes	Yes		Yes	
Group Options				Yes		Yes
Item Types	Yes	Yes	Yes			Yes
Folders	Yes					Yes
User Created Folders	Yes					Yes
Dates	Yes	Yes	Yes			Yes
Attachments Filter	Yes	Yes	Yes		Yes	Yes
Message Types Filter	Yes	Yes	Yes			
Properties			Yes			
Message Size Filter	Yes	Yes	Yes			Yes
Mapped Folder(s)						Yes
Shortcut Options (Microsoft Exchange)						Yes
Post Processing						Yes
Business Components:					Yes	
Specify Filtering Rules					Yes	
Delete Options	Yes	Yes	Yes			
Schedule	Yes	Yes	Yes	Yes		Yes
Select Worker Group	Yes	Yes	Yes	Yes	Yes	Yes

Table 26 New Activity wizard pages and activity types-Delete, Find, Journal, Migrate (continued)

Page in New Activity wizard	Delete-Historical	Delete-Microsoft Exchange Public Folder	Delete-User Directed Archive	Find-Microsoft Outlook PST	Journal	Migrate-Microsoft Outlook PST
Activity Name	Yes	Yes	Yes	Yes	Yes	Yes
Summary	Yes	Yes	Yes	Yes	Yes	Yes

Table 27 New Activity wizard pages and activity types-Shortcuts

Page in New Activity wizard	Restore Shortcuts-Historical and User Directed Archive	Restore Shortcuts-Microsoft Exchange Public Folder	Shortcut-Historical	Shortcut-Microsoft Exchange Public Folder	Shortcut-User Directed Archive	Update Shortcuts-Historical and User Directed Archive
Activity Type	Yes	Yes	Yes	Yes	Yes	Yes
Data Source Types			Yes		Yes	
Journaling Method (IBM Domino)						
Select Data Sources	Yes	Yes	Yes	Yes	Yes	Yes
Group Options						
Item Types			Yes	Yes	Yes	
Folders	Yes		Yes			
User Created Folders			Yes			
Dates	Yes	Yes	Yes	Yes	Yes	
Attachments Filter			Yes	Yes	Yes	
Message Types Filter						
Properties					Yes	
Message Size Filter			Yes	Yes	Yes	
Mapped Folder(s)			Yes	Yes	Yes	
Shortcut Options (Microsoft Exchange)			Yes	Yes	Yes	Yes

Table 27 New Activity wizard pages and activity types-Shortcuts (continued)

Page in New Activity wizard	Restore Shortcuts-Historical and User Directed Archive	Restore Shortcuts-Microsoft Exchange Public Folder	Shortcut-Historical	Shortcut-Microsoft Exchange Public Folder	Shortcut-User Directed Archive	Update Shortcuts-Historical and User Directed Archive
Post Processing						
Business Components:						
Specify Filtering Rules						
Delete Options						
Schedule	Yes	Yes	Yes	Yes	Yes	Yes
Select Worker Group	Yes	Yes	Yes	Yes	Yes	Yes
Activity Name	Yes	Yes	Yes	Yes	Yes	Yes
Summary	Yes	Yes	Yes	Yes	Yes	Yes

Adding activities to an organizational policy

Perform the following tasks to add an activity to an organizational policy.

Procedure

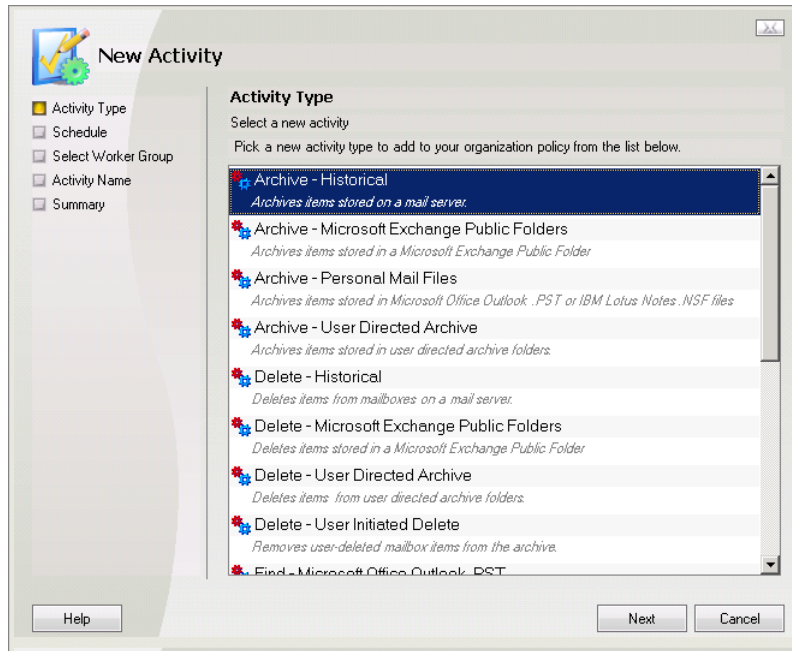
1. In the Dell EMC SourceOne console, select the **Organizational Policies** node.
2. In the **Organizational Policies** list, select the policy to which you want to add the activity.
3. Select **Action > New Activity**.
The **New Activity** wizard starts.
4. Click **Next** to continue through the pages of the **New Activity** wizard. You can use the **Back** button to return to a previous page.
5. When you reach the last page of the **New Activity** wizard, click **Finish**.

The checkboxes in the left column indicate the progress through the wizard. You cannot select them. The pages in the **New Activity** wizard differ depending on the type of activity you select.

Activity Type

The Activity Type page specifies the type of activity being created.

Figure 83 Activity Type—New Activity wizard



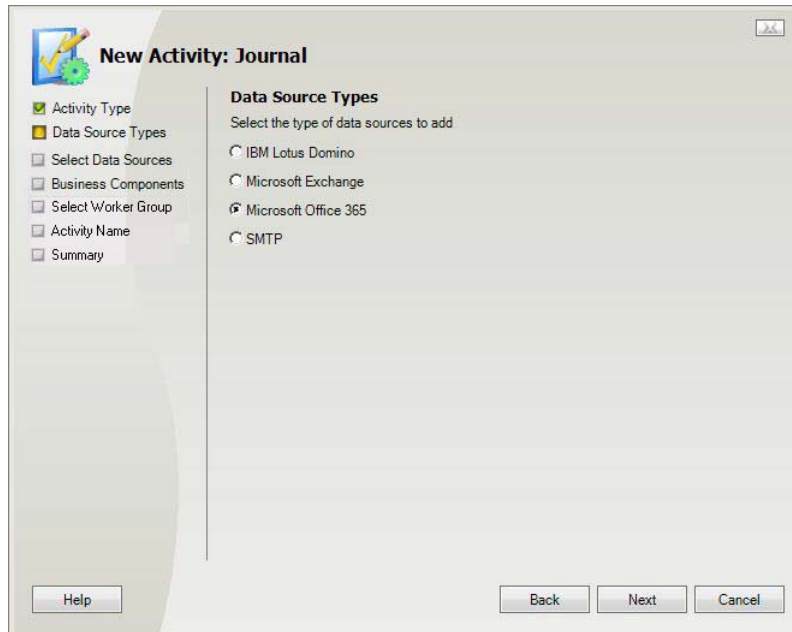
Select the type of activity to create from the displayed list.

Only one activity type can be selected for an activity. The activities available depend on the Dell EMC SourceOne components installed.

Data Source Types

Use the Data Source Types page to specify the data source type.

Figure 84 Data Source Types—New Activity wizard



Selecting the Data Source Type

Select the type of data source to be used:

- IBM Domino
- Microsoft Exchange
- Microsoft Office 365—Only available for use with the **Journal** activity.
- SMTP—Only available for use with the **Journal** activity.

Select Data Sources

The Select Data Sources page that appears depends on the Data Source Type selection in the Data Source Types page and the Activity Type selected in the Activity Types page.

Select Data Sources page (for most activities)

Perform the following procedure for activities to process public folder content, including:

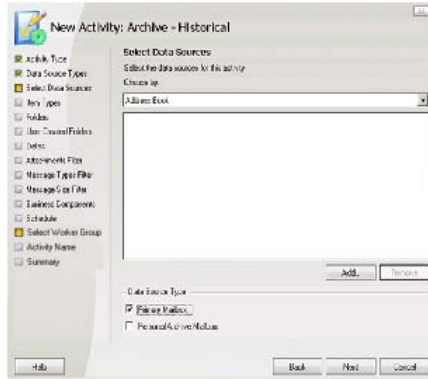
- Archive-Microsoft Exchange Public Folder
- Delete-Microsoft Exchange Public Folder
- Shortcut-Microsoft Exchange Public Folder
- Restore Shortcuts-Microsoft Exchange Public Folder activities

Do not use the procedure for the following activities:

- **Journal** activity when Microsoft Office 365, or SMTP is selected as the Data Source Type

- Public folder activities:
 - Archive-Microsoft Exchange Public Folder
 - Delete-Microsoft Exchange Public Folder
 - Restore Shortcuts-Microsoft Exchange Public Folder
 - Shortcut-Microsoft Exchange Public Folder

Figure 85 Select Data Sources (non-SMTP)—New Activity wizard



You use this page to:

- Specify the Primary Mailbox, mail servers, or an LDAP query as the source of items to process.
- Specify the Personal Archive Mailbox, mail servers, or an LDAP query as the source of items to process.

The options available on this page depend on the type of activity previously selected.

Configuring options in the Select Data Sources page

Perform the following tasks using the Select Data Sources page.

Procedure

1. Select one of the following options in the **Choose By** field:
 - **Address Book** (Microsoft Exchange) or **Directory** (IBM Domino).
 - **Server Hierarchy**.
The first time that you select the **Exchange Address Book** or **Exchange Server Hierarchy**, the **Choose Profile** dialog box appears:
 - a. Select an Outlook profile.
 - b. Click **OK**. The Outlook profile must be a member of the Dell EMC SourceOne Admin group which has view-only permission in Microsoft Exchange.
 - c. After the initial prompt, you are not prompted again. The profile name that you select is stored in the Registry.
 - **LDAP Query** (not used with **Journal** activities).
2. Select one of the following mailboxes in the **Data Source Type** field:
 - **Primary Mailbox**
 - **Personal Archive Mailboxes**
The following activities support personal archive mailbox archive.
 - **Archive-Historical**

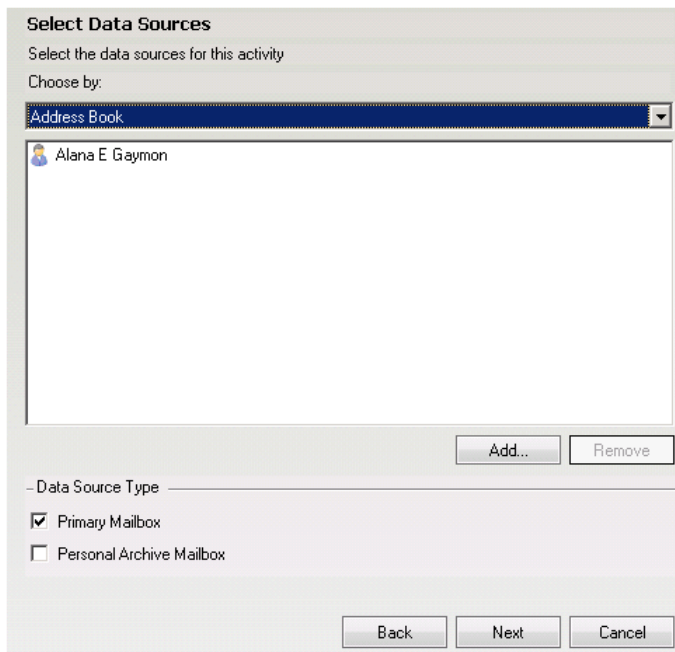
- **Shortcut-Historical**
- **Restore Shortcut-Historical & User Directed Archive**
- **Delete-Historical**
- **Update Shortcut-Historical & User Directed Archive**

Note: Select either the **Primary Mailbox** or the **Personal Archive Mailboxes** option. If one of these options is not selected, an error message appears.

Selecting data sources using Address Book or Directory

In the Choose By field on the Select Data Sources page, select Address Book (Microsoft Exchange) or Directory (IBM Domino).

Figure 86 Address Book (Microsoft Exchange)



To add groups or users to the **Group or User names** list, click **Add**, and then select groups or users from the address book or directory.

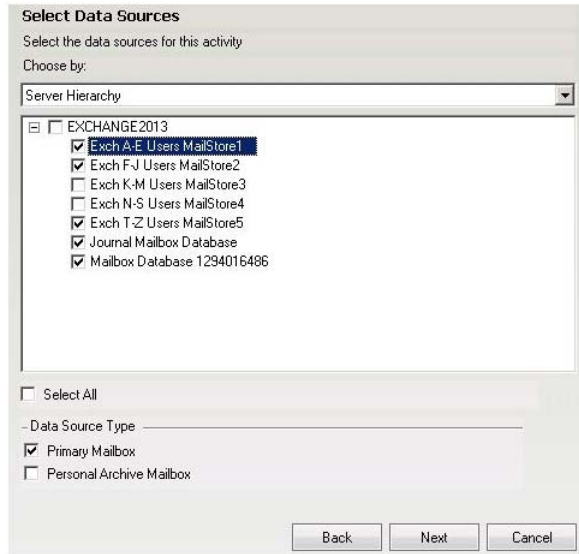
Note: Select a group or use an LDAP query instead of selecting many (thousands) of individual users from the address book or directory. If you select many users from the address book or directory, it takes several minutes before the users are added to the **Select Data Sources** dialog box.

To remove groups or users from the **Group or user names**, select the group or user in the list, and then click **Remove**.

Selecting data sources using Server Hierarchy

In the Choose By field on the Select Data Sources page, select Server Hierarchy.

Figure 87 Server Hierarchy



In the **Server Hierarchy** list, perform one of the following steps:

- For Microsoft Exchange, select individual mail servers, mail storage groups, or mail stores by selecting checkboxes.
- For IBM Domino, select individual servers.
- Click **Select All**.

Note: Data source refers to the mailbox database. Not the archive database. Before trying to archive the personal archive mailbox, confirm that the corresponding user's mailbox database has been checked in the server hierarchy.

Selecting data sources using LDAP overview

If you have an LDAP (Lightweight Directory Access Protocol) or Microsoft Active Directory Services (ADS) server, you can create LDAP queries that filter messages against the directory services schema. You can create them in cooperation with or in place of the mail system's address book. This approach may be faster or more effective than using a Microsoft Exchange or IBM Domino address book.

Dell EMC SourceOne does not support groups or distribution lists when performing LDAP or ADS-based filtering, unless the group or distribution list has a mail account or the RFC 822 mail account attribute assigned to it.

Selecting a data source using LDAP procedure

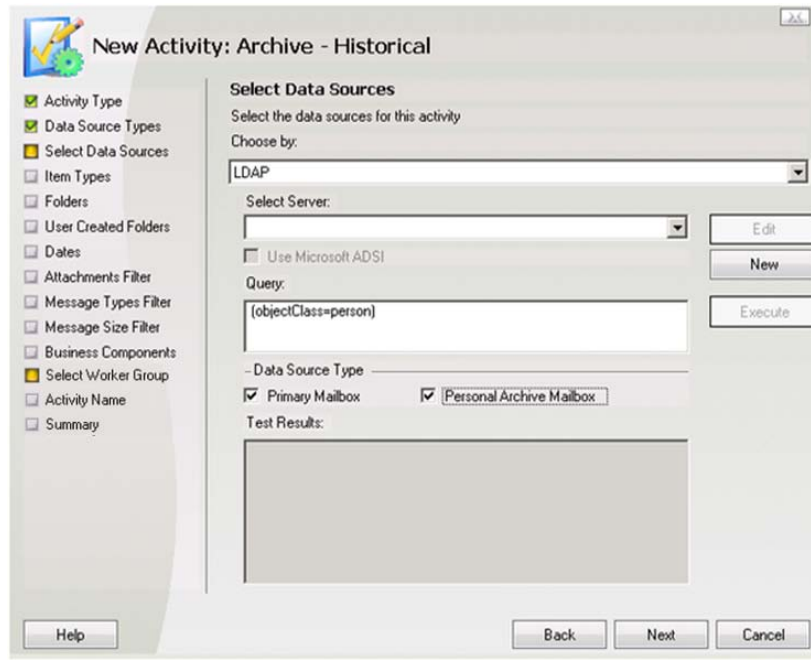
Perform the following steps to select a data source using LDAP.

Procedure

1. In the **Choose By** field on the **Select Data Sources** page, select **LDAP** (not available for Journal activities).
2. Specify the LDAP server to be used, as follows:
 - In the **Select Server** field, select the LDAP server to use.

- If the server you want to use is not displayed, specify and use a new LDAP server.

Figure 88 LDAP data sources dialog box



3. Specify whether the LDAP server is to use Microsoft ADSI by selecting the **Use Microsoft ADSI** option.

The **Use Microsoft ADSI** option is enabled or disabled by default that is based on the server that is displayed in the **Select Server** field:

- If the server had enabled the **Server supports Microsoft ADSI search** option, the **Use Microsoft ADSI** option is selected by default on the **Data Sources** dialog box.
- If the server had not enabled the **Server supports Microsoft ADSI search** option, the **Use Microsoft ADSI** option is not selected by default on the **Data Sources** dialog box.
- If the **Use Microsoft ADSI** option appears gray, which indicates that the LDAP server was defined before the installation of SourceOne Email Management 6.8 SP2 or later.

4. In the **Query** field, type the search filter portion of the query.

An LDAP query is limited to 2000 characters.

5. To test the query, click **Execute**.

Results of the query and any error messages are displayed in the **Test Results** area.

6. Select one of the following mailboxes in the **Data Source Type** field:

- Primary Mailbox.
- Personal Archive Mailboxes.

Note: Do not select both the **Primary Mailbox** and the **Personal Archive Mailboxes** options simultaneously. If both options are selected, an error message appears.

Specifying a new LDAP server in Microsoft Exchange

Perform the following procedure to specify a new LDAP server.

Procedure

1. In the **Select Data Sources** page of the **New Activity** wizard:
 - a. In the **Choose By** field on the **Select Data Sources** page, select **LDAP**. This selection is not available for **Journal** activities.
 - b. Click **New**.
The **LDAP Server Configuration** dialog box appears.

Figure 89 LDAP server configuration

2. In the **Server Configuration** field, type the unique name to refer to the LDAP server. Use this name in the LDAP search syntax later on. It can contain letters, numbers, and spaces (maximum 250 characters).
3. In the **Server Host/IP** field, type the computer name or the IP address of the domain controller that contains the users you want to view, or use the Global Catalog server.
The maximum number of characters for this field is 250.
4. In the **Server Port** field, leave the default port value of 389 unless you use an alternate port for LDAP services on the ADS or LDAP server.
Valid port values are integers in the range 1–999999. To reset the Server Port value to 389, click **Use Default**.
5. If the LDAP or ADS server supports Active Directory Service Interface (ADSI) search, select the **Server supports Microsoft ADSI search** option. The value of this option controls whether you can select to use the ADSI search capability with Dell EMC SourceOne.
6. If the LDAP or ADS server requires a secure sockets layer connection (SSL), select the **Server requires a secure connection (SSL)?** option. When this option is selected, the LDAP port changes to the default secure LDAP port value of 636 for **Active Directory**.
7. Choose whether to require logging in to the server. Type the **Domain\Windows** login of the domain controller you are querying against in the **Account name** and **Password** fields.
The maximum number of characters for the **Account name** field is 250. The maximum number of characters for the **Password** field is 250.
8. Specify the location in which the LDAP search begins, using the **Search base** field.

Type the domain information that is based on the ADS primary domain controller (PDC) computer name using the following format:

dc=subdomain,dc=domain,dc=com

For example, if the name of the PDC is AcmePDC.Acme.com, type the following:

dc=AcmePDC,dc=acme,dc=com

The maximum number of characters is 250.

9. Click **OK** to save the changes and to close the **LDAP Server Configuration** dialog box.

Specifying a new LDAP server in IBM Domino

Perform the following procedure to specify a new LDAP server.

Procedure

1. In the **Select Data Sources** page of the **New Activity** wizard:
 - a. In the **Choose By** field on the **Select Data Sources** page, select **LDAP**. This selection is not available for Journal activities.
 - b. Click **New**.
The **LDAP Server Configuration** dialog box appears.

Figure 90 LDAP server configuration



2. In the **Server Configuration** field, type the unique name to refer to the LDAP server. Use this name in the LDAP search syntax later on. It can contain letters, numbers, and spaces (maximum 250 characters).
3. In the **Server Host/IP** field, type the computer name or IP address of the computer running the LDAP server. If multiple IBM Domino servers are running the LDAP task, type the computer name or IP address of the IBM Domino Hub server.
The maximum number of characters for this field is 250.
4. In the **Server Port** field, leave the default port value of 389 unless you use an alternate port for LDAP services on the ADS or LDAP server.
Valid port values are integers in the range 1–999999. To reset the Server Port value to 389, click **Use Default**.
5. If the LDAP or ADS server supports Active Directory Service Interface (ADSI) search, select the **Server supports Microsoft ADSI search** option. The value of this option controls whether you can select to use the ADSI search capability with Dell EMC SourceOne.

6. If the LDAP or ADS server requires a secure sockets layer connection (SSL), select the **Server requires a secure connection (SSL)?** option. When this option is selected, the LDAP port changes to the default secure LDAP port value.
7. Choose whether to require logging in to the server. If you are using LDAP with IBM Domino, you may have anonymous LDAP access set up. Clear the **Server requires login?** checkbox and leave the **Account name** and **Password** fields empty unless you specifically restricted access on the IBM Domino LDAP servers. If you want to require logging in to the server, type the IBM Domino user account, not the Windows login, in the **Account name** and **Password** fields.
The maximum number of characters for the **Account name** field is 250. The maximum number of characters for the **Password** field is 250.
8. Specify the location in which the LDAP search begins, using the **Search base** field. Leave the **Search Base** field blank, or type the name of the IBM Domino server directory, `names.nsf`.
The maximum number of characters is 250.
9. Click **OK** to save the changes and to close the **LDAP Server Configuration** dialog box.

LDAP query syntax

The syntax that you use to create LDAP filters is very specific and uses common LDAP query syntax.

Refer to the examples outlined in the following sections.

For more information about LDAP search syntax, refer to the RFC 1650 and RFC 2252 specifications at:

http://ldapman.org/ldap_rfcs.html

Note:

Dell EMC SourceOne does not support groups or distribution lists when performing LDAP or ADS-based filtering, unless the group or distribution list has a mail account or the RFC 822 mail account attribute assigned to it. Also, while the object class `person` may be the one you use most often, you can also use other object classes if they are associated with a mail account.

The number of results that are returned and the time allotted to return them is based on the actual LDAP server settings.

For Microsoft Exchange, these settings are on the Active Directory server.

LDAP query syntax for finding users based on common names

The following example displays how to find users with common names that begin with A.

```
(&(objectclass=person)(cn=a*))
```

On the same server, you could find users with common names beginning with any letter from A through M using the following syntax:

```
(&(objectclass=person)(cn=<m))
```

LDAP query syntax for finding users based on organization

The following example displays how to find users who are members of the Engineering organization.

```
(&(objectclass=person)(o=Engineering))
```

On the same server, you could find users who are not members of either the Engineering or Accounting organizations using the following syntax:

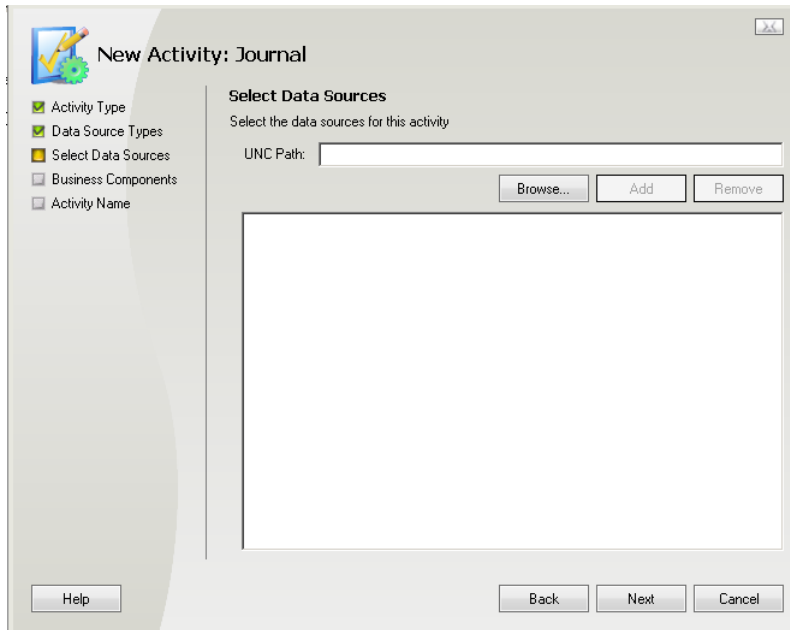
```
(&(objectclass=person) (!(|(o=Engineering) (o=Accounting)))
```

Select Data Sources page for Journal activities for SMTP email

Use this variant of the Select Data Sources page with the Journal activity when SMTP is selected as the Data Source.

About this task

Figure 91 Journal Select Data Sources page



Use the **Select Data Sources** page to specify the locations of the SMTP drop directories that journaling uses as a source.

Perform the following steps.

Procedure

1. Click **Browse**.
2. In the **Browse For Folder** dialog box, browse to and select an SMTP drop directory. Click **OK** to close the dialog box.

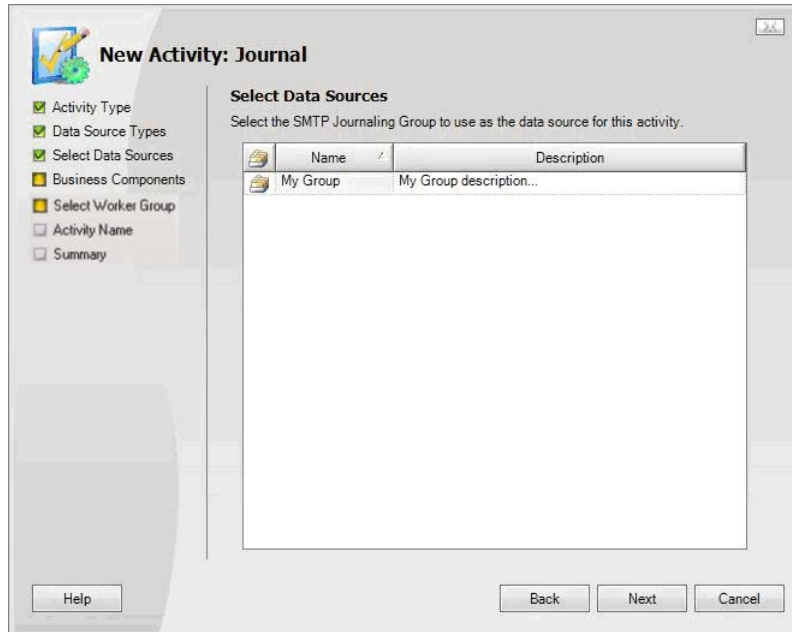
The **UNC Path** field displays the path that you specified.
The maximum number of characters is 256.

3. Click **Add**.
The path of the SMTP drop directory appears in the list.
4. To specify additional drop directories, repeat steps 1 through 3.

Select Data Sources page for Journal activities for Microsoft Office 365 email

Use this variant of the Select Data Sources page with the Journal activity when Microsoft Office 365 is selected as the Data Source.

Figure 92 Journal Select Data Sources page



On the **Select Data Sources** page, select one of the previously defined SMTP journaling groups to use as the data source for this journaling activity, and click **Next**. The **Business Components** page appears.

If no SMTP journaling group is defined, the following error message appears:

At least one SMTP Journaling Group must be created before configuring an activity of this type.

If this message occurs, cancel creating the activity and create an SMTP Journaling Group to be used with this activity.

Select Data Sources page (for Public Folder activities)

This section describes the Select Data Sources page for Public Folder activities. Perform the following steps.

Procedure

1. Use this variant of the **Select Data Sources** page with the activities which process Microsoft Exchange public folder content, including:
 - Archive-Microsoft Exchange Public Folder
 - Delete-Microsoft Exchange Public Folder
 - Shortcut-Microsoft Exchange Public Folder
 - Restore Shortcuts-Microsoft Exchange Public Folder activities

Figure 93 Delete-Microsoft Exchange Public Folders Select Data Sources page



2. On the **Select Data Sources** page, Public Folder is the only available option in the **Choose by** field and cannot be changed. Within the area below the **Choose by** field, select the public folders to process as follows:

- Select the Microsoft Exchange public folder content to be processed by selecting the box next to each public folder name containing that content.

Initially, only the top-level public folders are displayed. If these folders contain other folders, you can expand the folder to display the subfolders by clicking the plus sign (+) next to the public folder. After expansion, you can hide the subfolders by clicking the minus (-) sign next to the parent folder.

Only the selected folders are processed.

- Select the **Select All** option to cause all folders and subfolders to be selected. To deselect all folders and subfolders, clear the **Select All** option.
- Select the **Subfolders** option in the **Include** area to cause all subfolders that are contained in the selected folders to be processed without individually marking each subfolder. By default this option is selected and subfolders of selected folders are processed.
- Select the **Read items** option in the **Include** area to have read items that are processed. To exclude read items from being processed, unselect this option. By default this option is selected and read items are processed.
- Select the **Unread items** option in the **Include** area to have unread items that are processed. To exclude unread items from being processed, unselect this option. By default this option is selected and unread items are processed.

Client archive support for IBM Domino archive

The IBM Domino administrator can set the client archive policy. Also, if the Administrator did not previously set a policy, the Notes client can set their own archive setting. In either case, for Dell

EMC SourceOne to access the archive database, it must be created on an IBM Domino server and linked to the Archive folder in the mailbox.

Requirements

The following conditions must be met to support the processing of attached Archive databases:

- The Archive database cannot be a Local database.
- The Archive database must reside on an IBM Domino server.
- The Archive database must be accessible.
- The Archive Profile document must exist.
- The Archive Profile document must have the following set:
 - ArchiveLocation = Server
 - ArchiveServer = <Domino Server name>
 - ArchivePrivatePolicyList
- Available client Archive Settings:
 - ArchivePath = <Path on Server>, usually archive\\a_admin.nsf
The ArchivePath can remain blank in the Archive Profile.
- ArchLastRunDestDBs is used if the Archive Profile exists, but does not contain an entry in ArchivePath and the ArchivePrivatePolicyList contains no entries. This value contains the IBM Domino server and archive database that was last used, so that value is returned.
- IBM Domino and Notes environments support the Archive Profile.
To view the archive profile, use a tool, such as NotesPeek, to open the database and view the database profiles.

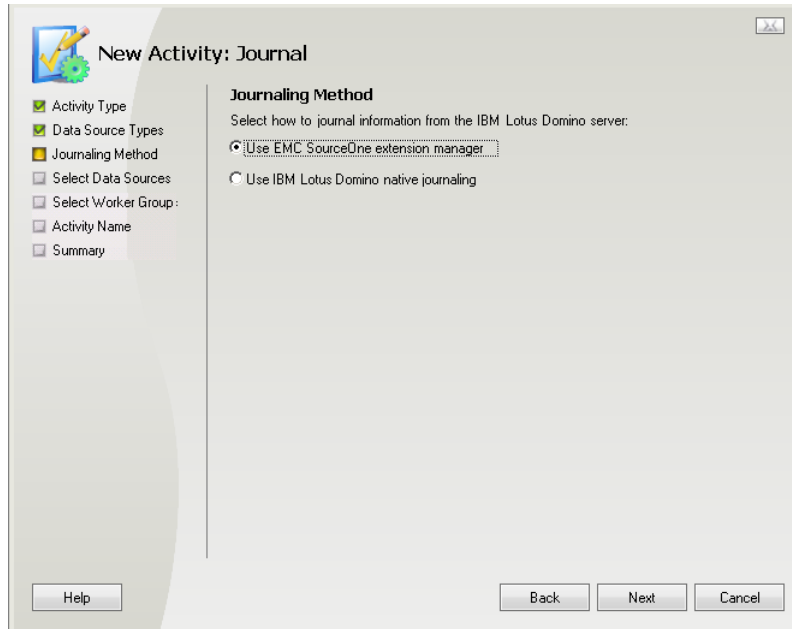
Configure IBM Domino Archiving

Refer to the IBM Domino Notes documentation to configure IBM Domino or Notes Archiving.

Journaling Method

If you selected IBM Domino on the Data Source Types page, the Journaling Method page allows you to select the method for journaling and appears for the Journal activity.

Figure 94 Journaling Method—New Activity wizard (Domino)



Specifying how to Journal Information from the IBM Domino server

Select one of the following options:

- Use Dell EMC SourceOne extension manager.
- Use IBM Domino native journaling.
Set the **Journal Recipients** field to Enabled if using IBM Domino native journaling.

Considerations for Over Quota Error reports

Over Quota Error reports sent by IBM Domino are handled differently depending on which type of processing you select:

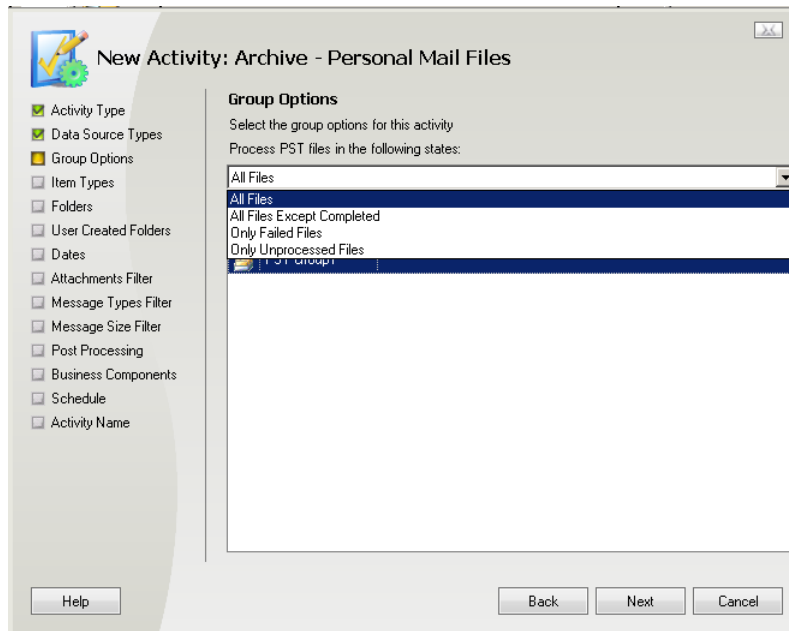
- Over Quota Error reports are processed when you use IBM Domino native journaling.
- Over Quota Error reports are not processed when you use Dell EMC SourceOne journaling.
- Over Quota Error reports are processed when you use an **Archive** activity, if you select **Reports** in the **Item Types** page for that activity.

Group Options

Use the Group Options page of the New Activity wizard to select options for the PST or NSF groups that are used by the activity.

Note: Before you create PST activities, create PST groups. Before you create NSF activities, create NSF groups.

Figure 95 Group Options (PST)—New Activity wizard



Specifying processing options for PST or NSF groups

Perform the following steps to specify processing options.

Procedure

- In the **Process locations/PST/NSF in the following states** field, select the state of items you want to process
 - For **Archive-Personal Mail Files** activities and **Migrate PST** activities, the states correspond to the states of PST files in PST groups, or the states of NSF files in NSF groups.
 - For **Find PST** activities, the states correspond to source computer states in PST groups.

The following table describes the relationship between group options and source computer/file states.

Table 28 Relationship between group options and source computer/file states (1 of 2)

Group options in PST/NSF activity	Source computer/file state in PST/NSF group	Description
All Locations/Files	All states	The activity processes all source computers or files, regardless of their state.

Table 28 Relationship between group options and source computer/file states (1 of 2) (continued)

Group options in PST/NSF activity	Source computer/file state in PST/NSF group	Description
All Locations/Files Except Completed	Complete	The activity will: <ul style="list-style-type: none"> • Skip any source computer or file in a Complete state. • Only process source computers or files in a New or Failed state.
Only Failed Locations/Files	Failed	The activity processes only those source computers or files in a Failed state.
Only Unprocessed Locations/Files	New	The activity processes only those source computers or files marked New .

2. In the **Select the group to use for this activity** field, select the PST groups or NSF groups you want to process.

Item Types

The Item Types page is used to select the type of email items the activity processes, such as email messages, meeting requests, or appointments.

In Dell EMC SourceOne, not all mail system documents are considered to be messages. Specifically, calendar, contact, and task entries are not messages. Only those documents that are sent over the network between individuals are considered to be messages, including common email messages, task requests, meeting requests, and delivery receipts.

Figure 96 Item Types—Archive activities (Microsoft Exchange)

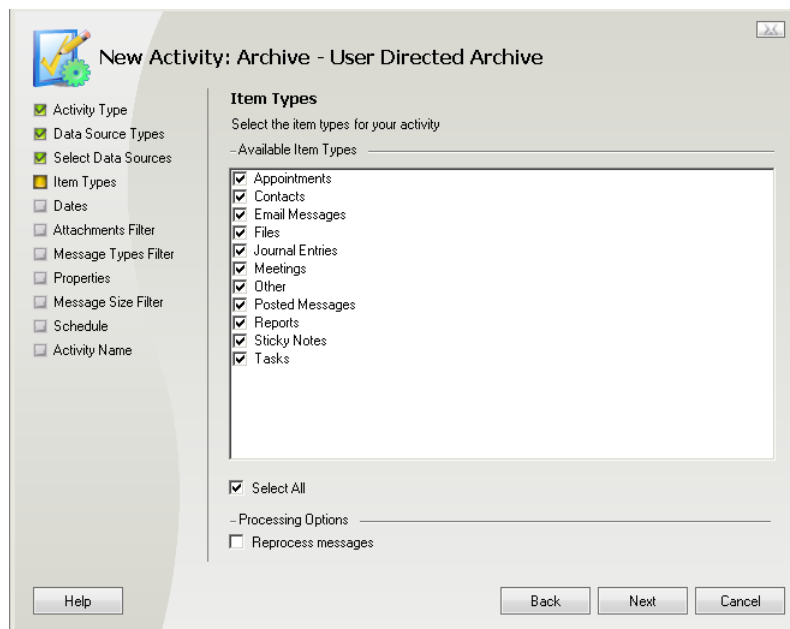
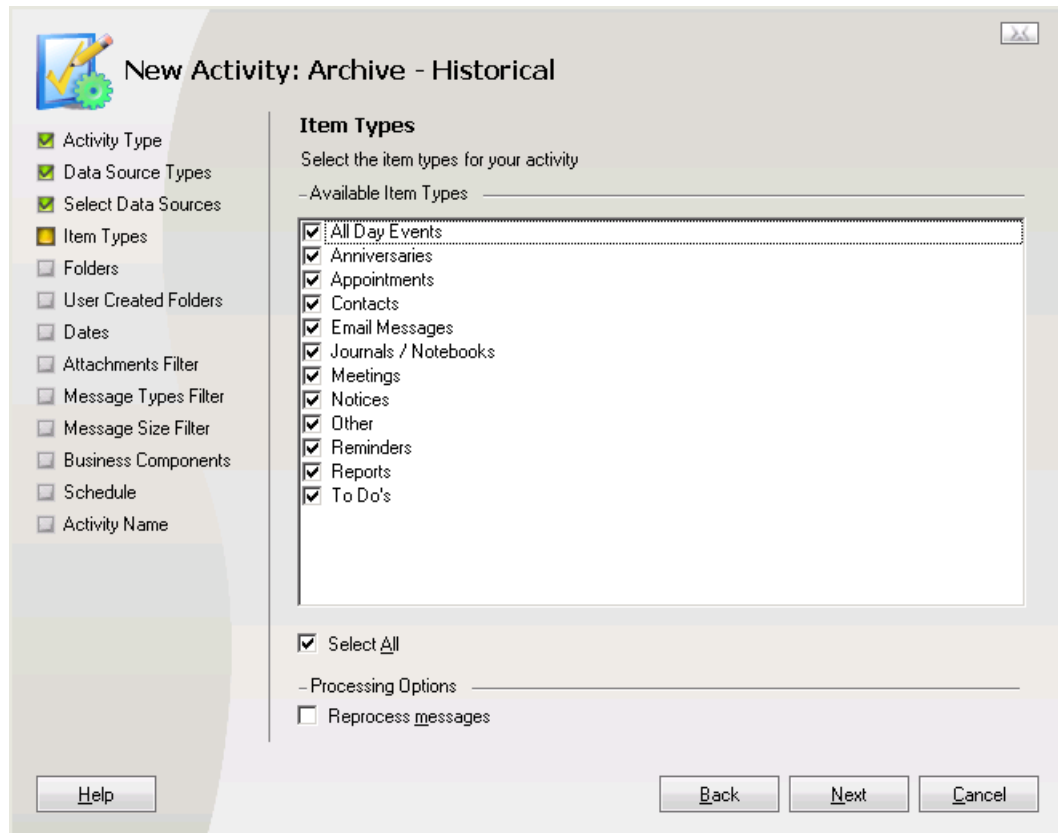


Figure 97 Item Types—Archive activities (IBM Domino)



Not all activities support the same set of item types. For example:

- **Exchange** activities support different item types than **Domino** activities.
- **Shortcut** activities support only email message and calendar item types. For example, the **Shortcut-Microsoft Exchange Public Folder** activity only supports shortcutting of Appointment, Email Message, and Meeting item types.
- The **Migrate-Microsoft Office Outlook PST** only supports the email message item type.

Considerations and limitations

Be aware of the following considerations and limitations:

- A **Delete** activity that uses the **Use all date** option removes recurring calendar items, because the date is not used as part of the selection criteria. This behavior works as designed and is expected. To prevent recurring calendar items from being deleted, specify a date before today's date.
- When using **Exchange** activities:
 - The message class for the Appointment item type is `IPM.Appointment`. It has no recipients, and it exists in the calendar folder.
 - The Meeting item type has two Message Classes:
 - **IPM.Appointment**—Contains recipients, and it exists in calendar folder.
 - **IPM.Schedule**—Contains recipients, and it exists in any folder except Calendar.
 - Dell EMC SourceOne does not support shortcutting the `IPM.Document.Outlook.File.ics` item type. SourceOne does not treat this item type

as an appointment or meeting. This item type is created when a user drags an .ics iCalendar format file into a user-defined folder in Outlook.

- When using **Domino** activities:
 - SourceOne Email Management does not intentionally archive a Tracking Request. However, if you select the **Other** option, some Tracking Requests may be archived. In this case, there is no guarantee that all Tracking Requests are archived.
 - Messages and calendar entries can be shortcut. Notices, Task and ToDo notices, cannot be shortcut.


Specifying the types of items to process

Perform the following procedure to specify the types of items to process.

Procedure

1. Perform one of the following steps:
 - To select all item types, select the **Select All** checkbox (default).
 - To specify individual item types, clear the **Select All** checkbox, then select the checkbox of each item type you want.

The item types that are available depend on the activity and mail system.
2. For archive activities only, perform one of the following steps:
 - To process messages again, select **Reprocess items**.
 - To stop messages from processing again, clear **Reprocess items**.

 **Note:** This option applies only to Dell EMC SourceOne archived messages.
3. For Shortcut activities only, perform one of the following steps:
 - To shortcut only previously archived items, select **Process only previously archived items**.
 - To shortcut items regardless of whether they have been previously archived, clear **Process only previously archived items**.

Shortcutting only previously archived items

The Item Types page contains the Process only previously archived items checkbox:

- When the checkbox is selected, only those messages that have already been archived (and not modified or already shortcut) are shortcut.

For example, after you archive items and perform a backup of the archive, run **shortcut** activities with this checkbox selected.

The **Shortcut-Historical** activity looks for previously archived items only in the mapped folder that you specify for the activity. The **Shortcut-User Directed Archive** activity looks for previously archived items only in the UDA folder that you specify for the activity. **Shortcut** activities do not look through the entire archive for previously archived items.

- When the checkbox is cleared, the activity will shortcut all the messages that are specified in the **shortcut** activity settings. If the job finds messages that are not archived, then those messages are archived to the mapped folder specified in the activity and then they are shortcut.

The **Process only previously archived items** checkbox is available for **Shortcut-Historical** and **Shortcut UDA** activities for IBM Domino and Microsoft Exchange.

Reprocessing messages based on archive date

The **Reprocess items** checkbox is used for disaster recovery. When you select it, a new **Archive date** option is added to the **Dates** page.

For example, assume you create an activity to archive mail that is based on a received date older than three months, and you run the activity on 5/20/2010. The activity archives mail that is received on 2/20/2010 and also messages that are received on 2/13/2010 that were not archived from previous archive runs. A system failure occurs on 5/21/2010 before the next archive run.

To recover, run an archive activity with both **Reprocess items** and **Archive date** selected, and specify after 5/20/2010 to reprocess only those messages that the activity that ran on 5/20/2010 archived. Messages that are received on 2/20/2010 and 2/13/2010 are reprocessed.

The **Reprocess items** checkbox is available for **Archive-Historical** and **Archive-UDA Archive** for IBM Domino and Microsoft Exchange.

Note:

When you recover Microsoft Exchange messages by using an **Archive** activity with the **Reprocess items** checkbox selected, the MAPI properties that were set when the messages were originally archived are not updated. This behavior is by design, so that the reprocessed messages do not trigger cache synchronization in Outlook.

For journaling, recovery includes restoring the deleted retention items, which will be processed the next time journaling runs.

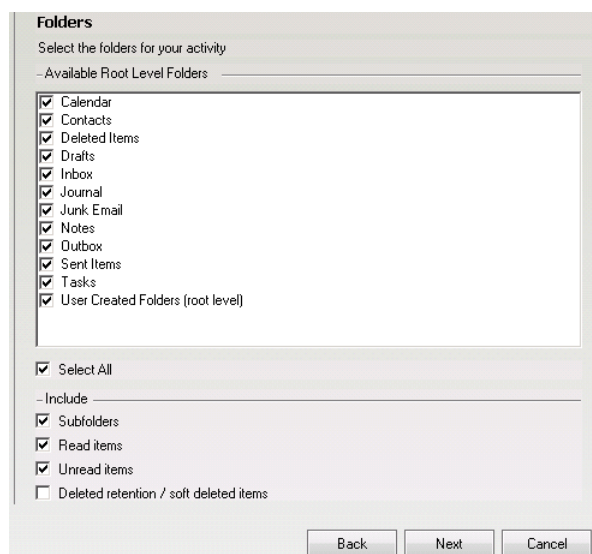
If the message was previously archived and users later deleted them, using the **Reprocess items** checkbox on messages in a Personal or Community folder restores the users' references to the messages.

Folders

Use the **Folders** page of the **New Activity** wizard to select the folders to process.

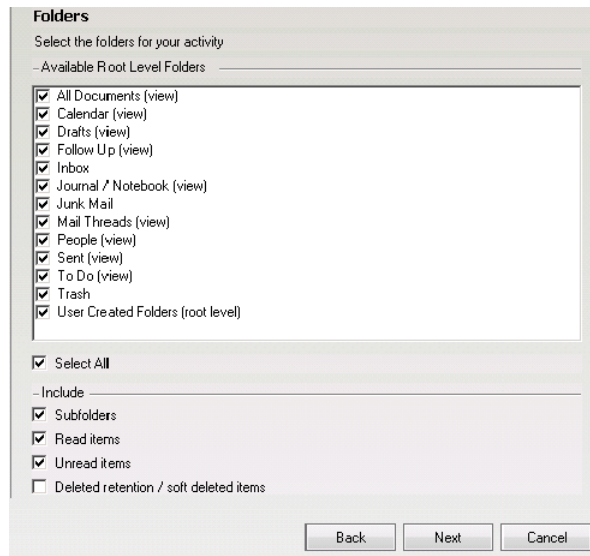
The following image shows the folders for Microsoft Exchange in the **New Activity** wizard.

Figure 98 Folders (Microsoft Exchange)—New Activity wizard



The following image shows the folders for IBM Domino in the **New Activity** wizard.

Figure 99 Folders (IBM Domino)—New Activity wizard



Considerations and limitations

- For the **Archive-Personal Mail Files** activity and the **Migrate-Microsoft Office Outlook PST** activity, the **Folders** page lists an additional selection option of **Top Level Folder**. If you select **Top Level Folder**, then items in the root folder are processed.
- For **Shortcut** activities, the **Drafts** folder is not selected by default. Do not shortcut drafts. If you shortcut drafts, then users must use Dell EMC SourceOne Search to restore the drafts to their mailboxes before editing.
- For **Shortcut** activities including IBM Domino, SourceOne does not shortcut any Notes documents that are in the **Trash** folder.
- For the **Restore Shortcuts** activity, the **Folders** page lists two additional selections:
 - If you select **User Defined**, then all user-defined folders are in the **Restore Shortcuts** activity.
 - If you select **User Directed Archive**, then all user-directed archive folders are in the **Restore Shortcuts** activity.

Note: You cannot select individual user-defined folders or individual user-directed archive folders for a **Restore Shortcuts** activity.

- If UDA folders are in the **Restore Shortcuts** activity, then the UDA parent folder is skipped during processing.
- If you select the **All Documents** or **Mail Threads** views on the **Folders** page, an activity can process the items in a Notes private folder. If you select only **User Defined** folders, then the activity cannot process items in a Notes private folder.
- For **Restore Shortcuts** activities including IBM Domino, restore to a folder or the database, not to a view.

Although the SourceOne console allows it, restoring IBM Domino messages to a view could result in messages not being correctly restored to the selected view.


The messages not being restored occurs because formulas construct a view, which uses information that may not be available in the restored message, resulting in the message not being restored in the selected view.

- Any records in the user-directed archiving (UDA) folders of a Notes client is also displayed in the **All Documents** and **Mail Threads** views. If you create a **Delete-Historical** activity and include these two views, the **Delete-Historical** activity deletes items from the UDA folders, although the activity was not a **Delete-User Directed Archive** activity.

Specifying the mailbox folders to process

Perform the following procedure to specify the mailbox folders to process.

Procedure

1. Perform one of the following:
 - To select all folders, select the **Select All** checkbox (default).
 - To specify individual folders, clear the **Select All** checkbox, then select the checkbox of each folder you want.
2. Select or clear the **Include** checkboxes:
 - **Subfolders**—Selected by default for **Shortcut** and **Archive-Historical** activities. Select to process items in the subfolders that are associated with the selected folders (Exchange).
 -  **Note:** For IBM Domino **Restore Shortcuts** activities, all subfolders are included by default. For all other **Domino** activities, subfolders are not included.
 - **Read Items**—Selected by default for **Shortcut** and **Archive-Historical** activities. Select to process items that have been opened.
 - **Unread Items**—Selected by default for **Archive-Historical** activities. Select to process items that have not been opened.
 - **Deleted retention/soft deleted item**—Not available for **Delete-Historical** activities and **Archive-Personal Mail Files** activities. Select process items in the IBM Domino Trash folder or items in the Microsoft Exchange Dumpster.

User Created Folders

Use the User Created Folders page of the New Activity wizard to select folders for the activity to process.

Considerations and limitations

Activities can process folders that a user creates at the root of the mailbox, and can process any subfolders below that top-level user-created folder.

Activities cannot process folders that a user creates as subfolders under a standard mailbox folder.

Example 1—Assume an Outlook user creates a folder that is called **My Project** under Mailbox-*<name>* at the same level as standard Outlook folders. Activities can process the **My Project** folder as a user-created folder.

Example 2—Assume an Outlook user creates a folder that is called **My Project** as a subfolder under the standard Inbox folder. Activities cannot process the **My Project** folder as a user-created folder.

Specifying a user created folder

Select one of the following options to specify a user created folder to process:

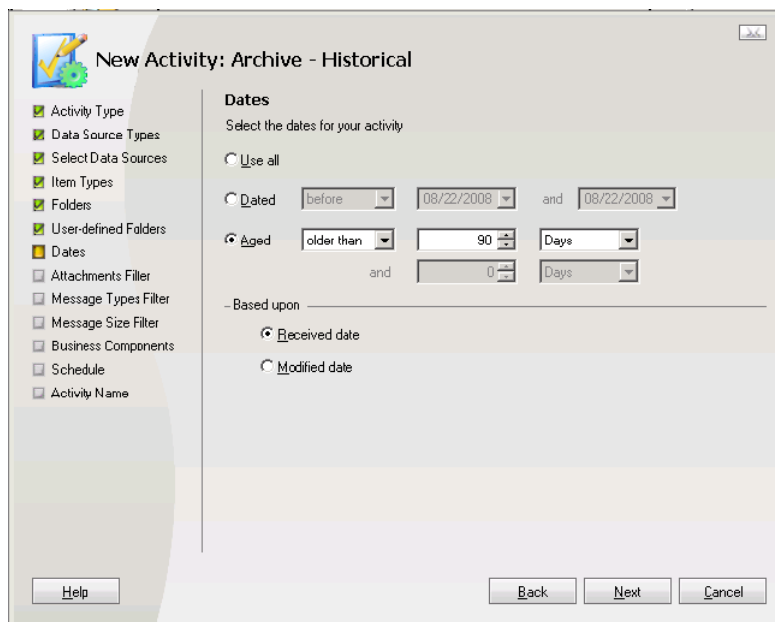
- Include all user created folders.
- Include specified user created folders:
 - Type the name of the user created folder.
 - Click **Add**.
 - Repeat this step for each folder that you want to add.

Dates

Use the Dates page of the New Activity wizard to select the dates to use for the activity.

Note: For the **Delete-User Initiated Delete** activity, specify dates using the **Archive deletion eligibility period** option in the **Global Settings** dialog box.

Figure 100 Dates—New Activity wizard



For **Archive** activities, if you selected the **Reprocess items** option on the **Item Types** page, then the **Dates** page displays an additional option: **Archived date**. The **Archived date** option is available for **Archive-Historical** and **Archive-UDA Archive for Domino and Exchange**.

Figure 101 Dates—Archive activities—Archived date

New Activity: Archive - Historical

Activity Type
 Data Source Types
 Select Data Sources
 Item Types
 Folders
 User Created Folders
 Dates
 Attachments Filter
 Message Types Filter
 Message Size Filter
 Business Components
 Schedule
 Activity Name

Dates
 Select the dates for your activity

Use all

Dated after 04/11/2010 and 04/14/2010

Aged newer than 0 Days and 0 Days

— Based upon —

Received date
 Modified date
 Archived date

Help Back Next Cancel

Specifying the date range and date property of items to process

Perform the following procedure to specify the date range and date property of items to process.

Procedure

- Select one of the following options:
 - Use all**
If you select this option, then the options in the **Based upon** section become unavailable.
 - Dated**
 - In the first field, select one of the following options: **after**, **before**, or **between**. **Before** is the default.
 - In the first date field, click the down-arrow, then select a date from the calendar (default = today). For the **between** option, this date is the start of the date range.
 - For the **between** option, specify the end of the date range in the second date field.
 - Aged**
- If you selected the **Dated** option or the **Aged** option, select one of the following to specify which date property to use:
 - Received date**
 - Modified date**
 - Archived date**—Available for **Archive** activities if you selected the **Reprocess items** option on the **Item Types** page.

Processing items based on their age

Refer to the following sections to process items based on their age.

Older than/Newer than

Perform the following steps to process items based on their age.

Procedure

1. Select **Aged**.
2. Select one of the following options in the first field:
 - **Older than**
 - **Newer than**
3. Specify the amount of time in the second field.
4. Select the unit of time in the third field.

Between

Use a sliding date range to process items based on their age.

Procedure

1. Select **Aged**.
2. Select **Between** in the first field.
3. To specify the start of the age range:
 - a. Specify the amount of time in the second field.
 - b. Select the unit of time in the third field.
4. To specify the end of the age range:
 - a. Specify the amount of time in the fourth field.
 - b. Select the unit of time in the fifth field.

Effect of Use all option on deletion of recurring calendar items

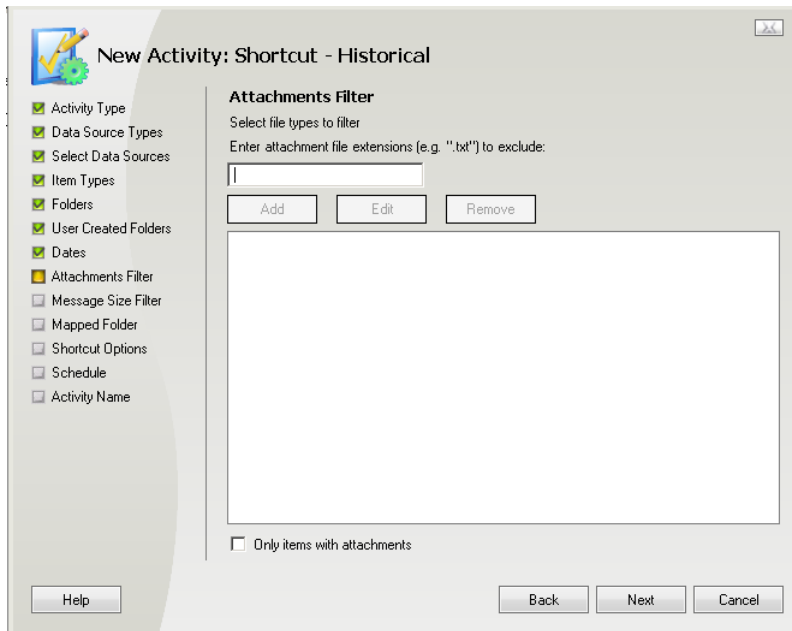
A Delete activity that uses the Use all date option removes recurring calendar items, because the date is not used as part of the selection criteria. This function works as designed and is expected behavior.

To prevent recurring calendar items from being deleted, specify a date before today's date.

Attachments Filter

Use the Attachments Filter page of the New Activity wizard to select the kinds of attachments to filter for the activity.

Figure 102 Attachments Filter—New Activity wizard



Specifying the file name extensions of attachments to exclude from processing

Perform the following steps to exclude attachments from processing.

Procedure

1. Perform the following:
 - a. Type the file name extension that you want to exclude, for example, `.txt`.
 - b. Click **Add**.
2. To process only those items that have attachments, select the **Only items with attachments** option. The **Only items with attachments** option is only displayed on the **Attachments Filter** page for the following activities that create shortcuts:

- **Migrate-Microsoft Office Outlook PST**
- **Shortcut-Historical**
- **Shortcut-Microsoft Exchange Public Folder**
- **Shortcut-User Directed Archive**

Process message attachments differently by using, or not using, this option:

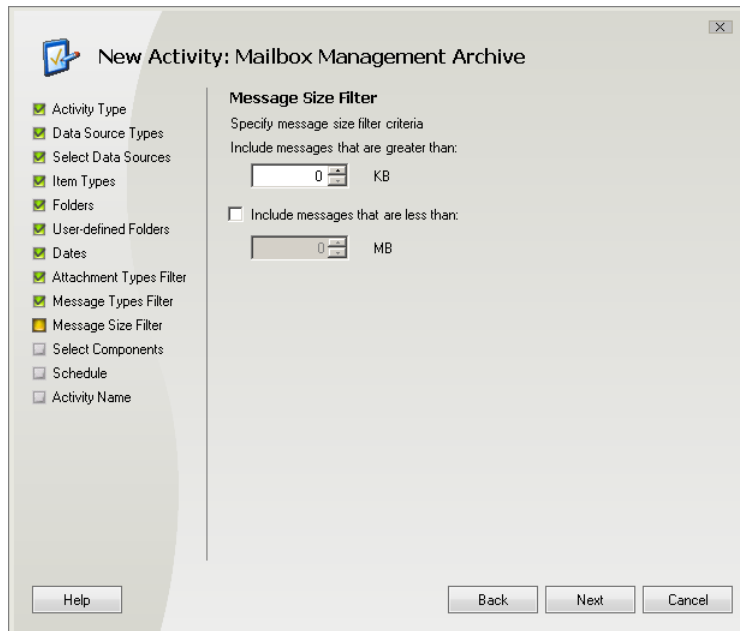
- To shortcut all attachments, select the **Only items with attachments** option.
- To shortcut all attachments with some exceptions, select the **Only items with attachments** option and type those attachment file name extensions, such as PDF, to be excluded in the **Enter attachment file extensions to exclude** area on this page.

- To not shortcut any attachments, select nothing on the **Attachments Filter** page.

Message Types Filter

Use the Message Types Filter page of the New Activity wizard to specify the message types to include, or exclude from processing.

Figure 103 Message Types Filter—New Activity wizard



Specifying message types to include or exclude from processing

Perform the following steps to specify message types to include, or exclude from processing.

Procedure

1. In the list box, select one of the following options:
 - **Include**
 - **Exclude** (default)
2. Type a message class. For example, **ipm.activity**.

The following lists the messages classes and a description of the item type:

- ipm.activity—Activity.
- ipm.appointment—Appointment.
- ipm.contact—Contact.
- ipm.document—Document.
- ipm.note—Note.
- ipm.post—Post.

- ipm.schedule—Schedule.
- ipm.stickynote—Sticky note.
- ipm.task—Task.
- ipm.taskrequest—Task request.
- report.ipm.note—Other type of report.
- report.ipm.note.dr—Delivery report.
- report.ipm.note.ipnrrn—Read receipt report.

Properties

Use the Properties page of the New Activity wizard to specify the settings and folders for user-directed archiving.

Figure 104 Properties—New Activity wizard

New Activity: Archive - User Directed Archive

Properties
Select the User Directed Archive properties and folders

Archive type: (dropdown menu showing Community Archive and Personal Archive)

Parent Folder Required (dropdown menu showing User Archive Folders)

Parent Folder: (dropdown menu)

Mapped Folders:

	Name	Type	Description
<input type="checkbox"/>	Community Archive	Community	

Buttons: Help, Back, Next, Cancel

Specifying the settings and folders for user-directed archiving

Use the following procedure to specify the settings and folders for user-directed archiving.

Procedure

1. In the **Archive type** field, select the type of user-directed archive you want to create:
 - **Community-Users** can see other users' mail in these UDA folders. Use for collaboration and sharing.
 - **Personal-Users** can see only their own mail in these UDA folders. Use for non-compliant mail.
2. Perform one of the following steps:
 - To create a parent folder in the user's mailbox in which to place the UDA folders:

- a. Select the **Parent Folder Required** checkbox (default).
 - b. In the **Parent Folder** field, type or select a name for the parent folder. The default name is **User Archive Folders**. The maximum number of characters is 64.
Names that you type are added to the list box, so that you can select them when you create other UDA activities later.
- To create the UDA folders without creating a parent folder, clear the **Parent Folder Required** checkbox.
3. In the **Mapped Folders** list, select the folders in which to archive **user-directed** items.
The **Mapped Folders** list displays only those folders that match the archive type you selected in step 1.

The **UDA Archive** activity creates folders of the same names in the mailboxes of the users you selected in the **Select Data Sources** page earlier in the **New Activity** wizard. These users must have **Contributor** permission on the folders that you select in the **Mapped Folders** list.

Message Size Filter

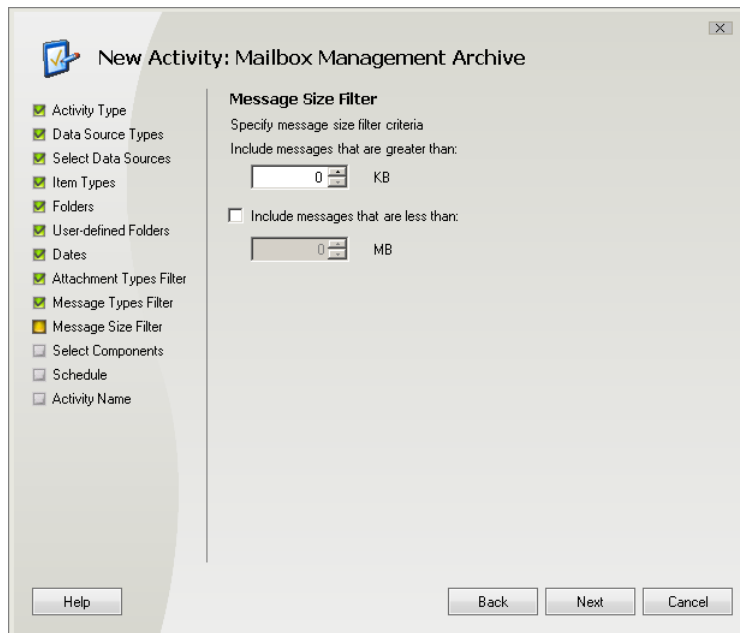
Use the Message Size Filter page of the New Activity wizard to specify the minimum size and maximum size of messages to process using the activity.

Note:

The message sizes are approximate and could vary by a few kilobytes.

For IBM Domino or Notes, filtering messages that are based on size is approximate. The size calculation could vary by a few kilobytes (KB), especially for a **Delete** activity.

Figure 105 Message Size Filter—New Activity wizard



Specifying the minimum size and maximum size of messages to process

Perform the following procedure to specify the minimum size and maximum size of messages to process.

Procedure

1. To specify a minimum message size, type a value in the **Include messages that are greater than _KB** field. The default is 0.
2. To specify a maximum message size:
 - a. Select the **Include messages that are less than _MB** checkbox.
 - b. Type a value in KB.

Mapped Folder(s)

Use the Mapped Folder(s) page to select the mapped folders that are used by an activity.

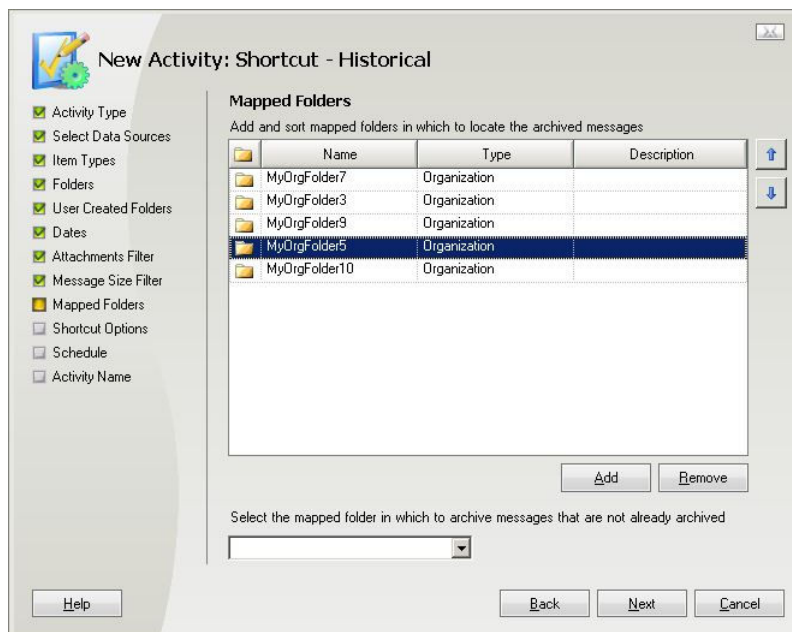
One of several **Mapped Folder(s)** pages appears, depending on the activity that is being created or modified. Each of these pages is described in the following topics.

Mapped Folders page for Shortcut-Historical activity

Use the Mapped Folders page for the Shortcut-Historical activity to specify in which mapped folders to look for the archived messages to be shortcut. Sometimes, you can also specify the mapped folder to archive messages that have not already been archived before their being shortcut. This page is also used by the Shortcut-Microsoft Exchange Public Folder activity.

About this task

Figure 106 Mapped Folders page for Historical and Public Folder Shortcut activities



Perform the following procedure to use the **Mapped Folders** page when creating an activity.

Procedure

1. Add one or more mapped folders in which to search for the archived messages to be shortcut by clicking **Add**.

The **Mapped Folder Selection** dialog box appears.

2. If required, modify the list of mapped folders.

The activity from the top to the bottom processes the list of mapped folders:

- To change the order of processing, select the mapped folder to reorder in the list. Then click the up-arrow or down-arrow to the right of the list to move the mapped folder higher or lower in the list.
- To remove a mapped folder from the list, select the mapped folder, and click **Remove**.

3. If the **Process only previously archived items** option was not selected on the **Item Types** page, use the lower mapped folder area on the **Mapped Folders** page to select the mapped folder where messages that were not previously archived are.

If the **Process only previously archived items** option was selected on the **Item Types** page, the lower mapped folder area is not valid and so is not displayed on the **Mapped Folders** page.

Note: For User Delete to work on mail items shortcut using the **Shortcut-Historical** activity, select a Personal or Community mapped folder on the **Mapped Folder** page of the **Activity** wizard.

4. Select **Organization** folders for **Shortcut-Historical** activities if you do not want to allow users to delete the archived mail items.

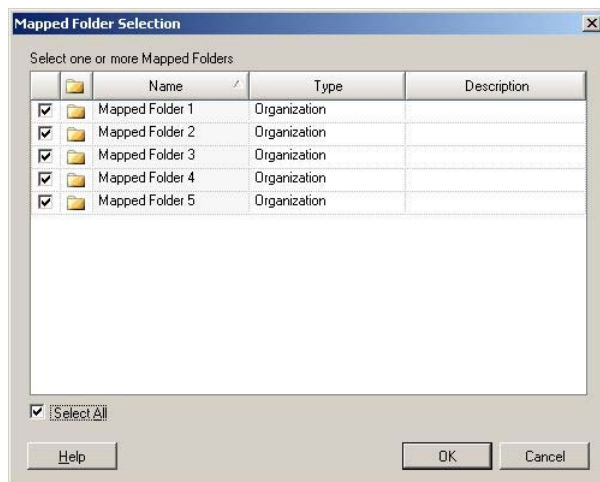
Using the Mapped Folder Selection dialog box

The Mapped Folders page of the Shortcut-Historical or the Shortcut-Microsoft Exchange Public Folder activity launches the Mapped Folder Selection dialog box.

About this task

Perform the following steps using the **Mapped Folder Selection** dialog box to select one or more mapped folders to add to the list of mapped folders.

Figure 107 Mapped Folder Selection dialog box



Procedure

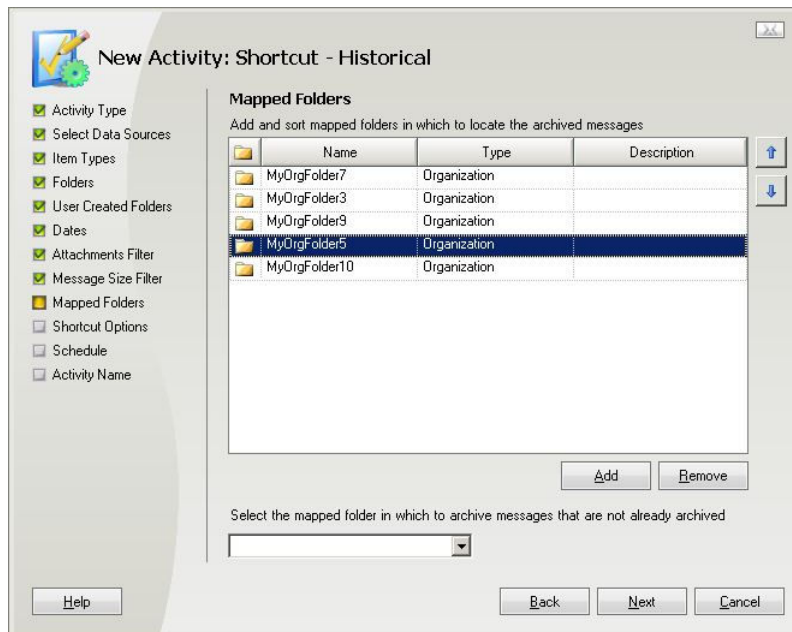
1. In the **Mapped Folder Selection** dialog box, select the checkbox next to one or more mapped folders in which the activity is to look for archived messages to be shortcut.
To select all mapped folders in the list, click **Select All**.
2. When complete, click **OK**. The **Mapped Folder Selection** dialog box exits and the updated list appears on the **Mapped Folders** page.

Mapped Folders page for Shortcut-Microsoft Exchange Public Folder activity

Use the Mapped Folders page for the Shortcut-Microsoft Exchange Public Folder activity to specify in which mapped folders to look for the archived messages to be shortcut. Sometimes, you can also specify the mapped folder to archive messages that have not already been archived before their being shortcut. This page is also used by the Shortcut-Historical activity.

About this task

Figure 108 Mapped Folders page for Historical and Public Folder Shortcut activities



Perform the following steps to use the **Mapped Folders** page when creating an activity.

Procedure

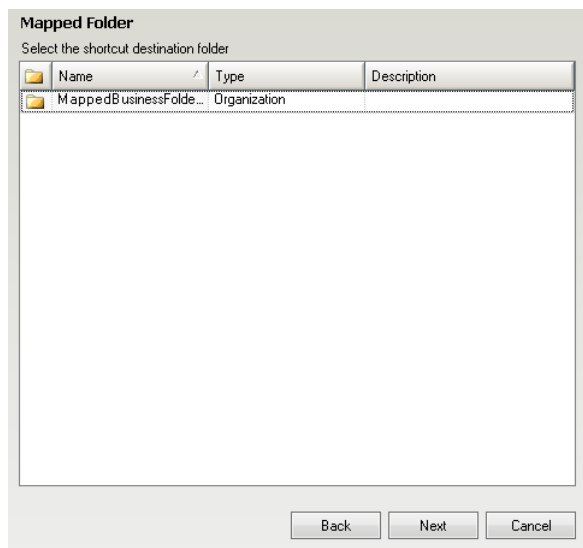
1. Add one or more mapped folders in which to search for the archived messages to be shortcut by clicking **Add**. The **Mapped Folder Selection** dialog box appears.
2. If required, modify the list of mapped folders that you created.
The activity from the top to the bottom process the list of mapped folders:
 - To change the order of processing, select the mapped folder that you want to reorder in the list. Then click the up-arrow or down-arrow to the right of the list to move the mapped folder up or down in the list.
 - To remove a mapped folder from the list, select the mapped folder, and click **Remove**.
3. If the **Process only previously archived items** option was not selected on the **Item Types** page, use the **lower mapped folder** area on the **Mapped Folders** page to select the mapped folder where messages that have not already been archived are.

If the **Process only previously archived items** option was selected on the **Item Types** page, the **lower mapped folder** area is not valid and so is not displayed on the **Mapped Folders** page.

Mapped Folder page for Migrate-Microsoft Office Outlook .PST activity

Use the Mapped Folder page for the Migrate-Microsoft Office Outlook .PST activity to specify into which mapped folder to archive messages that have been shortcut from the PST file.

Figure 109 Mapped Folder—Migrate—Microsoft Office Outlook PST activity

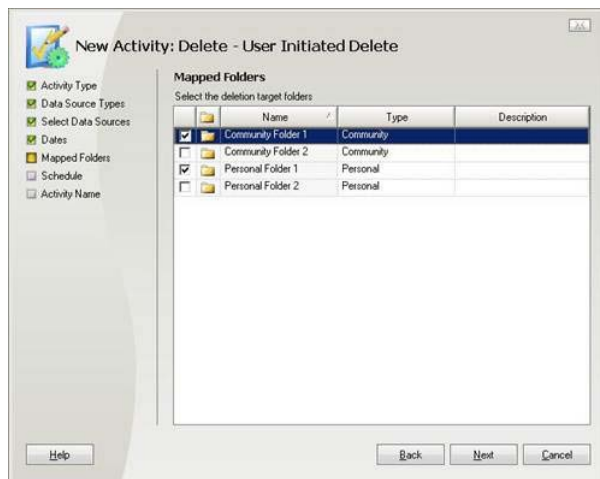


Select the one mapped folder from the ones listed.

Mapped Folders page for Delete-User Initiated Delete activity

Use the Mapped Folders page with the Delete-User Initiated Delete activity to specify one or more Personal or Community mapped folders from which to delete messages, which are based on the delete requests in user mailboxes.

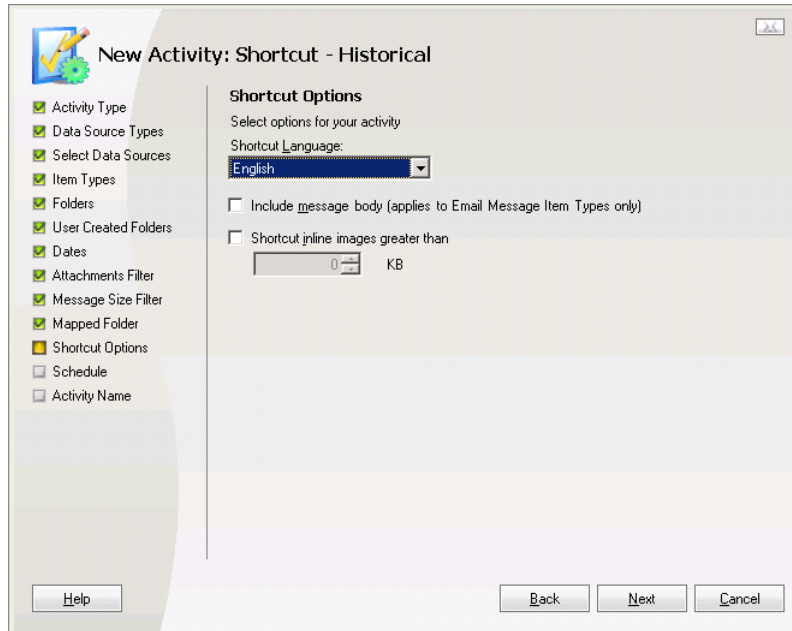
Figure 110 Mapped Folders—Delete-User Initiated Delete activity



Shortcut Options

Use the Shortcut Options page of the New Activity wizard to specify options for Microsoft Exchange shortcuts.

Figure 111 Shortcut Options—New Activity wizard



Specifying options for shortcutting messages

Perform the following procedure to specify options for shortcutting messages.

Procedure

1. In the **Shortcut Language** field, select the language for the replacement text that displays in shortcut stubs.
2. To shortcut message bodies, select the **Include message body** checkbox.

The **Include message body** checkbox applies to email message types only. For calendar items, inline attachments and bodies are not shortcut, but attachments are shortcut.

3. To shortcut inline images, select the **Shortcut inline images greater than _KB** checkbox, then type a threshold value for image size.

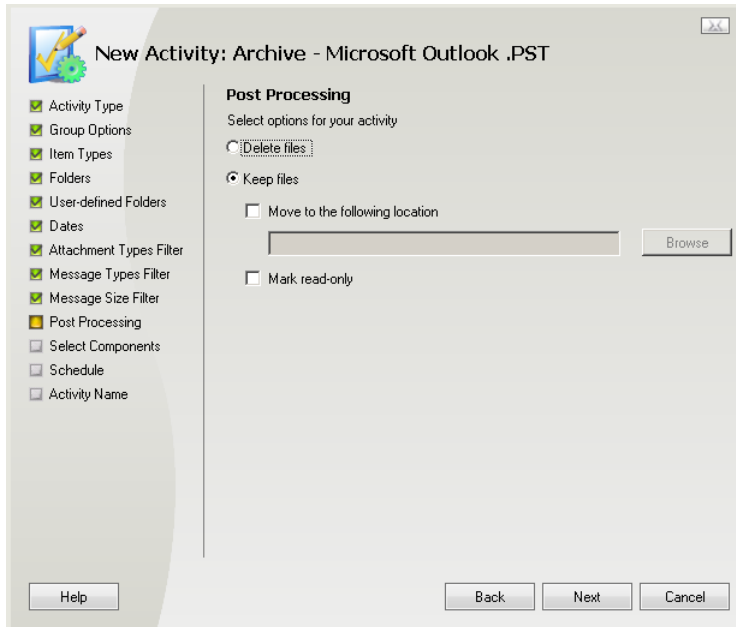
Post Processing

Use the Post Processing page of the New Activity wizard to specify the actions to perform on PST files or NSF files after archiving or shortcutting.

The **Post Processing** page appears for the following activity types:

- **Archive-Personal Mail Files.**
- **Migrate-Microsoft Office Outlook PST.**

Figure 112 Post Processing—New Activity wizard



Specifying the actions to perform on PST files or NSF files after archiving or shortcutting

Perform the following steps.

Procedure

1. Select one of the following options:

- **Delete files**-When selected, a warning message appears:

Not all data may be archived because this activity does not support all item types that mail files support.

This activity only processes email messages, so deleting the PST or NSF file could result in the loss of any other data types in the mail file.

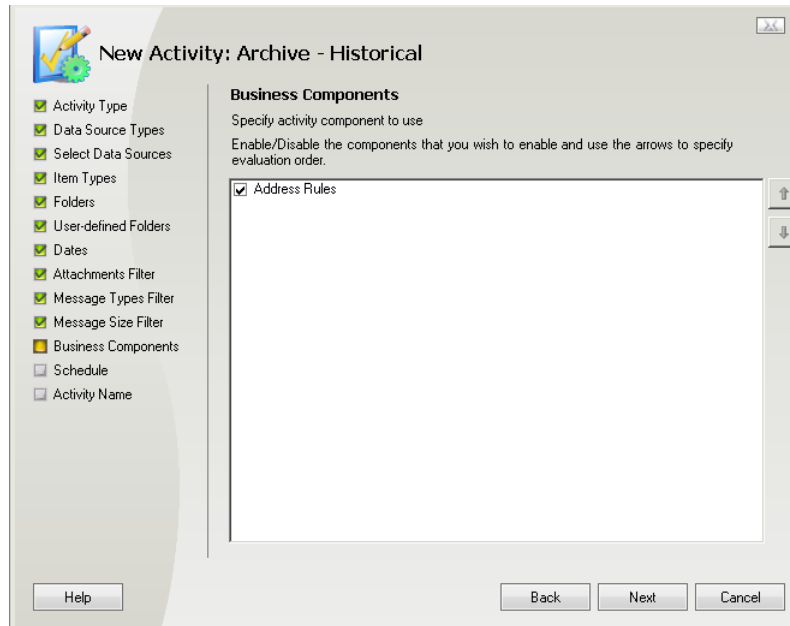
- **Keep files**
2. If you selected the **Keep files** option:
 - a. To specify the destination of the PST files or NSF files, perform one of the following steps:
 - To move the files to another location, select the **Move to the following location** checkbox, click **Browse**, and specify the location.
 - To keep the files in their current location, clear the **Move to the following location** checkbox, which is the default.
 - b. To specify whether the files are to be read-only, perform one of the following steps:
 - To make the files read-only, select the **Mark read-only** checkbox.
 - To retain the current permissions on the files, clear the **Mark read-only** checkbox, which is the default.

Business Components

Use the Business Components page of the New Activity wizard to select the business components, such as the Address Rules business component, to use to process content, and specify the order in which to use those components.

When multiple business components are configured as part of an activity, the order in which the business components process content appears on the **Activity Summary** page.

Figure 113 Business Components—New Activity wizard



Selecting and ordering components

Perform the following tasks to select the components you want to use to process content, and specify the order in which to use those components.

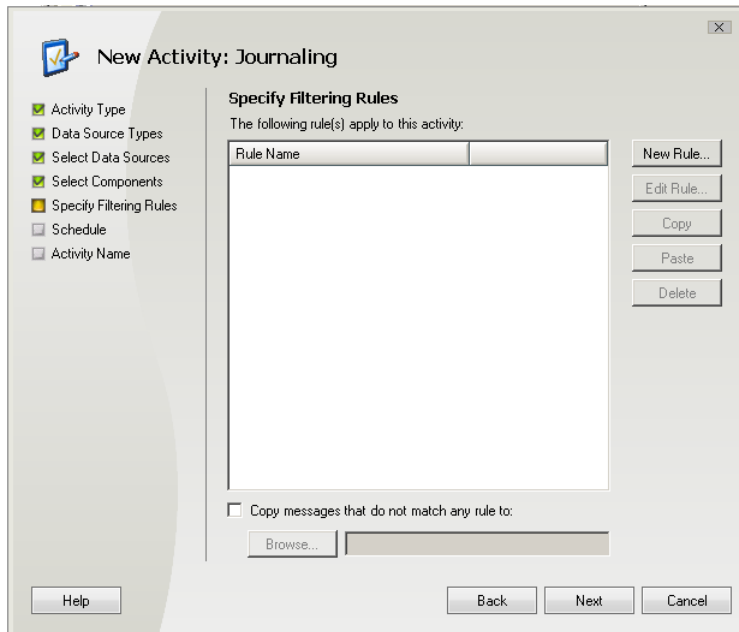
Procedure

1. Select the business components that you want to use for this activity.
The available components depend on the type of activity you selected and on which components you have registered. The Address Rules component is always registered.
2. Clear the checkboxes of the components you do not want to use for this activity.
3. Specify the sequence in which you want the selected business components to be used.
Select a component, and then click the up-arrow button or down-arrow button to move the component in the list.

Specify Filtering Rules

If you selected Address Rules in the Select Components page of the New Activity wizard, then the Specify Filtering Rules page appears.

Figure 114 Specify Filtering Rules—New Activity wizard



For User Delete to work on mail items that are archived using the **Journal**, **Archive-Historical**, or **Archive-Personal Mail Files** activities, select **Personal** or **Community** mapped folders. Select these folders as targets for the Copy messages that do not match any rule option on the **Specify Filtering Rules** page and in the **Rule** wizard.

Note: Use Organization folders for these activities to disallow users to delete the archived mail items.

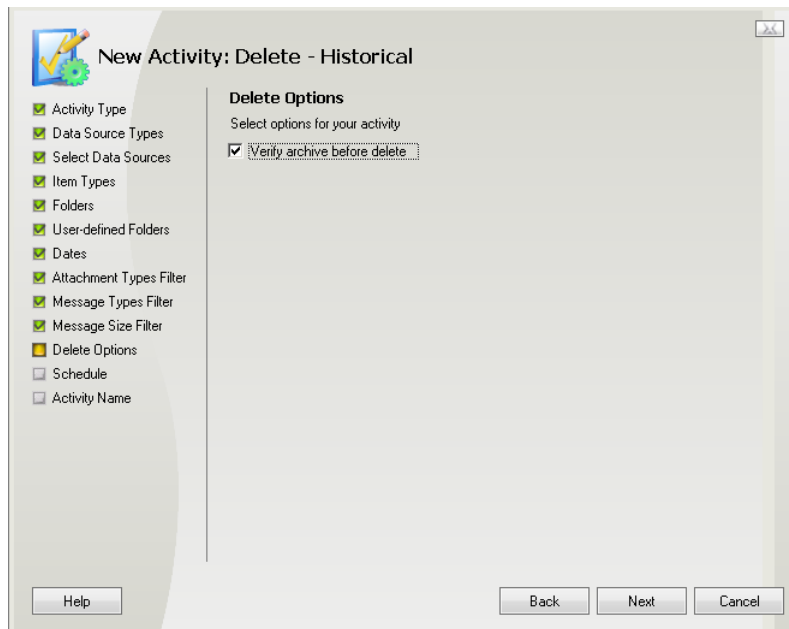
Delete Options

Use the Delete Options page to determine how content that has not been archived is handled during the processing of the delete activity:

- If you select the **Verify archive before delete** option, and the **Delete** activity encounters content that has not been archived, then the activity does not delete the message and does not archive the message.
- If you do not select the **Verify archive before delete** option, and the **Delete** activity encounters content that has not been archived, the content is deleted without being first archived.

The **Delete Options** page appears for the following activities:

- **Delete-Historical.**
- **Delete-Microsoft Exchange Public Folders.**
- **Delete-User Directed Archive.**

Figure 115 Delete Options—New Activity wizard

Both Microsoft Exchange and IBM Domino support deleting recurring calendar items that are out of date.

Specifying whether to verify archival before deleting messages

Perform one of the following steps:

- To verify archival, select **Verify archive before delete**.
- To delete messages without verifying whether they have been archived, clear **Verify archive before delete**.

Scheduling Activities

Use the Schedule page of the New Activity wizard to schedule the activity. The Schedule page appears for all activity types, except the Journal activity.

Figure 116 Schedule Recur Once New Activity wizard

Considerations for rescheduling activities

A recurring schedule could be specified using the **Recurrence pattern** option on the **Schedule** page, or when you edit a **Journal** activity, that automatically runs on a daily basis.

When you reschedule an activity that runs according to a specified recurring schedule, the scheduling of the activities change as follows:

- For all activities except **Journal**:

If the user changed the schedule for an activity, that activity is then run at the newly scheduled time, which may result in the activity running later the same day.

Note: If the activity has parent jobs that are running, then the changes to the schedule do not take effect until the following day.

- For **Journal** activities only:

The user cannot schedule **Journal** activities. The schedule for a **Journal** activity parent job is reset whenever the **Journal** activity is changed to be the time of day that the **Journal** activity was last edited. The child jobs that do the journaling continues to run.

Note: If the activity has parent jobs that are running, then the changes to the schedule do not take effect until the following day.

If rules used by the **Journal** activity are changed, the modified rules are used by any new child jobs that the **Journal** parent job creates. The modified rules that are associated with a **Journal** activity will be used when the next **Journal** child job runs.

- Note:** Avoid scheduling **Delete-User Initiated Delete** activities when other activities are scheduled, or when data is being disposed from the Native Archive.

Scheduling an activity

The following sections include information about the options that you can configure when scheduling an activity.

Start Date

In the Start Date field, select the date that the activity is to start. Click the down-arrow, and then select the start date from the calendar.

Start Time

In the Start Time field, select the time that the activity is to start. Click the down-arrow, and then select one of the following options:

- To start the activity soon, select **As soon as possible**, which is the default.
- To specify a time, select the time from the list.

Duration

In the Duration field, select one of the following options:

- Select the number of hours the activity is allowed to run. The default is 1 hour.
- Select **1 day**.
- Select **Run to completion**.

Recurrence Pattern

In the **Recurrence Pattern** area, specify an interval.

Specifying a one-time occurrence

To specify a one-time occurrence, select **Once**, which is the default.

Journal activities with an occurrence of **Once** generate child jobs that run every 5 minutes, which is normal behavior.

Specifying a daily occurrence

Perform the following steps to specify a daily occurrence.

Procedure

1. Select **Daily** from the list box.
2. Select **Every_day(s)**. Specify the number of days between occurrences of the activity. The default is 1 day.


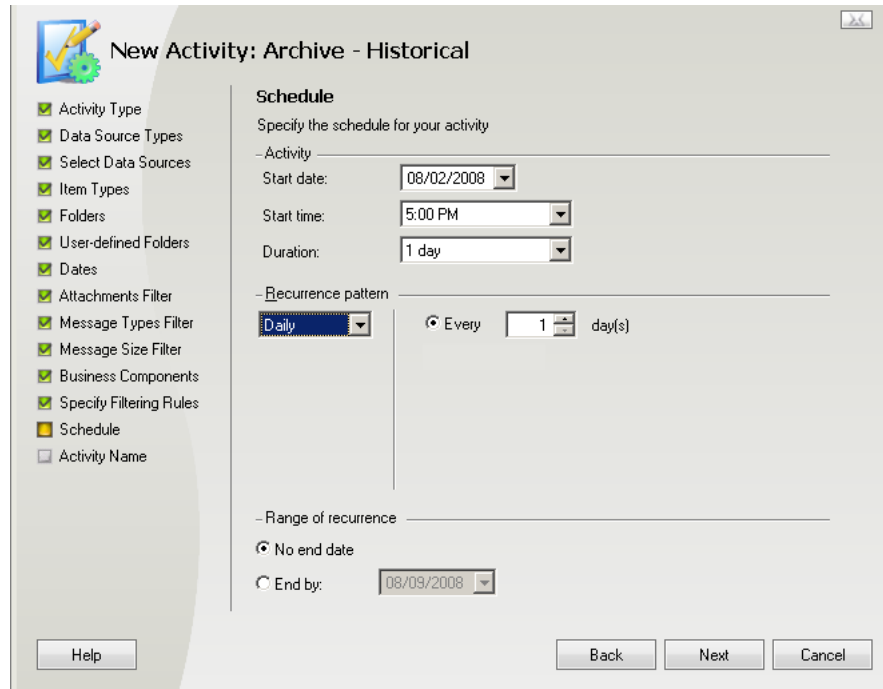
 **Note:** To run the activity on weekdays, specify a **Weekly occurrence** and select only weekdays.

Figure 117 Schedule—Recur Daily—New Activity wizard



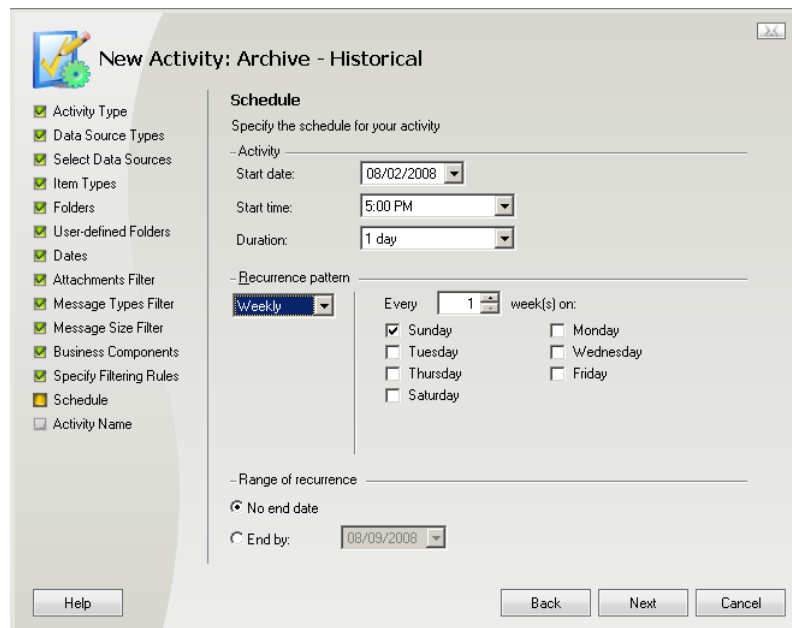
Specifying a weekly occurrence

Perform the following steps to specify a weekly occurrence.

Procedure

1. Select **Weekly** from the list box.
2. In the **Every _week(s) on** field, specify the number of weeks between occurrences.
3. To specify the day of the week on which the activity is to occur, select one or more checkboxes.

Figure 118 Schedule—Recur Weekly—New Activity wizard



Specifying a monthly occurrence

Perform the following steps to specify a monthly occurrence.

Procedure

1. Select **Monthly** from the list box.
2. Perform one of the following steps:
 - Select the **Day_of every_month(s)**. In the first field, specify the day of the month on which you want the activity to occur. Valid values are 1 through 31. In the second field, select the number of months between occurrences. Valid values are 1, 2, 3, 4, 6, and 12.
 - Select the **Day_of every_month(s)**. In the first field, select the week (first, second, third, fourth, or last). In the second field, select the day of the week. In the third field, specify the number of months between occurrences. Valid values are 1, 2, 3, 4, 6, and 12.

Figure 119 Schedule—Recur Monthly—New Activity wizard

The screenshot shows the 'New Activity: Archive - Historical' wizard. On the left is a list of configuration options, with 'Schedule' selected. The main area is titled 'Schedule' and contains the following fields:

- Activity:** Start date: 02/26/2009, Start time: 2:00 PM, Duration: 1 day.
- Recurrence pattern:** Monthly.
 - Day: 1 of every 1 month(s)
 - The first Sunday of every 1 month(s)
- Range of recurrence:**
 - No end date
 - End by: 03/05/2009

Buttons at the bottom include 'Help', 'Back', 'Next', and 'Cancel'.

Range of recurrence

In the Range of recurrence area, select one of the following options:

- **No end date**-The activity first occurs on the start date and time you specified. The activity reoccurs according to the information you specified in the **Recurrence** area.
- **End by**-The activity first occurs on the start date and time you specified. The activity reoccurs according to the information you specified in the **Recurrence Pattern** area, until the end date you specify in this option. Click the down-arrow, and then select an end date from the calendar.

Select Worker Group

When creating an activity, the Dell EMC SourceOne administrator can choose to constrain the execution of the activity to specified Worker group or to all Workers.

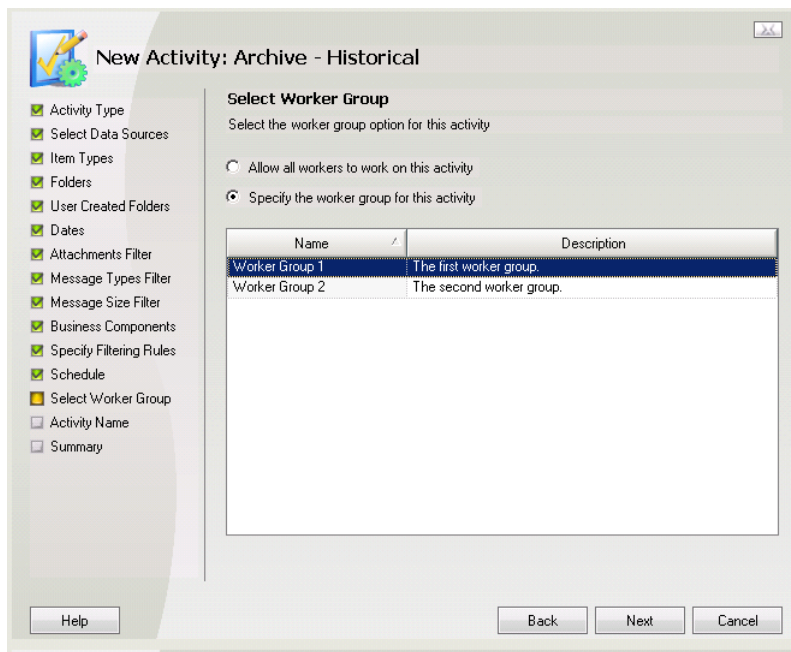
About this task

Perform the following steps to specify a Worker group for an activity.

Procedure

1. Click the checkbox to select **Select Worker Group**.
2. Select **Specify the worker group for this activity**.
3. Click to select the **Worker group from the list**.

Figure 120 Select Worker Group



After clicking **Next**, if the selected Worker group does not have a Worker that is assigned, a **Worker Group Members** warning dialog box appears:

No worker is selected for this worker group. Would you like to continue?

Click **Yes** to continue the process and the Worker group for this activity does not have a Worker.

Click **No** to return to the **Select Worker Group** window to choose Workers for the Worker group.

Activity Name

Use the Activity Name page of the New Activity wizard to select a name and possibly detailed logging for an activity. The Activity Name page appears for all activity types.

About this task

Figure 121 Activity Name—New Activity wizard

The screenshot shows a dialog box titled "New Activity: Archive - Personal Mail Files". On the left, there is a list of configuration options, each with a checkbox. The "Activity Name" option is currently selected and highlighted in yellow. The main area of the dialog is titled "Activity Name" and contains the instruction "Specify the name for your activity" followed by a "Name:" label and an empty text input field. Below the input field is an unchecked checkbox labeled "Enable Detailed Logging". At the bottom of the dialog, there are four buttons: "Help", "Back", "Finish", and "Cancel".

Perform these steps to specify a name for the activity.

Procedure

1. In the **Name** field, type a name for the new activity.
2. To collect detailed information about message processing by activities, select the **Enabled Detailed Logging** checkbox. This checkbox is not available for **Journal** activities.

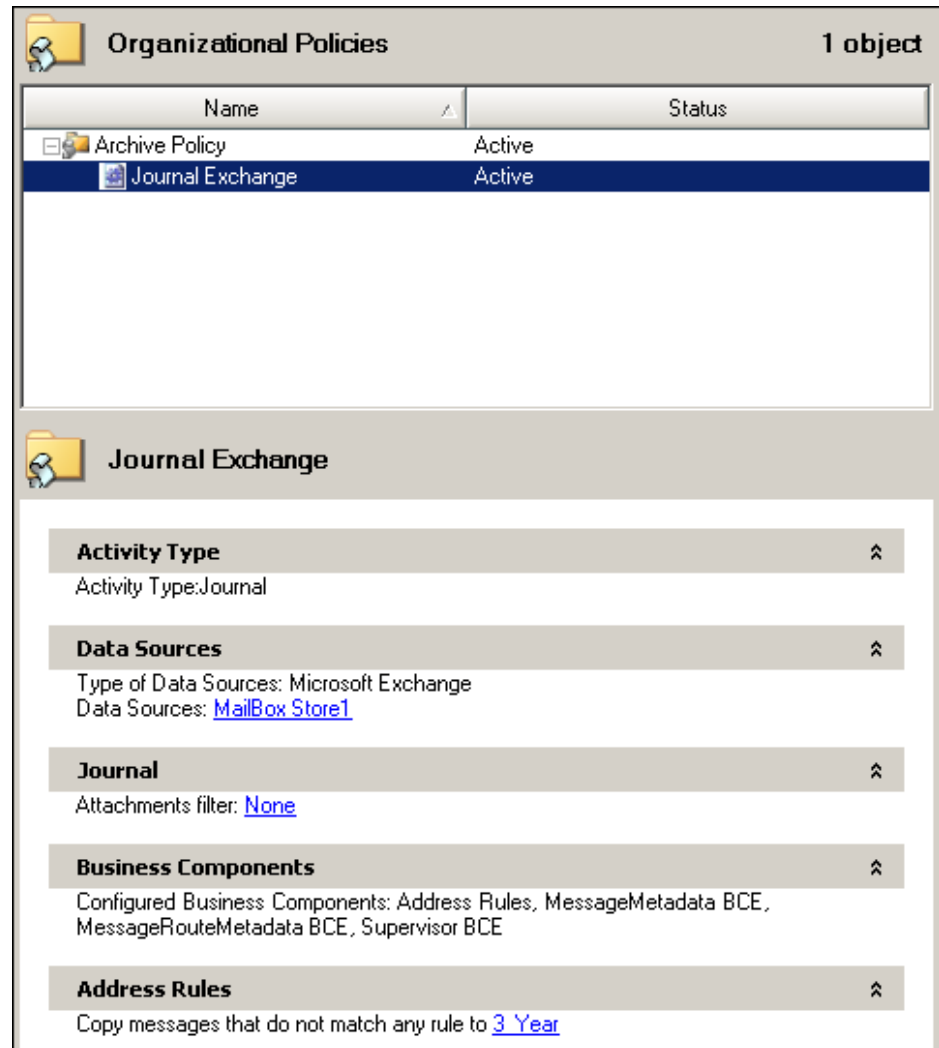
Editing activities in an organizational policy

The Activity Type or Activity Name properties cannot be edited. To edit other properties of an activity, perform the following procedure.

Procedure

1. In the Dell EMC SourceOne Console, select the **Organizational Policies** node.
2. In the **Organizational Policies** area:
 - a. Expand the organizational policy that contains the activity you want to edit.
 - b. Select the activity that you want to edit.
3. To edit a specific property:
 - a. Click the link for that property in the activity summary.
A dialog box appears, corresponding to the page in the New Activity wizard that contains the property.

Figure 122 Activity summary example



- b. Edit the property as described in the topic for the corresponding New Activity wizard page.
If the displayed page has dependencies on another page in the activity, a **Next** button appears at the bottom of the page.
 - c. Click **Next**, and then make any other required changes on the page that appears.
4. To review all properties using the Edit Activity wizard:
- a. Select **Action > Edit Activity**.
The Edit Activity wizard starts.
 - b. Click **Next** until you reach the page containing the property that you want to edit.
 - c. Edit the property as described in the topic for the corresponding New Activity wizard page.
 - d. Click **Next** until you reach the last page of the Edit Activity wizard, and then click **Finish**.

Controlling activities

Control an activity and its jobs by using the Stop, Pause, and Resume actions.

The action that is applied to an activity also applies to the activity's jobs. To control multiple jobs, control the activity that is associated with those jobs.

The status of an activity is derived from the status of the activity's jobs. For example, if any jobs associated with a run once activity fail, the status of the activity is shown as failed.

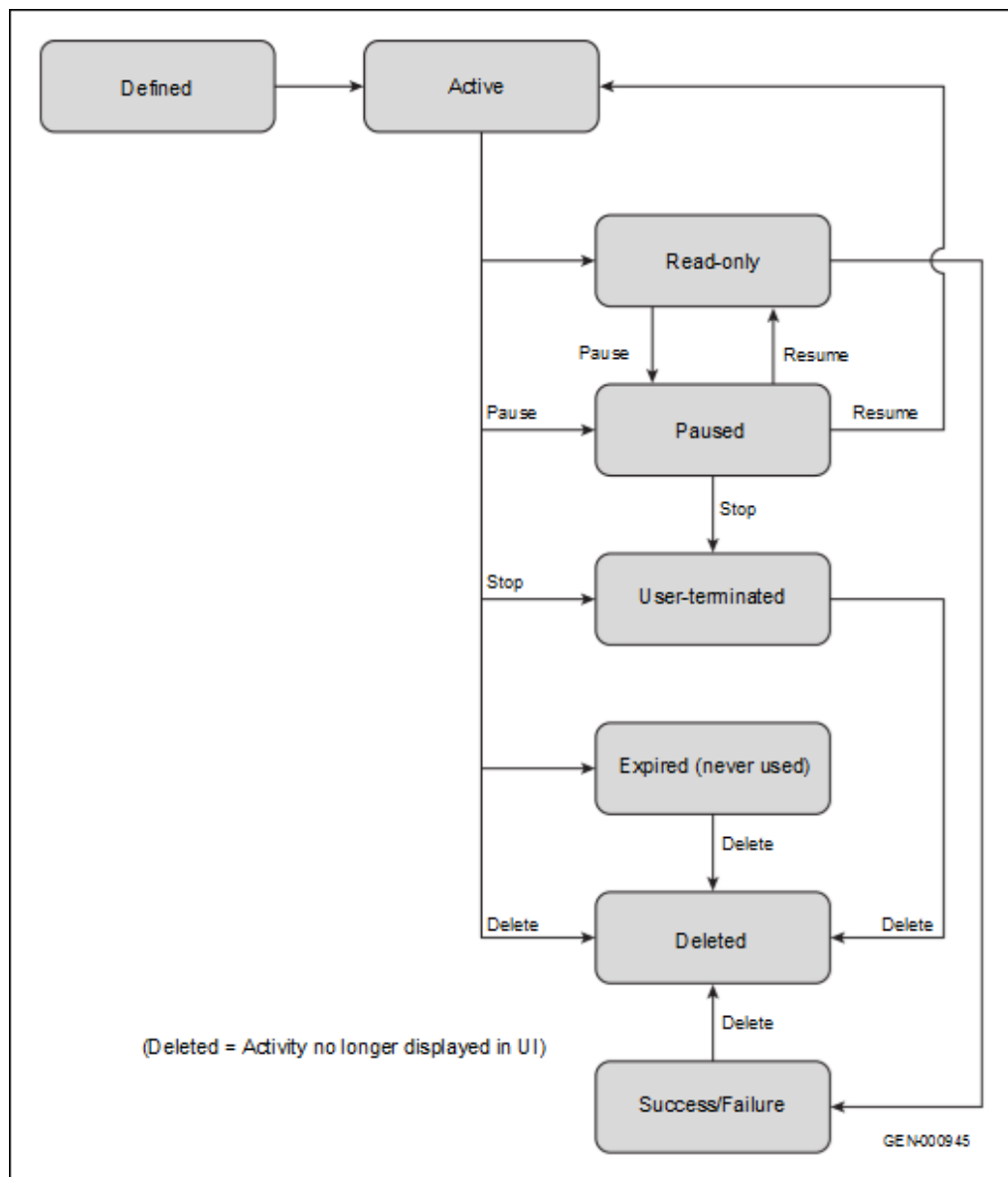
About activity status and actions

The actions available for each activity status depend on the recurrence pattern that is specified in the activity's schedule.

Run once

The following figure displays the actions for a run-once activity.

Figure 123 Activity actions and status run once



3. Select **Action > Pause**.

In the **Organizational Policies** area, the status of the activity changes from **Active** to **Paused**.

Resuming paused activities

Perform these steps to resume a paused activity.

Procedure

1. Select the activity.
2. Select **Action > Resume**.

Stopping activities

Perform these tasks to stop an activity in an organizational policy.

Procedure

1. In the Dell EMC SourceOne console, select the **Organizational Policies** node.
2. In the **Organizational Policies** area:
 - a. Expand the organizational policy that contains the activity you want to stop.
 - b. Select the activity.
3. Select **Action > Stop**.

In the **Organizational Policies** area, the status of the activity changes from **Active** to **User Terminated**.

If the activity has a periodic schedule, you can resume a **User Terminated** activity:

- a. Select the activity.
- b. Select **Action > Resume**.

Deleting activities from an organizational policy

Perform the following procedure to delete an activity.

Procedure

1. In the Dell EMC SourceOne console, select the **Organizational Policies** node.
2. In the **Organizational Policies** area, select the activity that you want to delete.
3. Select **Action > Delete Activity**.
4. At the following prompt, click **Yes**.

Are you sure you want to delete the selected activity?

CHAPTER 17

PST and NSF Processing Activities

The following section describes how to perform processing activities for Microsoft Exchange PST files and IBM Domino NSF files using Dell EMC SourceOne:

- [PST processing activities](#)..... 380
- [NSF processing activities](#)..... 396

PST processing activities

This section describes how to process groups of Microsoft Exchange PST files.

If you are processing PST files in a multiple forest Active Directory environment, perform the additional configuration tasks.

Introduction to PST activities

This section describes PST file groups and how you use them to prepare for PST activities.

What are PST groups?

Use PST groups to organize and simplify the management of source computers and PST files in preparation for PST activities.

You can:

- Search for source computers that are based on an LDAP query and add the results to a PST group.
- Browse for source computers and shares and add the results to a PST group.
- Manually remove source computers and shares from a PST group.
- Inspect the status of source computers since the last processing occurred.
- Use PST groups as input to **PST** activities.
- List the **PST** files that are discovered in a **Find-Microsoft Office Outlook PST** activity.
- Remove individual **PST** files from the PST group.

PST management checklist

To manage PST files, ensure that the following tasks are performed.

Procedure

1. Create PST groups.
2. Specify source computers or shares.
3. Perform one or both of the following steps:
 - Create a **Find-Microsoft Office Outlook PST** activity to search for **PST** files on source computers in specified PST groups.
 - Add **PST** files manually to PST groups.
4. Perform actions on the discovered **PST** files, if required:
 - Assign owner.
 - Specify password for password-protected PSTs.
5. Remove the **PST** files that you do not want to process.
6. If required, Set states of source computers to indicate which **PST** files to process.
7. Create an **Archive-Personal Mail Files** activity to archive PSTs or a **Migrate-Microsoft Office Outlook PST** activity to shortcut PSTs.

How ownership is determined for PST files

When you discover PST files using the Find-Microsoft Office Outlook PST activity, Dell EMC SourceOne tries to assign an owner automatically to the PST files located.

About this task

The following is the method SourceOne uses to assign an owner to a PST file after the PST file has been located.

Procedure

1. SourceOne determines if a Sent Items folder is present in the PST file. This folder can be the folder that Outlook creates or a folder that the user creates with any of the following names:
 - Sent Items (English)
 - Éléments envoyés (French)
 - Gesendete Objekte (German)
 - invia mail (Italian)
 - Elementos enviados (Spanish)
2. If the Sent Items folder, or one of the previously listed language variants, is present, SourceOne determines which email address sent most of the messages that are found in this folder. SourceOne marks this email address as being the owner of the PST file.
3. If the Sent Items folder is not found, SourceOne tries to determine the owner by evaluating the folder path in which the PST file was located as follows:

- a. SourceOne evaluates the folder path in which the PST file was located to determine whether the file contains the following string:

```
\Documents and Settings\user-name\file-name.pst
```

This parsing only functions correctly if the folder string Documents and Settings is spelled correctly in English, although the string is not case-sensitive.

The folder path does not have to indicate the Microsoft Windows Documents and Settings folder. The PST files could also be located in a subdirectory of a network share with that same name, such as the following, and still be processed correctly:

```
\\corpshare\users\documents and settings\jsmith\archive1.pst
```

```
\\corpshare\users\documents and settings\mjones\myemail.pst
```

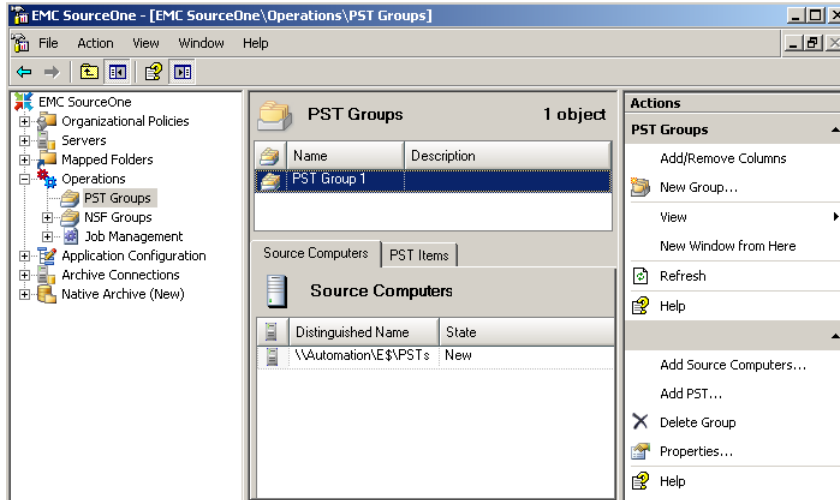
- b. If the Documents and Settings folder path is found, SourceOne searches the Active Directory for the username portion of the path.
- c. If the username string matches a user in Active Directory, SourceOne marks that user as the owner of the PST file.

Note: If SourceOne cannot determine an owner for a PST file using this method, then manually assign an owner.

Viewing list of PST groups

To view a list of existing PST groups (if any), in the Dell EMC SourceOne console, expand the **Dell EMC SourceOne > Operations > PST > PST Groups** node

Figure 125 PST groups



Refreshing a PST group view

To update the list of PST management groups and view the latest changes, press F5 or click Refresh. The list may take a few moments to refresh.

Viewing list of source computers in a PST group

Perform the following steps to view the list of source computers in a PST group.

Procedure

1. In the Dell EMC SourceOne console, expand the **Dell EMC SourceOne > Operations > PST Groups** node.
2. In the **PST Groups** list, select a group.
3. Select the **Source Computers** tab.

Viewing list of PST files in a PST group

Perform the following steps to view the list of PST files in a PST group.

Procedure

1. In the Dell EMC SourceOne console, expand the **Dell EMC SourceOne > Operations > PST Groups** node.
2. In the **PST Groups** list, select a group.
3. Select the **PST Items** tab.

Adjusting PST list when display limit is reached

By default, up to 1,000 PST files are displayed in the PST Items tab.

If the number of PST files exceeds the maximum rows that are specified for the **PST Items** tab, the following message and links appears at the top of the PST list:

Your search has returned more rows than can be displayed. Apply a filter or adjust the maximum number of rows to limit the number of rows.

To change the maximum number of PST files that are displayed, click the maximum number of rows link.

To filter the PST list, click the **filter** link.

Customizing the view for PST groups

The following sections describe how to customize the view for PST groups.

Specifying maximum number of PST files to display

The default maximum number of PST files to display in the PST Items tab is 1,000.

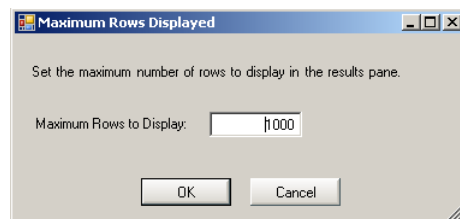
About this task

Perform the following steps to change the maximum.

Procedure

1. In the Dell EMC SourceOne console, expand the **Dell EMC SourceOne > Operations > PST Groups** node.
2. Select a group.
3. Select the **PST Items** tab.
4. Select any item in the list. If there are no items, populate the list.
5. Select **Action > Maximum Rows Displayed**.

Figure 126 Maximum Rows Displayed dialog box



6. Type the maximum number of rows to display, in the range 1 to 99,999.
7. Click **OK**.

Adding or removing columns

Perform the following steps to add or remove columns.

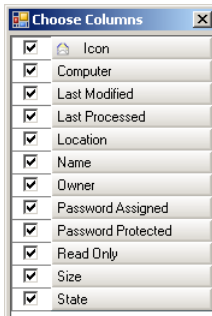
Procedure

1. In the Dell EMC SourceOne console, expand the **Dell EMC SourceOne > Operations > PST Groups** node.
2. In the center pane, perform one of the following steps:

- To add or remove columns from the **PST Groups** list, select any group in the list.
 - To add or move columns from the **Source Computers** tab, select any source computer in the list.
 - To add or remove columns from the **PST Items** tab, select any PST in the list.
3. Select **Action > View > Add/Remove Columns**.
- The **Choose Columns** dialog box appears.

Example 1 Choose Columns dialog box—PST Items

Figure 127 Choose Columns dialog box example



Changing the order of columns

Perform the following steps to change the order of columns.

Procedure

1. In the Dell EMC SourceOne console, expand the **Dell EMC SourceOne > Operations > PST Groups** node.
2. Drag the column header that is left or right to a new location. Red arrows indicate where you can drop the column header.

Changing sort order in a column

The direction of the triangle in a column header indicates the direction of sort for that column.

About this task

- Up—rising (alphabetical)
- Down—Descending

Perform the following steps to toggle between rising and descending sort order in a column.

Procedure

1. In the Dell EMC SourceOne console, expand the **Dell EMC SourceOne > Operations > PST Groups** node.
2. Click the header of the column you want to toggle.

Grouping by column

In the Source Computers tab or the PST Items tab, you can organize the display of source computers or PST files that are based on a specific column.

About this task

Perform the following steps to group source computers or PST files by column.

Procedure

1. In the Dell EMC SourceOne console, expand the **Dell EMC SourceOne > Operations > PST Groups** node.
2. Select a group.
3. Select the **Source Computers** tab or the **PST Items** tab.
4. Select **Action > Enable Grouping**.
5. Drag-and-drop the column to the indicated area above the **source computers** list or **PST** list.

Group by column prompt:

Drag a column header here to group by that column.

The source computers or PST files are now grouped under expandable rows, similar to a **tree** pane.

Filtering the PST list

To refine the PST list that is displayed in the PST Items tab, you can create a filter.

About this task

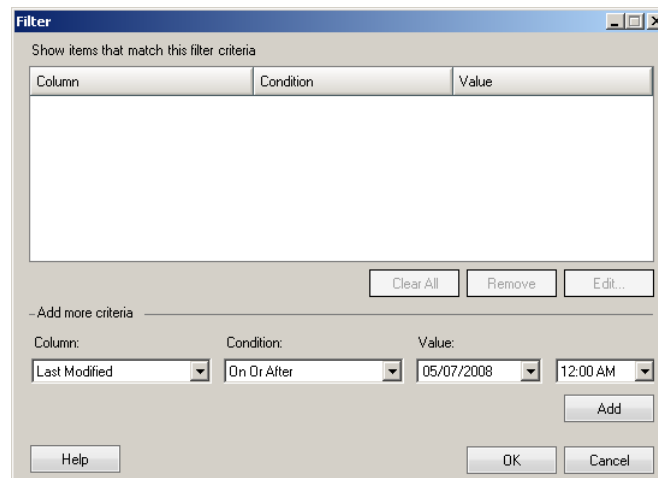
Perform the following steps to filter the list of PST files.

Procedure

1. In the Dell EMC SourceOne console, expand the **Dell EMC SourceOne > Operations > PST Groups** node.
2. Select a group.
3. Select the **PST Items** tab.
4. Select **Action > Filter**.

The **Filter** dialog box appears.

Figure 128 Filter dialog box



5. In the **Column** field, select the name of the column that you want to filter.
 6. In the **Condition** field, select the condition to apply to the column's values.
- The conditions depend on the data type of the column you selected in step 5.

7. In the **Value** field, type a value for the column and the condition.
Depending on the condition, you selected in step 6, the **Value** field may not be available.
8. Click **Add**.
The new criterion appears in the list.
9. To add another criterion to the list, repeat step 5 through step 8.
Each line in the filter is joined with the other lines through an AND search.
You can use the same column more than one time in a filter. For example, you could use the Last Processed column twice to specify a date-time range.
10. To remove entries from the criteria list, perform one of the following steps:
 - Click **Clear All**.
 - Select the line in the list that you want to remove, then click **Remove**.
11. To edit a selected entry in the filter:
 - a. Select the entry in the criteria list.
 - b. Click **Edit**. The **Edit Filter Criteria** dialog box appears. Modify the portion of the filter entry and click **OK**.
12. Click **OK** to close the **Filter** dialog box.

Specifying conditions for string data

The following list describes the possible conditions available for columns that display string data.

- **Is exactly**—Includes all the string that is specified in the **Value** field.
- **Contains**—Includes part or all the string you specify in the **Value** field.
- **Does not contain**—Does not include part or all the string you specify in the **Value** field.
- **Is Empty**—Does not contain any data.
The **Value** field is unavailable for this condition.
- **Is Not Empty**—Contains any data.
The **Value** field is unavailable for this condition.

Specifying conditions for boolean data

For Boolean data (such as Has Password, Password Assigned, and Read Only), specify the following:

- One condition is available—**Is Equal To**
- Two values are available—**True and False**

Specifying conditions for states

For state data, specify the following:

- One condition is available—**Is Equal To**
- Select a state in the **Value** field

Specifying conditions for time data

Filter PST files by specifying a date or date range, and the time, using the conditions that are described in the following list:

- **On or Before**—Select this condition to specify a less than or equals date time.
For example, selecting this condition for the **Last Modified** column filters PST files that were last modified on or before a certain date.
Select a date from the calendar and a time from the time picker.
The **Value** field fills in automatically with the date and time you selected.
- **On or After**—Select this condition to specify a greater than or equals date time.
For example, selecting this condition for the **Last Modified** column filters PST files that were last modified on or after a certain date.
Select a date from the calendar and a time from the time picker.
The **Value** field fills in automatically with the date and time you selected.
- **Is Empty**—Select this condition to test that the column is blank.
The **Value** field is unavailable for this condition.
- **Is Not Empty**—Select this condition to test that the column is not blank.
The **Value** field is unavailable for this condition.

The default date and time is that of the local computer.

You can use combinations of date time conditions in a filter.

To filter jobs that were created between two dates, use the same date time column twice. Use the column one time with the **On or after** condition and one time with the **On or before** condition.

The following example filters PST files that were last processed between May 5, 2007 and August 22, 2007:

Last Processed	On or after	05/05/2007
Last Processed	On or before	08/22/2007

Adding a PST group

To add a PST group, perform the following steps .

Procedure

1. In the Dell EMC SourceOne Console, expand the **Dell EMC SourceOne > Operations > PST Groups** node.
2. Select **Action > New Group**.
3. In the New Group wizard:
 - a. In the **Name** field, type a name for the new group.
 - b. In the **Description** field, type a description for the new group.

Figure 129 New Group dialog box

4. To close the **New Group** dialog box, click **Finish**.

The name of the new group is listed in the **PST Groups** pane.

Deleting a PST group

Deleting a PST group does not permanently remove source computers and PST files from the system. Only the PST group is deleted, because the source computers and PST files could belong to another PST group.

About this task

Perform the following steps to delete a PST management group.

Procedure

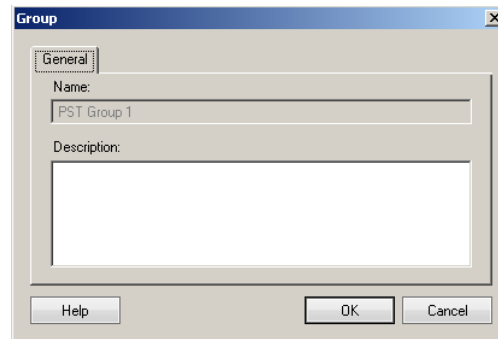
1. In the Dell EMC SourceOne console, expand the **Dell EMC SourceOne > Operations > PST Groups** node.
2. In the **PST Groups** list, select the group that you want to delete.
3. Select **Action > Delete Group**.

Viewing and editing properties of a PST group

Perform the following steps to view the properties of a PST group.

Procedure

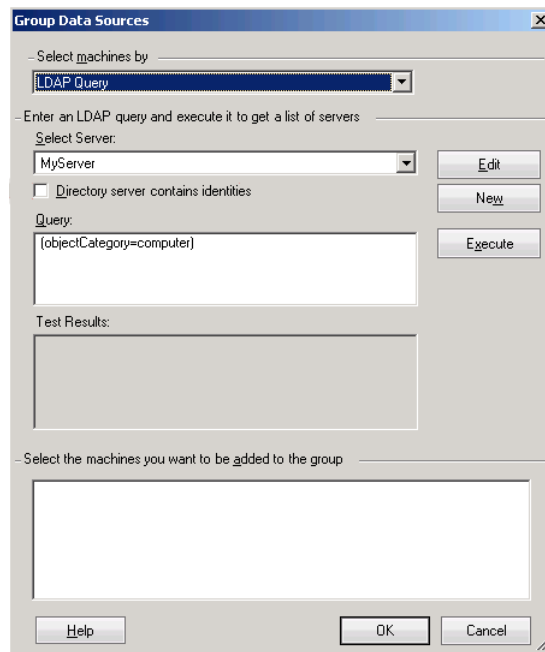
1. In the Dell EMC SourceOne console, expand the **Dell EMC SourceOne > Operations > PST Groups** node.
2. In the **PST Groups** list, select the group whose properties you want to view.
3. Select **Action > Properties**. The **Group** dialog box appears and displays the name of the group and an optional description of the group.

Figure 130 Group Properties dialog box

4. You can edit the **Description** field. You cannot edit the **Name** field.
5. Click **OK** to close the dialog box.

Managing source computers and shares in a PST group

The following section describes how to manage source computers and shares in a PST group.

Figure 131 Group Data Sources dialog box

Adding a source computer or share to a PST group

Perform the following steps to add a source computer to a PST group.

Procedure

1. In the Dell EMC SourceOne console, expand the **Dell EMC SourceOne > Operations > PST Groups** node.
2. In the **PST Groups** list, select the group to which you want to add a source computer.
3. Select **Action > Add Source Computers**.

The **Group Data Sources** dialog box appears.

4. Perform one of the following steps:
 - Specify source computers by UNC path.
 - Specify source computers by using an LDAP query.

Specifying source computers by UNC path

Perform the following procedure to specify source computers by UNC path.

Procedure

1. Open the **Group Data Sources** dialog box.
2. In the **Select machines by** field, select **UNC Path**.
3. Click **Browse**.
4. In the **Browse for Folder** dialog box, locate and select the computer, shared drive, or shared folder and then click **OK**.

Always select the computer, shared drive, or shared folder through the network (My Network Places) and not the local folder path.

The **Search Path** field displays the selected UNC path.

5. Click **Add** to add the UNC path to the list.

Always select the computer, shared drive, or shared folder through the network (My Network Places) and not the local folder path.

The **Search Path** field displays the selected UNC path.

6. Repeat step 3 through step 5 for each UNC path you want to add.
7. Click **OK**.

The UNC paths are listed in the **Source Computers** tab of the PST group.

Specifying source computers by LDAP query

Perform the following steps to specify source computers by LDAP query.

Procedure

1. Open the **Group Data Sources** dialog box.
2. In the **Select machines by** field select **LDAP Query**.
3. Perform one of the following steps:
 - If the directory server you specified is configured to contain identities, select the **Directory server contains identities** to improve query performance.
 - If the directory server you specified is not configured to contain identities, clear the **Directory server contains identities** (default).

This option does not apply to IBM Domino servers or to LDAP queries executed locally using the **Execute** or **Test** buttons. In those cases, the option is ignored without error or user notification.

4. After you run the LDAP query, at the bottom of the dialog box:
 - a. Select the source computers in the list that you want to add to the PST group.
 - b. Click **OK**.

The selected source computers are listed in the **Source Computers** tab of the PST group.

Removing a source computer from a PST group

Removing a source computer from a PST group does not remove the PST files that were discovered on that source computer from the group. The PST files remain in the group, even if you run another Find PST activity against the group. Manually remove each PST file from the group.

About this task

Perform the following procedure to remove a source computer from a PST group.

Procedure

1. In the Dell EMC SourceOne console, expand the **Dell EMC SourceOne > Operations > PST Groups** node.
2. In the **PST Groups** list, select the group containing the source computer that you want to remove.
3. In the **Source Computers** tab, select the source computer that you want to remove.
4. Select **Action > Remove**.

Moving a source computer to another PST group

Moving a source computer from one PST group to another does not move the associated PST files. The PST files remain in the group, until you run another Find PST activity against the group.

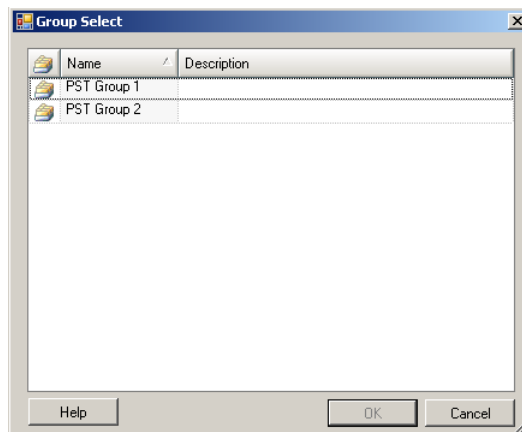
About this task

Perform the following steps to move a source computer to another PST group.

Procedure

1. In the Dell EMC SourceOne console, expand the **Dell EMC SourceOne > Operations > PST Groups** node.
2. In the **PST Groups** list, select the group containing the source computers that you want to move.
3. In the **Source Computers** tab, select the source computers that you want to move.
4. Select **Action > Move to Group**.

Figure 132 Group Select dialog box



5. Select the group to which you want to move the source computers.
6. Click **OK**.

Changing the state of a source computer

The following information describes how to change the state of a source computer.

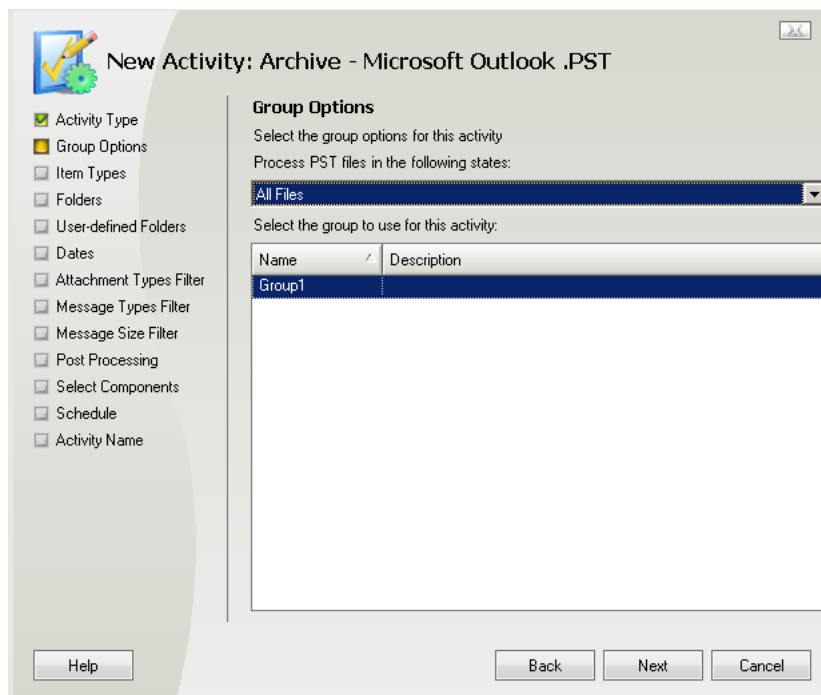
About source computer states

A source computer’s state indicates what the state the source computer was in the last time a PST activity ran against that source computer.

The source computer state determines whether that source computer is processed during a PST activity.

In the **Group Options** page of a PST activity, you specify the state of items to process. These options are related to source computer states in PST groups.

Figure 133 Group Options page—PST activity



The following table displays the relationship between source computer states in PST groups and the **Group Options** page in **Find PST** activities

Table 29 Source computer states and group options-Find PST activities

Source computer state in PST Group	Group options in Find PST activity	Description
All states	All Locations	The PST activity processes all source computers, regardless of the source computer state.
Complete	All Locations Except Completed	The Find PST activity: <ul style="list-style-type: none"> • Skips any source computer in a Complete state. • Only processes source computers in a New or Failed state.

Table 29 Source computer states and group options-Find PST activities (continued)

Source computer state in PST Group	Group options in Find PST activity	Description
Failed	Only Failed Locations	The Find PST activity processes only those source computers in a Failed state.
New	Only Unprocessed Locations	The Find PST activity processes only those source computers marked New.

To process only certain source computers during a **Find PST** activity, change the state of the source computers.

Changing the state of a source computer procedure

Perform the following steps to change the state of a source computer.

Procedure

1. In the Dell EMC SourceOne Console, expand the **Dell EMC SourceOne > Operations > PST Groups** node.
2. In the **PST Groups** list, select the group containing the source computer.
3. In the **Source Computers** tab, select the source computer.
4. Select **Action > Change State**.

Select one of the following options on the **Change State** submenu:

- To Complete—Changes source computer state to Completed.
- To Failed—Changes source computer state to Failed.
- To Reset—Changes source computer state to New.

Managing PST files in a PST group

The following sections describe how to manage PST files in a PST file group.

Adding a PST file to a PST group

Use either of the following methods to add PST files to a PST group:

- Find PST files:
 - Add source computers or shares.
 - Create a **Find-Microsoft Outlook PST** activity.
- Manually add PST files, as described in this section.

PST files must reside in shared folders to which the Dell EMC SourceOne administrator has access.

The following automatic processing occurs on discovered PST files, but does not occur on PST files that are added manually:

- Detection of ownership
- Determination of password protection

Adding a PST file manually to a PST group

Perform the following procedure to add a PST file manually to a PST group.

Procedure

1. In the Dell EMC SourceOne console, expand the **Dell EMC SourceOne > Operations > PST Groups** node.
2. In the **PST Groups** list, select the group.
3. Select **Action > Add PST**.
4. Click **Yes** to continue when the following appears:

```
Automatic detection of password and ownership attributes is not performed when manually adding a PST file to a group. PST files that do not have an owner assigned will not be archived. Do you wish to proceed?
```

5. In the **Open** dialog box:
 - a. Browse to the location of the PST file.
 - b. Select the PST file. You can select more than one.
 - c. Click **Open**.

The selected PST files are listed in the **PST Items** tab.

Removing a PST File from a PST group

Perform the following steps to remove a PST file from a PST group.

Procedure

1. In the Dell EMC SourceOne console, expand the **Dell EMC SourceOne > Operations > PST Groups** node.
2. In the **PST Groups** list, select the group containing the PST files that you want to remove.
3. In the **PST Items** tab, select the PST files that you want to remove.
4. Select **Action > Remove**.

Moving a PST file to another PST group

Perform the following steps to move a PST file from one PST group to another.

Procedure

1. In the Dell EMC SourceOne console, expand the **Dell EMC SourceOne > Operations > PST Groups** node.
2. In the **PST Groups** list, select the group containing the PST files that you want to move.
3. In the **PST Items** tab, select the PST files.
4. Select **Action > Move to Group**. The **Group Select** dialog box appears.
5. Using the **Group Select** dialog box, select the group to which you want to move the PST files.
6. Click **OK**. The **Group Select** dialog box closes and the files are moved to the new group.

Assigning an owner to a PST file

The Owner column indicates one of the following:

- The anticipated owner that a **Find PST** activity discovers.
- The owner that you selected from the Microsoft Exchange address book.
- The owner that you specified manually (as described in this section).

If ownership has not been determined:

- The Owner column is blank.
- The PST file is not archived.
- You can specify an owner.

Associating a PST file with a mailbox

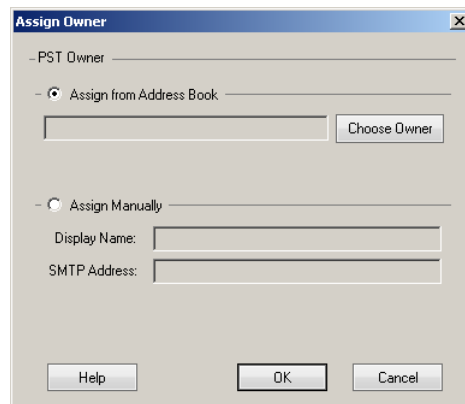
Perform the following steps to associate a PST file with a mailbox.

Procedure

1. In the Dell EMC SourceOne console, expand the **Dell EMC SourceOne > Operations > PST Groups** node.
2. In the **PST Groups** list, select the group containing the PST file.
3. In the **PST Items** tab, select the PST file. You can select more than one file.
4. Select **Action > Assign Owner**.

The **Assign Owner** dialog box appears.

Figure 134 Assign Owner dialog box—PST



5. Perform one of the following steps:
 - To assign ownership using the address book:
 - a. Select **Assign from Address Book**.
 - b. Click **Choose Owner**.
 - c. Select the owner from the address book.
 - To assign ownership manually:
 - a. Select **Assign Manually**.
 - b. In the **Display Name** field, type the display name of the owner (maximum 150 characters).

- c. In the **SMTP Address** field, type the SMTP address of the owner.
6. Click **OK**. The Owner column updates for the selected PST file.

Specifying the password for a password-protected PST file

If a PST file is password-protected (the value in the Password Protected column is True), you can manually specify the password that was already assigned to the PST.

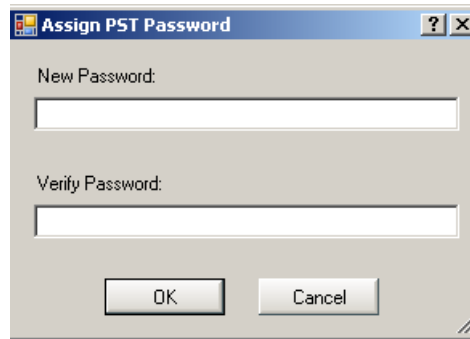
About this task

Perform the following procedure to specify the password that is already assigned to a PST file.

Procedure

1. In the Dell EMC SourceOne console, expand the **Dell EMC SourceOne > Operations > PST Groups** node.
2. In the **PST Groups** list, select the group containing the PST file.
3. In the **PST Items** tab, select the PST file. You can select more than one file.
4. Select **Action > Set Password**. The **Assign PST Password** dialog box appears.

Figure 135 Assign PST Password dialog box



5. In the **New Password** field, type the password that was already assigned to the PST file. Do not specify a new password. The characters display as asterisks.
6. In the **Verify Password** field, re-enter the password.
7. Click **OK**. The password is stored in the database in encrypted form.

NSF processing activities

This section describes how to process groups of IBM Domino NSF files.

What are NSF groups?

Use NSF groups to organize and simplify the management of source computers and NSF files in preparation for NSF activities.

You can:

- Search for source computers that are based on an LDAP query. Add the results to an NSF group.
- Browse for source computers and shares and add the results to an NSF group.
- Manually remove source computers and shares from an NSF group.
- Inspect the status of source computers since the last processing occurred.

- Use NSF groups as input to **NSF** activities.
- Remove individual NSF files from the NSF group.

NSF management checklist

Ensure that the following steps are performed to manage NSF files.

Procedure

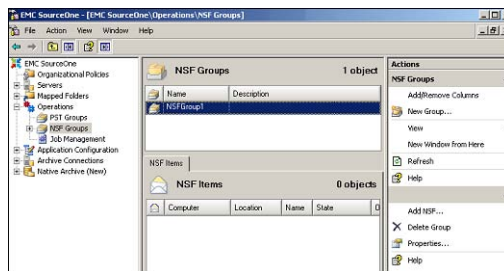
1. Create NSF groups.
2. Add NSF files manually to NSF groups.
3. Assign owners to the NSF files, if required.
4. Remove the NSF files that you do not want to process.
5. Create an **Archive-Personal Mail Files** activity to archive NSF files.

Viewing list of NSF groups

This section provides an overview of the NSF Groups area.

To view a list of existing NSF groups, in the Dell EMC SourceOne Console, expand the **Dell EMC SourceOne > Operations > NSF Groups** node.

Figure 136 NSF groups



Refreshing an NSF group view

To update the list of NSF management groups and view the latest changes, press F5 or click Refresh. The list may take a few moments to refresh.

Viewing list of NSF files in an NSF group

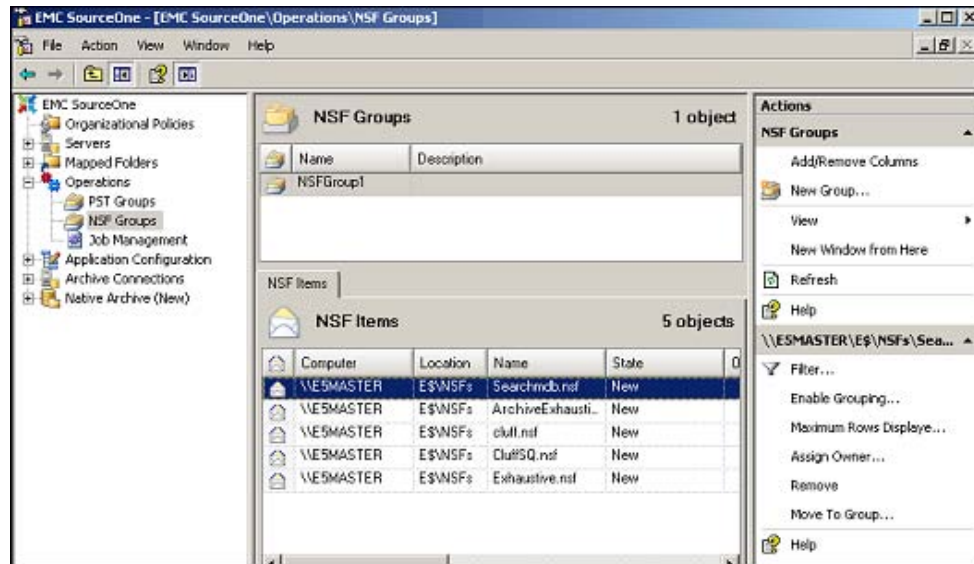
To view the list of NSF files in an NSF group, perform the following steps.

Procedure

1. In the Dell EMC SourceOne Console, expand the **Dell EMC SourceOne > Operations > NSF Groups** node.
2. In the **NSF Groups** list, select a group.

The **NSF Items** area lists the NSF files in the selected NSF group.

Figure 137 NSF Items



Adjusting NSF list when display limit is reached

By default, up to 1,000 NSF files are displayed in the NSF Items tab.

If the number of NSF files exceeds the maximum rows that are specified for the **NSF Items** tab, a message and links appear at the top of the **NSF** list.

NSF Items tab—Links to properties and filter:

Your search has returned more rows than can be displayed. Apply a filter or adjust the maximum number of rows to limit the number of rows.

- To change the maximum number of NSF files that are displayed, click the **maximum number of rows** link.
- To filter the NSF list, click the **filter** link.

Customizing the view for NSF groups

The following sections describe how to customize the view for NSF groups.

Specifying maximum number of NSF files to display

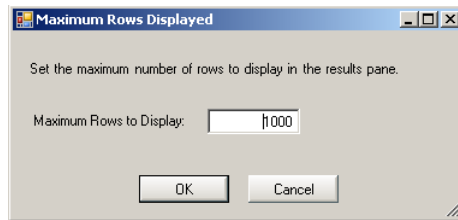
The default maximum number of NSF files to display in the NSF Items tab is 1,000.

About this task

Perform the following steps to change the maximum number of NSF files.

Procedure

1. In the Dell EMC SourceOne console, expand the **Dell EMC SourceOne > Operations > NSF Groups** node.
2. Select a group.
3. Select the **NSF Items** tab.
4. Select any item in the list.
5. Select **Action > Maximum Rows Displayed**.

Figure 138 Maximum Rows Displayed dialog box

6. Type the maximum number of rows to display, in the range 1 to 99,999.
7. Click **OK**.

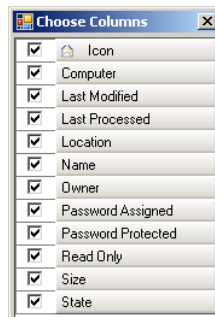
Adding or removing columns

Perform the following procedure to add or remove columns.

Procedure

1. In the Dell EMC SourceOne console, expand the **Dell EMC SourceOne > Operations** node.
2. In the center pane, perform one of the following steps:
 - To add or remove columns from the **NSF Groups** list, select any group in the list.
 - To add or remove columns from the **NSF Items** tab, select any NSF in the list.
3. Select **Action > View > Add/Remove Columns**.

The **Choose Columns** dialog box appears.

Figure 139 Choose Columns dialog box example

Changing the order of columns

Perform the following steps to change the order of columns.

Procedure

1. In the Dell EMC SourceOne console, expand the **Dell EMC SourceOne > Operations > NSF Groups** node.
2. Drag the column header left or right to a new location. Red arrows indicate where you can drop the column header.

Changing sort order in a column

The direction of the triangle in a column header indicates the direction of sort for that column.

About this task

- Up—rising (alphabetical)

- Down—Descending

Perform these steps to toggle between rising and descending sort order in a column.

Procedure

1. In the Dell EMC SourceOne console, expand the **Dell EMC SourceOne > Operations > NSF Groups** node.
2. Click the header of the column you want to toggle.

Grouping by column

In the **NSF Items** area, you can organize the display of NSF files that are based on a specific column.

About this task

Perform the following procedure to group NSF files by column.

Procedure

1. In the Dell EMC SourceOne console, expand the **Dell EMC SourceOne > Operations > NSF Groups** node.
2. Select a group.
3. Select any item in the **NSF Items** area
4. Select **Action > Enable Grouping**.
5. Drag-and-drop the column to the indicated area above the **NSF** list.

Group by column prompt:

Drag a column header here to group by that column.

The NSF files are now grouped under expandable rows, similar to a tree pane.

Filtering the NSF list

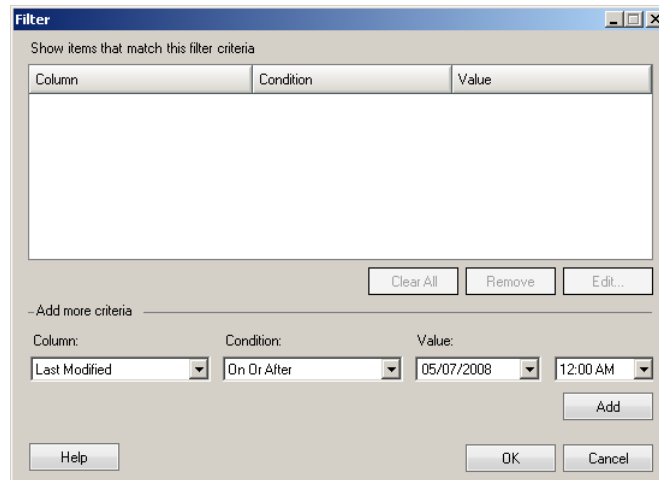
To refine the NSF list that is displayed in the NSF Items tab, you can create a filter.

About this task

Perform the following steps to filter the list of NSF files.

Procedure

1. In the Dell EMC SourceOne console, expand the **Dell EMC SourceOne > Operations > NSF Groups** node.
2. Select a group.
3. In the **NSF Items** area, select any item.
4. Select **Action > Filter**. The **Filter** dialog box appears.

Figure 140 Filter dialog box

5. In the **Column** field, select the name of the column that you want to filter.
6. In the **Condition** field, select the condition to apply to the column's values.
The conditions depend on the data type of the column you selected in the **Column** field.
7. In the **Value** field, type a value for the column and the condition.
Depending on the condition, you selected in the **Condition** field, the **Value** field may not be available.
8. Click **Add**.
The new criterion appears in the list.
9. To add another criterion to the list, repeat step 5 through step 8.
Each line in the filter is joined with the other lines by an AND search.
You can use the same column more than one time in a filter. For example, you could use the Last Processed column twice to specify a date-time range.
10. To remove entries from the criteria list, perform one of the following steps:
 - Click **Clear All**.
 - Select the line in the list that you want to remove, then click **Remove**.
11. To edit a selected entry in the filter:
 - a. Select the entry in the criteria list.
 - b. Click **Edit**. The **Edit Filter Criteria** dialog box appears. Modify the portion of the filter entry and click **OK**.
12. Click **OK** to close the **Filter** dialog box.

Specifying conditions for string data

The following list describes the conditions available for columns that display string data:

- **Is exactly**—Includes all the string you specify in the **Value** field.
- **Contains**—Includes part or all the string you specify in the **Value** field.
- **Does not contain**—Does not include part or all the string you specify in the **Value** field.

- **Is Empty**—Does not contain any data. The **Value** field is unavailable for this condition.
- **Is Not Empty**—Contains any data. The **Value** field is unavailable for this condition.

Specifying conditions for boolean data

For Boolean data, such as Has Password, Password Assigned, and Read Only, specify the following:

- One condition is available: Is Equal To.
- Two values are available: True and False.

Specifying conditions for states

For state data, specify the following:

- One condition is available—Is Equal To.
- Select a state in the **Value** field.

Specifying conditions for time data

You can filter NSF files by specifying a date or date range, and the time, using the conditions that are described in the following list:

- **On Or Before**—Select this condition to specify a less than or equals (<=) date-time. For example, selecting this condition for the Last Modified column filters NSF files that were last modified on or before a certain date.
Select a date from the calendar and a time from the time picker.
The **Value** field fills in automatically with the date and time you selected.
- **On Or After**—Select this condition to specify a greater than or equals (>=) date-time. For example, selecting this condition for the Last Modified column will filter NSF files that were last modified on or after a certain date.
Select a date from the calendar and a time from the time picker.
The **Value** field fills in automatically with the date and time you selected.
- **Is Empty**—Select this condition to test that the column is blank. The **Value** field is unavailable for this condition.
- **Is Not Empty**—Select this condition to test that the column is not blank. The **Value** field is unavailable for this condition.

The default date and time is that of the local computer.

You can use combinations of datetime conditions in a filter.

To filter jobs that were created between two dates, use the same datetime column twice. Use the column one time with the **On or after** condition and one time with the **On or before** condition.

The following example filters NSF files that were last processed between May 5, 2007 and August 22, 2007:

Last Processed	On or after	05/05/2007
Last Processed	On or before	08/22/2007

Adding an NSF group

Perform the following procedure to add an NSF group.

Procedure

1. In the Dell EMC SourceOne console, expand the **Dell EMC SourceOne > Operations > NSF Groups** node.
2. Select **Action > New Group**.
3. In the **New Group** wizard:
 - a. In the **Name** field, type a name for the new group.
 - b. In the **Description** field, type a description for the new group.
4. Click **Finish** to close the **New Group** dialog box.

The name of the new group is listed in the **NSF Groups** pane.

Deleting an NSF group

Deleting an NSF group does not permanently remove NSF files from the system. Only the NSF group is deleted, because the NSF files could belong to another NSF group.

About this task

Perform the following steps to delete an NSF management group.

Procedure

1. In the Dell EMC SourceOne console, expand the **Dell EMC SourceOne > Operations > NSF Groups** node.
2. In the **NSF Groups** list, select the group that you want to delete.
3. Select **Action > Delete Group**.

Viewing and editing properties of an NSF group

Perform the following steps to view properties of an NSF group.

Procedure

1. In the Dell EMC SourceOne console, expand the **Dell EMC SourceOne > Operations > NSF Groups** node.
2. In the **NSF Groups** list, select the group whose properties you want to view.
3. Select **Action > Properties**. The **Group** dialog box appears and displays the name of the group and an optional description of the group.
4. You can edit the **Description** field. You cannot edit the **Name** field.
5. Click **OK** to close the dialog box.

Managing NSF files in an NSF group

The following sections describe how to manage NSF files in an NSF file group.

Adding an NSF file to an NSF group

NSF files must reside in shared folders to which the Dell EMC SourceOne administrator has access.

About this task

Perform the following procedure to add an NSF file manually to an NSF group.

Procedure

1. In the Dell EMC SourceOne console, expand the **Dell EMC SourceOne > Operations > NSF Groups** node.
2. In the **NSF Groups** list, select the group.
3. Select **Action > Add NSF**.
4. Click **Yes** to continue when the following appears:

Automatic detection of password and ownership attributes is not performed when manually adding an NSF file to a group. NSF files that do not have an owner assigned will not be archived. Do you wish to proceed?

5. In the **Open** dialog box:
 - a. Browse to the location of the NSF file.
 - b. Select the NSF file. You can select more than one.
 - c. Click **Open**.

The selected NSF files are listed in the **NSF Items** area.

Removing an NSF File from an NSF group

Perform the following procedure to remove an NSF file from an NSF group.

Procedure

1. In the Dell EMC SourceOne console, expand the **Dell EMC SourceOne > Operations > NSF Groups** node.
2. In the **NSF Groups** list, select the group containing the NSF files that you want to remove.
3. In the **NSF Items** area, select the NSF files that you want to remove.
4. Select **Action > Remove**.

Moving an NSF file to another NSF group

Perform the following steps to move an NSF file from one NSF group to another.

Procedure

1. In the Dell EMC SourceOne console, expand the **Dell EMC SourceOne > Operations > NSF Groups** node.
2. In the **NSF Groups** list, select the group containing the NSF files that you want to move.
3. In the **NSF Items** area, select the NSF files.
4. Select **Action > Move to Group**. The **Group Select** dialog box appears.

5. Using the **Group Select** dialog box, select the group to which you want to move the NSF files.
6. Click **OK**. The **Group Select** dialog box closes and the files are moved to the new group.

Assigning an owner to an NSF file

The Owner column indicates one of the following:

- The owner that you selected from the IBM Domino address book.
- The owner that you specified manually, as described in this section.

If the ownership has not yet been determined:

- The Owner column is blank.
- The NSF file is not archived.
- You can specify an owner.

Associating an NSF file with an owner

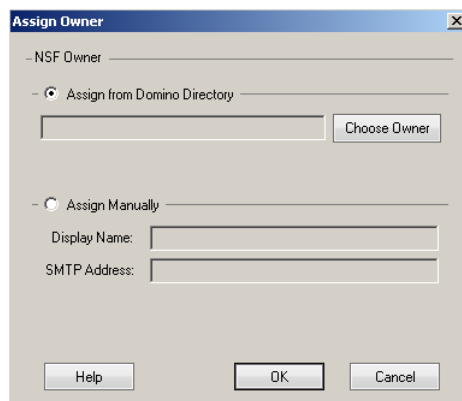
Perform these steps to associate an NSF file with an owner.

Procedure

1. In the Dell EMC SourceOne console, expand the **Dell EMC SourceOne > Operations > NSF Groups** node.
2. In the **NSF Groups** list, select the group containing the NSF file.
3. In the **NSF Items** area, select the NSF file. You can select more than one file.
4. Select **Action > Assign Owner**.

The **Assign Owner** dialog box appears.

Figure 141 Assign Owner dialog box—NSF



5. Perform one of the following steps:
 - To assign ownership using the address book:
 - a. Select **Assign from Domino Directory**.
 - b. Click **Choose Owner**.
 - c. Select the owner from the address book.
 - To assign ownership manually:
 - a. Select **Assign Manually**.

- b. In the **Display Name** field, type the display name of the owner with a maximum of 150 characters.
 - c. In the **SMTP Address** field, type the SMTP address of the owner.
 6. Click **OK**.

The Owner column updates for the selected NSF file.

CHAPTER 18

Shortcut Activities

This section describes shortcuts and shortcut activities in SourceOne Email Management.

For information about shortcuts and Microsoft Exchange Public Folders, refer to [Processing Exchange Public Folder Content](#).

- [Introduction to shortcuts](#)..... 408
- [Considerations and limitations when using shortcuts](#)..... 411
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- [Customizing shortcut replacement text](#)..... 413
- [Shortcut-Historical activity](#)..... 417
- [Update Shortcuts-Historical & User Directed Archive activity](#)..... 418
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Introduction to shortcuts

SourceOne Email Management can be used to create, restore, and update different types of email message shortcuts.

You create shortcuts to save space on the email server by replacing the email message with a small file that points to the original email message that SourceOne Email Management archives.

Summary of activities used to manage shortcuts

Use different activities to process different types of email message shortcuts as shown in the following list:

- Email that is archived using the **Archive-Historical** activity
Shortcut activities that are used:
 - **Shortcut-Historical**
 - **Restore Shortcuts-Historical and User Directed Archive**
 - **Update Shortcuts-Historical and User Directed Archive**
- Email that is archived in Microsoft Exchange Public folders using the **Archive-Microsoft Exchange Public Folders** activity
Shortcut activities that are used:
 - **Shortcut-Microsoft Exchange Public Folders**
 - **Restore Shortcuts-Microsoft Exchange Public Folders**
- Email that is archived using the **Archive-User Directed Archive** activity
Shortcut activities that are used:
 - **Shortcut-User Directed Archive**
 - **Restore Shortcuts-Historical and User Directed Archive**
 - **Update Shortcuts-Historical and User Directed Archive**
- Email that is stored in a **.PST** file that has been migrated and archived
Shortcut activities that are used:
 - **Migrate-Microsoft Office Outlook .PST**

What happens to the contents of a shortcut message?

A stub replaces the contents of a shortcut message.

Depending on the mail server (IBM Domino or Microsoft Exchange), and the activity options that are selected, using a shortcut replaces the body of the shortcut message, or the attachments, or both. The stub may consist of explanatory text only, or explanatory text and links to attachments.

For details on the replacement text that appears in stubs, refer to the following sections.

 **Note:** You can customize the replacement text.

IBM Domino/Notes

For Notes messages, the message body and attachments are extracted from the mail document. The mail document is converted to an empty shell containing replacement text.

- The default replacement text for the message body is:

```
This Notes message has been converted as a shortcut.
```

- The default replacement text for an attachment is:

```
This attachment of the Notes message has been converted as a shortcut.  
Please open the message to view the attachment.
```

IBM Domino/Notes message bodies and attachments are always shortcut and replaced with explanatory text.

Microsoft Exchange, Outlook, and mobile devices

Mobile Services Dell EMC SourceOne Mobile Services software and web Services software support the resolution of shortcuts for users accessing them using the universal URL.

This support includes:

- Mobile device users
- Outlook web Access users in environments in which SourceOne Extensions for OWA Support software is not installed on the Microsoft Exchange server.
- Outlook users in environments in which the SourceOne Offline Access software is not installed on their client computers.

Microsoft Exchange mail users and mobile users can double-click shortcuts in their mailboxes to retrieve the full messages from the SourceOne archive. The message is retrieved through the Retrieval server.

When restoring shortcuts using mobile devices, both SourceOne and the mobile device have filtering settings that can be applied. A mobile device will synchronize only those items that meet its own filter settings.

Outlook and SourceOne Offline Access

The user experience in Outlook depends on whether you install the SourceOne Offline Access software on user computers.

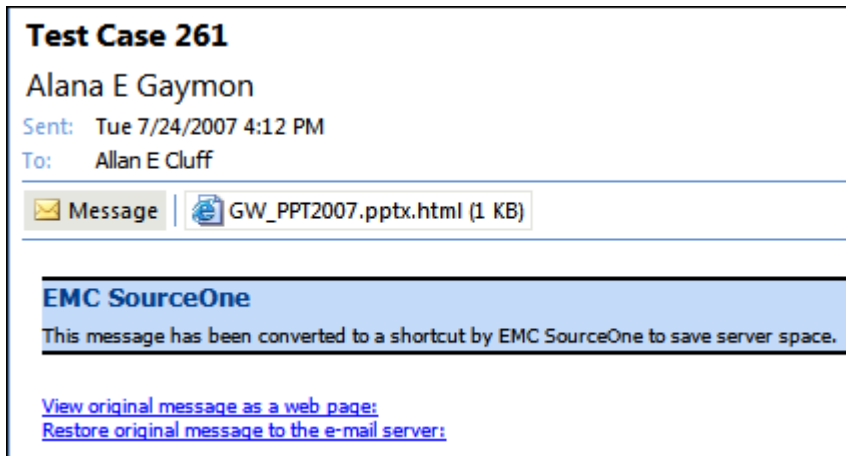
- If you install SourceOne Offline Access on user computers, the user experience is seamless. Shortcut messages and attachments display unchanged in the **Outlook preview** pane. You can also configure SourceOne Offline Access to cache messages and attachments locally so that Outlook users can retrieve them offline.

Refer to:

- The *SourceOne Offline Access Installation and Administration Guide* for information about installing the SourceOne Offline Access client.
- The SourceOne Email Management SourceOne Offline Access User Guide for information about the user interface.
- If you do not install SourceOne Offline Access on user computers, then:
 - If you choose to shortcut the message body, the explanatory text replaces the message body.

- Attachments are converted to HTML stubs, which link to the attachments.

Figure 142 Shortcut message body and attachment displayed in Outlook



The **View original message as a web page** link does not display messages in rich formatted content, nor does it display inline images.

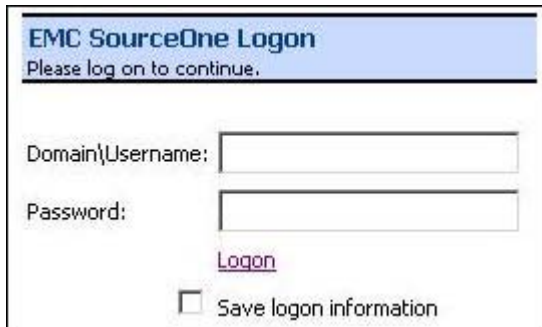
In a Microsoft Exchange environment, delegate users cannot use the universal URL to resolve shortcuts in the delegate mailbox. Delegate users can use SourceOne Offline Access to resolve the shortcut.

Considerations for mobile devices used with Microsoft Exchange

For mobile devices used with Microsoft Exchange, consider the following:

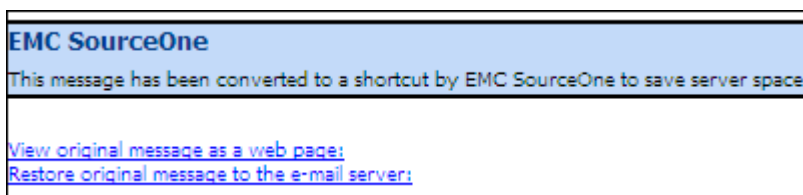
- Users must log in using the full Windows login name, including the domain.

Figure 143 Mobile device login screen



- For a shortcut message, the screen displays the following replacement text.

Figure 144 Shortcut message displayed in mobile device (Microsoft Exchange)



- When a mobile device user opens a shortcut message, the message is retrieved and stored in the user's mailbox. The user sees both the shortcut stub and the message in the mailbox.

The **View original message as a web page** link does not display messages in rich formatted content, nor does it display inline images.

Shortcutting messages

Perform the following steps to shortcut messages.

Procedure

1. Install the prerequisite software.
2. Enable and configure the Universal URL used for shortcut activities and for retrieval. This step is required for Microsoft Exchange.
3. Customize the default replacement text for message bodies and attachments. This step is optional.
4. Create and run an activity which creates shortcuts.

To update existing shortcuts in Microsoft Exchange environments, create an **Update Shortcuts-Historical & User Directed Archive** activity.

How do I restore shortcut messages to the email server?

In a Microsoft Exchange environment where you have not installed SourceOne Offline Access software on user computers, users can restore one shortcut message at a time by clicking the Restore original message to the email server link in the message stub.

To restore many messages at one time, system administrators can use the **Restore Shortcuts-Historical & User Directed Archive** activity.

Users and administrators can also restore messages by using Search.

Refer to the *SourceOne Search User Guide*.

Considerations and limitations when using shortcuts

- Do not shortcut draft messages. If you shortcut drafts, then users must use Dell EMC SourceOne Search to restore the drafts to their mailboxes before editing.
- When messages in the Notes trash folder are archived, running a **Shortcut** activity does not process any items in the trash folder. However, the **Restore Shortcut** activity processes some items with failures. This failure occurs because the **Shortcut** activity did not process any items, so there are no items to restore.
- Shortcut Public Folder email messages do not return a universal URL (UURL) link when you use Microsoft Outlook Web Access.
- By design, for calendar items:
 - Inline attachments and bodies are not shortcut.
 - Attachments are shortcut.
- By design, messages that contain a virus are not shortcut. If a shortcut activity is run against a message containing a virus, the following error occurs:

```
Shortcut failed
```

- In Microsoft Exchange mail environments:

- The Dell EMC SourceOne shortcut icon does not appear for digitally signed Microsoft Exchange messages.
- Encrypted messages are not shortcut.
- Forwarded messages or replies that are shortcut displays the Microsoft Outlook forward/reply icons instead of the Dell EMC SourceOne shortcut icon. This icon display is a design limitation of Microsoft Outlook. The forward/reply icons are always used instead of custom icons.

Prerequisites for shortcutting messages

Before creating activities to shortcut messages, update message shortcuts, or restore message shortcuts, complete the following prerequisites.

- If you are creating shortcuts on a Microsoft Exchange mail server, perform the following:
 - Configure the URL used for shortcut retrieval.
 - Enable the **universal URL** option and specify the URL used for shortcut retrieval before you create **Shortcut** or **Update Shortcut** activities. If the **universal URL** option is enabled but the URL is not configured, then the following error message appears when you try to create Shortcut or Update activities:

```
No 'External URL' has been configured.
```

```
An 'External URL' must be set in the Application Configuration node before creating an activity of this type.
```

- Verify that there is sufficient mailbox space for restoring shortcuts.

Restoring shortcuts to full mailboxes causes problems. When a mailbox containing shortcut messages is close to exceeding the assigned size limit, shortcut messages can be restored to that mailbox causing it to exceed the size limit. This limit results in the user receiving error messages and is no longer able to send or receive messages using that mailbox.

When a mailbox containing shortcuts is close to exceeding the size limit, the limit is to either be increased or the user or administrator should not restore any shortcuts. The administrator can restore more shortcuts when the mailbox has more free space.

Customizing shortcut replacement text

Customize the replacement text that is displayed in shortcut stubs by editing the `LanguageResources` table in the database with the default installed name of `ES1Activity`.

About the `LanguageResources` table

The first ten rows in the `LanguageResources` table contain the default replacement text that is displayed in shortcut stubs.

Figure 145 `LanguageResources` table

LangID	ApplicationID	ResourceID	ResourceString
1033	39	1	This notes message has been converted as a shortcut.
1033	39	2	This attachment of the notes message has been converted as a shortcut. Please open the message to view t...
1033	39	3	<html><body>This notes message has been converted as a shortcut. </body></html>
1033	39	4	<html><body>This attachment of the notes message has been converted as a shortcut. Please open the me...
1033	39	5	This exchange message has been converted as a shortcut.
1033	39	6	This attachment of the exchange message has been converted as a shortcut. Please open the message to vi...
1033	39	7	<html><head><meta http-equiv="Content-Language" content="en-us"><title>EMC Shortcut Information<...
1033	39	8	<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN" "http://www.w3.org/TR/xhtml1/DTD/xht...
1033	39	9	<html><head><meta http-equiv="Content-Language" content="en-us"><title>EMC Shortcut Information<...
1033	39	10	<html><head><meta http-equiv="Content-Language" content="en-us">□□□□ <title>EMC Shortcut Inf...
1033	58	1	QA Diagnostic Task
1033	58	2	Journaling
1033	58	3	Mailbox Archive

The following list includes information about the columns that appear in the `LanguageResources` table:

- **LangID** —Contains the Microsoft locale ID (LCID) for the language.
- **ApplicationID**—Identifies the application using the string. Do not edit this column.
- **ResourceID**—Identifies the following:
 - The mail system, for example, IBM Domino or Microsoft Exchange.
 - The usage for the string, for example, body or attachment replacement.

Do not edit the **ResourceID** column.

- The **ResourceString** column contains the replacement text that you can edit. For SourceOne, replacement text is HTML. For Microsoft Exchange, the HTML replacement text may contain links so that users can access the message body and attachments of the shortcut message.

The following list includes information about the **ResourceID** entries in the `LanguageResources` table that is used for shortcut replacement text:

- **ResourceID 1**
 - Default replacement text that is displayed in stubs—This entry notes that the message has been converted as a shortcut.
 - Mail environment—IBM Domino and IBM Notes.
 - Description—Plain text. Replaces shortcut message body.
- **ResourceID 2**
 - Default replacement text that is displayed in stubs—This attachment of the notes message has been converted as a shortcut. Open the message to view the attachment.
 - Mail environment—IBM Domino and IBM Notes.

- Description—Plain text. Replaces shortcut attachment.
- **ResourceID 3**
 - Default replacement text that is displayed in stubs—`<html><body>This notes that the message has been converted as a shortcut.</body></html>`
 - Mail environment—IBM Domino and IBM Notes, SourceOne.
 - Description—HTML. Replaces shortcut message body.
- **ResourceID 4**
 - Default replacement text that is displayed in stubs—`<html><body>This attachment of the notes message has been converted as a shortcut. Open the message to view the attachment.</body></html>`
 - Mail environment—IBM Domino and IBM Notes, SourceOne.
 - Description—HTML. Replaces shortcut attachment.
- **ResourceID 5**
 - Default replacement text that is displayed in stubs—This Microsoft Exchange message has been converted as a shortcut.
 - Mail environment—Microsoft Exchange and Microsoft Outlook.
 - Description—Plain text. Replaces shortcut message body.
- **ResourceID 6**
 - Default replacement text that is displayed in stubs—This attachment of the exchange message has been converted as a shortcut. Open the message to view the attachment.
 - Mail environment—Microsoft Exchange and Microsoft Outlook.
 - Description—Plain text. Replaces shortcut attachment.
- **ResourceID 7**
 - Default replacement text that is displayed in stubs—Refer to [Default replacement text for Microsoft Outlook](#) on page 415.
 - Mail environment—Microsoft Exchange and Microsoft Outlook, SourceOne.
 - Description—HTML. Replaces shortcut message body if the Shortcut message body option is selected when the Shortcut activity is created.
- **ResourceID 8**
 - Default replacement text that is displayed in stubs—Refer to [Default replacement text for mobile devices \(Microsoft Exchange\)](#) on page 416.
 - Mail environment—Microsoft Exchange and mobile devices, SourceOne.
 - Description—HTML. Replaces shortcut message body if the Shortcut message body option is selected when the Shortcut activity is created.
- **ResourceID 9**
 - Default replacement text that is displayed in stubs—Refer to [Default replacement text for Microsoft Outlook](#) on page 415.
 - Mail environment—Microsoft Exchange and Microsoft Outlook, SourceOne.
 - Description—HTML. Replaces shortcut message body if the Shortcut message body option is selected when the Shortcut activity is created.
- **ResourceID 10**
 - Default replacement text that is displayed in stubs—Refer to [Default replacement text for mobile devices \(Microsoft Exchange\)](#) on page 416.

- Mail environment—Microsoft Exchange and mobile devices, SourceOne.
- Description—HTML. Replaces shortcut message body if the Shortcut message body option is selected when the Shortcut activity is created.

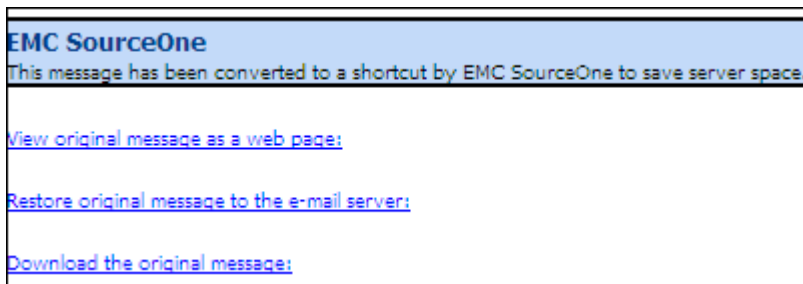
Default replacement text for Microsoft Outlook

The following section outlines the default replacement text for Microsoft Outlook.

The HTML for ResourceID 7 and ResourceID 9 includes the **Download the original message** link.

Download the original message link

Figure 146 Download the original message link



When a user clicks this link, the user can log in, and save the shortcut message to a specified location. With this link, a user can save and view a shortcut message without restoring it to the mailbox. This link can be useful when a shortcut message is encrypted, because without this link a user cannot see the shortcut encrypted message unless the message is restored to the mailbox first.

ResourceID 7:

```
<html> <head> <meta http-equiv="Content-Type" content="text/html;
charset=utf-8" /> <meta http-equiv="Content-Language" content="en-us" />
<title>Dell EMC SourceOne Shortcut Information</title>
</head>
<body>
<div style="border-top-style: solid; border-bottom-style: solid; background-
color: #C3DAF9; border-top-width:2px; border-bottom-width:2px">
<b><font face="Tahoma" size="2" color="#003C87">Dell EMC SourceOne</font></b>
<br>
<font face="Tahoma" size="1"><br>This message has been converted to a
shortcut by Dell EMC SourceOne to save server space.</font></div>
<p><font face="Tahoma" size="1"><a href="%Shortcut.ViewMsgURL%">View
original message as a web page:</a></font></p>
<p><font face="Tahoma" size="1"><a href="%Shortcut.RestoreMsgURL%">Restore
original message to the e-mail server:</a></font></p>
<p><font face="Tahoma" size="1"><a href="%Shortcut.URL%/exshortcut/
viewmessage.aspx?exid=%EXID%&view=nativemsg&lcid=%LCID%">Download the original
message:</a></font></p>
</body></html>
```

ResourceID 9:

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN" "http://
www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
<html xmlns="http://www.w3.org/1999/xhtml" >
<head><meta http-equiv="Content-Type" content="text/html; charset=utf-8" /
><meta http-equiv="Content-Language" content="en-us" />
<title>Dell EMC SourceOne Shortcut Information</title>
<style>
.bannerStyle { border-top-style: solid; border-bottom-style: solid;
background-color: #C3DAF9; border-top-width:2px; border-bottom-
```

```
width:2px }
</style>
</head>
<body>
  <div class="bannerStyle">
    <b><font face="Tahoma" size="2" color="#003C87">Dell EMC
SourceOne</font></b><font face="Tahoma" size="1"> <br>This message has been
converted to a shortcut by Dell EMC SourceOne to save server space.</
font>
  </div>
  <p><font face="Tahoma" size="1"><a href="%Shortcut.URL%/exshortcut/
viewmessage.aspx?exid=%EXID%&view=nativemsg&lcid=%LCID%">Download the original
message:</a></font></p>
  <p><font face="Tahoma" size="1"><a href="%Shortcut.RestoreMsgURL
%">Restore original message to the e-mail server:</a></font></p>
</body>
</html>
```

Default replacement text for mobile devices (Microsoft Exchange)

In a Microsoft Exchange environment, mobile devices use ResourceIDs 8 and 10 in the LanguageResources table.

ResourceID 8:

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN" "http://
www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
<html xmlns="http://www.w3.org/1999/xhtml" >
  <head><meta http-equiv="Content-Type" content="text/html; charset=utf-8" /
><meta http-equiv="Content-Language" content="en-us" />
  <title>Dell EMC SourceOne Shortcut Information</title>
  <style>
    .bannerStyle
    {
      border-top-style: solid;
      border-bottom-style: solid;
      background-color: #C3DAF9;
      border-top-width:2px;
      border-bottom-width:2px
    }
  </style>
</head>
<body>
  <div class="bannerStyle">
    <b><font face="Tahoma" size="2" color="#003C87">Dell EMC SourceOne</
font></b><font face="Tahoma" size="1">
    <br>This message has been converted to a shortcut by Dell EMC
SourceOne to save server space.</font>
  </div>
  <p>
    <font face="Tahoma" size="1">To download the attachment click the link
<a href="%Shortcut.GetAttachURL%">%ATTACHNAME%</a>.
  </p>
  <p>
    <a href="%Shortcut.RestoreMsgURL%">Restore original message to the e-
mail server:</a><br>
  </p></font>
</body>
</html>
```

ResourceID 10:

```
<html><head><meta http-equiv="Content-Type" content="text/html; charset=utf-8" /
><meta http-equiv="Content-Language" content="en-us" />
  <title>Dell EMC SourceOne Shortcut Information</title>
  <style>
```



```

        .bannerStyle
        {
            border-top-style: solid;
            border-bottom-style: solid;
            background-color: #C3DAF9;
            border-top-width:2px;
            border-bottom-width:2px
        }
    </style>
</head>
<body>
    <div class="bannerStyle">
        <b><font face="Tahoma" size="2" color="#003C87">Dell EMC SourceOne</font></b><font face="Tahoma" size="1">
            <br>This message has been converted to a shortcut by Dell EMC SourceOne to save server space.</font>
        </div>
    </body>
</html>

```

Customizing replacement text for shortcuts procedure

Perform the following steps to customize replacement text.

Procedure

1. On the Microsoft SQL server, start **SQL Server Manager**.
2. In the left pane, expand the **ES1Activity database** node.
3. Expand the **Tables** node.
4. Right-click the **LanguageResource** table, then select **Open Table**.
5. Edit the HTML text for the mail environment and archiving product.

Shortcut-Historical activity

Use the Shortcut-Historical activity to create shortcuts from messages, or optionally to archive messages and then create shortcuts of those messages.

You can also use the **Shortcut-Historical** activity to shortcut journaled content.

Improvements in using Shortcut-Historical activity to shortcut journaled content

In versions of SourceOne Email Management before 6.8 SP1, the Shortcut-Historical activity created shortcuts only from content that had been archived using the Archive-Historical or the Shortcut-Historical activities. Microsoft Exchange or IBM Domino content that had been archived using the Journal activity must be shortcut by performing the following steps:

Procedure

1. Use the **Journal** activity to archive the content.
2. Use the **Archive-Historical** activity to archive the same content as the **Journal** activity had already archived.
3. Use the **Shortcut-Historical** activity with the **Process only previously archived items** option selected on the **Item Types** page to shortcut the content that the **Archive-Historical** activity processes in the specified mapped folder.
4. If the content had been archived into several mapped folders, create a **Shortcut-Historical** activity to shortcut the content in each mapped folder.

Update Shortcuts-Historical & User Directed Archive activity

The Update Shortcuts-Historical & User Directed Archive activity is available in a Microsoft Exchange environment.

The **Update Shortcuts-Historical & User Directed Archive** activity is available in a Microsoft Exchange environment.

Use the **Update Shortcuts-Historical & User Directed Archive** activity to:

- Update replacement text that is used in the message body stubs of shortcuts.
- Update replacement text that is used in the attachment stubs of shortcuts.

The **Update Shortcuts-Historical & User Directed Archive** activity also updates shortcuts in user-directed archiving (UDA) folders.

Restore Shortcuts-Historical & User Directed Archive activity

Use the Restore Shortcuts-Historical & User Directed Archive activity to restore shortcut messages from the archive to the email server.

The **Restore Shortcuts** activity processes SourceOne Email Management shortcuts in the folder in which the shortcuts are found. If the shortcut was moved out of the folder from which the message was originally archived, then the message is restored into the folder in which the shortcut was found.

Changes made to the shortcut's subject or body are not retained during the restore. However, if the user placed flags, categories, or reminders on the shortcut, those changes are retained when the message is restored.

Recipients are not restored or changed because they are not changed when the message is shortcut.

CHAPTER 19

Using Journal Activities

This section describes how to configure and use the Journal activity to process content from various environments.

- [Using Journal activities with different content types](#).....420
- [Using Journal activities with Microsoft Exchange](#)..... 420

Using Journal activities with different content types

SourceOne Email Management supports journaling of content from multiple sources. You can use a Journal activity to process content from the following.

- IBM Domino

Select IBM Domino on the **Activity Types** page and then continue using the **New Activity** wizard.

i **Note:** Due to an issue with IBM Domino Native Journaling, SourceOne Email Management cannot capture all the owners of a journaled message because the IBM Domino mail server is not expanding groups on journaled messages.

If this occurs, install and use Dell EMC SourceOne Journaling instead of IBM Domino Native Journaling as follows.

1. Install and configure the SourceOne Extensions for IBM Domino.
2. Select the **Use Dell EMC SourceOne extension manager** option instead of the **Use IBM Lotus Domino native journaling** option on the **Journaling Method** page of the **EMC SourceOne activity** wizard.

Microsoft Exchange

You can perform both Microsoft Exchange standard and premium journaling with SourceOne Email Management, however configure them differently.

After configuration, you select **Microsoft Exchange** on the **Activity Types** page and then continue using the **New Activity** wizard

Microsoft Exchange Online

You must perform some configuration before journaling data from Microsoft Exchange Online.

Once configured, select **Microsoft Office 365** on the **Activity Types** page and then continue using the **New Activity** wizard.

SMTP mail servers

Select **SMTP** on the **Activity Types** page and then continue using the **New Activity** wizard.

Using Journal activities with Microsoft Exchange

You can perform both Microsoft Exchange standard and premium journaling with SourceOne Email Management, however configure them differently.

You can perform both Microsoft Exchange standard and premium journaling with SourceOne Email Management, however configure them differently.

Differences between Microsoft Exchange premium and standard journaling

Microsoft Exchange 2007 and Microsoft Exchange 2010 provide two types of journaling: standard and premium. Standard journaling has existed in previous versions of Microsoft Exchange, and premium journaling is new in Microsoft Exchange 2007 and 2010.

- **Standard journaling**—Standard journaling is configured on a mailbox database. It enables the Journaling agent to journal all messages sent to and from mailboxes that are on a specific mailbox database.
To journal all messages to and from all recipients and senders, configure journaling on all mailbox databases on all Mailbox servers in the organization.
- **Premium journaling**—Premium journaling enables the Journaling agent to perform more granular journaling by using journal rules. Instead of journaling all mailboxes residing on a

mailbox database, you can configure journal rules to match your organization's needs by journaling individual recipients or members of distribution groups.

Note: You must have an Exchange Enterprise client access license (CAL) to use premium journaling.

When you enable standard journaling on a mailbox database, this information is saved in Active Directory and is read by the Journaling agent. Similarly, journal rules that are configured with premium journaling are also saved in Active Directory and applied by the Journaling agent.

Note: Although it is possible to perform Microsoft Exchange premium or standard journaling using an SMTP mailbox instead of a Microsoft Exchange mailbox, it is not recommended when used with SourceOne Email Management due to limitations with that type of message.

Using Microsoft Exchange premium journaling with Dell EMC SourceOne

You can use Microsoft Exchange premium journaling with SourceOne Email Management. This capability is described in the following sections.

Summary of using Dell EMC SourceOne with Microsoft Exchange premium journaling

To configure SourceOne Email Management to use Microsoft Exchange premium journaling, configure both SourceOne Email Management and Microsoft Exchange premium journaling by performing the following tasks.

Procedure

1. Create and start a **Journal** activity with the Microsoft Exchange data source type selected. The **Journal** activity processes the messages that are delivered by premium journaling. Until premium journaling is enabled, the **Journal** activity does not have any content to process.
2. Define and enable premium journaling from Microsoft Exchange to the **Journal** activity. Do not enable premium journaling until the **Journal** activity is ready to process those messages. This helps avoid overloading the mailbox that is receiving the Microsoft Exchange journaling reports.

Configuring a Dell EMC SourceOne Journal activity to use Microsoft Exchange premium journaling

Perform the following steps to configure a Journal activity to use Microsoft Exchange premium journaling.

Procedure

1. Create a **Journal** activity using the SourceOne console by specifying **Journal** as the activity type on the **Activity Type** page.
2. Specify **Microsoft Exchange** as the kind of data to journal using the **Data Source Type** page.
3. Specify the mailbox that receives the premium journaling reports from the Microsoft Exchange server using the **Select Data Sources** page.
4. When you specify the premium journaling mailbox, The SourceOne console displays an error about specifying a non-journaling mailbox:

```
The following non-journaling mailboxes have been selected for this
journal activity: mailbox names
Would you like to remove these selections?
```

5. This error is acceptable for premium journaling, and you are to specify **No** in response to the error dialog box. This error is not acceptable for standard journaling.

6. Finish creating the activity.

Until premium journaling is enabled from the Microsoft Exchange server, no email content will be processed by the **Journal** activity.

Configuring Microsoft Exchange premium journaling for use with Dell EMC SourceOne

In the Microsoft Exchange Management console, perform the following steps to configure Microsoft Exchange premium journaling for use with a Journal activity.

Procedure

1. In the console navigation tree, select the **Hub Transport** node under the **Organization Configuration** node.
2. In the **Actions** pane, click **New Journal Rule**. The **New Journal Rule** dialog box appears

Figure 147 Premium journaling New Journal Rule page

3. Type a rule name in the **Rule name** field.
4. Type the email address to which the journal reports are sent in the **Send Journal reports to e-mail address** field. This field is the mailbox from which SourceOne Email Management receives and processes the journal reports.
5. Verify that the **Scope** is set to the **Global-all messages** option. This option is the default.
6. Verify that the **Enable Rule** option is selected. This option is the default.
7. Verify that you have the necessary licenses that are mentioned on the **New Journal Rule** page.
8. Click **New**. The **Completion** page appears.
9. Click **Finish**. The new rule is enabled and displayed on **Journaling** tab.

Using Microsoft Exchange standard journaling with Dell EMC SourceOne

You can use Microsoft Exchange standard journaling with SourceOne Email Management. This capability is described in the following sections.

Summary of using Dell EMC SourceOne with Microsoft Exchange standard journaling

Perform the following steps to configure Microsoft Exchange standard journaling for use with a Journal activity.

Procedure

1. Configure Microsoft Exchange standard journaling for use with the **Journal** activity.
2. Configure a **Journal** activity for use with Microsoft Exchange standard journaling.

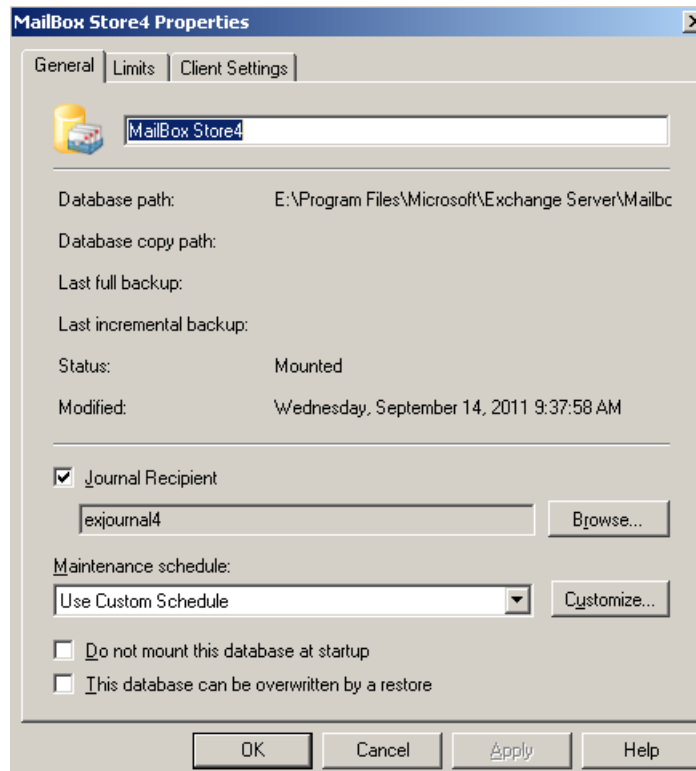
Configuring Microsoft Exchange standard journaling for use with the Journal activity

Perform the following procedure to configure Microsoft Exchange standard journaling for use with the Journal activity.

Procedure

1. In the Microsoft Exchange Management console, select and expand the **Server Configuration** node and then select **Mailbox** under it.
2. Select the **Database Management** tab. Right-click the mailbox for which you want to set up standard journaling and select **Properties**. The **Properties** page appears.

Figure 148 Mailbox properties page defining standard journal recipient



3. Select the **General** tab. Select the **Journal Recipient** option and click the **Browse** button to select the mailbox to use for standard journaling.

4. Confirm the selections by clicking **OK**. Standard journaling is now enabled.

Configuring a Journal activity for use with Microsoft Exchange standard journaling

Perform the following procedure to configure a Journal activity to use Microsoft Exchange standard journaling.

Procedure

1. Create a **Journal** activity using the Dell EMC SourceOne console by specifying **Journal** as the activity type on the **Activity Type** page.
2. Specify **Microsoft Exchange** as the kind of data to journal using the **Data Source Type** page.
3. Specify the mailbox that receives the standard journaling reports from the Microsoft Exchange server using the **Select Data Sources** page.
4. Finish creating the activity.

When standard journaling is enabled from the Microsoft Exchange server, the **Journal** activity processes the email content.

CHAPTER 20

Using the Journal Activity for Office 365 Content

This section describes how to configure and use the Journal activity to process Microsoft Exchange Online messages from an Office 365 environment.

- [Overview of using Journal activity with Office 365 content](#)..... 426
- [Journaling for Office 365 content configuration sequence](#)..... 429
- [Configuring SMTP support for Office 365 journaling](#)..... 429
- [Using the Journal activity to process Office 365 messages](#)..... 431
- [Configuring Microsoft Exchange Online premium journaling](#)..... 439
- [Maintaining and Troubleshooting Office 365 journaling](#) 440
- [Modifying SourceOne Search behavior for use with Office 365 content](#)..... 444

Overview of using Journal activity with Office 365 content

SourceOne Email Management allows you to journal content locally that is stored in Microsoft Exchange Online, using Microsoft Office 365 and Microsoft Exchange 2010.

Advantages of having a local journal of your cloud data

There are several advantages to having a local SourceOne Email Management journal of the data you have in the Microsoft Office 365 cloud.

- You can use Dell EMC SourceOne tools to process that local data, including using SourceOne Discovery Manager for legal discovery or using Email Supervisor for email supervision
- You can ensure that your local data is retained and disposed of according to any corporate rules for data retention and disposal.
- You have a local copy of your data if the cloud service you are using is unavailable for some reason.

Considerations when journaling email content from a Microsoft Office 365 environment

The full capabilities of SourceOne Email Management are not available for email content that is processed from Microsoft Office 365 using the Journal activity. The following are considerations for content that is journaled from Microsoft Office 365:

- Shortcuts for email content is not available.
- Use if SourceOne Offline Access is not available.
- Historical archiving or historical deletion of email content is not available.
- User-directed archiving of email content is not available.
- SourceOne journals Microsoft Office 365 email content as MIME messages. You can control how users can open and restore this content within SourceOne Search.
- All types of Microsoft Office 365 email content, other than meeting requests, are placed in the Native Archive by the **Journal** activity as email message item types, including task requests. Meeting requests are placed in the Native Archive as meeting request item types. Placing all types of Microsoft Office 365 email content, other than meeting requests, in the Native Archive as email message item types has the following implications for searching this content using SourceOne Search, SourceOne Discovery Manager, or Kazeon eDiscovery:
 - If you are searching email content, other than meeting requests, journaled from a Microsoft Office 365 environment, search for that content as an email message because that is how it was archived. You cannot use the content type that appears in Microsoft Outlook, for example, a task request. Meeting requests can be searched for as meeting requests.
 - Searches of Microsoft Office 365 email messages may return task request results as well as email message results when displayed by the Search clients.
- Anti-virus software is to exclude the Microsoft Office 365 email processing directories. Running anti-virus software on the contents of these directories may cause problems with SourceOne Email Management processing. These directories are:
 - Any source folder that is used by the SourceOne File Mover agent.

- Any target folder that is used by the File Mover agent. The administrator defines these folders.
- The Journaling issues folder that is used by the File Mover agent. The administrator defines these folders.

Architectural overview of using the Journal activity for Microsoft Office 365

The following is an architectural overview of how the SourceOne Email Management Journal activity processes Microsoft Exchange Online content from a Microsoft Office 365 environment. The following is the sequence of actions that result in an Office 365 email message being stored in the Native Archive.

Procedure

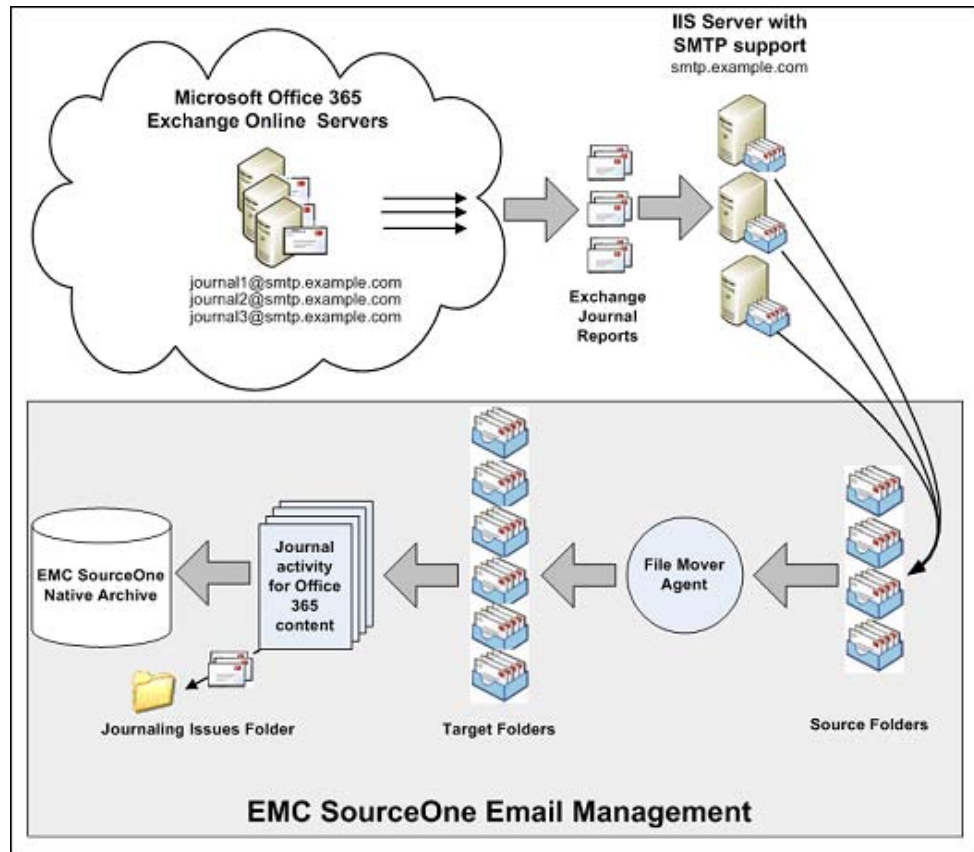
1. Microsoft Exchange Online premium journaling is configured to send journal reports of all messages to one or more local on-premise folders. A journal report is an SMTP message that Microsoft Exchange Online generates from the original message that includes the original message as an attachment.

The local folders are on one or more computers on which Microsoft Internet Information Services (IIS) and the Microsoft SMTP service are installed and on which the SMTP service is configured to receive messages from premium journaling.

2. The File Mover agent takes messages from these local locations, the source folders, and moves them to target folders that the **Journal** activity for Microsoft Office 365 content processes.
3. The **Journal** activity processes messages from the target folders and places them in the Native Archive. If the messages cannot be placed in the Native Archive, they are placed in the Journaling issues folder for analysis and possibly reprocessing.

The following figure illustrates the process:

Figure 149 Architectural view of Office 365 content journaling process



Considerations when moving existing archived or journaled content to Office 365

The following are some considerations when migrating archived or journaled content from an existing on-premise mail server to an Office 365 Microsoft Exchange Online server:

- Review whether SourceOne Email Management shortcuts were created for content in the onsite mail server. If so, those shortcuts are restored before moving the content to Microsoft Office 365.
- Review the restrictions on journaling of Microsoft Office 365 content to ensure a smooth migration to the Microsoft Office 365 environment from a local mail server environment.

Dell EMC SourceOne support for processing email content in a hybrid environment

SourceOne supports using the Journal activity to process email content from a hybrid Microsoft Office 365 environment.

The following sections describe what a hybrid deployment is, and any special considerations in using a hybrid deployment with SourceOne Email Management.

What is a hybrid deployment of Office 365?

A hybrid deployment of Microsoft Office 365 occurs when you maintain mailboxes in the on-premise Microsoft Exchange server organization, and maintain mailboxes in the cloud using Microsoft Exchange Online.

Considerations in using Dell EMC SourceOne with a hybrid deployment of Office 365

When using an SourceOne Email Management Journal activity to process Office 365 email content in a hybrid environment, be aware of the following considerations:

- **Journal** activity processing of content from Office 365 differs from the processing of content from an on premise Microsoft Exchange server.
- Content that is journaled from mailboxes in the on premise Microsoft Exchange organization, using the **Journal** activity with the Microsoft Exchange data source type, can duplicate content that is journaled from mailboxes in the cloud-based Office 365 environment, using the **Journal** activity with the Microsoft Office 365 data source type. This is because on premise messages are received as native Microsoft Exchange messages, and the Office 365 messages are received as Microsoft Exchange journal reports using SMTP.

Journaling for Office 365 content configuration sequence

Before you can journal messages from a Microsoft Office 365 environment using SourceOne Email Management, perform the following steps.

Procedure

1. Configure the components that are required to use the **Journal** activity with the Microsoft Office 365 data source type.
2. Create and start a **Journal** activity with the Microsoft Office 365 data source type selected. The **Journal** activity processes the messages that are delivered by premium journaling.
3. Enable premium journaling from Microsoft Exchange Online to the **Journal** activity.

Do not enable premium journaling until the **Journal** activity is ready to process those messages.

Configuring SMTP support for Office 365 journaling

SMTP support must be configured before running the Journal activity with the Microsoft Office 365 data source type.

SMTP support is required on whatever computer has the Internet Information Services (IIS) installed and is hosting the source directories that are accessed by the File Mover agent.

Installing the SMTP service

If the SMTP service is not already installed, install the SMTP service. The SMTP service is configured using the IIS Manager.

About this task

Perform the following steps to install the SMTP service using IIS 7.

Procedure

1. In the **Control Panel** applet in the **Features** view, select **Add Features**.

2. Select **SMTP Server** from the list and click **Install**. This process installs the IIS Manager, which you then use to install the SMTP service.

Configuring SMTP email delivery

Specify how SMTP email is delivered to SourceOne Email Management using the SMTP Virtual Server node of the Internet Information Services (IIS) Manager. The IIS Manager is used to configure SMTP.

Specify the following for SMTP email delivery to SourceOne Email Management:

- Limit the number of connections to the SMTP server to 10 using the **Limit number of connections to** field. You set this value on the **General** tab of the **Default SMTP Virtual Server Properties** dialog box.
- Limit the number of connections to the SMTP server to 10 using the **Limit number of connections to** field. You set this value on the **General** tab of the **Default SMTP Virtual Server Properties** dialog box.
- Set the authentication for the SMTP server. Select the **Access** tab of the **Default SMTP Virtual Server Properties** dialog box and specify the authentication to be used in your environment.
- Verify that the **Enable drop directory quota** option is not selected on the **Properties** page of the **Default SMTP Virtual server page** node in the IIS Manager. If this option is selected, the performance of the journaling of Microsoft Exchange Online messages may be significantly degraded.

Figure 150 Enable drop directory quota option on the IIS Properties page



- Optionally, you can enable logging by selecting the **Enable logging** field and selecting **W3C Extended Log File Format** as the log format on the **General** tab of the **Default SMTP Virtual Server Properties** dialog box.

If you enable logging, you also must set the log file folder by clicking **Properties** to launch the **Logging Properties** dialog box, and then specifying the folder in the **Log file directory** field.

Using the Journal activity to process Office 365 messages

This section describes how to configure and use the Journal activity to process Office 365 messages.

Planning and selecting the processing folders

Before you use the Dell EMC SourceOne console to create and run a Journal activity to process Microsoft Office 365 content, select the folders that are used by the SourceOne File Mover agent in the processing. These folders are used when you create the SMTP journaling group that is used by the Journal activity.

Select the following folders:

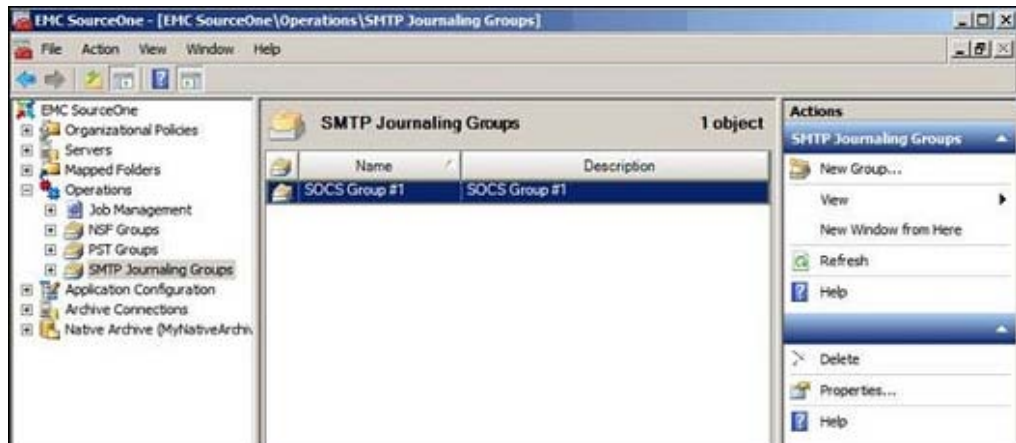
- Select one or more source folders—Select one or more source folders to contain the SMTP journal reports that have been sent from Microsoft Exchange Online. Typically, these are the SMTP drop directories that are used by IIS.
The File Mover agent takes files from the source folders and places them in the target folders.
- Select one or more target folders—Select one or more target folders to contain the SMTP journal reports that the File Mover agent moves.
The **Journal** activity processes the content found in the target folders. When the **Journal** activity runs, a separate job is created for each target folder that is defined as part of the group. Using multiple target directories allows SourceOne Email Management to process higher volumes of messages more efficiently because a larger number of jobs are being used.
In environments where a low volume of messages are journaled, you can opt to not use target folders. Instead use the source folders as both the source and target, however, this action is not generally recommended.
- Select a Journaling issues folder—Select a Journaling issues folder to contain any unsuccessfully processed messages. All unsuccessfully processed messages from any of the defined target folders are directed to a single Journaling issues folder to make identification and reprocessing of these messages easier.

Creating an SMTP Journaling Group

Before using the Journal activity with Office 365 email content, define an SMTP journaling group. Any existing SMTP journaling groups appear under the SMTP Journaling Groups folder of the Operations node in the Dell EMC SourceOne Console.

About this task

Figure 151 SMTP Journaling Groups location in the SourceOne console



Procedure

1. Under the **Operations** node of the SourceOne console, select **SMTP Journaling Groups**, and then select the **New Group** action.

The **General** page of the New SMTP Journaling Group wizard appears.

2. Type the name of the new group in the **Name** field, and then a description in the **Description** field.
3. Type the folder location for messages that were not successfully processed in the **Journaling issues folder** field, and then click **Next**.

The **Sources** page of the New SMTP Journaling Group wizard appears.

Figure 152 Sources page of the New SMTP Journaling Group wizard

4. Type the name of one or more source folders to be used for the SMTP journaling group in the **Source Folder** field, and then click **Add**. Alternatively, click **Browse** to browse to one or more folders to be used as the source, and then click **Add**. When done adding source folders, click **Next**.

The source folder is the location where premium journaling copies Microsoft Exchange journal report messages. If they are enabled, the File Mover agent moves these messages to one or more target directories. They are to be one or more source folder locations.

The **Targets** page of the New SMTP Journaling Group wizard appears.

Figure 153 Targets page of the New SMTP Journaling Group wizard

5. To select whether to use separate target and source folders, or to use the source folders as both the source and target folders, use the **Use target folders** option.

- To have separate source and target folders and to enable the definition of the target folders, select **Use target folders**. This option is the default and more commonly used setting.
- To have source folders that are used as both the source and the target folders, do not select **Use target folders**.

Normally, use separate source and target folders, but in small installations with a low volume of messages to journal, combining them to use a single set of folders can be useful.

6. If the **Use target folders** option is selected, perform the following:
 - a. Type the name of one or more target folders to be used for the SMTP journaling group in the **Target Folder** field, and then click **Add**. Alternatively, click **Browse** to browse to the folders to be used as targets, and then click **Add**.

There is a processing job that is created for each target folder that is defined for a **Journal** activity. Increasing the number of target folders that are specified in the SMTP journaling group increases the number of jobs that can simultaneously process messages, which can improve journaling performance.

- b. To specify how often (in seconds) the agent checks the source folders for SMTP `.eml` message files to be moved to a target folder, use the **Poll time (secs)** field. Files with the `.eml` extension are typically SMTP message files.

By default, this value is set to 300 s. You can modify this value to be any number of seconds between 60 and 3600, inclusive.

- c. To specify the number of seconds an SMTP `.eml` message file must be in the source folder before it is eligible to be moved to a target folder, use the **Move delay (secs)** field. A file is allowed to age for a period to permit it to be entirely copied into the source folder before it is moved to the target folder.

By default, this value is set to 600 s. You can modify this value to be any number of seconds between 60 and 3600, inclusive.

If the **Use target folders** option is not selected, no options other than **Finish** are available.

7. Click **Finish**.

The new SMTP journaling group appears on the **SMTP Journaling Groups** page, and under the **SMTP Journaling Groups** node.

Modifying SMTP Journaling Groups

Perform the following steps to modify an SMTP Journaling Group.

Procedure

1. Select the SMTP Journaling Group to be modified under the **SMTP Journaling Groups** node under the **Operations** node.
2. Select the **Properties** action. The **SMTP Journaling Group Properties** dialog box appears.
3. Modify the general, source folder or target folder properties.

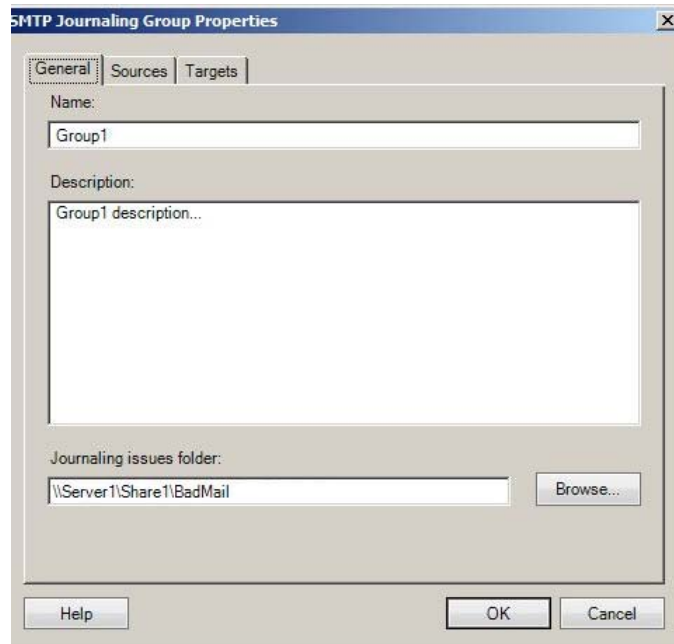
Modifying General properties of SMTP Journaling Groups

Perform the following procedure to modify the general properties of an SMTP Journaling Group.

Procedure

1. Select the **General** tab of the **SMTP Journaling Group Properties** dialog box.

Figure 154 General tab of the SMTP Journaling Group Properties dialog box



2. Modify one or more of the following:
 - Modify the name of the group by editing the value in the **Name** field.
 - Modify the description of the group by editing the value in the **Description** field.
 - Change the Journaling issues folder, either by editing the value in the **Journaling issues folder** field, or by clicking the **Browse** button and going to a new folder.
3. When you have completed the changes, click **OK**.

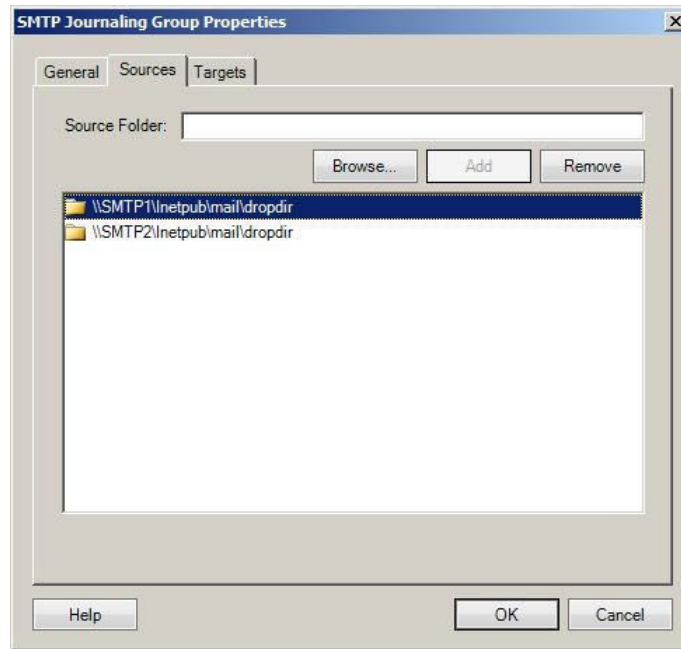
Modifying Source properties of SMTP Journaling Groups

Perform the following steps to modify the source folder properties of an SMTP journaling group.

Procedure

1. Select the **Sources** tab of the **SMTP Journaling Group Properties** dialog box.

Figure 155 Sources tab of the SMTP Journaling Group Properties dialog box



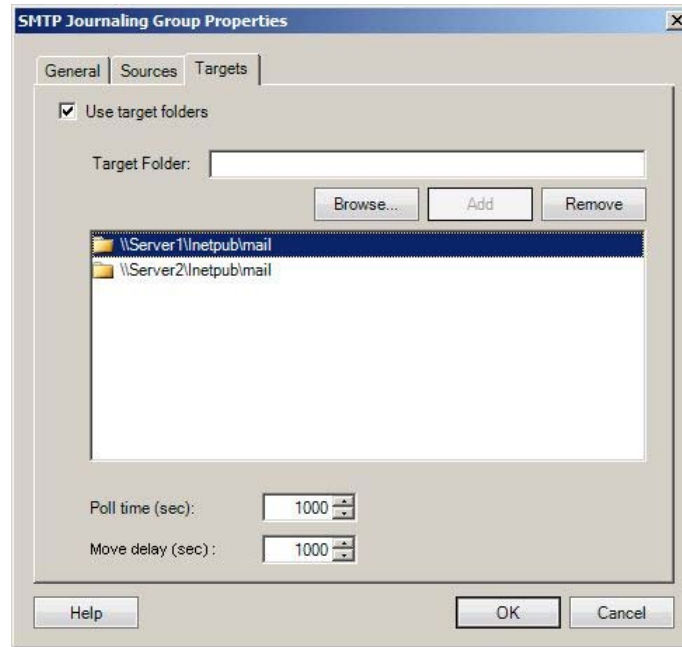
2. Add source folders to, or remove source folders from, this group as follows:
 - To add a source folder to the group, type the path to the folder in the **Source Folder** field, or click **Browse** to browse to that folder.
 - To remove a source folder from the group, select the source folder from the list, and click **Remove**.
3. When you have completed the changes, click **OK**.

Modifying Target properties of SMTP Journaling Groups

Perform the following steps to modify the target folder properties of an SMTP journaling group.

Procedure

1. Select the **Targets** tab of the **SMTP Journaling Group Properties** dialog box, and perform any of the following changes:

Figure 156 Targets tab of the SMTP Journaling Group Properties dialog box

- Add a target folder to the group by typing the path to the folder in the **Target Folder** field, or clicking **Browse** to browse to that folder.
- Remove a target folder from the group by selecting the target folder from the list, and clicking **Remove**.
- Modify the value of the **Poll time** field to specify how often the agent polls the source folders for SMTP .eml message files to be moved to a target folder. You can modify this value to be any number of seconds between 60 and 3600, inclusive.
- Modify the value of the **Move delay** field to modify how long an SMTP .eml message file must be in the source folder before it is eligible to be moved to a target folder. You can modify this value to be any number of seconds between 60 and 3600, inclusive.

2. When you have completed the changes, click **OK**.

Summary of creating a Journal activity for Office 365 email content

The following is a summary of how to use the Journal activity to archive Microsoft Exchange Online messages from a Microsoft Office 365 environment.

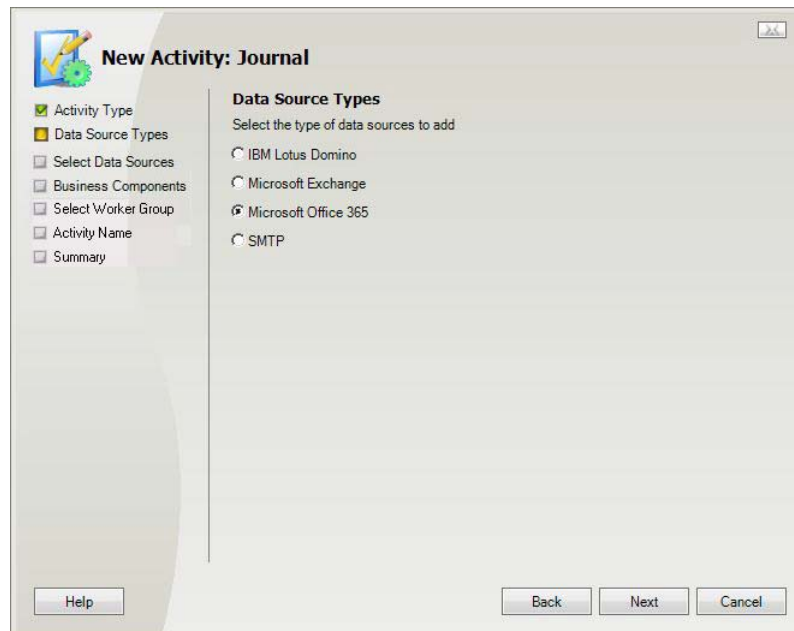
About this task

Perform the following procedure to create a **Journal** activity to process Office 365 email content.

Procedure

1. Select the Organizational Policy to which you want to add the new activity and select **Action > New Activity** to create the new activity. The **Activity Type** page appears.
2. Select **Journal** as the activity type and click **Next**. The **Data Source Types** page appears.

Figure 157 Journal Data Source Types page



3. On the **Data Source Types** page, select **Microsoft Office 365** as the data source type and click **Next**. The **Select Data Sources** page appears.
4. On the **Select Data Sources** page, select one of the previously defined SMTP journaling groups to use as the data source for this journaling activity, and click **Next**. The **Attachments Filter** page appears.

If no SMTP journaling group is defined, the following message appears:

At least one SMTP Journaling Group must be created before configuring an activity of this type.

If the SMTP journaling group must exist message appears, cancel creating the activity, create an SMTP Journaling group to be used with this activity, and then create the activity again specifying the SMTP Journaling group.

5. On the **Attachments Filter** page, select which attachments to exclude from processing. By default, no attachments are excluded. When done, click **Next**. The **Business Components** page appears.
6. On the **Business Components** page, select the business components to use with this activity. By default only the **Address Rules business component** is available. Click **Next**. If the **Address Rules business component** was selected, the **Specify Filter Rules** page appears.
7. Use the **Specify Filter Rules** page to define one or more rules.
When done specifying address rules, click **Next**. The **Activity Name** page appears.
8. Use the **Activity Name** page to create a name for this activity using the **Name** field. Click **Finish** after providing a name. The activity is now complete and ready to run.

Configuring Microsoft Exchange Online premium journaling

Microsoft Exchange Online premium journaling must be enabled to transfer messages from the Office 365 environment to the SourceOne Email Management source folder.

About this task

To enable premium journaling with Microsoft Exchange Online, perform the following steps:

Procedure

- Using a web browser that Microsoft Online Services supports, open Microsoft Online Services, and select **Admin**. The **Admin Overview** page appears.
 - Note:** If required, contact the Microsoft Online Services administrator for the URL, account name, and password that is required to access Microsoft Online Services.
- On the **Admin Overview** page, select **Manage** under the Microsoft Exchange Online heading. The **Mailboxes** page appears.
- On the **Mailboxes** page, under the Users & Groups heading, select **Mail Control**. The **Mail Control** page appears.
- On the **Mail Control** page, select **Journaling**. The **Journal Rules** page appears.
- On the **Journal Rules** page, select **New**. The **New Journal Rule** page appears.

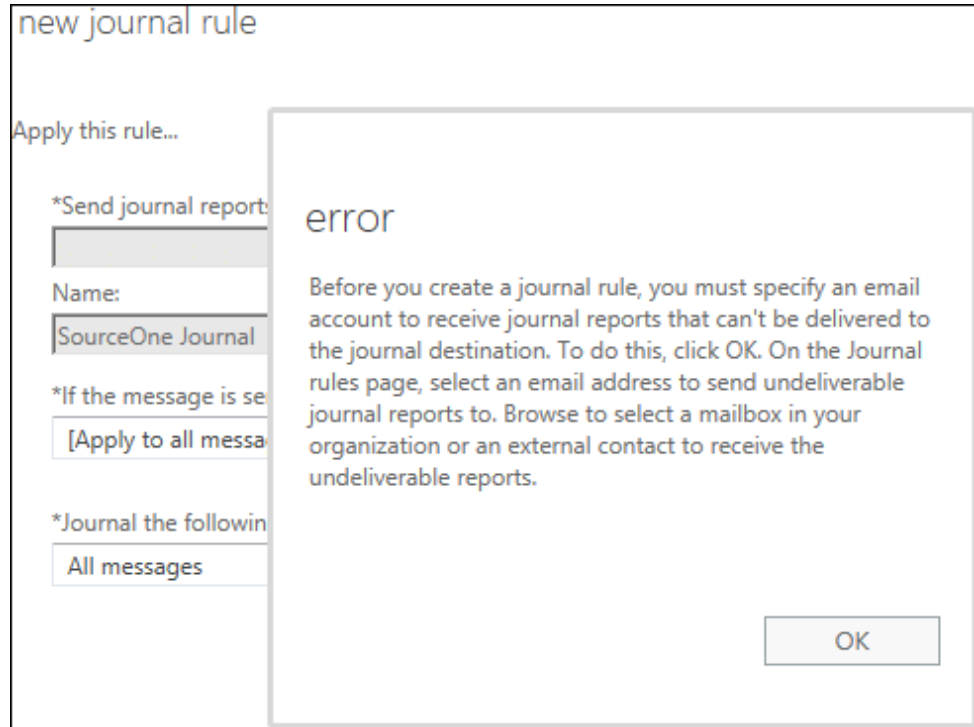
Figure 158 New Journal Rule page in Microsoft Online Services

- On the **New Journal Rule** page, create the journal rule as follows:
 - Set the **If this message is sent to or from** field, to the **Apply to all messages** option.
 - Set the **Journal the following messages** field to the **All messages** option.
 - Set the **Send Journal reports** field to be the email address that delivers the journal reports to the local Microsoft Exchange 2010 server.
 - Set the **Name of Rule** field to be the name of this rule.
- Select **Save**.

When you save the rule, you may be prompted to configure an email address to receive undeliverable messages. If an email address is set, messages in the alternate mailbox can be

missed because the **Journal** activity does not reach the mailbox. To ensure that messages do not become unavailable at the same time as the journal mailbox, monitor messages in the alternate mailbox. Refer to Microsoft documentation for more information about configuring journaling in Exchange online.

Figure 159 New Journal Rule error



Maintaining and Troubleshooting Office 365 journaling

The following topics help you maintain the Office 365 journaling portion of your SourceOne Email Management system and troubleshoot problems that you may encounter.

Office 365 journaling event log messages and corrective actions

When you use the Journal activity to process email messages from an Office 365 environment, errors may be written to the event log indicating a situation that must be corrected. This event log is on the Master Server on which the File Mover agent was installed.

Generally, these event log messages must do with either connectivity to the source and target directories that are used by the SMTP journal group, or problems with the amount of disk space remaining in those directories. These event log messages are issued by the File Mover agent only when you have defined separate source directories and target folders.

If you have not defined these folders as being separate, the Dell EMC SourceOne File Mover agent is not active and does not monitor the source folders for any errors. In this case, the only error you may encounter is if the source folder cannot be accessed by the **Journal** activity. When this error occurs, the **Journal** activity signals the following message to the event log on the Worker computer running the activity:

```
Cannot enumerate folder
```


Cannot enumerate folder

The following sections include the full event log message and the resolution for the error.

Full event log message

```
EX_E_FAIL_SRC_FOLDER_OFFLINE, Source Folder is offline. Cannot move
messages from source to target. Insufficient privileges or unable to
access Source folder source-folder-name. Moving of files will resume
once the source folder is accessible again.
```

Description and resolution

Indicates that the named source folder defined in the SMTP journal group that is used by this activity cannot be accessed by the Dell EMC SourceOne File Mover agent.

Review the privileges that are needed to access this folder and also review the network connection to this folder from the Master computer. This problem may correct itself with no intervention if it is due to a temporary network problem.

When a previously inaccessible source folder can be accessed, the following message is sent to the event log:

```
EX_E_INFO_SRC_FOLDER_ONLINE, Source Folder source-folder-name is back
online.
```

Insufficient privileges or unable to access target folder

The following sections include the full event log message, the resolution for the error, and additional information about the required privileges for the agent.

Full event log message

```
EX_E_FAIL_TARGET_OFFLINE, Insufficient privileges or unable to access
Target folder target-folder-name.
```

Description and resolution

Indicates that the named target folder defined in the SMTP journal group that is used by this activity cannot be accessed by the SourceOne File Mover agent.

Review the privileges that are needed to access this folder and also review the network connection to this folder from the Master computer. This problem may correct itself if it is due to a temporary network problem.

When a previously inaccessible target folder can be accessed, the following message is sent to the event log:

```
EX_E_INFO_TARGET_ONLINE, Target Folder target-folder-name is back
online.
```

Additional information about required privileges for the agent

By default, the ES1MoverAgent service runs using the SourceOne primary service account. That account on the Master Server must have full access (read, write, and delete) to the source folders (the IIS drop directories) and target folders the agent accesses. Alternatively, the optional SourceOne Master Services service account can be used. The Master Services service account must also have full access to the source and target folders.

For additional considerations, refer to the *SourceOne Email Management Installation Guide*.

All target folders are offline or not accessible

The following sections include the full event log message and the resolution for the error.

Full event log message

```
EX_E_FAIL_ALL_TARGETS_OFFLINE, All target folders are Offline or not accessible. Unable to move any messages. Moving of files will resume when at least one target folder is accessible again.
```

Description and resolution

Indicates that none of the target folders that are defined in the SMTP journal group that is used by this activity can be accessed by the File Mover agent.

Review the privileges that are needed to access these folders and also review the network connection to these folders from the Master computer. This problem may correct itself if it is due to a temporary network problem.

When a previously inaccessible target folder can be accessed, the following message is sent to the event log:

```
EX_E_INFO_TARGET_ONLINE, Target Folder target-folder-name is back online.
```

Target folder has insufficient disk space

The following sections include the full event log message and the resolution for the error.

Full event log message

```
EX_E_FAIL_TARGET_NO_DSK_SPACE, Target folder target-folder-name has insufficient disk space or below the minimum free space threshold. Cannot move messages to this target folder. Moving of files to this target folder will resume once the space is available again.
```

Description and resolution

Indicates that the named target folder used by this activity does not have sufficient space and so the Dell EMC SourceOne File Mover agent cannot move messages from the source folder to this target folder. However, the **Journal** activity can continue to process. SourceOne requires that there be a minimum of 1 GB of disk space free on each target folder.

To resolve this issue, create more than 1 GB of free space for the named target folder. Alternatively, run the activity again using a different target folder that is on a disk with more available space.

When a previously full target folder has 1 GB of space available again, the following message is sent to the event log, and file movement resumes:

```
EX_I_INFO_TARGET_HAS_DSK_SPACE, Target Folder target-folder-name now has available disk space. Processing will now resume to this location.
```

All target folders are below the free disk threshold

The following sections include the full event log message and the resolution for the error.

Full event log message

```
EX_E_FAIL_ALL_TARGETS_NO_SPACE, All target folders are below the free disk threshold. Unable to move any messages. Moving of files will resume when at least one target folder has free disk space available again.
```

Description and resolution

Indicates that all target folders defined in the SMTP journal group that is used by this activity do not have sufficient space and so the File Mover agent cannot move messages from the source folder to any of the target folders. However, the Journal activity can continue to process. Dell EMC SourceOne requires that there be a minimum of 1 GB of disk space free on each target folder.

To resolve this issue, create more than 1 GB of free space for each folder. Alternatively, run the activity again using different target folders that are on a disk with more available space.

When a previously full target folder has 1 GB of space available again, the following message is sent to the event log, and file movement resumes:

```
EX_I_INFO_TARGET_HAS_DSK_SPACE, Target Folder target-folder-name now has
available disk space. Processing will now resume to this location.
```

Failed to create a configuration manager

The following sections include the event log error for the File Mover agent configuration manager and the resolution for that message.

Full event log message

```
EX_E_FAILED_CREATE_CONFIGMGR, Failed to create a configuration manager,
unable to start move threads.
```

Description and resolution

Indicates that there is a problem on the Master computer that is preventing the File Mover agent configuration manager from being created. Typically this problem would occur when there are low resources available on the computer.

Review the available resources on the computer and correct any problems, perhaps by rebooting the computer.

Reprocessing Office 365 Microsoft Exchange journal reports

When you use the Journal activity to process either Office 365 content or SMTP content, that content is received as an SMTP message. Sometimes, SourceOne Email Management cannot process those SMTP messages and so places them into a different folder for manual reprocessing.

Overview of reprocessing Office 365 Microsoft Exchange journal reports

When Microsoft Office 365 is selected as the data source type for a Journal activity, that content the Journal activity receives as a Microsoft Exchange Online journal report, which is a type of SMTP message.

Sometimes, the **Journal** activity may not be able to process the Microsoft Exchange journal report message. When this problem occurs, the message is placed in the Journal issues folder that is specified in the SMTP Journaling group that is defined for this activity.

The message is moved to the Journal issues folder so that:

- The message is not continually being processed by SourceOne Email Management.
- The message is more easily found by the administrator for manual reprocessing.

Often, reprocessing the reports or messages corrects the problem, because many problems are temporary.

Causes for journaling report messages to not be processed

Review the following:

- There is a problem with the format of the Microsoft Exchange journal report.
- The Microsoft Exchange journal report cannot be separated into its components using the SourceOne Email Management unpacker.
- The Microsoft Exchange journal report cannot be placed in the Native Archive for some reason, such as there being a network problem.
- One or more data source directories had a network connection problem and SourceOne Email Management could not access it .
- One or more SourceOne Email Management servers that failed during processing, possibly because of operating system problems.

Journal report processing procedure


Often, reprocessing Microsoft Exchange journal reports corrects the problem with the report and allows it to be journaled.

About this task

Perform the following steps to reprocess Microsoft Exchange Online journal reports.

Procedure

1. Browse to the Journaling issues folder defined in the SMTP journaling group for that **Journal** activity.

 **Note:** A single Journaling issues folder is used when Microsoft Office 365 is selected for this activity as opposed to possibly several Baddr directories, one for each Drop directory, when SMTP is selected as the data source for the **Journal** activity.

2. Select one or more journal reports in the Journaling issues folder and move them to one or more of the data source directories that you specified for this activity for reprocessing.

If a journal report is not processed after several tries, record any event log messages about processing that journal report, and contact Dell EMC Software Support for assistance.

Improving Office 365 journaling performance by increasing target folders used

If needed, you may increase the performance of a Journaling activity processing Office 365 content by increasing the number of target folders that are used by the Journal activity.

One processing job is created for each defined target folder for that activity, so to have more messages that are processed simultaneously, increase the number of target folders in use.

Modifying SourceOne Search behavior for use with Office 365 content

You may want to modify how SourceOne Search handles Office 365 email content by using the Web Search dialog box from the Application Configuration node of the SourceOne console.

Controlling how email content is restored

Control whether email content can be restored from Search using the Enable restore to mailbox option in the SourceOne console. You access the Enable restore to mailbox option from the Client

Settings tab of the Web Search dialog box that is launched from the Application Configuration node of the SourceOne console.

- Select the **Enable restore to mailbox** option to allow messages to be restored to their mailbox by Search. This selection is the default for this option and is the behavior that is seen in previous versions of Search.

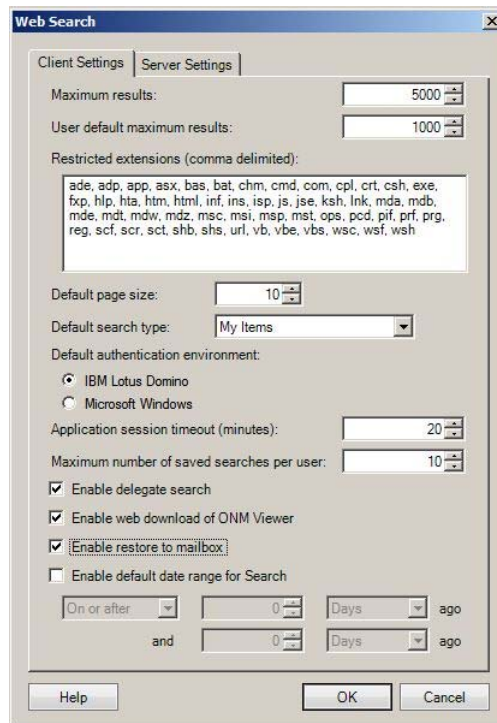
Note: When using the **Journal** activity with Office 365 content, it is recommended that you do not select the **Enable restore to mailbox** option. Not selecting this option prevents users from trying to restore locally archived content to their Office 365 mailboxes, and possibly receiving errors in the process.

When selected the **Restore** option is available for the **Administrator, My Items, My Contributed Items, and All Items** search types.

- Do not select the **Enable restore to mailbox** option to not allow messages to be restored to their mailbox.
When this option is disabled, the restore capability is removed and disabled for all search types in Search as follows:
 - The **Restore tool bar** button is removed.
 - The **Restore context** menu item on the search results grid is disabled.

This setting is recommended when using the **Journal** activity with Office 365 content.

Figure 160 Client Settings tab of the Web Search dialog box



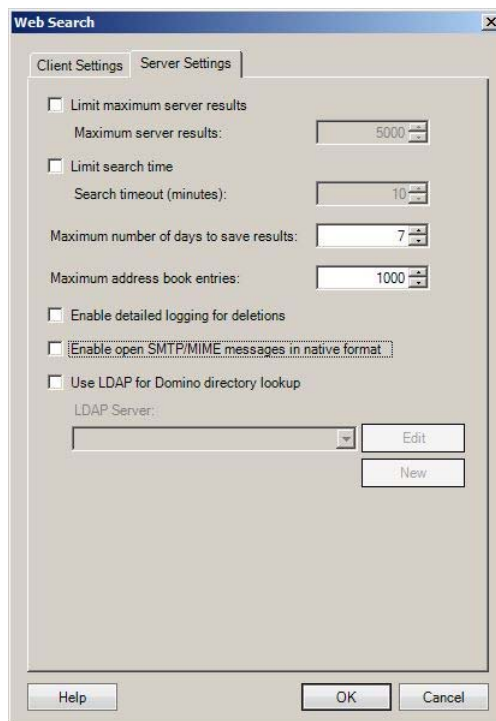
Controlling how SMTP email content is opened

Control how users can open email content using the Enable open SMTP/MIME messages in native format option.

Access this option using the **Server Settings** tab of the **Web Search** dialog box that is launched from the **Application Configuration** node of the SourceOne console.

- To not have messages that are opened in their native format, do not select the **Enable open SMTP/MIME messages in native format** option. This option is the default. In this case, when a SourceOne Search user logs in using their Microsoft Windows or IBM Domino credentials and double-clicks an `.eml` message, the `.eml` message is converted to the user's logged in environment message type, (`.msg` or `.onm`), before it is delivered to the user for download.
- To allow SMTP MIME messages to be opened in their native mail format by Search, select the **Enable open SMTP/MIME messages in native format** option. This option may provide a better user experience than having the messages converted, if all user clients can be configured.

Figure 161 Server Settings tab of the Web Search dialog box



When this setting is enabled, SMTP messages are not converted before they are returned to the user. The native `.eml` message is downloaded when a user double-clicks the `.eml` message.

Enabling this option only affects SMTP message types. IBM Domino messages are still converted to a Microsoft Exchange `.msg` message if the user logs in with Windows credentials and double-clicks an IBM Domino message. Likewise, if the user logs in using IBM Domino credentials and double-clicks a Microsoft Exchange message, that message would be converted to an IBM Domino `.onm` message.

Because Search cannot determine if the user's computer can open the `.eml` file that is delivered to the user's Web browser correctly, the user must have configured an application to open files with the `.eml` file type. Both Microsoft Outlook Express and Microsoft Outlook can be configured to open `.eml` files.

SMTP MIME message processing enhanced

SMTP MIME message processing has been enhanced to handle unknown attachment types better, but requires a hotfix to process these files always.

Background

In previous versions of SourceOne Email Management, when SMTP journaling encountered a MIME message with an attachment which did not have a file name that is specified in the MIME header, it labeled the attachment as unknown.

This function caused the following problems:

- Unknown MIME attachment types could not be opened from the Search preview pane.
- When a MIME message .eml message was converted to a Microsoft Exchange message and exported to a PST file, the attachment name remained labeled as Unknown in the exported message, and so could not be opened because no application was associated with it.

Install the Hotfix to ensure that MIME messages are archived correctly when using SMTP journaling

Sometimes, messages in MIME format may not be archived correctly by using EMC SourceOne Email Management SMTP journaling, including Microsoft Office 365 journaling. This results in some messages not displaying embedded images when they are retrieved from the archive.

Note: Journaling SMTP MIME messages includes journaling messages from all SMTP sources, including but not limited to, Microsoft Exchange servers, IBM Domino servers, Office 365 servers, SMTP routers, or processing MIME messages that are placed in drop directories.

Install the Hotfix to ensure that MIME messages are archived correctly when using SMTP journaling

Sometimes, messages in MIME format may not be archived correctly by using SourceOne Email Management SMTP journaling, including Microsoft Office 365 journaling. Since the messages are not archived correctly, some messages not displaying embedded images when they are retrieved from the archive.

Note: Journaling SMTP MIME messages includes journaling messages from all SMTP sources, including but not limited to, Microsoft Exchange servers, IBM Domino servers, Office 365 servers, SMTP routers, or processing MIME messages that are placed in drop directories.

Configuring email clients to open .eml files

Newer versions of Microsoft Outlook, can open .eml files by default. Older version of Microsoft Outlook, such as Microsoft Outlook 2007, may require the use of the .eml switch when opening the file, as follows.

About this task

Outlook.exe /eml message.eml

For example, Outlook 2007, with a minimum of SP2, requires the following change to the Registry to open .eml files.

Procedure

1. Open the Registry and browse to the following location:

```
[HKEY_CLASSES_ROOT\Microsoft Internet Mail Message\shell\open
\command]
```

2. **Modify the Default key to cause Microsoft Outlook to be used to open .eml files rather than Microsoft Outlook Express.**

Change the value that indicates Microsoft Outlook Express is to open .eml files:

```
"%ProgramFiles%\Outlook Express\msimn.exe" /eml:%1
```

To indicate that Microsoft Outlook 2007 is to open .eml files:

```
"%ProgramFiles%\Microsoft Office\Office12\OUTLOOK.EXE" /eml "%1"
```

3. **Exit the Registry.**

CHAPTER 21

Processing Microsoft Exchange Public Folder Content

This section describes how to configure and use the activities for processing Microsoft Exchange public folder content.

- [Overview of using Microsoft Exchange public folder activities](#)..... 450
- [Configuring public folder archiving and shortcutting](#)..... 450
- [Creating an Archive-Microsoft Exchange Public Folder activity](#)..... 453
- [Creating a Shortcut-Microsoft Exchange Public Folder activity](#)..... 454
- [Creating a Restore Shortcuts-Microsoft Exchange Public Folder activity](#)..... 456
- [Summary of creating a Delete-Microsoft Exchange Public Folder activity](#)..... 457

Overview of using Microsoft Exchange public folder activities

SourceOne Email Management provides activities that allow you to archive, shortcut, restore shortcut and delete content from Microsoft Exchange public folders as described in the following sections.

Public folder activities summary

Use the following activities to process content in Microsoft Exchange public folders:

- Use the **Archive-Microsoft Exchange Public Folder** activity to archive content within Microsoft Exchange public folders.
- Use the **Shortcut-Microsoft Exchange Public Folder** activity to shortcut content within Microsoft Exchange public folders.
- Use the **Restore Shortcuts-Microsoft Exchange Public Folder** activity to restore shortcut content within Microsoft Exchange public folders.
- Use the **Delete-Microsoft Exchange Public Folder** activity to delete content within Microsoft Exchange public folders.

Considerations when processing public folder content

SourceOne Email Management supports processing of public folders.

Consider the following:

- There is no activity to update shortcuts for public folder content.
- The SourceOne primary service account must have owner rights to the public folders that the public folder activities process.
- SourceOne sets ownership of an item to the person who places an item in a Public Folder.
- To access shortcut items in Microsoft Exchange Public Folders use Offline Access.
- UURL is not exposed on shortcut items in Public Folders.

Configuring public folder archiving and shortcutting

Before archiving and shortcutting public folder content, plan how best to structure the mapped folders and permissions in SourceOne Email Management to reflect the structure and permissions that are associated with your public folders, as described in the following sections.

Public Folder activities require SourceOne MAPI profile on the SourceOne console

Public folder activities require that the SourceOne console user have a MAPI profile with the following name configured for their mailbox:

EMCSourceOne

Trying to create public folder activities without this profile causes the following error that the SourceOne console issues:

```
Failed to validate changes.
```

To associate this MAPI profile with the SourceOne console user, you can perform either of the following:

- Install and use the SourceOne console on a SourceOne Worker Server which already has this MAPI profile that is defined for the administrator.
- Modify the administrator's MAPI profile name on the computer that is not a SourceOne Worker computer then log in to the local Outlook client using the new profile. Now the administrator can use the SourceOne console to create and manage public folder activities.

Planning mapped folder structure with public folders

Before archiving and shortcutting public folder content, plan the structure of the mapped folders in the archive as follows:

- Analyze the structure of the public folders from which you plan to archive and shortcut the content.
- Review the structure of your public folders and determine how many mapped folders to use for the public folder content.
If you have many public folders and you want to create multiple mapped folders for that content, you may want to create a worksheet detailing how the content of each public folder is placed in each mapped folder.
- If Microsoft Exchange public folders are administered separately from Dell EMC SourceOne, coordinate the proposed mapped folder structure for the archived content with the Microsoft Exchange administrator to identify any potential problems.
- Review the permissions on the public folders and the mapped folders.

Planning mapped folder permissions use with public folders

Before archiving and shortcutting public folder content, plan the permissions that are associated with the mapped folders in the archive as follows:

- Analyze the permissions on the public folders from which you plan to archive and shortcut and determine if you need similar or different permissions on the mapped folders in the archive.
- Determine how much access you want to allow users, or groups of users, to each of the mapped folders in the archive. If you have different permissions on different public folders, take that into account when creating the mapped folders to contain that public folder content.
- If Microsoft Exchange public folders are administered separately from SourceOne Email Management, discuss the proposed mapped folder permissions for the archived content with the Microsoft Exchange administrator to identify any potential problems.
If the Microsoft Exchange administrator manages permissions on individual public folders, not setting the permissions correctly on the corresponding mapped folders could possibly result in problems with the local public folder permissions policies.
- Verify that all users who are accessing archived or shortcut public folder content have a minimum of the following permissions on the Microsoft Exchange public folders they are accessing:
 - Read: Full Details
 - Write: Edit all
 - Delete Items: None
 - Other: Folder visible

Figure 162 Microsoft Exchange Public Folder Properties dialog box

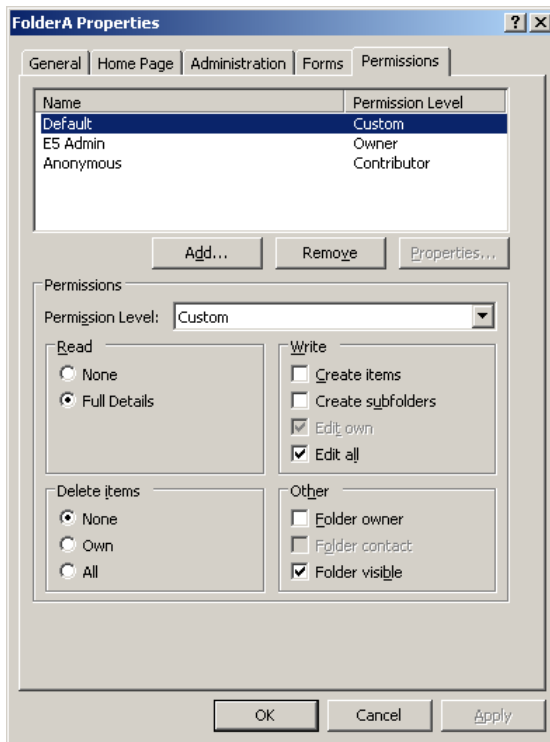
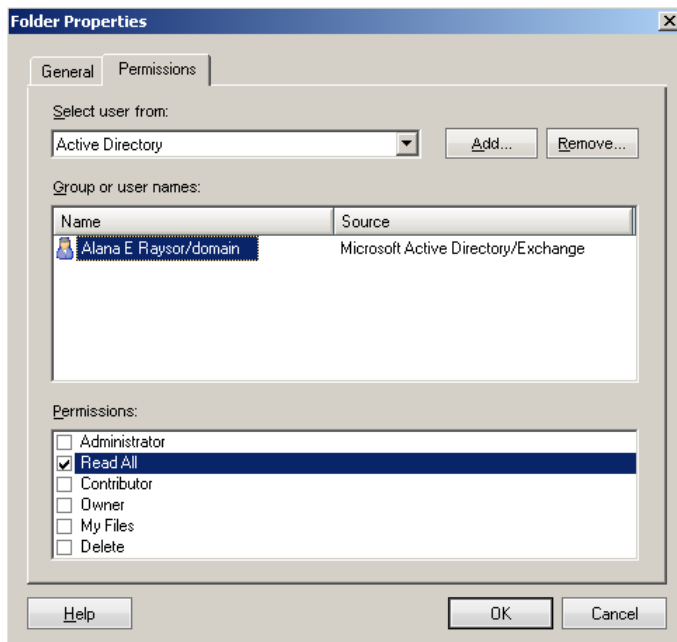


Figure 163 Dell EMC SourceOne Mapped Folder Properties dialog box



- Review the structure of the public folders and the mapped folders.

Creating an Archive-Microsoft Exchange Public Folder activity

The following is a summary of how to use the Archive-Microsoft Exchange Public Folder activity to archive content in Microsoft Exchange public folders.

About this task

Perform the following steps to create an **Archive-Microsoft Exchange Public Folder** activity.

Procedure

1. Create one or more mapped folders to contain the archived public folder content. To create an **Archive-Microsoft Exchange Public Folder** activity, specify one or more mapped folders to contain the archived content.

Review any plans that you previously made for creating the mapped folders.

2. Select the **Organizational Policy** to which you want to add the new activity and select **Action > New Activity** to create activity. The **Activity Type** page appears.
3. On the **Activity Type** page, select **Archive-Microsoft Exchange Public Folders** as the type of activity to create and click **Next**. The **Select Data Sources** page appears.
4. On the **Select Data Sources** page, select the Microsoft Exchange public folder content to be processed.

When you have completed selecting the folders containing the content to process, click **Next**. The **Item Types** page appears.

5. On the **Item Types** page, select which Microsoft Exchange item types you want to archive using the **Item Types** page. Select them individually or select all item types by clicking **Select All**.

Optionally, select the **Reprocess items** option to cause the selected item types that have already been processed to be processed again. Typically, this option is used in a disaster recovery situation.

Click **Next** when you have selected the item types to be archived. The **Dates** page appears.

6. On the **Dates** page, select the date range of the messages you want to archive from the public folders.

Click **Next** when you have selected the date range of the messages to be archived. The **Attachments Filter** page appears.

7. On the **Attachments Filter** page, select the attachment options that you want to use when archiving from public folders.

Click **Next** when you have selected the attachment options for the messages to be archived. The **Message Types Filter** page appears.

8. On the **Message Types Filter** page, select the types of messages to include or exclude.

Click **Next** when you have selected the filters to select the message types to be archived from the public folders. The **Message Size Filter** page appears.

9. On the **Message Types Filter** page, specify the size of the content to be archived and click **Next**. The **Business Components** page appears.

10. On the **Business Components** page, select the business components that you want to enable. By default, the **Address Rules** business component is enabled. Click **Next** when

done. If **Address Rules** are selected, the **Specify Filtering Rules** page appears, if not, the **Schedule** page appears.

11. On the **Specify Filtering Rules** page, specify the rules to use to process the public folder content.

Click **Next** when you have specified the rules options. The **Schedule** page appears.

12. On the **Schedule** page, select when you want the **Archive-Microsoft Exchange Public Folder** activity to run, and how often you want it to repeat.

Click **Next** when you have scheduled the activity. The **Activity Name** page appears.

13. On the **Activity Name** page, type a name for the activity in the **Name** field. If you want to enable detailed logging, select **Enable Detailed Logging**.

Click **Finish** and the activity is complete and ready to run.

The **results** pane lists the new activity below the policy to which it belongs. The status of the new activity is set to **Active**.

Creating a Shortcut-Microsoft Exchange Public Folder activity

To shortcut content in Microsoft Exchange public folders, create and run a Shortcut-Microsoft Exchange Public Folder activity using the Dell EMC SourceOne console. If the content you indicate to be shortcut has not already been archived, it is archived before being shortcut.

About this task

Note: Content that the **Shortcut-Microsoft Exchange Public Folder** activity archives does not use address rules. To use address rules when archiving public folder content, use the **Archive-Microsoft Exchange Public Folder** activity to archive the content.

The following is a summary of how to use the **Shortcut-Microsoft Exchange Public Folder** activity to shortcut content in Microsoft Exchange public folders. Refer to [Common and email-specific best practices](#) for information about how best to deploy shortcuts in an organization.


Perform the following steps to create a **Shortcut-Microsoft Exchange Public Folder** activity.

Procedure

1. Verify that there are one or more mapped folders containing the archived public folder content.
To create a **Shortcut-Microsoft Exchange Public Folder** activity, specify one or more mapped folders that contain the archived content to be shortcut.
Review any plans previously made for the mapped folders.
2. Verify that an external URL has been configured using the **Application Configuration** node. An external URL is required before creating a **Shortcut-Microsoft Exchange Public Folder** activity.
3. Select the **Organizational Policy** to which you want to add the new activity and select **Action > New Activity** to create activity. The **Activity Type** page appears.
4. On the **Activity Type** page, select **Shortcut-Microsoft Exchange Public Folders** as the type of activity to create and click **Next**. The **Select Data Sources** page appears.
5. On the **Select Data Sources** page, select the Microsoft Exchange public folder content to be processed.

When you have completed selecting the folders containing the content to process, click **Next**. The **Item Types** page appears.

6. On the **Item Types** page, select which Microsoft Exchange item types you want to shortcut.
 - You can select the item types individually by clicking the selection box next to each, or select all item types using the **Select All** option.
 - Select the **Process only previously archived items** option to shortcut only those item types that have previously been archived.

 **Note:** The item types that you can shortcut are a subset of the ones you can archive. Only the following are supported for shortcutting:

- Appointments
- Email Messages
- Meetings

Click **Next** when you have selected the item types to be shortcut. The **Dates** page appears.

7. On the **Dates** page, select the dates of the messages you want to shortcut from public folders.

Click **Next** when you have selected the date range of the messages to be shortcut. The **Attachments Filter** page appears.

8. On the **Attachments Filter** page, select the attachment options that you want to use when shortcutting from public folders.

Click **Next** when you have selected the attachment options for the messages to be shortcut. The **Message Size Filter** page appears.

9. On the **Message Size Filter** page, select the size of messages to include in, or exclude from, the shortcutting process.

Click **Next** when you have selected the **Message Size Filter** options for the messages to be shortcut. The **Mapped Folder** page appears.

10. On the **Mapped Folder** page, select the mapped folder in which to shortcut messages.

Click **Next**. The **Shortcut Options** page appears.

11. On the **Shortcut Options** page, select the options for the shortcuts to be created.

Click **Next** when you have selected the **Shortcut Options**. The **Schedule** page appears.

12. On the **Schedule** page, select how often and when the **Shortcut-Microsoft Exchange Public Folder** activity is to run.

Click **Next** when you have selected the **Schedule** options. The **Activity Name** page appears.

13. On the **Activity Name** page, select the name for this activity and select whether to enable detailed logging as follows:

- In the **Name** field, type a name for the new activity.
- To collect detailed information about message processing by activities, select the **Enable Detailed Logging** option.

14. Click **Finish**.

The **results** pane lists the new activity below the policy to which it belongs. The status of the new activity is set to **Active**.

Creating a Restore Shortcuts-Microsoft Exchange Public Folder activity

The following is a summary of how an administrator can use the Restore Shortcuts-Microsoft Exchange Public Folder activity to restore shortcut content in Microsoft Exchange public folders.

About this task

Administrators typically use the **Restore Shortcuts-Microsoft Exchange Public Folder** activity to restore large numbers of shortcuts in multiple public folders. If installed, administrators or end users can use SourceOne Offline Access to restore individual shortcuts in Microsoft Exchange public folders.

Perform the following steps to create a **Restore Shortcuts-Microsoft Exchange Public Folder** activity.

Procedure

1. Select the **Organizational Policy** to which you want to add the new activity and select **Action > New Activity** to create activity. The **Activity Type** page appears.
2. Verify that an external URL has been configured using the **Application Configuration** node. An external URL is required before creating a **Restore Shortcuts-Microsoft Exchange Public Folder** activity.
3. On the **Activity Type** page, select **Restore Shortcuts-Microsoft Exchange Public Folders** as the type of activity to create and click **Next**. The **Select Data Sources** page appears.
4. On the **Select Data Sources** page, select the Microsoft Exchange public folders that contain the shortcuts to be restored. Click **Next** and the **Dates** page appears.
5. On the **Dates** page, select the dates of the shortcut messages you want to restore from the public folders. Click **Next** when you have selected the date range, and the **Schedule** page appears.
6. On the **Schedule** page, select how often and when the **Restore Shortcuts-Microsoft Exchange Public Folder** activity is to run.

Click **Next** when you have selected the **Schedule** options. The **Activity Name** page appears.

7. On the **Activity Name** page, select the name for this activity and select whether to enable detailed logging as follows:
 - In the **Name** field, type a name for the new activity.
 - To collect detailed information about message processing by activities, select the **Enable Detailed Logging** option.
8. Click **Finish**.

The **results** pane lists the new activity below the policy to which it belongs. The status of the new activity is set to **Active**.

Summary of creating a Delete-Microsoft Exchange Public Folder activity

The following is a summary of how to use the Delete-Microsoft Exchange Public Folder activity to delete content in Microsoft Exchange public folders.

About this task

Perform the following steps to create a **Delete-Microsoft Exchange Public Folder** activity, do the following.

Procedure

1. Select the **Organizational Policy** to which you want to add the new activity and select **Action > New Activity** to create activity. The **Activity Type** page appears.
2. On the **Activity Type** page, select **Delete-Microsoft Exchange Public Folders** as the type of activity to create and click **Next**. The **Select Data Sources** page appears.
3. On the **Select Data Sources** page, select the Microsoft Exchange public folders that contain the content to be deleted.

Click **Next**. The **Item Types** page appears.

4. On the **Item Types** page, select which item types you want to delete. You can select them individually, or select all item types by clicking **Select All**.

Optionally, select the **Reprocess items** option to cause the selected item types that have already been processed to be processed again. Typically, this option is used in a disaster recovery situation.

Click **Next** when you have selected the item types to be deleted. The **Dates** page appears.

5. On the **Dates** page, select the dates of the messages you want to delete from the public folders. Click **Next** when you have selected the date range, and the **Attachments Filter** page appears.
6. On the **Attachments Filter** page, select the attachment options that you want to use when deleting content from public folders.

Click **Next** when you have selected the attachment options. The **Message Types Filter** page appears.

7. On the **Message Types Filter** page, select the types of messages to include or exclude from deletion.

Click **Next** when you have selected the **Message Types Filter** options for the messages to be deleted. The **Message Size Filter** page appears.

8. On the **Message Size Filter** page, select the size of messages to include in, or exclude from, the deletion process.

Click **Next** when you have selected the **Message Size Filter** options for the messages to be deleted. The **Delete Options** page appears.

9. On the **Delete Options** page, select the whether to verify that content has been archived before it is deleted.

Click **Next** when you have completed using the **Delete Options** page. The **Schedule** page appears.

10. On the **Schedule** page, select how often and when the **Delete-Microsoft Exchange Public Folder** activity is to run.

Click **Next** when you have selected the **Schedule** options. The **Activity Name** page appears.

11. On the **Activity Name** page, select the name for this activity and select whether to enable detailed logging as follows:
 - In the **Name** field, type a name for the new activity.
 - To collect detailed information about message processing by activities, select the **Enable Detailed Logging** option.

12. Click **Finish**.

The **results** pane lists the new activity below the policy to which it belongs. The status of the new activity is set to **Active**.

CHAPTER 22

User Directed Archiving Activities

This section describes how to configure and use User Directed Archiving (UDA) with Dell EMC SourceOne.

- [Introduction](#).....460
- [About User Directed Archiving support](#)..... 460
- [Main steps to configure User Directed Archiving](#)..... 461
- [Configuring community archive or personal archive](#)..... 463
- [Considerations and limitations](#)..... 464
- [Archive-User Directed Archive activity](#)..... 465
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Introduction

Refer to the following sections for information about User Directed Archiving.

What is User Directed Archiving?

With User Directed Archiving (UDA), a mail user or mail application can direct messages to a specific folder in Dell EMC SourceOne for archiving.

Users place messages in the UDA folders in their mailboxes. **UDA Archive** activities archive the messages from the UDA folders in user mailboxes to the corresponding SourceOne mapped folders.

User-directed archiving is optional.

Uses and benefits of User Directed Archiving

The uses and benefits of User Directed Archiving include the following:

- Personal archive for personal mail and storage management.
- Community archive for collaboration and retention.
- Reduced need for individual PST/NSF files.
- Faster search results by selecting targeted archive folders.
- Reduced costs with a smaller archive containing only relevant data.

User Directed Archiving folders

This section includes information about User Directed Archiving (UDA) folders.

Archive folders in user mailboxes are called UDA folders. UDA Archive activities creates them. UDA folders correspond to Dell EMC SourceOne mapped folders that you map to archive folders, in the same way that you map folders for journaling, historical archiving, and PST/NSF archiving.

As with other mapped folders, for each mapped folder that is used for UDA you can configure:

- Retention to control content disposition that is specified on archive folders.
- Rights to enable certain users to direct mail to and search mail in a particular folder that is specified on mapped folders.

Searching User Directed Archiving folders

To perform searches of archived messages in User Directed Archiving (UDA) folders use Dell EMC SourceOne Search.

About User Directed Archiving support

The following sections list what is supported and not supported when using User Directed Archiving (UDA).

Supported capabilities

User Directed Archiving (UDA) supports the following:

- UDA folders that are configured with a parent folder.

- UDA folders that are configured without a parent folder.
For IBM Domino/Notes, UDA folders that are configured without a parent folder exists at the same level as user-defined folders.
- One level of UDA folders—For every mapped folder specified in the **UDA Archive** activity, there is one UDA folder that is created in the user’s mailbox with the same name as the mapped folder.
 - If a parent folder is specified when the activity is created, the UDA folders are child folders of the parent folder.
 - Subfolders that the user in UDA folders create are processed. Messages are archived from user created child folders.
- Renaming—If the UDA folder in the user’s mailbox is renamed, a subsequent **UDA Archive** activity renames the folder to the same name as the mapped folder.
 1. A **UDA Archive** activity specifies a mapped folder that is named Accounting, which is in the parent folder named User Archive Folders. This folder hierarchy is created in the user’s mailbox when the activity runs.
 2. The user adds messages to the Accounting folder in their mailbox, but also changes the name of the Accounting folder to Banking.
 3. A subsequent **UDA Archive** activity is run against the user’s mailbox.
 4. The **UDA Archive** activity discovers the folder name has changed, and changes the name of the folder from Banking back to Accounting.

For example:

- Archiving shortcuts that users move to UDA folders—The original message is retrieved, behind the scenes, and archived to the UDA mapped folder.

Unsupported capabilities

User Directed Archiving (UDA) does not support the following:

- Archiving messages in the parent folder. An error is logged if there are messages being processed in the parent folder during the **UDA Archive** activity.
- Message filtering that is based on UDA folders. Normal archive filtering rules do apply.
- If you place messages in folders that are not specified in a **UDA Archive** activity, the messages are not archived.

Main steps to configure User Directed Archiving

Configure User Directed Archiving (UDA) by performing the steps in the following sections.

Creating archive folders

Perform the following steps to create archive folders.

Procedure

1. Connect the archive to Dell EMC SourceOne.
2. In the archive, create archive folders for User Directed Archiving (UDA).

Messages and shortcuts can be placed in User Directed Archiving folders

Users can move messages or shortcuts to User Directed Archiving (UDA) folders.

Mapping and configuring a mapped folder

Perform the following steps to map and configure a mapped folder.

Procedure

1. Create a Dell EMC SourceOne mapped folder of the same type, **Personal**, or **Community**, as the type of user-directed archiving that you want to perform.
2. Map the **Personal** or **Community** folder to an archive folder that you created for UDA in the archive.
3. Specify the users and groups that are allowed to search the **Personal** or **Community** folder.
4. For each user and group, specify **Contributor** permission on the **Personal** or **Community** folder.

Create User Directed Archiving folders in user mailboxes

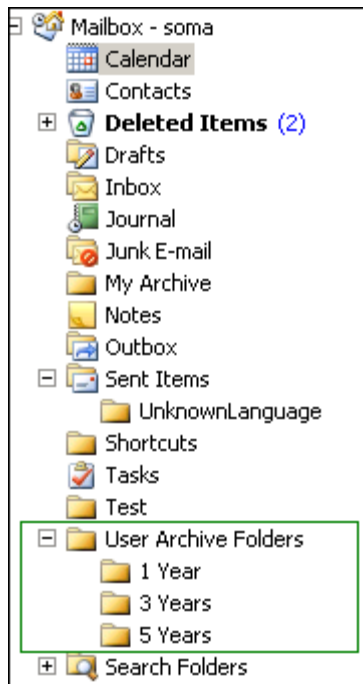
Create a User Directed Archiving (UDA) activity, which creates the corresponding empty UDA folders in user mailboxes.

You can specify that the UDA folders be created under a parent folder.

Exchange Mailbox

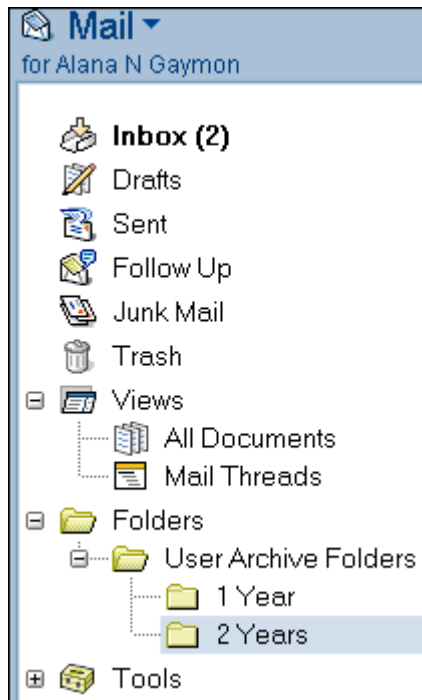
The following is an example of UDA folders in the Microsoft Exchange mailbox.

Figure 164 Example: UDA folders in Microsoft Exchange Mailbox



Notes Mailbox

The following is an example of UDA folders in an IBM Notes mailbox.

Figure 165 Example of UDA folders in an IBM Notes Mailbox

Note: To see new UDA folders that were created while Notes was open, users must reopen the mailbox. IBM Notes users are to drag and drop (or CTRL + drag and drop) to copy messages into a UDA folder instead of using copy and paste. Copying and pasting creates a message, not a copy.

Refer to [Configuring Email Activities](#) on page 323

Create an activity to process User Directed Archiving folders in user mailboxes

After users copy messages and shortcuts to the User Directed Archiving (UDA) folders in their mailboxes, create another UDA Archive activity to archive the messages and shortcuts.

Refer to [Configuring Email Activities](#) on page 323

Configuring community archive or personal archive

This section describes how to configure community archives or personal archives.

About community archives and personal archives

UDA has two usage models and are described in the following sections.

When you create a **UDA Archive** activity, you choose whether to archive user messages to a Community mapped folder or a Personal mapped folder.

Community archive

A User Directed Archiving (UDA) community archive is used for collaboration and sharing, and to retain shared items for the required amount of time. When a user puts a message into a UDA community folder, anyone in the To or From field who has access to that UDA folder can see content that is archived into this folder. The content can be seen regardless of whether the user archived it, and can search for that message.

Personal archive

A User Directed Archiving (UDA) personal archive is used for personal messages and for storage management. When a user puts a message into a UDA personal folder, only that person can search for the message other than Administrators. Users can see only what they archived into this folder. None of the recipients, except for the sender and the person who put the message in the UDA folder, can search for that message.

If another user puts the same message into the personal folder, then both users can search for the message.

The messages are still single-instanced in the UDA folder.

Users can delete items from UDA personal archives.

Best practices for User Directed Archiving folders

Best practice is to minimize the number of User Directed Archiving (UDA) folders.

For community archiving, you can configure multiple UDA Community folders that are based on retention policies, for example, 1 Year, 3 Years, 5 Years, and 10 Years.

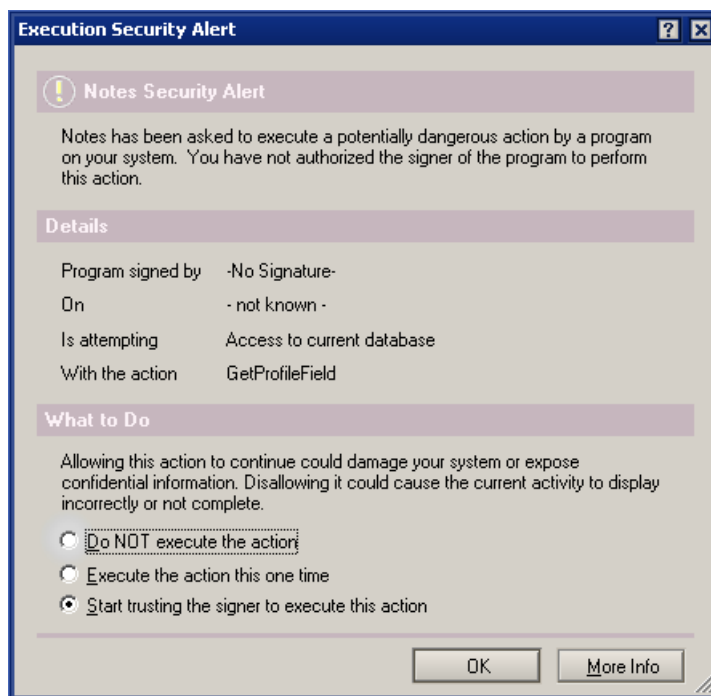
Considerations and limitations

Refer to the following considerations and limitations:

- User display names cannot include any @ signs. The @ sign in an address is used to determine whether it is an SMTP address or not. User Directed Archiving (UDA) folders are not created for users whose display name contains an @ sign.
- The name of the optional parent folder that you specify must be unique. Do not use the name of an existing folder in Outlook or Notes.
- The **Parent Folder Name** field defaults to User Archive Folders.
If you choose to use a parent folder, and the name in the **Parent Folder Name** field does not match an existing parent folder, then Dell EMC SourceOne creates a set of UDA folders under the name that is shown, instead of processing the UDA folders that you intended.
If the selected user UDA folders exist under the old parent folder, then the selected user UDA folders are moved to the new parent folder.
- You can use **UDA archive** activities to create multiple parent folders for organizational purposes. For example, you could create a Personal Archive parent folder with one activity, and a Corporate Archive parent folder with another activity.
Because the **UDA archiving** activity does not rename UDA parent folders that exist in Outlook, discourage users from renaming UDA parent folders in Outlook. Assume that a user renames a UDA parent folder in Outlook (for example, from User Archive Folders to My Archive Folders).
If you run another **UDA archiving** activity using the original parent folder name User Directed Folders, the activity does not rename My Archive Folders to User Archive Folders. The user sees two UDA parent folders in Outlook.
- When you create a **UDA Archiving** activity, typically you select the **Use all** option on the **Dates** page in the **New Activity** wizard. The assumption is that users want those messages that are archived regardless of the date.
- IBM Domino/Notes: Any records in the UDA folders of a Notes client is also displayed in the All Documents and Mail Threads views. If you create a **Delete-Historical** activity and include these two views, the **Delete-Historical activity** deletes items from the UDA folders, although the activity was not a **Delete-User Directed Archive** activity.
- IBM Domino/Notes: The SourceOne account requires the following permissions on all user mail files:

- If you implement UDA, then the SourceOne account must have Manager rights.
- If you do not implement UDA, then the SourceOne account must have Editor rights with the ability to delete records.
- IBM Domino/Notes: Because SourceOne programmatically adds the UDA folders to the mail user's database, it is necessary to sign the UDA folders and to add the user who is running **UDA Archiving** activities to the Execution Control List for Notes. Perform this action in one of two ways:
 - Set up a policy in IBM Domino and add the user to the Administrative ECL on the server. Users can manually refresh their local ECL or have the ECL pushed down to them.
 - When the Execution Security Alert appears for the first time, users can select the **Start trusting the signer to execute this action** option, and Notes add the correct user and permissions to the users' local ECL automatically.

Figure 166 IBM Domino/Notes: Execution Security Alert



Archive-User Directed Archive activity

This section includes information about the **Archive-User Directed Archive** activity.

Use the **Archive-User Directed Archive** activity to perform the following:

- Create User Directed Archiving (UDA) folders in user mailboxes.
- Archive the items that users place in their UDA folders to Community or Personal folders.

Delete-User Directed Archive activity

Use the **Delete-User Directed Archive** activity to delete items from User Directed Archiving (UDA) Community or Personal folders.

Shortcut-User Directed Archive activity

Use the **Shortcut-User Directed Archive** activity to shortcut items in User Directed Archiving (UDA) Community or Personal folders.

CHAPTER 23

Using Rules

This section includes information about how to use rules with activities.

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Rule concepts

Before using rules within activities, review the concepts that are described in the following sections.

Overview of rules

Create rules within activities to cause messages to be archived into mapped folders.

Messages which match the rule criteria are stored in the mapped folder that is assigned to that rule. For example, a rule can place all messages from John Smith into a mapped folder that is called SmithArchive.

The criteria that you can use to match a message to a rule includes one or more of the following:

- Email addresses or distribution lists (groups) that were part of the message.
- Words that occur in the message subject.
- The owner of the message.
- Custom metadata that has been added to the message or message address.

If a message matches multiple rules, that message is copied into the folder that is associated with each rule that it matches. Also, if multiple rules all specify the same folder, any message matching any of those rules are archived in that folder.

If a message does not match any of the rules you have defined, the message is not archived. If you want all messages to be archived, you can specify that messages which do not match any rule are archived as well by specifying the **Copy messages that do not match any rule to** option on the **Specify Filtering Rules** page of the **activity** wizard.

Overview of rule criteria

When you create or modify a rule that you must create or modify the criteria that are associated with the rule.

These criteria include one or more of the following:

- The mapped folder that stores the messages matching the rule conditions.
- The name of the rule and the conditions that are associated with the rule.
- The email addresses, if specified, contained within the rule conditions.
- The external mail domains, if specified, contained within the rule conditions.
- The message owners, if specified, contained within the rule conditions.
- The keywords, if specified, contained within the rule conditions.
- The custom metadata, if specified, contained within the rule conditions.

Using metadata as rule criteria

Dell EMC SourceOne address rules can be used with applications that assign custom metadata to email messages.

You can use rule criteria to specify whether the value of the metadata field equals, contains, or does not contain the metadata field that you specify. For example, you can specify that messages with the department metadata field set equal to a value of 1234 are to match the rule.

Using the message owner as rule criteria

Messages that Dell EMC SourceOne archives have one or more owners that are associated with them. Select the Owned by people rule criteria to specify that a rule must match messages that are based on message ownership.

Select one or more owners using the **Data Sources** dialog box.

A message may have one or more message owners. Message ownership is determined by which activity was used to archive the message as follows:

- **Journal** activity—The message owner is any email address that the message was received from, or sent to, including Cc and Bcc recipients.
- **Archive-Historical** and **Archive-User Directed Archive** activities—One or more mailboxes to be archived are analyzed by SourceOne and one or more owners are automatically assigned to messages in those mailboxes that are based on the results of the analysis.
- **Archive-Personal Mail Files**—One or more Microsoft Outlook .PST files or IBM Lotus Notes .NSF files to be archived are analyzed. SourceOne tries to assign one or more owners automatically to messages in the files that are based on the results of the analysis. If owners cannot be assigned, the administrator must assign ownership.

Best practices for using rules

The following sections describe best practices for using rules. Review this information before using rules.

Enable the use of address rules

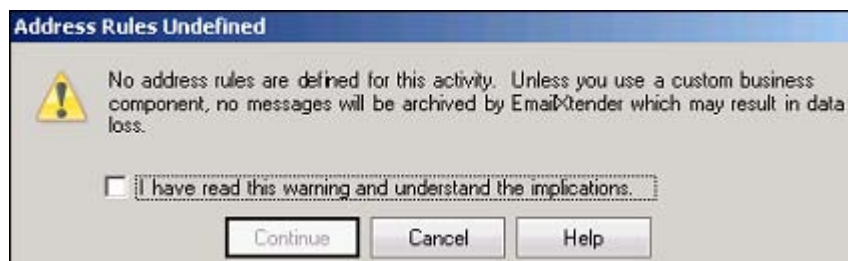
Normally, select the Address Rules component on the Business Components page of the activity wizard. The Address Rules component determines which messages to archive and where to archive those messages. If the Address Rules component is not selected, messages are not archived and that data is lost.

The only time to not select the **Address Rules** component is when you:

- Have installed and selected another component that archives the messages.
- Do not want the messages to be archived.

If you do not select the **Address Rules** component on the **Business Components** page of the activity wizard, the **Address Rules Undefined** dialog box appears.

Figure 167 Address Rules Undefined dialog box



To continue to create or modify the activity, perform one of the following:

- To continue without selecting the **Address Rules** component, and potentially not archive messages, select the **I have read this warning and understand the implications** option and click **Continue**.
- To dismiss this dialog box and return to the **Business Components** page where you can select the **Address Rules** component, click **Cancel**.

Keep message rules simple

define multiple conditions for a rule, only messages matching all those conditions that rule archives.

If a message meets only some of the conditions of the rule, the message that rule does not archive.

To make rule processing as simple and maintainable as possible, try to have as few conditions as possible defined for each rule.

Review address rules component position when multiple business components are defined

Business components process messages sequentially from top to bottom in the order that is listed on the Business Components page. By default, only the Address Rules component is listed, but other business components can be installed.

If multiple business components are available in the Dell EMC SourceOne installation, verify that the Address Rules component occurs after any business component that changes the messages that the rules process.

The Address Rules component must occur last in the processing list to ensure that SourceOne archives the messages.

Archive messages that do not match any other rule

You can select an option to archive messages that any other rule does not collect by selecting the Copy messages that do not match any rule to option on the Specify Filtering Rules page. When this option is selected, all messages are archived, including those messages that some rules reject.

 **Note:** When this option is not selected, messages which do not match a rule are not archived.

This option is useful for verifying that all the other rules you have defined are collecting all the messages you intended, as it only archives those messages that the other rules do not archive.

Use a directory service to specify many addresses in a rule

When creating a rule with many addresses, using a directory service may perform better than using a Microsoft Exchange or IBM Domino address book, especially when specifying many users, for example, more than 4,000, for a rule.

If you have a Lightweight Directory Access Protocol (LDAP) or Microsoft Active Directory Services (ADS) server, you can configure rules that filter messages against the directory services schema in addition to or in place of the mail system address book or directory.

Be aware of rule processing of email addresses and distribution lists or groups

When a distribution list or group is typed into rules containing certain conditions, that distribution list or group is expanded so that all members of that list are considered part of the rule.

This occurs with rules containing the following conditions:

- From people or distribution list
From people or group
- To people or distribution list
To people or group
- To or From people or distribution list
To or From people or group

Periodically, the Dell EMC SourceOne Address Cache service `ExAddressCacheService.exe` checks to see if new rules have been added to the system. The SourceOne Address Cache service also reviews and updates if required existing rules and email addresses that are used by rules one time a day at 2 am by default. The review and update process is also performed for all addresses in a rule whenever that rule is modified.

The SourceOne Address Cache service reviews the following information and updates it when necessary:

- Updates a distribution list or group that is used by a rule if the list has had one or more email addresses that are added or removed.
- Updates the name portion, for example John Smith, of an email address that is used by a rule if that name has changed. This applies both to single email addresses and email addresses within distribution lists or groups.
- Updates the address portion, for example, JSmith@example.com, of an email address that is used by a rule if that address has changed. This applies both to single email addresses and email addresses within distribution lists or groups.

Any jobs that start while the SourceOne Address Cache service has the database tables that are locked for update is retried three times. If none of these tries are successful, the job fails to start and the event is logged. If a job is running when a rule that affects it is changed or added, that rule will not be used until the next time that job runs.

Use the Owned by people rule criteria to match all messages sent to an Microsoft Exchange user and archived using historical archiving

If a Microsoft Exchange mailbox has been archived using the Archive-Historical or the Archive-Personal Mail File activities, use the Owned by people rule criteria (specifying the Microsoft Exchange mailbox that you want to archive as the owner) to ensure that the rule criteria matches all mail sent to the owner of that mailbox.

If you do not use the Owned by people rule criteria, messages sent to that user using the BCC field are not captured. For example, if you use the **To people or distribution list member(s)** rule criteria, messages sent to that user where that user is listed on the BCC field are not matched by the rule and so the messages are not archived.

Remove users from rules when they are removed from the mail system

Rules can contain the names of users, groups, or distribution lists that are used in IBM Domino or Microsoft Exchange mail systems. When such a user, group, or distribution list has been removed from the Microsoft Exchange or IBM Domino mail system, they must also be manually removed from any rules that specify them.

Rules that contain users, groups, or distribution lists that no longer exist are invalid and are to be modified or deleted.

Do not use IBM Domino group SMTP aliases in rules

If domain aliasing is enabled on the IBM Domino server, and an Dell EMC SourceOne rule specifies an alias SMTP group, messages sent to or from that alias SMTP group the rule does not process.

Do not use IBM Domino group SMTP aliases in rules.

Creating rules

Create rules to select which messages activities archive.

About this task

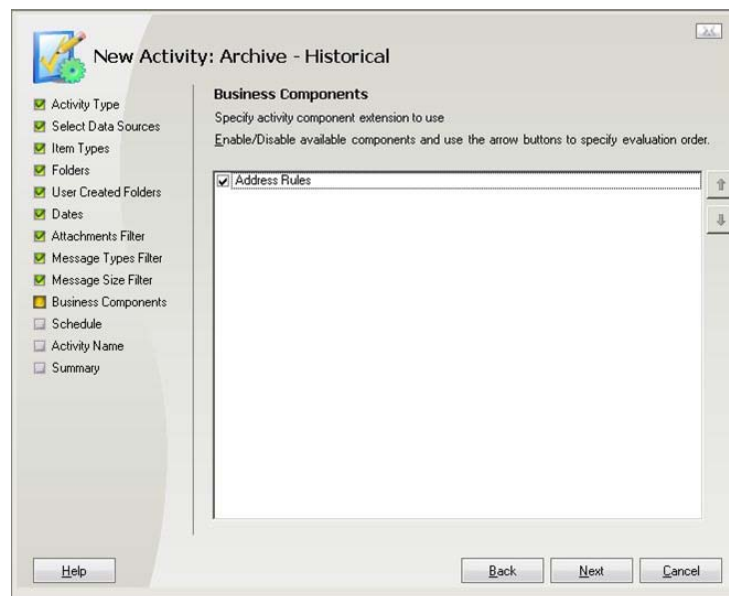
Note: If the **Copy messages that do not match any rule to** option on the **Specify Filtering Rules** page are not selected, messages which do not match a rule are not archived.

Perform the following tasks to create a rule.

Procedure

1. If not already done, enable the use of rules for the activity by selecting the **Address Rules** component on the **Business Components** page of the **activity wizard**.

Figure 168 Business Components page in the activity wizard

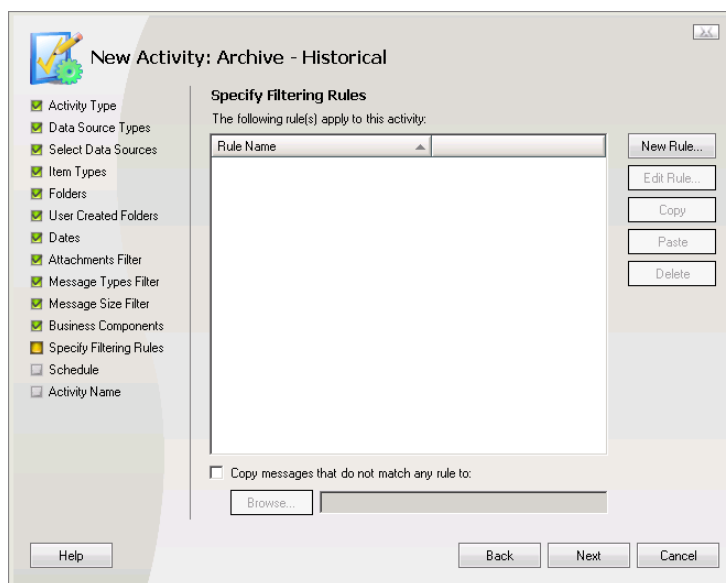


The **Business Components** page lists all components that are available in your system. By default only the **Address Rules** component is available.

2. If multiple components are listed on the **Business Components** page, verify that the **Address Rules** component is listed below any component that would change the messages the rule processes. Components process messages in the order they are listed, from top to bottom.
3. If you must change the position of one or more components in the list on the **Business Components** page:
 - a. Select the component to be moved.
 - b. Click the up-arrow to move the component higher in the list. Click the down-arrow to move the component lower in the list.

- When the components are ordered correctly, click **Next**. The **Specify Filtering Rules** page appears.

Figure 169 Specify Filtering Rules page in the activity wizard



The **Specify Filtering Rules** page displays the names of the rules, if any, that are defined for the activity.

On this page you can:

- Click **New Rule** to create rule to archive messages. The **Specify Rule Target Folder** page appears.
- Select **Copy messages that do not match any rule** to cause messages which do not match any rule to be archived.
- Click **Edit** to edit a rule.
- Click **Copy** to copy a rule and
- Click **Paste** to paste a rule you have previously copied.
- Click **Delete** to delete a rule.

Specify Rule Target Folder page

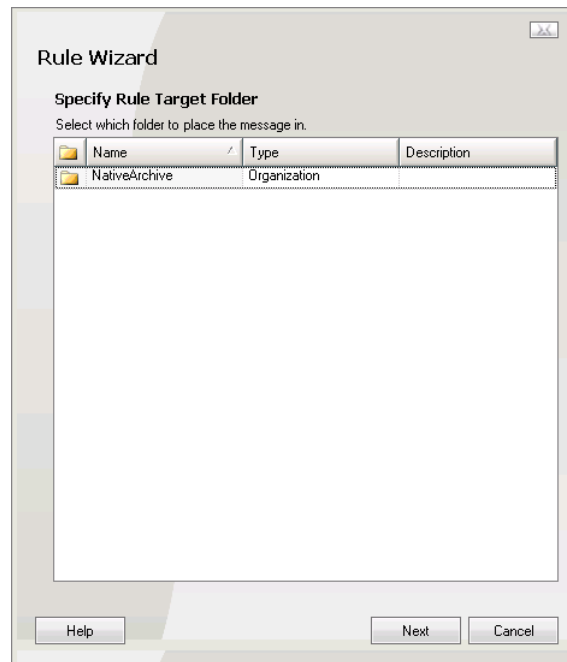
Each rule must specify a mapped folder in which to place messages which match the rule. The mapped folder must exist before the rule is created.

About this task

Specify this mapped folder using the **Specify Rule Target Folder** page of the **Rule** wizard as follows.

Procedure

- Click **Next** on the **Specify Filtering Rules** page. The **Specify Rule Target Folder** page appears.

Figure 170 Specify Rule Target Folder page

2. Review the list of folders that are displayed and select the folder in which you want to store messages matching the rule by clicking that folder name.
3. Click **Next** to continue defining the rule. The **Specify Rule Criteria** page appears and is described in the next section.

Specify Rule Criteria page

Use the **Specify Rule Criteria** page of the **Rule** wizard to specify the conditions that are associated with a rule. If a message meets the conditions, that message is archived in the folder that is associated with the rule. If you select multiple conditions for a rule, all the conditions must be met for a message to be archived into the folder that is associated with that rule.

About this task

Figure 171 Specify Rule Criteria page in the rule wizard

Rule Wizard

Specify Rule Criteria

Name of rule:

Which conditions do you want to check? (click underlined values to change; ALL conditions must be met for the action to be applied):

- From [people or distribution list member\(s\)](#)
- To [people or distribution list member\(s\)](#)
- To or From [people or distribution list member\(s\)](#)
- Directly From [distribution list](#)
- Directly To [distribution list](#)
- Directly To or From [distribution list](#)
- From [specific external domain](#)
- To [specific external domain](#)
- To or From [specific external domain](#)
- Owned by [people](#)
- With [specific words](#) in the subject
- Messages with [custom metadata](#)


Help Back Finish Cancel

Perform the following steps to specify the conditions that are associated with a rule using the **Specify Rule Criteria** page.

Procedure


1. Type a name for the rule you are creating in the **Name of rule** field.
2. Decide whether to use rule criteria or not.
 - If you do not specify any conditions and click **Finish**, all messages are placed in the folder that you specified. The **Specify Filtering Rules** page appears.
 - If you specify one or more conditions, only messages matching all those conditions are placed in the folder that you specified. To specify those conditions, continue to step 3.
3. Select one or more conditions from the list by selecting the option box next to the condition. For example, select the **Directly From distribution list** condition.

The condition name can vary depending on the mail system selected. If the mail system is IBM Domino, the term group is used in the condition name. If the mail system is Microsoft Exchange, the term distribution list is used in the condition name.


 **Note:** If you select multiple conditions for a rule, a message must meet all the conditions for it to match the rule.

The following is a list of the possible conditions that you can select and its coinciding message:

- From people or group members. From people or distribution list members—Matching message must be from the specified email address, the specified email distribution list or email group, or the email address of any member of the specified distribution list or group.
- To people or group members. To people or distribution list members—Matching message must be to the specified email address, email distribution list or email group, or the email address of any member of the specified distribution list or group. This includes being a To, CC, or BCC recipient.
- To or From people or group members. To or From people or distribution list members—Matching message must be to or from the specified email address, email distribution list or email group, or the email address of any member of the specified distribution list or group. This includes being a To, CC, or BCC recipient.
- Directly From distribution list—Matching message must be from the specified distribution list only. The rule does not consider the email addresses of the members of the distribution list.

 **Note:** Notes users cannot send email from a group.

- Directly To group. Directly To distribution list—Matching message must be to the specified distribution list or group email address only. The rule does not consider the email addresses of the members of the distribution list or group. This includes having the group or distribution list being a To, CC, or BCC recipient.
- Directly To or From group. Directly To or From distribution list—Matching message must be to or from the specified distribution list address only. The rule does not consider the email addresses of the members of the distribution list. This includes having the distribution list being a To, CC, or BCC recipient.

 **Note:** Notes users cannot send email from a group.

- From specific external domain—Matching message must be from an email address with an email address domain matching the external domain specified. For example, if the domain example.com is specified, email that is sent from Smith@example.com or Jones@example.com matches the rule.
 - To specific external domain—Matching message must be to an email address with an email address domain matching the external domain specified. For example, if the domain example.com is specified, email sent to Smith@example.com or Jones@example.com matches the rule.
 - To or From specific external domain—Matching message must be to or from an email address with an email address domain matching the external domain specified. For example, if the domain example.com is specified, email sent to or from Smith@example.com or sent to or from Jones@example.com matches the rule.
 - Owned by people—Matching message must be owned by one or more of the email addresses listed in the rule criteria.
 - With specific words in the subject—Matching message must contain the specified word(s) in the subject portion of the message.
 - Messages with custom metadata—Matching message must contain a metadata field that meets the condition and value that is specified in the rule criteria.
4. Click the underlined variable portion of the condition to change it from a variable to an actual value, such as an email address or distribution list. When you click the underlined

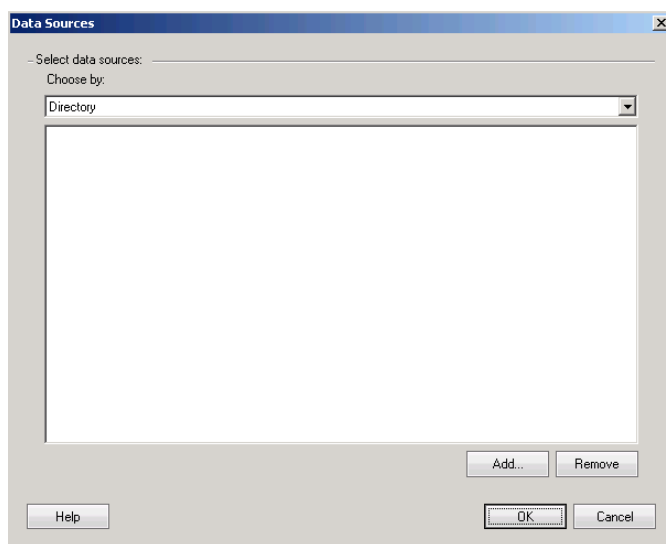
variable portion, one of the following dialog boxes appears to change the variable to an actual value:

- If the condition variable is *people, people or group, people or distribution list, distribution list, or group*, the **Data Sources** dialog box appears. For example, click the *distribution list* variable in the **Directly From distribution list** condition to select an actual distribution list from the mail server to match in the rule.
- If the condition variable is *specific external domain*, the **Select Mail Domain** dialog box appears. For example, click the **specific external domain** variable in the **To or From specific external domain** condition to select an actual mail domain to match in the rule.
- If the condition variable is *specific words*, the **Select Keywords** dialog box appears. For example, click the *specific words* variable in the **With specific words in the subject** condition to select the actual words to match in the rule.
- If the condition variable is *custom metadata*, the **Custom Metadata** dialog box appears. For example, click *custom metadata* in the **Messages with custom metadata** condition to select the metadata to match in the rule.

Rule wizard Data Sources dialog box

Use the **Rule wizard Data Sources** dialog box to select the email addresses for the rule. This dialog box is also used to select email addresses for message owners.

Figure 172 Initial rule wizard Data Sources dialog box



Select an option in the **Choose by** field to specify how to select email address for the rule criteria.

After you select the data source, the **Data Sources** dialog box is updated differently, depending on which option you selected:

- Select **Address Book** to use a Microsoft Exchange mail server address book to locate an email address. This option is only available for Microsoft Exchange mail servers. The **Data Source** page for Microsoft Exchange address books appears.
- Select **Directory** to use an IBM Domino mail server directory to locate an email address. This option is only available for IBM Domino mail servers. The **Data Source** page for IBM Domino directories appears.
- Select **SMTP Addresses** to specify an external SMTP address. The **Data Source** page for SMTP addresses appears.

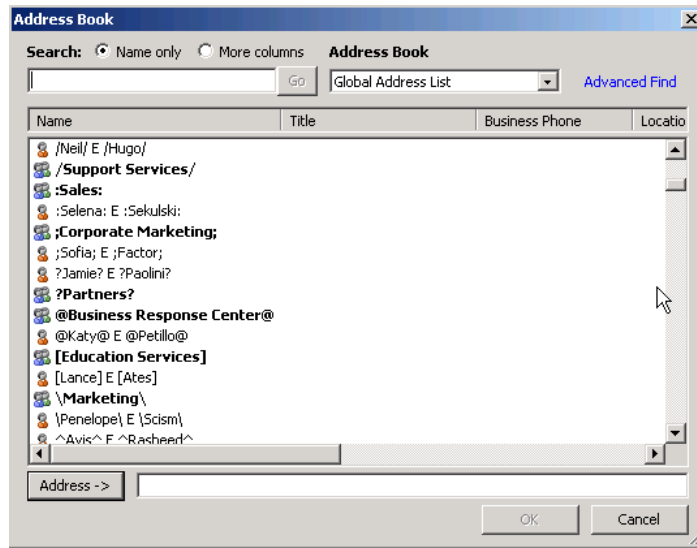
- Select **LDAP** in the **Choose by** field to use an LDAP query to locate an email address. The **Data Source** page for using LDAP queries to find email addresses appears.

Microsoft Exchange address book Data Sources dialog box

When the Data Source page for Microsoft Exchange address books appears, perform the following tasks.

About this task

Figure 173 Microsoft Exchange Address Book dialog box



Procedure

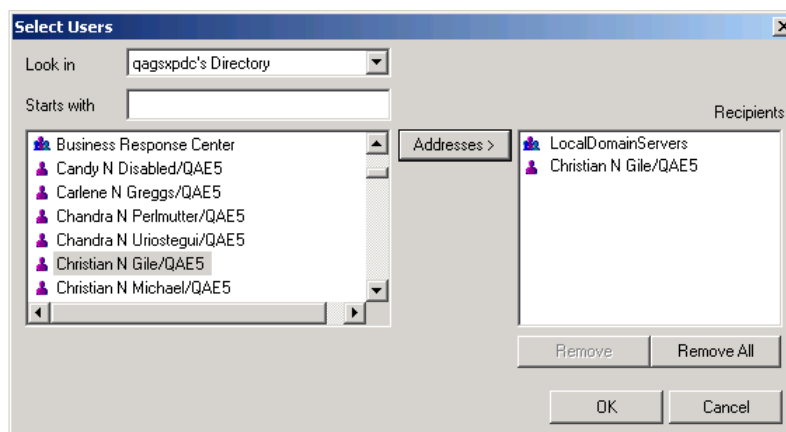
1. Select the email address or distribution list you want to associate with the rule and click **OK**.
The **Specify Rule Criteria** page appears with the selected email address or distribution list that is inserted into the previously selected rule.
2. Continue to specify the rule by defining a folder for the rule.

IBM Domino directory Data Sources dialog box

When the Data Source page for IBM Domino directories appears, the list of available directories appear. Using this dialog box, perform the following tasks.

Procedure

1. Select the directory to use from the list that is displayed and click **Add**. The **Select Users** dialog box appears.

Figure 174 IBM Domino directory Select Users dialog box

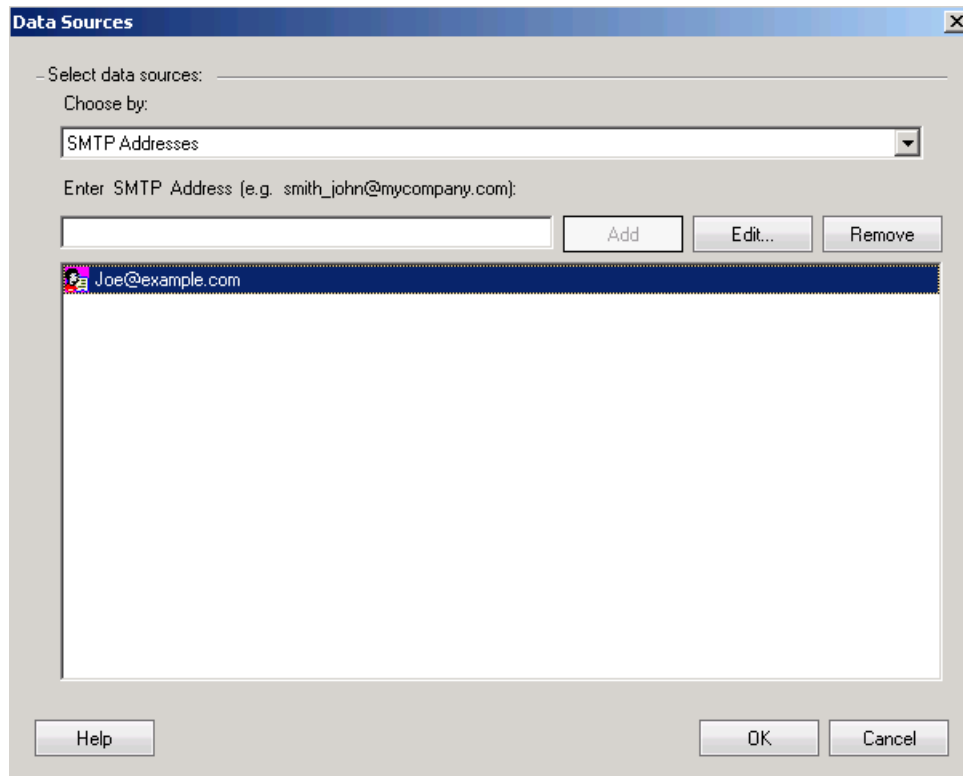
2. Select the email addresses to add and then click **Addresses** to add them to the **Recipients** list for the rule.
 - To remove an email address from the **Recipients** list, select the email address and click **Remove**.
 - To remove all the email addresses from the list, click **Remove All**.
 - To search for an email address in the selected directory, type the initial text of that address in the **Starts with** field.
3. When you are finished creating the list of email addresses, click **OK**.
4. Assuming you click **OK**, the **Specify Rule Criteria** page appears with the selected email address or group that is inserted into the previously selected rule.
5. Continue to specify the rule by defining a folder for the rule.

SMTP addresses Data Sources dialog box

When the Data Source page for SMTP addresses appears, perform the following tasks.

About this task

Figure 175 Rules Data Sources dialog box for SMTP Addresses



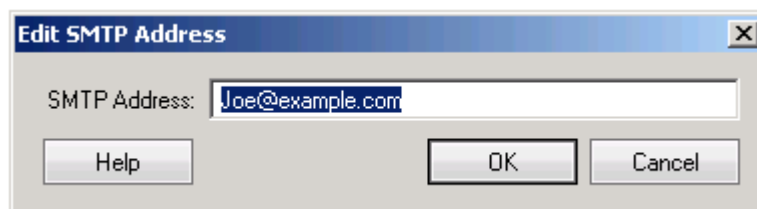
Procedure

1. Type the external SMTP address in the **Enter SMTP Address** field and click **Add**.

To remove an address from the list of addresses, select the address and click **Remove**.

To modify an address on the list, select the address and click **Edit**. The **Edit SMTP Address** dialog box appears. In the **Edit SMTP Address** dialog box, modify the address and then click **OK**. The modified address is now displayed in the list on the **Data Source** page for SMTP addresses.

Figure 176 Edit SMTP Address dialog box



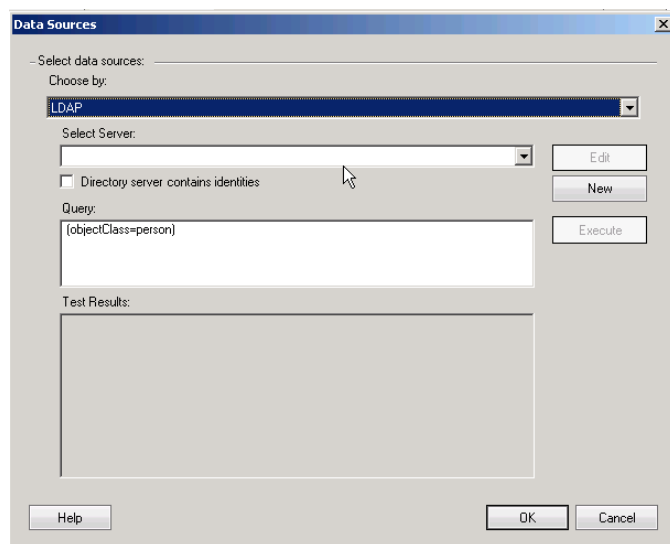
2. When you have finished creating the list of email addresses, click **OK**.
3. Assuming you click **OK**, the **Specify Rule Criteria** page appears with the selected email address or distribution list that is inserted into the previously selected rule.
4. Continue to specify the rule by defining a folder for the rule.

LDAP Data Sources dialog box

When the Data Source page for LDAP queries for email addresses appears, define an LDAP query to locate an email address for a rule as follows.

About this task

Figure 177 Rule Data Sources dialog box for LDAP



Procedure

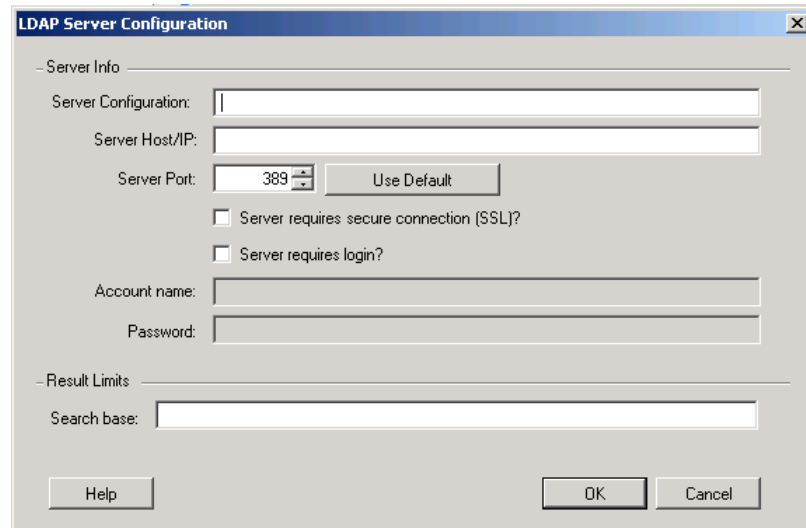
1. Select the LDAP server to use in the **Select Server** field.

If the server to use is not listed, add it to the list by clicking **New**. The **LDAP Server Configuration** dialog box appears.

2. Specify whether the LDAP directory server contains identity information. Perform one of the following steps:
 - If in a Microsoft Exchange environment where the directory server you specified contains identity information, select the **Directory server contains identities** to improve LDAP query performance.
 - If in an IBM Domino environment, or if in a Microsoft Exchange environment where the directory server you specified is not configured to contain identities, clear the **Directory server contains identities** (default).

Note: This option does not apply to IBM Domino servers or to LDAP queries executed locally using the **Execute** or **Test** buttons. In those cases, the option is ignored without error or user notification.

When this option is selected for Microsoft Exchange, Active Directory Service Interface (ADSI) is used to access the information.
3. Specify the LDAP query to use to get the email address in the **Query** field.

Figure 178 LDAP Server Configuration dialog box


The dialog box is titled "LDAP Server Configuration" and is divided into two sections: "Server Info" and "Result Limits".

Server Info:

- Server Configuration: [Text field]
- Server Host/IP: [Text field]
- Server Port: [Spin box with value 389] [Use Default button]
- Server requires secure connection (SSL)?
- Server requires login?
- Account name: [Text field]
- Password: [Text field]

Result Limits:

- Search base: [Text field]

Buttons: Help, OK, Cancel

- Click **Execute** to run the query. The results are displayed in the **Test Results** area.
If the correct email address results, click **OK** to use the query in the rule. Otherwise, change the query and run it again until you get the results you require and then click **OK**.
- The **Specify Rule Criteria** page appears with the selected email address inserted into the previously selected rule.
- Continue to specify the rule by defining a folder for the rule.

Rule Select Mail Domains dialog box

Use the Select Mail Domains dialog box to specify one or more external mail domains to match in a rule. An external mail domain is a mail domain that is not a company-internal mail domain. For example, Example.com is an external domain and can be used with the Select Mail Domains dialog box, but QATest.Example.com is an internal domain and should not be used.

About this task

Perform the following procedure to add, modify, or remove an external mail domain from the list of domains that a rule matches.

Figure 179 Rules Select Mail Domains dialog box


The dialog box is titled "Select Mail Domains" and contains the following elements:

- Enter mail domain (e.g. emc.com): [Text field]
- [Add] [Edit...] [Remove] buttons
- [List area]
- [Help] [OK] [Cancel] buttons

Procedure

1. Perform one or more of the following tasks:
 - a. If you are adding a domain, type the domain to add to the rule, such as example.com, in the **Enter mail domain** field and click **Add**.
 - b. If you are modifying a domain, select the domain to modify, click **Edit**, and make the needed changes.
 - c. If you are removing a domain, select the domain to remove and click **Remove**.
2. Click **OK** to complete adding, modifying, or removing mail domains to the rule condition.
3. Continue to specify the rule by defining a folder for the rule.

Rule Select Keywords dialog box

Use the Select Keywords dialog box to specify one or more keywords to match in a rule. Perform the following procedure to add, modify, or remove a keyword from the list of keywords that a rule matched.

About this task

Figure 180 Rules Select Keywords dialog box



Procedure

1. Perform one or more of the following tasks:
 - a. If you are adding a keyword, type the keyword to add to the rule in the **Enter keyword** field and click **Add**.
 - b. If you are modifying a keyword, select the keyword to modify, click **Edit**, and make the needed changes.
 - c. If you are removing a keyword, select the keyword to remove and click **Remove**.
2. Click **OK** to complete adding, modifying, or removing keywords to the rule condition.
3. Continue to specify the rule by defining a folder for the rule.

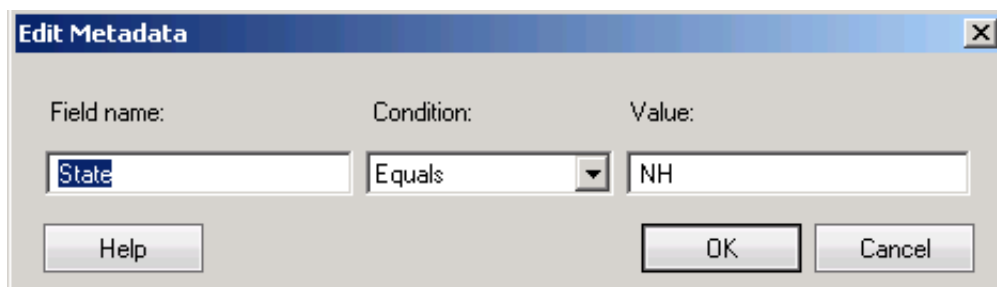
Editing a message metadata field on a rule criteria

Perform the following steps to modify a metadata field, condition, or value in a rule criteria.

Procedure

1. Select the metadata field and value from the list.
2. Click **Edit**. The **Edit Metadata** dialog box appears.

Figure 182 Edit Metadata dialog box



3. Modify the **Field name**, **Condition**, or **Value** and then click **OK**. The **Edit Metadata** dialog box closes and the modified metadata field, condition, and value are displayed.
4. Repeat the previous steps for as many fields as must be changed.
5. Click **OK** to complete modifying metadata field and values.
6. Continue to specify the rule by defining a folder for the rule.

Removing a message metadata field from a rule criteria

Perform the following steps to remove a message metadata field and value from a rule criteria.

Procedure

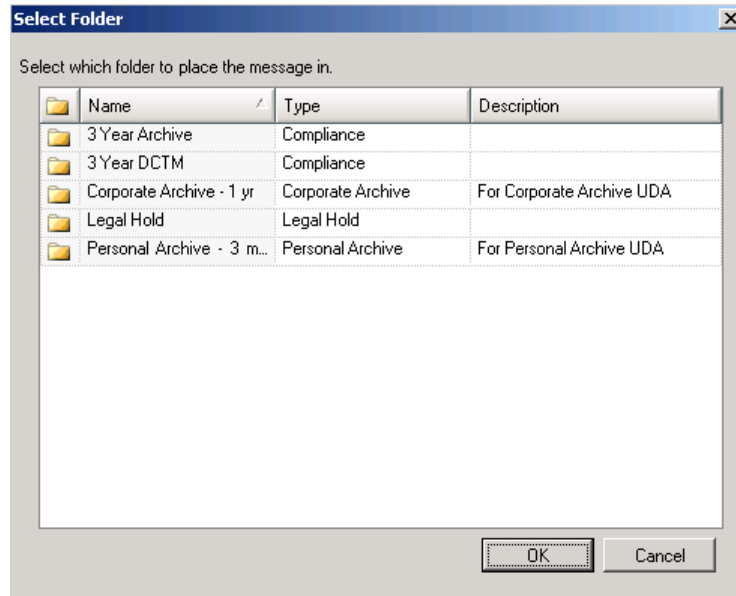
1. Select the metadata field and value from the list on the **Custom Metadata** dialog box.
2. Click **Remove**.
3. Repeat the previous steps for as many fields as must be removed.
4. Click **OK** to complete removing metadata field and values.
5. Continue to specify the rule by defining a folder for the rule.

Archiving messages which do not match any rules

Perform the following steps to archive messages which do not match any rules to a folder.

Procedure

1. On the **Specify Filtering Rule** pages, select the **Copy messages that do not match any rule to option**.
2. Click **Browse**. The **Select Folder** dialog box appears.

Figure 183 Select Folder dialog box

3. Select a folder from the ones listed to contain the messages.
4. Click **OK** to use the selected folder.

Editing rules

You can edit a rule after it has been created. You use rules to select which messages activities archive.

About this task

Perform the following procedure to edit a rule.

Procedure

1. Open the **Specify Filtering Rules** page in the **Rule** wizard.
2. Select the rule that you want to edit from the list of rules.
3. Click **Edit**.
4. You are allowed to change all the criteria of the rule that you set when you were creating the rule.

Copying and pasting rules

You can copy and paste rules within an activity or between activities, but the rules must be used with the same mail system. You cannot copy rules between Microsoft Exchange-based activities and IBM Domino-based activities.

About this task

Perform the following procedure to copy and paste a rule.

Procedure

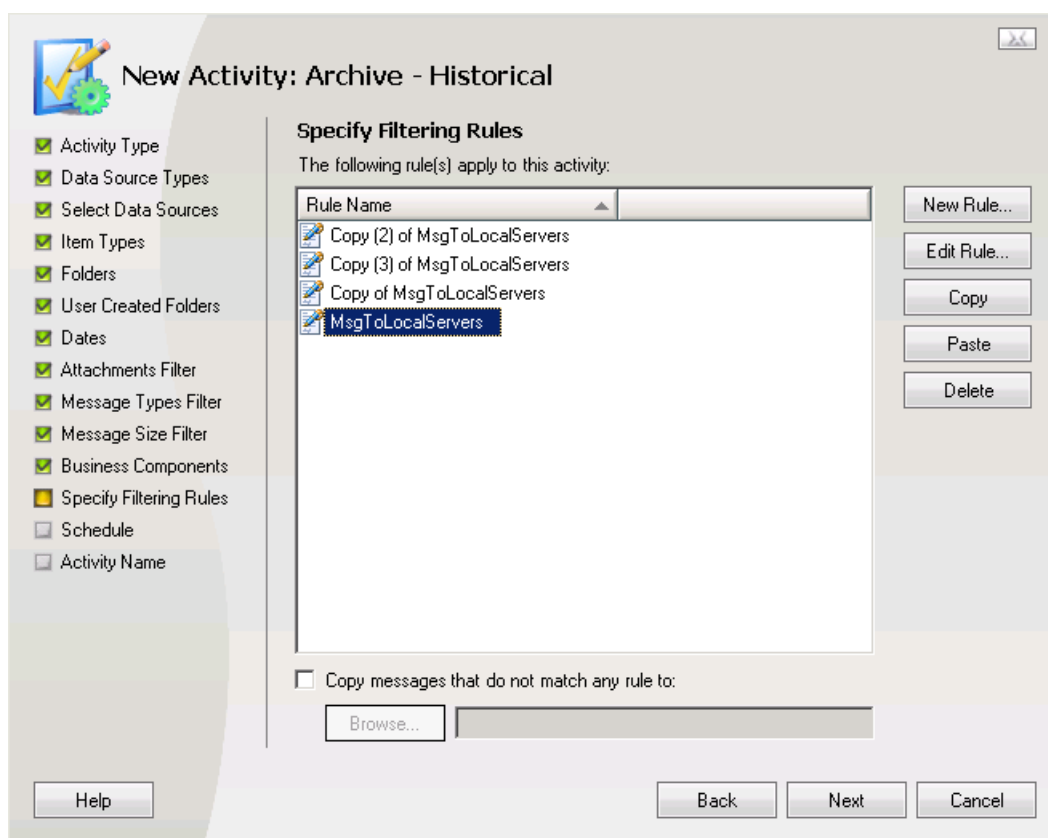
1. Open the **Specify Filtering Rules** page in the **Rule** wizard.
2. Select the rule that you want to copy.

3. Click **Copy**.
4. The rule is copied to the Windows clipboard.
5. Paste the rule as follows:
 - If you are pasting the rule into the same activity, click **Paste**.
 - If you are pasting the rule into a different activity, browse to the **Specify Filtering Rules** page for that activity and click **Paste**.

Note: A rule that is copied and pasted as a new rule is not linked in any way to the rule from which it was copied. Changes to the original rule not reflected in the copied rule.

If the pasted rule has the same name as an existing rule, the name of the new rule has the text **Copy of** as a prefix. If multiple copies of the same rule name are pasted into the same activity, the names have the text **Copy (number) of** as a prefix.

Figure 184 Example of rule names created by copying and pasting



Deleting rules

Perform the following tasks to delete a rule.

Procedure

1. Select the rule to delete on the **Specify Filtering Rules** page of the **activity** wizard.
2. Click **Delete**.

CHAPTER 24

Configuring User Delete

This section describes how to configure and use the User Delete feature.

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Introduction to User Delete

This section introduces User Delete.

In previous releases of Dell EMC SourceOne:

- Users could not delete their mail items from the Native Archive through the mail client.
- Users could delete their mail items from the Native Archive through SourceOne Search, if those mail items had been archived to a Personal or a Community mapped folder using User-Directed Archiving (UDA).

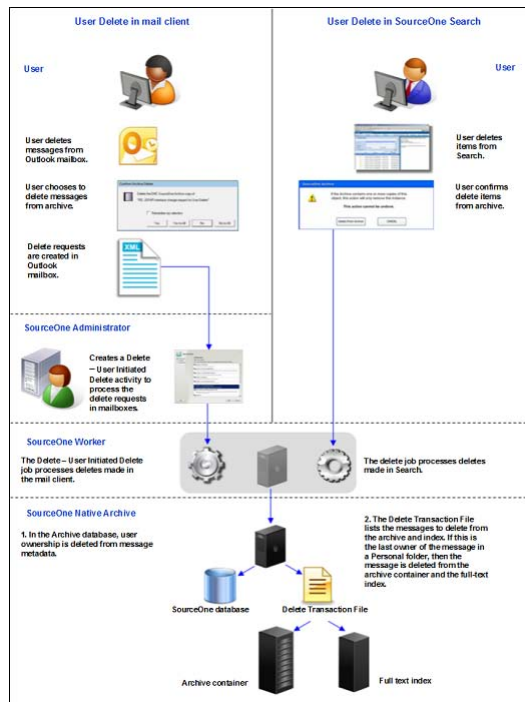
Users can delete their email items from the Native Archive through the mail client (Microsoft Outlook) or Search if the mail items were archived to a Personal or a Community mapped folder using:

- **Journal, Archive-Historical, or Archive-Personal Mail Files** activities
- UDA

Overview: How User Delete works

The following diagram illustrates how User Delete works in Outlook and in Dell EMC SourceOne Search.

Figure 185 Overview: How User Delete works



User Delete considerations and limitations

This section includes User Delete considerations and limitations.

Mail clients

Consider the following information:

- User Delete supports Microsoft Outlook thick clients.
- User Delete does not support OWA, IBM Lotus Notes, iNotes, Android, iPhone, Blackberry, or other handheld devices.

 **Note:** IBM Lotus Notes users can delete archived mail items through Search.

Microsoft Exchange/Outlook

Consider the following information.

User Delete does not support the deletion of archived mail items from user PSTs, shared folders, or public folders.

Mapped folders

Consider the following information:

- For **Journal**, **Archive-Historical**, **Archive-Personal Mail Files** activities:
 - User Delete works only on mail items that are archived in Dell EMC SourceOne Personal or Community mapped folders, and only if users have the new Delete permission on those folders. For Search, Contributor permission is also required.
 - User Delete does not work on mail items that are archived in SourceOne Organization mapped folders.

A Folder Conversion utility is provided to convert Organization mapped folders to Personal or Community mapped folders.

- User Delete works on mail items that were previously archived in SourceOne Personal or Community mapped folders through User-Directed Archiving if users have both Contributor permission and the new Delete permission on those folders.
- User Delete does not work on mail items in SourceOne Legal Hold folders.

Deleting messages under retention

If a user tries to delete a message that is under retention, all references to the message are removed from SQL and from the index. However, the message is not deleted from the volume.

Cannot delete message(s) from storage in Volume <volume name>, the volume is under retention.

Journaling

Consider the following information:

- To support journaling to Personal or Community mapped folders, the **Journal** activity now distinguishes internal recipients from external recipients. Only internal recipients are promoted to owners when you journal to a Personal or Community mapped folder.

- Initialize the address cache before you create the first **Journal** activity to a Personal or Community folder.

User Delete operation

Consider the following information:

- User Delete operations on user mailboxes through mail clients are asynchronous. After items are deleted from user mailboxes, they may still appear in search results for some time. It may take up to 24 hours for a User Delete operation on the archive to complete after either of the following actions:
 - The **User Initiated Delete** Activity is run from the archive console to process delete requests in user mailboxes.
 - The user deletes the item from Dell EMC SourceOne Search.
- User Delete operations remove actual mail items from the archive only when no other users have ownership references to the deleted item. A user merely removes their reference to an item and SourceOne removes the item only when no user references remain on an item.

Delegate deletes

Deletion of archived mail items by delegates is not supported in the mail client or in Dell EMC SourceOne Search.

User Delete can result in orphaned shortcuts

There is no mechanism to clean up orphaned shortcuts that the use of User Delete causes. Users can still retrieve the item using the shortcut if the item still exists in the archive.

This is the case for items in a:

- Personal Folder—If at least one reference still exists
- Community Folder—Always

How User Delete works in the mail client

The following sections describe how User Delete works in the mail client.

Introduction

With SourceOne Offline Access installed and with User Delete enabled, when a user deletes a mail item from their Outlook mailbox, they have the option to delete the corresponding archived mail item.

If a user chooses not to delete the mail item from the archive through the mail client at that time, they can perform either of the following steps later:

- Move the mail item from the Deleted Items folder to another mailbox folder, and then delete the item again, this time choosing to delete the item from the archive.
- Use Dell EMC SourceOne Search to delete the mail item from the archive.

Main steps

Ensure that the following steps are performed.

Procedure

1. In the mail client, the user selects mail items to delete. For the detailed user procedure, refer to the *SourceOne Offline Access User Guide*.
2. The **Delete-User Initiated Delete** activity and the User Delete job process, deletes requests in the mailboxes.
 - The **Delete-User Initiated Delete** activity (created by the Dell EMC SourceOne administrator) passes the delete requests found in a user's mailbox to the User Delete job on the Worker.
 - Then the delete requests are removed from the user's mailbox.
3. The Native Archive removes ownership and deletes mail items.

The Native Archive uses the delete requests passed to it from the **Delete-User Initiated Delete** activity and User Delete job to:

- Remove the user's ownership from each mail item.
- If it is the last user to have ownership on the mail item, remove the mail item from the archive.

Specifically:

- The mail item metadata is deleted from the SourceOne Archive database.
- For each mail item eligible to be deleted from the archive, an entry is created in a Delete Transaction File.
- Later, the delete transactions are processed asynchronously. This process is optimized to delete as many items from the same container as possible. As a result, mail items that are requested to be deleted may still appear in SourceOne Search results for up to 24 hours.

Note: The steps that are outlined apply to deletion from a Personal Folder. The message is retained in the archive even after a user deletes the last reference to the message in the Community Folder. The user's reference is removed so that the user is no longer able to search for the message using the My Contributed Items search type.

How User Delete works in Dell EMC SourceOne Search

The following sections describe how User Delete works in SourceOne Search.

Introduction

A Search user can delete a mail item from the archive if all the following conditions are true:

- The mail items were journaled or archived to a Personal or Community folder.
- The user selected the **My Contributed Items** search type.
- The user has Delete permission on the folders containing the mail items that they want to delete.

Prerequisites

User prerequisites include the following:

- Search type—To delete items from the archive through Dell EMC SourceOne Search, a user must select the **My Contributed Items** search type.
- Deleting duplicates—Duplicate mail items are not deleted from the archive automatically. To delete duplicate mail items from the archive, the duplicate items must be displayed in search results for selection and deletion by the user.

To display duplicates in search results, users must clear the **Remove duplicate items from search results** checkbox in the **Options** dialog box.

Considerations and limitations

The following are considerations and limitations:

- Availability of Delete options—For the **Delete toolbar** button and the **Delete right-click** menu option to be available in Search, a user must have Delete permission on at least one Personal or Community mapped folder.
Search does not show or hide menu items on a per mapped folder basis. For example, if a user has Contributor access to two mapped folders, but has Delete access to only one of those folders, then:
 - The Delete option is accessible.
 - The user can start a Delete job for mail items in both mapped folders, but:
 - The mail items in the mapped folder for which the user does not have delete permission fails to be deleted.
 - The failure is reported in the **Delete Status Details** dialog box as a permission denied error.
- Delete Status dialog box—The **Delete Status** dialog box displays an informational message to the user. Even after a Delete job is reported as complete, the mail items are not immediately removed from the archive or indexes. These mail items could display in new search results until the back end fully completes the removal. Depending on the system load, it could take anywhere between minutes and hours before the mail items are completely removed. Deletions occur faster if:
 - Volumes are open.
 - The searches are SQL searches.
 - The system is not under load.
 Deletions take longer if:
 - Volumes are closed.
 - The searches are full-text index searches.
 - The system is under load.

Main steps

Ensure that the following steps are performed.

Procedure

1. In Search, the user selects mail items to delete from the archive.

To delete a mail item from the archive through Dell EMC SourceOne Search, a user must select the **My Contributed Items** search type

For details, refer to the EMC SourceOne Search User Guide.

2. The Delete job on the Worker processes the deletions for Search.

The Delete job on the Worker processes the deletions that were started from Search.

Note: The **Delete-User Initiated Delete** activity and the User Delete job are not involved in deletions that are made through Search.

3. The Native Archive removes ownership and deletes mail items.

User delete configuration

Use the following procedures to configure User Delete.

Configuring common settings for User Delete

Perform the following steps to configure common settings for User Delete.

Procedure

1. Configure index throttling.
2. Specify a date range using the **Archive deletion eligibility period** option in the **Global Settings** dialog box.
3. To convert existing Organization folders to Personal or Community folders, and to update ownership on the archived mail items, run the **Folder Conversion** utility. User Delete works on mail items that are archived to Personal or Community folders, not Organization folders.
4. Create Personal or Community mapped folders to use in **Journal**, **Archive-Historical**, **Archive-Personal Mail Files**, and **User-Directed Archiving (UDA)** activities.

To support User Delete, these activities must archive to Personal or Community mapped folders, not Organization folders.

5. Grant users permissions on Personal and Community folders.
 - To delete archived mail items through Search, users must have Contributor permission and Delete permission.
 - To delete archived mail items through the mail client, users must have **Delete** permission.

Note: The Delete permission is also required on pre-existing Personal and Community folders that are used for UDA so that users can delete UDA content through Search.

6. Before creating the first **Journal** activity that archives to a Personal or Community mapped folder:
 - For IBM Domino, disable external address resolution.
 - Initialize the address cache.
7. Continue to the other User Delete configuration procedures.

Configuring User Delete through the Outlook mail client

Perform the following steps to allow users to delete mail items through the Outlook mail client.

Procedure

1. Complete the common User Delete configuration steps.

2. Verify that users have Delete permission on Personal and Community mapped folders.
3. Create **Journal** activities to archive to Personal or Community mapped folders.
4. After mail is journaled to Personal or Community folders, or after you run the **Folder Conversion** utility on Organization folders containing journaled mail items, create **Historical Archive** or **UDA Archive** activities against user mailboxes to archive mail into Personal or Community folders. This step is required to add the SourceOne MsgID to mail that was previously journaled.

Note: Users cannot delete items through the mail client (Outlook) if the items were archived using the **Archive-Personal Mail Files** activity. PST deletions are not supported in the mail client.

5. Configure SourceOne Workers to run **Delete-User Initiated Delete** jobs.
6. Install SourceOne Offline Access.
7. Configure SourceOne Offline Access GPO to enable User Delete.
8. Create **Delete-User Initiated Delete** activities to process delete requests in user mailboxes.

Configuring User Delete through Dell EMC SourceOne Search

Perform the following steps to allow users to delete mail through SourceOne Search.

Procedure

1. Complete the common User Delete configuration steps.
2. Verify that users have Contributor and Delete permissions on Personal and Community mapped folders.
3. Create **Journal**, **Archive-Historical**, or **Archive-Personal Mail Files** activities to archive mail items into Personal or Community mapped folders.
4. Configure one or more SourceOne Workers to run User Delete jobs.
5. (Optional) Enable detailed logging.

Using the Folder Conversion utility

This section describes how to use the Folder Conversion utility.

Folder Conversion utility introduction

The User Delete feature works only on mail items that are archived in Personal or Community mapped folders, not in Organization mapped folders.

Before users can delete mail items that are already archived in Organization mapped folders, use the **Folder Conversion** utility to convert those Organization folders to Personal or Community mapped folders.

When to use the utility

Run the **Folder Conversion** utility before enabling User Delete for the mail client.

Where to run the utility

Run the **Folder Conversion** utility on an Dell EMC SourceOne Worker.

What the utility does

The **Folder Conversion** utility performs the following:

- Triggers a synchronization of the address cache, and waits for the cache to be ready before continuing.
- Converts Organization mapped folders to Personal or Community mapped folders.
- Works with the ExAsAdmin service to update ownership on mail items to contributor ownership, as in UDA.
 - The cache of internal addresses is used to assign ownership to messages. Only internal recipients are marked as owners of messages, which ensures that a message is deleted from the archive only when all the internal owners have deleted the message.
 - Existing owners remain on each mail item so that the mail items can be found in Search through Administrator or My Items searches while the folder is being converted.
- Reports on the progress of the conversion.
- Cleans up database entries after the conversion completes.

You can:

- Start or stop the conversion.
You can stop a conversion, and then resume it later. The utility continues from where it left off, and skips mail items that it has already processed.
- Increase or decrease the load.
- Schedule the conversion.

Considerations and limitations-Folder Conversion utility

The following are considerations and limitations:

- Run the **Folder Conversion** utility only when the system is not under heavy load.
- The type of the mapped folder is converted at the beginning of the conversion. The folder is available for other Dell EMC SourceOne activities such as ingestion (Journaling or Archiving). Change or add user permissions (Contributor and Delete) only after the folder conversion is done.

While the **Folder Conversion** utility is running:

- The following SourceOne processing is supported:
 - Administrator searches
 - User searches of the My Items type
 - Shortcut retrievals
 - Administrator retrievals
- The following SourceOne processing is not supported:
 - User searches of the My Contributed Items type. These searches have partial results until UDA ownership is established on all documents. The SourceOne administrator can decide whether to allow these searches.
 - Archive folder disposition or document deletes. If disposition or deletes occur, they may result in errors that the **Folder Conversion** utility logged.
 - Activities using the Organization mapped folder that is being converted.
- If you convert an Organization mapped folder that contains archived files, then you cannot create a **File Restore** activity to retrieve the archived files from the resulting Personal or Community mapped folder. The **File Restore** activity displays only Organization mapped folders for you to select, not Personal or Community mapped folders.

Prerequisites-Folder Conversion utility

Review the following prerequisites:

- Use the Dell EMC SourceOne console to disable disposition or change the scheduling of disposition so that it does not conflict with the folder conversion.
- Before starting a folder conversion, stop all activities that use the Organization mapped folder that you want to convert. If you pause activities instead of stopping them, then the resumed activities do not pick up the new folder information, and newly archived mail items are not searchable using a My Contributed Items search. Use the SourceOne console to stop the activities.

Configuring and scheduling folder conversion

(Optional) Before you convert folders, perform any combination of the following configurations:

- Specify the load by increasing or decreasing the number of threads (throttling).
- Specify the duration of the conversion in hours.
- Specify a day and time on which to run the utility.

Configuring and scheduling folder conversion procedure

Perform the following steps to configure and schedule folder conversion.

Procedure

1. Use the Control (**-ctrl**) parameter and specify the name of the Dell EMC SourceOne archive connection. To view the name of the archive connection, select the **Archive Connections** node in the SourceOne console.
2. To specify the number of threads, use the Threads (**-threads**) parameter and specify an integer in the range 1 to 10. The default is 10 threads.
3. To specify the duration of the conversion in hours, use the Duration (**-duration**) parameter and specify an integer in the range 1 to 24. The default duration is 24 hours.
4. To specify a schedule, use the following parameters:
 - Use the Start Time (**-starttime**) parameter and specify a start time in the range 00:00 to 23:59. The default start time is 00:00.
 - Use the Day Of The Week (**-dow**) parameter and specify one of the following days of the week:
 - **sun**
 - **mon**
 - **tue**
 - **wed**
 - **thu**
 - **fri**
 - **sat**

The default is all days.

Usage

```
ES1NaFolderConvert -ctrl <archive connection name> -threads <1-10> -
duration <1-24> -starttime <00:00 - 23:59> -dow <
\"sun,mon,tue,wed,thu,fri,sat\">
```

Example

The following example configures folder conversions for an archive connection that is named SourceOneArchive to use 4 threads, last a maximum of 6 hours, and start on Monday at 1:00 AM:

```
ES1NaFolderConvert -ctrl SourceOneArchive -threads 4 -duration 6 -
starttime 01:00 -dow mon
```

5. After configuring and scheduling the folder conversion, specify a folder to convert.

Starting a folder conversion

Perform the following steps to start a folder conversion, in a single command line.

Procedure

1. Use the Initialize (**-init**) parameter and specify the name of the Organization mapped folder to convert.
2. (Optional) Use the Type (**-type**) parameter and specify the type of mapped folder (Personal or Community) to which you want to convert.

If you do not specify a type of folder, the default is Personal.

```
ES1NaFolderConvert -init <mapped folder name> -type <personal or
community>
```

The **-init** parameter triggers a synchronization of user addresses. The utility waits for the synchronization to complete before it starts the folder conversion.

Stopping a folder conversion

Perform one of the following to stop a folder conversion:

- To stop a folder conversion while the Initialize (**-init**) step is synchronizing the address cache, press **q** to return to the command line prompt.
- To stop folder conversions that have been scheduled or after the address cache has synchronized, use one of the following commands:

```
ES1NaFolderConvert -ctrl <archive connection name> -threads 0
```

```
ES1NaFolderConvert -ctrl <archive connection name> -duration
```

Restarting a folder conversion

If the ExAsAdmin service is stopped or suspended during a folder conversion, the conversion may not complete when the ExAsAdmin service resumes.

To restart the processing of an in-progress folder conversion, use the Rerun (**-rerun**) parameter and specify the name of the Organization mapped folder that was in the process of being converted:

```
ExNaFolderConvert -rerun <mapped folder name>
```

Reporting the status of the conversion

To see the status of the folder conversion, use the Status (**-stat**) parameter and specify the name of the Organization mapped folder that you are converting.

```
ES1NaFolderConvert -stat <mapped folder name>
```

Cleaning up the database after folder conversion

To clean the database after converting a folder, use the Clean (**-clean**) parameter and specify the name of the Organization mapped folder that you converted.

```
ES1NaFolderConvert -clean <mapped folder name>
```

Folder Conversion utility parameters summary

The following are the parameters that are used with the Folder Conversion utility.

- **-ctrl**—Specifies the name of the Dell EMC SourceOne archive connection. Use with the **-threads**, **-duration**, **-starttime**, and **-dow** parameters to configure the load, duration, and schedule of folder conversions.
- **-threads**—Specifies the load (number of threads) for the conversion, in the range 1 to 10. Used with the **-ctrl** parameter.
- **-duration**—Specifies the maximum time that a conversion is to take, in the range 1 to 24 (hours). Used with the **-ctrl** parameter.
- **-starttime**—Specifies the start time of the conversion, in the range 00:00 to 23:59. Used with the **-ctrl** parameter.
- **-dow**—Specifies the day of the week on which to start the conversion: sun, mon, tue, wed, thu, fri, or sat. Used with the **-ctrl** parameter.
- **-init**—Starts the conversion of the specified Organization mapped folder.
- **-type**—Specifies the type of mapped folder (personal or community) to which to convert the Organization folder. Used with the **-init** parameter. If the folder type is not specified, then the default folder type is Personal.
- **-rerun**—Resumes the conversion of the specified folder.
- **-stat**—Reports the status of the conversion in-progress for the specified folder.
- **-clean**—Cleans the database after the conversion of the specified folder.

After folder conversion

After the conversion of the Organization folder completes, perform the following.

- Verify permissions on the converted folder.
- If the contents of the converted folder were originally archived through **Journal** activities, and if you want to allow users to delete the contents through the mail client (Outlook), then run **Historical Archive** or **UDA Archive** activities against those user mailboxes. This step is required to add the Dell EMC SourceOne MsgID to mail that was previously journaled. This step is not required for users to delete archived mail items through SourceOne Search.

Verify permissions on the converted folder

Verify that the converted folder, now a Personal, or Community folder, has the correct permissions.

Procedure

1. In the Dell EMC SourceOne console, go to **Mapped Folders > Action > New Folder** to display the properties of the converted folder.
2. On the **Permissions** tab:
 - a. Clear the **Owner** checkbox.
 - b. Select the **Delete** permission.
 - c. If you want users to search for and delete archived mail items from Search, also select the **Contributor** permission.

Index throttling for User Delete

The following sections describe how to configure index throttling for User Delete.

Introduction

Processing delete requests affects the performance of the Native Archive Servers. You can control the number of resources that are allocated to various index operations, including the processing of delete requests. This index control capability also referred to as index throttling.

Best practices

If you are deploying User Delete to many users, follow these guidelines:

- If you are using a single Native Archive Index server to handle several types of index operations, limit the number of resources that are used to process delete requests. To perform this, specify a small value in the Delete field in Index server properties.
- Ideally, add one or more Native Archive Index servers to process only delete requests.

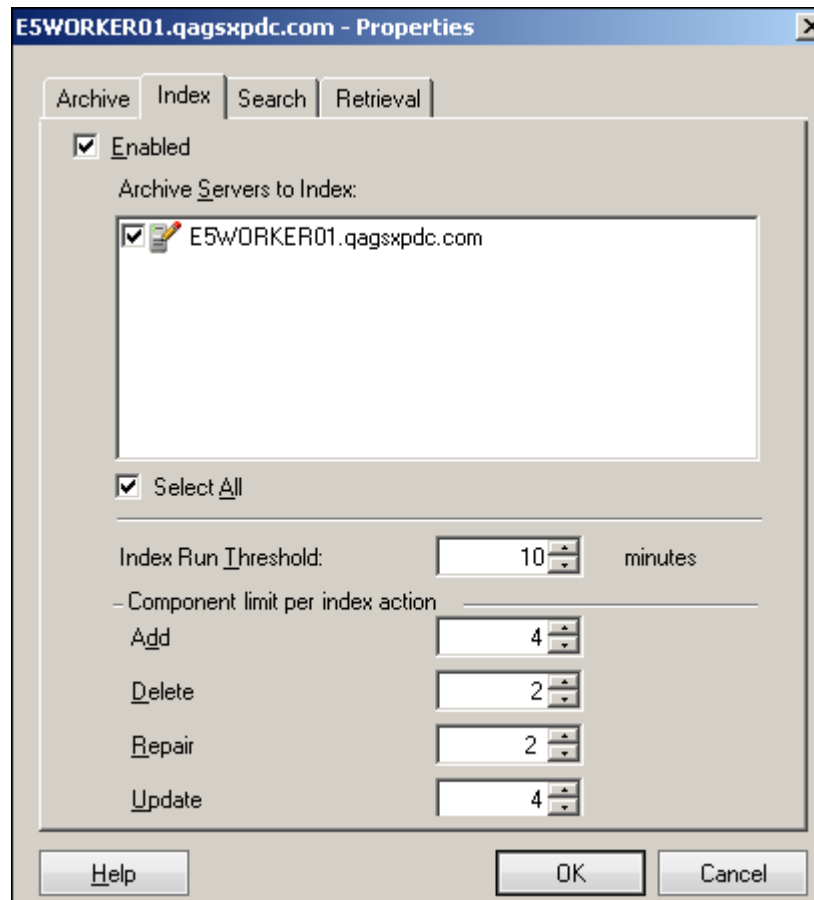
Configuring index throttling for user delete

To control the resources that are allocated to processing delete requests, perform the following procedure.

Procedure

1. Display the properties of the Native Archive Index server that you want to use to process delete requests.

Figure 186 Native Archive Server properties-Index tab



The **Component limit per index action** area contains the following fields which control the maximum number of processes per index operation:

- **Add**—The number of processes that are allocated to adding indexes. Default = 4.
- **Delete**—The number of processes that are allocated to delete requests. Default = 2.
- **Repair**—The number of processes that are allocated to index refresh and rebuild operations. Default = 2.
- **Update**—The number of processes that are allocated to index updates. Default = 4.

2. To modify the **Delete** value, type an integer in the range 0-4.

A value of 0 means that this index server does not process any delete requests. A warning message appears if you type 0.

Changes are applied after the service restarts or refreshes.

3. To save changes, click **OK**.

Configuring mapped folders for User Delete

The following sections describe how to configure mapped folders for User Delete.

Use Personal or Community folders

To support User Delete, the use of Personal and Community mapped folders has been extended beyond User-Directed Archiving (UDA) activities to Journal, Archive-Historical, Archive-Personal

Mail Files, and Shortcut-Historical activities. For those four activities, User Delete works only on mail items that are archived to Personal or Community mapped folders, not Organization mapped folders.

Note: If you want users to delete mail items from existing Organization mapped folders, use the **Folder Conversion** utility to convert those Organization mapped folders to Personal or Community mapped folders.

Assign Contributor and Delete permissions

The Delete permission is now required on Personal and Community mapped folders for users to perform User-Directed Archiving (UDA) deletes in Search. Previously, users only needed Contributor permission on those folders to perform UDA deletes in Search.

The database update scripts add the Delete permission to existing Personal or Community mapped folders for which the user already has Contributor permission. However, for Personal or Community folders that are created after the update, add the Delete permission for each user manually.

To delete archived mail items through Dell EMC SourceOne Search

In addition to Contributor permission, the Delete permission is required on Personal or Community mapped folders to allow users to delete mail items that were archived through the following:

- **Journal, Archive-Historical, and Archive-Personal Mail Files** activities.
- UDA. In previous versions of SourceOne, users only needed Contributor permission on those folders to perform UDA deletes in Search.

To delete archived mail items through the mail client

Users need the Delete permission on Personal mapped folders. Users do not need Contributor permission on mapped folders unless they are also deleting archived items through Dell EMC SourceOne Search.

Procedure

Refer to the chapter [Configuring Mapped Folders](#) for detailed procedures.

Configuring Workers for User Delete

This section describes how to configure Workers for User Delete.

Specifying a file share for detailed job logs

If you plan to generate detailed job logs for Dell EMC SourceOne jobs, specify a file share for the logs when you install Worker Services.

Refer to the section on Installing Worker Services software in the *SourceOne Email Management Installation Guide*.

Configuring jobs for User Delete

Configure the following jobs for User Delete on Dell EMC SourceOne Workers:

- For the **Delete-User Initiated Delete** activity to process delete requests in user mailboxes, configure a Worker to run **Delete-User Initiated Delete** jobs.

- For User Delete to work in SourceOne Search, configure a Worker to run Delete jobs. The Delete job is the same one already used for Administrator deletes in SourceOne Search.

Disabling external address resolution in IBM Domino

This section discusses disabling external address resolution.

Introduction

When you journal to Personal or Community mapped folders, Dell EMC SourceOne determines message ownership to be the internal users only, based on each user's email addresses in their Person document.

By default, IBM Domino performs external address resolution. To avoid journaling messages that do not have the internal user set as the owner, disable the external address resolution feature in IBM Domino.

When you disable external address resolution, all incoming mail from external domains must match the user's default email address in IBM Domino. Any other permutations are not resolved by IBM Domino, and are not delivered.

For example, if a user's default email address in IBM Domino is john.smith@company.com, and an email from an external domain is addressed to a valid alternate such as jsmith@company.com, the email from the external domain is not journaled.

Disabling external address resolution

Perform the following steps to disable external address resolution.

Procedure

1. In IBM Domino Administrator, open the **Configuration Settings** document.
2. Click the **Router/SMTP-Basics** tab.
3. For the Address lookup setting, select the **Fullname only** option.
4. Save the changes.

Configuring Dell EMC SourceOne Search for User Delete

This section discusses configuring SourceOne Search for User Delete.

Enabling/disabling detailed logging

Unlike Dell EMC SourceOne trace logs, the detailed job logs are not overwritten and do not have verbosity settings.

About this task

Perform the following procedure to enable or disable detailed logging for delete operations that are performed through SourceOne Search.

Procedure

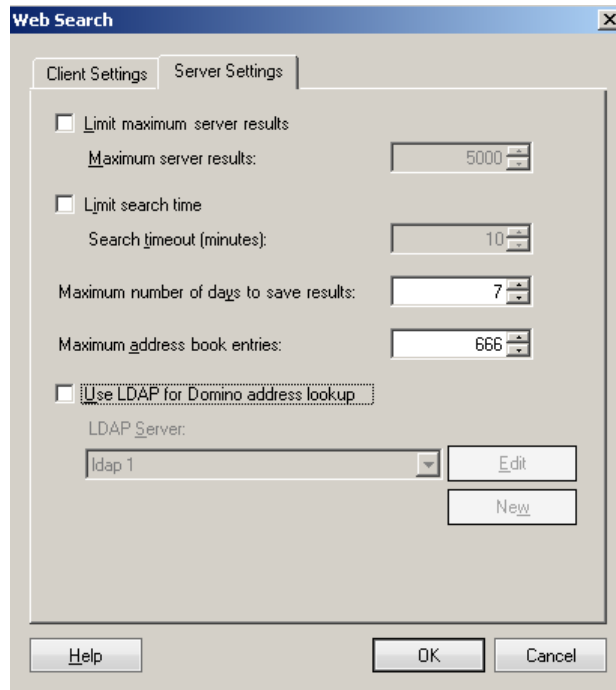
1. In the SourceOne console, expand the **Application Configuration** node.
2. Double-click the **Web Search** node.
The **Web Search** dialog box appears.
3. Click the **Server Settings** tab.

4. Perform one of the following steps:

- To enable detailed logging, select the **Enable detailed logging for deletions** checkbox.
- To disable detailed logging, clear the **Enable detailed logging for deletions** checkbox. By default, detailed logging is disabled.

The change affects new Delete jobs, not Delete jobs that are already running.

Figure 187 Web Search properties-Server Settings tab



Specifying a date range

Specify a date range using the Archive deletion eligibility period option in the Global Settings dialog box.

This date range applies to deletes performed through the mail client and through Search.

Configuring Journal activities for User Delete

This section describes how to configure Journal activities for User Delete.

Introduction

In previous versions of Dell EMC SourceOne, you journaled content into Organization mapped folders. Journaling added internal and external recipients as owners on a mail item.

To support user deletions of journaled mail items:

- You must journal to Personal or Community mapped folders, not Organization mapped folders. When you create a **Journal** activity, select Personal or Community mapped folders as target folders in the **Rule** wizard.

Note: You can use Organization folders for journaling if you do not want to allow users to delete the archived mail items.

- When you journal to a Personal or Community mapped folder, only internal recipients are marked as owners of mail items. This change ensures that a mail item is deleted from the archive only when all the internal owners have deleted the mail item. If the recipient's email address is found in the cache of internal addresses, journaling adds the user as an owner on the mail item. Recipients that are not found in the address cache are considered external recipients and are not added as owners on the mail item.

Prerequisite

Before you create the first Journal activity to a Personal or Community mapped folder, initialize the address cache to synchronize all mail users with Dell EMC SourceOne. If you do not initialize the address cache and wait for synchronization to complete, then you are not able to save that Journal activity.

If the address cache has not been initialized, then the following error message appears when you try to create the first **Journal** activity to a Personal or Community folder:

```
The rule is invalid for the following reasons: Unable to archive to a Personal or Community folder until a Mail User sync has been completed. Please start a Mail User sync via the Global settings page under Application Configuration, wait for the sync to complete and then try again.
```

Procedure

To create journal activities, refer to the chapter [Configuring Email Activities](#) on page 323.

Configuring archive and shortcut activities for User Delete

The following sections describe how to configure archive and shortcut activities for User Delete.


About ownership and mapped folder types

Archive-Historical, Archive-Personal Mail Files, and Shortcut-Historical activities recognize the type of mapped folder that is specified as a target, and add the ownership.

- If the target is an Organization mapped folder, then the ownership is added.
- If the target is a Personal or Community mapped folder, then the ownership is added.

Archive activities

For User Delete to work on mail items that are archived using the Archive-Historical or Archive-Personal Mail Files activities, select Personal or Community mapped folders as targets in the Rule wizard.

 **Note:** User Delete through the mail client (Outlook) does not support PST deletion. Users cannot delete items through the mail client that were archived using the **Archive-Personal Mail Files** activity. You can use Organization folders for these archive activities if you do not want to allow users to delete the archived mail items.

Shortcut-Historical activity

For User Delete to work on mail items shortcut using the Shortcut-Historical activity, select a Personal or Community mapped folder on the Mapped Folder page of the Activity wizard.

 **Note:** Select Organization folders for **Shortcut-Historical** activities to disallow users from deleting archived mail items.

Procedure

To create activities, refer to the chapter [Configuring Email Activities](#) on page 323.


Configuring the Delete-User Initiated Delete activity

This section describes how to configure the Delete-User Initiated Delete activity.

Introduction

The Delete-User Initiated Delete activity performs the following:

- Processes the delete requests in user mailboxes that were created when users chose to delete mail items from the archive.
- Passes the information to the Native Archive for further processing.
- Removes the delete requests from the user mailboxes.

 **Note:** The **Delete-User Initiated Delete** activity is not involved in user deletes initiated from Search.

Prerequisites

In the Dell EMC SourceOne console, perform the following:

- Configure a Worker to process **Delete-User Initiated Delete** jobs.
- Specify a date range using the **Archive deletion eligibility period** option in the **Global Settings** dialog box.

Best practices

Processing delete requests affects system performance. To minimize this impact, follow these guidelines when you create a Delete-User Initiated Delete activity.

- Avoid scheduling **Delete-User Initiated Delete** activities when other activities are scheduled, or when data is being disposed from the Native Archive.
- In the **Archive deletion eligibility period** option in the **Global Settings** dialog box, specify a narrow date window. Doing so limits the number of volumes, indexes, and database partitions that are affected.

Procedure

To create a **Delete-User Initiated Delete** activity, refer to the chapter [Configuring Email Activities](#) on page 323.

Detailed job logs for User Delete activities

If you select the Enable Detailed Logging checkbox when you create a User Delete activity, then when the activity runs, it will log the following:

- The configuration of the activity.
- The mail items that are deleted from the archive.

Troubleshooting the address cache for User Delete

This section describes how to troubleshoot the address cache for User Delete.

Two Dell EMC SourceOne components use a cache of internal addresses to determine internal recipients for ownership of mail items:

- **Journal** activities that archive to a Personal or Community mapped folder
- The **Folder Conversion** utility

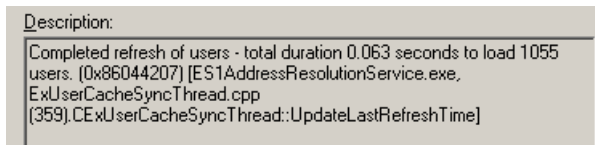
Until the cache of internal addresses builds successfully, those **Journal** jobs fail and the **Folder Conversion** utility waits.

To troubleshoot problems with this address cache, view the Event log that displays informational and error messages for the Address Resolution service.

Successful

If the Address Resolution service successfully updates the list of users in memory, then an informational message appears in the Event log.

Figure 188 Successful update message

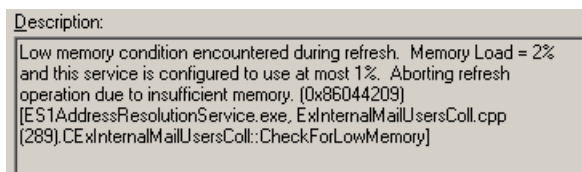


The information includes the number of users who are loaded into memory and the amount of time it took to perform the load.

Low memory error

Address Resolution Service is allowed to consume up to 60% of the system memory, although it is expected to use a much lower percentage. If the Address Resolution service does not have enough memory to update the list of users, then a low memory error message appears in the Event log

Figure 189 Low memory message



To resolve this problem, perform one or both of the following steps:

- Evaluate the processes running on the server. If one or more processes are consuming an abnormally large amount of memory, stop or restart those processes.
- Increase system memory.

Refresh error

If the Address Resolution service encounters other errors when it tries to update the list of users in memory, then an error message appears in the Event log.

Figure 190 Refresh error message

```

Description:
Errors were encountered during refresh run. Next refresh run attempt will
be 60 minutes later or whenever a refresh is triggered through the
database. (0x86044205) [ES1AddressResolutionService.exe,
ExUserCacheSyncThread.cpp
(220).CEXUserCacheSyncThread::TryRefresh]

```

The Address resolution service tries to update the user list again in 5 minutes.

Viewing detailed job logs for User Delete

This section describes the detailed job logs for User Delete.

Prerequisites

Review the following prerequisites:

- The location of the detailed log files is specified during installation of the Dell EMC SourceOne Worker Server software.
- Enable detailed job logging.

Accessing detailed job logs

Perform the following procedure to access detailed job logs for User Delete.

Procedure

1. In the Dell EMC SourceOne console, select **Operations > Job Management**.
2. Select the **Delete** job in the job list.
3. At the bottom of the **preview** pane, click the link to the detailed job log.

Understanding detailed job logs

A log file with a unique file name is created for each Delete-User started Delete job or Delete job.

The detailed log contains the following information:

- Job information:
 - The name of the user that started the delete
 - Date and time
 - Activity, task, and job IDs

- Summary (number of items that are processed, succeeded, and failed)
- Details for each item:
 - Item identification: Subject, Date, EntryID, mapped folder (business folder)
 - Status:
 - Successfully deleted: UDA ownership has been removed, which results in removal of the mail item from the archive after the last owner is removed.
 - Failed to be deleted.
 - Not found: If ownership was not found on a folder, then the job log does not report success or failure, because ownership did not exist.

Maintaining detailed job logs

Manually delete old job logs. Unlike Dell EMC SourceOne trace logs, the detailed job logs are not overwritten. SourceOne does not clean up old job log files automatically.

APPENDIX

Differences between Elasticsearch and ISYS

This section includes the following topics:

- [Elasticsearch non-supported characters](#)..... 512
- [Old ISYS indexes not automatically deleted](#) 512
- [Search Expression field may work differently between ISYS and Elasticsearch](#)..... 512
- [Search results from Elasticsearch and ISYS indexes are different for Japanese numbers and the date](#)..... 513
- [Elasticsearch and ISYS indexing Document ID](#)..... 513

Elasticsearch non-supported characters

Elasticsearch index does not correctly index and query the following non-alphanumeric characters: @ \$ & %. When performing a search, remove non-supported non-alphanumeric characters from the search criteria. These characters act as punctuation in an Elasticsearch index.

Old ISYS indexes not automatically deleted

Old ISYS indexes are not automatically deleted after ISYS indexes are converted to Elasticsearch, resulting in the unnecessary use of disk space.

To delete old ISYS indexes, perform the following:

1. Ensure that all Indexes have been converted to Elasticsearch from the SourceOne Console.
2. In the command prompt, run the following query:

```
"dir \\your full index path\*.cfg" /b /s >C:\ISYS_Indexes.txt
```

A list of all ISYS index set folder paths appears in the text file.

3. Open the `ISYS_Indexes.txt` file using Notepad.

The document will open.

4. Click **Edit**, and then select **Replace** from the drop-down list.
5. Replace all `ISYS.CFG` configuration names with `" /s /q`.
6. Replace all `\\` with `rd"\\`.

The modified output will appear like the following:

```
rd "\\Master\Index\Archive test\201512\001\" /s /q
```

7. Rename the `ISYS_Indexes.txt` to `.CMD`.
8. Run the script. All ISYS index set folders are deleted.

Only Elasticsearch index set folders remain in the index folder.

Search Expression field may work differently between ISYS and Elasticsearch

Build and test search expressions term-by-term to ensure that search expressions work as intended. After folders are converted to be indexed with Elasticsearch, any existing ISYS Search Expression must be retested against Elasticsearch. Existing Search Expressions may work differently between ISYS and Elasticsearch.

Elasticsearch does not support the following:

- ISYS proximity syntax `/#,#/`
- ISYS XOR
- ISYS EXCEPT

- ISYS BUTNOT
- ISYS paragraph proximity

Search results from Elasticsearch and ISYS indexes are different for Japanese numbers and the date

Search results from Elasticsearch and ISYS indexes are different for Japanese numbers and the date.

By default SourceOne uses ISYS as its indexing and search platform. You can install and configure Elasticsearch to enhance index and search performance.

Elasticsearch and ISYS indexing Document ID

The Document ID from an Elasticsearch index differs from a Document ID from an ISYS index.

Document IDs from an Elasticsearch index are prefixed with the following number sequence:

00000000

Document IDs for the same content from an ISYS index do not include the same number sequence as Elasticsearch number sequence.

GLOSSARY

A

Activity An activity defines a specific type of work for EMC SourceOne to perform, including the environment that it will be perform in and when it is performed. For example, Archive Email, Shortcut Email, and Archive Email are all activities. An activity component uses the information that is defined by the activity to create one or more jobs that actually perform the work. Activities are grouped in the EMC SourceOne console using policies.

Administrative Search A type of search where certain users can search for and view all messages even messages of all other users in the mail archive.

Administrative Service A service that is used by the Native Archive. This service runs on each server that is part of the Native Archive to announce the startup of the server and to inform other Native Archive Servers that this server is running. The Administrative service can also process commands.

Archive Folder Contains volumes and indexes in the message archive. Archive folders are organized using automatically-created monthly folders.

B

BCC journaling A kind of Exchange journaling with the ability to capture Bcc recipient information. When Bcc journaling is enabled, Exchange captures all recipients (including Bcc recipients) that are known at the originating server. If this recipient list includes hidden distribution lists, query-based distribution lists, or distribution lists that are expanded on another server, the recipients for these lists are not in the journaled mail.

D

Data access component (DAC) Mechanism by which all services and COM objects within EMC SourceOne communicate with the EMC SourceOne database. The DAC resides on Worker Servers and on the computer that hosts the EMC SourceOne console.

Data source The location from which EMC SourceOne collects messages or to which EMC SourceOne archives messages. A journaling mailbox on an Exchange mail server is an example of a data source.

Data source name (DSN) A named connection to a database. Typically used with ODBC.

Developer A person who customizes an EMC SourceOne system using documented interfaces, scripts, and interfaces.

Direct read A DiskXtender setting whereby files that have been cleared from the extended drive are read directly from the media rather than being copied back to the extended drive when requested.

DiskXtender An EMC product that allows you to "extend" the capacity of the EmailXtender storage drive by automatically writing .emx files to other storage media.

E

Email administrator A person who implements policies in the messaging system, such as maintaining and supporting email messaging services for a large community of users. An Exchange administrator or a Domino administrator are examples of email administrators.

Email User A person who views, composes, and manages their messages using an email client, such as Outlook or Notes. The email user may select messages for their personal archive and delegate access to their personal archives to other users if the mail server supports it.

EMC Centera® A line of disk-based storage devices that are deployed on a Redundant Array of Independent Nodes (RAIN). EmailXtender can write files to EMC Centera through DiskXtender.

EMC Cloud Tiering Appliance (CTA) EMC product that provides policy-based file tiering, archiving, and migration. CTA was formerly known as EMC File Management Appliance (FMA). You can launch the CTA console within the EMC SourceOne console.

EMC Message Format A message format that is created by EMC for common use by applications that deal with email messages, such as EMC SourceOne. EMCMF was created as a single message format that can contain existing message formats, such as Microsoft Exchange .msg files, IBM Lotus Notes .onm files, and RFC SMTP or MIME .eml files.

EMC SourceOne An enterprise-level solution that collects, organizes, retains, and retrieves email messages and attachments from Exchange and Domino mail servers as well as from other sources. You can use EMC SourceOne to reduce the space that is required for the mail servers or to comply with legal requirements for archiving email messages. EMC SourceOne stores email messages and attachments in the Native Archive. You can also use Discovery Manager with EMC SourceOne.

EMC SourceOne administrator A person who installs, configures, and manages an EMC SourceOne system. Configuration and management is primarily done using the EMC SourceOne console.

EMC SourceOne Console A graphical user interface that allows the EMC SourceOne administrator to configure and manage an EMC SourceOne system. The EMC SourceOne console is implemented as a Microsoft Management Console (MMC) snap-in.

EMC SourceOne Discovery Manager Discovery Manager is an EMC product for the discovery of email in archiving environments in response to legal or regulatory notice or corporate policy complaint. Discovery Manager, built around a legal matter metaphor, is a separate, chargeable application option to EMC SourceOne.

EMC SourceOne File Mover Agent Component of EMC SourceOne that moves Microsoft Office 365 journal report files to be used by the Journal activity.

EMC SourceOne Offline Access An additional EMC SourceOne product that allows users to retrieve shortcut messages while not connected to the network.

Envelop Journaling A person who views, composes, and manages their messages using an email client, such as Outlook or Notes. The email user may select messages for their personal archive and delegate access to their personal archives to other users if the mail server supports it.

Exchange Dumpster Microsoft Outlook moves items such as email messages, appointment, meetings, contacts, and tasks, into a location that is known as the Exchange Dumpster when a user either:

- Deletes an item from the Deleted Items folder.
- Performs a shift-delete after selecting an item.
- Changes an item. The original version is moved to the Exchange Dumpster.
- Accepts an appointment or a meeting.

For Microsoft Exchange versions before Server 2010, Outlook moves items into a view stored per a folder that is known as Dumpster 1.0. For Microsoft Exchange Server 2010 and later, Microsoft Outlook moves items to a Recoverable Items folder, which is located within the Non-IPM subtree of the user's mailbox that is known as Dumpster 2.0. The Recoverable Items folder contains subfolders as described in the following list:

- Deletion—Stores items in this folder when a user either:
 - Deletes an item from the Deleted Items folder.
 - Performs a shift-delete after selecting an item.
- Versions—This folder contains the original version of a changed item, including accepted appointment or meeting items.
- Purges—If a user purges an item when using Recover Deleted Items, the item moves from the Deletions folder to the Purges folder.

Extended Drive In DiskXtender, an NTFS volume (such as a hard drive), or partitioned part of a hard drive for which DiskXtender provides file migration services by moving files to media and fetching files from media according to the parameters you set.

F

Folder Contains all volumes and indexes. Folders can be archive folders in a message archive or mapped folders that are virtual folders which map to archive folders.

Full-text Indexing An index of all available text within the header, message, or attachment of an email. Indexes are created to allow fast searching of the Native Archive.

I

IBM Lotus Domino database Stores Domino information, such as email messages. This database exists as a file with the `.nsf` extension. The Domino journaling utility automatically creates an `.nsf` file as a mailbox connector when it is installed. If users create private `.nsf` mail databases, you can use EMC SourceOne to archive messages from them.

Index Server One or more servers, called Native Archive Servers, performing the indexing role within the Native Archive. This server is used to index archived messages, which include content scraping, creating content caches, distributing content to indexes, indexing, re-indexing, and disposing of indexes.

J

Job The scheduled instance of an activity. For example, a user of the EMC SourceOne console creates a Domino shortcut activity to run every night of the week at 11:00 PM. At the end of seven days, there would have been seven jobs that are created and run by this activity, assuming only one job was created for each run.

Job Dispatcher A process on the Worker computer that registers the Worker computer with the activity database and scans the Job table in the activity database for work. The job dispatcher compares the job types of scheduled jobs against all registered activity components to determine if there is an activity component capable of running the jobs. If a registered activity component is found, the job dispatcher locks the job and transfers execution to the activity component.

Job Scheduler Service that creates and schedules jobs from activities. If a Worker or job fails, the job scheduler is responsible for checking the status of Worker Servers and rescheduling jobs.

Journaling Is the ability to copy, in real-time, messages that are received and delivered by a mail server. EMC SourceOne allows you to use the Journal activity to journal messages from an Exchange mail server, a Domino mail server, or both. After the messages have been journaled they can then be archived, shortcut, or searched.

Journaling Issues Folder Contains any unsuccessfully processed messages from any of the target folders that are defined as part of the associated SMTP Journaling Group. The journaling issues folder is used by the Journal activity to process email content from an Office 365 environment.

Journal Report An SMTP message that is generated by Exchange Online from the original message that includes the original message as an attachment. Journal reports are used to pass messages from an Office 365 Exchange server to Email Management.

M

Mail Server A mail server is an application that receives incoming email from local users and remote senders and forwards outgoing email for delivery. A computer that is dedicated to such an application can also be called a mail server. Microsoft Exchange, IBM Lotus Domino, and sendmail are mail server applications.

Mapped Folder Virtual folders which are associated with archive folders.

Message Archive Server One or more servers performing the message archive role within the Native Archive. These servers, called Native Archive Servers, are used to archive messages, which include journaling, historical archiving (mailboxes, PST files, and NSF files) and user-directed archiving.

Message Ingestion	The process of bringing a message into the EMC SourceOne system. Message ingestion includes retrieving the message, processing the message, applying any applicable rules to the message, and then archiving the message, unless the rules determine otherwise. Messages can be ingested from multiple sources, including Exchange, Domino, or SMTP mail servers, or instant message proxy servers.
Message Store	A message store contains the mailboxes for a mail server. An Exchange message store is referred to as a Mailbox Store. A Domino message store is referred to as a mail database.
Messaging Application Program Interface (MAPI)	A Microsoft Windows program interface that EMC SourceOne uses to access address books and to retrieve messages from Exchange mail servers.
Metadata	Metadata is information about data, such as when the data was modified, or security associated with the data .
Microsoft Exchange Personal Folder	Stores Microsoft Exchange content in an external file. You can use EMC SourceOne to archive messages from .pst files.
Microsoft Management Console (MMC)	Extensible common presentation service for managing applications that are used by administrators to manage Workers, activities, and so on. The EMC SourceOne console is implemented as an MMC snap-in.
Microsoft Office 365	A cloud-based implementation of Exchange (Exchange Online) and SharePoint (SharePoint online). Email Management can journal email content from Office 365.
Monthly Folder	Subfolders within the archive folders. The archiving process creates monthly folders to organize the archived content and associated full-text indexes by month.
N	
Native Archive	A horizontally scalable archive that includes the data store, message database, and full-text indexes. The Native Archive can be configured to allow separate roles to be performed on one or more separate computers. These roles are: message archive server, index server, search server, and retrieval server. These computers are referred to as Native Archive Servers.
Native Archive Server	A computer that is used to perform a computing role within the Native Archive.
P	
Policy	A logical grouping of one or more related activities in the EMC SourceOne console.
R	
Retention Period	A folder-level setting that allows you to track how long volumes exist in the EmailXtender system. They are designed to help you to meet legal retention requirements by preventing you from deleting volumes before the specified amount of time has passed.

Retrieval Server One or more servers, called Native Archive Servers, performing the retrieval role within the Native Archive. This server is used to retrieve archived messages.

Rules Criteria that you configure to organize email archives. Rules are hierarchical, and can be nested up to three levels deep. After rules are defined, multiple activities can share rules.

S

Search Server One or more servers, called Native Archive Servers, performing the search role within the Native Archive. This server is used to search archived messages.

SharePoint Archiving The type of archiving used to store content from a Microsoft SharePoint server. This archiving is performed in EMC SourceOne using the SharePoint archiving activity.

SharePoint External BLOB Storage (EBS) SharePoint External BLOB Storage (EB) is an optional storage management feature that automatically stores BLOB content in the Native Archive instead of in the SharePoint SQL Server.

SharePoint Search SharePoint users can search for SharePoint content that was archived in the EMC SourceOne Native Archive, even if the original SharePoint site no longer exists. Users access this search through the SharePoint Search portal.

Shortcut Pointers that are placed on the mail server to copies of messages that are archived in EmailXtender.

SMTP Abbreviation for Simple Mail Transport Protocol. Messages sent using this protocol are typically in MIME (Multipurpose Internet Mail Extensions) format and as files typically have the `.eml` file name extension. Email Management can process SMTP messages.

SMTP Journaling Group A defined set of folders that are used by the Journal activity when processing Microsoft Office 365 email content.

T

Task A task is used by the activity component to specify configuration information for a job, such as the schedule, which is based on a specific activity. A task generates one or more jobs. A task cannot be configured from the user interface.

U

User-directed Archiving A type of archiving that allows a mail user or mail application to direct messages to a specific folder in EMC SourceOne for archiving.

V

Volume Flat, portable files of a configurable size containing archived messages that are organized by month. Also called container files or `.emx` files.

W

Worker A networked computer that can perform one or more EMC SourceOne jobs. There can be any number of Workers. A Worker can also be configured to run specific jobs.

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