

# **EMC<sup>®</sup> Documentum<sup>®</sup> Webtop**

**Version 6.5 SP2**

## **Email Migration Guide**

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EMC Corporation  
*Corporate Headquarters:*  
Hopkinton, MA 01748-9103  
1-508-435-1000  
[www.EMC.com](http://www.EMC.com)

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# Preface

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This manual describes how to migrate existing email messages of the type `dm_email_message` and format `msg`, or subtypes, to type `dm_message_archive` type (also known as “EMCMF”) or subtypes.

## Intended Audience

This manual is intended for administrators who want to migrate existing email messages of the type `dm_email_message` and format `msg`, or subtypes, to type `dm_message_archive` type (also known as “EMCMF”) or subtypes.

## Revision History

The following changes have been made to this document.

Revision Date	Description
June 2009	Initial publication.



## Overview

Webtop 6.5 SP1 or higher, DCO, and Documentum 5.3, 6.0, and 6.5 repositories can now support `dm_message_archive` objects in the proprietary EMCMF format. This format encapsulates the content, metadata, and attachment information as a single unit of information.

The following features have been enhanced to support the EMCMF format:

- **Import:** When a user imports an email message (.msg), the email message converts to EMCMF format and is stored as a `dm_message_archive` type. All attachments in the email are imported and related to the email.
- **Export:** When a user exports an EMCMF object, the object converts to native email format (.msg) for viewing by Microsoft Outlook.
- **View Properties and Listing pages:** The Properties and Listing pages have been enhanced to show email-centric attributes such as To, From, Date Sent and Subject.
- **Transform:** EMCMF messages can be transformed to HTML, XML, or PDF.

To take advantage of these `dm_message_archive` enhancements, migrate existing email messages of the `dm_email_message` object type (and its subtypes) and the msg format to the `dm_message_archive` type (EMCMF) or one of its subtypes.

EMC Documentum provides utilities to perform the migration of `dm_email_message` objects to `dm_message_archive` objects. The email migration utility migrates `dm_email_message` objects to `dm_message_archive` objects and converts the `dm_message_archive` `message_id` attribute to the 6.5 SP2 format; whereas the `message_id` conversion utility only converts the `dm_message_archive` `message_id` attribute to the 6.5 SP2 format.

**Note:** These utilities report if there are any `dm_email_message` objects that need to be migrated (and can be executed as many times as required).

### **To migrate `dm_email_message` objects and enable support of `dm_message_archive` in your Documentum system installation:**

1. Create a test copy of the repository that contains the `dm_email_message` objects to migrate.  
See the *Documentum Content Server Installation Guide*: “Creating a Repository Copy to Test an Upgrade” section in Chapter 4, “Preparing for Content Server Installation”.
2. Make sure your system environment meets the hardware and software requirements in and [Chapter 2, Hardware and Software Requirements](#).
3. Install and configure the email migration utilities.  
See [Chapter 3, Install and Configure](#).

4. Perform any of these actions that apply to your system installation:

- For 6.5 repositories, use the email migration utility to migrate dm\_email\_message objects to dm\_message\_archive objects.

See [Chapter 5, Migrate Email Messages to EMCMF Format](#).

**Note:** Do not run the message\_id conversion utility, because the email migration utility also converts the dm\_message\_archive message\_id attribute to the 6.5 SP2 format.

- For 5.3 and 6.0 repositories—in which the dm\_email\_message objects have already been converted to dm\_message\_archive objects—and that you want to upgrade to 6.5, first upgrade the repositories to 6.5 and then use the message\_id conversion utility to convert the dm\_message\_archive message\_id attribute.

See [Chapter 4, Convert dm\\_message\\_archive message\\_id Attributes](#).

**Note:** You must use the message\_id conversion utility, because the process of upgrading to 6.5 does not convert the dm\_message\_archive message\_id attribute to the 6.5 SP2 format.

- For 5.3 and 6.0 repositories, use the email migration utility to migrate dm\_email\_message objects to dm\_message\_archive objects.

See [Chapter 5, Migrate Email Messages to EMCMF Format](#).

**Note:** In versions 5.3 and 6.0, the dm\_message\_archive message\_id attribute is not converted to the 6.5 SP2 format..

5. Schedule the appropriate dates for migrating your production repository depending on how long the email migration utility takes to complete the migration.
6. To enable import of email messages in the EMCMF format in Webtop 6.5, add the <messageArchive-support> element structure to the app.xml file.

See [Chapter 6, Enable the EMCMF Format in WDK-based Applications](#).



# Hardware and Software Requirements

These topics are included:

- [Hardware requirements, page 9](#)
- [Software requirements, page 9](#)

## Hardware requirements

In addition to the minimum operating system hardware requirements, you must have approximately 1 GB of temp space on the machine on which you run the email migration utilities.

## Software requirements

The machine on which you run the email migration utilities requires the following software:

- Windows XP SP2 (recommended), Windows 2003 Server or Windows Vista
- Microsoft Outlook 2007 SP1
- JDK 1.5
- DFC 6, if you are running the email migration utilities against Content Server 5.3 or 6.0
- DFC 6.5, if you are running the email migration utilities against Content Server 6.5

Content Server 5.3 or 6 SPx requires the following software:

- For Content Server 5.3 only: You must request Content Server 5.3 SP6 hotfix with bug fixes for 159746 and 170812 from customer support.
- Documentum Client for Outlook (DCO) 5.3 SP6 DocApp (in the `Documentum_Client_for_Outlook_5.3_SP6_DocApps.zip`)
- EmailMessageMigrationService DocApp (included in `EmailMigration.zip`)

**Note:** Use Documentum Application Installer (DAI) 5.3 SP5.5 Update 1 to install DocApps. For instructions about using DAI to install DocApps, see the *DAI User Guide*.

Content Server 6.5 SPx requires the following software:

- For Content Server 6.5 SP1 only: You must request the Content Server 6.5 SP1 hotfix with the bug fix for CS-7130 from customer support.
- Documentum Client for Outlook (DCO) 5.3 SP6 DAR (in the `Documentum_Client_for_Outlook_5.3_SP6_for_CS6.5_DARS.zip`)
- `EmailMessageMigrationService` DAR (included in `EmailMigration.zip`)

**Note:** Use Documentum Composer 6.5 to install DARs. For instructions about using Composer and the DAR Installer Plugin to install DARs, see the *Composer User Guide*.

# Install and Configure

### To install and configure the message\_id conversion and email migration utilities:

**Note:** *DOCUMENTUM* is the path to the Documentum user directory (typically, `C:\Documents and Settings\your_user_name\Documentum` or `C:\Documentum`, where *your\_user\_name* is the user name that you were logged in as when you installed your first Documentum product).

1. Unzip `EmailMigration.zip`.
2. On the machine on which the email migration utilities are installed, specify the repository against which the email migration utilities are to be executed in the `dfc.docbroker.host` and `dfc.docbroker.host.port` properties in the `DOCUMENTUM\config\dfc.properties`.

For example:

```
dfc.docbroker.host[0]=10.10.10.10
dfc.docbroker.port[0]=1489
```

3. For Content Server 5.3 or 6.0, deploy these DocApps (using Documentum Application Installer (DAI)) to the global or target repository:
  - Documentum Client for Outlook (DCO) 5.3 SP6 DocApp
  - EmailMigration DocApp in  
`EmailMigration\EmailMessageMigrationService\DocApp\`  
`EmailMessageMigrationService.zip`.
4. For Content Server 6.5, deploy these DARs (using Documentum Composer and the DAR Installer Plugin) to the global or target repository:
  - Documentum Client for Outlook (DCO) 5.3 SP6 DAR
  - `EmailMigration\EmailMessageMigrationService\ DAR\`  
`EmailMessageMigrationService.dar` (if you will be using the email migration utility)
  - `EmailMigration\EmailMessageIDConversionService\`  
`MsgArchiveMsgIdConversionService.dar` (if you will be using the message\_id conversion utility)

5. If you will be using the message\_id conversion utility, set its logging configuration in `DOCUMENTUM\config\log4j.properties`; for example:

```
#-----MsgIdConversionUtil-----
# Enable log messages for MsgIdConversionUtil
log4j.category.MsgIdConversionUtil=DEBUG,MsgIdConversionUtil
log4j.appender.MsgIdConversionUtil=org.apache.log4j.RollingFileAppender
log4j.appender.MsgIdConversionUtil.File=DOCUMENTUM/logs/MsgIdConversionUtil.log
```

```
log4j.appender.MsgIdConversionUtil.MaxFileSize=100KB
log4j.appender.MsgIdConversionUtil.layout=org.apache.log4j.PatternLayout
log4j.appender.MsgIdConversionUtil.layout.ConversionPattern=%d{HH:mm:ss}%p
%c %m %n
```

6. If you will be using the email migration utility, perform these steps:

a. Run:

- For Content Server 6.5, the EmailMigration\ExMRE Installers\ES1\_MRE\ES1\_MRE.exe installer, or
- For Content Server 6.0 or 5.3, the EmailMigration\ExMRE Installers\ExMRE5\ExMRE5.exe installer.

b. Set the email migration utility logging configuration in *DOCUMENTUM\config\log4j.properties*; for example:

```
#-----Email Migration Util -----
# Enable log messages for Email Migration Utility
log4j.category.EmailMigrationUtil=DEBUG,EmailMigrationUtil
#EmailMigrationUtil Appender
log4j.appender.EmailMigrationUtil=org.apache.log4j.RollingFileAppender
log4j.appender.EmailMigrationUtil.File=DOCUMENTUM/logs/EmailMigrationUtil.log
log4j.appender.EmailMigrationUtil.MaxFileSize=100KB
log4j.appender.EmailMigrationUtil.layout=org.apache.log4j.PatternLayout
log4j.appender.EmailMigrationUtil.layout.ConversionPattern=%d{HH:mm:ss}%p
%c %m %n
```

# Convert dm\_message\_archive message\_id Attributes

If you enabled email conversion to the EMC MF format in 6.5 SP1 or earlier, you must run the message\_id conversion utility on Content Server 6.5 SP2, because:

- The message\_id format has been changed between in 6.5 SP2.
- The message\_id length was changed from 24 to 42 characters in 6.5 SP1.

The message\_id conversion utility updates these attributes:

- message\_id: Converts its format to that of 6.5 SP2 and lengthens it from 24 to 42 characters, if required.
- message\_id\_timestamp
- conversation\_id
- is\_encrypted
- retention\_state\_date (if it is not already set)

**Note:** message\_id changes do not affect a message's renditions, attachments, ACLs, lifecycles, relations, links, subscriptions, and workflows.

The following dm\_message\_archive objects are not processed and errors for these objects are logged:

- Frozen documents (r\_immutable\_flag set to true)
- Messages that are part of formal records
- Messages with a retention policy
- Messages that are references to objects in another repository

## Run the message\_id conversion utility

To run the message\_id conversion utility:



**Caution:** Because the original dm\_message\_archive objects that were migrated are deleted after migration has completed (and the migration utility does not back them up), you must back up the repository to retain those original dm\_message\_archive objects. So, if migration fails, you can restore the repository from your backup.

1. Verify that you have write privileges on your user home directory's temp directory; for example, `C:\Documents and Settings\your_user_name\Local Settings\Temp`, where *your\_user\_name* is the user name of the user account you are logged in as.

**Note:** The temp space is cleaned up when migration has completed.

2. Verify that your user account in the target repository has superuser privileges and does not belong to any group.
3. Double-click  
`EmailMigration\MessageIdConversionUtility\MessageIdConversionUtil.bat`.
4. Verify that your user home directory's temp directory has been cleaned up.

The message\_id conversion tool displays a count of the number of dm\_message\_archive objects found in the repository before conversion. Errors are written to a log file, `MsgIdConversionUtil.log`. The location of this log file is specified in `DOCUMENTUM\logs\log4j.properties` that is used by DFC.

**Note:** *DOCUMENTUM* is the path to the Documentum user directory (typically, `C:\Documents and Settings\your_user_name\Documentum` or `C:\Documentum`, where *your\_user\_name* is the user name that you were logged in as when you installed your first Documentum product).

# Migrate Email Messages to EMCMF Format

You use the email migration utility to migrate email .msg files to the EMCMF format on Content Server 5.3, 6.0, or 6.5. The email migration utility downloads an email .msg file to the client machine, converts it to a .emcmf file, and then imports it into the repository.

## How messages are migrated

Only the latest version of a `dm_email_message` (that is, the version with an implicit label of "CURRENT") is migrated; furthermore, its older and branched versions are not migrated and are deleted. A `dm_email_message` object can only be migrated to a `dm_message_archive` object. Consequently, a `dm_email_message` object cannot be migrated to a `dm_message_archive` subtype object. A `dm_email_message` subtype object can only be migrated to a `dm_message_archive` subtype object. Consequently, a `dm_email_message` subtype object cannot be migrated to a `dm_message_archive` object.

Before executing the migration, you must create the corresponding `dm_message_archive` subtypes. The `dm_message_archive` subtypes must have the exact same custom attributes—in name and datatype—as the corresponding `dm_email_message` subtypes. When you run `EmailMigrationUtil.bat`, you are prompted to map each `dm_email_message` subtype to its corresponding `dm_message_archive` subtype.

If deletion of a `dm_email_message` fails, an error message is logged.

Attachments are migrated in the following way:

- Embedded emails (nested emails) are converted to the new type.
- Attachments that are part of the msg file are extracted to a `dm_attachment_folder` folder, which is generally hidden, and linked to the `dm_message_archive` object.
- Renditions are unlinked from `dm_email_message` and linked to the converted `dm_message_archive` object.

**What is inherited from the old message object** — The following inheritance rules apply to migrated messages:

- ACL: The migrated message object inherits the ACL
- Links: The migrated `dm_message_archive` is linked to all locations in which the `dm_email_message` was linked, and the old `dm_email_message` is unlinked.

- Relations: Relations to dm\_email\_message are updated to point to the new message, and message containing relations are copied into the new message objects.
- Lifecycles: Messages that are part of a lifecycle will be replaced in the lifecycle with the migrated message.
- Workflows: Messages that are part of a workflow will be converted, and the converted message will be placed in the workflow.
- Subscriptions: Subscriptions to messages will point to the new dm\_message archive objects.

**What is not migrated** — The following kinds of objects are not migrated:

- Frozen dm\_email\_message objects
- Messages under retention policy
- Messages that are part of formal records
- Messages that are references pointing to another repository
- Messages that are part of a virtual document or that have versions that are part of a virtual document
- Duplicate dm\_email\_message objects that are copies of the same message content  
Only one of the dm\_email\_message objects is migrated and an error about duplicate messages and their corresponding object names and IDs are recorded in the log file.
- Custom TBOs and SBOs that are called during operations (for example, import, checkin, and so forth) on a dm\_email\_message object
- Custom Aspects that are attached to a dm\_email\_message object

**Note:** You must manually migrate the code for your custom TBOs, SBOs, and Aspects to work with dm\_message\_archive objects. See the *DFC Development Guide* for more information about developing TBOs, SBOs, and Aspects.

Messages that are not migrated are logged along with the reason they were not migrated. In the log file, search for EMAIL\_MIGRATION\_UTIL\_ERR to find the error messages. In addition, dm\_email\_message files that contain messages that have already been migrated cannot be migrated (and an error message for these duplicates is logged).

## Perform the email migration

**To perform the email migration:**



**Caution:** Because the original dm\_email\_message objects that were migrated are deleted after migration has completed (and the migration utility does not back them up), you must back up the repository to retain those original dm\_email\_message objects. So, if migration fails, you can restore the repository from your backup.

1. Verify that your user account in the target repository has superuser privileges and does not belong to any group.



2. Verify that you have write privileges on your user home directory; for example, C:\Documents and Settings\your\_name\Local Settings\Temp.

**Note:** The temp space is cleaned up when migration has completed.

3. Create dm\_message\_archive subtypes to which to map any dm\_email\_message subtypes. The dm\_message\_archive subtypes must have the exact same custom attributes—in name and datatype—as the corresponding dm\_email\_message subtypes. When you run EmailMigrationUtil.bat, you are prompted to map each dm\_email\_message subtype to its corresponding dm\_message\_archive subtype. If a dm\_message\_archive custom attribute does not have the same name as the corresponding dm\_email\_message subtype attribute, then the custom attribute is dropped—and an error that the subtypes could not be mapped is reported.

4. Verify that there is, at most, one default constraint on the dm\_message\_archive message\_id attribute—only this one constraint is migrated.

If there is more than one constraint, you must drop the additional constraints and then manually recreate them after migration execution has completed. You can verify the number of constraints on the dm\_message\_archive message\_id attribute by executing this DQL command:

```
SELECT name FROM dmi_index WHERE index_type IN (select r_object_id from dm_type
WHERE name = 'dm_message_archive') AND is_unique=1 AND attr_count=3
```

5. Double-click one of the following batch files and complete the instructions:

- For Content Server 6.5: EmailMigration\EmailMigrationUtility  
ForES1\_MRE\EmailMigrationUtil.bat
- For Content Server 6.0 or 5.3: EmailMigration\EmailMigrationUtility  
ForExMRE5\EmailMigrationUtil.bat

If there are any objects that are subtypes of dm\_email\_message, you are prompted to map each subtype to a corresponding dm\_message\_archive subtype.

Files are downloaded to:

```
C:\Documents and Settings\your_user_name\Local
Settings\Temp\EmailMigrationUtil\IN
```

For example:

```
C:\Documents and Settings\Administrator\Local Settings\Temp\EmailMigrationUtil\IN\
0906a0a980001469.msg
```

The converted file is saved in a separate folder having the name as the downloaded .msg file:

```
C:\Documents and Settings\your_user_name\Local Settings\Temp\EmailMigrationUtil\OUT\
xyz.msg\
```

For example:

```
C:\Documents and Settings\Administrator\Local Settings\Temp\EmailMigrationUtil\OUT\
0906a0a980001469.msg\499BB15EB2748AB7BBA34D8F.EMCMF
```

At the end of the migration the above folders are deleted.

6. Verify that your user home directory's temp directory has been cleaned up.
7. Verify that the repository's temp location, where the dm\_email\_message objects were temporarily stored, has been cleaned up.

## Trace email migration

A log file is generated during the email migration process. This file is named `EmailMigrationUtil.log`. The location of this log file is specified in `log4j.properties` that is used by DFC. The `log4j` file is in a `logs` subdirectory of the Documentum home directory, for example, `C:\Documentum\logs`. The following example from a `log4j.properties` file specifies a location for the migration utility log:

```
log4j.appender.EmailMigrationUtil.File=
C:/Documentum/logs/EmailMigrationUtil.log
```

The following information is recorded in the log:

- Invalid object type. If the objects passed to the utility are not `dm_email_message` or a subtype, they will not be migrated.
- Invalid object type mapping: If the migration mapping from a `dm_email_message` subtype cannot be performed to the specified `dm_message_archive` subtype, an error is logged.
- Email Object *object\_name (object\_id)*
  - is immutable
  - is under retention
  - is a reference
  - cannot be migrated, since it has versions that are part of a virtual document
  - Checking for older versions for *object\_name (object\_id)*. Email object *object\_name (object\_id)* is not the current version. Deleting *version\_label* for *object\_name (object\_id)*.
  - is checked out to *owner\_name*. Canceling checkout for *object\_name (object\_id)*.
  - found duplicate with same message ID

To find error messages logged by the email migration utility, search for `EMAIL_MIGRATION_UTIL_ERR`.

# Enable the EMCMF Format in WDK-based Applications

Only Webtop 6.5 can access EMCMF format email messages. To enable message archive support, you need to install these DARs and DocApps:

- On 6.5 content servers, install the DCO 5.3 SP6 DAR.
- On 5.3 and 6.0 content servers, install the DCO 5.3 SP6 DocApp.

Enabling this feature increases the Unified Client Facilities (UCF) initialization time, so the first content transfer operation may take some time.

### To enable importing email messages in the EMCMF format:

1. Install these DARs and DocApps:
  - On 6.5 content servers, install the DCO 5.3 SP6 DAR.
  - On 5.3 and 6.0 content servers, install the DCO 5.3 SP6 DocApp.
2. Add the following lines to `app.xml` (located in the custom directory).

**Note:** Refer to *Web Development Kit Development Guide* for details on these configuration elements.

```
<messageArchive-support>
  <enabled>true</enabled>
  <supported-file-format>
    <file-format>msg</file-format>
  </supported-file-format>
  <default-attachment-object-type>dm_document</default-attachment-object-type>
  <store-emf-object-as-archive>false</store-emf-object-as-archive>
  <skip-duplicate-messages>true</skip-duplicate-messages>
</messageArchive-support>
```

3. After you have enabled email conversion, open `wdk/contentXfer/ucf.installer.config.xml` and uncomment the `ES1_MRE.exe` executables. You must change the application version so that client browsers will detect the change. The following example changes the version and uncomments the executables by removing `<!--` and `-->` from the declaration:

```
<executables>
  <executable version="6.5.0"
    href="ES1_MRE.exe"
    installOptions='/s /v"/qn ADDLOCAL=ALL"'
    uninstallOptions='/x /s /v"/qn REBOOT=REALLYSUPPRESS"' />
</executables>
```

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