

Using the XMT Transmit Facility

Overview

Transmitting files is the preferred way of transferring datasets between z/OS sites. It is the best way of sending load libraries, object code, prepped ISPF panels but it will also work for source files, plain text files etc. It works for sequential files and partitioned datasets alike.

The XMT facility will 'transmit' datasets using either the IBM TRANSMIT program or the CBT SUPERXMT program (if installed).

The SUPERXMT program is available from the CBT tape in file number 830.

If the SUPERXMT program is available, it is used instead of the IBM TRANSMIT program.

The XMT facility adds the ability to select members by a generic pattern (i.e., ASL*) but if this list results in large numbers of member names (i.e., the number of names will exceed 256 characters) then you will need to download and install our modified version of SUPERXMT which is available from our website.

The XMT facility can produce a log and additionally add a message to the transmitted files.

Changes to the XMT Facility

The following enhancements have been added to the XMT facility.

- The ability to produce an index of the members being transmitted. This is ignored for sequential files. This index member can be kept in the original dataset or deleted after transmitting has been completed.
- The ability to produce a log of the actions taken by XMT. This can be written to a file, displayed on the screen, or not generated at all.
- The ability to add a message to the transmission file or files. In the case of multiple files, the same message will be attached to **all** files.
- The ability to suppress the IEBCOPY output usually generated by the IBM TRANSMIT command. You can specify the output class to write these messages to, if this is a 'throw away' output class then the output will be lost.
- Comments and blank lines are now allowed in the dataset list files.
- The full name of the output file is now displayed, and the suffix used changed to. XMI
- For a dataset list, datasets that are unqualified will be prefixed with the userid of the user executing XMT.
- For a dataset list, any dataset with the high-level qualifier of USERID() will have the USERID() replaced with the userid of the user executing XMT.
- For source libraries, a filter facility has been added to enable the members to be filtered by who last updated, the last modification date.



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Components of the XMT Facility

The XMT facility is comprised of two partitioned datasets and one sequential dataset. One of the partitioned datasets is the required REXX library containing several required members the other is the required ISPF panel library containing the prepped ISPF panels for XMT. The sequential file is a copy of this document as a PDF.

Rexx Library Contents

Exec Name	Description
ASLTESTR	Checks for an existing sequential file. If it finds one it empties it, if it doesn't find one it will allocate it.
CHECKDSN	Checks to see if a dataset name is a valid format and if it exists or not.
CNT	Counts the number of records in a dataset.
EDITREC	Invokes recovery services for EDIT if needed.
FINDMOD	Looks for a module name.
MEMMATCH	Checks a PDS for the existence of the member or member pattern (i.e., ASL*).
STRREPL	Replaces a target string with a different string.
XMT	This is the main entry point for the XMT facility.
XMTL	This handles a list of datasets to be transmitted.
XMTO	This handles a single file for transmission.

Panel Library Contents

Panel	Help Panel	Description
ASLXMT01	ASLXMT1H	The multi or single file selection panel.
ASLXMT02	ASLXMT2H	Single sequential file options panel.
ASLXMT03	ASLXMT3H	Single load library options panel.
ASLXMT04	ASLXMT4H	Multiple files transmission options panel.
ASLXMT05	ASLXMT5H	Allows edit of the message dataset
ASLMXT06	ASLXMT6H	Output file overwrite confirmation panel.
ASLXMT07	n/a	Progress pop-up as used by XMTL
ASLXMT08	ASLXMT8H	Log browse selection panel.
ASLXMT09	ASLXMT9H	Single PDS file options panel.
ASLXMT10		Member filter pop-up panel

The sequential dataset is a binary copy of this document in PDF format.

Installing the XMT Facility

To install the XMT facility you will need to transfer the XMT file as a binary file. It is vitally important to transfer this file in binary format. Once the file is successfully transferred to your system, receive it using the standard IBM RECEIVE command. To do this navigate to TSO option 6 and enter the following.:



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RECEIVE *'your.dataset.name'*

Where *'your.dataset.name'* is the name you saved the supplied file under when you file transferred it.

Once the file is RECEIVED you will need to execute the UNPACK member. This will RECEIVE the REXX and ISPF panel libraries. To execute the UNPACK member enter the following on the TSO option 6 screen:

EX *'your.received.dataset.name(UNPACK)'*

Where *'your.received.dataset.name'* is the name of the file created when you received the file.

Alternatively, you can issue the 'EX' command from the member list:

```
File      Options  Keypad
-----
Menu  Functions  Confirm  Utilities  Help
-----
EDIT                                     Row 00001 of 00006
Command ===> _____ Scroll ===> CSR_
                                     ID
Name      Prompt      Size  Created      Changed
-----
$$$INDEX
$$$INSTAL
PDF
README
REXX
UNPACK
EX  _____
**End**
```

UNPACK will issue several prompts to allow site customization to take place:

```
You are about to extract the package XMT.
Reply Y to continue. Any other response to terminate
y
Lets go then.....
Enter the HLQ to use. Default is your own userid i.e. MIT001

Volume serial to install XMT on.
(Leave blank to use a default volume)

HLQ to use: MIT001
VOL to use:

Please do NOT try to reply to any prompts after this one
OK to continue? (Y or N)

```

Once all the prompts are replied to the XMT facility installation will proceed.



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Important: Do NOT reply to any further prompts that are issued. The installation process will take care of them.

Once the exec has finished you should read the \$\$INSTAL member of the PDS containing the UNPACK exec for details on how to complete the installation of the XMT facility.



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Using the XMT Facility

The XMT facility can be invoked either from the ISPF 3.4 panel or as a regular REXX exec but it must be run under ISPF. It can be used to transmit either a single file or multiple files.

```
Menu Options View Utilities Compilers Help
-----
DSLIS - Data Sets Matching ABBYDALE.XMT          Row 1 of 4
Command ==> _____ Scroll ==> CSR_

Command - Enter "/" to select action           Message           Volume
-----
xmt  ABBYDALE.XMT.ISPPREP                      ABBY03
      ABBYDALE.XMT.PDS                         ABBY03
      ABBYDALE.XMT.PDS.XMIT                   TEST01
      ABBYDALE.XMT.REXX                       ABBY01
***** End of Data Set list *****
```

Invoking XMT from the ISPF 3.4 Menu

Whether you are doing multiple files or a single file XMT is invoked simply by typing “xmt” next to the dataset. If you are transmitting multiple files, the dataset for the list of files is defined in the panell

If you only want to transmit one dataset and want to bypass the above screen, then you can invoke **XMT** with an optional parameter of **1** i.e.

```
Menu Options View Utilities Compilers Help
-----
DSLIS - Data Sets Matching ABBYDALE.XMT          Row 1 of 4
Command ==> _____ Scroll ==> PAGE

Command - Enter "/" to select action           Message           Volume
-----
xmt / 1 ABBYDALE.XMT.ISPPREP                      ABBY03
        ABBYDALE.XMT.PDS                         ABBY03
        ABBYDALE.XMT.PDS.XMIT                   SYSDA1
        ABBYDALE.XMT.REXX                       ABBY01
***** End of Data Set list *****
```

If you are running XMT as a Rexx command, you can use:

```
xmt 'yourdsname' 1
```



Using the XMT Transmit Facility

The first screen displayed will allow the user to decide whether to do a single file or multiple files:

The subsequent panel that will be displayed is dependent on the type of dataset being transmitted and if there are going to be multiple files or just a single file transmitted.

If you are going to transmit multiple files then you can enter XMT against any file on a 3.4 panels. For a single file the file next to where you enter XMT will be transmitted.

```
Menu Options View Utilities Compilers Help
----- Process Multiple Files? -----
D
C Command ==>
C ----- Called by XMT -----
X
* Do you want to TRANSMIT multiple files?
  Reply Y or N n (or R for a rescan)
  Press PFK3 to terminate
----- Copyright Abbydale Systems LLC 2017 - 2023 -----
----- Version 2.2 -----

Row 1 of 5
11 ==> CSR
Volume
-----
ABBY03
ABBY01
ABBY03
ABBY03
ABBY01
*****
```

ASLXMT01 Screen

If you select “R” for rescan the exec will search for the file transfer program that is to be used. This will enable the user to change to using SUPERXMT if it becomes installed.

The very first execution of XMT by a user will search for SUPERXMT and if it doesn’t locate it, then TRANSMIT will be used for all subsequent executions.



Single File Transfer

A Partitioned Dataset

If you select the single file option then the screen you see displayed next will depend on if the original dataset is a load library, a partitioned dataset or sequential file.

For a regular partitioned dataset, the following screen is displayed:

```

Menu Options View Utilities Compilers Help
Transmission Values Definition Panel For a Source PDS          USERID - MIT001
Option ==>
-----
| Date : 23/10/16           Time : 16:59           Julian Date: 2023.289 |
-----
Transmit dataset: ABBYDALE.TEST.PDS
Member Name (* for all members) ... *
Apply Member filters? (Y or N) .... N
-----
Index Options
-----
Do you want an index? (Y or N) .... N
Index Member Name ..... $$$$$XMI
Keep the Index Member? (Y or N) ... N
-----
Message Dataset Specification
-----
(Leave blank for no message, * for message prompt)
-----
Log Dataset Specification
-----
Do you want a log? (Y or N) ..... Y
IEBCOPY output class ..... 9
(leave blank for display on screen)
-----
Output Dataset Specification
-----
Target Dataset Name (If blank XMI will be suffixed)
ABBYDALE.TEST.PDS.XMI_____
-----
Node Name to be used ..... ABBYDALE
Userid to be used ..... MIT001_
-----
Press PFK3 to terminate
-----
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-----
4A 009/055

```

Partitioned Dataset Options Definition Panel



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Once the values have been entered (or the default accepted) press 'enter' and the file will be transmitted using the designated transmit program file. (Either TRANSMIT or SUPERXMT).

This panel has an option for filtering members based on modification data. These are by modification date and by last updated by TSO user data.

The filter panel is a popup panel. It is important to note that all your other options should be made before the pop-up is displayed (by entering a "Y" into the "Apply Member Filter" selection). When you do this, and press enter, the "Member Filter Panel" will be displayed.

```
Menu Options View Utilities Compilers Help
Transmission Values Definition Panel For a Source PD
Member Filter Panel
0
| Use "/" to select the option |
|
| Filter userid? _      Userid
| Exclude? ..... _    MIT001
|
|
| On .....           MM / DD / YYYY
| Before ...         -----
| After ...          10 / 16 / 2023
|
| Press PFK3 to terminate
|
| Copyright Abbydale Systems LLC
| 2017 - 2023
|
| (leave blank for display on screen
```

The Member Filter(ASLXMT10) Panel

Use a "/" to select the options desired. The options are cumulative. In other words, you can select member last updated by a user on a certain date.

Note: if you select all the options 'on, after and before' it will cause only members that have no 'last modified' date to be selected.

Use the "Exclude?" option to flip the userid selection to member updated by everyone except the userid in the panel.



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The userid field will be filled in with the TSO Id of the user running the exec, however, this can be overtyped.

You can use an asterisk (*) to supply a generic userid. i.e., MIT* will select any members that were updated by anyone with a userid starting MIT.

These filters are used in combination with the options selected on the partitioned dataset definition panel.

The date field will be filled in with the current date.

The logic for the date selection is:

"On" Selected	"Before" Selected	"After" Selected	Resultant Test
Y	N	N	Equal
Y	Y	N	Less Than or Equal
Y	Y	Y	Not updated
Y	N	Y	Greater Than or Equal
N	Y	Y	Not Equal
N	Y	N	Less Than
N	N	Y	Greater Than
N	N	N	All



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A Load Library

For a Load Library partitioned dataset, the following screen is displayed

```
Transmission Values Definition Panel For Load Library          USERID - MIT001
Option ==> _____
| Date : 23/09/22          Time : 20:05          Julian Date : 2023.265 |
-----
Transmit dataset: ABBYDALE.PROD.LOADLIB
                  Member Name (* for all members) ... * _____
-----
Index Dataset Specification
Do you want an index? (Y or N) ..... N
Do you want to keep the index? (Y or N) ..... N
Index dataset Name?
MIT001.INDEX _____
(If blank MIT001.INDEX will be used.)
-----
Message Dataset Specification
(Leave blank for no message, * for message prompt)
-----
Log Dataset Specification
Do you want a log? (Y or N) ..... Y
IEBCOPY output class ..... 9
(leave blank for display on screen)
-----
Output Dataset Specification
Target Dataset Name (If blank XMI will be suffixed)
ABBYDALE.PROD.LOADLIB.XMI _____
Node Name to be used ..... ABBYDALE
Userid to be used ..... MIT001_
Press PFK3 to terminate
-----
Copyright Abbydale Systems LLC 2017 - 2023
-----
4A 009/056
```

Load Library Options Definition Panel

Once the values have been entered (or the default accepted) press 'enter' and the file will be transmitted using the designated transmit program file. (Either TRANSMIT or SUPERXMT).



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A Sequential Dataset

For a sequential dataset the following screen is displayed:

```
File      Options  Keypad
Sequential File Transmission Values Definition Panel          USERID - MIT001
Option ==> 
-----
| Date : 23/08/24          Time : 13:20          Julian Date : 2023.236 |
-----
Transmit dataset:
      ABBYDALE.XMT.PDF
-----
      Message Dataset Specification
      (Leave blank for no message, * for message prompt)
-----
      Log Dataset Specification
      Do you want a log? (Y or N) ..... Y
-----
      Output Dataset Specification
      Target Dataset Name (If blank XMI will be suffixed)
      ABBYDALE.XMT.PDF.XMI_____
-----
      Node Name to be used ..... ABBYDALE
      Userid to be used ..... MIT001_
-----
      Press PFK3 to terminate
-----
      Copyright Abbydale Systems LLC 2017 - 2023
-----
4A                                             003/014
```

Sequential Dataset Options Definition Panel

Once the values have been entered (or the default accepted) press 'enter' and the file will be transmitted using the designated transmit program file. (Either TRANSMIT or SUPERXMT)



Multiple Dataset Transfer

```

Transmission Values Definition Panel                                USERID - MIT001
Option ==> _____

-----
| Date : 23/09/23          Time : 14:04          Julian Date : 2023.266 |
-----

Transmission Dataset List:
ABBYDALE.XMT.LIST(CRY)_____

----- All values will be applied to all datasets -----

Do you want an index? (Y or N) ..... N
Index Member Name ..... $$$$$XMI
Do you want to keep the index? (y or N)... N

----- Message Dataset Specification -----

(Leave blank for no message, * for message prompt)

----- Log Dataset Specification -----

Do you want a log? (Y or N) ..... Y
IEBCOPY output class ..... 9
(leave blank for display on screen)

----- Output Dataset Specification -----

Suffix Transmitted datasets with ..... XMI_____
(If blank XMI will be suffixed)

Node Name to be used ..... ABBYDALE
Userid to be used ..... MIT001_

Press PFK3 to terminate

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```

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Multiple Datasets Value Definition Panel

For multiple files to be transmitted a list of datasets should be provided. This list can be a member of a PDS or a sequential file. This list can be a mix of dataset type (i.e Load library, sequential of PDS). The format of the list is:

- One dataset per line.
- Blank lines are ignored.
- An asterisk as the first character is denote a comment.
- Invalid or missing datasets will be ignored.
- Upper and Lower case are permitted.



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```
File Edit Edit_Settings Menu Utilities Compilers Test Help
EDIT          ABYDALE.XMT.LIST(CRY) - 01.02          Columns 00001 00072
Command ==> _____ Scroll ==> CSR_
***** ***** Top of Data *****
000001 *
000002 *          List of CRYPTO datasets
000003 *
000004 ABYDALE.CRYPTO.ISPPLIB(aslcry*)
000005 ABYDALE.CRYPTO.SOURCE
000006          ABYDALE.CRYPTO.REXX
000007 ABYDALE.CRYPTO.LOADLIB
***** ***** Bottom of Data *****
```

Sample List Dataset

Notice the mix of dataset types and the use of a generic member selection (ASLCRY*).

Notice also that the dataset name can be anywhere on the line.

Using multiple files and file types enables a complete backup or transmission of a particular function.



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File Options Explained

The options available for file transmission will depend on the type of dataset being transmitted. The following table explains the options and indicates which file type they relate to. When multiple files are being transmitted the options specified on the panel will be used for all applicable datasets.

Option	Used for	Explanation
Member Name	PDS Load Libraries	Specifies which members to transmit. If it is left blank or an asterisk is defined, then all members will be selected. If you use a pattern (i.e., ASL*) then all members that start with ASL will be selected.
Do you want an Index?	PDS Load Libraries	If you want an index to be created in the source file reply "Y". The index will be transmitted with the source file. If the source file is a load library the index will be in a separate sequential file.
Index Name	PDS	This will be the name in the PDS that the index will be stored under. The index process will overwrite any similar named member.
Index dataset name	Load Libraries	This specifies the name of the index file for a load library. The file will be overwritten if it currently exists.
Keep the index?	PDS Load Libraries	If you want to keep the index that was created, then set this to "Y" otherwise the index file will be deleted when XMT is complete.
Message Dataset	All Libraries	The message dataset will allow for a message to be added to the XMT files. The message will be displayed on the users TSO screen when the files are RECEIVED. If no message dataset is provided. none will be added. The message dataset can be a member of a PDS or a sequential file, however the LRECL must be 80 bytes. Coding an * will prompt for the message to be added, however in the case of transmitting multiple files the message will be in a temporary file named : <i>userid.XMIT.MESSAGE.DATASET</i> This will then be added to every file in the list.
Do you want a Log?	All Libraries	If you want a log of the actions taken specify "Y". The log dataset will be named : <i>userid.XMIT.LOG</i>
IEBCOPY output class	All Libraries	This option allows you to specify the message class for the IEBCOPY messages. This will vary depending upon your site output class definitions. If you leave this option blank the IEBCOPY messages will be displayed on the user's screen.



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Option	Used for	Explanation
IEBCOPY output class (Cont.)		If you specify a 'throw away' JES output class no output will be retained.
Suffix Transmitted datasets with	All Libraries	This option will present itself differently for multiple files as opposed to single files. For multiple files you will get the choice to change the suffix to be used for all the files in the list. For single files you can overwrite the entire output file name.
Node Name to be used	All Libraries	This specifies the node name that will be used for the sending node of the transmission. This will be used for all datasets being transmitted.
USERID to be used	All Libraries	This specifies the userid name that will be used for the sending userid of the transmission. This will be used for all datasets being transmitted.

These panels will allow you to specify the dataset and member name that contains a list of datasets to be transmitted. When enter is pressed the member list is opened for edit. When the list is saved the processing of transmitting begins providing the data names are valid. If, by adding the suffix to a dataset name in the list, the length exceeds 44 characters the dataset is reduced by the least significant level until the length is 44 characters or less. If this results in a dataset name that exists, you are given the option to change the output dataset name or overwrite the existing dataset.

Whether a single file is being transmitted or multiple files the output dataset name(s) will have a suffix appended to them. The suffix can be defined by the user. The default suffix will be **XMI**. If, by appending a suffix the length will exceed 44 characters then the dataset name will be stripped back until it is able to be appended. This could cause a dataset to get overwritten if names get stripped back and end up with the same name for the transmitted datasets. In this case the facility will prompt you to allow you to change the name to be used rather than overwrite an existing dataset. ***Note: Source datasets names will always remain unchanged.***

Once the files are transmitted to the XMIT file then they are ready to be file transferred to a workstation. The files **must** be transferred as **binary** format otherwise the files on the workstation will be invalid.

Once you have transferred the file or files you can, if you are on Windows, view the files using XmitManager. The files can be sent to other sites (or used as a backup) if they remain in XMIT format.



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To restore the files the IBM program, RECEIVE, should be used once the files have be transferred to the required system. Remember that files must be transferred as **binary** format, or they will be corrupted when they are RECEIVE'd.



Using the XMT Transmit Facility

Summary of Changes

Date	By	Description of Changes
7 th Feb 2022	KEF	Corrected spelling and changed pictures.
9 th Aug 2023	KEF	Document changed to reflect the new version in the XMT facility.

