

ATM Version 7.5.1 Documentation Update

This document contains the following documentation updates for Adabas Transaction Manager Version 7.5.1:

- Required Usage of Load Library LX06/LX08
 - Documentation for the New ET Data Migration Utility
 - Additional Adabas Transaction Manager Error Codes
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Required Usage of Load Library LX06/LX08

The Adabas load library update LX06, which was originally delivered with the ATM 751 installation package, has been replaced by the load library update LX08 (ADA743.LX08). ADA743.LX08 can be used with either Adabas Version 7.4.3 or Adabas Version 7.4.4. LX08 must be used, together with the standard Adabas 743/744 library, by the ATM 7.5 daemon. LX08 must also be used for any Adabas Cluster Services databases or Adabas Parallel Services databases that run with parameter DTP=RM.

Documentation for the New ET Data Migration Utility

Originally, ATM Version 7.5.1 was shipped with an ET data migration utility, T1ETDAP, which was a Natural program, executed in a batch Natural session. More recently, a new, more flexible version of this utility, which is written in assembler, has been made available for z/OS systems in the ATM751.MVSL001 update library. The documentation for the new version of this utility is provided below.

- ET Data Location and ET Data Migration Requirements
- ET Data Migration Checklist
- Running the ET Data Copy Program
- Error Return Codes

ET Data Location and ET Data Migration Requirements

When Adabas Transaction Manager is in use, the location of ET data is determined by the ADARUN runtime parameter TMETDATA:

- The setting TMETDATA=ATM indicates that ET data is always stored in and read from the ATM transaction manager's database without regard to the Database ID indicated by the Adabas command.
- The setting TMETDATA=TARGETS indicates that ET data is stored during the commit process in all changed database that are running with DTP=RM. ET data is always read from the database specified in the Adabas command.

If the setting TMETDATA=TARGETS is used, no special action is required to set up ET data in the correct locations before using ATM.

If the setting TMETDATA=ATM is used, it may be necessary to transfer existing ET data from application databases into the ATM transaction manager's database.

If an application that uses ET data is capable of starting from an initial state where no ET data is stored, it can be run with ATM without migrating ET data into the transaction manager's database.

If, on the other hand, the current ET data contents of the application are required whenever the application is executed, the application's current ET data must be migrated into the ATM transaction manager's database. A utility program is provided in the ATM load library to perform the necessary migration. Usage of this utility program is described in the following sections.

ET Data Migration Checklist

The following checklist outlines the required steps in the ET data migration procedure:

1. Identify the ETIDs whose ET data needs to be migrated.
2. Identify the database(s) in which the ET data is currently stored.
3. For each database identified in step 2, use Adabas Online System to delete ET data for any ETIDs that were not identified in step 1.
4. For each database identified in step 2, run job ATMETDAT providing suitable parameter input. See the following section for further information on running this job.

Running the ET Data Copy Program

The sample JCL that follows can be adjusted and used to run the copy ET data program, ATPETD.

```
//ATMETDAT JOB (A),HUGO,MSGCLASS=X,CLASS=A
//*JOBPARM LINES=9999
//*
//*****
//*
//* THIS JOB EXECUTES ATM'S ET-DATA MIGRATION UTILITY
//*
//* STEP1 - READ ET-DATA AND OPTIONALLY STORE IT IN ATM'S
//* DATABASE
//*
//* INPUT : PARAMETERS, ET DATA IN SOURCE LOCATION
//* OUTPUT : REPORT, ET DATA IN TARGET LOCATION
//*
//* LOCALIZE ANY SITE-SPECIFIC JOB DETAILS, AND:
//* 1. THE LOAD LIBRARIES IN STEPLIB
//* 2. THE ADARUN PARAMETERS
//* 3. THE TMETIN INPUT PARAMETERS
//*
//*****
//*
//RUNPETD EXEC PGM=ATMPETD
//STEPLIB DD DISP=SHR,DSN=SAG.ATMvr1.MVSL001 <== L001 LIBRARY
// DD DISP=SHR,DSN=SAG.ATMvr1.LOAD <== ATM LOAD LIBRARY
// DD DISP=SHR,DSN=SAG.ADAvr1.LOAD <== ADABAS LOAD LIBRARY
//DDCARD DD *
ADARUN PROG=USER,SVC=xxx,MODE=MULTI,DBID=xxx <== SVC NUMBER, DBID
//DDPRINT DD SYSOUT=*
//TMETOUT DD SYSOUT=* <== ATPETD REPORT
```

```
//TMETIN DD *
FROM=DB135
TO=TM20535
REPL=Y
LIST=Y
//
<== ATMPETD PARAMETERS
```

Before executing this job, modify the ADARUN parameters, dataset names, and file allocation statements according to the requirements of your installation. The ADARUN SVC parameter should specify the SVC number that is used by the target and source databases that the utility will process.

Before you can run ATMETDAT, you must link it with ADAUSER from your current Adabas load library.

This utility must execute in a batch job which does *not* use ATM services. That is, it must execute using an Adabas link module which has no Adabas System Coordinator stub bound to it, or else it must execute under client controls which specify ATM OFF.

ATMETDAT writes a report of the processing it has carried out. The report is written to TMETOUT, and consists of fixed-length, 121-byte records.

Execution of ATMETDAT is governed by parameters read from the TMETIN input. The input file must consist of 80-byte records. Each input record must either contain a comment, indicated by an asterisk (*) in the first position, or else it must contain a valid parameter statement, beginning in the first position. Valid parameter statements have the following form:

parameter=value

Valid parameters and their permitted values are described below.

FROM: ET data source

Parameter	Use	Possible Values	Default
FROM	Identifies the source from which ET data will be read.	DBnnnnn TMnnnnn	None. This parameter must be specified.

Possible values:

Value	Description
DBnnnnn	nnnnn is a database ID in the range 1-65535. (Leading zeroes are not required.) ET data will be read from the checkpoint file of the specified database. The database must be executing in multi-user mode when ATMETDAT is run.
TMnnnnn	nnnnn is the database ID of an ATM Transaction Manager, in the range 1-65535. (Leading zeroes are not required.) ET data will be read from the ET data file of the specified TM. The TM must be executing in multi-user mode when ATMETDAT is run.

TO: ET data target

Parameter	Use	Possible Values	Default
TO	Identifies the target in which ET data will be stored.	DBnnnnnn TMnnnnnn	None.

Possible values:

Value	Description
No value (the default)	If the TO parameter is not specified, ET data will be read from the specified source, but no ET data will be stored. This feature can be used to produce a report of the ET data contained in the source database or Transaction Manager.
DBnnnnnn	nnnnnn is a database ID in the range 1-65535. (Leading zeroes are not required.) ET data will be stored in the checkpoint file of the specified database. The database must be executing in multi-user mode when ATMETDAT is run.
TMnnnnnn	nnnnnn is the database ID of an ATM Transaction Manager, in the range 1-65535. (Leading zeroes are not required.) ET data will be stored in the ET data file of the specified TM. The TM must be executing in multi-user mode when ATMETDAT is run.

REPL: Replacement option

Parameter	Use	Possible Values	Default
REPL	Indicates whether or not ET data in the target location should be overwritten by ET data from the source location, if both locations contain data for the same ETID.	Y N	N

Possible values:

Value	Description
Y	If ET data is read from the source location, and the target location already contains ET data for the same ETID, the ET data from the source location will replace the existing ET data in the target location.
N	If ET data is read from the source location, and the target location already contains ET data for the same ETID, the ET data from the target location will be left unchanged.

LIST: Report requirements

Parameter	Use	Possible Values	Default
LIST	Indicates whether or not the report should contain details of all the ET data that was processed.	Y N	N

Possible values:

Value	Description
Y	The report will contain details of all the ET data that was processed. If the REPL=Y (replace) option is specified, the report will also contain details of any ET data that was overwritten in the target location. If the replace option is not specified, and ET data for the same ETID is found in both the source and target locations, the report will contain details of both sets of data.
N	The report will contain only a summary of the processing that was carried out. No detail will be given of the ET data processed.

Example Parameter Input

ET data will be read from the checkpoint file of database 135 and stored in the ET data file of Transaction Manager 20535. If any ETID has ET data in both database 135 and TM 20535, the ET data from database 135 will replace the existing data in the ET data file of TM 20535. Details of all processed ET data will appear in the report.

```
FROM=DB135
TO=TM20535
REPL=Y
LIST=Y
```

Error Return Codes

On successful completion, ATMPETD will terminate with a return code of zero. Any other return code indicates an error, and in some cases will be accompanied by an ATM159 error message, which will give details of the cause of failure.

Possible return codes are as follows.

Return code	Meaning
0	Execution was successful.
20	Error opening TMETIN.
24	Invalid parameter input.
28	FROM= was not specified.
32	Error opening TMETOUT.
36	Error writing to TMETOUT.
40	Unexpected response from source (FROM=) location. Check the TMETOUT report for details.
44	Unexpected response from target (TO=) location. Check the TMETOUT report for details.

Additional Adabas Transaction Manager Error Codes

The following additional error codes may be generated by ATM Version 7.5.1:

Error Code	Description
error 488	An invalid communication ID was supplied.
error 492	An invalid communication ID was detected in the transaction manager's queue.
error 496	The application did not back out everywhere after a response code 9.