

Installing Adabas Transaction Manager for BS2000

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The Installation Tape

Review the *Report of Tape Creation* that accompanies the release package before restoring the release data to disk.

The installation tape contains the following datasets in the sequence indicated in the report:

Dataset	Contents
ATM vrs .JOBS	Installation jobs, utility jobs
ATM vrs .PAMS	Executable modules
ATM vrs .SYS5	ADALOD input for the ATM PRR file
ATM vrs .SYS6	ADALOD input for the ATM STJ file
ATM vrs .SYS7	ADALOD input for the user proxy log (UPL) file
ATM vrs .SYS8	ADALOD input for the ET data file
ATM vrs .INPL	Online Services application
ATM vrs .ERRN	Online Services messages
ADA743.LX06	Adabas load library update

where vrs is the version, revision, and system maintenance level of the product. Use the comments in the jobs when modifying them to conform to site requirements.

Installation Checklist

The steps needed for a successful installation are as follows:

Step	Description	Job Name
	Before proceeding with the installation, ensure that all necessary preparation has been completed as described in section Before You Install	
1	Restore libraries from installation tape.	
2	Create the transaction manager daemon database.	ATMI030
3	Load the transaction manager files to the ATM daemon's database.	ATM1050
4	INPL the Online Services application.	ATM1061
5	Define the default job parameters for use by the transaction manager proxy.	
6	Prepare the Adabas Transaction Manager daemon job.	ATMI200
7	Enable databases for two-phase commit.	
8	Prepare the Adabas System Coordinator daemons to support ATM.	
9	Make Adabas Transaction Manager components available as required.	

Installation Procedure

Following is the general Adabas Transaction Manager installation procedure. The actual installation depends on your particular requirements and the specific contents of the release package provided by Software AG for your site. Information in the release package is intended for your system. If that information differs from the information in this section, use the release package information or contact Software AG technical support for assistance.

Step 1: Restore Libraries from the Installation Tape

 to restore libraries from the installation tape:

1. Copy the library SRV*nnn*.LIB from tape to disk.

Note:

This step is not necessary if you have already copied the library SRV*nnn*.LIB from another Software AG tape. For more information, refer to the element #READ-ME in this library.

The library SRV*nnn*.LIB is stored on the tape as the sequential file SRV*nnn*.LIBS containing LMS commands. The current version *nnn* can be obtained of the Report of Tape Creation. To convert this sequential file into an LMS-library, execute the following commands:

```
/IMPORT-FILE SUPPORT=*TAPE(FILE-NAME=SRVnnn.LIBS, -
/ VOLUME=<volser>, DEV-TYPE=<tape-device>)
/ADD-FILE-LINK LINK-NAME=EDTSAM, FILE-NAME=SRVnnn.LIBS, -
/ SUPPORT=*TAPE(FILE-SEQ=9), ACC-METH=*BY-CAT, -
/ BUF-LEN=*BY-CAT, REC-FORM=*BY-CAT, REC-SIZE=*BY-CAT
/START-EDT
```

```

@READ '/'
@SYSTEM 'REMOVE-FILE-LINK EDTSAM'
@SYSTEM 'EXPORT-FILE FILE-NAME=SRVnnn.LIBS'
@WRITE 'SRVnnn.LIBS'
@HALT
/ASS-SYSDTA SRVnnn.LIBS
/MOD-JOB-SW ON=1
/START-PROG $LMS
/MOD-JOB-SW OFF=1
/ASS-SYSDTA *PRIMARY

<tape-device> = device-type of the tape, e.g. TAPE-C4
<volser> = VOLSER of tape (see Report of Tape Creation)

```

2. Copy the procedure COPY.PROC from tape to disk

Call the procedure P.COPYTAPE in the library SRVnnn.LIB to copy the procedure COPY.PROC to disk:

```

/CALL-PROCEDURE (SRVnnn.LIB,P.COPYTAPE), -
/ (VSNT=<volser>, DEVT=<tape-device>)

```

If you use a TAPE-C4 device, you can omit the parameter DEVT.

3. Copy all product files from tape to disk

Enter the procedure COPY.PROC to copy all Software AG product files from tape to disk:

```

/ENTER-PROCEDURE COPY.PROC, DEVT=<tape-device>

```

If you use a TAPE-C4 device, you can omit the parameter DEVT. The result of this procedure is written to the file L.REPORT.SRV.

Step 2: Create the Transaction Manager Daemon Database (Job ATMI030)

The transaction manager daemon database holds recovery information and, depending on the setting of the TMETDATA parameter, ET data, but no other operational data. The remaining files are for occasional use for special purposes – to store diagnostic log information obtained by the transaction manager proxy, and to hold details of transactions that were forcibly terminated. The size of this database depends mainly on the number of transactions that might be in progress at the same time, and the total amount of ET data, if any, that the ATM daemon will need to store.

to create the daemon database:

- Use sample job ATMI030, modified to meet your requirements, to establish the database.

Initially, define a database with the following component sizes:

```

DATA: 250 cylinders
ASSO: 50 cylinders
WORK: 50 cylinders
TEMP: 20 cylinders
SORT: 20 cylinders

```

Enough Data Storage space in the recovery file must be allocated to accommodate the maximum number of concurrently active transactions. The following can be used as a guide for calculating the required Data Storage space:

x times y is the required number of Data Storage blocks,

where x is the maximum number of concurrent transactions/branches at the local ATM daemon, and y is the average number of compressed recovery records (PRRs) per Data Storage block. Assume that a compressed PRR requires about 2300 bytes if the transaction has 2000 bytes (compressed) of ET data, and 300 bytes if there is no ET data. It is recommended to allow a safety margin of about 50 percent extra space.

Standard block sizes are adequate for most sites. However, if transactions which perform changes to many databases are to be used, it may be necessary to increase the Data Storage block size to accommodate large recovery records.

No ET data will be stored in this database's checkpoint file. The following parameters should be adequate for the daemon checkpoint file.

```
MAXISN=10,000
DSSIZE=100B
NISIZE=20B
UISIZE=8B
```

Use the normal reporting utilities to determine whether space shortages are likely to occur.

Step 3: Load the Transaction Manager Files into the ATM Daemon's Database (Job ATMI050)

The recovery record file, suspect transaction file, proxy log file and ET data file have numbers 5, 6, 7 and 8, respectively. These file numbers are fixed. Since no application files should be loaded into this database, there should be no conflict.

If ET data is to be stored in the ATM daemon's database (TMETDATA=ATM), define file 8 with MAXISN large enough to allow an ISN for each ETID that will ever be used in this Adabas Transaction Manager's local system. A decompressed ET data record occupies about 2 kilobytes. If you choose to store ET data in target databases (TMETDATA=TARGETS), file 8 will not be used. For more information, see TMETDATA parameter.

to load the Transaction Manager files into the daemon's database:

- Use job ATMI050 to define the recovery record, suspect transaction, proxy log and ET data files in the daemon's database.

The suggested sizes are adequate for the purposes of testing. You can use the normal reporting utilities to check whether your system needs larger files.

Step 4: Install the Online Services Application SYSATM (Job ATMI061)

The Adabas Transaction Manager Online Services application is delivered on the installation tape as a NATUNLD dataset created under Natural 3.1. The application programs are stored in libraries SYSATM and SYSMT*vrs* where *vrs* is the version, revision, and system maintenance level of the product.

▶ **to install the Online Services application SYSATM:**

1. Use a Natural utility to install the Online Services application and ERRLODUS to install its messages.
2. If Natural Security is installed, define the libraries SYSATM and SYSMT vrs , where vrs is the version, revision, and system maintenance level of the product.

Step 5: Define the Default Job Parameters for the Transaction Manager Proxy

The default job parameters for the Transaction Manager proxy must be defined. For further information, see Online Services, Job Parameters. See also the section Adabas Transaction Manager Components.

▶ **to define the default job parameters for the Transaction Manager proxy:**

1. Start a Natural session and log on to the newly installed SYSATM application. Invoke the Menu function. If you have not defined LFILE 152 for your Natural session, a message will prompt you to define it now. Select the function Systems Settings, then option LFILE 152 Maintenance. Enter the Database ID and file number of the system file that you created when you installed the Adabas System Coordinator. Enter values for the remaining input fields, and confirm your definition. Now return to the main menu and select the Job Parameters option. For a detailed description of the following step, refer to Online Services, Job Parameters
2. On the Job Parameters screen, press PF10 to add a new default definition. Make sure that you set Adabas Transaction Manager to ON. Confirm your new definition, then select it for modification by marking it with an “m”. You must also set the name of the Adabas System Coordinator group in which your client jobs and TP systems will execute. The provided default values for the remaining parameters should be satisfactory for the purpose of completing and verifying the installation. You can review and change them as required once you have completed and verified the installation.

Step 6: Prepare the Adabas Transaction Manager Daemon Job

Because the Adabas Transaction Manager daemon executes as a special kind of Adabas nucleus, its JCL is similar to that of a normal Adabas nucleus.

▶ **to prepare the Adabas Transaction Manager daemon job:**

1. Make any necessary site-specific changes to ATMI200 so that it can be used as a procedure for a started task.
2. Ensure that any ADALNK module that can be loaded by the ATM job does not have the Adabas System Coordinator stub linked into it.
3. Specify ADARUN DTP=TM.
4. Specify ADARUN TMLOG=NEVER for the purpose of verifying the installation. Once the verification process has been completed, reconsider this parameter setting.
5. Specify ADARUN NONDES=YES. This is the default setting.

Set other ADARUN parameters as you would for a normal database. For initial testing, the default limits and pool and buffer sizes should be sufficient.

See the section Parameters for a description of the ADARUN parameters that affect Adabas Transaction Manager operation.

Note:

An Adabas Transaction Manager daemon job must be run in each operating system image that will participate in distributed transaction processing (DTP). If more than one Adabas ID table is used in the same system image, an Adabas System Coordinator daemon and an Adabas Transaction Manager daemon must be run under each Adabas ID table that will participate in DTP. For further information, see ATM Daemons and Adabas System Coordinator Groups.

Step 7: Enable Databases for Two-Phase Commit Processing

to enable databases for two-phase commit processing

1. Ensure that the parameter

```
ADARUN DTP=RM
```

is set in every database that participates in global transactions coordinated by Adabas Transaction Manager.

2. Add ADD-FILE-LINK statements for the Adabas Transaction Manager product library and the Adabas System Coordinator product library to each database job that will run with DTP=RM.
3. In the case of Adabas Parallel Services databases, use the Adabas 7.4 update library LX06 together with the standard Adabas 7.4.3 library.
4. In the case of Adabas 7.1 databases, you must apply fix A\$71306 to your Adabas 7.1 load library. The fix is contained in member ZAPOPT of the supplied JOBS library.

Refer to the *Adabas System Coordinator* documentation for more information on how to run Adabas Transaction Manager 7.4 with Adabas 7.1 databases. The same instructions can be used for running Adabas Transaction Manager 7.5 with Adabas 7.1 databases.

Step 8: Prepare the Adabas System Coordinator Daemons

The ATM load library should be made available to all SYSCO daemons which will run under the same Adabas ID table as an ATM v7.5 daemon.

The SYSCO daemons must be started with the parameter setting `PRODUCT=ATM`.

Step 9: Make Adabas Transaction Manager Components Available

Add an ADD-FILE-LINK for the Adabas Transaction Manager product library to all batch, TIAM and UTM tasks that will use Adabas Transaction Manager services. The Adabas Transaction Manager library and the Adabas System Coordinator library must be available to Adabas Transaction Manager daemon tasks.

Caution:

The Adabas Transaction Manager proxy must not be used by any job or started task that executes an Adabas Transaction Manager daemon, an Entire Net-Work node, or an Adabas nucleus running in multiuser mode. You should therefore make sure that the Adabas System Coordinator stub is not present in any ADALNK module that might be used by these jobs.