

The
TABLES Memory Manager
Installation Guide

Version 3.1

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INSTALLATION OVERVIEW

TABLES/MM is shipped on a standard label, 6250 BPI 3420 tape or 3480 cartridge. It contains all the files necessary to install the product at your installation. When loaded to disk, all installation files will require less than 10 cylinders of 3380 DASD space.

To install and run TABLES/MM, the following software must be available:

- MVS/ESA or Z/OS
- DB2 or VSAM or TABLES/MS
- IEBGENER and IEBCOPY Utilities
- LE370 COBOL Compiler or Library

INSTALLATION TAPE CONTENTS

The installation tape for **TABLES/MM** contains the following files:

File	Dataset Name	Description
1.	RELODJCL	JCL required to allocate and load the remaining files.
2.	LOADLIB	Program load modules for TABLES/MM only.
3.	CLIST	TSO clists for on-line facilities and utilities.
4.	SOURCE	Contains source members for options, samples, etc.
5.	JCL	Contains installation jobs, procedures, and sample JCL.
6.	ISPPLIB	Panel library containing ISPF panels.
7.	ISPMLIB	Message library for ISPF message processing.
8.	DBRMLIB	DB2 DBRM's used by the interface and utilities.

All libraries (files 2 through 8) were unloaded using the standard IBM IEBCOPY utility. The RELODJCL member is setup to reload them also using IEBCOPY.

UNLOADING THE INSTALLATION TAPE

- STEP 1.** Unload the first file *RELODJCL* from the installation tape to a sequential data set or PDS member. The sample JCL below with the noted modifications can be used:

```
//          JOB
//LOAD          EXEC  PGM=IEBGENER, REGION=512K
//SYSPRINT DD    SYSOUT=*
//SYSUT1 DD     DSN=RELODJCL, DISP=OLD,
//            DCB=(LRECL=80, RECFM=FB, BLKSIZE=800),
//            UNIT=?????????, VOL=SER=???????
//SYSUT2 DD     DSN=????????? (RELODJCL), DISP=SHR
//SYSIN DD     DUMMY
```

- Notes:**
- A -** Add your standard job card.
 - B -** Change the UNIT= parameter to your specification for 3420 or 3480 type tapes.
 - C -** Change the VOL=SER= parameter to the volser that appears on the installation tape received from SSI.
 - D -** Change the DSN= parameter to your JCL library.

The unloaded file contains JCL to allocate and reload the 7 installation libraries required by **TABLES/MM** from the installation tape. An in-stream procedure with symbolic parameters is provided to isolate and minimize the number of required changes. **All symbolic parameter changes should be made within the in-stream procedure.**

- STEP 2.** Edit the unloaded file *RELODJCL* to incorporate installation naming standards for JCL and DASD data sets as follows:

- A. Installation job card information.
- B. Symbolic parameter *TPUNIT* should be changed to reflect your installation's generic tape unit name for 3420 or 3480 type devices (default is TAPE).
- C. Symbolic parameter *TPVOL* must be changed to the volser which appears on the installation tape shipped from Specialized Solutions.
- D. Symbolic parameter *PDSHLQ* should be changed to reflect the high level qualifier you wish the **TABLES/MM** libraries to be named (default is SSI.TMM22).
- E. Symbolic parameter *PDSUNIT* should be changed to reflect your installation's DASD unit name (default is SYSDA).
- F. Symbolic parameter *PDSVOL* should be changed to reflect the volser where the **TABLES/MM** installation libraries will reside.

- STEP 3.** Submit the job for execution. After the job completes, check the results. The job should end normally with a condition code of zero.

INSTALLING TABLES/MM INTO YOUR SYSTEM

STEP 1. The module that creates the dataspace, TMMSTART, must be APF authorized. To make it authorized, do one of the following:

- Copy TMMSTART to a library that is already APF authorized. This can be any library in the IEAAPF member of SYS1.PARMLIB.
- Make the installation load library APF authorized. This requires placing the name in the IEAAPF member of SYS1.PARMLIB and may also require an IPL.

The first option is the easiest and recommended approach. However, when installing maintenance, this module must be copied each time.

STEP 2. To allow use of the TSO On-line facilities, some of the libraries must be concatenated to the appropriate DD cards in your TSO Logon JCL procedures.

The following installation libraries must be concatenated to the appropriate files in any TSO proc to be used with TABLES/MM:

<u>INSTALL LIBRARY</u>	<u>TSO PROC DDNAME</u>
LOADLIB	STEPLIB or ISPLLIB
CLIST	SYSPROC
ISPLLIB	ISPLLIB
ISPMLIB	ISPMLIB

Alternatively, the members in each library can be copied to existing libraries already defined in the TSO procedures or the files can be allocated after logging on.

STEP 3. To define and maintain tables, views and indexes, TABLES/MM uses a table referred to as the MS_DEFINITION table. This table can be a DB2 table or a VSAM KSDS (only if the VSAM COMPONENT is also installed). The DB2 table should always be used if DB2 is available. If this is the case, do steps A, B and C below. If only the VSAM table is to be used, do steps D and E below. However, both can be defined and used without affecting the other.

To create the **DB2 version** of the table and make the necessary DB2 connections, do the following:

- A. Define the MS_DEFINITION DB2 table. This table contains all TABLES/MM definitions. Using the DB2 SPUFI facility, select and edit member DB2CREAT in the installation SOURCE library. Review the SQL and make any required changes. Then execute it to create the table.

NOTE: If TABLES/AS product is also installed, this table may already be defined. If so, it can be used.

- B. **Bind the plans and packages** required by TABLES/MM. Member **DB2BIND** of the installation **SOURCE library** contains the necessary commands. It executes the BINDPKG and BINDPLAN members in the same library. Review the clists and adjust any parameters and file names that may need to be changed. Then execute the DB2BIND member as a clist (e.g. EXEC 'SSI.TMM22.SOURCE(DB2BIND)').

NOTE: To create the plans and authorize them to public, a user with SYSADM authority may need to execute the clist. This is required because the DB2 catalogs are accessed by the plan. If the bind or grant do not work, please check with your DB2 administrator for the required authority.

- C. Grant the plans created to public using standard DB2 grant commands.

To create the **VSAM version** of the table do the following:

- D. **Define the MS_DEFINITION** VSAM KSDS and initialize it. On TSO, review the comments at the beginning of the TMMVIMSD clist in the installation CLIST library. Then execute the clist to setup the VSAM KSDS. The following example of executing the clist can be used:

```
%TMMVIMSD 'user.tmm.msdef' VOL(uvol01) NEW
```

Specify a valid dataset name and a valid volume serial. This will define and initialize the VSAM MS_DEFINITION file.

- E. If VSAM tables will be loaded from CICS, the VSAM file must be defined to any CICS region that needs it, using a **FILE name of TBLMSDEF**. Update the appropriate CICS FCT's or use RDO to define the VSAM file created above to CICS. The file should only be defined to support READ and BROWSE under CICS and should be share-able.

NOTE: Please review the VSAM COMPONENT section in the TABLES/MM Reference Guide for additional information.

STEP 4. If TABLES/MM is to be used with **CICS systems**, the **TMML transaction should be** and the **modules must be** defined to CICS. Member **CICSGEN** in the installation **SOURCE library** has the necessary PCT and PPT entries to define TABLES/MM to CICS. Include the entries in your CICS tables and then assemble them. Alternatively, you can use RDO or DFHCSDUP to define them into the CICS CSD.

Also, **include the TABLES/MM load library** in the **CICS JCL** with the other datasets in the DFHRPL DD card or copy the modules defined above to a library already in the DFHRPL list.

STEP 5. If TABLES/MM is to be used with **IMS systems** and the TMM Load utility is to be used, then the **transaction and PSB** must be defined to IMS. Member **IMSPSB** in the installation SOURCE library can be used to generate the PSB and member **IMSGEN** can be used as input to the IMS Generation process to define the transaction. Refer to these members to define TABLES/MM to IMS.

Also, **include the TABLES/MM load library** in the **IMS MPR JCL** as part of the STEPLIB DD card or copy the modules to an existing library already there.

STEP 6. Certain options for TABLES/MM can be changed by modifying and re-assembling the options module. Review job INSTOPT in the installation JCL library to see if this is necessary.

NOTE: If the TABLES/AS product with the DB2 component was also installed, then the TABLES/MM options should be set the same as the TABLES/AS options.

STEP 7. In the installation JCL library, there are several procedures used by the batch utilities. Each should be reviewed and updated as necessary to reflect the correct library names and any other installation requirements. Then copy the procedures to the appropriate system proclib dataset. The following are the JCL procedures used by TABLES/MM:

TMMDEFN	- Batch Definition Procedure
TMMUTIL	- Batch Utility Procedure for daspace control
TMMRPT	- Batch Report Procedure
TMMSTART	- Procedure to create and initialize daspaces
TMMVIMSD	- Procedure to initialize VSAM MS_DEFINITION

There are other sample JCL members that are used when interfacing to other TABLES products. These should be reviewed and updated as needed. Member \$INDEX in the JCL library contains a list and description of all members.

STEP 8. In the installation CLIST library, several clists should be reviewed and modified to reflect the correct installation dataset names, DB2 specifications, and any other requirements. Edit and change the parameters on the PROC statement in the following clists:

TMMDEFN	- clist to execute the TMMDEFN utility
TMMUTIL	- clist to execute the TMMUTIL utility
TMMDSU	- clist to execute the Dataspace Utility
TMMEFF	- clist to execute Effectivity Definition
TMMVIMSD	- clist to setup VSAM MS_DEFINITION file

This completes the TABLES/MM installation. If all steps were completed correctly, the system should be ready to use. The installation verification procedure (IVP) can be followed to test the system. Please refer to the TABLES/MM Reference Manual when running the IVP.

INSTALLATION VERIFICATION

If all steps were completed, TABLES/MM installation should be complete. To verify the installation, the following can be tested:

1. Start a dataspace.

Update the sample member JCLDS00 in the installation JCL library. This member is setup to start a dataspace. Review Section 2 in the Reference Manual for more specifics about starting dataspaces. An operator can also issue a start command to start a dataspace instead of using the sample job.

The job (or started task) will display the TMMS001R message on the system console if the dataspace starts ok. Otherwise, TMMS002E will be displayed. Refer to Appendix A in the Reference Manual for a description of these messages.

2. Activate the On-line Facilities.

If the dataspace starts ok, activate the On-line Facilities. Logon to TSO using your normal procedures. Then from ISPF Option 6, enter command:

```
====> %TMM
```

The TABLES/MM Primary Menu (as shown in the Reference Manual) should be displayed. Select the dataspace shown by placing an 'S' to the left of the dataspace-id and press ENTER. The dataspace memory and directory information should be displayed on the Dataspace-ID panel.

3. Try loading a table.

On the Dataspace-ID panel, if you are using DB2 tables, try to load a table. Enter option **L** and a DB2 table name. It must be a table you have read access to. Press the ENTER key to load the table. A message will be displayed with the results. If the load failed, review installation STEP 3 and STEP 4 to make sure that TABLES/MM can access DB2 tables. Also, make sure all DB2 authorizations were granted allowing you access to TABLES/MM plans and the table being loaded.

4. Test the TMML transaction on CICS or IMS.

If the **TMML transaction** was gen'ed to CICS or IMS, logon to the region where it was defined and execute the TMML transaction. Test load a table or do **LIST** to view the tables loaded in the dataspace.

Appendix A - TABLES/AS Considerations

Setting Up TABLES/AS to use TABLES/MM

To allow for easy migration of tables pre-loaded using the older TABLES/AS or TABLES/MS interfaces, the TABLES Memory Manager is shipped with replacement modules that dynamically call the new API instead of the old interfaces. This allows all applications that call the old interfaces to use the TABLES/MM API without any changes.

To activate this feature, simply **concatenate the TABLES/MM load library** before the TABLES/AS and TABLES/MS load libraries in any batch job or on-line region where it's used. All the old dynamically called interfaces will then use the new API.

In addition, **the TABLES/AS DB2 plans must be re-bound** to include the TABLES/MM plans to allow for loading or re-loading the TABLES/AS control tables. To do this, update the TABLES/AS bind job by adding the following TABLES/MM DBRM's to it:

- TBLIODB2
- TBLMSDEF
- TBLMSCIC
- TMMDEF1C

Include the TABLES/MM installation DBRM library in the job and re-run it. After it completes, the plans should be re-authorized to allow access to them.