

VisualAge Pacbase



Pactables - OS/390 CICS

Version 3.5



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Note

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Contents

| | |
|---|------------|
| Notices | v |
| Trademarks | vii |
| Chapter 1. Foreword | 1 |
| Chapter 2. Pactables components | 3 |
| Introduction | 3 |
| The on-line programs library | 3 |
| The batch programs library | 5 |
| The VA Pac macro-structures library | 7 |
| The parameters library | 7 |
| The system files | 8 |
| The evolving files | 8 |
| Standard limitations | 10 |
| Chapter 3. Environment | 11 |
| Introduction | 11 |
| CICS environment | 11 |
| Access methods (VSAM) | 12 |
| Batch environment | 12 |
| Chapter 4. The batch procedures | 13 |
| Introduction | 13 |
| Classification of procedures | 13 |
| Abnormal executions | 14 |
| INTA - Table initialization | 15 |
| INTA - Introduction | 15 |
| INTA - User input | 15 |
| INTA - Description of steps | 16 |
| INTA - Execution JCL | 16 |
| GETT - Table generation | 17 |
| GETT - Introduction | 17 |
| GETT - Description of steps | 18 |
| GETT - Execution JCL | 18 |
| UPTA - Table update | 20 |
| UPTA - Introduction | 20 |
| UPTA - User input | 20 |
| UPTA - Description of steps | 21 |
| UPTA - Execution JCL | 22 |
| PRTA - Table printing | 24 |
| PRTA - Introduction | 24 |
| PRTA - User input | 25 |
| PRTA - Description of steps | 26 |
| PRTA - Execution JCL | 27 |
| IMTA - Table import | 28 |
| IMTA - Introduction | 28 |
| IMTA - User input | 30 |
| IMTA - Description of steps | 30 |
| IMTA - Execution JCL | 31 |
| RETA - Table reorganization | 33 |
| RETA - Introduction | 33 |
| RETA - User input | 33 |
| RETA - Description of steps | 34 |
| RETA - Execution JCL | 36 |
| SVTA - Backup | 39 |
| SVTA - Introduction | 39 |
| SVTA - Description of steps | 39 |
| SVTA - Execution JCL | 40 |
| TCTA - Pactables transfer from another platform | 41 |
| TCTA - Introduction | 41 |
| TCTA - Description of steps | 42 |
| TCTA - Execution JCL | 43 |
| RSTA - Restoration | 45 |
| RSTA - Introduction | 45 |
| RSTA - Description of steps | 45 |
| RSTA - Execution JCL | 46 |
| LDTA - List of table descriptions | 47 |
| LDTA - Introduction | 47 |
| LDTA - User input | 47 |
| LDTA - Description of steps | 48 |
| LDTA - Execution JCL | 48 |
| PMTA - Parameter update | 49 |
| PMTA - Introduction | 49 |
| PMTA - User input | 49 |
| PMTA - Description of steps | 51 |
| PMTA - Execution JCL | 51 |
| EXTA - Table extraction | 53 |
| EXTA - Introduction | 53 |
| EXTA - User input | 53 |
| EXTA - Description of steps | 54 |
| EXTA - Execution JCL | 54 |
| TUTA - Direct consultation of tables | 56 |
| TUTA - Introduction | 56 |
| TUTA - User input | 56 |
| TUTA - Description of steps | 57 |
| TUTA - Execution JCL | 57 |
| Dispatched table management (DTM option) | 59 |

| | | | |
|---|-----------|--|-----------|
| CDT1-CDT2 - Table descriptions comparison | 59 | Cataloging of operating procedures | 87 |
| CDT1 - User input | 59 | Test table restoration | 89 |
| CDT1 - Description of steps | 60 | Update of user parameters | 89 |
| CDT1 - Execution JCL | 61 | User operation complements | 90 |
| CDT2 - Description of steps | 62 | List of installed programs | 90 |
| CDT2 - Execution JCL | 63 | Utilization tests | 90 |
| CVTA - Table contents update | 64 | Test JCL: INTA | 91 |
| CVTA - User input | 64 | Test JCL: GETT | 91 |
| CVTA - Description of steps | 65 | Test JCL: PRTA | 92 |
| CVTA - Execution JCL | 65 | Test JCL: IMTA | 92 |
| | | Test JCL: UPTA | 92 |
| | | Test JCL: SVTA | 93 |
| | | Test JCL: RSTA | 93 |
| | | Test JCL: RETA | 93 |
| | | Test JCL: PMTA | 93 |
| | | Test JCL: EXTA | 94 |
| | | Test JCL: TUTA | 94 |
| | | Test JCL: TCTA | 94 |
| | | Test JCL: CDT1 (DTM) | 95 |
| | | Test JCL: CDT2 (DTM) | 95 |
| | | Test JCL: CVTA (DTM) | 95 |
| | | Pactables standard reinstallation | 96 |
| Chapter 5. Installation | 69 | | |
| Parameterization | 69 | Chapter 6. Pactables - RACF or | |
| Installation preparation | 69 | TOPSECRET Interface | 97 |
| Initial JCL | 70 | Introduction | 97 |
| Complete JCL installation | 72 | Installation | 97 |
| Default installation settings | 74 | Operating mode | 100 |
| JCL modules | 75 | Error management (RACF only) | 102 |
| JCL parameterization | 76 | | |
| JCL-module separators | 78 | | |
| Installation process | 78 | | |
| CICS CSD update | 79 | | |
| Allocation and loading of system parameter | 82 | | |
| Error message and documentation file installation | 85 | | |
| Pactables test file installation | 85 | | |
| Initialization of working file for TUF-TP | 86 | | |

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Chapter 1. Foreword

How to use this manual for system installation

If a previous version of Pactables is already installed on the site, the 3.5 version must be different from any former Pactables version regarding installation parameters. The test case provided on the installation media must be executed.

Chapter 2. Pactables components

Introduction

The purpose of the Pactables function is to process a certain amount of permanent data whether on-line or in batch mode (see the Pactables Reference Manual).

Two types of resources are therefore necessary:

- Libraries which store the programs making up the Pactables function, and its parameters,
- Permanent files, which contain the data processed by those programs. These files can be divided into two categories:
 - ‘System’ files, which remain stable during the use of the Pactables function,
 - ‘Evolving’ files, which are handled by the users, and whose volumes vary according to the types of updates performed.

Note:

Pactables is installed independently of the other VisualAge Pacbase functions.

The implementation of the Pactables function requires data which must be defined and described with the VisualAge Pacbase Specifications Dictionary function. The Extraction Procedure required to operate the Pactables function is described in the VisualAge Pacbase 3.5 Operations Manual.

Options of the Pactables function are coded as follows:

- Dispatched Table Management : DTM
- Security System Interface : SEC (only with IBM MVS)

The on-line programs library

On-line program library: SBVPMTR8

| Code | Operation and meaning |
|---------|--|
| BVPFT00 | Tables extraction (TUF-TP MODULE) |
| BVPFT10 | User parameters extraction (TUF-TP MODULE) |
| BVPFT90 | User Interface (TUF-TP MODULE) |
| BVPP500 | Enter, FT or ‘clear’ : initial screen |

| Code | Operation and meaning |
|---------|---|
| BVPP510 | C1: read-write access to mono-item with CR, MO, DE for updating |
| BVPP512 | C1: read-write access to mono-item with CR, MO, DE for updating |
| BVPP520 | C2: read-only access to multi-item with DE for an item deletion |
| BVPP522 | C2: read-only access to multi-item with DE for an item deletion |
| BVPP530 | LT : list of tables |
| BVPP540 | LS : list of sub-schemas/sub-systems |
| BVPP550 | LD : list of documentation |
| BVPP560 | C3 : read-only access to item hist. acc. |
| BVPP570 | HELP screen |
| BVPP580 | LH : list of historical accounts |
| BVPP590 | LJ, LE : print requests |
| BVPP599 | Display system errors |
| BVPP600 | Parameter & password updating |
| BVPP610 | User code updating |
| BVPP620 | Access authorization updating |
| BVPP820 | Optimized access module |
| BVPP920 | Generalized access module |
| BVPPLNK | Pactables access via user-program module |
| BVPSECT | Security systems interface sub-program |

Important

During updates, the BVPP510 and BVPP520 programs may call the user check routines in order to perform additional checks. As a default, the generation option of these routines is without the century management.

If the user check routines are generated with the century management option, the two programs (BVPP512 and BVPP522) must be renamed and used instead of BVPP510 and BVPP520.

In all cases, ALL user check routines should be generated with the same option.

The batch programs library

Batch program library : SBVPMBR8

| Code | Proc. | Opt. | Meaning |
|----------|-------|------|-------------------------------|
| BVPTU001 | | | Transaction file copy |
| BVPTAINI | INTA | | File initialization |
| BVPTARST | RSTA | | Table restoration |
| BVPTARSV | - | | -- |
| BVPTARSG | - | | -- |
| BVPTASVT | SVTA | | Table backup |
| BVPTASVV | - | | -- |
| BVPTASVG | - | | -- |
| - | RETA | | Table reorganization |
| BVPTAU80 | TUTA | | Direct consultation of tables |
| BVPTA100 | PMTA | | Parameter update |
| BVPTA120 | - | | -- |
| BVPTA150 | EXTA | | Table extraction |
| BVPTA160 | - | | -- |
| BVPTA250 | GETT | | Table generation |
| BVPTA290 | - | | - /Lists - |
| - | LDTA | | - /Lists - |
| BVPTA300 | UPTA | | Table update |
| BVPTA302 | - | | -- |
| BVPTA310 | IMTA | | Table import |
| BVPTA312 | - | | -- |
| BVPTA320 | PRTA | | Table printout |
| BVPTA350 | UPTA | | -- |
| - | IMTA | | -- |
| - | PRTA | | -- |
| BVPTA360 | UPTA | | -- |
| - | IMTA | | -- |
| - | PRTA | | -- |
| BVPTA400 | RETA | | Table reorganization |
| BVPTA410 | - | | -- |
| BVPTA420 | - | | -- |

| Code | Proc. | Opt. | Meaning |
|----------|-------|------|---|
| BVPTA430 | - | | -- |
| BVPTAD05 | CDT1 | DTM | Table-description comparison |
| BVPTAD10 | - | - | --- |
| BVPTAD20 | CDT2 | - | --- |
| BVPTAV10 | CVTA | - | Table update |
| BVPTAV20 | - | - | -- |
| BVPTA800 | | | Optimized access module |
| BVPTA900 | | | Generalized access module |
| BVPSECB | | SEC | Security systems sub-program |
| BVPTATCD | TCTA | | TD file sort |
| BVPTATCG | - | | TG file sort |
| BVPTATCV | - | | TV file sort |
| BVPTATC1 | - | | TC partitioning according to the type of file |
| BVPTATC2 | - | | Sorted TC file rebuilding |

Important note:

During updates, the BVPTA302 and BVPTA312 programs may call the user check routines in order to perform additional checks. The default generation option of these routines is 'without century management'.

If the user check routines are generated with the century-management option, the two new programs, BVPTA302 and BVPTA312, must be renamed and used respectively in the UPTA and IMTA procedures instead of the BVPTA300 and BVPTA310 programs.

In all cases, ALL the user check routines should be generated with the same century-management option.

Security systems interface extension (SEC)

The optional sub-program BVPSECUR interfaces the Pactables function with the site's security system.

This sub-program is supplied by SMP/E in the hlq.SBVPMBR8 PDS.

Refer to the chapter 'Security system interface' in VA Pacbase Installation Guide for details on this extension operations.

The VA Pac macro-structures library

TUF-TP macro-structures catalog

The Macro-structures are the following ones:

| Code | Meaning |
|--------|---------------------------------------|
| AATUFA | Description of the table data element |
| AATUFL | 'LT' or 'LH' list |
| AATUFS | 'LS' or 'LC' list |
| AATUFU | List of user parameters |
| AATUFX | List of table items |

These macro-structures are to be used in user on-line application programs using the TUF-TP facility.

They allow to add the description of communication areas which are necessary to the call of BVPFT90 sub-program in the TUF-TP facility.

These Macro-structures are supplied as VA Pac update transactions. They can be downloaded through the VA Pac Support web page at <http://www.ibm.com/software/awdtools/vapacbase/support.html>

They must be loaded in the VA Pac library used for the development of user transactions by taking the transactions of VA Pac UPDP or UPDT procedures in input.

The parameters library

Parameter library: SY

Its size is approximately 4 blocks of 6,080 bytes.

It contains:

- The DEFINES of VSAM files:

The DELETE/DEFINE of each VSAM file is named DFxx00ff (where xx00ff = file suffix).

Information on the catalog in use, disks, size, etc., is initialized according to the initial parameters of the installation and can be modified by the System Administrator, if needed.

- The VERIFYs of VSAM files:

Under the name VERIFF, one finds the VERIFY requests applied to the Pactables files.

Note:

Any modification of the file characteristics must be done in the parameter library.

The system files

They represent the system itself. They are not modified by daily handling, and they must be re-loaded if the system has to be re-installed.

- The library of batch load modules: SBVPMBR8.
- The library of on-line load modules: SBVPMTR8.
- The library of parameters: BVPSY (PDS).
- The file containing the error messages and the automatic documentation of the Pactables function: TE.

| Characteristics | Value |
|-----------------|---------------------------|
| Size | Approximately 900 records |
| Organization | VSAM-KSDS |
| Reclsize | 90 |
| Key | 17 (position 0) |
| Utilization | Batch/On-line |

The evolving files

They contain the user's data. They are processed by the system in either on-line or batch mode.

The first two make up the actual Tables.

Table-description file (TD)

| Characteristics | Value |
|-----------------|-----------------|
| Organization | VSAM-KSDS |
| Reclsize | 240 |
| CI size | 2,048 |
| Key | 21 (position 0) |
| Utilization | Batch/On-line |

| Characteristics | Value |
|-----------------|-----------------------------|
| Space | 8 records per C.I. of 1,024 |

Table-contents file (TV)

| Characteristics | Value |
|-----------------|----------------------------|
| Organization | VSAM-KSDS |
| Reclsize | 80 to 1,100 |
| CI size | 2,048 |
| Key | 35 (position 4) |
| Utilization | Batch/On-line |
| Space | Varies with the table size |

The third file contains the user parameters required for the system operations. It is managed through a specific batch procedure:

User parameters file (TG)

| Characteristics | Value |
|-----------------|------------------------------|
| Organization | VSAM-KSDS |
| Reclsize | 85 |
| CI size | 2,048 |
| Key | 22 (position 0) |
| Utilization | Batch/On-line |
| Space | 24 records per C.I. of 2,048 |

The TG file includes:

- User codes and corresponding access authorizations,
- Table printing user JCL.

The fourth file constitutes the backup of the user Table files described above.

Backup (TC)

| Characteristics | Value |
|-----------------|----------------------------|
| Organization | Sequential generation file |
| DSNAME | &INDUN..&ROOTT.00TC(n) |

| Characteristics | Value |
|-----------------|-----------------------------------|
| DCB | RECFM=VB,LRECL=1067,BLKSIZE=10674 |
| Utilization | Batch |

A fifth file used by the TUF-TP facility enables the transitory storage of data extracted from Pactables, data used to update Pactables and updating error messages.

Working file (TB)

| Characteristics | Value |
|-----------------|-----------------------------|
| Organization | VSAM-KSDS |
| Reclsize | 80 to 1140 |
| CI size | 1,024 |
| Key | 63 (position 3) |
| Utilization | TP |
| Space | depending on the table size |

Standard limitations

Maximum length for a table item : 999 characters

Maximum length for the table key : 20 characters

Maximum number of Data Elements in a table : 40

Number of table items per table : Unlimited

Chapter 3. Environment

Introduction

It is assumed that the site where Pactables is installed provides the environment and the resources required to run the system.

The purpose of this chapter is to define this environment, and thus help determine how much disk space is required.

File sizes are specified in the Chapter 'Prerequisites' of the VisualAge Pacbase 'Installation Guide : Server & Client components'

CICS environment

The monitor used is CICS ESA, version 3.1 or later.

It must include the SPOOL=YES option for running batch jobs (LE or LJ choice).

The Description (TD), Tables (TV), User parameter (TG) files and the TUF-TP working file (TB) are updated on-line and must be protected by the option allowing for Dynamic Backout.

It is recommended to use the CICS 'EMERGENCY RESTART' option.

The size of the COMMAREA used for Pactables is 8Kb.

The TUF-TP facility needs a specific COMMONAREA of 30K.

Basics on the Pactables operations

The general characteristics of Pactables operations are:

- A transaction code is used to enter the system. The branchings to the different programs are done through 'RETURN TRANSID'.
A transaction code and a program are associated to each screen (example: BVPP510 ensures the update and the transaction code is xx01 for a mono-item screen).
- When an error is detected by the system a 'MAP ABEND' is displayed. The display program of this map BVPP599 is called by XCTL.

Uppercase/lowercase processing

The Pactables function automatically changes lowercase into uppercase on screens with the UCTRAN option at the TCT level for fields requiring uppercase, i.e.:

- User code & associated password,
- Operation code.

Access methods (VSAM)

The Pactables function manages its files using the VSAM-KSDS indexed access method without secondary index.

Files are protected against concurrent read-write accesses (SHARE OPTION 2). In particular, the Pactables function protects itself against simultaneous updates in both batch and on-line modes by using this share option.

Each batch procedure includes a DELETE/DEFINE step in case of file reloading. As a result, files need not include the REUSE default option and, consequently, may be allocated using either the UNIQUE option or the SUB-ALLOCATION option.

Batch environment

In batch mode, the system uses standard functions of the operating system and the VSAM access method.

The size of the memory necessary for the execution of the batch procedures varies according to the size of the buffers allocated to the files they use.

Chapter 4. The batch procedures

Introduction

Batch processing with Pactables is divided into various procedures. The procedures likely to be used are described in the following chapters with their specific execution conditions.

For each procedure, there is:

- A general presentation including:
 - the introduction,
 - the execution condition(s),
 - the action(s) to be performed in case of abnormal execution.
- A description of user input, processing executed, and results, plus - if needed - specific recommendations on use.
- A description of steps:
 - notations or parameters used,
 - list of the files used (temporary or permanent),
 - return codes for each step
- JCL lines.

Classification of procedures

The batch procedures are the following:

- Pactables file initialization (INTA)
- Table generation (GETT)
- Table Update (UPTA)
- Table printing (PRTA)
- Table importation (IMTA)
- Table reorganization (RETA)
- Table backup (SVTA)
- Pactables database migration (TCTA)
- Table restoration (RSTA)
- Printing of table description lists (LDTA)
- Update of user parameters (PMTA)
- Extraction of data (EXTA)
- Direct reading of tables (TUTA)

With the Dispatched Table Management option (DTM):

- Table description comparison (CDT1, CDT2)
- Table extraction for update (CVTA).

Note

Pactables does not provide a journal of update transactions.

Abnormal executions

Abends may occur during the execution of a batch program. Input-output errors on the system files or on the Database cause a forced abnormal end with a USER ABEND (code 12), accompanied by a message on the SYSOUT file.

When an abend occurs, the user must find the error message. This message is displayed in the following manner:

```
PROGR : pppppp   INPUT-OUTPUT ERROR : FILE ff   OP: oo
STATUS : ss
END OF RUN DUE TO PROVOKED ABEND
```

In most cases, examining the status and type of operation allows the user to find the cause of the abnormal execution.

The summary table below lists the most common values for the status and type of operation.

| Code | Operation |
|------|-------------|
| W | WRITE |
| RW | REWRITE |
| RU | READ UPDATE |
| OP | OPEN |
| CL | CLOSE |
| D | DELETE |
| R | READ |
| P | START |
| RN | READ NEXT |
| | INFORMATION |

| Status | Message |
|--------|----------------|
| 21 | Sequence error |

| Status | Message |
|--------|---|
| 22 | Duplicate key |
| 23 | No record found |
| 24 | Boundary violation (KSDS-RRDS) |
| 30 | System error |
| 34 | Boundary violation (sequential) |
| 92 | Logic error (For example, the opening of an already opened file |
| 93 | File still opened under CICS |
| 95 | Invalid or Incomplete file information |

When this message is absent, and the type of ABEND generated directly reports a problem in the VisualAge Pacbase system programs, contact the VisualAge Pacbase support at IBM. KEEP ALL LISTINGS that may be necessary to analyze the problem.

INTA - Table initialization

INTA - Introduction

This procedure initializes the files containing the descriptions and contents of tables.

Note:

The purpose of this procedure is to physically initialize new files. It may not be used to initialize new tables in already defined files (refer to Chapter 'The Batch procedures', Subchapter 'GETT - Table generation' for more details on the Table initialization procedure).

INTA - User input

| Pos. | Len. | Value | Meaning |
|------|------|-------|-----------------------------|
| 1 | 36 | | Installation label |
| 37 | 1 | | Language version parameter: |
| | | E | English |
| | | F | French |
| 38 | 1 | | Not used |
| 39 | 12 | | Function keys assignments |
| 51 | 4 | cccc | Security system class |
| 55 | 1 | | Security system type |

| Pos. | Len. | Value | Meaning |
|------|------|-------|-------------------------------------|
| | | blank | No security system |
| | | R | RACF |
| | | S | TOP SECRET |
| 56 | 2 | nn | Number of lines per printout page |
| 58 | 1 | | Type of resource control |
| | | blank | Def tables resource security system |
| | | P | Def of resources in VA Pac |
| 59 | 1 | | Lock of user's code |
| | | blank | Other user's code authorized |
| | | N | Other user's code unauthorized |

INTA - Description of steps

Input recognition: PTU001

Definition of files: IDCAMS

| Code | Physical name | Type | Label |
|--------|--------------------|------|------------------------|
| PAC7TD | &INDUV.&ROOTT.00TD | | Table-description file |
| PAC7TV | &INDUV.&ROOTT.00TV | | Table-contents file |

Initialization of files: PTAINI

| Code | Physical name | Type | Label |
|--------|--------------------|--------|------------------------|
| PAC7MD | &&INTAMB | Input | Input file |
| PAC7TD | &INDUV.&ROOTT.00TD | Output | Table-description file |
| PAC7TV | &INDUV.&ROOTT.00TV | Output | Table-contents file |
| PAC7ED | | Report | Initialization review |

INTA - Execution JCL

```

//*****
//* PACTABLES 3.5 *
//*****
//*          --- TABLE INITIALIZATION --- *
//*****
//BVPINTA PROC ROOTT=$ROOTT, PACTABLES SYSTEM ROOT *
//          INDUV='$INDUV',      PACTABLES FILE INDEX *
//          INDSN='$INDSN',      NON-VSAM FILE INDEX *
//*:       VSAMCAT='$VCAT',      USER VSAM CATALOG *
//          STEPLIB='$HLQ..SBVPMBR8', LIBRARY OF LOAD-MODULES *

```

```

//          UWK=$UWK,                WORK UNIT                *
//          SPAMB='(TRK,(1,1),RLSE)', MB FILE SPACE          *
//          OUT=$OUT,                 OUTPUT CLASS            *
//          OUTL=$OUT                 REPORT OUTPUT CLASS     *
//*****
//COPY    EXEC PGM=BVPTU001
//*-----
//STEPLIB DD DSN=&STEPLIB,DISP=SHR
//PAC7MB  DD DSN=&&INTAMB,DISP=(,PASS),UNIT=&UWK,
//          DCB=BLKSIZE=1600,SPACE=&SPAMB
//CARTE   DD DDNAME=SYSIN,DCB=BLKSIZE=80
//DEFINE  EXEC PGM=IDCAMS
//*-----
//*:STEPCAT DD DSN=&VSAMCAT,DISP=SHR
//SYSPRINT DD SYSOUT=&OUT
//SYSIN   DD DSN=&INDSN..BVPSY(DF&ROOTT.00TD),
//          DISP=SHR
//          DD DSN=&INDSN..BVPSY(DF&ROOTT.00TV),
//          DISP=SHR
//PTAINI  EXEC PGM=BVPTAINI
//*-----
//STEPLIB DD DSN=&STEPLIB,DISP=SHR
//*:STEPCAT DD DSN=&VSAMCAT,DISP=SHR
//SYSOUT  DD SYSOUT=&OUT
//PAC7MD  DD DSN=&&INTAMB,DISP=SHR
//PAC7TD  DD DSN=&INDUV..&ROOTT.00TD,
//          DISP=SHR
//PAC7TV  DD DSN=&INDUV..&ROOTT.00TV,
//          DISP=SHR
//PAC7ED  DD SYSOUT=&OUTL
//SYSUDUMP DD SYSOUT=&OUT

```

GETT - Table generation

GETT - Introduction

This procedure updates the tables descriptions file using the tables descriptions extracted from the VisualAge Pacbase Database, and initializes the generated tables in the Tables Contents file.

Execution condition

This procedure must be preceded by the Extraction procedure of the VisualAge Pacbase system (GETD or GETA), whose output file contains the extracted tables descriptions used in input by the GETT procedure.

The TD and TV files being updated by this procedure, access to on-line use must therefore be closed except if the material in use allows Batch/TP concurrence.

NOTE about the platforms where the disk space allocated to the files is fixed:

When a very large update (in terms of number of transactions) is run, it may be necessary to precede the execution of this procedure by a backup and a reload in order to increase or physically reorganize the files and make all the initially provided free space available.

User input

Result of GETD or GETA extraction.

GETT - Description of steps

VSAM files check: IDCAMS

Update of table files: PTA250

| Code | Physical name | Type | Label |
|----------|---------------------|-----------------|--|
| PAC7MD | &MD | Input | Transaction file (GETD or GETA output) |
| PAC7TD | &INDUV..&ROOTT.00TD | Input Output | Tables descriptions file |
| PAC7TV | &INDUV..&ROOTT.00TV | Input Output | Tables contents file |
| PAC7TK | &&DE | Output | Output file |
| PAC7ET | | Report | Input/output errors on files |
| SORTWK01 | | Sort | |
| SORTWK02 | | Sort | |
| SORTWK03 | | Sort | |

Printing of descriptions: PTA290

| Code | Physical name | Type | Label |
|--------|---------------------|--------|--------------------------|
| PAC7TD | &INDUV..&ROOTT.00TD | Input | Tables descriptions file |
| PAC7TE | &&DE | Input | Print request |
| PAC7ID | | Report | Printout of descriptions |

GETT - Execution JCL

```

//*****
//* PACTABLES 3.5 *
//*****
//*          ---- TABLE GENERATION ---- *
//*****
//BVPGETT  PROC ROOTT=$ROOTT,   PACTABLES SYSTEM ROOT *
//          INDUV='$INDUV',      PACTABLES FILE'S INDEX
//          INDSN='$INDSN',      INDEX OF NON-VSAM SYSTEM FILES *

```

```

//      MD='&&MD',          GENERATED DESCRIPTION DSNAME      *
//      UNITS=$UNITUN,      GENERATED DESCRIPTION UNIT        *
//      VOLS='SER=$VOLUN',  GENERATED DESCRIPTION VOLUME     *
//*:    VSAMCAT='$VCAT',    USER VSAM CATALOG                *
//*:    SYSCAT='$SCAT',     SYSTEM VSAM CATALOG              *
//      STEPLIB='$HLQ..SBVPMBR8', LIBRARY OF LOAD-MODULES      *
//      SORTLIB='$BIBT',    SORT LIBRARY                      *
//      OUT=$OUT,          UTILITY AND ERROR OUTPUT CLASS REURS*
//      OUTL=$OUT,        OUTPUT CLASS OF REPORTS          *
//      UWK=$UWK,         WORK UNIT                          *
//      CYL='(3,1)',      SORTWORK SPACE                    *
//      SPAWK='(TRK,(50,10),RLSE)' WORK FILE SPACE          *
//*****
//VERIFY EXEC PGM=IDCAMS
//*-----
//*:STEPCAT DD DSN=&VSAMCAT,DISP=SHR
//*:      DD DSN=&SYSCAT,DISP=SHR
//SYSPRINT DD SYSOUT=&OUT
//PAC7TD DD DSN=&INDUV..&ROOTT.00TD,
//      DISP=SHR
//PAC7TV DD DSN=&INDUV..&ROOTT.00TV,
//      DISP=SHR
//SYSIN DD DSN=&INDSN..BVPSY(VERIFTD),
//      DISP=SHR
//      DD DSN=&INDSN..BVPSY(VERIFTV),
//      DISP=SHR
//PTA250 EXEC PGM=BVPTA250
//*-----
//*:STEPCAT DD DSN=&VSAMCAT,DISP=SHR
//STEPLIB DD DSN=&STEPLIB,DISP=SHR
//      DD DSN=$BCOB,DISP=SHR
//SYSOUT DD SYSOUT=&OUT
//PAC7TD DD DSN=&INDUV..&ROOTT.00TD,
//      DISP=SHR
//PAC7TV DD DSN=&INDUV..&ROOTT.00TV,
//      DISP=SHR
//PAC7MD DD DSN=&MD,DISP=OLD,
//      VOL=&VOLS,UNIT=&UNITS
//PAC7ET DD SYSOUT=&OUTL
//PAC7TK DD DSN=&&DE,DISP=(,PASS),UNIT=&UWK,
//      SPACE=&SPAWK,
//      DCB=(RECFM=FB,LRECL=80,BLKSIZE=1600)
//SORTLIB DD DSN=&SORTLIB,DISP=SHR
//SORTWK01 DD UNIT=&UWK,SPACE=(CYL,&CYL,,CONTIG)
//SORTWK02 DD UNIT=&UWK,SPACE=(CYL,&CYL,,CONTIG)
//SORTWK03 DD UNIT=&UWK,SPACE=(CYL,&CYL,,CONTIG)
//SYSOUX DD SYSOUT=&OUT
//SYSUDUMP DD SYSOUT=&OUT
//PTA290 EXEC PGM=BVPTA290
//*-----
//STEPLIB DD DSN=&STEPLIB,DISP=SHR
//      DD DSN=$BCOB,DISP=SHR
//*:STEPCAT DD DSN=&VSAMCAT,DISP=SHR
//SYSOUT DD SYSOUT=&OUT
//PAC7TD DD DSN=&INDUV..&ROOTT.00TD,

```

```
//          DISP=SHR
//PAC7TE   DD DSN=&&DE,DISP=(OLD,PASS)
//PAC7ID   DD SYSOUT=&OUTL
//SYSUDUMP DD SYSOUT=&OUT
```

UPTA - Table update

UPTA - Introduction

This procedure executes a batch update of the tables, and prints the updated tables.

Execution condition

The TV and TD files being updated by this procedure, access to on-line use must be closed except if the material in use allows Batch/TP concurrency.

NOTE about the platforms where the disk space allocated to the files is fixed:

When a very large update is run (in terms of the number of transactions), it may be necessary precede the execution of this procedure by a backup and a reload in order to increase or physically reorganize the TV file to make all the initially provided free space available.

Important note

An alternative version of the update program, PTA302, is available with Pactables 2.0 and higher.

During updates, the PTA300 program may call the user check routines in order to perform additional checks. The default generation option for these routines is 'without century management'.

From Release 2.0 and higher, the user check routines are generated with the century-management option. The new program, PTA302, must therefore be renamed and used instead of the PTA300 program.

In all cases, ALL the user check routines should be generated with the same century-management option.

UPTA - User input

- One '*'-type line per user:

| Pos. | Len. | Value | Meaning |
|------|------|----------|-----------|
| 2 | 1 | '*' | Line code |
| 3 | 8 | uuuuuuuu | User code |

| Pos. | Len. | Value | Meaning |
|------|------|----------|----------|
| 11 | 8 | pppppppp | Password |

- One 'A'-type line per table to update:

| Pos. | Len. | Value | Meaning |
|------|------|----------|------------------------------|
| 2 | 1 | 'A' | Line code |
| 3 | 6 | tttttt | Table number |
| 9 | 8 | DDMMCCYY | Historical account date |
| 17 | 1 | | Not used |
| 18 | 1 | | Sub-system number |
| | | ' ' | No sub-system specified |
| | | 1 to 0 | Sub-system number |
| 19 | 1 | | Data delimiter |
| | | ' ' | Considered as '/' by default |

- 'V'-type lines to update table data:

| Pos. | Len. | Value | Meaning |
|------|------|-------|--|
| 1 | 1 | | Action code |
| | | 'C' | Creation |
| | | 'M' | Modification |
| | | 'D' | Deletion |
| 2 | 1 | 'V' | Line code |
| 3 | 1 | | Continuation line |
| | | ' ' | First data line |
| | | '-' | Item data continuation |
| 4 | 77 | | Table data separated by the delimiter indicated on the 'A'-type line |

UPTA - Description of steps

Input recognition: PTU001

VSAM files check: IDCAMS

Table update: PTA300

| Code | Physical name | Type | Label |
|--------|---------------------|-----------------|---------------------------|
| PAC7TD | &INDUV..&ROOTT.00TD | Input | Tables descriptions file |
| PAC7TE | &INDSV..BVPTE | Input | Error message file |
| PAC7TG | &INDUV..&ROOTT.00TG | Input | User parameters file |
| PAC7TV | &INDUV..&ROOTT.00TV | Input Output | Tables contents file |
| PAC7MS | &&UPTAMB | Input | Update transactions |
| PAC7DE | &&TABLE | Output | Print requests (lrecl=80) |
| PAC7ET | | Report | Transaction review |
| PAC7MT | &&MVT300 | | Prepared transactions |

Formatting for printing: PTA350

| Code | Physical name | Type | Label |
|--------|---------------------|--------|--------------------------|
| PAC7TD | &INDUV..&ROOTT.00TD | Input | Tables descriptions file |
| PAC7TV | &INDUV..&ROOTT.00TV | Input | Tables contents file |
| PAC7DE | &&TABLE | Input | Print request |
| PAC7ET | &&SPOOL | Output | Print file |
| PAC7EX | | Report | Statistics on printing |

Printing of tables: PTA360

| Code | Physical name | Type | Label |
|----------|---------------------|--------|--------------------------|
| PAC7TD | &INDUV..&ROOTT.00TD | Input | Tables descriptions file |
| PAC7ET | &&SPOOL | Input | Print file |
| PAC7EY | | Report | Printing of tables |
| SORTWK01 | | Sort | |
| SORTWK02 | | Sort | |
| SORTWK03 | | Sort | |

UPTA - Execution JCL

```

//*****
//* PACTABLES 3.5 *
//*****
//*          --- TABLE UPDATE --- *
//*****
//BVPUPTA PROC ROOTT=$ROOTT, PACTABLES SYSTEM ROOT *

```



```

//      INDUV='$INDUV',      PACTABLES FILES' INDEX      *
//      INDSV='$INDSV',      VA PAC SYSTEM FILES' INDEX      *
//      INDSN='$INDSN',      NON-VSAM FILES' INDEX      *
//*:    VSAMCAT='$VCAT',      USER VSAM CATALOG      *
//*:    SYSTCAT='$SCAT',      SYSTEM VSAM CATALOG      *
//      STEPLIB='$HLQ..SBVPMBR8',  LIBRARY OF LOAD-MODULES  *
//      SORTLIB='$BIBT',      SORT LIBRARY      *
//      OUT=$OUT,            UTILITY AND ERROR OUTPUT CLASS  URS *
//      OUTL=$OUT,           REPORT OUTPUT CLASS      *
//      UWK=$UWK,           WORK UNIT      *
//      CYL=3,              SORTWORK SPACE      *
//      SPAWK='(TRK,(50,10),RLSE)',  WORK FILE SPACE      *
//      SPAED='(TRK,(150,30),RLSE)',  PRINT FILE SPACE      *
//      SPAMB='(TRK,(5,1),RLSE)'    REQUEST FILE SPACE      *
//*****
//COPY  EXEC PGM=BVPTU001
//*-----
//STEPLIB DD DSN=&STEPLIB,DISP=SHR
//PAC7MB DD DSN=&&UPTAMB,DISP=(,PASS),UNIT=&UWK,
//      DCB=BLKSIZE=1600,SPACE=&SPAMB
//CARTE DD DDNAME=SYSIN,DCB=BLKSIZE=80
//VERIFY EXEC PGM=IDCAMS
//*-----
//*:STEPCAT DD DSN=&VSAMCAT,DISP=SHR
//*:      DD DSN=&SYSTCAT,DISP=SHR
//SYSPRINT DD SYSOUT=&OUT
//PAC7TE DD DSN=&INDSV..BVPTE,
//      DISP=SHR
//PAC7TD DD DSN=&INDUV..&ROOTT.00TD,
//      DISP=SHR
//PAC7TV DD DSN=&INDUV..&ROOTT.00TV,
//      DISP=SHR
//PAC7TG DD DSN=&INDUV..&ROOTT.00TG,
//      DISP=SHR
//SYSIN DD DSN=&INDSN..BVPSY(VERIFTE),
//      DISP=SHR
//      DD DSN=&INDSN..BVPSY(VERIFTD),
//      DISP=SHR

//      DD DSN=&INDSN..BVPSY(VERIFTV),
//      DISP=SHR
//      DD DSN=&INDSN..BVPSY(VERIFTG),
//      DISP=SHR
//PTA300 EXEC PGM=BVPTA300
//*-----
//STEPLIB DD DSN=&STEPLIB,DISP=SHR
//*:STEPCAT DD DSN=&VSAMCAT,DISP=SHR
//*:      DD DSN=&SYSTCAT,DISP=SHR
//SYSOUT DD SYSOUT=&OUT
//SYSOUX DD SYSOUT=&OUT
//PAC7TD DD DSN=&INDUV..&ROOTT.00TD,
//      DISP=SHR
//PAC7TE DD DSN=&INDSV..BVPTE,
//      DISP=SHR
//PAC7TG DD DSN=&INDUV..&ROOTT.00TG,

```

```

//          DISP=SHR
//PAC7TV   DD DSN=&INDUV..&ROOTT.00TV,
//          DISP=SHR
//PAC7MS   DD DSN=&&UPTAMB,DISP=(OLD,PASS)
//PAC7DE   DD DSN=&&TABLE,DISP=(NEW,PASS),UNIT=&UWK,
//          DCB=(RECFM=FB,LRECL=80,BLKSIZE=800),
//          SPACE=&SPAWK
//PAC7ET   DD SYSOUT=&OUTL
//PAC7MT   DD DSN=&&MVT300,DISP=(NEW,DELETE),UNIT=&UWK,
//          DCB=(RECFM=FB,LRECL=95,BLKSIZE=6175),
//          SPACE=&SPAWK
//SYSUDUMP DD SYSOUT=&OUT
//PTA350   EXEC PGM=BVPTA350
//*-----
//STEPLIB DD DSN=&STEPLIB,DISP=SHR
//*:STEP   DD DSN=&VSAMCAT,DISP=SHR
//SYSOUT   DD SYSOUT=&OUT
//PAC7TD   DD DSN=&INDUV..&ROOTT.00TD,
//          DISP=SHR
//PAC7TV   DD DSN=&INDUV..&ROOTT.00TV,
//          DISP=SHR
//PAC7DE   DD DSN=&&TABLE,DISP=(OLD,DELETE)
//PAC7ET   DD DSN=&&SPOOL,DISP=(NEW,PASS),UNIT=&UWK,
//          DCB=(RECFM=FB,LRECL=160,BLKSIZE=1600),
//          SPACE=&SPAED
//PAC7EX   DD SYSOUT=&OUTL
//SYSUDUMP DD SYSOUT=&OUT
//PTA360   EXEC PGM=BVPTA360
//*-----
//STEPLIB DD DSN=&STEPLIB,DISP=SHR
//*:STEP   DD DSN=&VSAMCAT,DISP=SHR
//SORTLIB DD DSN=&SORTLIB,DISP=SHR
//SYSOUT   DD SYSOUT=&OUT
//SYSOUX   DD SYSOUT=&OUT
//PAC7TD   DD DSN=&INDUV..&ROOTT.00TD,
//          DISP=SHR
//PAC7ET   DD DSN=&&SPOOL,DISP=(OLD,DELETE)
//PAC7EY   DD SYSOUT=&OUTL
//SORTWK01 DD UNIT=&UWK,SPACE=(CYL,&CYL,,CONTIG)
//SORTWK02 DD UNIT=&UWK,SPACE=(CYL,&CYL,,CONTIG)
//SORTWK03 DD UNIT=&UWK,SPACE=(CYL,&CYL,,CONTIG)
//SYSUDUMP DD SYSOUT=&OUT

```

PRTA - Table printing

PRTA - Introduction

This procedure performs a batch printing of tables.

Execution condition

This procedure reads the Pactables files ; it can be executed even if access to on-line use remains open.

Note

Users may also submit the PRTA procedure on-line: refer to the Pactables Reference Manual for more details on batch printing submission.

PRTA - User input

- One '*'-type line per user:

| Pos. | Len. | Value | Meaning |
|------|------|----------|-----------|
| 2 | 1 | '*' | Line code |
| 3 | 8 | uuuuuuuu | User code |
| 11 | 8 | pppppppp | Password |

- One 'A'-type line per table to be printed:

| Pos. | Len. | Value | Meaning |
|------|------|----------|--|
| 1 | 1 | | Action code |
| | | 'E' | Table printing |
| | | 'H' | List of historical accounts |
| | | 'L' | List of the tables |
| | | 'S' | List of sub-schemas and sub-systems |
| | | 'X' | Table contents with historical accounts |
| 2 | 1 | 'A' | Line code |
| 3 | 6 | ttttt | Table number |
| 9 | 8 | DDMMCCYY | Historical account date or date of the reference description (if transaction code = 'X') |
| 17 | 1 | | Sub-schema selection |
| | | blank | No sub-schema selection |
| | | 1 to 0 | Selected sub-schema number |
| 18 | 1 | | Sub-system selection |
| | | blank | No sub-system selection |
| | | 1 to 0 | Selected sub-system number |
| 19 | 1 | | Print option of the key's data elements |
| | | blank | Printing of concatenated data elements |
| | | 'O' | Printing of separated data elements |

PRTA - Description of steps

Input recognition: PTU001

VSAM files check: IDCAMS

Extraction of tables for printing: PTA320

| Code | Physical name | Type | Label |
|--------|--------------------|--------|--------------------------|
| PAC7TD | &INDUV.&ROOTT.00TD | Input | Tables descriptions file |
| PAC7TE | &INDSV..BVPTE | Input | Error message file |
| PAC7TV | &INDUV.&ROOTT.00TV | Input | Table contents File |
| PAC7TG | &INDUV.&ROOTT.00TG | Input | User parameter file |
| PAC7CA | &&PRTAMB | Input | Update transactions |
| PAC7DE | &&TABLE (LRECL=80) | Output | Print requests |
| PAC7XE | | Report | Transaction review |

Preparation for printing: PTA350

| Code | Physical name | Type | Label |
|--------|--------------------|--------|--------------------------|
| PAC7TD | &INDUV.&ROOTT.00TD | Input | Tables descriptions file |
| PAC7TV | &INDUV.&ROOTT.00TV | Input | Tables contents file |
| PAC7DE | &&TABLE | Input | Print requests |
| PAC7ET | &&SPOOL | Output | Print file |
| PAC7EX | | Report | Statistics on printing |

Printing of tables: PTA360

| Code | Physical name | Type | Label |
|----------|--------------------|--------|--------------------------|
| PAC7TD | &INDUV.&ROOTT.00TD | Input | Tables descriptions file |
| PAC7ET | &&SPOOL | Input | Print file |
| PAC7EY | | Report | Printing of tables |
| SORTWK01 | | Sort | |
| SORTWK02 | | Sort | |
| SORTWK03 | | Sort | |

PRTA - Execution JCL

```

//*****
//* PACTABLES 3.5 *
//*****
//* --- TABLE PRINTING --- *
//*****
//BVPVRTA PROC ROOTT=$ROOTT, PACTABLES SYSTEM ROOT *
// INDUV='$INDUV', PACTABLES FILES' INDEX *
// INDSV='$INDSV', VA PAC SYSTEM FILES' INDEX *
// INDSN='$INDSN', NON-VSAM FILE INDEX *
//*: VSAMCAT='$VCAT', USER VSAM CATALOG *
//*: SYSTCAT='$SCAT', SYSTEM VSAM CATALOG *
// STEPLIB='$HLQ..SBVPMBR8', LIBRARY OF LOAD-MODULES *
// SORTLIB='$BIBT', SORT LIBRARY *
// OUT=$OUT, UTILITY AND ERROR OUTPUT CLASS URS *
// OUTL=$OUT, REPORT OUTPUT CLASS *
// UWK=$UWK, WORK UNIT *
// CYL=3, SORTWORK SPACE *
// SPAWK=(TRK,(50,10),RLSE)', WORK FILE SPACE *
// SPAED=(TRK,(150,30),RLSE)', PRINTING FILE SPACE *
// SPAMB=(TRK,(5,1),RLSE)' REQUEST FILE SPACE *
//*****
//COPY EXEC PGM=BVPTU001
//*-----
//STEPLIB DD DSN=&STEPLIB,DISP=SHR
//PAC7MB DD DSN=&&PRTAMB,DISP=(,PASS),UNIT=&UWK,
// DCB=BLKSIZE=1600,SPACE=&SPAMB
//CARTE DD DDNAME=SYSIN,DCB=BLKSIZE=80
//VERIFY EXEC PGM=IDCAMS
//*-----
//*:STEPCAT DD DSN=&VSAMCAT,DISP=SHR
//*: DD DSN=&SYSTCAT,DISP=SHR
//SYSPRINT DD SYSOUT=&OUT
//PAC7TE DD DSN=&INDSV..BVPTE,
// DISP=SHR
//PAC7TD DD DSN=&INDUV..&ROOTT.00TD,
// DISP=SHR
//PAC7TV DD DSN=&INDUV..&ROOTT.00TV,
// DISP=SHR
//PAC7TG DD DSN=&INDUV..&ROOTT.00TG,
// DISP=SHR
//SYSIN DD DSN=&INDSN..BVPSY(VERIFTE),
// DISP=SHR
// DD DSN=&INDSN..BVPSY(VERIFTD),
// DISP=SHR
// DD DSN=&INDSN..BVPSY(VERIFTV),
// DISP=SHR
// DD DSN=&INDSN..BVPSY(VERIFTG),
// DISP=SHR
//PTA320 EXEC PGM=BVPTA320
//*-----
//STEPLIB DD DSN=&STEPLIB,DISP=SHR
//*:STEPCAT DD DSN=&VSAMCAT,DISP=SHR
//*: DD DSN=&SYSTCAT,DISP=SHR
//SYSOUT DD SYSOUT=&OUT

```

```

//PAC7TD DD DSN=&INDUV..&ROOTT.00TD,
// DISP=SHR
//PAC7TE DD DSN=&INDSV..BVPTE,
// DISP=SHR
//PAC7TV DD DSN=&INDUV..&ROOTT.00TV,
// DISP=SHR
//PAC7TG DD DSN=&INDUV..&ROOTT.00TG,
// DISP=SHR
//PAC7CA DD DSN=&&PRTAMB,DISP=(OLD,PASS)
//PAC7DE DD DSN=&&TABLE,DISP=(NEW,PASS),UNIT=&UWK,
// DCB=(RECFM=FB,LRECL=80,BLKSIZE=800),
// SPACE=&SPAWK
//PAC7XE DD SYSOUT=&OUTL
//SYSUDUMP DD SYSOUT=&OUT
//PTA350 EXEC PGM=BVPTA350
//*-----
//STEPLIB DD DSN=&STEPLIB,DISP=SHR
//*:STPCAT DD DSN=&VSAMCAT,DISP=SHR
//SYSOUT DD SYSOUT=&OUT
//PAC7TD DD DSN=&INDUV..&ROOTT.00TD,
// DISP=SHR
//PAC7TV DD DSN=&INDUV..&ROOTT.00TV,
// DISP=SHR
//PAC7DE DD DSN=&&TABLE,DISP=(OLD,DELETE)
//PAC7ET DD DSN=&&SPOOL,DISP=(NEW,PASS),UNIT=&UWK,
// DCB=(RECFM=FB,LRECL=160,BLKSIZE=1600),
// SPACE=&SPAED
//PAC7EX DD SYSOUT=&OUTL
//SYSUDUMP DD SYSOUT=&OUT
//PTA360 EXEC PGM=BVPTA360
//*-----
//STEPLIB DD DSN=&STEPLIB,DISP=SHR
//*:STPCAT DD DSN=&VSAMCAT,DISP=SHR
//SORTLIB DD DSN=&SORTLIB,DISP=SHR
//SYSOUT DD SYSOUT=&OUT
//SYSOUX DD SYSOUT=&OUT
//PAC7TD DD DSN=&INDUV..&ROOTT.00TD,
// DISP=SHR
//PAC7ET DD DSN=&&SPOOL,DISP=(OLD,DELETE)
//PAC7EY DD SYSOUT=&OUTL
//SORTWK01 DD UNIT=&UWK,SPACE=(CYL,&CYL,,CONTIG)
//SORTWK02 DD UNIT=&UWK,SPACE=(CYL,&CYL,,CONTIG)
//SORTWK03 DD UNIT=&UWK,SPACE=(CYL,&CYL,,CONTIG)
//SYSUDUMP DD SYSOUT=&OUT

```

IMTA - Table import

IMTA - Introduction

This procedure imports external tables into the existing Pactables files.

You must first enter the description of the Table you want to import in the VA Pac Database, then generate this description (GETA/GETT procedures).

Once you have performed these operations, you can import the external table via the IMTA procedure.

The IMTA input format of the Table to be imported is a sequential file which contains one record per table item, whose contents corresponds to the description entered in the VA Pac Database (input format).

The length of this file record is 999 characters (maximum length of a table item).

Execution condition

Since this procedure updates the TV Table file, the files must be closed to on-line use except for equipment allowing batch/TP concurrence.

Note: for platforms where the disk space allocated to the files is fixed:

If the table to be imported is large, it may be necessary to precede the execution of the procedure by a backup and reload in order to increase the size of the TV file or physically reorganize this file so as to make all the initially provided free space available.

Restriction

The procedure allows you to import only one table per execution.

Important note

An alternative version of the update program, PTA312, is shipped with Pactables 2.0 and higher releases.

During updates, the PTA310 program may call user check routines in order to perform additional checks. The default generation option for these routines is 'without century management'.

With Release 2.0 and higher, if the user check routines are generated with the century-management option, the new program, PTA312, must therefore be renamed and used instead of the PTA310 program.

In all cases, ALL the user check routines should be generated with the same century-management option.

IMTA - User input

- One '*'-type line per user:

| Pos. | Len. | Value | Meaning |
|------|------|----------|-----------|
| 2 | 1 | '*' | Line code |
| 3 | 8 | uuuuuuuu | User code |
| 11 | 8 | pppppppp | Password |

- One 'A'-type line per table to be imported:

| Pos. | Len. | Value | Meaning |
|------|------|----------|------------------------------------|
| 2 | 1 | 'A' | Line code |
| 3 | 6 | tttttt | Number of the table to be imported |
| 9 | 8 | DDMMCCYY | Table date (optional) |

IMTA - Description of steps

Input recognition: PTU001

VSAM files check: IDCAMS

Table check and update: PTA310

| Code | Physical name | Type | Label |
|--------|--------------------|-----------------|--------------------------|
| PAC7TD | &INDUV.&ROOTT.00TD | Input | Tables descriptions file |
| PAC7TE | &INDSV..BVPTE | Input | Error message file |
| PAC7TG | &INDUV.&ROOTT.00TG | Input | User parameter file |
| PAC7TV | &INDUV.&ROOTT.00TV | Input Output | Tables contents files |
| PAC7MV | &&IMTAMB | Input | Request transactions |
| PAC7NK | &TABF (LRECL=999) | Input | External table file |
| PAC7DE | &&TABLE (LRECL=80) | Output | Print requests |
| PAC7ET | | Report | Execution report |

Formatting of printout: PTA350

| Code | Physical name | Type | Label |
|--------|--------------------|-------|--------------------------|
| PAC7TD | &INDUV.&ROOTT.00TD | Input | Tables descriptions file |
| PAC7TV | &INDUV.&ROOTT.00TV | Input | Tables contents file |
| PAC7DE | &&TABLE | Input | Print requests |

| Code | Physical name | Type | Label |
|--------|---------------|--------|---------------------|
| PAC7ET | &&SPOOL | Output | Print file |
| PAC7EX | | Report | Printing statistics |

Printing: PTA360

| Code | Physical name | Type | Label |
|----------|--------------------|--------|--------------------------|
| PAC7TD | &INDUV.&ROOTT.00TD | Input | Tables descriptions file |
| PAC7ET | &&SPOOL | Input | Print file |
| PAC7EY | | Report | Table printout |
| SORTWK01 | | Sort | |
| SORTWK02 | | Sort | |
| SORTWK03 | | Sort | |

IMTA - Execution JCL

```

//*****
//* PACTABLES 3.5 *
//*****
//* --- TABLE IMPORT --- *
//*****
//BVPIMTA PROC ROOTT=$ROOTT, PACTABLES SYSTEM ROOT *
// INDUV='$INDUV', PACTABLES FILES' INDEX *
// INDSV='$INDSV', VA PAC SYSTEM FILES' INDEX *
// INDSN='$INDSN', NON-VSAM FILES' INDEX *
//*: VSAMCAT='$VCAT', USER VSAM CATALOG *
//*: SYSCAT='$SCAT', SYSTEM VSAM CATALOG *
// STEPLIB='$HLQ..SBVPMBR8', LIBRARY OF LOAD-MODULES *
// SORTLIB='$BIBT', SORT LIBRARY *
// TABF=, DSN OF TABLE FILE TO BE IMPORTED *
// OUT=$OUT, UTILITY AND ERROR OUTPUT CLASS URS *
// OUTL=$OUT, REPORT OUTPUT CLASS *
// UWK=$UWK, WORK UNIT *
// CYL=3, SORTWORK SPACE *
// SPAWK=(TRK,(50,10),RLSE)', WORK FILE SPACE *
// SPAED=(TRK,(150,30),RLSE)', PRINT FILE SPACE *
// SPAMB=(TRK,(5,1),RLSE)' REQUEST FILE SPACE *
//*****
//COPY EXEC PGM=BVPTU001
//*-----
//STEPLIB DD DSN=&STEPLIB,DISP=SHR
//PAC7MB DD DSN=&IMTAMB,DISP=(,PASS),UNIT=&UWK,
// DCB=BLKSIZE=1600,SPACE=&SPAMB
//CARTE DD DDNAME=SYSIN,DCB=BLKSIZE=80
//VERIFY EXEC PGM=IDCAMS
//*-----
//*:STEPCAT DD DSN=&VSAMCAT,DISP=SHR
//*: DD DSN=&SYSCAT,DISP=SHR

```

```

//SYSPRINT DD SYSOUT=&OUT
//PAC7TE DD DSN=&INDSV..BVPT,
// DISP=SHR
//PAC7TD DD DSN=&INDUV..&ROOTT.00TD,
// DISP=SHR
//PAC7TV DD DSN=&INDUV..&ROOTT.00TV,
// DISP=SHR
//PAC7TG DD DSN=&INDUV..&ROOTT.00TG,
// DISP=SHR
//SYSIN DD DSN=&INDSN..BVPSY(VERIFTE),
// DISP=SHR
// DD DSN=&INDSN..BVPSY(VERIFTD),
// DISP=SHR
// DD DSN=&INDSN..BVPSY(VERIFTV),
// DISP=SHR
// DD DSN=&INDSN..BVPSY(VERIFTG),
// DISP=SHR
//PTA310 EXEC PGM=BVPTA310
//*-----
//STEPLIB DD DSN=&STEPLIB,DISP=SHR
//*:STEP CAT DD DSN=&VSAMCAT,DISP=SHR
//*: DD DSN=&SYSTCAT,DISP=SHR
//PAC7TD DD DSN=&INDUV..&ROOTT.00TD,
// DISP=SHR
//PAC7TE DD DSN=&INDSV..BVPT,
// DISP=SHR
//PAC7TG DD DSN=&INDUV..&ROOTT.00TG,
// DISP=SHR
//PAC7TV DD DSN=&INDUV..&ROOTT.00TV,
// DISP=SHR
//PAC7MV DD DSN=&&IMTAMB,DISP=(OLD,PASS)
//PAC7NK DD DSN=&TABF,DISP=OLD
//PAC7DE DD DSN=&&TABLE,DISP=(NEW,PASS),UNIT=&UWK,
// DCB=(RECFM=FB,LRECL=80,BLKSIZE=800),
// SPACE=&SPAWK
//PAC7ET DD SYSOUT=&OUTL
//SYSOUT DD SYSOUT=&OUT
//SYSUDUMP DD SYSOUT=&OUT
//PTA350 EXEC PGM=BVPTA350
//*-----
//STEPLIB DD DSN=&STEPLIB,DISP=SHR
//*:STEP CAT DD DSN=&VSAMCAT,DISP=SHR
//SYSOUT DD SYSOUT=&OUT
//PAC7TD DD DSN=&INDUV..&ROOTT.00TD,
// DISP=SHR
//PAC7TV DD DSN=&INDUV..&ROOTT.00TV,
// DISP=SHR
//PAC7DE DD DSN=&&TABLE,DISP=(OLD,DELETE)
//PAC7ET DD DSN=&&SPOOL,DISP=(NEW,PASS),UNIT=&UWK,
// DCB=(RECFM=FB,LRECL=160,BLKSIZE=1600),
// SPACE=&SPAED
//PAC7EX DD SYSOUT=&OUTL
//SYSUDUMP DD SYSOUT=&OUT
//PTA360 EXEC PGM=BVPTA360
//*-----

```

```

//STEPLIB DD DSN=&STEPLIB,DISP=SHR
//*:STEPDAT DD DSN=&VSAMCAT,DISP=SHR
//SORTLIB DD DSN=&SORTLIB,DISP=SHR
//SYSOUT DD SYSOUT=&OUT
//SYSOUX DD SYSOUT=&OUT
//PAC7TD DD DSN=&INDUV..&ROOTT.00TD,
// DISP=SHR
//PAC7ET DD DSN=&&SPOOL,DISP=(OLD,DELETE)
//PAC7EY DD SYSOUT=&OUTL
//SORTWK01 DD UNIT=&UWK,SPACE=(CYL,&CYL,,CONTIG)
//SORTWK02 DD UNIT=&UWK,SPACE=(CYL,&CYL,,CONTIG)
//SORTWK03 DD UNIT=&UWK,SPACE=(CYL,&CYL,,CONTIG)
//SYSUDUMP DD SYSOUT=&OUT

```

RETA - Table reorganization

RETA - Introduction

From the Pactables Database, this procedure rebuilds the backup file containing the new tables descriptions and contents files, reorganized images of the initial TD and TV files.

RETA deletes the records that were logically deleted during update by reorganizing the historical accounts of the files according to the user's requests (see the Pactables Reference Manual). The records that were logically deleted can be kept by option.

For user programs written in Cobol II, RETA assigns a sign + to numeric data signed positive (not available in previous releases).

Execution condition

To ensure the consistency of the reorganized database, files must be closed to on-line use.

RETA - User input

- One '*'-type line identifying the Pactables Manager :

| Pos. | Len. | Value | Meaning |
|------|------|----------|------------------------|
| 2 | 1 | '*' | Line code |
| 3 | 8 | '*****' | Table Manager code |
| 11 | 8 | pppppppp | Table Manager password |

- One 'A'-type line per historical account to keep or delete:

| Pos. | Len. | Value | Meaning |
|------|------|-------|-------------|
| 1 | 1 | | Action code |

| Pos. | Len. | Value | Meaning |
|------|------|----------|--|
| | | 'S' | Historical account to purge |
| | | 'G' | Historical account to keep |
| 2 | 1 | 'A' | Line code |
| 3 | 6 | tttttt | Table number |
| 9 | 8 | DDMMCCYY | Historical account date |
| 19 | 1 | ' ' | Option |
| | | | - when the action code is equal to 'G', the historical account whose date is equal to the date specified is kept. If there is no date, all historical accounts are kept. |
| | | | - When the action code is equal to 'S', the historical account whose date is equal to the date specified is purged. |
| | | '<' | - When the action code is equal to 'G', the historical accounts whose dates are strictly earlier than the date specified are kept. |
| | | | - When the action code is equal to 'S', all historical accounts whose dates are strictly earlier than the date specified are purged. |
| | | '>' | - When the action code is equal to 'G', all historical accounts whose dates are later than or equal to the date specified are kept. |
| | | | - When the action code is equal to 'S', all historical accounts whose dates are later than or equal to the date specified are purged. |

The action codes 'G' and 'S' are exclusive.

For more details, see the Pactables Reference Manual.

RETA - Description of steps

Input recognition: PTU001

VSAM files check: IDCAMS

Reorganization of table contents: PTA400

| Code | Physical name | Type | Label |
|--------|--------------------|-------|--------------------------|
| PAC7TD | &INDUV.&ROOTT.00TD | Input | Tables descriptions file |
| PAC7TE | &INDSV..BVPTE | Input | Error-message file |
| PAC7TG | &INDUV.&ROOTT.00TG | Input | User parameter file |

| Code | Physical name | Type | Label |
|----------|----------------------|--------|-----------------------------|
| PAC7TV | &INDUV.&ROOTT.00TV | Input | Tables contents file |
| PAC7DR | &&RETAMB | Input | Reorganization requests |
| PAC7TX | &&TXREO (LRECL=1063) | Output | Reorganized contents file |
| PAC7DE | &&DEREO (LRECL=80) | Output | Reorganized table list file |
| PAC7IR | | Report | Transaction report |
| SORTWK01 | | Sort | |
| SORTWK02 | | Sort | |
| SORTWK03 | | Sort | |

Note:

The PAC7DE file (reorganized table list file) whose description contains print requests, may be kept. Once the reorganization is complete, it can be used as input for the PRTA procedure applied to the reorganized files, thus enabling the printing of all the tables that were kept, in order to check the correct execution of the reorganization.

Return codes:

- 0: No error detected.
- 4: Error on an 'A' line.

Validation of table contents: PTA410

| Code | Physical name | Type | Label |
|----------|---------------|--------|---------------------------|
| PAC7MB | &&RETAMB | Input | Reorganization requests |
| PAC7TX | &&TXREO | Input | Reorganized contents file |
| PAC7TW | &&TWREO | Output | Validated contents file |
| SORTWK01 | | Sort | |
| SORTWK02 | | Sort | |
| SORTWK03 | | Sort | |

Reorganization of table-descriptions: PTA420

| Code | Physical name | Type | Label |
|--------|--------------------|-------|-----------------------------|
| PAC7TD | &INDUV.&ROOTT.00TD | Input | Tables descriptions file |
| PAC7DE | &&DEREO | Input | Reorganized table list file |

| Code | Physical name | Type | Label |
|----------|---------------|--------|--------------------------------------|
| PAC7TS | &&TSREO | Output | Reorganized tables descriptions file |
| PAC7ML | &&ME | Output | Tables descriptions print request |
| SORTWK01 | | Sort | |
| SORTWK02 | | Sort | |
| SORTWK03 | | Sort | |

Note

The PAC7ML file (Tables descriptions print request) must be kept and used as input of the LDTA procedure, to produce a printout of the tables descriptions that were kept, in order to check the correct execution of the reorganization.

Building of backup file: PTA430

| Code | Physical name | Type | Label |
|--------|-------------------------|--------|---|
| PAC7TW | &&TWREO | Input | Validated contents file |
| PAC7TS | &&TSREO | Input | Reorganized descriptions file |
| PAC7TC | &INDUN..&ROOTT.00TC(+1) | Output | Backup file resulting from reorganization |

TG file backup: PTASVG

| Code | Physical name | Type | Label |
|--------|--------------------------------------|--------|---------------------|
| PAC7TG | &INDUV..&ROOTT.00TG | Input | User-parameter file |
| PAC7TC | &INDUN..&ROOTT.00TC(+1), DISP=MOD | Output | Table backup |

RETA - Execution JCL

```

//*****
//* PACTABLES 3.5 *
//*****
//*****
//*          --- REORGANIZATION OF TABLES --- *
//*****
//BVPRETA  PROC ROOTT=$ROOTT,   ROOT OF PACTABLES SYSTEM *
//          INDUV='$INDUV',     PACTABLES FILE INDEX *
//          INDSV='$INDSV',     VA PAC SYSTEM FILE INDEX *
//          INDSN='$INDSN',     NON VSAM FILES INDEX *
//          INDUN='$INDUN',     NON-VSAM USER FILE INDEX *
//*:       VSAMCAT='$VCAT',     USER VSAM CATALOG *

```

```

//*:      SYSTCAT='$SCAT',          SYSTEM USER CATALOG          *
//        STEPLIB='$HLQ..SBVPMBR8', LIBRARY OF LOAD-MODULES      *
//        SORTLIB='$BIBT',         SORT LIBRARY                  *
//        OUT=$OUT,                OUTPUT CLASS                  *
//        OUTL=$OUT,              OUTPUT CLASS OF REPORTS        *
//        UNITS=$UNITUN,          BACKUP UNIT (DISK OR TAPE)      E) *
//        VOLS='$SER=$VOLUN',     BACKUP VOLUME                  *
//        DSCB='$DSCB',          SAMPLE DSCB FILE                *
//        UWK=$UWK,              WORK UNIT                       *
//        CYL=(3,1)',            SORTWORK SPACE                 *
//        SPAWK=(TRK,(50,10),RLSE)', WORK FILE SPACE            *
//        SPAMB=(TRK,(5,1),RLSE)', REQUEST FILE SPACE          S  *
//        SPATC=(TRK,(150,10),RLSE)' BACKUP FILE SPACE         *
//*****
//COPY   EXEC PGM=BVPTU001
//*-----
//STEPLIB DD DSN=&STEPLIB,DISP=SHR
//PAC7MB  DD DSN=&&RETAMB,DISP=(,PASS),UNIT=&UWK,
//        DCB=BLKSIZE=1600,SPACE=&SPAMB
//CARTE   DD DDNAME=SYSIN,DCB=BLKSIZE=80
//VERIFY  EXEC PGM=IDCAMS
//*-----
//*:STEPCAT DD DSN=&VSAMCAT,DISP=SHR
//*:      DD DSN=&SYSTCAT,DISP=SHR
//SYSPRINT DD SYSOUT=&OUT
//PAC7TE   DD DSN=&INDSV..BVPTE,
//        DISP=SHR
//PAC7TD   DD DSN=&INDUV..&ROOTT.00TD,
//        DISP=SHR
//PAC7TV   DD DSN=&INDUV..&ROOTT.00TV,
//        DISP=SHR
//PAC7TG   DD DSN=&INDUV..&ROOTT.00TG,
//        DISP=SHR
//SYSIN    DD DSN=&INDSN..BVPSY(VERIFTE),
//        DISP=SHR
//        DD DSN=&INDSN..BVPSY(VERIFTD),
//        DISP=SHR
//        DD DSN=&INDSN..BVPSY(VERIFTV),
//        DISP=SHR
//        DD DSN=&INDSN..BVPSY(VERIFTG),
//        DISP=SHR
//PTA400   EXEC PGM=BVPTA400
//*-----
//STEPLIB DD DSN=&STEPLIB,DISP=SHR
//SORTLIB DD DSN=&SORTLIB,DISP=SHR
//*:STEPCAT DD DSN=&VSAMCAT,DISP=SHR
//*:      DD DSN=&SYSTCAT,DISP=SHR
//SYSOUT   DD SYSOUT=&OUT
//SYSOUX   DD SYSOUT=&OUT
//PAC7TD   DD DSN=&INDUV..&ROOTT.00TD,
//        DISP=SHR
//PAC7TE   DD DSN=&INDSV..BVPTE,
//        DISP=SHR
//PAC7TV   DD DSN=&INDUV..&ROOTT.00TV,
//        DISP=SHR

```

```

//PAC7TG DD DSN=&INDUV..&ROOTT.00TG,
// DISP=SHR
//PAC7DR DD DSN=&&RETAMB,DISP=(OLD,PASS)
//PAC7DE DD DSN=&&DEREO,DISP=(,PASS),UNIT=&UWK,
// SPACE=&SPAWK,
// DCB=(RECFM=FB,LRECL=80,BLKSIZE=3200)
//PAC7TX DD DSN=&&TXREO,DISP=(,PASS),UNIT=&UWK,
// SPACE=&SPAWK,
// DCB=(RECFM=VB,LRECL=1063,BLKSIZE=10630)
//PAC7IR DD SYSOUT=&OUTL
//SORTWK01 DD UNIT=&UWK,SPACE=(CYL,&CYL,,CONTIG)
//SORTWK02 DD UNIT=&UWK,SPACE=(CYL,&CYL,,CONTIG)
//SORTWK03 DD UNIT=&UWK,SPACE=(CYL,&CYL,,CONTIG)
//SYSUDUMP DD SYSOUT=&OUT
//PTA410 EXEC PGM=BVPTA410
//*-----
//STEPLIB DD DSN=&STEPLIB,DISP=SHR
//SORTLIB DD DSN=&SORTLIB,DISP=SHR
//SYSOUT DD SYSOUT=&OUT
//PAC7MB DD DSN=&&RETAMB,DISP=(OLD,PASS)
//PAC7TX DD DSN=&&TXREO,DISP=(OLD,PASS)
//PAC7TW DD DSN=&&TWREO,DISP=(,PASS),UNIT=&UWK,
// SPACE=&SPAWK,
// DCB=(RECFM=VB,LRECL=1063,BLKSIZE=10630)
//SORTWK01 DD UNIT=&UWK,SPACE=(CYL,&CYL,,CONTIG)
//SORTWK02 DD UNIT=&UWK,SPACE=(CYL,&CYL,,CONTIG)
//SORTWK03 DD UNIT=&UWK,SPACE=(CYL,&CYL,,CONTIG)
//SYSUDUMP DD SYSOUT=&OUT
//PTA420 EXEC PGM=BVPTA420
//*-----
//STEPLIB DD DSN=&STEPLIB,DISP=SHR
//SORTLIB DD DSN=&SORTLIB,DISP=SHR
//*:STEPCAT DD DSN=&VSAMCAT,DISP=SHR
//SYSOUT DD SYSOUT=&OUT
//PAC7TD DD DSN=&INDUV..&ROOTT.00TD,
// DISP=SHR
//PAC7TS DD DSN=&&TSREO,DISP=(NEW,PASS),UNIT=&UWK,
// SPACE=&SPAWK,
// DCB=(RECFM=FB,LRECL=240,BLKSIZE=2400)
//PAC7DE DD DSN=&&DEREO,DISP=(OLD,PASS)
//PAC7ML DD DSN=&&ME,DISP=(,PASS),UNIT=&UWK,
// SPACE=&SPAWK,
// DCB=(RECFM=FB,LRECL=80,BLKSIZE=3200)
//SORTWK01 DD UNIT=&UWK,SPACE=(CYL,&CYL,,CONTIG)
//SORTWK02 DD UNIT=&UWK,SPACE=(CYL,&CYL,,CONTIG)
//SORTWK03 DD UNIT=&UWK,SPACE=(CYL,&CYL,,CONTIG)
//SYSUDUMP DD SYSOUT=&OUT
//PTA430 EXEC PGM=BVPTA430,COND=(8,LE,PTA400)
//*-----
//STEPLIB DD DSN=&STEPLIB,DISP=SHR
//*:STEPCAT DD DSN=&VSAMCAT,DISP=SHR
//PAC7TS DD DSN=&&TSREO,DISP=(OLD,PASS)
//PAC7TW DD DSN=&&TWREO,DISP=(OLD,PASS)
//PAC7TC DD DSN=&INDUN..&ROOTT.00TC(+1),
// UNIT=&UNITS,VOL=&VOL,

```



```

//          DISP=(NEW,CATLG,DELETE),
//          SPACE=&SPATC,
//          DCB=(&DSCB,RECFM=VB,LRECL=1067,BLKSIZE=10674)
//SYSOUT   DD SYSOUT=&OUT
//SYSUDUMP DD SYSOUT=&OUT
//PTASVG   EXEC PGM=BVPTASVG,COND=(8,LE,PTA400)
//*-----
//STEPLIB  DD DSN=&STEPLIB,DISP=SHR
//*:STEPDAT DD DSN=&VSAMCAT,DISP=SHR
//PAC7TG   DD DSN=&INDUV..&ROOTT.00TG,
//          DISP=SHR
//PAC7TC   DD DSN=&INDUN..&ROOTT.00TC(+1),
//          UNIT=&UNITS,VOL=&VOLS,
//          DISP=MOD,
//          DCB=(&DSCB,RECFM=VB,LRECL=1067,BLKSIZE=10674)
//SYSOUT   DD SYSOUT=&OUT
//SYSUDUMP DD SYSOUT=&OUT

```

SVTA - Backup

SVTA - Introduction

The SVTA procedure performs a backup of the Tables descriptions and contents, and a backup of the user parameters in a single sequential file (TC).

Execution condition

The files must be closed to on-line use.

User input

None.

SVTA - Description of steps

TD backup: PTASVT

| Code | Physical name | Type | Label |
|--------|-------------------------|--------|--------------------------|
| PAC7TD | &INDUV..&ROOTT.00TD | Input | Tables descriptions file |
| PAC7TC | &INDUN..&ROOTT.00TC(+1) | Output | Table backup |

TV backup: PTASVV

| Code | Physical name | Type | Label |
|--------|--------------------------------------|--------|----------------------|
| PAC7TV | &INDUV..&ROOTT.00TV | Input | Tables contents file |
| PAC7TC | &INDUN..&ROOTT.00TC(+1), DISP=MOD | Output | Table backup |

TG backup: PTASVG

| Code | Physical name | Type | Label |
|--------|-------------------------------------|--------|---------------------|
| PAC7TG | &INDUV.&ROOTT.00TG | Input | User parameter file |
| PAC7TC | &INDUN.&ROOTT.00TC(+1), DISP=MOD | Output | Table backup |

SVTA - Execution JCL

```

//*****
//* PACTABLES 3.5 *
//*****
//*          --- BACKUP --- *
//*****
//$BVPSVTA PROC ROOTT=$ROOTT, ROOT OF PACTABLES SYSTEM *
//      INDUV='$INDUV',      USER VSAM FILES INDEX *
//      INDUN='$INDUN',      NON VSAM FILES INDEX *
//      INDPV='$INDPV',      VA PACBASE SYSTEM VSAM FILES *
//*:      VSAMCAT='$VCAT',    USER VSAM CATALOG *
//      STEPLIB='$HLQ..SBVPMBR8', LIBRARY OF LOAD-MODULES *
//      OUT=$OUT,            OUTPUT CLASS *
//      DSCB='$DSCB',        DSCB MODEL FILE *
//      VOLS='SER=$VOLUN',    BACKUP VOLUME *
//      UNITS=$UNITUN,        BACKUP UNIT (DISK OR TAPE) *
//      SPATC='(TRK,(150,10))' BACKUP SPACE *
//*****
//PTASVT EXEC PGM=BVPTASVT
//*-----
//STEPLIB DD DSN=&STEPLIB,DISP=SHR
//*:STEP CAT DD DSN=&VSAMCAT,DISP=SHR
//PAC7AE DD DSN=&INDPV..BVPAE,DISP=SHR
//PACGGN DD DSN=&INDPV..BVPGN,DISP=SHR
//PACGGR DD DSN=&INDPV..BVPGR,DISP=SHR
//PACGGU DD DSN=&INDPV..BVPGU,DISP=SHR
//PAC7TD DD DSN=&INDUV..&ROOTT.00TD,
//      DISP=SHR
//PAC7TC DD DSN=&INDUN..&ROOTT.00TC(+1),
//      UNIT=&UNITS,VOL=&VOLS,
//      DISP=(,CATLG,DELETE),SPACE=&SPATC,
//      DCB=(&DSCB,RECFM=VB,LRECL=1067,BLKSIZE=10674)
//SYSOUT DD SYSOUT=&OUT
//PAC7DD DD SYSOUT=&OUT
//SYSUDUMP DD SYSOUT=&OUT
//PTASVV EXEC PGM=BVPTASVV
//*-----
//STEPLIB DD DSN=&STEPLIB,DISP=SHR
//*:STEP CAT DD DSN=&VSAMCAT,DISP=SHR
//PAC7TV DD DSN=&INDUV..&ROOTT.00TV,
//      DISP=SHR
//PAC7TC DD DSN=&INDUN..&ROOTT.00TC(+1),
//      UNIT=&UNITS,VOL=&VOLS,
//      DISP=MOD,
//      DCB=(&DSCB,RECFM=VB,LRECL=1067,BLKSIZE=10674)

```

```

//SYSOUT DD SYSOUT=&OUT
//SYSUDUMP DD SYSOUT=&OUT
//PTASVG EXEC PGM=BVPTASVG
//*-----
//STEPLIB DD DSN=&STEPLIB,DISP=SHR
//*:STEPCHAT DD DSN=&VSAMCAT,DISP=SHR
//PAC7TG DD DSN=&INDUV..&ROOTT.00TG,
// DISP=SHR
//PAC7TC DD DSN=&INDUN..&ROOTT.00TC(+1),
// UNIT=&UNITS,VOL=&VOLS,
// DISP=MOD,
// DCB=(&DSCB,RECFM=VB,LRECL=1067,BLKSIZE=10674)
//SYSOUT DD SYSOUT=&OUT
//SYSUDUMP DD SYSOUT=&OUT

```

TCTA - Pactables transfer from another platform

TCTA - Introduction

The purpose of this procedure is to retrieve Pactables Databases from other platforms (source platforms) in order to adapt them to your environment.

The Database backup is sorted according to the format of the target platform (ASCII or EBCDIC).

If the source site version is the same as the target site's version, the actions to perform are the following:

- Backup on the source site (SVTA procedure)
- Transfer of the TC file produced by SVTA onto the target platform,
- Retrieval of the file on the target platform (TCTA procedure),
- Restoration of the database (RSTA procedure), with, in input, the TC file built by the preceding step.

If, on the contrary, the source site is of an older version, and that the version requires a retrieval, the TC backup must be retrieved in the new format ON THE SOURCE SITE before being transferred onto the target environment.

Execution condition

None.

User input

None.

Notes

1. Backup transfer

Transferring the TC backup from the source site to the mainframe host where Pactables is installed is the user's responsibility. The file contains data (DATA) which must be converted in the EBCDIC format.

2. Disk space

The TCTA procedure, described thereafter, consists mainly of sorting the TC backup according to an EBCDIC sequence. The sort is performed in three distinct steps, so as to minimize the disk space required. However, the procedure requires between 4 to 4.5 times the equivalent of the original file's size.

3. Initial and result files

The TC backup input file, coming from a different platform, is specified in the TCTA procedure by its DSNNAME, by setting a value to the SAVIN parameter. As a default, generation 0 of the Data-group corresponding to the backup of the Pactables database is used.

As a default, the TC output file, sorted according to the EBCDIC sequence, corresponds to the generation +1 of the Pactables database backup. This file may be retrieved by performing an override on the PTATC2.PAC7TC procedure (see the provided execution test JCL).

TCTA - Description of steps

TC backup split: PTATC1

| Code | Physical name | Type | Label |
|--------|---------------|--------|--------------------------------------|
| PAC7TC | &SAVIN | Input | Input backup file |
| PAC7SD | &&PAC7SD | Output | Tables descriptions sequential image |
| PAC7SV | &&PAC7SV | Output | Tables contents sequential image |
| PAC7SG | &&PAC7SG | Output | Parameter sequential image |

Table-description sort: PTATCD

| Code | Physical name | Type | Label |
|--------|---------------|--------|--------------------------------------|
| PAC7SD | &&PAC7SD | Input | Tables descriptions sequential image |
| PAC7AD | &&PAC7AD | Output | Sorted table descriptions |

Table-contents sort: PTATCV

| Code | Physical name | Type | Label |
|--------|---------------|--------|-------------------------------------|
| PAC7SV | &&PAC7SV | Input | Sequential image of tables contents |
| PAC7AV | &&PAC7AV | Output | Sorted tables contents |

User-parameter sort: PTATCG

| Code | Physical name | Type | Label |
|--------|---------------|--------|--------------------------------|
| PAC7SG | &&PAC7SG | Input | Sequential image of parameters |
| PAC7AG | &&PAC7AG | Output | Sorted user parameters |

Reconstitution of the TC backup: PTATC2

| Code | Physical name | Type | Label |
|--------|------------------------|--------|--------------------------------------|
| PAC7AD | &&PAC7AD | Input | Tables descriptions sequential image |
| PAC7AV | &&PAC7AV | Input | Sequential image of contents |
| PAC7AG | &&PAC7AG | Input | Sequential image of parameters |
| PAC7TC | &INDUN.&ROOTT.00TC(+1) | Output | TC backup in EBCDIC format |

TCTA - Execution JCL

```

/*****
/* PACTABLES 3.5 *
/*****
/* ---- TRANSFER OF A PACTABLES DATABASE ---- *
/*****
//BVPTCTA PROC ROOTT=$ROOTT, PACTABLES SYSTEM ROOT *
// INDUN='$INDUN', BACKUP FILES' INDEX *
//*: VSAMCAT='$VCAT', USER VSAM CATALOG *
// STEPLIB='$HLQ..SBVPMBR8', LIBRARY OF LOAD-MODULES *
// UWK=$UWK, WORK UNIT *
// OUT=$OUT, OUTPUT CLASS *
// SAVIN='$INDUN..$ROOTT.00TC(0)', INPUT BACKUP FILE REE *
// SPASD='(TRK,(15,5),RLSE)', 'SD' FILE SPACE *
// SPASV='(TRK,(15,5),RLSE)', 'SV' FILE SPACE *
// SPASG='(TRK,(15,5),RLSE)', 'SG' FILE SPACE *
// CYL='(3,1)' SORTWORK SPACE *
/*****
//PTATC1 EXEC PGM=BVPTATC1
/*-----

```

```

//STEPLIB DD DSN=&STEPLIB,DISP=SHR
//PAC7TC DD DSN=&SAVIN,DISP=SHR
//PAC7SD DD DSN=&&PAC7SD,DISP=(,PASS),UNIT=SYSDA,
//      SPACE=&SPASD,
//      DCB=(RECFM=FB,LRECL=244,BLKSIZE=24400)
//PAC7SV DD DSN=&&PAC7SV,DISP=(,PASS),UNIT=SYSDA,
//      SPACE=&SPASV,
//      DCB=(RECFM=FB,LRECL=1063,BLKSIZE=10630)
//PAC7SG DD DSN=&&PAC7SG,DISP=(,PASS),UNIT=SYSDA,
//      SPACE=&SPASG,
//      DCB=(RECFM=FB,LRECL=89,BLKSIZE=8900)
//SYSOUT DD SYSOUT=&OUT
//SYSUDUMP DD SYSOUT=&OUT
//PTATCD EXEC PGM=BVPTATCD
//*-----
//STEPLIB DD DSN=&STEPLIB,DISP=SHR
//SORTWK01 DD UNIT=&UWK,SPACE=(CYL,&CYL,,CONTIG)
//SORTWK02 DD UNIT=&UWK,SPACE=(CYL,&CYL,,CONTIG)
//SORTWK03 DD UNIT=&UWK,SPACE=(CYL,&CYL,,CONTIG)
//PAC7SD DD DSN=&&PAC7SD,DISP=SHR
//PAC7AD DD DSN=&&PAC7AD,DISP=(,PASS),UNIT=SYSDA,
//      SPACE=&SPASD,
//      DCB=(RECFM=FB,LRECL=244,BLKSIZE=24400)
//SYSOUT DD SYSOUT=&OUT
//SYSUDUMP DD SYSOUT=&OUT
//PTATCV EXEC PGM=BVPTATCV
//*-----
//STEPLIB DD DSN=&STEPLIB,DISP=SHR
//SORTWK01 DD UNIT=&UWK,SPACE=(CYL,&CYL,,CONTIG)
//SORTWK02 DD UNIT=&UWK,SPACE=(CYL,&CYL,,CONTIG)
//SORTWK03 DD UNIT=&UWK,SPACE=(CYL,&CYL,,CONTIG)
//PAC7SV DD DSN=&&PAC7SV,DISP=SHR
//PAC7AV DD DSN=&&PAC7AV,DISP=(,PASS),UNIT=SYSDA,
//      SPACE=&SPASV,
//      DCB=(RECFM=FB,LRECL=1063,BLKSIZE=10630)
//SYSOUT DD SYSOUT=&OUT
//SYSUDUMP DD SYSOUT=&OUT
//PTATCG EXEC PGM=BVPTATCG
//*-----
//STEPLIB DD DSN=&STEPLIB,DISP=SHR
//SORTWK01 DD UNIT=&UWK,SPACE=(CYL,&CYL,,CONTIG)
//SORTWK02 DD UNIT=&UWK,SPACE=(CYL,&CYL,,CONTIG)
//SORTWK03 DD UNIT=&UWK,SPACE=(CYL,&CYL,,CONTIG)
//PAC7SG DD DSN=&&PAC7SG,DISP=SHR
//PAC7AG DD DSN=&&PAC7AG,DISP=(,PASS),UNIT=SYSDA,
//      SPACE=&SPASG,
//      DCB=(RECFM=FB,LRECL=89,BLKSIZE=8900)
//SYSOUT DD SYSOUT=&OUT
//SYSUDUMP DD SYSOUT=&OUT
//PTATC2 EXEC PGM=BVPTATC2
//*-----
//STEPLIB DD DSN=&STEPLIB,DISP=SHR
//PAC7AD DD DSN=&&PAC7AD,DISP=SHR
//PAC7AV DD DSN=&&PAC7AV,DISP=SHR
//PAC7AG DD DSN=&&PAC7AG,DISP=SHR

```

```

//PAC7TC DD DSN=&INDUN..&ROOTT.00TC(+1),
//      DISP=(,CATLG,DELETE),
//      UNIT=$UNITUN,
//      VOL=SER=$VOLUN,
//      SPACE=(TRK,(15,5),RLSE),
//      DCB=($DSCB,RECFM=VB,LRECL=1067,BLKSIZE=10674)
//SYSOUT DD SYSOUT=&OUT
//SYSUDUMP DD SYSOUT=&OUT

```

RSTA - Restoration

RSTA - Introduction

The RSTA procedure is used to restore the descriptions and contents of tables, as well as the user parameters, from the sequential image obtained by the SVTA backup procedure.

Execution condition

Access to on-line use must be closed.

NOTE about the platforms where the disk space allocated to the files is fixed:

As this procedure reloads the files, it is recommended to consider beforehand the estimated evolution of the files and re-adjust their size accordingly. These modifications should be made in the system parameters library.

Abnormal execution

See Chapter 'Batch procedures', Subchapter 'Abnormal Executions'.

Whatever the cause of the abend, the procedure can be restarted as it is once the problem has been solved.

User input

None.

RSTA - Description of steps

Definition of files: IDCAMS

| Code | Physical name | Label |
|--------|---------------------|--------------------------|
| PAC7TD | &INDUV..&ROOTT.00TD | Tables descriptions file |
| PAC7TV | &INDUV..&ROOTT.00TV | Tables contents file |
| PAC7TG | &INDUV..&ROOTT.00TG | User parameter file |

Restoration of TD: PTARST

| Code | Physical name | Type | Label |
|--------|------------------------|--------|--------------------------|
| PAC7TC | &INDUN..&ROOTT.00TC(0) | Input | Table backup |
| PAC7TD | &INDUV..&ROOTT.00TD | Output | Tables descriptions file |

Restoration of TV: PTARSV

| Code | Physical name | Type | Label |
|--------|------------------------|--------|----------------------|
| PAC7TC | &INDUN..&ROOTT.00TC(0) | Input | Table backup |
| PAC7TV | &INDUV..&ROOTT.00TV | Output | Tables contents file |

Restoration of TG: PTARSG

| Code | Physical name | Type | Label |
|--------|------------------------|--------|---------------------|
| PAC7TC | &INDUN..&ROOTT.00TC(0) | Input | Table backup |
| PAC7TG | &INDUV..&ROOTT.00TG | Output | User parameter file |

RSTA - Execution JCL

```
//*****  
//* PACTABLES 3.5 *  
//*****  
//*          ---- RESTORATION ---- *  
//*****  
//BVPRSTA  PROC ROOTT=$ROOTT,  ROOT OF THE PACTABLES SYSTEM *  
//          INDUV='$INDUV',      INDEX OF PACTABLES FILES *  
//          INDUN='$INDUN',      INDEX OF BACKUP FILES *  
//          INDSN='$INDSN',      INDEX NON VSAM FILES *  
//          INDPV='$INDPV',      VA PACBASE SYSTEM VSAM FILES *  
//*:       VSAMCAT='$VCAT',      USER VSAM CATALOG *  
//          STEPLIB='$HLQ..SBVPMBR8',  LIBRARY OF LOAD-MODULES *  
//          OUT=$OUT              OUTPUT CLASS *  
//*****  
//DEFINE   EXEC PGM=IDCAMS *  
//*----- *  
//*:STEPCAT DD DSN=&VSAMCAT,DISP=SHR *  
//SYSPRINT DD SYSOUT=&OUT *  
//SYSIN DD DSN=&INDSN..BVPSY(DF&ROOTT.00TD), *  
//          DISP=SHR *  
//          DD DSN=&INDSN..BVPSY(DF&ROOTT.00TV), *  
//          DISP=SHR *  
//          DD DSN=&INDSN..BVPSY(DF&ROOTT.00TG), *  
//          DISP=SHR *  
//PTARST   EXEC PGM=BVPTARST *  
//*----- *  
//STEPLIB DD DSN=&STEPLIB,DISP=SHR *  
//*:STEPCAT DD DSN=&VSAMCAT,DISP=SHR
```



```

//PAC7AE DD DSN=&INDPV..BVP AE,DISP=SHR
//PACGGN DD DSN=&INDPV..BVP GN,DISP=SHR
//PACGGR DD DSN=&INDPV..BVP GR,DISP=SHR
//PACGGU DD DSN=&INDPV..BVP GU,DISP=SHR
//PAC7TD DD DSN=&INDUV..&ROOTT.00TD,
//
//DISP=SHR
//PAC7TC DD DSN=&INDUN..&ROOTT.00TC(0),
//
//DISP=SHR
//PAC7DD DD SYSOUT=&OUT
//SYSOUT DD SYSOUT=&OUT
//SYSUDUMP DD SYSOUT=&OUT
//PTAR SV EXEC PGM=BVP TARSV
//*-----
//STEPLIB DD DSN=&STEPLIB,DISP=SHR
//*:STEP CAT DD DSN=&VSAMCAT,DISP=SHR
//PAC7TV DD DSN=&INDUV..&ROOTT.00TV,
//
//DISP=SHR
//PAC7TC DD DSN=&INDUN..&ROOTT.00TC(0),
//
//DISP=SHR
//SYSOUT DD SYSOUT=&OUT
//SYSUDUMP DD SYSOUT=&OUT
//PTAR SG EXEC PGM=BVP TARS G
//*-----
//STEPLIB DD DSN=&STEPLIB,DISP=SHR
//*:STEP CAT DD DSN=&VSAMCAT,DISP=SHR
//PAC7TG DD DSN=&INDUV..&ROOTT.00TG,
//
//DISP=SHR
//PAC7TC DD DSN=&INDUN..&ROOTT.00TC(0),
//
//DISP=SHR
//SYSOUT DD SYSOUT=&OUT
//SYSUDUMP DD SYSOUT=&OUT

```

LDTA - List of table descriptions

LDTA - Introduction

This procedure prints descriptions of tables.

Execution condition

This procedure reads the TD file which can remain open to on-line use.

LDTA - User input

A 'Z'-type line per print request:

| Pos. | Len. | Value | Meaning |
|------|------|--------|----------------------------|
| 2 | 1 | 'Z' | Line code |
| 5 | 4 | | Print request |
| | | 'TLS ' | List of table descriptions |
| | | 'TDS ' | Table description |

| Pos. | Len. | Value | Meaning |
|------|------|----------|-------------------------|
| 9 | 6 | tttttt | Table number |
| 23 | 8 | MMDDCCYY | Historical account date |

Note

The input transactions are not validated; erroneous requests are ignored.

LDTA - Description of steps

Input recognition: PTU001

VSAM files check: IDCAMS

Printing of tables descriptions: PTA290

| Code | Physical name | Type | Label |
|--------|--------------------|--------|------------------------------|
| PAC7TD | &INDUV.&ROOTT.00TD | Input | Tables descriptions file |
| PAC7TE | &&LDTAMB | Input | Print request |
| PAC7ID | | Report | Tables descriptions printout |

LDTA - Execution JCL

```

//*****
//* PACTABLES 3.5 *
//*****
//* --- LIST OF TABLE DESCRIPTIONS --- *
//*****
//BVPLDTA PROC ROOTT=$ROOTT, ROOT OF THE PACTABLES SYSTEM *
// INDUV='$INDUV', INDEX OF PACTABLES FILES *
// INDSN='$INDSN', INDEX NON-VSAM FILES *
//*: VSAMCAT='$VCAT', USER VSAM CATALOG *
// STEPLIB='$HLQ..SBVPMBR8', LIBRARY OF LOAD-MODULES *
// OUT=$OUT, UTILITIES AND ERRORS OUTPUT CLAREURS*
// OUTL=$OUT, OUTPUT CLASS OF REPORTS *
// UWK=$UWK, WORK UNIT *
// SPAMB='(TRK,(5,1),RLSE)' REQUEST-FILE SPACE *
//*****
//COPY EXEC PGM=BVPTU001
//*-----
//STEPLIB DD DSN=&STEPLIB,DISP=SHR
//PAC7MB DD DSN=&&LDTAMB,DISP=(,PASS),UNIT=&UWK,
// DCB=BLKSIZE=1600,SPACE=&SPAMB
//CARTE DD DDNAME=SYSIN,DCB=BLKSIZE=80
//VERIFY EXEC PGM=IDCAMS
//*-----
//*:STEPCAT DD DSN=&VSAMCAT,DISP=SHR
//SYSPRINT DD SYSOUT=&OUT
//PAC7TD DD DSN=&INDUV.&ROOTT.00TD,

```

```

//          DISP=SHR
//SYSIN    DD DSN=&INDSN..BVPSY(VERIFTD),
//          DISP=SHR
//PTA290   EXEC PGM=BVPTA290
//*-----
//STEPLIB DD DSN=&STEPLIB,DISP=SHR
//*:STEP   DD DSN=&VSAMCAT,DISP=SHR
//SYSOUT   DD SYSOUT=&OUT
//PAC7TD   DD DSN=&INDUV..&ROOTT.00TD,
//          DISP=SHR
//PAC7TE   DD DSN=&&LDTAMB,DISP=(OLD,PASS)
//PAC7ID   DD SYSOUT=&OUTL
//SYSUDUMP DD SYSOUT=&OUT

```

PMTA - Parameter update

PMTA - Introduction

This procedure updates Pactables user codes, passwords and access authorizations as well as control cards for print requests.

When the user input contains a 'TA' line with the Database Administrator user's code, the PMTA procedure prints all the user parameters.

Execution condition

This procedure updates the TG file, which must be closed to on-line use except if the equipment in use allows Batch/TP concurrence.

PMTA - User input

- 'TA'-line: user parameter updating:

| Pos. | Len. | Value | Meaning |
|------|------|----------|------------------------------------|
| 1 | 1 | | Action code |
| | | blank | Creation or modification |
| | | 'C' | Creation |
| | | 'M' | Modification |
| | | 'D' | Deletion |
| 2 | 8 | uuuuuuuu | User code |
| 10 | 2 | 'TA' | Line code |
| 12 | 8 | pppppppp | Password |
| 20 | 1 | | General access authorization |
| | | '0' | No general access authorization |
| | | '1' | Read-only access authorization |
| | | '2' | Read-write authorization on tables |

| Pos. | Len. | Value | Meaning |
|------|------|-------|--|
| | | '3' | Read-write authorization on user codes |

- 'TC'-line: access authorizations per table:

| Pos. | Len. | Value | Meaning |
|------|------|----------|---|
| 1 | 1 | | Action code |
| | | blank | Creation or modification |
| | | 'C' | Creation |
| | | 'M' | Modification |
| | | 'D' | Deletion |
| 2 | 8 | uuuuuuuu | User code |
| 10 | 2 | 'TC' | Line code |
| 12 | 6 | tttttt | Table code |
| 18 | 3 | nnn | Line number |
| 21 | 60 | | Access authorizations: 20 access authorizations may be entered in this field, with, for each authorization: |
| | 1 | n | Sub-schema number |
| | 1 | n | Sub-system number |
| | 1 | x | Authorization (0, 1 or 2) ('*' for all sub-schemas and sub-systems) |

- 'TJ'-line: control cards:

| Pos. | Len. | Value | Meaning |
|------|------|----------|----------------------------------|
| 1 | 1 | | Action code |
| | | blank | Creation or modification |
| | | 'C' | Creation |
| | | 'M' | Modification |
| | | 'D' | Deletion |
| 2 | 8 | uuuuuuuu | User code |
| 10 | 2 | 'TJ' | Line code |
| 12 | 6 | | JCL line number |
| | | <600000 | Control card in front of program |
| | | >599999 | Control card in back of program |
| 18 | 69 | | Content of JCL line |

Note

When a user code is deleted, related access authorizations and JCL lines are also deleted.

The Database must include at least one Administrator code with a level 3 access authorization. The deletion of the last Administrator code is not authorized.

PMTA - Description of steps

Input recognition: PTU001

VSAM files check: IDCAMS

Parameter update: PTA100

| Code | Physical name | Type | Label |
|--------|--------------------|-----------------|-----------------------------|
| PAC7TD | &INDUV.&ROOTT.00TD | Input | Tables descriptions file |
| PAC7TE | &INDSV..BVPTE | Input | Error message file |
| PAC7TG | &INDUV.&ROOTT.00TG | Input Output | User parameter file |
| PAC7MV | &&PMTAMB | Input | Extraction requests |
| PAC7NU | &&NU | Output | Parameter printing requests |
| PAC7ET | | Report | Printing of descriptions |

Printing of user parameters: PTA120

| Code | Physical name | Type | Label |
|--------|--------------------|--------|-----------------------------|
| PAC7TD | &INDUV.&ROOTT.00TD | Input | Tables descriptions file |
| PAC7TG | &INDUV.&ROOTT.00TG | Input | User parameter file |
| PAC7NU | &&NU | Input | Print requests |
| PAC7ET | | Report | Printing of user parameters |

PMTA - Execution JCL

```
//*****  
//* PACTABLES 3.5 *  
//*****  
//* --- USER PARAMETER UPDATE -- *  
//*****  
//BVPPMTA PROC ROOTT=$ROOTT, ROOT OF PACTABLES SYSTEM *  
// INDUV='$INDUV', INDEX OF PACTABLES FILES *  
// INDSV='$INDSV', INDEX OF VA PAC SYSTEM FILES *  
// INDSN='$INDSN', NON-VSAM FILES INDEX *
```

```

//*:      VSAMCAT='$VCAT',      VSAM USER CATALOG      *
//*:      SYSTCAT='$SCAT',      VSAM SYSTEM CATALOG      *
//      STEPLIB='$HLQ..SBVPMBR8',  LIBRARY OF LOAD-MODULES  *
//      OUT=$OUT,                UTILITIES AND ERRORS OUTPUT CLASSURS  *
//      OUTL=$OUT,              OUTPUT CLASS OF REPORTS      *
//      UWK=$UWK,              WORK UNIT                    *
//      SPANU='(TRK,(1,1),RLSE)',  WORK FILE SPACE          *
//      SPAMB='(TRK,(5,1),RLSE)',  REQUEST-FILE SPACE        *
//*****
//COPY   EXEC PGM=BVPTU001
//*-----
//STEPLIB DD DSN=&STEPLIB,DISP=SHR
//PAC7MB DD DSN=&PMTAMB,DISP=(,PASS),UNIT=&UWK,
//      DCB=BLKSIZE=1600,SPACE=&SPAMB
//CARTE  DD DDNAME=SYSIN,DCB=BLKSIZE=80
//VERIFY EXEC PGM=IDCAMS
//*-----
//*:STEPCAT DD DSN=&VSAMCAT,DISP=SHR
//*:      DD DSN=&SYSTCAT,DISP=SHR
//SYSPRINT DD SYSOUT=&OUT
//PAC7TE DD DSN=&INDSV..BVPTTE,
//      DISP=SHR
//PAC7TD DD DSN=&INDUV..&ROOTT.00TD,
//      DISP=SHR
//PAC7TG DD DSN=&INDUV..&ROOTT.00TG,
//      DISP=SHR
//SYSIN  DD DSN=&INDSN..BVPSY(VERIFTD),
//      DISP=SHR
//      DD DSN=&INDSN..BVPSY(VERIFTE),
//      DISP=SHR
//      DD DSN=&INDSN..BVPSY(VERIFTG),
//      DISP=SHR
//PTA100 EXEC PGM=BVPTA100
//*-----
//STEPLIB DD DSN=&STEPLIB,DISP=SHR
//*:STEPCAT DD DSN=&VSAMCAT,DISP=SHR
//*:      DD DSN=&SYSTCAT,DISP=SHR
//SYSOUT  DD SYSOUT=&OUT
//PAC7TD DD DSN=&INDUV..&ROOTT.00TD,
//      DISP=SHR
//PAC7TE DD DSN=&INDSV..BVPTTE,
//      DISP=SHR
//PAC7TG DD DSN=&INDUV..&ROOTT.00TG,
//      DISP=SHR
//PAC7MV DD DSN=&PMTAMB,DISP=(OLD,DELETE)
//PAC7NU DD DSN=&&NU,DISP=(,PASS),UNIT=&UWK,
//      SPACE=&SPANU,
//      DCB=(RECFM=FB,LRECL=80,BLKSIZE=800)
//PAC7ET DD SYSOUT=&OUTL
//SYSUDUMP DD SYSOUT=&OUT
//PTA120 EXEC PGM=BVPTA120
//*-----
//STEPLIB DD DSN=&STEPLIB,DISP=SHR
//*:STEPCAT DD DSN=&VSAMCAT,DISP=SHR
//SYSOUT  DD SYSOUT=&OUT

```

```

//PAC7TD DD DSN=&INDUV..&ROOTT.00TD,
//      DISP=SHR
//PAC7TG DD DSN=&INDUV..&ROOTT.00TG,
//      DISP=SHR
//PAC7NU DD DSN=&&NU,DISP=(OLD,DELETE)
//PAC7ET DD SYSOUT=&OUTL
//SYSUDUMP DD SYSOUT=&OUT

```

EXTA - Table extraction

EXTA - Introduction

The EXTA procedure extracts table data in the form of batch update transactions.

Execution condition

This procedure reads the Pactables files which can remain open to on-line use.

EXTA - User input

- One '*'-type line per user:

| Pos. | Len. | Value | Meaning |
|------|------|----------|-----------|
| 2 | 1 | '*' | Line code |
| 3 | 8 | uuuuuuuu | User code |
| 11 | 8 | pppppppp | Password |

- One 'A'-type line per table to extract:

| Pos. | Len. | Value | Meaning |
|------|------|----------|-------------------------------|
| 2 | 1 | 'A' | Line code |
| 3 | 6 | ttttt | Table number |
| 9 | 8 | DDMMCCYY | Historical account date |
| 17 | 1 | | Not used |
| 18 | 1 | | Sub-system selection |
| | | blank | No sub-system selection |
| | | 1 to 0 | Number of selected sub-system |
| 19 | 1 | | Data delimiter |
| | | blank | '/' by default |

EXTA - Description of steps

Input recognition: PTU001

VSAM files check: IDCAMS

Extraction of table data: PTA150

| Code | Physical name | Type | Label |
|--------|--------------------|--------|--------------------------|
| PAC7TD | &INDUV.&ROOTT.00TD | Input | Tables descriptions file |
| PAC7TE | &INDSV..BVPTE | Input | Error message file |
| PAC7TV | &INDUV.&ROOTT.00TV | Input | Tables contents file |
| PAC7TG | &INDUV.&ROOTT.00TG | Input | User parameter file |
| PAC7MV | &&EXTAMB | Input | Extraction requests |
| PAC7EX | &&EX | Output | Extracted transactions |
| PAC7ET | | Report | Transaction review |

Printing of extracted transactions: PTA160

| Code | Physical name | Type | Label |
|----------|--------------------|--------|----------------------------|
| PAC7TD | &INDUV.&ROOTT.00TD | Input | Tables descriptions file |
| PAC7EX | &&EX | Input | Extracted transactions |
| PAC7NU | &&MBTAB | Output | Extracted transactions |
| PAC7ET | | Report | Printing of extracted data |
| SORTWK01 | | Sort | |
| SORTWK02 | | Sort | |
| SORTWK03 | | Sort | |

Return codes:

- 0: No delimiter in data
- 8: Delimiter in at least one table
- 12: Delimiter in all tables

EXTA - Execution JCL

```
//*****
//* PACTABLES 3.5 *
//*****
//*          --- TABLE EXTRACTION --- *
//*****
//BVPEXTA  PROC ROOTT=$ROOTT, ROOT OF PACTABLES SYSTEM *
//          INDUV='$INDUV',      INDEX OF PACTABLES FILES *
//*****
```



```

//      INDSV='$INDSV',      INDEX OF VA PAC SYSTEM FILES      *
//      INDSN='$INDSN',      NON VSAM FILES INDEX          *
//*:    VSAMCAT='$VCAT',      VSAM USER CATALOG          *
//*:    SYSCAT='$SCAT',      VSAM SYSTEM CATALOG          *
//      STEPLIB='$HLQ..SBVPMBR8',  LIBRARY OF LOAD-MODULES  *
//      SORTLIB='$BIBT',      SORT LIBRARY                *
//      OUT=$OUT,            UTILITIES AND ERRORS OUTPUT CLASSURS *
//      OUTL=$OUTL,          OUTPUT CLASS OF REPORTS        *
//      UWK=$UWK,            WORK UNIT                    *
//      CYL='(3,1)',        SORT-FILE SPACE              *
//      SPAEX='(TRK,(10,10),RLSE)',  EXTRACTED-TRANSACTIONS SPA *
//      SPAMB='(TRK,(5,1),RLSE)'  REQUEST-FILE SPACE      *
//*****
//COPY  EXEC PGM=BVPTU001
//*-----
//STEPLIB DD DSN=&STEPLIB,DISP=SHR
//PAC7MB  DD DSN=&&EXTAMB,DISP=(,PASS),UNIT=&UWK,
//        DCB=BLKSIZE=1600,SPACE=&SPAMB
//CARTE   DD DDNAME=SYSIN,DCB=BLKSIZE=80
//VERIFY  EXEC PGM=IDCAMS
//*-----
//*:STEPCAT DD DSN=&VSAMCAT,DISP=SHR
//*:       DD DSN=&SYSCAT,DISP=SHR
//SYSPRINT DD SYSOUT=&OUT
//PAC7TE  DD DSN=&INDSV..BVPTE,
//        DISP=SHR
//PAC7TD  DD DSN=&INDUV..&ROOTT.00TD,
//        DISP=SHR
//PAC7TV  DD DSN=&INDUV..&ROOTT.00TV,
//        DISP=SHR
//PAC7TG  DD DSN=&INDUV..&ROOTT.00TG,
//        DISP=SHR
//SYSIN   DD DSN=&INDSN..BVPSY(VERIFTD),
//        DISP=SHR
//        DD DSN=&INDSN..BVPSY(VERIFTV),
//        DISP=SHR
//        DD DSN=&INDSN..BVPSY(VERIFTE),
//        DISP=SHR
//        DD DSN=&INDSN..BVPSY(VERIFTG),
//        DISP=SHR
//PTA150  EXEC PGM=BVPTA150
//*-----
//STEPLIB DD DSN=&STEPLIB,DISP=SHR
//*:STEPCAT DD DSN=&VSAMCAT,DISP=SHR
//*:       DD DSN=&SYSCAT,DISP=SHR
//SYSOUT  DD SYSOUT=&OUT

//PAC7ET  DD SYSOUT=&OUTL
//PAC7EX  DD DSN=&&EX,DISP=(,PASS),UNIT=&UWK,
//        SPACE=&SPAEX,
//        DCB=(RECFM=FB,LRECL=120,BLKSIZE=2400)
//PAC7MV  DD DSN=&&EXTAMB,DISP=(OLD,DELETE)
//PAC7TD  DD DSN=&INDUV..&ROOTT.00TD,
//        DISP=SHR
//PAC7TE  DD DSN=&INDSV..BVPTE,

```

```

//          DISP=SHR
//PAC7TV   DD DSN=&INDUV..&ROOTT.00TV,
//          DISP=SHR
//PAC7TG   DD DSN=&INDUV..&ROOTT.00TG,
//          DISP=SHR
//SYSUDUMP DD SYSOUT=&OUT
//PTA160   EXEC PGM=BVPTA160
//*-----
//STEPLIB DD DSN=&STEPLIB,DISP=SHR
//SORTLIB DD DSN=&SORTLIB,DISP=SHR
//*:STPCAT DD DSN=&VSAMCAT,DISP=SHR
//SYSOUT   DD SYSOUT=&OUT
//PAC7ET   DD SYSOUT=&OUTL
//PAC7EX   DD DSN=&&EX,DISP=(OLD,PASS)
//PAC7NU   DD DSN=&&MBTAB,DISP=(,PASS),UNIT=&UWK,
//          SPACE=&SPAEX,
//          DCB=(RECFM=FB,LRECL=80,BLKSIZE=800)
//PAC7TD   DD DSN=&INDUV..&ROOTT.00TD,
//          DISP=SHR
//SYSOUX   DD SYSOUT=&OUT
//SORTWK01 DD UNIT=&UWK,SPACE=(CYL,&CYL,,CONTIG)
//SORTWK02 DD UNIT=&UWK,SPACE=(CYL,&CYL,,CONTIG)
//SORTWK03 DD UNIT=&UWK,SPACE=(CYL,&CYL,,CONTIG)
//SYSUDUMP DD SYSOUT=&OUT

```

TUTA - Direct consultation of tables

TUTA - Introduction

The TUTA procedure extracts tables in the form of tables without historical accounts and which are to be consulted.

The procedure creates two new files which contain the descriptions and contents of the selected tables. There is only one description and one version of data for each selected table.

Execution condition

This procedure recreates the AD and AV files, which must therefore be closed to on-line use. These two files are the reorganized images of TD and TV respectively.

The TUTA procedure defines both files in the second step.

TUTA - User input

- One '*' -type line :

| Pos. | Len. | Value | Meaning |
|------|------|----------|-----------|
| 2 | 1 | '*' | Line code |
| 3 | 8 | uuuuuuuu | User code |

| Pos. | Len. | Value | Meaning |
|------|------|----------|----------|
| 11 | 8 | pppppppp | Password |

- One 'A'-type line for each selected table:

| Pos. | Len. | Value | Meaning |
|------|------|----------|-------------------------|
| 2 | 1 | 'A' | Line code |
| 3 | 6 | tttttt | Table number |
| 9 | 8 | DDMMCCYY | Historical account date |

When no 'A'-type line is entered, the user may use all the tables that are accessible at that time. A different date may be entered on a single 'A'-type line where no table number is indicated.

TUTA - Description of steps

Input recognition: PTU001

VSAM files check: IDCAMS

Direct consultation of tables: PTAU80

| Code | Physical name | Type | Label |
|----------|--------------------|--------|--------------------------|
| PAC7TD | &INDUV.&ROOTT.00TD | Input | Tables descriptions file |
| PAC7TE | &INDSV..BVPTE | Input | Error message file |
| PAC7TV | &INDUV.&ROOTT.00TV | Input | Tables contents file |
| PAC7TG | &INDUV.&ROOTT.00TG | Input | User parameter file |
| PAC7MX | &&TUTAMB | Input | Request transactions |
| PAC7AD | &INDUV.&ROOTT.00AD | Output | Tables descriptions file |
| PAC7AV | &INDUV.&ROOTT.00AV | Output | Tables contents file |
| PAC7ET | | Report | Transaction report |
| SORTWK01 | | Sort | |
| SORTWK02 | | Sort | |
| SORTWK03 | | Sort | |

TUTA - Execution JCL

```
//*****
//* PACTABLES 3.5 *
//*****
//* ---- DIRECT CONSULTATION OF TABLES --- *
//*****
//BVPTUTA PROC ROOTT=$ROOTT, ROOT OF PACTABLES SYSTEM *
```

```

//      INDUV='$INDUV',          INDEX OF PACTABLES FILES          *
//      INDSV='$INDSV',          INDEX OF VA PAC SYSTEM FILES      *
//      INDSN='$INDSN',          NON VSAM FILES INDEX              *
//*:    VSAMCAT='$VCAT',          VSAM USER CATALOG                *
//*:    SYSTCAT='$SCAT',          VSAM SYSTEM CATALOG              *
//      STEPLIB='$HLQ..SBVPMBR8', LIBRARY OF LOAD-MODULES        *
//      SORTLIB='$BIBT',          SORT LIBRARY                      *
//      OUT=$OUT,                  UTILITIES AND ERRORS OUTPUT CLASSURS *
//      OUTL=$OUT,                 OUTPUT CLASS OF REPORTS        *
//      CYL='(3,1)',              SORT-FILE SPACE                  *
//      UWK=$UWK,                  WORK UNIT                        *
//      SPAMB='(TRK,(5,1),RLSE)'  REQUEST-FILE SPACE              *
//*****
//COPY  EXEC PGM=BVPTU001
//*-----
//STEPLIB DD DSN=&STEPLIB,DISP=SHR
//PAC7MB  DD DSN=&&TUTAMB,DISP=(,PASS),UNIT=&UWK,
//          DCB=BLKSIZE=1600,SPACE=&SPAMB
//CARTE   DD DDNAME=SYSIN,DCB=BLKSIZE=80
//VERIFY  EXEC PGM=IDCAMS
//*-----
//*:STEPCAT DD DSN=&VSAMCAT,DISP=SHR
//*:      DD DSN=&SYSTCAT,DISP=SHR
//SYSPRINT DD SYSOUT=&OUT
//PAC7TD  DD DSN=&INDUV..&ROOTT.00TD,
//          DISP=SHR
//PAC7TV  DD DSN=&INDUV..&ROOTT.00TV,
//          DISP=SHR
//PAC7TE  DD DSN=&INDSV..BVPT,
//          DISP=SHR
//PAC7TG  DD DSN=&INDUV..&ROOTT.00TG,
//          DISP=SHR
//SYSIN   DD DSN=&INDSN..BVPSY(VERIFTD),
//          DISP=SHR
//          DD DSN=&INDSN..BVPSY(VERIFTV),
//          DISP=SHR
//          DD DSN=&INDSN..BVPSY(VERIFTE),
//          DISP=SHR
//          DD DSN=&INDSN..BVPSY(VERIFTG),
//          DISP=SHR
//          DD DSN=&INDSN..BVPSY(DF&ROOTT.00AD),
//          DISP=SHR
//          DD DSN=&INDSN..BVPSY(DF&ROOTT.00AV),
//          DISP=SHR
//PTAU80  EXEC PGM=BVPTAU80
//*-----
//STEPLIB DD DSN=&STEPLIB,DISP=SHR
//SORTLIB DD DSN=&SORTLIB,DISP=SHR
//*:STEPCAT DD DSN=&VSAMCAT,DISP=SHR
//*:      DD DSN=&SYSTCAT,DISP=SHR
//SYSOUT  DD SYSOUT=&OUT
//PAC7TD  DD DSN=&INDUV..&ROOTT.00TD,
//          DISP=SHR
//PAC7TE  DD DSN=&INDSV..BVPT,
//          DISP=SHR

```

```

//PAC7TV DD DSN=&INDUV..&ROOTT.00TV,
// DISP=SHR
//PAC7TG DD DSN=&INDUV..&ROOTT.00TG,
// DISP=SHR
//PAC7AD DD DSN=&INDUV..&ROOTT.00AD,
// DISP=SHR
//PAC7AV DD DSN=&INDUV..&ROOTT.00AV,
// DISP=SHR
//PAC7MX DD DSN=&&TUTAMB,DISP=(OLD,DELETE)
//PAC7ET DD SYSOUT=&OUTL
//SORTWK01 DD UNIT=&UWK,SPACE=(CYL,&CYL,,CONTIG)
//SORTWK02 DD UNIT=&UWK,SPACE=(CYL,&CYL,,CONTIG)
//SORTWK03 DD UNIT=&UWK,SPACE=(CYL,&CYL,,CONTIG)
//SYSUDUMP DD SYSOUT=&OUT

```

Dispatched table management (DTM option)

CDT1-CDT2 - Table descriptions comparison

The Dispatched Table Manager is an optional utility and its use depends on a specific purchase agreement.

Table description comparison

The CDT1 procedure compares two different states of a Table description file and extracts the differences, giving an intermediate sequential file.

This file may be used to update the 'outdated' description file, called 'slave' file, (CDT2 procedure).

Execution condition

The CDT1 procedure reads the Pactables files which can therefore remain open to on-line use.

From the result of the CDT1 procedure, the CDT2 procedure updates the TD and TV files ('slave' files). These files must therefore remain closed to on-line use.

CDT1 - User input

- One '*'-type line per user:

| Pos. | Len. | Value | Meaning |
|------|------|----------|-----------|
| 2 | 1 | '*' | Line code |
| 3 | 8 | uuuuuuuu | User code |
| 11 | 8 | pppppppp | Password |

- One 'A'-type line for each selected table:

| Pos. | Len. | Value | Meaning |
|------|------|-------|--------------|
| 2 | 1 | 'A' | Line code |
| 3 | 6 | ttttt | Table number |

When a single 'A'-type line is entered without the table number, all tables descriptions are compared.

CDT1 - Description of steps

Input recognition: PTU001

VSAM files check: IDCAMS

Check of transactions: PTAD05

| Code | Physical name | Type | Label |
|--------|---------------------|--------|---|
| PAC7TD | &TDMAST | Input | Tables descriptions Master file |
| PAC7TE | &INDSV..BVPTE | Input | Error message file |
| PAC7TG | &INDUV..&ROOTT.00TG | Input | User parameter file |
| PAC7MV | &&CDT1MB | Input | Comparison request transactions |
| PAC7MX | &&MX | Output | Validated comparison request transactions |
| PAC7ET | | Report | Transaction report |

Table-description comparison and extraction: PTAD10

| Code | Physical name | Type | Label |
|--------|---------------|--------|---|
| PAC7TD | &TDMAST | Input | Table description 'Master' file |
| PAC7TE | &INDSV..BVPTE | Input | Error message file |
| PAC7TS | &TDSLAV | Input | Table description 'Slave' file |
| PAC7MX | &&MX | Input | Validated transactions |
| PAC7TX | &XD | Output | Comparison result to be used as input of the CDT2 procedure |
| PAC7ET | | Report | Extraction printout |

CDT1 - Execution JCL

```

//*****
//* PACTABLES 3.5 *
//*****
//* ----- TABLE-DESCRIPTION COMPARISON ----- *
//*****
//BVPCDT1 PROC ROOTT=$ROOTT, ROOT OF PACTABLES SYSTEM *
// INDUV='$INDUV', INDEX OF PACTABLES FILES *
// INDSV='$INDSV', INDEX OF VA PAC SYSTEM FILES *
// INDSN='$INDSN', NON VSAM FILES INDEX *
//*: VSAMCAT='$VCAT', VSAM USER CATALOG *
//*: SYSTCAT='$SCAT', VSAM SYSTEM CATALOG *
// TDMAST=, MASTER DESCRIPTION *
// TDSLAV=, SLAVE DESCRIPTION *
// XD='&&TX', EXTRACTED DESCRIPTION DSN *
// SPAXD='(TRK,(30,3),RLSE)', EXTRACTED DESCRIPTION SPACE *
// STEPLIB='$HLQ..SBVPMBR8', LIBRARY OF LOAD-MODULES *
// SORTLIB='$BIBT', SORT LIBRARY *
// OUT=$OUT, UTILITIES AND ERRORS OUTPUT CLASSURS *
// OUTL=$OUT, OUTPUT CLASS OF REPORTS *
// UWK=$UWK, WORK UNIT *
// CYL='(3,1)', SORTWORK SPACE *
// SPAMB='(TRK,(5,1),RLSE)' REQUEST-FILE SPACE *
//*****
//COPY EXEC PGM=BVPTU001
//*-----
//STEPLIB DD DSN=&STEPLIB,DISP=SHR
//PAC7MB DD DSN=&&CDT1MB,DISP=(,PASS),UNIT=&UWK,
// DCB=BLKSIZE=1600,SPACE=&SPAMB
//CARTE DD DDNAME=SYSIN,DCB=BLKSIZE=80
//VERIFY EXEC PGM=IDCAMS
//*-----
//*:STEPCAT DD DSN=&VSAMCAT,DISP=SHR
//*: DD DSN=&SYSTCAT,DISP=SHR
//SYSPRINT DD SYSOUT=&OUT
//PAC7TD DD DSN=&TDMAST,
// DISP=SHR
//PAC7TE DD DSN=&INDSV..BVPTTE,
// DISP=SHR
//PAC7TG DD DSN=&INDUV..ROOTT.00TG,
// DISP=SHR
//PAC7AD DD DSN=&TDSLAV,
// DISP=SHR
//SYSIN DD DSN=&INDSN..BVPSY(VERIFTD),
// DISP=SHR
// DD DSN=&INDSN..BVPSY(VERIFTE),
// DISP=SHR
// DD DSN=&INDSN..BVPSY(VERIFTG),
// DISP=SHR
//PTAD05 EXEC PGM=BVPTAD05
//*-----
//STEPLIB DD DSN=&STEPLIB,DISP=SHR
//SORTLIB DD DSN=&SORTLIB,DISP=SHR
//*:STEPCAT DD DSN=&VSAMCAT,DISP=SHR
//*: DD DSN=&SYSTCAT,DISP=SHR

```

```

//SYSOUT DD SYSOUT=&OUT
//PAC7ET DD SYSOUT=&OUTL
//PAC7MV DD DSN=&&CDT1MB,DISP=(OLD,DELETE)
//PAC7MX DD DSN=&&MX,DISP=(,PASS),UNIT=&UWK,
//      SPACE=&SPAXD,
//      DCB=(RECFM=FB,LRECL=80,BLKSIZE=1600)
//PAC7TD DD DSN=&TDMAST,
//      DISP=SHR
//PAC7TE DD DSN=&INDSV..BVPTE,
//      DISP=SHR
//PAC7TG DD DSN=&INDUV..&ROOTT.00TG,
//      DISP=SHR
//SYSOUX DD SYSOUT=&OUT
//SORTWK01 DD UNIT=&UWK,SPACE=(CYL,&CYL,,CONTIG)
//SORTWK02 DD UNIT=&UWK,SPACE=(CYL,&CYL,,CONTIG)
//SORTWK03 DD UNIT=&UWK,SPACE=(CYL,&CYL,,CONTIG)
//SYSUDUMP DD SYSOUT=&OUT
//PTAD10 EXEC PGM=BVPTAD10
//*-----
//STEPLIB DD DSN=&STEPLIB,DISP=SHR
//SORTLIB DD DSN=&SORTLIB,DISP=SHR
//*:STEPDAT DD DSN=&VSAMCAT,DISP=SHR
//*:      DD DSN=&SYSTCAT,DISP=SHR
//SYSOUT DD SYSOUT=&OUT
//PAC7ET DD SYSOUT=&OUTL
//PAC7MX DD DSN=&&MX,DISP=(OLD,PASS)
//PAC7TD DD DSN=&TDMAST,
//      DISP=SHR
//PAC7TE DD DSN=&INDSV..BVPTE,
//      DISP=SHR
//PAC7TS DD DSN=&TDSLAV,
//      DISP=SHR
//PAC7TX DD DSN=&XD,DISP=(,PASS),UNIT=&UWK,
//      SPACE=&SPAXD,
//      DCB=(RECFM=FB,LRECL=240,BLKSIZE=2400)

```

CDT2 - Description of steps

VSAM files check: IDCAMS

Update of 'slave' files, Recognition of the file extracted by CDT1: PTAD20

| Code | Physical name | Type | Label |
|--------|---------------|--------|---|
| PAC7TD | &TDSLAV | Input | Tables descriptions Slave file |
| PAC7TE | &INDSV..BVPTE | Input | Error message file |
| PAC7TX | &XD | Input | Result extracted from comparison in the CDT1 procedure |
| PAC7TV | &TVSLAV | Output | File of table-contents associated to the tables descriptions Slave file |

| Code | Physical name | Type | Label |
|----------|---------------|--------|---------------|
| PAC7ET | | Report | Update report |
| SORTWK01 | | Sort | |
| SORTWK02 | | Sort | |
| SORTWK03 | | Sort | |

CDT2 - Execution JCL

```

//*****
//* PACTABLES 3.5 *
//*****
//* --- UPDATE OF TABLE-DESCRIPTIONS AFTER COMPARISON --- *
//*****
//BVPDCT2 PROC INDSV='$INDSV', INDEX OF VA PAC SYSTEM FILES *
// INDSN='$INDSN', NON VSAM FILES INDEX *
//*: VSAMCAT='$VCAT', VSAM USER CATALOG *
//*: SYSCAT='$SCAT', VSAM SYSTEM CATALOG *
// TDSLAV=, 'SLAVE' DESCRIPTION *
// TVSLAV=, TABLES LINKED TO SLAVE DESCRIPTIO *
// XD='&&TX', DSN OF CDT1 EXTRACTED DESCRIPTION *
// STEPLIB='$HLQ..SBVPMBR8', LIBRARY OF LOAD-MODULES *
// SORTLIB='$BIBT', SORT LIBRARY *
// OUT=$OUT, UTILITIES AND ERRORS OUTPUT CLASSURS *
// OUTL=$OUT, OUTPUT CLASS OF REPORTS *
// UWK=$UWK, WORK UNIT *
// CYL='(3,1)' SORTWORK SPACE *
//*****
//VERIFY EXEC PGM=IDCAMS
//*-----
//*:STEPCAT DD DSN=&VSAMCAT,DISP=SHR
//*: DD DSN=&SYSCAT,DISP=SHR
//SYSPRINT DD SYSOUT=&OUT
//PAC7TD DD DSN=&TDSLAV,
// DISP=SHR
//PAC7TE DD DSN=&INDSV..BVPTE,
// DISP=SHR
//PAC7TV DD DSN=&TVSLAV,
// DISP=SHR
//SYSIN DD DSN=&INDSN..BVPSY(VERIFTD),
// DISP=SHR
// DD DSN=&INDSN..BVPSY(VERIFTE),
// DISP=SHR
// DD DSN=&INDSN..BVPSY(VERIFTV),
// DISP=SHR
//PTAD20 EXEC PGM=BVPTAD20
//*-----
//STEPLIB DD DSN=&STEPLIB,DISP=SHR
//SORTLIB DD DSN=&SORTLIB,DISP=SHR
//*:STEPCAT DD DSN=&VSAMCAT,DISP=SHR
//*: DD DSN=&SYSCAT,DISP=SHR
//SYSOUT DD SYSOUT=&OUT
//PAC7ET DD SYSOUT=&OUTL

```

```

//PAC7TD DD DSN=&TDSLAV,
//      DISP=SHR
//PAC7TE DD DSN=&INDSV..BVPTE,
//      DISP=SHR
//PAC7TV DD DSN=&TVSLAV,
//      DISP=SHR
//PAC7TX DD DSN=&XD,
//      DISP=SHR
//SYSOUX DD SYSOUT=&OUT
//SORTWK01 DD UNIT=&UWK,SPACE=(CYL,&CYL,,CONTIG)
//SORTWK02 DD UNIT=&UWK,SPACE=(CYL,&CYL,,CONTIG)
//SORTWK03 DD UNIT=&UWK,SPACE=(CYL,&CYL,,CONTIG)
//SYSUDUMP DD SYSOUT=&OUT

```

CVTA - Table contents update

The CVTA procedure extracts tables contents modified on a given date, or between two given dates, and formats them as batch update transactions.

Execution condition

This procedure reads the Pactables files ; it can be executed even if the files remain open to on-line use.

CVTA - User input

- One '*'-type line per user:

| Pos. | Len. | Value | Meaning |
|------|------|----------|-----------|
| 2 | 1 | '*' | Line code |
| 3 | 8 | uuuuuuuu | User code |
| 11 | 8 | pppppppp | Password |

- One 'A'-type line for each selected table:

| Pos. | Len. | Value | Meaning |
|------|------|----------|------------------------|
| 1 | 1 | 'S' | Transaction code |
| 2 | 1 | 'A' | Line code |
| 3 | 6 | tttttt | Table number |
| 9 | 8 | DDMMCCYY | Update date: beginning |
| 17 | 2 | | Not used |
| 19 | 1 | '/' | Delimiter |
| 20 | 1 | | Not used |
| 21 | 8 | DDMMCCYY | Update date: end |

When a single 'A'-type line is entered without the table number, all the modified items of all tables accessible by the user ('*' -line) can be extracted.

CVTA - Description of steps

Input recognition: PTU001

VSAM files check: IDCAMS

Table-contents comparison: PTAV10

| Code | Physical name | Type | Label |
|--------|---------------------|--------|--------------------------|
| PAC7TD | &TD | Input | Tables descriptions file |
| PAC7TE | &INDSV..BVPTE | Input | Error message file |
| PAC7TV | &TV | Input | Tables contents file |
| PAC7TG | &INDUV..&ROOTT.00TG | Input | ser parameter file |
| PAC7MV | &&CVTAMB | Input | Comparison requests |
| PAC7EX | &&EX | Output | Comparison result |
| PAC7ET | | Report | Transaction report |

Extraction of update transactions: PTAV20

| Code | Physical name | Type | Label |
|----------|---------------|--------|--|
| PAC7TD | &TD | Input | Tables Descriptions file |
| PAC7EX | &&EX | Input | Comparison result |
| PAC7NU | &&NU | Output | Update transactions for use as input of UPTA |
| PAC7ET | | Report | Printing of extracted transactions |
| SORTWK01 | | Sort | |
| SORTWK02 | | Sort | |
| SORTWK03 | | Sort | |

CVTA - Execution JCL

```

//*****
//* PACTABLES 3.5 *
//*****
//* ---- TABLE TRANSACTION EXTRACTION --- *
//*****
//BVP CVTA PROC ROOTT=$ROOTT, ROOT OF PACTABLES SYSTEM *
//      INDUV='$INDUV',      INDEX OF PACTABLES FILES *
//      INDSV='$INDSV',      INDEX OF VA PAC SYSTEM FILES *
//      INDSN='$INDSN',      NON-VSAM FILES INDEX *

```

```

//*:      VSAMCAT='$VCAT',      VSAM USER CATALOG      *
//*:      SYSTCAT='$SCAT',      VSAM SYSTEM CATALOG   *
//        TD=,                  DSN DESCRIPTION        *
//        TV=,                  TABLES LINKED TO DESCRIPTION *
//        STEPLIB='$HLQ..SBVPMBR8', LIBRARY OF LOAD-MODULES   *
//        SORTLIB='$BIBT',      SORT LIBRARY                  *
//        OUT=$OUT,             UTILITIES AND ERRORS OUTPUT CLASSURS *
//        OUTL=$OUT,            OUTPUT CLASS OF REPORTS        *
//        UWK=$UWK,             WORK UNIT                      *
//        CYL='(3,1)',          SORTWORK SPACE                *
//        SPAEX='(TRK,(30,3),RLSE)', EXTRACTED-TRANSACTION SPACE *
//        SPAMB='(TRK,(5,1),RLSE)' REQUEST-FILE SPACE        *
//*****
//COPY    EXEC PGM=BVPTU001
//*-----
//STEPLIB DD DSN=&STEPLIB,DISP=SHR
//PAC7MB  DD DSN=&&CVTAMB,DISP=(,PASS),UNIT=&UWK,
//        DCB=BLKSIZE=1600,SPACE=&SPAMB
//CARTE   DD DDNAME=SYSIN,DCB=BLKSIZE=80
//VERIFY EXEC PGM=IDCAMS
//*-----
//*:STEPCAT DD DSN=&VSAMCAT,DISP=SHR
//*:      DD DSN=&SYSTCAT,DISP=SHR
//SYSPRINT DD SYSOUT=&OUT
//PAC7TD  DD DSN=&TD,
//        DISP=SHR
//PAC7TE  DD DSN=&INDSV..BVPT,
//        DISP=SHR
//PAC7TG  DD DSN=&INDUV..&ROOTT.00TG,
//        DISP=SHR
//PAC7TV  DD DSN=&TV,
//        DISP=SHR
//SYSIN   DD DSN=&INDSN..BVPSY(VERIFTD),
//        DISP=SHR
//        DD DSN=&INDSN..BVPSY(VERIFTE),
//        DISP=SHR
//        DD DSN=&INDSN..BVPSY(VERIFTG),
//        DISP=SHR
//        DD DSN=&INDSN..BVPSY(VERIFTV),
//        DISP=SHR
//PTAV10 EXEC PGM=BVPTAV10
//*-----
//STEPLIB DD DSN=&STEPLIB,DISP=SHR
//*:STEPCAT DD DSN=&VSAMCAT,DISP=SHR
//*:      DD DSN=&SYSTCAT,DISP=SHR
//SYSOUT  DD SYSOUT=&OUT
//PAC7ET  DD SYSOUT=&OUTL
//PAC7MV  DD DSN=&&CVTAMB,DISP=(OLD,DELETE)
//PAC7EX  DD DSN=&&EX,DISP=(,PASS),UNIT=&UWK,
//        SPACE=&SPAEX,
//        DCB=(RECFM=FB,LRECL=120,BLKSIZE=2400)
//PAC7TD  DD DSN=&TD,
//        DISP=SHR
//PAC7TE  DD DSN=&INDSV..BVPT,
//        DISP=SHR

```

```

//PAC7TG DD DSN=&INDUV..&ROOTT.00TG,
// DISP=SHR
//PAC7TV DD DSN=&TV,
// DISP=SHR
//SYSUDUMP DD SYSOUT=&OUT
//PTAV20 EXEC PGM=BVPTAV20
//*-----
//STEPLIB DD DSN=&STEPLIB,DISP=SHR
//SORTLIB DD DSN=&SORTLIB,DISP=SHR
//*:STEPDAT DD DSN=&VSAMCAT,DISP=SHR
//*: DD DSN=&SYSTCAT,DISP=SHR
//SYSOUT DD SYSOUT=&OUT
//PAC7ET DD SYSOUT=&OUTL
//PAC7EX DD DSN=&&EX,DISP=(OLD,DELETE)
//PAC7NU DD DSN=&&NU,DISP=(,PASS),UNIT=&UWK,
// SPACE=&SPAEX,
// DCB=(RECFM=FB,LRECL=80,BLKSIZE=1600)
//PAC7TD DD DSN=&TD,
// DISP=SHR
//SYSOUX DD SYSOUT=&OUT
//SORTWK01 DD UNIT=&UWK,SPACE=(CYL,&CYL,,CONTIG)
//SORTWK02 DD UNIT=&UWK,SPACE=(CYL,&CYL,,CONTIG)
//SORTWK03 DD UNIT=&UWK,SPACE=(CYL,&CYL,,CONTIG)
//SYSUDUMP DD SYSOUT=&OUT

```

Chapter 5. Installation

Parameterization

Installation preparation

The preparation to the installation process consists of three phases:

- Receiving the cartridge with the SMP/E (System Modification Program/Extended) utility in dedicated PDS.
This stage must be performed by the system staff who are accustomed to installing IBM products with SMP/E.
- Allocation of a PDS file meant to save all the installation and operation JCL.
- Execution of the installation JCL from the PDS members created during the first phase.

First phase

You will find details in the document 'Program Directory for Pactables' specific to SMP/E.

This stage consists of the following steps:

- Downloading of JCL examples via IEBCOPY
 - Definition of 'Target field' and 'distribution field' (BVPTDD) files
 - Assignment of files 'Target field' and 'Distribution field' (BVPTAL)
- Cartridge receipt
 - Execution of RECEIVE (BVPTREC)
 - Execution of APPLY (BVPTAPP)
 - Execution of ACCEPT (BVPTACC).

Once this phase has been executed, all components required at installation are to be found in the following PDS, 'hlq' indicating the common prefix of delivered elements (High-Level Qualifier):

- hlq.SBVPTF1: all the files with a length of 80 including:
 - The initial installation JCL (BVPTINIT),
 - A file including the installation and operation JCL's and procedures (BVPTTTAL),
- hlq.SBVPTF2: initialization files: TC,
- hlq.SBVPMBR8: batch load-modules,

- hlq.SBVPMT8: on-line load-modules,
- hlq.SBVPTF5: error messages file: TE,
- hlq.SBVPTF6: workfile: TB.

Second phase

This phase is optional but it is recommended to execute it. It involves allocating a PDS file with the following characteristics:

- Lrecl=80
- Size: around 100 disc track 3,390, 30 pads directory.

Third phase

The third phase involves copying the 'hlq.SBVTF1(BVPTINIT)' JCL into the PDS mentioned in the second phase, modifying its parameters to match the constraints of the site and executing it so as to obtain a complete installation and operating JCL.

The BVPTINIT JCL executes the BVPMMJCL program loaded in the hlq.SBVPMBR8 PDS.

It must be completed as follows:

- Fill in '&hlq' with the 'hlq' parameter value used in the first phase SMP/E.
- In the '//SYSUT2 DD DSN=' field, enter the name of the file in which the complete JCL is to be saved.

This file can be either a PDS member initially created to save all the JCL's, or a sequential file selected by the user.

- Enter the parameters (see details in the next chapter).

The BVPMMJCL program execution must be saved: it can be used for a further re-installation.

Initial JCL

```
//VAPACTAB JOB (---),'JCL INSTALLATION',CLASS=D,MSGCLASS=A
//MM1JCL EXEC PGM=BVPMMJCL
//STEPLIB DD DISP=SHR,DSN=&HLQ.SBVPMBR8
// DD DISP=SHR,DSN=---.---.--- LE LIBRARY
//SYSOUT DD SYSOUT=A
//SYSUT1 DD DSN=&HLQ.SBVPTF1(BVPTTAL),DISP=SHR
//SYSUT3 DD UNIT=SYSDA,SPACE=(CYL,(5,2)),DCB=BLKSIZE=4160
//SYSUT4 DD UNIT=SYSDA,SPACE=(CYL,(5,2)),DCB=BLKSIZE=4160
//SYSUT8 DD DUMMY,DCB=BLKSIZE=1370
//SYSUT9 DD DUMMY,DCB=BLKSIZE=1370
//*****
//*
//* CREATION OF INSTALLATION JCL THROUGH 'BVPMMJCL'
```



```

//* -----
//*
//* MODIFY THE LIST OF THE SUPPLIED COMMANDS BY ASKING,
//* IF NECESSARY, A SELECTION OF PARTS OF INSTALLATION JCL
//* (JCL MODULES), BY GIVING THE APPROPRIATE VALUES TO THE
//* INSTALLATION PARAMETERS, AND, IF NECESSARY, BY SPECIFYING
//* THE LINES TO BE ADDED AT THE BEGINNING OR AT THE END OF
//* EACH JCL MODULE.
//*****
//SYSPRM DD DUMMY
//SYSUT2 DD ----- PDS MEMBER OR SEQUENTIAL FILE RECEIVING
//* THE INSTALLATION JCL (LRECL=80)
//SYSIN DD *
===PRM PRFJ=PAC .JOB NAMES PREFIXES (3 CHARACTERS)
===PRM CCPT=<> .JOB ACCOUNTING CODES (JOB CARDS)
===PRM CLASSJ=1 .JOB EXECUTION CLASS (JOB CARDS)
===PRM MSGCL=A .JCL OUTPUT CLASS (MSGCLASS)
===PRM OUT=A .JOB SYSOUT CLASS
===PRM INDSV='EXP.BVP3V' .PACTABLE SYSTEM VSAM FILES INDEXES
===PRM INDSN='EXP.BVP3N' .PACTABLE SYST.NON VSAM FILES INDEXES
===PRM INDUV='UTI.BVP3V' .PACTABLE USER VSAM FILES INDEXES
===PRM INDUN='UTI.BVP3N' .PACTABLE USER NON VSAM FILES INDEXES
===PRM INDPV='PAC.ADMIN' .VA PACBASE SYSTEM VSAM FILES INDEXES
===PRM VOLSV=<> .VOL. OF VA PAC SYSTEM VSAM FILES
===PRM VOLSN=<> .VOL. OF VA PAC SYSTEM NON VSAM FILES
===PRM VOLUV=<> .VOL. OF VA PAC USER VSAM FILES
===PRM VOLUN=<> .VOL. OF VA PAC USER NON VSAM FILES
===PRM TABTDF='EXP.TAB35' .DSN OF TABLES DESCRIPTION FILE
===PRM ROOTT='PM' .ROOT OF PACTABLE SYSTEM (2 CHARACTER)
===PRM RUS=REUSE .REUSE OR UNIQUE FOR VSAM FILES DEFINE
===PRM SCAT=<> .CATALOG OF PACTABLES SYSTEM VSAM FILES
===PRM VCAT=<> .CATALOG OF PACTABLES USER VSAM FILES
===PRM UWK=SYSDA .WORK UNIT
===PRM UNITSN=SYSDA .NON VSAM TABLE SYSTEM FILES UNIT
===PRM UNITUN=SYSDA .NON VSAM TABLE USER FILES UNIT
===PRM LNG=E .DATABASE LANGAGE (E=ENGLISH, F=FRENCH)
===PRM HLQ='HLQ' .HIGH LEVEL QUALIFIER OF LOAD MODULES
===PRM BIBP='SYS1.PROCLIB' .PROCEDURE LIBRARY
===PRM BIBT='SYS1.SORTLIB' .SORT LIBRARY
===PRM BCOB='SYS1.SCEERUN' .COBOL ROUTINE LIBRARY
===PRM DSCB='PDS.DSCB' .DSCB MODEL FILE DSNNAME
===PRM CSDL='CICS330.LOADLIB' .DFHCSDUP STEPLIB DSN
===PRM DFHCSD='PAC.DFHCSD' .TABLE CSD DSN
===PRM LIST=<> ."LIST" NAME
===PRM GROUP='PACTABLE' ."GROUP" NAME FOR PROGRAMS
===BEGMOD
./ ADD NAME=$ZMODUL
/*
//

```

Complete JCL installation

The BVPMMJCL module reads the JCL skeleton file BVPTTTAL and outputs a complete JCL. It allows you to:

- Select the installation language F (French) or E (English),
- Select portions of the skeleton JCL, which are called 'JCL modules',
- Parameterize the skeleton in order to obtain a JCL requiring a minimum of modifications to make it operational,
- Add lines before and after the JCL modules to separate them.

This step can be executed as many times as necessary to generate a complete JCL.

User input

Refer to the following paragraphs:

- Coding of BVPMMJCL commands
- Table of JCL modules
- Parameter chart
- JCL separators

Output result: Complete JCL

The resulting SYSUT2 file contains all the installation and operation JCLs. This file may be modified (if necessary) via a text editor before installation begins.

Two types of operations are to be performed on the complete JCL:

1. Global modifications (if necessary):

Adaptations can be performed on all the JCLs.

VSAM CATALOGS are entered as comments in the installation JCL:

- In DELETE/DEFINES, as:

```
/*: CATALOG ($VCAT) */  
/*: CATALOG ($SCAT) */
```

- In JCL STEPCATs as:

```
/*: STEPCAT DD  
/*: DD
```

- In procedure parameters as:

```
/*: VSAMCAT=' $VCAT '  
/*: SYSCAT=' $SCAT '
```

When these parameters are not required on the site, the resulting JCL may remain unchanged.

When these parameters are required, affected lines should be changed into command lines. This is accomplished by:

- Transforming all `'//*:'` into `'//'`,
- Substituting blanks for `'/*:'` and `'*/'`.

Blocking criteria for large files can also be changed.

Caution: SMS

- If the SMS product is installed, you should delete IDCAMS definition DD `//GDGMOD` lines in the installation JCLs with DataGroup Generation allocation.
- If the UNIT and VOL parameters cannot be used on the site, you can delete them in the whole JCL through an exclusion (EXCLUDE command under TSO/EDIT).

In most cases, it is recommended to perform general modifications on JCLs before the JCL splitting operation.

2. JCL splitting

In front of each module of a standard complete JCL, there is a `./ ADD NAME=<JCL-module>` line, where `<JCL-module>` is the code of the `===MOD` line that is found (see the following table of JCL modules).

This allows for the complete JCL to be split up into as many members as there are JCL modules in a PDS. The completed JCL file is to be used as SYSIN for the PDS update utility: IEUBUPDTE.

Note:

Because of this default option, all `./` characters found in JCL modules containing IEUBUPDTE were replaced with `:/`.

Once the JCL is split up, the replacement must be done the other way round before executing jobs which contain IEUBUPDTE.

Printed output

BVPM MJCL produces a list for each created JCL module, including the taken into account parameters.

Note:

Since the JCL skeleton parameters are in the \$xxxx format, during execution, if BVPMMJCL encounters a \$ character that does not correspond to a defined parameter, it sends error messages such as: 'UNKNOWN SYMBOLIC PARAMETER' or 'INVALID POSITION OR LENGTH' or 'SYNTAX ERROR IN SYMBOLIC PARAMETER'.

Those messages do not stop the execution and should be ignored: they apply to the '\$' in the flow processed by BVPMMJCL which are NOT parameters.

Coding of BVPMMJCL commands

```

===SELM mmmm1 mmmm2 ...  .Selection of JCL modules
                           mmmm1 = name of JCL module
                           mmmm2 = name of JCL module
                           etc.
                           The absence of a ===SELM line
                           involves the selection of all
                           JCL modules.

===PRM  PPPP=pppp        .Parameter
                           PPPP = name of parameter
                           pppp = value of parameter

```

Note: On ===PRM or ===SELM lines, comments may be entered. They must be preceded by a period, and not jut out over column 72.

```

===BEGMOD                Insertion of lines at beginning of module.
....1                    )
.....                    ) lines to insert before each module
....n                    )

===ENDMOD                Insertion of lines at end of module.
....1                    )
.....                    ) lines to insert after each module
....n                    )

```

Default installation settings

- PARAMETERS (===PRM):

Indicated values are examples; they should be replaced according to the site's specific needs.

- MODULES (===SELM):

No selection; all modules are copied.

- JCL MODULE FIRST LINE (===BEGMOD):

```
./ ADD NAME=$MODULE
```

This adds a line before each JCL module, in the form:

./ ADD NAME=<<name-of-JCL-module>

JCL modules

Table of JCL modules: ==SELM mmmm1 mmmm2 ... mmmmN

| mmmm | Content | Nature |
|--------|---|--------|
| TCICSD | CICS/ESA V3: CSD update job | OS JCL |
| | | |
| | Other CICS: | |
| | | |
| TI1SY | Loading of file-parameter's PDS | OS JCL |
| TI3SFI | Installation of error message and on-line documentation file (TE) | OS JCL |
| TI4PRE | Initialization of GDG backup (TC) | OS JCL |
| TI5ITB | Initialization of TB file (TUF-TP) | OS JCL |
| TI6PRO | Operations procedure cataloging | OS JCL |
| TI7TAB | Test tables restoration | OS JCL |

| mmmm | Content | Proc. | Nature |
|--------|----------------------------|-------|--------|
| | BATCH PROCEDURE TESTS: | | |
| | | | |
| TO2GET | Tables generation | GETT | OS JCL |
| TO2INT | Ex. Tables initialization | INTA | OS JCL |
| TO2PRT | Ex. Tables printing | PRTA | OS JCL |
| TO2IMT | Ex. Tables import | IMTA | OS JCL |
| TO2UPT | Ex. Tables update | UPTA | OS JCL |
| TO2SVT | Ex. Tables backup | SVTA | OS JCL |
| TO2TCT | Ex. Tables transfer | TCTA | OS JCL |
| TO2RST | Ex. Tables restoration | RSTA | OS JCL |
| TO2RET | Ex. Tables reorganization | RETA | OS JCL |
| TO2PMT | Ex. Parameter update | PMTA | OS JCL |
| TO2EXT | Ex. Table extraction | EXTA | OS JCL |
| TO2TUT | Ex. Production turnover | TUTA | OS JCL |
| | | | |
| TO2CD1 | Ex. Description comparison | CDT1 | OS JCL |

| mmmm | Content | Proc. | Nature |
|--------|----------------------------|-------|--------|
| TO2CD2 | Ex. Description comparison | CDT2 | OS JCL |
| TO2CVT | Ex. Tables updating | CVTA | OS JCL |
| | | | |
| TO2LPT | Ex. Module list | LPTA | OS JCL |

JCL parameterization

Table of parameters

===PRM PPPP=pppp .Comments

| Code PPPP | Meaning | Default pppp |
|-----------|---|--------------|
| | ON JOB CARDS | |
| PRFJ | 4 character maxi. jobname prefix | PAC |
| CCPT | Job accounting code | <> |
| CLASSJ | Job execution class | 1 |
| MSGCL | JCL output class | A |
| | | |
| | CODIFICATION OF FILE DSNs | |
| | All permanent VA Pac file names (except for load module libraries) have the following format: | |
| | INDUV.xx00ss : User VSAM. | |
| | INDUN.xx00ss : User non-VSAM. | |
| | INDSV.xx00ss : System VSAM. | |
| | INDSN.xx00ss : System non-VSAM. | |
| | | |
| | IND-- Index of file names: | |
| INDSV | VSAM-system | |
| INDSN | NON-VSAM-system (SAM, PDS) | |
| INDUV | VSAM-user | |
| INDUN | NON-VSAM-user (SAM) | |
| INDPV | VSAM-System VA Pacbase | 'PAC.ADMIN' |
| | | |
| | xx=ROOTT, ss=file code suffix | |

| Code PPPP | Meaning | Default pppp |
|-----------|--|-------------------|
| ROOTT | ROOT OF THE PACTABLES SYSTEM (2 characters other than PH) | PM |
| | | |
| | CSD CICS update parameters | |
| | (CICS/ESA V3 RDO only) | |
| | | |
| CSDL | DFHCSDUP STEPLIB DSN | 'CICS311.LOADLIB' |
| DFHCSD | Pactables CSD DSN | 'PAC.DFHCSD' |
| GROUP | Pactables CSD input group | PACBASE |
| LIST | List where group is to be added | <> |
| | | |
| | ON THE DD CARDS | |
| OUT | Sysout printing class | A |
| UWK | UNIT of work files used | SYSDA |
| UNITSN | UNIT of system non VSAM files | SYSDA |
| UNITUN | UNIT of user non VSAM files | SYSDA |
| VOLSN | Volume name of non-VSAM system files | <> |
| VOLSV | Volume name of VSAM system files | <> |
| VOLUN | Volume name of non-VSAM user files | <> |
| VOLUV | Volume name of VSAM user files | <> |
| | | |
| | OTHER PARAMETERS | |
| | | |
| TABTDF | DSN description of tables | 'EXP.TAB35' |
| VCAT | DSNAME of the VSAM catalog in which the installed Pactables test files are installed | |
| SCAT | DSNAME of the VSAM catalogue in which the Pactables TE file is installed | |
| RUS | File defined as REUSE or UNIQUE | RUS |
| BIBP | DSNAME of the procedure library in which the Pactables procedures are to be cataloged. | SYS1.PROCLIB |
| BIBT | DSNAME of the sort library | SYS1.SORTLIB |
| BCOB | Cobol routine library | |

| Code PPPP | Meaning | Default pppp |
|-----------|-------------------------|--------------|
| DSCB | DSCB model file DSN | |
| HLQ | HLQ SMP/E of components | |
| LNG | Database language | 'E' or 'F' |

Note: The '<>' indicates a required coded parameter.

The values of parameters containing special characters must be delimited by quotes.

JCL-module separators

```

===BEGMOD
....1  )
..... ) lines to insert before each JCL module
....n  )
===ENDMOD
....1  )
..... ) lines to insert after each JCL module
....n  )

```

Lines may be inserted as input in the BVPMMJCL if the default option is not appropriate (see Subchapter 'Installation Default settings' above).

The purpose of these lines is to execute the separation of the JCL file created by the BVPMMJCL utility into as many members as there are JCL modules.

This utility adds1 ton lines in front of each JCL module and1 ton lines at the end of each JCL module.

Installation process

Once the JCL is obtained, the installation of the Pactables function includes following steps:

- Update of CICS tables,
- Allocation and loading of parameter PDS,
- Installation of error message and documentation file,
- Installation of Pactables test Table backup,
- Initialization of working file for TUF-TP,
- Cataloging of operations procedures,
- Test Table restoration,
- Update of user parameters,

- Operations complement,
- Listing installed programs.

CICS CSD update

TCICSD module: '\$prfj.TCI' job

- Transactions codes:
 - 2 user transaction codes:
xx00 and xx90
 - 11 internal transaction codes (RETURN TRANSID):
xx01, xx02, xx03, xx04, xx05, xx06, xx07, xx08, xx09, xx91 and xx92.
- Coded Programs:
BVPPnnn (Complete list in Chapter 'Pactables components', Subchapter 'The on-line programs library').
- Files:
 - 1 Pactables system file:
BVPTE: Error messages
 - 4 user files:
xx00TV: Table contents file,
xx00TD: Table description file,
xx00TG: User parameter file.
xx00TB: TUF-TP facility's working file

Notes on the installation

The option allowing for 'Dynamic Backout' is required for the TV, TD, and TG files.

The estimated numbers of STRINGS, INDEX BUFFERS and DATA BUFFERS defined are the minimum numbers necessary for the system.

The two 'xx' characters of the transaction codes, the map and program names, and the file codes are chosen by the user (default = 'PM').

Transaction xx00 allows all normal operations to be done on the tables (consultation, update).

Transaction xx90 allows Pactables users to modify their passwords. It also allows the Table manager to enter Pactables general parameters (language, date format, security system Interface) and to update user passwords and access authorization.

Execution JCL

```

//$PRFJ.TCI JOB ($CCPT),'PACTABLES DFHCSDUP',CLASS=$CLASSJ,
//      MSGCLASS=$MSGCL
//*****
//* PACTABLES 3.5 *
//*****
//*          --- BATCH UPDATE OF THE DFHCSD --- *
//*****
//DFHCSDUP EXEC PGM=DFHCSDUP
//STEPLIB DD DSN=$CSDL,DISP=SHR
//SYSPRINT DD SYSOUT=$OUT
//DFHCSD DD DSN=$DFHCSD,DISP=SHR
//SYSIN DD *
*****
*          --- CSD CICS $ROOTT. FILES --- *
*****
DEFINE FILE($ROOTT.00TB) GROUP($GROUP)
DESCRIPTION(PACTABLE WORK FILE)
      DSNAME($INDUV..$ROOTT.00TB)
      STRINGS(2)
      STATUS (ENABLED) OPENTIME(STARTUP)
      DATABUFFERS(3) INDEXBUFFERS(2)
      RECORDFORMAT(V)
      ADD(YES) BROWSE(YES) DELETE(YES) READ(YES) UPDATE(YES)
      RECOVERY(BACKOUTONLY)
DEFINE FILE($ROOTT.00TV) GROUP($GROUP)
DESCRIPTION(PACTABLE DATA FILE)
      DSNAME($INDUV..$ROOTT.00TV)
      STRINGS(2)
      STATUS (ENABLED) OPENTIME(STARTUP)
      DATABUFFERS(3) INDEXBUFFERS(2)
      RECORDFORMAT(V)
      ADD(YES) BROWSE(YES) DELETE(YES) READ(YES) UPDATE(YES)
      RECOVERY(BACKOUTONLY)
DEFINE FILE($ROOTT.00TD) GROUP($GROUP)
DESCRIPTION(PACTABLE DESCRIPTION FILE)
      DSNAME($INDUV..$ROOTT.00TD)
      STRINGS(2)
      STATUS (ENABLED) OPENTIME(STARTUP)
      DATABUFFERS(3) INDEXBUFFERS(2)
      RECORDFORMAT(F)
      ADD(YES) BROWSE(YES) DELETE(YES) READ(YES) UPDATE(YES)
      RECOVERY(BACKOUTONLY)
DEFINE FILE($ROOTT.00TG) GROUP($GROUP)
DESCRIPTION(PACTABLE USERS FILE)
      DSNAME($INDUV..$ROOTT.00TG)
      STRINGS(2)
      STATUS (ENABLED) OPENTIME(STARTUP)
      DATABUFFERS(3) INDEXBUFFERS(2)
      RECORDFORMAT(F)
      ADD(YES) BROWSE(YES) DELETE(YES) READ(YES) UPDATE(YES)
      RECOVERY(BACKOUTONLY)
DEFINE FILE(BVPTE) GROUP($GROUP)
DESCRIPTION(PACTABLE ERROR MESSAGES AND DOC FILE)
      DSNAME($INDSV..BVPTE)
      STRINGS(1)

```

```

STATUS (ENABLED) OPENTIME(STARTUP)
DATABUFFERS(2) INDEXBUFFERS(1)
RECORDFORMAT(F)
ADD(NO) BROWSE(YES) DELETE(NO) READ(YES) UPDATE(NO)
RECOVERY(BACKOUTONLY)
*****
*           CSD CICS  PROGRAMS           *
*****
DEFINE PROGRAM(BVPFT00) GROUP($GROUP)
DEFINE PROGRAM(BVPFT10) GROUP($GROUP)
DEFINE PROGRAM(BVPFT90) GROUP($GROUP)
DEFINE PROGRAM(BVPP500) GROUP($GROUP)
DEFINE PROGRAM(BVPP510) GROUP($GROUP)
DEFINE PROGRAM(BVPP520) GROUP($GROUP)
DEFINE PROGRAM(BVPP530) GROUP($GROUP)
DEFINE PROGRAM(BVPP540) GROUP($GROUP)
DEFINE PROGRAM(BVPP550) GROUP($GROUP)
DEFINE PROGRAM(BVPP560) GROUP($GROUP)
DEFINE PROGRAM(BVPP570) GROUP($GROUP)
DEFINE PROGRAM(BVPP580) GROUP($GROUP)
DEFINE PROGRAM(BVPP590) GROUP($GROUP)
DEFINE PROGRAM(BVPP599) GROUP($GROUP)
DEFINE PROGRAM(BVPP600) GROUP($GROUP)
DEFINE PROGRAM(BVPP610) GROUP($GROUP)
DEFINE PROGRAM(BVPP620) GROUP($GROUP)
DEFINE PROGRAM(BVPP820) GROUP($GROUP)
DEFINE PROGRAM(BVPP920) GROUP($GROUP)
DEFINE PROGRAM(BVPR980) GROUP($GROUP)
DEFINE PROGRAM(BVPSECT) GROUP($GROUP)
DEFINE PROGRAM(BVPRACF) GROUP($GROUP)
*****
*           ROUTINE FOR ACCES TO TABLES VIA ON-LINE PROGRAM           *
*****
DEFINE PROGRAM(BVPLNK) GROUP($GROUP)
*****
*           CSD CICS  $ROOTT.-- TRANSACTIONS           *
*****
DEFINE TRANSACTION($ROOTT.00) GROUP($GROUP)
DESCRIPTION(PACTABLE $ROOTT.00 TRANSACTION) PROGRAM(BVPP500)
DEFINE TRANSACTION($ROOTT.01) GROUP($GROUP)
DESCRIPTION(PACTABLE $ROOTT.01 TRANSACTION) PROGRAM(BVPP510)
DEFINE TRANSACTION($ROOTT.02) GROUP($GROUP)
DESCRIPTION(PACTABLE $ROOTT.02 TRANSACTION) PROGRAM(BVPP520)
DEFINE TRANSACTION($ROOTT.03) GROUP($GROUP)
DESCRIPTION(PACTABLE $ROOTT.03 TRANSACTION) PROGRAM(BVPP530)
DEFINE TRANSACTION($ROOTT.04) GROUP($GROUP)
DESCRIPTION(PACTABLE $ROOTT.04 TRANSACTION) PROGRAM(BVPP540)
DEFINE TRANSACTION($ROOTT.05) GROUP($GROUP)
DESCRIPTION(PACTABLE $ROOTT.05 TRANSACTION) PROGRAM(BVPP550)
DEFINE TRANSACTION($ROOTT.06) GROUP($GROUP)
DESCRIPTION(PACTABLE $ROOTT.06 TRANSACTION) PROGRAM(BVPP560)
DEFINE TRANSACTION($ROOTT.07) GROUP($GROUP)
DESCRIPTION(PACTABLE $ROOTT.07 TRANSACTION) PROGRAM(BVPP570)
DEFINE TRANSACTION($ROOTT.08) GROUP($GROUP)
DESCRIPTION(PACTABLE $ROOTT.08 TRANSACTION) PROGRAM(BVPP580)

```

```

DEFINE TRANSACTION($ROOTT.09) GROUP($GROUP)
DESCRIPTION(PACTABLE $ROOTT.09 TRANSACTION) PROGRAM(BVPP590)
DEFINE TRANSACTION($ROOTT.90) GROUP($GROUP)
DESCRIPTION(PACTABLE $ROOTT.90 TRANSACTION) PROGRAM(BVPP600)
DEFINE TRANSACTION($ROOTT.91) GROUP($GROUP)
DESCRIPTION(PACTABLE $ROOTT.91 TRANSACTION) PROGRAM(BVPP610)
DEFINE TRANSACTION($ROOTT.92) GROUP($GROUP)
DESCRIPTION(PACTABLE $ROOTT.92 TRANSACTION) PROGRAM(BVPP620)
ADD GROUP($GROUP) LIST($LIST)

```

Allocation and loading of system parameter

TI1SY module: '\$prfj.TI1' job

| Step | Program | Comment |
|-------|----------|--|
| STEP1 | IEHPROGM | SCRATCH/UNCATLG of parameter PDS |
| STEP2 | IEFBR14 | Allocation of SY parameter PDS |
| STEP3 | IEBUPDTE | Loading of the PDS which contains IDCAMS entries |

Execution JCL

```

//$PRFJ.TI1 JOB ($CCPT),'TABLE PARAMETERS',CLASS=$CLASSJ,
// MSGCLASS=$MSGCL
//*****
//* PACTABLES 3.5 *
//*****
//* ALLOCATION OF PACTABLES PARAMETER PDS *
//* .STEP1 : SCRATCH UNCATLG *
//* .STEP2 : ALLOCATION *
//* .STEP3 : LOADING OF PACTABLES PARAMETERS *
//* *
//* ->NOTE *
//* ---- *
//* THIS PDS CONTAINS THE SYSINS FOR ALLOCATING THE FILES THAT *
//* MAKE UP THE PACTABLES TABLE FILES *
//* THE INDICATED SIZES CAN BE ADAPTED ACCORDING TO YOUR NEEDS *
//* *
//* *
//* REPLACE :/ BY ./ BEFORE SUBMITTING THE JOB *
//* *
//*****
//*
//STEP1 EXEC PGM=IDCAMS
//SYSPRINT DD SYSOUT=$OUT
//SYSIN DD *
LISTC ENT($INDSN..BVPSY)
/*
//STEP2 EXEC PGM=IEFBR14,COND=(0,EQ,STEP1)
//SY DD DSN=$INDSN..BVPSY,DISP=(,CATLG,DELETE),
// DCB=(RECFM=FB,LRECL=80,BLKSIZE=6080),VOL=SER=$VOLSN,
// SPACE=(6080,(50,,5)),UNIT=$UNITSN
//*

```

```

//STEP3 EXEC PGM=IEBUPDTE,PARM=NEW
//SYSPRINT DD SYSOUT=$OUT
//SYSUT2 DD DSN=$INDSN..BVPSY,
// DISP=SHR
//SYSIN DD *
:/ ADD NAME=DF$ROOTT.00TB
DELETE ($INDUV..$ROOTT.00TB) CLUSTER
DEFINE CLUSTER ( NAME ($INDUV..$ROOTT.00TB) -
                SHR (2,3) $RUS KEYS (63,3) -
                CYL (1,1) -
                VOL ($VOLUV) -
                RECSZ (80,1140) ) -
INDEX ( NAME ($INDUV..$ROOTT.00TB.I) -
        CISZ (1024) ) -
DATA ( NAME ($INDUV..$ROOTT.00TB.D) -
        FSPC (10,5) -
        CISZ (2048) )
:/ ADD NAME=DF$ROOTT.00TV
DELETE ($INDUV..$ROOTT.00TV) CLUSTER
DEFINE CLUSTER ( NAME ($INDUV..$ROOTT.00TV) -
                SHR (2,3) $RUS KEYS (35,4) -
                CYL (1,1) -
                VOL ($VOLUV) -
                RECSZ (80,1100) ) -
INDEX ( NAME ($INDUV..$ROOTT.00TV.I) -
        CISZ (1024) ) -
DATA ( NAME ($INDUV..$ROOTT.00TV.D) -
        FSPC (10,5) -
        CISZ (2048) )
:/ ADD NAME=DF$ROOTT.00TD
DELETE ($INDUV..$ROOTT.00TD) CLUSTER
DEFINE CLUSTER ( NAME ($INDUV..$ROOTT.00TD) -
                SHR (2,3) $RUS KEYS (21,0) -
                CYL (1,1) -
                VOL ($VOLUV) -
                RECSZ (240,240) ) -
INDEX ( NAME ($INDUV..$ROOTT.00TD.I) -
        CISZ (1024) ) -
DATA ( NAME ($INDUV..$ROOTT.00TD.D) -
        FSPC (10,5) -
        CISZ (2048) )
:/ ADD NAME=DFBVPTTE
DELETE ($INDSV..BVPTTE) CLUSTER
DEFINE CLUSTER ( NAME ($INDSV..BVPTTE) -
                KEYS (17,0) SHR (2,3) RUS -
                CYL (1,1) -
                VOL ($VOLSV) -
                RECSZ (90,90) ) -
INDEX ( NAME ($INDSV..BVPTTE.I) -
        CISZ (1024) ) -
DATA ( NAME ($INDSV..BVPTTE.D) -
        CISZ (1024) )
:/ ADD NAME=DF$ROOTT.00TG
DELETE ($INDUV..$ROOTT.00TG) CLUSTER
DEFINE CLUSTER ( NAME ($INDUV..$ROOTT.00TG) -

```

```

                SHR (2,3) $RUS KEYS (22,0)           -
                CYL (1,1)                            -
                VOL ($VOLUV)                          -
                RECSZ (85,85) )                       -
INDEX   ( NAME ($INDUV..$ROOTT.00TG.I)              -
        CISZ (1024) )                               -
DATA   ( NAME ($INDUV..$ROOTT.00TG.D)              -
        FSPC (10,5)                                -
        CISZ (2048) )
:/      ADD NAME=DF$ROOTT.00AV
DELETE ($INDUV..$ROOTT.00AV) CLUSTER
DEFINE CLUSTER ( NAME ($INDUV..$ROOTT.00AV)         -
                SHR (2,3) $RUS KEYS (35,4)         -
                CYL (1,1)                            -
                VOL ($VOLUV)                          -
                RECSZ (80,1100) )                   -
INDEX   ( NAME ($INDUV..$ROOTT.00AV.I)              -
        CISZ (1024) )                               -
DATA   ( NAME ($INDUV..$ROOTT.00AV.D)              -
        FSPC (10,5)                                -
        CISZ (2048) )
:/      ADD NAME=DF$ROOTT.00AD
DELETE ($INDUV..$ROOTT.00AD) CLUSTER
DEFINE CLUSTER ( NAME ($INDUV..$ROOTT.00AD)         -
                SHR (2,3) $RUS KEYS (21,0)         -
                CYL (1,1)                            -
                VOL ($VOLUV)                          -
                RECSZ (240,240) )                   -
INDEX   ( NAME ($INDUV..$ROOTT.00AD.I)              -
        CISZ (1024) )                               -
DATA   ( NAME ($INDUV..$ROOTT.00AD.D)              -
        FSPC (10,5)                                -
        CISZ (2048) )
:/      ADD NAME=VERIFTV
VERIFY FILE (PAC7TV)
:/      ADD NAME=VERIFTD
VERIFY FILE (PAC7TD)
:/      ADD NAME=VERIFTE
VERIFY FILE (PAC7TE)
:/      ADD NAME=VERIFTG
VERIFY FILE (PAC7TG)
:/      ADD NAME=VERIFAV
VERIFY FILE (PAC7AV)
:/      ADD NAME=VERIFAD
VERIFY FILE (PAC7AD)
:/      ADD NAME=REPROTG
REPRO INFILE(PAC7IG) OUTFILE(PAC7TG)
/*
//

```

Error message and documentation file installation

TI3SFI module: '\$prfj.TI3' job

| Step | Program | Comment |
|-------|---------|--------------------------------|
| STEP1 | IDCAMS | DELETE/DEFINE TE file |
| STEP2 | IDCAMS | REPRO of TE error message file |

Execution JCL

```
//$PRFJ.TI3 JOB ($CCPT),'SYSTEM FILES',CLASS=$CLASSJ,
// MSGCLASS=$MSGCL
//*****
//* PACTABLES 3.5 *
//*****
//* LOADING OF PACTABLES ERROR-MESSAGES AND DOCUMENTATION *
//*****
//STEP1 EXEC PGM=IDCAMS
//***** DELETE DEFINE 'TE' FILE
//*
//*:STEPCAT DD DSN=$SCAT,DISP=SHR
//SYSPRINT DD SYSOUT=$OUT
//SYSIN DD DSN=$INDSN..BVPSY(DFBVPTE),
// DISP=SHR
//STEP2 EXEC PGM=IDCAMS
//***** LOADING 'TE' FILE
//*
//*:STEPCAT DD DSN=$SCAT,DISP=SHR
//SYSPRINT DD SYSOUT=$OUT
//TEO DD DSN=$INDSV..BVPTE,
// DISP=SHR
//TEI DD DSN=$HLQ..SBVPTF5(BVPTE),DISP=SHR
//SYSIN DD *
// REPRO INFILE (TEI) OUTFILE (TEO)
//*
```

Pactables test file installation

TI4PRE module: '\$prfj.TI4' job

| Step | Program | Comment |
|-------|----------|--|
| STEP1 | IEHPROGM | SCRATCH UNCATLG of the model DSCB file |
| STEP2 | IEFBR14 | Allocation of the model DSCB file |
| STEP3 | IDCAMS | GDG of TC file |
| STEP4 | IEBGENER | Test backup loading |

Execution JCL

```
//$PRFJ.TI4 JOB ($CCPT),'PREPAR',CLASS=$CLASSJ,
// MSGCLASS=$MSGCL
//*****
```

```

//* PACTABLES 3.5 *
/******
/* JOB TO BE RUN ONLY AT THE FIRST INSTALLATION OF THE PACTABL *
/* SYSTEM *
/* . BUILDING OF DSCB MODEL AND INDEX DATA-GROUP FOR BACKUP *
/* . LOADING OF TEST BACKUP ON 'TC' FILE *
/* *
/* ->NOTE *
/* ---- *
/* IF "SMS" IS INSTALLED, DELETE //GDGMOD DD STATEMENTS *
/******
//STEP1 EXEC PGM=IDCAMS
//SYSPRINT DD SYSOUT=$OUT
//SYSIN DD *
DELETE ($DSCB)
/*
//STEP2 EXEC PGM=IEFBR14
//DSCB DD DISP=(,CATLG),SPACE=(TRK,0),
// UNIT=$UNITSN,
// VOL=SER=$VOLSN,
// DSN=$DSCB
/*
//STEP3 EXEC PGM=IDCAMS
/*:STEPCAT DD DSN=$VCAT,DISP=SHR
//GDGMOD DD DSN=$INDUN..$ROOTT.00TC,
// DISP=(,KEEP,DELETE),SPACE=(TRK,0),
// UNIT=$UNITUN,
// VOL=SER=$VOLUN,
// DCB=($DSCB,RECFM=VB,LRECL=1067,BLKSIZE=10674)
//SYSPRINT DD SYSOUT=$OUT
//SYSIN DD *
DEFINE GENERATIONDATAGROUP -
(NAME ($INDUN..$ROOTT.00TC) LIMIT (3) SCR)
/*
//STEP4 EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=$OUT
//SYSIN DD DUMMY
//SYSUT1 DD DSN=$HLQ..SBVPTF2(BVPTC$LNG),DISP=SHR
//SYSUT2 DD DSN=$INDUN..$ROOTT.00TC(+1),
// DISP=(,CATLG,DELETE),
// UNIT=$UNITUN,
// VOL=SER=$VOLUN,
// SPACE=(TRK,(15,5),RLSE),
// DCB=($DSCB,RECFM=VB,LRECL=1067,BLKSIZE=10674)
//

```

Initialization of working file for TUF-TP

TI5ITB module: '\$prfj.TI5' job

| Step | Program | Comment |
|--------|---------|--------------------------|
| STEP 1 | IDCAMS | DELETE/DEFINE of TB file |
| STEP 2 | IDCAMS | Loading of TB file |

Execution JCL

```
//$PRFJ.TI5 JOB ($CCPT),'FILE TB',CLASS=$CLASSJ,
// MSGCLASS=$MSGCL
//*****
//* PACTABLES 3.5 *
//*****
//* LOADING WORKING TB *
//*****
//STEP1 EXEC PGM=IDCAMS
//***** DELETE DEFINE 'TB' FILE
//*
//*:STEPCAT DD DSN=$SCAT,DISP=SHR
//SYSPRINT DD SYSOUT=$OUT
//SYSIN DD DSN=$INDSN..BVPSY(DF$ROOTT.00TB),DISP=SHR
//STEP2 EXEC PGM=IDCAMS
//***** LOADING 'TB' FILE
//*
//*:STEPCAT DD DSN=$SCAT,DISP=SHR
//SYSPRINT DD SYSOUT=$OUT
//TBO DD DSN=$INDSV..$ROOTT.00TB,
// DISP=SHR
//TBI DD DSN=$HLQ..SBVPTF6(BVPTB),DISP=SHR
//SYSIN DD *
// REPRO INFILE (TBI) OUTFILE (TBO)
//*
```

Cataloging of operating procedures

It is recommended that all operation procedures be cataloged in one procedures library:

- Either in a reserved PROCLIB: in this case, execute the allocation job first, and then the loading job.
- Or in an existing PROCLIB: in this case, execute the loading job straight away.

TI6IPRO module: '\$prfj.TI6' job

Allocation of a reserved library (optional)

| Step | Program | Comments |
|-------|---------|----------------------------------|
| STEP1 | IEFBR14 | Allocation of procedures library |

Execution JCL

```
//$PRFJ.TI6 JOB ($CCPT),'PAC TI6IPRO',CLASS=$CLASSJ,
// MSGCLASS=$MSGCL
//*****
//* PACTABLES 3.5 *
//*****
//* INSTALLATION - TI6IPRO *
//*
```

```

//*                WARNING! OPTIONAL JOB                *
//*                =====                            *
//*                                                        *
//*    INITIAL ALLOCATION OF A SPECIAL "PROCLIB" FOR THE PRODUCT *
//*    .STEP1 : LISTCAT                                     *
//*    .STEP2 : ALLOCATION                                   *
//*                                                        *
//*****
//*
//STEP1    EXEC PGM=IDCAMS
//SYSPRINT DD SYSOUT=$OUT
//SYSIN    DD *
           LISTC ENT($BIBP)
//*
//STEP2    EXEC PGM=IEFBR14,COND=(0,EQ,STEP1)
//LIB      DD DSN=$BIBP,DISP=(,CATLG,DELETE),
//          DCB=(RECFM=FB,LRECL=80,BLKSIZE=6080),
//          VOL=SER=$VOLSN,
//          UNIT=$UNITSN,
//          SPACE=(6080,(200,20,10))

```

TI6PRO module: '\$prfj.TP6' job

Loading of procedures

This job includes the IEBUPDTE step, which creates one member for each procedure.

Caution:

Replace all `:/` with `./` before submitting the job.

Each member is coded 'BVPNNNN', where NNNN is the standard name of the procedure.

Procedures are detailed in the other chapters of this manual.

Execution JCL

```

//$PRFJ.TP6 JOB ($CCPT),'PROCEDURES ',CLASS=$CLASSJ,
// MSGCLASS=$MSGCL
//*****
//* PACTABLES 3.5                                         *
//*****
//*    --- CATALOGING OF PACTABLES PROCEDURES ---        *
//*                                                        *
//*    ->NOTE:                                             *
//*    REPLACE :/ BY ./ BEFORE SUBMITTING THE JOB        *
//*****

```

```

// EXEC PGM=IEBUPDTE,PARM=NEW
//SYSPRINT DD SYSOUT=$OUT
//SYSUT2 DD DSN=$BIBP,DISP=SHR
//SYSIN DD DATA,DLM='F+'

:/ ADD NAME=BVPCDT1
:/ ADD NAME=BVPCDT2
:/ ADD NAME=BVPCVTA
:/ ADD NAME=BVPEXTA
:/ ADD NAME=BVPGETA
:/ ADD NAME=BVPGETD
:/ ADD NAME=BVPGETI
:/ ADD NAME=BVPGETT
:/ ADD NAME=BVPIMTA
:/ ADD NAME=BVPINTA
:/ ADD NAME=BVPLDTA
:/ ADD NAME=BVPLPTA
:/ ADD NAME=BVPPMTA
:/ ADD NAME=BVPPRTA
:/ ADD NAME=BVPRETA
:/ ADD NAME=BVPRSTA
:/ ADD NAME=BVPSMTD
:/ ADD NAME=BVPSVTA
:/ ADD NAME=BVPTCTA
:/ ADD NAME=BVPTUTA
:/ ADD NAME=BVPUPTA

F+
//

```

Test table restoration

TI7TAB module: '\$prfj.TI7' job

This job executes the RSTA procedure with, as input, the backup loaded on disk during the STEP4 of the '\$prfj.TI4' job.

Execution JCL

```

//$PRFJ.TI7 JOB ($CCPT),'TABLE FILES',CLASS=$CLASSJ,
// MSGCLASS=$MSGCL
//*****
//* PACTABLES 3.5 *
//*****
//* --- LOADING OF THE PACTABLES TEST FILES --- *
//*****
// JCLLIB ORDER=($BIBP)
//STEP1 EXEC BVPRSTA
*ADMIN ADMIN

```

Update of user parameters

The system is operational when user parameters are entered in the Pactables Database.

Before any test, it is necessary to update user parameters in the TG file using the PMTA procedure. An initial general user code is provided for the installation phase and is found in the TG file:

```
'*****SUPER'
```

User operation complements

Since tables are rather stable files undergoing few updates, the Pactables function does not provide a journal file.

However, update transactions can be retrieved from the standard CICS file.

List of installed programs

TO2LPT module: '\$prfj.LPTA' job

This job executes the LPTA procedure that prints the list of batch and on-line programs with their compilation date.

This list must be kept since you may be asked for installation references by IBM in case of a problem in the operation of Pactables.

```
//$PRFJ.LPTA JOB ($CCPT), 'PROGR.', CLASS=$CLASSJ,  
// MSGCLASS=$MSGCL  
//*****  
//* PACTABLES 3.5 *  
//*****  
//* --- LIST OF INSTALLED PROGRAMS --- *  
//*****  
// JCLLIB ORDER=($BIBP)  
  
//LPTA EXEC BVPLPTA
```

Utilization tests

The tests contain the following steps:

- On-line use tests,
- Batch tests for update, printing and reorganization,
- Tests for tables generation.

The test case contains 3 tables:

- 'TEMPER' without historical account,
- 'CUSTOM' with historical accounts dated 03/01/85 and 03/10/85.
- 'ARTICL' with historical account dated 01/15/87

On-line tests of the Pactables function:

- Open Pactables test files,

- Read-only access to all screens,
- Perform some updates.

Batch tests:

- Execute the PRTA procedure.
- Execute the EXTA procedure.
- Close Pactables files.
- Execute the UPTA procedure.

Reorganization of test tables:

- Backup (IDCAMS) TV and TD.
- Execute the reorganization (RETA) which contains:
 - Reorganization of TV (PTA400 and PTA410 programs)
 - Reorganization of TD (PTA420 program)
 - Building of TC backup file (PTA430 program)
- Restore TV and TD (RSTA)
 - Execute a printing of the tables (PRTA) for verification.
 - Open the files and perform some on-line reorganization validation tests.

Test for table generation (GETT procedure)

- Close the files.
- Execute extraction with VA Pac (GETA or GETD).
- Execute GETT.
- Verify the execution.
- Re-open the files and perform some verification tests.

Test JCL: INTA

```

//$PRFJ.INTA JOB ($CCPT),'INIT',CLASS=$CLASSJ,
// MSGCLASS=$MSGCL
//*****
//* PACTABLES 3.5 *
//*****
//* --- TEST OF THE INTA PROCEDURE --- *
//*****
// JCLLIB ORDER=($BIBP)
//INTA EXEC BVPINTA
I.B.M. ESSAI F 1234567 ABC

```

Test JCL: GETT

```

//$PRFJ.GETT JOB ($CCPT),'GENERATION',CLASS=$CLASSJ,
// MSGCLASS=$MSGCL
//*****
//* PACTABLES 3.5 *
//*****

```

```

//*          --- TEST OF THE GETT PROCEDURE ---          *
//*****
// JCLLIB ORDER=(SBIBP)
//**** INSERT HERE GETA OR GETD (SEE VA PACBASE)
//GETT      EXEC BVPGETT,MD='&&MD'

```

Test JCL: PRTA

```

//$PRFJ.PRTA JOB ($CCPT),'PRINT',CLASS=$CLASSJ,
// MSGCLASS=$MSGCL
//*****
//* PACTABLES 3.5          *
//*****
//*          --- TEST OF THE PRTA PROCEDURE ---          *
//*****
// JCLLIB ORDER=(SBIBP)
//PRTA      EXEC BVPPRTA
           *****SUPER
EACUSTOM03101985
EATEMPER

```

Test JCL: IMTA

```

//$PRFJ.IMTA JOB ($CCPT),'IMPORT',CLASS=$CLASSJ,
// MSGCLASS=$MSGCL
//*****
//* PACTABLES 3.5          *
//*****
//*          --- TEST OF THE IMTA PROCEDURE ---          *
//*****
// JCLLIB ORDER=(SBIBP)
//IMTA      EXEC BVPIMTA,TABF='...'
           *****SUPER
A??????

```

Test JCL: UPTA

```

//$PRFJ.UPTA JOB ($CCPT),'UPDATE',CLASS=$CLASSJ,
// MSGCLASS=$MSGCL
//*****
//* PACTABLES 3.5          *
//*****
//*          --- TEST OF THE UPTA PROCEDURE ---          *
//*****
// JCLLIB ORDER=(SBIBP)
//UPTA      EXEC BVPUPTA
           *****SUPER
ACUSTOM03101985 *
AV 44190
  V 555333***ATHENS*
  V 666333***MOSCOW*
  V 889900***PEKING*
AV 333111
  V 6666111*MARAVEN*BOLIVAR*CARACAS*22300*VENEZUELA*3
ATEMPER      /
  V GUAYAQUIL/OF 75 0C 24/OF 75 0C 24/OF 78 0C 25/OF 78 0C 25
V-/OF 78 0C 25

```

```

V-/OF 78 0C 25/OF 80 0C 27/OF 80 0C 27/OF 78 0C 25/OF 78 0C 25
V-/OF 78 0C 25/OF 75 0C 24/
V PARIS/////OF 58 0C 14/
V FRANKFURT/OF 30 0C -1/OF 32 0C 0/OF 39 0C 4/OF 46 0C 7
V-/OF 55 0C 13
V-/OF 60 0C 15/OF 64 0C 18/OF 63 0C 17/OF 57 0C 14/OF 48 0C 9
V-/OF 38 0C 4
V-/OF 33 0C 1/
AV FRANKFORT

```

Test JCL: SVTA

```

//$PRFJ.SVTA JOB ($CCPT), 'SVTA', CLASS=$CLASSJ,
// MSGCLASS=$MSGCL
//*****
//* PACTABLES 3.5 *
//*****
//* --- TEST OF THE SVTA PROCEDURE --- *
//*****
// JCLLIB ORDER=($BIBP)
//SVTA EXEC BVPSVTA

```

Test JCL: RSTA

```

//$PRFJ.RSTA JOB ($CCPT), 'RSTA', CLASS=$CLASSJ,
// MSGCLASS=$MSGCL
//*****
//* PACTABLES 3.5 *
//*****
//* --- TEST OF THE RSTA PROCEDURE --- *
//*****
// JCLLIB ORDER=($BIBP)
//RSTA EXEC BVPRSTA

```

Test JCL: RETA

```

//$PRFJ.RETA JOB ($CCPT), 'REORG', CLASS=$CLASSJ,
// MSGCLASS=$MSGCL
//*****
//* PACTABLES 3.5 *
//*****
//* --- TEST OF THE RETA PROCEDURE --- *
//*****
// JCLLIB ORDER=($BIBP)
//RETA EXEC BVPRETA
*****SUPER
GACUSTOM03101985
GATEMPER

```

Test JCL: PMTA

```

//$PRFJ.PMTA JOB ($CCPT), 'PARAM.', CLASS=$CLASSJ,
// MSGCLASS=$MSGCL
//*****
//* PACTABLES 3.5 *
//*****
//* --- TEST OF THE PMTA PROCEDURE --- *
//*****

```

```

// JCLLIB ORDER=($BIBP)
//PMTA EXEC BVPPMTA
*****TASUPER
*****TJ000100//$PRFJ.PRTA JOB ($CCPT),'PRTA',CLASS=$CLASSJ,
*****TJ000200// MSGCLASS=$MSGCL
*****TJ000300//PRTA EXEC BVPPRTA
USER1 TAUSER1 2

```

Test JCL: EXTA

```

//$PRFJ.EXTA JOB ($CCPT),'EXTRACTION',CLASS=$CLASSJ,
// MSGCLASS=$MSGCL
//*****
//* PACTABLES 3.5 *
//*****
//* --- TEST OF THE EXTA PROCEDURE --- *
//*****
// JCLLIB ORDER=($BIBP)
//EXTA EXEC BVPEXTA
*****SUPER
ACUSTOM03101985
/*
//* EXTRACTED TRANSACTIONS FILE
//PTA160.PAC7NU DD DSN=---.---.---,DISP=SHR

```

Test JCL: TUTA

```

//$PRFJ.TUTA JOB ($CCPT),'EXPLOI.',CLASS=$CLASSJ,
// MSGCLASS=$MSGCL
//*****
//* PACTABLES 3.5 *
//*****
//* --- TEST OF THE TUTA PROCEDURE --- *
//*****
// JCLLIB ORDER=($BIBP)
//TUTA EXEC BVPTUTA
*****SUPER
ACUSTOM10311985
ATEMPER

```

Test JCL: TCTA

```

//$PRFJ.TCTA JOB ($CCPT),'TCTA',CLASS=$CLASSJ,
// MSGCLASS=$MSGCL
//*****
//* PACTABLES 3.5 *
//*****
//* --- TEST OF THE TCTA PROCEDURE --- *
//*****
// JCLLIB ORDER=($BIBP)
//TCTA EXEC BVPTCTA,SAVIN=---.---.---
//* (DEFAULT: SAVIN = GENERATION 0 OF TC'S DATA GROUP)
//* OUTPUT TC FILE (DEFAULT: GENERATION +1 OF DATA GROUP)
//PTATC2.PAC7TC DD DSN=---.---.---,DISP=SHR

```


Test JCL: CDT1 (DTM)

```
//$PRFJ.CDT1 JOB ($CCPT),'EXPLOI.',CLASS=$CLASSJ,
// MSGCLASS=$MSGCL
//*****
//* PACTABLES 3.5 *
//*****
//*          --- TEST OF THE CDT1 PROCEDURE --- *
//*****
// JCLLIB ORDER=($BIBP)
//CDT1     EXEC BVPCDT1,
//* TDMAST = 'MASTER' TABLE-DESCRIPTION FILE
//* TDSLAV = 'SLAVE' TABLE-DESCRIPTION FILE
//* XD     = EXTRACTED-DESCRIPTION FILE
// TDMAST=---.---.---,TDSLAV=---.---.---,XD=---.---.---
*****SUPER
ACUSTOM
ATEMPER
/*
```

Test JCL: CDT2 (DTM)

```
//$PRFJ.CDT2 JOB ($CCPT),'EXPLOI.',CLASS=$CLASSJ,
// MSGCLASS=$MSGCL
//*****
//* PACTABLES 3.5 *
//*****
//*          --- TEST OF THE CDT2 PROCEDURE --- *
//*****
// JCLLIB ORDER=($BIBP)
//CDT2     EXEC BVPCDT2,
//* TDSLAV = 'SLAVE' TABLE-DESCRIPTION FILE
//* TVSLAV = TABLES ASSOCIATED TO 'SLAVE' DESCRIPTION
//* XD     = FILE OF TABLE-DESCRIPTIONS EXTRACTED IN CDT1
// TDSLAV=---.---.---,TVSLAV=---.---.---,XD=---.---.---
```

Test JCL: CVTA (DTM)

```
//$PRFJ.CVTA JOB ($CCPT),'EXPLOI.',CLASS=$CLASSJ,
// MSGCLASS=$MSGCL
//*****
//* PACTABLES 3.5 *
//*****
//*          --- TEST OF THE CVTA PROCEDURE --- *
//*****
// JCLLIB ORDER=($BIBP)
//CVTA     EXEC BVPCVTA,
//* TD = TABLE-DESCRIPTION FILE
//* TV = FILE OF TABLES ASSOCIATED TO DESCRIPTIONS
// TD=---.---.---,
// TV=---.---.---
*****SUPER
SACUSTOM31101985    31101987
```

Pactables standard reinstallation

Pactables must be re-installed when a new version of the software comes out following corrections and enhancements.

To install this version, download the cartridge in the dedicated PDS by using SMP/E and execute the JCL supplied if it is necessary.

A sub-release, identified by a number is composed of:

- An installation cartridge (or tape),
- The "Program Directory for Pactables" specific to SMP/E,
- The list of corrected anomalies,
- Instructions -- possibly included -- to complete this chapter.

Generally, only system files and program libraries are impacted by this version.

In any case, load-modules are updated by SMP/E. They are copied in hlq.SBVPMBR8 and hlq.SBVPMTR8 PDS.

In case of JCL, procedure or SYSIN modification, execute the BVPMMJCL utility with the parameters provided at installation, and split the result file to re-install the JCLs as described in the Installation chapter.

In case of modification of ERROR MESSAGE AND DOCUMENTATION file execute the JCL TI3SFI.

Chapter 6. Pactables - RACF or TOPSECRET Interface

Introduction

Security systems provide a mechanism for data access control. They perform user identification and verification, and they check resource access authorizations.

These systems control security over the whole data processing installation and, as such, operate independently from the Pactables system. The Interface is designed to ensure control communication between the security systems and Pactables. The Security Interface performs the following tasks:

- On-line: automatic retrieval of the CICS or IMS SIGN-ON USERID, that is displayed on the sign-on screen of Pactables.
- In batch: for Pactables procedures including user input ('*' line) that are executed under TSO, it will be possible to leave the user code and the password blank.

In order to ensure compatibility with all security systems, Pactables is not directly connected with the security system, but with SAF (System Authorization Facility) via the RACROUTE macro-instructions for RACF or the TSS macro-instructions for TOPSECRET.

Installation

1. Class creation

Each Pactables Database must be identifiable to the security system. As a result, each database corresponds to a class. A class must be created within the Pactables function by the Pactables manager using the XX90 transaction, and:

- under RACF via the 'ICHERCDE' RACF macro.
- under TOPSECRET via the command:
TSS RESCLASS(cccc) RESCODE(xx), with
cccc = resource class,
xx = hexadecimal code which identifies the resource.

A class name is coded on four characters and must be identical in the security system and in Pactables.

2. Resource creation

The creation of resources is necessary only when these are going to be checked by the security system.

A class includes all the logical resources of a Pactables Database, i.e. all possible access authorizations for each table (down to the subschema, subsystem levels). These authorizations include the following data:

AUTHORIZATION + SUB-SCHEMA + SUB-SYSTEM + TABLE NUMBER

The authorization search is processed according to the order of these elements. If there are no sub-schema, sub-system and table number, blanks are replaced by '\$' signs. When a table is not assigned a specific authorization, the general access authorization is taken into account.

For RACF:

Resources are created via the 'RDEFINE' procedure.

For TOPSECRET, resources are created via the command:

```
TSS ADD (dept-name) cccc(nstable) cccc(nstable)... with
    dept-name = department name,
    n = sub-schema number,
    s = sub-system number,
    table = table code.
```

EXAMPLE:

The Pactables manager wishes to check all table authorizations on a given table:

| SUB-SCHEMA NUMBER | SUB-SYSTEM NUMBER | TABLE NUMBER |
|-------------------|-------------------|--------------|
| 1 | 3 | TABLE |

The search is performed in the following order:

| | | | |
|---|----|----|--------------|
| 1 | 1 | 3 | TABLE |
| 2 | \$ | 3 | TABLE |
| 3 | 1 | \$ | TABLE |
| 4 | \$ | \$ | TABLE |
| 5 | \$ | \$ | \$\$\$\$\$\$ |

Under RACF or TOPSECRET, the asterisk is a generic character. As a result, on the sites controlled by a security system, the PACTABLE manager's code is '\$\$\$\$\$\$\$'.

3. Defining users

Resource access authorizations are granted to individual end users :

- under RACF via the 'PERMIT' procedure.
- under TOPSECRET via the command:


```
TSS PERMIT (user-code) cccc(nstable), with
      cccc = resource class,
      n = sub-schema number,
      s = sub-system number,
      table = table code.
```

Resources and user codes not declared to the security system are consequently prohibited in PACTABLE operations.

Implementation of Pactables / RACF or TOPSECRET interface

- For RACF:

ON-LINE MODE REQUESTS

In on-line mode, a command allows you to execute a RACF request and to declare the user access authorizations to the resources ('EXEC QUERY SECURITY' in the BVPRACF control sub-program).

BATCH REQUESTS

Unlike the on-line mode, there is no command allowing the execution of a RACF request: therefore, it is necessary to execute the RACF request through the use of an assembler sub-program.

This sub-program BVPSECUR is supplied by SMP/E in the hlq.SBVPMBR8 PDS.

Moreover, you must install a SVC in the LPA library.

This installation includes the following steps:

1. Declaration of the SVC with the appropriate routine number.

Example for the 232 number: add, in SYS1.PARMLIB(IEASVC00), the SVC Parm 232, REPLACE, TYPE(3), EPNAME(IGC0023B) line, where IGC0023B is the name of the SVC load module.

2. Link of the BVPSECUR object module to create the name of the necessary load module.
3. Addition of this load module name in the system library of SVC load.
4. ZAP of the BVPSECB VA Pac module with the chosen SVC routine number.
5. After the LPA library update, you must execute an IPL CLPA to take the modifications into account.

The E10RACF example JCL, that is supplied with the installation JCLs, performs the steps 2 and 3, and the E11RACF JCL executes the step 4.

If the SVC is already installed in the VA Pacbase context, you just have to execute the E11RACF JCL.

Once these operations are performed, verify that the user has the required authorization to execute the procedures.

- For TOPSECRET

The sources of the sub-programs (assembler) for access to the TOPSECRET tables are supplied by SMP/E in the hlq.SBVPSRC PDS and must be compiled.

COMPILATION OF THE ACCESS SUB-PROGRAMS

For the compilation of BVPTSS and BVPTSSC, the OPMAT TSS library must be specified in the SYSLIB line of the Assembler compilation program.

BVPTSSC is a CICS program. It must be translated before its compilation and link-edit.

BVPTSSC and the TSSCAI program (Computer Associates) must be declared in the CICS CDS. They must be loaded in one of the DFHRPL's load-module library.

Operating mode

The addition of the Pactables / RACF or TOPSECRET requires a modification of the database parameters. The 'XX90' transaction where XX is the database root enables the database manager to update these parameters, specifying the security system type ('R' for RACF or 'S' for TOPSECRET), the Pactables database identification class, and two indicators:

- User authorization indicator:
For RACF, it specifies whether the user, connected on CICS or IMS for the on-line mode, or TSO for the batch mode, is allowed a Pactables connection under a user code other than his/hers. This indicator applies only when the security system is used.
For TOPSECRET, this indicator is forced because the user cannot log on with a user code other than his/hers.
- Resource indicator:
Access through Pactables or through the security system. This indicator applies only when the security system is used.

These indicators are used to distinguish the following methods of management: total and strict management or total and flexible management under a security system.

Total and strict management under a security system

Verification of users and table access is managed by the security interface, and a user can log on only with his/her own code.

1. Logging on in on-line mode: the PACTABLE SIGN-ON screen is initialized with the code under which the user logged on to CICS or IMS. This code is retrieved in the IO-PCB under IMS and by an EXEC CICS

ASSIGN USERID command under CICS (valid only from CICS release 1.7 on). Changing the user code is prohibited.

2. The password field is locked and cannot be filled in. The cursor is positioned on the library code.
3. RACF only: LJ and LE screens: since RACF does not carry over the user code and the CICS or IMS password, they must be inserted on the JOB card. Since the system does not pass on the password, the user must enter this on the LJ or LE screen (masked fields) when first submitting a JOB or SUB action.

A warning message is displayed if the field has not already been filled in. From release 1.9 of RACF, the password no longer needs to be filled in since a user can submit a job for another ('surrogate') user.

4. Batch procedures that include a '*' line: the user code and password are no longer required since the system automatically takes the code under which the user signed on to TSO. As a result, the PASSWORD is no longer present in the temporary files found in batch jobstreams.

For RACF only: another consequence is that jobstreams including steps with a '*' line can be linked together without manual intervention so that the password can be specified. This process implies a restriction: the user cannot code several '*' lines with user codes other than his/her own for procedures which would normally allow him/her to do so.

Note: with TOPSECRET, the user can never enter a code other than his/her own.

Total and flexible management under a security system

This management is possible with RACF only.

Verification of users and library access is managed by the security interface, but the user can log on with a code other than his/her own.

1. Logging on in on-line mode: identical to number 1 under 'TOTAL AND STRICT MANAGEMENT UNDER A SECURITY SYSTEM' above, but the field including the USER code is an input field, as is the PASSWORD field. The user can modify these two fields (password is required). In case of modification, the interface performs a test to validate the USER code, and the security system performs a test to validate the password.
2. LJ, LE screens: identical to number 3 under 'TOTAL AND STRICT MANAGEMENT UNDER A SECURITY SYSTEM' above. If the user entered the password on the logon screen, it does not have to be entered again.
3. Batch procedures that include a '*' line: just as in the case of on-line processing when the user code is different from the one under TSO, the password has to be filled in. This makes it possible to submit jobs with several '*' lines having different user codes.

Temporary files do not include the password, which means that it is not possible to link together steps having a '*' line. The password has to be entered each time.

Nevertheless, if the USER code is identical to the one under TSO, verification of users and library access is managed as described in number 4 under 'TOTAL AND STRICT MANAGEMENT UNDER A SECURITY SYSTEM' above.

Field TYPE of transaction XX90 has therefore one of two values: "blank" or "P". "P" stands for the resource verification by PACTABLE and not by the security system.

Field BLOC has one of two values: "blank" or "N". "N" specifies that the user cannot use a password other than his/her own.

Error management (RACF only)

If the RACF system detects an error when a user logs on, a VA Pac error message is displayed. This message is completed by a return code that includes a RACF return code and the error type.

The security administrator should be informed of the general return code so that the problem can be resolved accordingly.

There are five error types:

'T': Error on user code

REQUEST=VERIFY RACROUTE macro-instruction (checks the user code with password).

'L': Unauthorized library access

REQUEST=LIST, ENVIR=CREATE RACROUTE macro-instruction (used to create a back-up copy of all resource profiles for the class in question).

'C': Unauthorized library access

REQUEST=FASTAUTH RACROUTE macro-instruction (checks the access authorization in relation to a given resource).

'D': Unauthorized library access

REQUEST=LIST, ENVIR=DELETE RACROUTE macro-instruction (used to delete the back-up copy created by ENVIR=CREATE).

'P': Blank password.



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