VisualAge Pacbase 2.5

PACTABLES 2.5 – INTEL WINDOWS/NT OPERATIONS MANUAL

DETNT000251A

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1. FOREWORD

FOREWORD

The purpose of this manual is to provide the reader with information related to the installation and operation of Pactables 2.5.

HOW TO USE THIS MANUAL FOR SYSTEM INSTALLATION

If a previous Pactables Release is already installed on the site:

. The 2.5 Release is different from any former Pactables Release regarding installation parameters. The test case provided on the installation tape must be executed.

. Once the installation is complete, read the chapter about the retrieval and follow the instructions carefully in order to ensure a thorough compatibility of existing data from the former release.

2. PACTABLES COMPONENTS

2.1. INTRODUCTION

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:

The installation of the Pactables function is quite independent of that of 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 2.5 Operations Manual.

Options of the Pactables function are coded as follows:

. Dispatched Table Management : DTM

. Security System Interface : SEC (only with IBM MVS)

2.2. ON-LINE PROGRAMS

On-line PROGRAMS

length : about 2,3 Mega-bytes.

PROGRAM CODE	OPERATION AND MEANING
D8T500	Access, FT or 'clear': initial screen
D8T510	C1 : mono-item consultation and CR, MO, AN update
D8T512	C1 : mono-item consultation and CR, MO, AN update for Rel. 2
D8T520	C : multi-item consultation and AN for deletion
D8T522	C : multi-item consultation and AN for deletion for Rel. 2
D8T530	LT : list of tables
D8T540	LS : list of sub-schemas/sub-systems
D8T550	LD : list of documentation
D8T560	C3 : consultation of an archived item
D8T570	'HELP' screen
D8T580	LH : list of historical accounts
D8T590	LJ, LE : print requests
D8T599	System error display
D8T600	Password and parameters update
D8T610	User code update
D8T620	Access authorization update
PTA800	Optimized access funtion
PTA802	Optimized access funtion
PTA900	Generalized access function
PTA902	Generalized access function
D8FT00	Tables extraction (TUF-TP FACILITY)
D8FT90	User Interface (TUF-TP FACILITY)

TAJOB	On-line requests
TAROO	On-line server and PARM
ADMIN	Administrator of the on-line server
MONITOR	On-line server monitor

IMPORTANT

Two additional programs (P512 and P522) have been supplied since Pactables Release 2.0.

During updates, the P510 and P520 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.

After Release 2.0, if the user check routines are generated with the century management option, the two new programs (P512 and P522) must be renamed and used instead of P510 and P520.

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

2.3. BATCH PROGRAMS

BATCH PROGRAMS

length: about 2,3 Mega-bytes.

CODE	PROC.	OPT.	SIGNIFICANCE
PTAINI	INTA		File Initialization
PTARSD	RSTA		TD file restoration
PTARSV	-		TV file restoration
PTARSG	-		TG file restoration
PTAR20	RTTA		Pactables retrieval 8.2, 1.2 -> 2.0
PTASVD	SVTA		TD file backup
PTASVV	-		TV file bcakup
PTASVG	-		TG file backup
PTAU80	TUTA		Direct consulation of tables
PTA100	PMTA		Parameter update
PTA120	-		- -
PTA150	EXTA		Table extraction
PTA160	-		- - -
PTA250	GETT		Table generation
PTA290	-		- - - / Lists
-	LDTA		- - - / Lists
PTA300	UPTA		Table updating
PTA302	-		
PTA310	IMTA		Table import
PTA312	-		
PTA320	PRTA		Table printing
PTA350	UPTA		
-	IMTA		
-	PRTA		
PTA360	UPTA		
-	IMTA		
-	PRTA		
PTA400	RETA		Re-organizing tables
PTA410	-		- -
PTA420	-		- -
PTA430	-		
PTAD05	CDT1	DTM	Table description comparison
PTAD10	-	DTM	- - - -
PTAD20	CDT2	DTM	- - - -
PTAV10	CVTA	DTM	Table data comparison

PTAV20	-	DTM	- - - - - -
PTATCD	TCTA		Central site database retrieval
PTATCG	-		- - - - - -
PTATCV	-		- - - - - -
PTATC1	-		- - - - - -
PTATC2	-		- - - - - -
PACSEP	UPTA		Report separator sub-program
-	PRTA		
TAB00			Batch server monitor
SHUTBAT			Batch server shutdown
PURTAB00			Purge of jobs

IMPORTANT NOTE:

Two other programs (PTA302 and PTA312) have been supplied since release 2.0.

During updates, the PTA302 and PTA312 programs may call the user check routines in order to perform additional checks. The default generation option of these routines is 'without century management'.

After release 2.0, if the user check routines are generated with the century-management option, the two new programs, PTA302 and PTA312, must be renamed and used respectively in the UPTA and IMTA procedures instead of the PTA300 and PTA310 programs.
In all cases, ALL the user check routines should be generated with the same century-management option.

2.4. MACRO-STRUCTURES OF TUF-TP FACILITY

MACRO-STRUCTURES OF TUF-TP FACILITY

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
AATUFX	List of items

These macro-structures are used in user on-line application programs using the TUF-TP facility.
They are used to add the description of communication areas which are necessary to the call of xxFT90 sub-program in the TUF-TP facility.

These Macro-structures are supplied as VA Pac update transactions in the 'Method' sub-directory, under the Pactables installation directory. They must be loaded in the VA Pac library used for the development of user transactions by taking the transactions of VA Pac UPDT procedure in input.

2.5. SYSTEM FILES

SYSTEM FILES

They represent the system itself. They are not subjected to daily handling and must be re-loaded if the system has to be re-installed. They are constituted of:

. Batch and on-line executable programs

(installed in the 'Release' Batch PGM and TP PGM directories).

. a file containing the error messages and the automatic documentation of the Pactables function : TE

```
.Size          : about 900 records
                 : about 1,2 Mega-bytes
.Organization  : Indexed
.Length        : 90
.Key           : 17 (position 1)
.Utilization   : Batch / on-line
.Localization  : \BASES 'Release' directory
.Internal name: PAC7TE
```

2.6. EVOLVING FILES

EVOLVING FILES

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

The first two make up the actual Pactables files:

```
The Table Description file (TD)    . Organization : Indexed
    . Length       : 240
    . Key          : 19 (position 1)
    . Utilization  : Batch/on-line
    . Location     : with VA Pac Specifications Database
    . Internal name: PAC7TD
```

```
The Table Contents file (TV)   . Organization  : Indexed
    . Length       : 80 to 1100
    . Key          : 33 (position 5)
    . Utilization  : Batch/on-line
    . Location     : 'Release'\BASE\'db_name'
    . Internal name: PAC7TV
```

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

```
The user parameters file (TG)    . Organization : Indexed
    . Length       : 85
    . Key          : 22 (position 1)
    . Utilization  : Batch/on-line
    . Location     : 'Release'\BASE\'db_name'
    . Internal name: PAC7TG
```

The TG file includes the user codes and the corresponding access authorizations.

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

```
The backup file (TC)    . Organization : Sequential
    . Length       : 1,061
    . Utilization  : Batch/on-line
    . Location     : 'Release'\SAVE\'db_name'
    . Internal name: PAC7TC
```

The TC backup management

The TC sequential backup is used in input/output of batch procedures. This file is thus created and used under two different names : TC when used in input and TC.NEW when created by the procedure.

Each procedure that creates TC.NEW calls the TCBACKUP.CMD command file, at the end of each successful execution. This file is located under the 'Release'\SAVE\'db_name'. By default, it performs a shift on two copies: TC is renamed as TC-1, TC.NEW as TC, and TC.NEW is deleted.

The user will modify the TCBACKUP.CMD file if he/she wants to adapt this standard management to his/her operations constraints.

Note on the location of the TD file:

. Sites where VisualAge Pacbase and Pactables are both installed.

The TD file is preferably located with the VA Pac Specifications Dictionary. The VA Pac and Pactables installation procedures assign the TD file in this directory, via the PAC7TD.CMD files (located under the VA Pac and Pactables ASSIGN directories).

The users who want to move the TD file will have to modify the two PAC7TD.CMD files.

. Sites where only Pactables is installed.

The TD file will be located with the other Pactables Database files.

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

2.7. USER ACCESS FACILITIES

USER ACCESS FACILITIES

Some sub-programs enable user applications to access Pactables:

CODE	MEANING
PTA800	Optimized acess function
PTA802	Generalized access function
PTA900	Generalized access function
PTA902	Optimized access function
PTARSD	Restoration of table descriptions
PTARSV	Restoration of table contents
D8FT00	TUF facility
D8FT90	TUF facility

These programs are available in two forms:

. '.DLL' compiled in the Pactables Windows/NT environment which can be executed with the same Micro Focus Run-Time

They are installed in the on-line programs directory.

. SOURCE COBOL (.CBL) files, which can be compiled and used in a Micro Focus environment different from that of Pactables. They are installed in the DATA COBOL directory on the CDROM.

These sub-programs can be used in Batch or on-line user applications.

2.8. EXECUTION OF USER APPLICATIONS

EXECUTION OF USER APPLICATIONS

The user may want to execute applications in a Micro Focus environment different from Windows/NT Pactables : either on MS-DOS, or on Windows/NT but with a version different from that of his/her Micro Focus compiler; one which is incompatible with the Pactables function's version.

In that case, the user must create his/her own execution environment, comprising:

. user access facilities (refer to previous subchapter),

. Pactables TD and TV files used in the applications and which must be created:

- from the TC backup containing only the TD and TV files (refer to the 'INTRODUCTION' to the SVTA procedure)

- with the help of the TV and TD files loading procedure, which calls up the PTARSD and PTARSV programs compiled and linked in the user Micro Focus environment.

TD and TV files loading procedure

Create a command file (.BAT on MS-DOS or .CMD on OS/2) as explained in the 'INTRODUCTION' to the RSTA PROCEDURE.

TD and TV files loading procedure

The installation CD-ROM contains, in the DATA COBOL directory the COBOL SOURCE files of PTARSD and PTARSV programs.

3. ENVIRONMENT

3.1. INTRODUCTION

INTRODUCTION

The purpose of this chapter is to define the environment and the resources required to run Pactables on a Local Network of PCs. It presents the different parts of Pactables (on-line and batch servers, workstations, file servers) with their components, their structure and their operation mode.

3.2. ARCHITECTURES

ARCHITECTURES

Each workstation communicates with an on-line server to access a Pactables database. An on-line server can manage an unlimited number of workstations. However, for performance reasons, it is advisable to limit this number (30 maximum).

It is possible to install several on-line servers on only one workstation or on several different ones.

Each workstation communicates with one or several batch servers (via its on-line server) to execute print commands generally submitted on line (from the 'LE' screen).

The installation of several batch servers on only one workstation or on several different ones being possible, different configurations may be chosen, depending on the number of workstations to be installed.

In any case, each Pactables server (on-line or batch) should access the Pactables database as well as the Table description TD file (with VisualAge Pacbase database).

The architecture of Pactables being strictly identical to that of VisualAge Pacbase, the user is invited to refer to the VisualAge Pacbase ENVIRONMENT and INSTALLATION Manual, chapter ENVIRONMENT', subchapter 'Architectures', for a detailed description of the different possible configurations.

OPERATION PRINCIPLE

Communication must be established with the on-line server when workstations are used.
The communication mode adopted between an on-line server and its workstations is a 'process to process' dialog, where all the exchanges of information are made through the 'Windows Socket' interface of the TCP/IP network protocol.

When a workstation submits a print-generation request, the on-line server converses with the workstation in the usual way and transmits the print-generation requests to the batch server via a couple of communication files.

When all the on-line and batch servers are on the same machine, the communication files between them do not have to be shared on the same Local Network.

The batch server creates results files of the requests made on workstations on a disk unit specified during the installation of VisualAge Pacbase. The workstations should then be able to access these files via the Local Network or via any other file transfer software.

The batch and on-line operation is detailed in the following subchapters.

3.3. FILE SERVER

FILE SERVER

The 'System' and 'User' files of the Pactables database (as well as the TD file) must be accessible from the different Pactables servers.

If servers are installed on different machines, the database files must be installed on the file Server.

Note

The communication process between the workstations and the servers is identical for both VisualAge Pacbase and Pactables, as well as the process of the file communication coding. However, the file name extensions are different in order to avoid problems in case VisualAge Pacbase and Pactables are installed under the same directories.

3.4. WORKSTATIONS

WORKSTATIONS

The Pactables user environment is constituted of workstations equipped with Windows from release 3.1 and higher releases, including Windows 95 and Windows NT, and connected to the Local Area Network.

Each workstation communicates with an on-line server which controls the executions of programs and the access to the Pactables Database and also transmits to the batch server the printing requests submitted from the workstations.

The user workstation is a dumb terminal-type workstation (PACLINK.EXE).

To carry out communication with the on-line server, the TCP/IP software must be installed on each workstation.

The Pactables print output files can be accessed, either by the sharing of the server USERS directory, or via a file transfer software (e.g. FTP).

3.5. ON-LINE SERVERS

ON-LINE SERVERS

The Pactables on-line server is managed by the TAR00.EXE program.

Each on-line server executes the transactional programs used to access the Pactables Database.

The 'Windows socket' interface offers a synchronous communication between the on-line server and its workstations. In order to establish a 'socket'connection, each workstation must know the network name (hostname) of the Windows/NT computer hosting the on-line server, and the 'socket' number assigned to the on-line server.

An on-line server can be installed on the same computer as the batch server started up from another session.

More than one on-line servern*dofbe installed on one or more computers.

An on-line server runs in text mode in a system window which displays information on each connected workstation: user code, executed program and execution time.

Workstations purge

Workstations can be purged via the STATION menu of the on-line server during a work session.

For more details, refer to Chapter 'MONITOR START-UP', Subchapter 'ON-LINE SERVER START-UP'.

3.6. BATCH SERVERS

BATCH SERVERS

Batch servers process the generation-print commands submitted from the Pactables LE screen. A batch monitor (TAB00.EXE) processes these commands and automatically runs the PRTA procedure.

The Batch server(s) communicates with the on-line server(s) through the 'db_name.TLB' and 'db_name.TBD' files.

The TABOO monitor must be able to update these files on the file server.

Batch operation is based upon the exchange of messages between the on-line and the batch servers via a 'mailbox' system.

The on-line server collects, in the TLB file, the requests submitted from the worstations' LE screens.

The TAB00 monitor reads the TLB file in cycle.

The TBD file, pointed to by TLB, contains the generation-print commands.

PRTA outputs a file for each print type. These files are created under the USERS directory of the common volume (refer to Chapter 'INSTALLATION', subchapter 'DESCRIPTION OF CREATED DIRECTORIES').

The batch server screen displays the submitted requests which have already been processed and those still being processed. Each request is serialized and processed sequentially by the batch server.

More than one batch server can be installed to process the generation-print requests of a Pactables Database. In this case, these batch servers have the same name ('db_name' by default), communicate with the on-line server(s) via the same TLB and TBD files, and share the execution of the generation-print requests.

Job purge

When the server is started up, the jobs successfully executed are automatically purged. The batch server menu allows to purge either a selected job or all the jobs. The PURTAB00.EXE program is used to explicitly purge all jobs.

For more details, refer to the PROCTBAT procedure in subchapter 'BATCH SERVER START-UP', Chapter 'MONITOR START-UP'.

3.7. USER PARAMETER TRANSACTIONS

USER PARAMETERS TRANSACTION

The TAPA transaction allows the Pactables Database administrator to update user codes and passwords in on-line mode.

At installation, in the Pactables group, an icon for the monitor start-up and another for the PACLINK administrator are created.

To connect to the TAPA transaction, start up the on-line server and then click on the PACLINK administrator icon. You can also connect to it from a remote workstation via PACLINK. For more details on the installation of PACLINK on a remote workstation, see chapters INSTALLATION (subchapter 'INSTALLATION OF PACLINK-EMULATED WORKSTATIONS') and MONITOR START-UP (subchapter 'PACLINK-EMULATED WORKSTATION START-UP').

4. MONITOR START-UP

4.1. MONITOR START-UP FROM A WINDOW

MONITOR START-UP FROM A WINDOW

Pactables servers start-up procedures (on-line/batch servers) as well as the batch procedures which are most often used can be activated from a Windows/NT window. These procedures require a number of parameters.

The installation procedure allows to create a 'Group of programs' specific to each installed Pactables database. This 'Group' contains the icons required to start up the servers, dumb terminal-type workstations connecting to these servers as well as the on-line server monitor.

If you want to create icons manually, you must specify, in the 'command line' of the program definition, the name of the procedure to execute, followed by all the parameters required to start it (see the following subchapters for the description of parameters).

Example :
C:\PACTABLE\TP\PROC\PROCTATP.CMD C C C \PACTABLE TEST TP1 10 7000
(start-up of server named TP1 on the TEST database)

To start up a procedure, specify, on the 'command line' of the program definition, the complete path and the name of TAPR"db_name".CMD file, followed by the procedure to execute (see chapter SUBMISSION OF PROCEDURES for more details).

```
Example :
C:\PACTABLE\BATCH\PROC\TAPRTEST.CMD UPTA
(start-up of the UPTA procedure on TEST database)
```

4.2. PACLINK-EMULATED WORKSTATION START-UP

PACLINK-EMULATED WORKSTATION START-UP (PACLINK)

To start Paclink under Windows, click on the PACLINK Administrator icon to access the user parameter transaction (TABPARM) or on the PACLINK developer icon to access the Pactables Server. These two icons are created at installation, in the group of programs of the Pactables server.

REMINDER

1. To customize the communication between the dumb terminal (Paclink) and the on-line server, just modify the parameters contained in the GSWINNT.PRM and PACLINK.PRM files created at installation. For more details, see Chapter INSTALLATION, subchapter 'Installation of Paclink-emulated Workstations'.

2. The user must have access to the 'Release'\USERS directory used by the batch server to create the result files of the print-generation requests submitted on-line from the LE screen.

EXECUTION CONDITION

The 'hosts' file (located in the WINDOWS directory or WINNT\System32\driver\etc) must have been updated to indicate the address of the computer on which the on-line server runs. This modification is required only if the connection between the 'dumb'terminal and the server is made via the symbolic name of the computer running the server; otherwise, the IP address of the Pactables on-line server is sufficient.

The Pactables on-line server must be active to carry out the communication.

NOTE ON THE USE OF THE WINDOWS 'DUMB TERMINAL'

The dumb terminal-type user workstation under Windows (Paclink-emulated) uses the GSTCPIP.EXE and PACLINK.EXE programs..
Refer to the COMMUNICATIONS MANAGER AND PACLINK UTILITY Manual for more details on the operating mode of this workstation.

4.3. TATP : ON-LINE SERVER START-UP

ON-LINE MONITOR START-UP

Located under the on-line procedures directory, the PROCTATP procedure is used to start up the on-line monitor on a Pactables server. At installation, an icon named 'On-line Server' is created and then used to activate this procedure.

It includes the following parameters:

```
        1 : Pactables programs volume,

        2 : database volume,

        3 : batch server communication files volume,

        4 : release = tree root for each volume
            (with an antislash)

        5 : Pactables Database name,

        6 : on-line server's name,

        7 : number of workstations,

        8 : TCP port number for the communication with
            workstations via the socket interface;
            this number must correspond to the number
            defined in the 'Services' file for this server

  Example :  PROCTATP  C  T  \TABLE  TEST  TEST  12 6000
```

The procedure assigns the Database and communication files and then starts up the execution of the TAR00.EXE monitor program.

ON-LINE SERVER

The server runs in a MS-DOS session. The on-line server monitor (icon created at installation) can be executed only only after the on-line server start-up. It is used to run the server: shutdown of the server, purge of the connected workstations and display of information in real time on the workstations. For each workstation, the following information is displayed: the workstation number, the IP address, the application and the executed program, with its loading date and time.

The STOPTATP, INFOTATP and PURGTATP procedures are used to run the on-line server without its monitor. They are described in the chapter below.

STOPTATP.CMD is used to stop the on-line server.

INFOTATP.CMD is used to get the list of the connected workstations at a certain moment, as well as the associated information.

PURGTATP.CMD is used to purge a workstation when it is abnormally disconnected (e.g after a disconnection following a reboot).

ACTIVATION OF THE 'DEBUG' MODE ON THE ON-LINE SERVER

When the on-line server does not run correctly (system 'abend' for example), IBM may ask for the activation of a DEBUG mode on the server in order to find the origin of the problem.

The DEBUG mode is indicated in the start-up file of the server, by positioning a DEBUG variable to the value YES (SET SERVER_DEBUG=NO by default).

The activation of this mode triggers the display of traces in the on-line server start-up window. These messages must be saved in a file if to be kept.

INFOTATP : LIST OF CONNECTED WORKSTATIONS

The INFOTATP.CMD procedure located under the list of on-line procedures ('Release'\TP\PROC), allows to display the list of the workstations connected the on-line server. This procedure can be submitted from the Pactables server or from a workstation. An icon used to start up the INFOTATP procedure is created at installation on the Pactables server.

The procedure displays the number of workstations connected and then the list. Each connected workstation bears a number. This number must be set as the last parameter in the PURGTATP procedure if a workstation has to be purged.

INFOTATP gives, for each connected workstation, the user's IP address as well as the name of the last program executed.

SUBMISSION OF THE INFOTATP PROCEDURE

```
        1 : volume of programs and on-line procedures

        2 : release (avec \)

        3 : Name of station associated with the IP address

        4 : nb of TCP port

Examples:


Submitting from the host server :
        INFOTATP C \PACTABLE localhost 7000

Submitting from a workstation :
        INFOTATP C \PACTABLE pc924 7000
```

PURGTATP : PURGE OF A WORKSTATION IN SESSION

The PURGTATP.CMD procedure located under the on-line procedures directory ('release'\TP\PROC), is used to purge workstation in session. This procedure can be submitted from the host server or from a workstation.

SUBMISSION OF THE PURGTATP PROCEDURE

```
        1 : volume of programs and on-line procedures

        2 : release (avec \)

        3 : Name of station connected to the IP address

        4 : nb of TCP port

        5 : nb of workstation to be purged (see INFOTATP)

Examples:


Submitting from the host server :
        PURGTATP C \PACTABLE localhost 7000 1

Submitting from a workstation :
        PURGTATP C \PACTABLE pc924 7000 1
```

STOPTATP : ON-LINE SERVER SHUTDOWN

The STOPTATP.CMD procedure located under the on-line procedures directory ('Release'\TP\PROC) is used to shutdown on-line server started up under Windows/NT.

This procedure can be submitted from the Windows/NT host server or from a Windows 95 or NT workstation.

At installation, an icon named 'On-line Server Shutdown' is created , allowing to activate this procedure.

SUBMISSION OF THE STOPTATP PROCEDURE

```
        1 : volume of on-line programs and procedures

        2 : Release (with \),

        3 : Name of station associated with the IP address

        4 : nb of TCP port.

  Examples:

  Submission from the host server:

  Example : STOPTATP  C  \TABLE  TEST 1515

  Submission from a workstation:
        STOPTATP C \PACTABLE pc924 7000
```

MULTIPLE ON-LINE SERVERS

Several on-line servers can be activated on one same machine or on different ones, and access a Pactables Database or different Databases.

It is important that each on-line server has a specific socket number.

4.4. TATP : ON-LINE SERVER EXECUTION JCL

```
ECHO OFF
CLS
REM Checking parameters
IF P%8 == P  GOTO ERR
ECHO ********************************************************
ECHO               Pactables :  ON-LINE SERVER START-UP
ECHO     Volume  (programs)            : %1
ECHO     Volume  (database)            : %2
ECHO     Volume  (communication)       : %3
ECHO     Release (with \)              : %4
ECHO     Database name                 : %5
ECHO     Server name                   : %6
ECHO     Number of work stations       : %7
ECHO     TCP Port Number               : %8
ECHO ********************************************************
CALL %1:%4\BATCH\PROC\MSGPAUSE
ECHO ********************************************************
ECHO * Database file assignments
ECHO ********************************************************
ECHO CALL %1:%4\ASSIGN\%5\PAC7TD.CMD
ECHO CALL %1:%4\ASSIGN\%5\PAC7TE.CMD
ECHO CALL %1:%4\ASSIGN\%5\PAC7TV.CMD
ECHO CALL %1:%4\ASSIGN\%5\PAC7TG.CMD
CALL %1:%4\BATCH\PROC\MSGPAUSE.CMD
CALL %1:%4\ASSIGN\%5\PAC7TD.CMD
CALL %1:%4\ASSIGN\%5\PAC7TE.CMD
CALL %1:%4\ASSIGN\%5\PAC7TV.CMD
CALL %1:%4\ASSIGN\%5\PAC7TG.CMD
ECHO SERVER_DIR=%3:%4\COMMUN
ECHO SAVESCR=%1:%4\BASES\%5\HELP
CALL %1:%4\BATCH\PROC\MSGPAUSE
SET SERVER_DIR=%3:%4\COMMUN
SET SAVESCR=%1:%4\BASES\%5\HELP
ECHO ********************************************************
ECHO *  SERVER NAME
ECHO ********************************************************
ECHO SERVER_NAME=%6
CALL %1:%4\BATCH\PROC\MSGPAUSE.CMD
SET  SERVER_NAME=%6
ECHO ********************************************************
ECHO * NUMBER OF WORK STATIONS
ECHO ********************************************************
ECHO SERVER_MAXSTATIONS=%7
CALL %1:%4\BATCH\PROC\MSGPAUSE.CMD
SET  SERVER_MAXSTATIONS=%7
ECHO ********************************************************
ECHO * TCP Port number assignment
ECHO ********************************************************
ECHO SERVER_SOCKET=%8
CALL %1:%4\BATCH\PROC\MSGPAUSE.CMD
SET  SERVER_SOCKET=%8
ECHO ********************************************************
ECHO * Batch communication file assignments
ECHO ********************************************************
ECHO SET PAC7BD=%3:%4\COMMUN\%5.TBD
ECHO SET PAC7LB=%3:%4\COMMUN\%5.TLB
CALL %1:%4\BATCH\PROC\MSGPAUSE.CMD
SET PAC7BD=%3:%4\COMMUN\%5.TBD
SET PAC7LB=%3:%4\COMMUN\%5.TLB
ECHO ********************************************************
ECHO * WHERE IS INSTALL THE SERVEUR
ECHO ********************************************************
ECHO SERVER_APPLI=%1:%4\ASSIGN\%5\APPLI
CALL %1:%4\BATCH\PROC\MSGPAUSE.CMD
SET  SERVER_APPLI=%1:%4\ASSIGN\%5\APPLI
ECHO ********************************************************
ECHO * 'DEBUG' mode assignment
ECHO ********************************************************
```

```
ECHO SERVER_DEBUG=NO
ECHO DEBUGDIR=%1:%4\TP\PROC
CALL %1:%4\BATCH\PROC\MSGPAUSE.CMD
SET  SERVER_DEBUG=NO
SET  DEBUGDIR=%1:%4\TP\PROC
ECHO ******************************************************
ECHO * On-line server start-up
ECHO ******************************************************
CALL %1:%4\BATCH\PROC\MSGPAUSE.CMD
%1:%4\TP\PGM\TAR00.EXE
GOTO END
:ERR
CLS
ECHO Erroneous Start-up parameter(s)
ECHO ******************************************************
ECHO    Parameter 1 : Volume  (programs)           %1
ECHO    Parameter 2 : Volume  (database)           %2
ECHO    Parameter 3 : Volume  (communication)      %3
ECHO    Parameter 4 : Release (with \)             %4
ECHO    Parameter 5 : Database name                %5
ECHO    Parameter 6 : Server name                  %6
ECHO    Parameter 7 : Number of work stations      %7
ECHO    Parameter 8 : TCP Port number              %8
ECHO ******************************************************
PAUSE
:END
ECHO ON
```

4.5. TAPA : PARAMETERS TRANSACTION START-UP

START-UP OF USER PARAMETERS TRANSACTION

The connection to the user parameters management application (TABPARM) is carried out through a dialog between the on-line server and Paclink administrator.

At installation, a 'Paclink administrator' icon is created in the Pactables server program group.

EXECUTION CONDITION

The Pactables on-line server must be active.

4.6. TBAT : BATCH SERVER START-UP

BATCH MONITOR START-UP

The batch server is used to process print commands submitted on-line, in an interactive mode, from the 'LE' screen. The PROCTBAT.CMD procedure (located under the batch procedures directory) allows to start-up a batch server on a Pactables server. An icon, in the installation program group of Pactables, allows to activate this procedure.

The PROCTBAT procedure requires five parameters :

```
        1 : Pactables programs volume,

        2 : Communication files volume,

        3 : Release = tree structure root for each
                      volume (with \),

        4 : Pactables Database name,

        5 : Complete location of temporary files.

  Example : PROCTBAT  C  T  \TABLE  TEST  C:\TMP
```

The PROCTBAT procedure assigns the Pactables Database files, the communication files, the ME temporary file, the TPARAM file used internally by the server and the SYSOUT (USERS directory) on a batch server,and then starts up the execution of the batch monitor (TAB00).

Notes

The batch server's name is that of the Database on which it operates (see paragraph 'MULTIPLE BATCH SERVERS').

EXECUTION CONDITION

Print requests are submitted to the on-line server which transfers them to the batch server. The on-line server must be active then.
Pactables users must be able to access the result files generated by the batch server.

ABNORMAL EXECUTION : DEBUG MODE

When the batch server does not operate correctly, IBM can ask for the activation of a DEBUG mode on the server in order to find the origin of the problem.

The DEBUG mode can be activated in the start-up command file of the batch server, by setting the DEBUG variable to YES (SET DEBUG=NO by default).

The activation of this mode creates a BAxxxx.SPY file, where xxxx is the processing number, located under the directory assigned by the DEBUGDIR variable (SET DEBUGDIR='Release'\BATCH\PROC by default).

BATCH SERVER SCREEN

The batch server screen displays the list and status of these requests. For each job, it displays:

- the job number
- the Pactables user's code,
- the workstation number,
- the time and date of job submission,
- the starting time of the request processing,
- the ending time of the request processing,
- the execution time in seconds.

The Server menu allows :
- to stop the batch server,
- to purge all the jobs.

The Job menu allows :
- to purge one job.

JOB PURGE

On starting up, the monitor displays all the jobs executed or submitted if any. The server allows two types of purge.
- a complete purge which corresponds to an initialization of the TLB and TBD files on the number of the last generation;
- a selective purge which allows to inhibit the display of a job which was executed or to cancel the generation of a job which is being submitted.

The complete purge : in the 'Server' menu, select the 'Server purge' option.

The selective purge : Select the line in the window and click on the 'Job purge' option of the 'Job' menu.

Note : to deactivate a line, click on it.

MULTIPLE BATCH SERVERS

The batch server name is parameterized with the Database name. The batch communication files are thus prefixed by the Database name ('db_name'.TLB and 'db_name'.TBD).

To process the print requests on a Pactables Database, more than one batch servers can be started up. These servers will share the same TLB and TBD files and thus, will also share the processing of the requests.

In case of several Databases, one or more batch servers can be activated on each Database without modifying the batch server start-up procedure.

To start up a new batch server, duplicate the batch server start-up icon created in the Pactables program 'Group' and then activate it.

REQUESTS OUTPUT

When a workstation submits a request from the 'LE' screen, the following information is displayed:

```
SUBMITTED JOB - NUMBER : nnnnn
```

The files created by the PRTA procedure are inserted in the 'user_code' subdirectory under the 'USERS' directory. Their code is composed of the job number followed by the type of the generated file, and is coded as follows:

```
INP = print requests report,
STA = print statistics,
TAB = tables print.
```

```
Ex. : under T:\TABLE\USERS\JOHN, will appear    00055.INP
                                                00055.STA
                                                00055.TAB
```

OUTPUT FILES PROCESSING

The PLBTAGP variable is used to call the TABAGP.CMD command file after the printing. The call of this file allows to automate the processing of certain tasks whose nature varies depending on the environment.

An example of TABAGP.CMD file is delivered on installation under the 'Release'\BATCH\PROC directory. This file must of course be modified in order to take into account each site specifics. In the delivered example, some comments explain in particular the parameters passed on to this command file by the batch server and which can then be used to process the output files.

The TABAGP.CMD file is assigned by default under the 'Release'\BATCH\PROC directory via the PROCDIR variable (located in the batch server start-up file). If the user wishes to move the TABAGP.CMD file under another directory, he/she must then modify the value of the PROCDIR variable in the PROCBAT file, in the 'Release'\BATCH\PROC directory.

4.7. TBAT : BATCH SERVER PARAMETERS

BATCH SERVER PARAMETERS

Several environment variables, located in the batch server start-up file, allow to activate different functions. These variables must be positioned in the PROCTBAT procedure by modifying the ECHO and SET type lines corresponding to the variable to be positioned.

Intermediary work files : PLBTDEL

The PLBTDEL variable allows the automatic deletion of work files used by the PRTA print procedure. The possible values are YES (deletion) or NO (no deletion).

Default value: YES

Call of TABAGP.CMD file : PLBTAGP

When it is set to the value YES, the PLBTAGP variable allows to call the TABAGP.CMD command file after the generation-prints. The call of this file allows to automate the processing of certain tasks whose nature varies depending on the environment. The TABAGP.CMD is awaited under the directory assigned by the PROCDIR variable.

Default value: NO

For more details, refer to paragraph 'OUTPUT FILES PROCESSING' in this Chapter.

4.8. TBAT : EXECUTION JCL

```
ECHO OFF
CLS
REM Checking parameters
IF P%5 == P  GOTO ERR
REM Parameters are OK
ECHO .
ECHO .
ECHO ********************************************************
ECHO                 Pactables : BATCH SERVER START-UP
ECHO .
ECHO     Volume  (programs)  : %1
ECHO     Volume  (common)    : %2
ECHO     Release (with \)    : %3
ECHO     Database name       : %4
ECHO     Temporary files     : %5
ECHO ********************************************************
ECHO .
CALL %1:%3\BATCH\PROC\MSGPAUSE.CMD
ECHO ********************************************************
ECHO * Database file assignments
ECHO ********************************************************
ECHO CALL %1:%3\ASSIGN\%4\PAC7TE.CMD
ECHO CALL %1:%3\ASSIGN\%4\PAC7TD.CMD
ECHO CALL %1:%3\ASSIGN\%4\PAC7TV.CMD
ECHO CALL %1:%3\ASSIGN\%4\PAC7TG.CMD
CALL %1:%3\BATCH\PROC\MSGPAUSE.CMD
CALL %1:%3\ASSIGN\%4\PAC7TE.CMD
CALL %1:%3\ASSIGN\%4\PAC7TD.CMD
CALL %1:%3\ASSIGN\%4\PAC7TV.CMD
CALL %1:%3\ASSIGN\%4\PAC7TG.CMD
ECHO ********************************************************
ECHO * On-line communication file assignments
ECHO ********************************************************
ECHO PAC7BD=%2:%3\COMMUN\%4.TBD
ECHO PAC7LB=%2:%3\COMMUN\%4.TLB
CALL %1:%3\BATCH\PROC\MSGPAUSE.CMD
SET PAC7BD=%2:%3\COMMUN\%4.TBD
SET PAC7LB=%2:%3\COMMUN\%4.TLB
ECHO ********************************************************
ECHO * Result output file assignment
ECHO ********************************************************
ECHO SYSOUT=%2:%3\USERS
CALL %1:%3\BATCH\PROC\MSGPAUSE.CMD
SET SYSOUT=%2:%3\USERS
ECHO ********************************************************
ECHO * Server internal file assignments
ECHO ********************************************************
ECHO PAC7ME=%5\TCA
ECHO PAC7CA=%5\TCA
ECHO PARAM=%1:%3\TPARAM
ECHO PROCDIR=%1:%3\BATCH\PROC
CALL %1:%3\BATCH\PROC\MSGPAUSE.CMD
SET PAC7ME=%5\TCA
SET PAC7CA=%5\TCA
SET PARAM=%1:%3\TPARAM
SET PROCDIR=%1:%3\BATCH\PROC
ECHO ********************************************************
ECHO * Server parameter assignments
ECHO ********************************************************
ECHO PLBTDEL=YES
ECHO PLBTPRT=HIGH
ECHO PLBTAGP=NO
CALL %1:%3\BATCH\PROC\MSGPAUSE.CMD
SET PLBTDEL=YES
SET PLBTPRT=HIGH
SET PLBTAGP=NO
ECHO ********************************************************
ECHO * 'Debug' mode assignment
```

```
ECHO ******************************************************
ECHO DEBUG=NO
ECHO DEBUGDIR=%1:%3\BATCH\PROC
ECHO SEMBATCH=BATCH1
CALL %1:%3\BATCH\PROC\MSGPAUSE.CMD
SET DEBUG=NO
SET DEBUGDIR=%1:%3\BATCH\PROC
SET SEMBATCH=BATCH1
ECHO ******************************************************
ECHO * Batch server start-up
ECHO ******************************************************
SET PATH=%1:%3\BATCH\PGM;%1:%3\TP\PGM;%PATH%
START /B %1:%3\BATCH\PGM\TAB00.EXE
GOTO END
:ERR
CLS
ECHO Error in start-up parameters
ECHO ******************************************************
ECHO    Parameter 1: Volume  (programs) %1
ECHO    Parameter 2: Volume  (common)   %2
ECHO    Parameter 3: Release (with \)   %3
ECHO    Parameter 4: Database name      %4
ECHO    Parameter 5: Temporary files    %5
ECHO ******************************************************
PAUSE
:END
ECHO ON
```

4.9. STOPTABA : BATCH SERVER SHUTDOWN

STOPTABA : BATCH SERVER SHUTDOWN

The server menu in the server batch execution window allows to shut down the server. The STOPTABA.CMD procedure, located under the batch procedures directory ('Release'\BATCH\PROC) is used to shut down the batch server(s) from a command file, and with no confirmation.

If more than one batch servers are active on a Database, on a single or different computers, the STOPTABA procedure must be run only once. It will stop all the servers at the end of a print request execution.

SUBMISSION OF THE STOPTABA PROCEDURE

The STOPTABA requires four parameters :

```
        1 : programs and procedures volume

        2 : communication file volume

        3 : Release (with \)

        4 : Pactables Database name

  Example : STOPTABA  C  T  \TABLE  TEST
```

The procedure assigns the db_name'.TLB communication file then executes the 'Release'\BATCH\PGM\SHUTBAT.EXE.

4.10. STOPTABA : EXECUTION JCL

```
ECHO OFF
CLS
REM Checking parameters
IF P%4 == P  GOTO ERR
IF P%3 == P  GOTO ERR
IF P%2 == P  GOTO ERR
IF P%1 == P  GOTO ERR
REM Parameters are OK
ECHO .
ECHO .
ECHO ******************************************************
ECHO                     Pactables : BATCH SERVER SHUTDOWN
ECHO .
ECHO     Volume  (programs)       : %1
ECHO     Volume  (communication)  : %2
ECHO     Release (with \)         : %3
ECHO     Database name            : %4
ECHO ******************************************************
ECHO .
ECHO PAC7LB=%2:%3\COMMUN\%4.TLB
CALL %1:%3\BATCH\PROC\MSGPAUSE.CMD
SET  PAC7LB=%2:%3\COMMUN\%4.TLB
SHUTBAT.EXE
GOTO END
:ERR
CLS
ECHO Erroneous Shutdown parameter(s)
ECHO ******************************************************
ECHO    Parameter 1 : Volume  (programs)             %1
ECHO    Parameter 2 : Volume  (commununication)      %2
ECHO    Parameter 3 : Release (with \)               %3
ECHO    Parameter 4 : Database name                  %4
ECHO ******************************************************
PAUSE
:END
ECHO ON
```

5. THE BATCH PROCEDURES

5.1. INTRODUCTION

BATCH PROCEDURES

The Batch processes associated with Pactables are grouped in procedures. The next chapters present each of these procedures and specify their execution conditions.

For each procedure there is:

. An introduction comprising:

- the procedure's functionality,

- the execution conditions,

- the actions to carry out in case of abnormal execution.

. The description of the user input, processes, and results obtained, as well as advice on use.

. Description of steps:

- the symbolics or parameters in use,

- the list of files in use (temporary and permanent),

- the return codes for each step,

. The execution procedures.

All procedures are shipped under the names 'PROCxxxx', where xxxx represents the procedure code. In the following chapters, the PROC code is not specified.

5.2. CLASSIFICATION OF PROCEDURES

CLASSIFICATION OF PROCEDURES

The following procedures are associated with batch processes:

.INTA: Initialization of Pactables files,

.GETT: Table generation,

.UPTA: Table update,

.PRTA: Table printing,

.IMTA: Table import,

.RETA: Table reorganization,

.SVTA: Table backup,

.RSTA: Table restoration,

.LDTA: List of tables descriptions,

.PMTA: User parameters update,

.EXTA: Table extraction,

.TUTA: Table production turnover,

For the Dispatched Table Management (DTM option):

.Table description comparison (CDT1, CDT2),

.Table contents update (CVTA),

For converting from another platform:

.Pactables Database migration (TCTA).

REMINDER

Pactables does not include a journal of update transactions.

5.3. ADVICE ON USE

ADVICE ON USE

The purpose of this subchapter is to make the Database administrator aware of the specifics of batch procedures executed on Windows/NT.

TEMPORARY FILES

Most of the batch procedures create temporary files under a directory specified when procedures are submitted (parameter %3).

For each procedure, the user should refer to the corresponding chapter for a detailed description of these files. In any event, sufficient disk space must be made available on the chosen user directory in order for the procedure to run successfully.

TEMPORARY SORT FILES

When a program executes a sort, the called COBOL routines also use temporary files that are independent of the ones mentioned above. The temporary sort files are created by default where the sort is executed: under the batch procedure directory, in this case.

If the user wishes to override this default allocation, he/she can do so via the TMP environment variable:

SET TMP=...

where ... will be replaced by the complete description of an existing directory, disk drive and backslash included.

This allocation can be used in other software environments. It can be done before the procedure is executed, in an MS-DOS session, explicitly, by including it in the AUTOEXEC.BAT file, or by modifying the variable's allocation in the user parameters of Windows/NT users (in the Main Group, open the Control Panel, then open the System menu; add or modify the user variable you want).

GENERAL REMARKS

1. You have to pass parameters on to each procedure. All of the parameters initially required by a procedure must be present, even if they are not used.

2. When user input is expected in a procedure, even if it is optional, the corresponding transaction file must be present when the procedure is being

executed. The transaction files of batch procedures are located under the 'release'\INPUT\'db_name' directory; they are coded MBxxxx, where xxxx is the procedure name (MBREST for the REST procedure for example).

3. There is no protection guaranteed if a batch procedure updating the Pactables database system or evolving files is started up while users are updating the same files interactively. The Database administrator alone should be able to execute batch procedures that update Databases. Therefore, the Database administrator must ensure protection of the database data (by closing the on-line servers, for example).

4. The temporary work files created by batch procedures are automatically deleted at the end of the procedure unless a step does not run sucessfully and sends back a return code different from 0.

5.4. SUBMISSION OF PROCEDURES

SUBMISSION OF BATCH PROCEDURES

Batch procedures must be submitted from a VA Pac server (on-line or batch, if all the programs and procedures are systematically copied on each server).

AUTOMATING THE SUBMISSION OF PROCEDURES

1. Submission via a command file

Since procedure parameters are always the same, a command file can be used to automate the submission of batch procedures.

The installation procedure creates, in the batch procedure directory, a command file adapted to the characteristics of the installation. This file is named TAPR'db_name'.CMD, that is TAPRTEST.CMD for the 'TEST' Database.

Consider the following installation :

```
C       = volume for programs, procedures,
          and ASSIGN directory,
C       = volume for the Database,
H       = volume for the backups,
C       = volume for the transaction files,
T       = volume for the communication file,
\TABLE  = Release,
TEST    = Database name,
C:\TMP  = temporary files directory.
```

The TAPRTEST.CMD file contains :

```
ECHO OFF
IF %1 == CDT1 ECHO File not adapted to CDT1
IF %1 == cdt1 ECHO File not adapted to CDT1
IF %1 == CDT2 ECHO File not adapted to CDT2
IF %1 == cdt2 ECHO File not adapted to CDT2
IF %1 == CDT1 GOTO :END
IF %1 == cdt1 GOTO :END
IF %1 == CDT2 GOTO :END
IF %1 == cdt2 GOTO :END
IF %1 == RSTA GOTO :PROC
IF %1 == rsta GOTO :PROC
IF %1 == SVTA GOTO :PROC
IF %1 == svta GOTO :PROC
ECHO Content of the file C:\TAB802\INPUT\TEST\MB%1
TYPE C:\TAB802\INPUT\TEST\MB%1
PAUSE
:PROC
C:
CD \TAB802\BATCH\PROC
CALL PROC%1  \TAB802  TEST  C:\TMP  C  C  H
ECHO OFF
IF %1 == RSTA ECHO No output report
IF %1 == SVTA ECHO No output report
IF %1 == rsta ECHO No output report
IF %1 == svta ECHO No output report
IF %1 == RSTA GOTO :END
IF %1 == SVTA GOTO :END
IF %1 == rsta GOTO :END
IF %1 == svta GOTO :END
ECHO Read the report under C:\TMP
DIR C:\TMP\%1*.*
:END
ECHO ON
```

TAPRTEST.CMD contains only one parameter : the name of the procedure. To submit the UPTA procedure, for example, enter: TAPRTEST UPTA.

The command file displays the content of the MBUPTA transaction file, submits the PROCUPTA procedure by passing the necessary parameters on to it, then displays the execution summary file. The additional parameter (the 6th one) is not used in UPTA, so it is ignored.

The CDT1 and CDT2 procedures require a sixth specific parameter. It is not advised then to submit them via TAPRTEST.CMD (display of a message and disconnection).

The RSTA et SVTA procedures have no user input and do not edit an output report. TAPRTEST.CMD recognizes these procedures' specifics.

2. Submission from an icon

It may be convenient to gather the most usual procedures in the 'Group' defined for Pactables.
For more details, refer to the introduction of Chapter 'MONITOR START-UP'.

5.5. ABNORMAL EXECUTIONS

ABNORMAL EXECUTION

A batch program execution may abend.

For example, input-output errors on the system files or on the Database files cause the interruption of the current program and the display of the following message:

```
PROGR : pppppp   INPUT-OUTPUT ERROR : FILE ff   OP : oo
STATUS : nn
```

In most cases, examining the status and type of operation allows you to find the cause of the abend.

The tables below indicates standard values for the status and type of operation.

OO	OPERATION
W	WRITE
RW	REWRITE
RU	READ UP
OP	OPEN
CL	CLOSE
D	DELETE
R	READ
P	START
RN	READ NEXT

NN	STATUS
21	SEQUENCE ERROR
22	DUPLICATE KEY
23	NO RECORD FOUND
24	BOUNDARY VIOLATION
30	SYSTEM ERROR
34	BOUNDARY VIOLATION (SEQ.)
35	FILE NOT FOUND
92	LOGICAL ERROR (i.e. OPEN AN ALREADY OPENED FILE)
93	LOCKED FILE
95	INVALID OR INCOMPLETE FILE DEFINITION

Some errors, other than input-output errors in a Database file, may also cause the following message to be displayed:

```
Run Time Error nnn

where 'nnn' is the error number.
```

Run Time Error 013 is the most common error. It means that the procedure did not find an input file. In order to find out which file is missing, enter the SET command. This will display the list of allocated files. You can also consult the procedure description in the Batch Procedures Manual. Then, compare this list with the contents of the directories involved.

Most often, it is the input transactions file that is missing (in the 'release'\INPUT\'db_name' directory : MBxxxx where xxxx is the procedure specific code).

The following subchapter contains the list of the most frequent errors. Each Run Time Error is accompanied by a short explanatory message. If the Run-Time Error is not in the following list, the message is not sufficient and the type of error signals a direct problem in the system programs, contact the VisualAge Pacbase Technical Support and save all listings that could help in analyzing the problem.

ERROR MANAGEMENT IN THE DELIVERED BATCH PROCEDURES

At the end of each batch procedure, the PAUSE instruction stops the execution if any error has occurred.

This feature prevents the window in which the procedure runs from closing and a new procedure from being executed (if there is a sequence of procedures).

5.6. LIST OF 'RUN TIME ERRORS'

LIST OF 'RUN-TIME ERRORS'

This list presents the most common errors and their meaning.

Number	Meaning
004	Invalid file name
005	Invalid device specification
007	No more disk space
009	Directory full or does not exist
013	File not found
026	Block I-O error
027	Device not available
028	Disk space exhausted
033	Physical I-O error
105	Memory allocation error
116	Cannot allocate memory
135	File not found
150	Program abandoned on user request
157	Not enough program memory: object file too large to load
170	System program not found
173	Called program file not found
188	File name too long
198	Not enough program memory: object file too large to load
207	Machine does not exist on the network
208	Network communication error
209	Network communication error
221 !	
222 !>	Error during a sort
223 !	

6. TABLE INITIALIZATION (INTA)

6.1. INTRODUCTION

INTA: TABLE INITIALIZATION

INTRODUCTION

This procedure initializes the table description and contents files of the Pactables Database.

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 'TABLE GENERATION' for more details on the Table initialization procedure).

6.2. USER INPUT

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
		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

6.3. DESCRIPTION OF STEPS

INTA: DESCRIPTION OF STEPS

INPUT RECOGNITION: PTU001

INITIALIZATION OF FILES: PTAINI

.Input file
PAC7MD

.Output files:
-Table Descriptions File
PAC7TD
-Table Contents File
PAC7TV

.Output report:
-Initialization review
PAC7ED

6.4. EXECUTION JCL

```
ECHO OFF
CLS
ECHO .
ECHO .
ECHO ******************************************************
ECHO *                   INTA PROCEDURE
ECHO *                   ==============
ECHO *  Release (with \)                      : %1
ECHO *  Name of the Database                  : %2
ECHO *  Temporary file directory               : %3
ECHO *  Volume of ASSIGN and BATCH directories  : %4
ECHO *  Volume of INPUT directory              : %5
ECHO ******************************************************
ECHO .
CALL %4:%1\BATCH\PROC\MSGPAUSE.CMD
ECHO .
REM ******************************************************
REM * Pactables : TABLE INITIALIZATION
REM ******************************************************
CALL %4:%1\ASSIGN\%2\PAC7TD.CMD
CALL %4:%1\ASSIGN\%2\PAC7TV.CMD
SET  PAC7MD=%5:%1\INPUT\%2\MBINTA
SET  PAC7ED=%3\INTAED.INI
ECHO Execution: PTAINI
PTAINI
IF ERRORLEVEL 1 GOTO ERRINI
IF NOT ERRORLEVEL 0 GOTO ERRINI
REM ******************************************************
ECHO End of procedure
GOTO END
REM ******************************************************
:ERRINI
ECHO Error in executing PTAINI
PAUSE
:END
ECHO ON
```

7. TABLE GENERATION (GETT)

7.1. INTRODUCTION

GETT: TABLE GENERATION

INTRODUCTION

This procedure updates the Table-Descriptions file using the table descriptions extracted from the VisualAge Pacbase Database, and initializes the generated tables in the Table-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 table 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 concurrency.

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.

7.2. DESCRIPTION OF STEPS

GETT: DESCRIPTION OF STEPS

UPDATE OF TABLE FILES: PTA250

```
.Permanent input-output files:
 -Table-description file
   PAC7TD
 -Table-contents file
   PAC7TV

.Input transaction file (GETD or GETA output):
 -Update transactions
   PAC7MD

.Output file
  PAC7TK

.Output report:
 -Input/output errors on files
   PAC7ET
```

PRINTING OF DESCRIPTIONS: PTA290

```
.Permanent input file:
 -Table-description file
   PAC7TD

.Transaction input file:
 -Print request
   PAC7TE

.Output report:
 -Printout of descriptions
   PAC7ID
```

7.3. EXECUTION JCL

```
ECHO OFF
CLS
ECHO .
ECHO .
ECHO ******************************************************
ECHO *                   GETT PROCEDURE
ECHO *                   ==============
ECHO *  Release (with \)                      : %1
ECHO *  Name of the Database                  : %2
ECHO *  Temporary file directory               : %3
ECHO *  Volume of ASSIGN and BATCH directories  : %4
ECHO *  Volume of INPUT directory              : %5
ECHO ******************************************************
ECHO .
CALL %4:%1\BATCH\PROC\MSGPAUSE.CMD
ECHO .
REM ******************************************************
REM * Pactables : TABLE GENERATION
REM ******************************************************
SET COBSW=\B2
REM ******************************************************
CALL %4:%1\ASSIGN\%2\PAC7TD.CMD
CALL %4:%1\ASSIGN\%2\PAC7TV.CMD
SET  PAC7MD=%5:%1\INPUT\%2\MBGETT
SET  PAC7TK=%3\TK
SET  PAC7ET=%3\GETTET.250
ECHO Execution: PTA250
PTA250
IF ERRORLEVEL 1 GOTO ERR250
IF NOT ERRORLEVEL 0 GOTO ERR250
REM ******************************************************
CALL %4:%1\ASSIGN\%2\PAC7TD.CMD
SET  PAC7TE=%3\TK
SET  PAC7ID=%3\GETTID.290
ECHO Execution: PTA290
PTA290
IF ERRORLEVEL 1 GOTO ERR290
IF NOT ERRORLEVEL 0 GOTO ERR290
REM ******************************************************
ECHO End of procedure
ECHO .
ECHO Deletion of the temporary file TK
DEL  %3\TK
GOTO END
REM ******************************************************
:ERR250
ECHO Error in executing PTA250
GOTO ERR
:ERR290
ECHO Error in executing PTA290
:ERR
PAUSE
:END
ECHO ON
```

8. TABLE UPDATE (UPTA)

8.1. INTRODUCTION

UPTA: TABLE UPDATING

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, these files must be closed to on-line use.

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 to run 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 since Pactables 2.0.

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.

8.2. USER INPUT

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 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 '/' be 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

8.3. DESCRIPTION OF STEPS

UPTA: DESCRIPTION OF STEPS

INPUT RECOGNITION: PTU001

TABLE UPDATE: PTA300

```
.Permanent input files:
 -Table-description file
   PAC7TD
 -Error-message file
   PAC7TE
 -User parameters file
   PAC7TG

.Permanent input-output file:
 -Table contents file
   PAC7TV

.Input transaction file:
   PAC7MS

.Output file:
 -Print requests
   PAC7DE

.Output report:
 -Transaction review
   PAC7ET

.Work file:
 -Prepared transactions
   PAC7MT
```

FORMATTING FOR PRINTING: PTA350

```
.Permanent input files:
 -Table-description file
   PAC7TD
 -Table-contents file
   PAC7TV

.Input transaction file:
 -Print request
   PAC7DE

.Output file:
 -Print file
   PAC7ET

.Output report:
 -Statistics on printing
   PAC7EX
```

PRINTING OF TABLES: PTA360

.Permanent inpput file:
 -Table-description file
   PAC7TD

.Input Transaction file:
 -Print file
   PAC7ET

.Output report:
 -Printing of tables
   PAC7EY

8.4. EXECUTION JCL

```
ECHO OFF
CLS
ECHO .
ECHO .
ECHO ******************************************************
ECHO *                   UPTA PROCEDURE
ECHO *                   ==============
ECHO *  Release (with \)                      : %1
ECHO *  Name of the Database                  : %2
ECHO *  Temporary file directory               : %3
ECHO *  Volume of ASSIGN and BATCH directories  : %4
ECHO *  Volume of INPUT directory              : %5
ECHO ******************************************************
ECHO .
CALL %4:%1\BATCH\PROC\MSGPAUSE.CMD
ECHO .
REM ******************************************************
REM * Pactables : TABLE UPDATE
REM ******************************************************
CALL %4:%1\ASSIGN\%2\PAC7TD.CMD
CALL %4:%1\ASSIGN\%2\PAC7TE.CMD
CALL %4:%1\ASSIGN\%2\PAC7TG.CMD
CALL %4:%1\ASSIGN\%2\PAC7TV.CMD
SET  PAC7MS=%5:%1\INPUT\%2\MBUPTA
SET  PAC7DE=%3\DE
SET  PAC7MT=%3\MT
SET  PAC7ET=%3\UPTAET.300
ECHO Execution: PTA300
PTA300
IF ERRORLEVEL 1 GOTO ERR300
IF NOT ERRORLEVEL 0 GOTO ERR300
REM ******************************************************
CALL %4:%1\ASSIGN\%2\PAC7TD.CMD
CALL %4:%1\ASSIGN\%2\PAC7TV.CMD
SET  PAC7DE=%3\DE
SET  PAC7ET=%3\ET
SET  PAC7EX=%3\UPTAEX.350
ECHO Execution: PTA350
PTA350
IF ERRORLEVEL 1 GOTO ERR350
IF NOT ERRORLEVEL 0 GOTO ERR350
REM ******************************************************
SET  COBSW=\B2
CALL %4:%1\ASSIGN\%2\PAC7TD.CMD
SET  PAC7ET=%3\ET
SET  PAC7EY=%3\UPTAEY.360
ECHO Execution: PTA360
PTA360
IF ERRORLEVEL 1 GOTO ERR360
IF NOT ERRORLEVEL 0 GOTO ERR360
REM ******************************************************
ECHO End of procedure
ECHO .
ECHO Deletion of the temporary files DE, ET and MT
DEL  %3\DE
DEL  %3\ET
DEL  %3\MT
GOTO END
REM ******************************************************
:ERR300
ECHO Error in executing PTA300
GOTO ERR
:ERR350
ECHO Error in executing PTA350
GOTO ERR
:ERR360
ECHO Error in executing PTA360
:ERR
```

```
PAUSE
:END
ECHO ON
```

9. TABLE PRINTING (PRTA)

9.1. INTRODUCTION

PRTA: TABLE PRINTING

INTRODUCTION

This procedure performs a batch print 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.

9.2. USER INPUT

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	tttttt	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

9.3. DESCRIPTION OF STEPS

PRTA: DESCRIPTION OF STEPS

INPUT RECOGNITION: PTU001

EXTRACTION OF TABLES FOR PRINTING: PTA320

```
.Permanent input files:
 -Table-description File
   PAC7TD
 -Error-message file
   PAC7TE
 -Table-contents File
   PAC7TV
 -User-parameter file
   PAC7TG

.Input transaction file:
 -Update transactions
   PAC7CA

.Output file:
 -Print requests
   PAC7DE

.Output report:
 -Transaction review
   PAC7XE
```

PREPARATION FOR PRINTING: PTA350

```
.Permanent input files:
 -Table-description File
    PAC7TD
 -Table-contents file
    PAC7TV

.Input transaction file:
 -Print requests
    PAC7DE

.Output file:
 -Print file
    PAC7ET

.Output report:
 -Statistics on printing
    PAC7EX
```

PRINTING OF TABLES: PTA360

```
.Permanent input file:
 -Tables-description file
    PAC7TD

.Input transaction file:
 -Print file
    PAC7ET

.Output report:
 -Printing of tables
```

9.4. EXECUTION JCL

```
ECHO OFF
CLS
ECHO .
ECHO .
ECHO ******************************************************
ECHO *                   PRTA PROCEDURE
ECHO *                   ==============
ECHO *  Release (with \)                      : %1
ECHO *  Name of the Database                  : %2
ECHO *  Temporary file directory               : %3
ECHO *  Volume of ASSIGN and BATCH directories  : %4
ECHO *  Volume of INPUT directory              : %5
ECHO ******************************************************
ECHO .
CALL %4:%1\BATCH\PROC\MSGPAUSE.CMD
ECHO .
REM ******************************************************
REM * Pactables : TABLE PRINTING
REM ******************************************************
CALL %4:%1\ASSIGN\%2\PAC7TD.CMD
CALL %4:%1\ASSIGN\%2\PAC7TE.CMD
CALL %4:%1\ASSIGN\%2\PAC7TG.CMD
CALL %4:%1\ASSIGN\%2\PAC7TV.CMD
SET  PAC7CA=%5:%1\INPUT\%2\MBPRTA
SET  PAC7DE=%3\DE
SET  PAC7XE=%3\PRTAXE.320
ECHO Execution: PTA320
PTA320
IF ERRORLEVEL 1 GOTO ERR320
IF NOT ERRORLEVEL 0 GOTO ERR320
REM ******************************************************
CALL %4:%1\ASSIGN\%2\PAC7TD.CMD
CALL %4:%1\ASSIGN\%2\PAC7TV.CMD
SET  PAC7DE=%3\DE
SET  PAC7ET=%3\ET
SET  PAC7EX=%3\PRTAEX.350
ECHO Execution: PTA350
PTA350
IF ERRORLEVEL 1 GOTO ERR350
IF NOT ERRORLEVEL 0 GOTO ERR350
REM ******************************************************
SET  COBSW=\B2
CALL %4:%1\ASSIGN\%2\PAC7TD.CMD
SET  PAC7ET=%3\ET
SET  PAC7EY=%3\PRTAEY.360
ECHO Execution: PTA360
PTA360
IF ERRORLEVEL 1 GOTO ERR360
IF NOT ERRORLEVEL 0 GOTO ERR360
REM ******************************************************
ECHO End of procedure
ECHO .
ECHO Deletion of the temporary files DE and ET
DEL  %3\DE
DEL  %3\ET
GOTO END
REM ******************************************************
:ERR320
ECHO Error in executing PTA320
GOTO ERR
:ERR350
ECHO Error in executing PTA350
GOTO ERR
:ERR360
ECHO Error in executing PTA360
:ERR
PAUSE
:END
```

```
    ECHO ON
```

10. TABLE IMPORT (IMTA)

10.1. INTRODUCTION

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 performed 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 materiels allowing batch/TP concurrency.

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

If the table to be imported is large, you may have to --prior to this procedure execution-- save and reload, to either increase the size of TV file, or physically reorganize this file so as to make all the 'free space' initially provided available.

RESTRICTION

Each execution of the procedure allows you to import only one table.

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'.

From 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.

10.2. USER INPUT

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)

10.3. DESCRIPTION OF STEPS

IMTA: DESCRIPTION OF STEPS

INPUT RECOGNITION: PTU001

TABLE CHECK AND UPDATE: PTA310

```
.Permanent input files:
 -Table-description file
    PAC7TD
 -Error-message file
    PAC7TE
 -User-parameter file
    PAC7TG

.Permanent input-output file:
 -Table-contents files
    PAC7TV

.Input file:
 -Request transactions
    PAC7MV
 -External table-file
    PAC7NK

.Output file:
 -Print requests
    PAC7DE

.Output report:
 -Execution report
    PAC7ET
```

FORMATTING OF PRINTOUT: PTA350

.Permanent input files:
 -Table-descriptions file
    PAC7TD
 -Table-contents file
    PAC7TV

.Input transaction file:
 -Print requests
    PAC7DE

.Output file:
 -Print file
    PAC7ET

.Output report:
 -Printing statistics
    PAC7EX

PRINTING: PTA360

.Permanent input file:
 -Table-description file
    PAC7TD

.Input transaction file:
 -Print file
    PAC7ET

.Output report:
 -Table printout
    PAC7EY

10.4. EXECUTION JCL

```
ECHO OFF
CLS
ECHO .
ECHO .
ECHO ******************************************************
ECHO *                   IMTA PROCEDURE
ECHO *                   ==============
ECHO *  Release (with \)                      : %1
ECHO *  Name of the Database                  : %2
ECHO *  Temporary file directory               : %3
ECHO *  Volume of ASSIGN and BATCH directories  : %4
ECHO *  Volume of INPUT directory              : %5
ECHO ******************************************************
ECHO .
CALL %4:%1\BATCH\PROC\MSGPAUSE.CMD
ECHO .
REM ******************************************************
REM * Pactables : TABLE IMPORT
REM ******************************************************
CALL %4:%1\ASSIGN\%2\PAC7TD.CMD
CALL %4:%1\ASSIGN\%2\PAC7TE.CMD
CALL %4:%1\ASSIGN\%2\PAC7TG.CMD
CALL %4:%1\ASSIGN\%2\PAC7TV.CMD
SET  PAC7MV=%5:%1\INPUT\%2\MBIMTA
SET  PAC7NK=%5:%1\INPUT\%2\MTIMTA
SET  PAC7DE=%3\DE
SET  PAC7ET=%3\IMTAET.310
ECHO Execution: PTA310
PTA310
IF ERRORLEVEL 1 GOTO ERR310
IF NOT ERRORLEVEL 0 GOTO ERR310
REM ******************************************************
CALL %4:%1\ASSIGN\%2\PAC7TD.CMD
CALL %4:%1\ASSIGN\%2\PAC7TV.CMD
SET  PAC7DE=%3\DE
SET  PAC7ET=%3\ET
SET  PAC7EX=%3\IMTAEX.350
ECHO Execution: PTA350
PTA350
IF ERRORLEVEL 1 GOTO ERR350
IF NOT ERRORLEVEL 0 GOTO ERR350
REM ******************************************************
SET  COBSW=\B2
CALL %4:%1\ASSIGN\%2\PAC7TD.CMD
SET  PAC7ET=%3\ET
SET  PAC7EY=%3\IMTAEY.360
ECHO Execution: PTA360
PTA360
IF ERRORLEVEL 1 GOTO ERR360
IF NOT ERRORLEVEL 0 GOTO ERR360
REM ******************************************************
ECHO End of procedure
ECHO .
ECHO Deletion of the temporary files DE and ET
DEL  %3\DE
DEL  %3\ET
GOTO END
REM ******************************************************
:ERR310
ECHO Error in executing PTA310
GOTO ERR
:ERR350
ECHO Error in executing PTA350
GOTO ERR
:ERR360
ECHO Error in executing PTA360
:ERR
PAUSE
```

```
:END
ECHO ON
```

11. TABLE REORGANIZATION (RETA)

11.1. INTRODUCTION

RETA: TABLE REORGANIZATION

INTRODUCTION

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

RETA deletes the records that were logically deleted during update and reorganizes these files' historical accounts according to user 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 avaible in previous releases).

EXECUTION CONDITION

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

11.2. USER INPUT

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
		'S'	Historical account to delete
		'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', storing of the historical account whose date is equal to the date specified.
			If there is no date, all historical accounts are stored.
			-- When the action code is equal to 'S', deletion of the historical account whose date is equal to the date specified.
		'<'	-- When the action code is equal to 'G', storing of all historical accounts whose dates are strictly smaller than the date specified.
			-- When the action code is equal to 'S', deletion of all historical accounts whose dates are strictly smaller than the date specified.
		'>'	-- When the action code is equal to 'G', storing of all historical accounts whose dates are higher than or equal to the date specified
			-- When the action code is equal to 'S', deletion of all historical accounts whose dates are higher than or equal to the date specified.

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

For more details, see the Pactables Reference Manual.

11.3. DESCRIPTION OF STEPS

RETA: DESCRIPTION OF STEPS

INPUT RECOGNITION: PTU001

REORGANIZATION OF TABLE CONTENTS: PTA400

```
.Permanent input files:
 -Table-description file
    PAC7TD
 -Error-message file
    PAC7TE
 -Table-contents file
    PAC7TV
 -User parameter file
    PAC7TG

.Input transaction file:
 -Reorganization requests
    PAC7DR

.Output file:
 -Reorganized-contents file
    PAC7TX
 -Reorganized-table list file
    PAC7DE
```

NOTE: This 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.

```
.Ouput report:
 -Transaction report
    PAC7IR

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

VALIDIDATION OF TABLE CONTENTS: PTA410

```
.Updating input file :
 -Reorganization requests
    PAC7MB

.Input file:
 -Reorganized-contents file
     PAC7TX

.Output file:
 -Validated-contents file
     PAC7TW
```

REORGANIZATION OF TABLE-DESCRIPTIONS: PTA420

```
.Permanent input file:
 -Table-description file
    PAC7TD

.Input file:
 -Reorganized-table list file
    PAC7DE

.Output files:
 -Reorganized table-description file
   PAC7TS
 -Table-description print request
    PAC7ML
```

NOTE: This file must be kept and used as input of the LDTA procedure, to produce a printout of the table-descriptions that were kept, in order to check the correct execution of the reorganization.

BUILDING OF BACKUP FILE: PTA430

```
.Input files:
 -Validated-contents fille
    PAC7TW
 -Reorganized-description file
    PAC7TS

.Ouput file:
 -Backup file resulting from
  reorganization
    PAC7TC
```

TG FILE BACKUP: PTASVG

```
.Permanent input file:
 -User-parameter file
    PAC7TG
.Output file:
 -Table backup
    PAC7TC
```

11.4. EXECUTION JCL

```
ECHO OFF
CLS
ECHO .
ECHO .
ECHO ******************************************************
ECHO *                   RETA PROCEDURE
ECHO *                   ==============
ECHO *  Release (with \)                      : %1
ECHO *  Name of the Database                 : %2
ECHO *  Temporary file directory              : %3
ECHO *  Volume of ASSIGN and BATCH directories  : %4
ECHO *  Volume of INPUT directory             : %5
ECHO *  Volume of SAVE directory              : %6
ECHO ******************************************************
ECHO .
CALL %4:%1\BATCH\PROC\MSGPAUSE.CMD
ECHO .
REM ******************************************************
REM * Pactables : TABLE REORGANIZATION
REM ******************************************************
CALL %4:%1\ASSIGN\%2\PAC7TD.CMD
CALL %4:%1\ASSIGN\%2\PAC7TE.CMD
CALL %4:%1\ASSIGN\%2\PAC7TV.CMD
CALL %4:%1\ASSIGN\%2\PAC7TG.CMD
SET  PAC7DR=%5:%1\INPUT\%2\MBRETA
SET  PAC7DE=%5:%1\INPUT\%2\MVRETA
SET  PAC7TX=%3\TX
SET  PAC7IR=%3\RETAIR.400
ECHO Execution: PTA400
PTA400
IF ERRORLEVEL 9 GOTO ERR400
IF NOT ERRORLEVEL 0 GOTO ERR400
REM ******************************************************
SET  PAC7TX=%3\TX
SET  PAC7TW=%3\TW
SET  PAC7MB=%5:%1\INPUT\%2\MBRETA
ECHO Execution: PTA410
PTA410
IF ERRORLEVEL 9 GOTO ERR410
IF NOT ERRORLEVEL 0 GOTO ERR410
REM ******************************************************
CALL %4:%1\ASSIGN\%2\PAC7TD.CMD
SET  PAC7TS=%3\TS
SET  PAC7DE=%5:%1\INPUT\%2\MVRETA
SET  PAC7ML=%5:%1\INPUT\%2\MWRETA
ECHO Execution: PTA420
PTA420
IF ERRORLEVEL 9 GOTO ERR420
IF NOT ERRORLEVEL 0 GOTO ERR420
REM ******************************************************
SET  PAC7TC=%6:%1\SAVE\%2\TC.NEW
SET  PAC7TW=%3\TW
SET  PAC7TS=%3\TS
ECHO Execution: PTA430
PTA430
IF ERRORLEVEL 9 GOTO ERR430
IF NOT ERRORLEVEL 0 GOTO ERR430
REM ******************************************************
CALL %4:%1\ASSIGN\%2\PAC7TG.CMD
SET  PAC7TC=%6:%1\SAVE\%2\TC.NEW
ECHO Execution: PTASVG
PTASVG
IF ERRORLEVEL 9 GOTO ERRSVG
IF NOT ERRORLEVEL 0 GOTO ERRSVG
REM ******************************************************
ECHO End of procedure
ECHO .
ECHO Calling the file TCBACKUP.CMD
```

```
CALL %6:%1\SAVE\%2\TCBACKUP.CMD %6 %1 %2
GOTO END
REM ******************************************************
:ERR400
ECHO Error in executing PTA400
GOTO ERR
:ERR410
ECHO Error in executing PTA410
GOTO ERR
:ERR420
ECHO Error in executing PTA420
GOTO ERR
:ERR430
ECHO Error in executing PTA430
GOTO ERR
:ERRSVG
ECHO Error in executing PTASVG
:ERR
PAUSE
:END
ECHO ON
```

12. BACKUP (SVTA)

12.1. INTRODUCTION

TABLE BACKUP (SVTA): INTRODUCTION

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

EXECUTION CONDITION

The files must be closed to on-line use.

USER INPUT

None.

12.2. DESCRIPTION OF STEPS

SVTA: DESCRIPTION OF STEPS

TD BACKUP: PTASVD

```
.Permanent input files:
 -Table-description file
    PAC7TD
.Output file:
 -Table backup
    PAC7TC
```

TV BACKUP: PTASVV

```
.Permanent input file:
 -Table-contents file
    PAC7TV
.Output file:
 -Table backup
    PAC7TC
```

TG BACKUP: PTASVG

```
.Permanent input file:
 -User-parameter file
    PAC7TG
.Output file:
 -Table backup
    PAC7TC
```

12.3. EXECUTION JCL

```
ECHO OFF
CLS
ECHO .
ECHO .
ECHO ******************************************************
ECHO *                   SVTA PROCEDURE
ECHO *                   ==============
ECHO *  Release (with \)                      : %1
ECHO *  Name of the Database                  : %2
ECHO *  Temporary file directory              : %3
ECHO *  Volume of ASSIGN and BATCH directories  : %4
ECHO *  Volume of INPUT directory             : %5
ECHO *  Volume of SAVE directory              : %6
ECHO ******************************************************
ECHO .
CALL %4:%1\BATCH\PROC\MSGPAUSE.CMD
ECHO .
REM ******************************************************
REM * Pactables : TABLE BACKUP
REM ******************************************************
CALL %4:%1\ASSIGN\%2\PAC7TD.CMD
SET  PAC7TC=%6:%1\SAVE\%2\TC.NEW
ECHO Execution: PTASVD
PTASVD
IF ERRORLEVEL 1 GOTO ERRSVD
IF NOT ERRORLEVEL 0 GOTO ERRSVD
REM ******************************************************
CALL %4:%1\ASSIGN\%2\PAC7TV.CMD
SET  PAC7TC=%6:%1\SAVE\%2\TC.NEW
ECHO Execution: PTASVV
PTASVV
IF ERRORLEVEL 1 GOTO ERRSVV
IF NOT ERRORLEVEL 0 GOTO ERRSVV
REM ******************************************************
CALL %4:%1\ASSIGN\%2\PAC7TG.CMD
SET  PAC7TC=%6:%1\SAVE\%2\TC.NEW
ECHO Execution: PTASVG
PTASVG
IF ERRORLEVEL 1 GOTO ERRSVG
IF NOT ERRORLEVEL 0 GOTO ERRSVG
REM ******************************************************
ECHO End of procedure
ECHO .
ECHO Calling the file TCBACKUP.CMD
CALL %6:%1\SAVE\%2\TCBACKUP.CMD %6 %1 %2
GOTO END
REM ******************************************************
:ERRSVD
ECHO Error in executing PTASVD
GOTO ERR
:ERRSVV
ECHO Error in executing PTASVV
GOTO ERR
:ERRSVG
ECHO Error in executing PTASVG
:ERR
PAUSE
:END
ECHO ON
```

13. PACTABLES TRANSFER FROM ANOTHER PLATFORM (TCTA)

13.1. INTRODUCTION

TRANSFER OF A DATABASE FROM ANOTHER PLATFORM

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. However, read the notes on the following page carefully.

USER INPUT

None.

NOTE:

1. BACKUP TRANSFER

The transfer of the TC backup from the original site to the local network where Pactables is to be installed, is handled by the user. The parameters to be specified during the transfer are: the data files (DATA), which must be converted to the ASCII format and must contain the control characters for the recordings ends (CRLF in general, or LINE_FEED).

2. DISK SPACE

The TCTA procedure, described below, consists in sorting the TC backup according to an ASCII sequence. The sort is carried out in 3 different programs to minimize the required disk space. However, the procedure needs 3 to 4 times the equivalent of the original file.

This procedure does not include the deletion of the TC.INI file. It is possible to delete this file at the end of the first step, if the user needs more disk space.

For execution reasons, it is recommended to create the work and sort files on the Pactables server disk which executes the programs.

13.2. DESCRIPTION OF STEPS

TCTA: DESCRIPTION OF STEPS

TC BACKUP SPLIT: PTATC1

.Input backup file
PAC7TC

.Output work files:
-Table-description sequential image
PAC7SD
-Table-contents sequential image
PAC7SV
-Parameter sequential image
PAC7SG

TABLE-DESCRIPTION SORT: PTATCD

.Input work file:
-Table-description sequential image
PAC7SD

.Output work file:
-Sorted table descriptions
PAC7AD

TABLE-CONTENTS SORT: PTATCV

.Input work file:
-Sequential image of table-contents
PAC7SV

.Output work file:
-Sorted table-contents
PAC7AV

USER-PARAMETER SORT: PTATCG

.Input work file:
Sequential image of parameters
PAC7SG

.Output work file:
-Sorted user parameters
PAC7AG

RECONSTITUTION OF THE TC BACKUP: PTATC2

.Permanent output file:
-TC backup in EBCDIC format
PAC7TC

.Input work files:
-Table-description sequential image
PAC7AD
-Sequential image of contents
PAC7AV
-Sequential image of parameters
PAC7AG

13.3. EXECUTION JCL

```
ECHO OFF
CLS
ECHO .
ECHO .
ECHO ******************************************************
ECHO *                   TCTA PROCEDURE
ECHO *                   ==============
ECHO *  Release (with \)                      : %1
ECHO *  Name of the Database                  : %2
ECHO *  Temporary file directory               : %3
ECHO *  Volume of ASSIGN and BATCH directories  : %4
ECHO *  Volume of INPUT directory              : %5
ECHO *  Volume of SAVE directory               : %6
ECHO *
ECHO *  Note:
ECHO *  Input TC file (from mainframe) is called TC.INI
ECHO *  Output TC file (ASCII format) is called TC.NEW, then is
ECHO *     renamed TC by the TCBACKUP procedure.
ECHO *  All the TC files are in %6:%1\SAVE\%2
ECHO ******************************************************
ECHO .
CALL %4:%1\BATCH\PROC\MSGPAUSE.CMD
ECHO .
REM ******************************************************
REM * Pactables : MAINFRAME DATABASE RETRIEVAL FOR MIGRATION
REM ******************************************************
SET  COBSW=\B2
REM ******************************************************
SET  PAC7TC=%6:%1\SAVE\%2\TC.INI
SET  PAC7SD=%3\SD
SET  PAC7SG=%3\SG
SET  PAC7SV=%3\SV
ECHO Execution: PTATC1
PTATC1
IF ERRORLEVEL 1 GOTO ERRTC1
IF NOT ERRORLEVEL 0 GOTO ERRTC1
REM ******************************************************
SET  PAC7SD=%3\SD
SET  PAC7AD=%3\AD
ECHO Execution: PTATCD
PTATCD
IF ERRORLEVEL 1 GOTO ERRTCD
IF NOT ERRORLEVEL 0 GOTO ERRTCD
ECHO Deletion of the temporary file %3\SD
DEL  %3\SD
REM ******************************************************
SET  PAC7SV=%3\SV
SET  PAC7AV=%3\AV
ECHO Execution: PTATCV
PTATCV
IF ERRORLEVEL 1 GOTO ERRTCV
IF NOT ERRORLEVEL 0 GOTO ERRTCV
ECHO Deletion of the temporary file %3\SV
DEL  %3\SV
REM ******************************************************
SET  PAC7SG=%3\SG
SET  PAC7AG=%3\AG
ECHO Execution: PTATCG
PTATCG
IF ERRORLEVEL 1 GOTO ERRTCG
IF NOT ERRORLEVEL 0 GOTO ERRTCG
ECHO Deletion of the temporary file %3\SG
DEL  %3\SG
REM ******************************************************
SET  PAC7TC=%6:%1\SAVE\%2\TC.NEW
SET  PAC7AD=%3\AD
SET  PAC7AG=%3\AG
SET  PAC7AV=%3\AV
```

```
ECHO Execution: PTATC2
PTATC2
IF ERRORLEVEL 1 GOTO ERRTC2
IF NOT ERRORLEVEL 0 GOTO ERRTC2
ECHO Deletion of the temporary files %3\AD, AG and AV
DEL  %3\AD
DEL  %3\AG
DEL  %3\AV
REM ********************************************************
ECHO End of procedure
ECHO .
ECHO Calling the file TCBACKUP.CMD
CALL %6:%1\SAVE\%2\TCBACKUP.CMD %6 %1 %2
GOTO END
REM ********************************************************
:ERRTC1
ECHO Error in executing PTATC1
GOTO ERR
:ERRTCD
ECHO Error in executing PTATCD
GOTO ERR
:ERRTCV
ECHO Error in executing PTATCV
GOTO ERR
:ERRTCG
ECHO Error in executing PTATCG
GOTO ERR
:ERRTC2
ECHO Error in executing PTATC2
:ERR
PAUSE
:END
ECHO ON
```

14. RESTORATION (RSTA)

14.1. INTRODUCTION

RESTORATION (RSTA): INTRODUCTION

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

EXECUTION CONDITION

On-line access 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 abnormal end, the procedure can be restarted as it is, after correcting the problem.

USER INPUT

None.

14.2. DESCRIPTION OF STEPS

RSTA: DESCRIPTION OF STEPS

RESTORATION OF TD: PTARSD

.Permanent output file:
 -Table-description file
    PAC7TD

.Permanent input file:
 -Table backup
    PAC7TC

RESTORATION OF TV: PTARSV

.Permanent output file:
 -Table-contents file
   PAC7TV

.Permanent input file:
 -Table backup
   PAC7TC

RESTORATION OF TG: PTARSG

.Permanent output file:
 -User parameter file
   PAC7TG

.Permanent input file:
 -Table backup
   PAC7TC

14.3. EXECUTION JCL

```
ECHO OFF
CLS
ECHO .
ECHO .
ECHO ******************************************************
ECHO *                   RSTA PROCEDURE
ECHO *                   ==============
ECHO *  Release (with \)                      : %1
ECHO *  Name of the Database                  : %2
ECHO *  Temporary file directory               : %3
ECHO *  Volume of ASSIGN and BATCH directories  : %4
ECHO *  Volume of INPUT directory              : %5
ECHO *  Volume of SAVE directory               : %6
ECHO ******************************************************
ECHO .
CALL %4:%1\BATCH\PROC\MSGPAUSE.CMD
ECHO .
REM ******************************************************
REM * Pactables : TABLE RESTORATION
REM ******************************************************
CALL %4:%1\ASSIGN\%2\PAC7TD.CMD
SET  PAC7TC=%6:%1\SAVE\%2\TC
ECHO Execution: PTARSD
PTARSD
IF ERRORLEVEL 1 GOTO ERRRSD
IF NOT ERRORLEVEL 0 GOTO ERRRSD
REM ******************************************************
CALL %4:%1\ASSIGN\%2\PAC7TV.CMD
SET  PAC7TC=%6:%1\SAVE\%2\TC
ECHO Execution: PTARSV
PTARSV
IF ERRORLEVEL 1 GOTO ERRRSV
IF NOT ERRORLEVEL 0 GOTO ERRRSV
REM ******************************************************
CALL %4:%1\ASSIGN\%2\PAC7TG.CMD
SET  PAC7TC=%6:%1\SAVE\%2\TC
ECHO Execution: PTARSG
PTARSG
IF ERRORLEVEL 1 GOTO ERRRSG
IF NOT ERRORLEVEL 0 GOTO ERRRSG
REM ******************************************************
ECHO End of procedure
GOTO END
REM ******************************************************
:ERRRSD
ECHO Error in executing PTARSD
GOTO ERR
:ERRRSV
ECHO Error in executing PTARSV
GOTO ERR
:ERRRSG
ECHO Error in executing PTARSG
:ERR
PAUSE
:END
ECHO ON
```

15. LIST OF TABLE DESCRIPTIONS (LDTA)

15.1. INTRODUCTION

LDTA: LIST OF TABLE DESCRIPTIONS

INTRODUCTION

This procedure prints table descriptions.

EXECUTION CONDITION

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

15.2. USER INPUT

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
9	6	tttttt	Table number
23	8	MMDDCCYY	Historical account date

NOTE:

The input transactions are not validated; erroneous requests are not taken into account.

15.3. DESCRIPTION OF STEPS

LDTA: DESCRIPTION OF STEPS

INPUT RECOGNITION: PTU001

TABLE-DESCRIPTION PRINTING: PTA290

```
.Permanent input file:
 -Table-description file
   PAC7TD

.Input transaction file:
 -Print request
   PAC7TE

.Output report:
 -Table-description printout
   PAC7ID
```

15.4. EXECUTION JCL

```
ECHO OFF
CLS
ECHO .
ECHO .
ECHO ******************************************************
ECHO *                   LDTA PROCEDURE
ECHO *                   ==============
ECHO *  Release (with \)                      : %1
ECHO *  Name of the Database                 : %2
ECHO *  Temporary file directory              : %3
ECHO *  Volume of ASSIGN and BATCH directories  : %4
ECHO *  Volume of INPUT directory             : %5
ECHO ******************************************************
ECHO .
CALL %4:%1\BATCH\PROC\MSGPAUSE.CMD
ECHO .
REM ******************************************************
REM * Pactables : LIST OF TABLE DESCRIPTIONS
REM ******************************************************
CALL %4:%1\ASSIGN\%2\PAC7TD.CMD
SET  PAC7TE=%5:%1\INPUT\%2\MBLDTA
SET  PAC7ID=%3\LDTAID.290
ECHO Execution: PTA290
PTA290
IF ERRORLEVEL 1 GOTO ERR290
IF NOT ERRORLEVEL 0 GOTO ERR290
REM ******************************************************
ECHO End of procedure
GOTO END
REM ******************************************************
:ERR290
ECHO Error in executing PTA290
PAUSE
:END
ECHO ON
```

16. PARAMETER UPDATE (PMTA)

16.1. INTRODUCTION

PMTA: USER PARAMETER UPDATE

INTRODUCTION

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

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 material in use allows Batch/TP concurrency.

16.2. USER INPUT

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
		'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 this code is not authorized.

16.3. DESCRIPTION OF STEPS

PMTA: DESCRIPTION OF STEPS

INPUT RECOGNITION: PTU001

PARAMETER UPDATE: PTA100

.Permanent input files:
 -Table-description file
   PAC7TD
 -Error-message file
   PAC7TE

.Permanent input-output file:
 -User parameter file
   PAC7TG

.Input transaction file:
 -Extraction requests
   PAC7MV

.Output file:
 -Parameter printing requests
   PAC7NU

.Output report:
 -Printing of descriptions
    PAC7ET

PRINTING OF USER PARAMETERS: PTA120

.Permanent input files:
 -Table description file
   PAC7TD
 -User parameter file
   PAC7TG

.Input transaction file:
 -Print requests
   PAC7NU

.Output report:
 -Printing of user parameters
   PAC7ET

16.4. EXECUTION JCL

```
ECHO OFF
CLS
ECHO .
ECHO .
ECHO ******************************************************
ECHO *                   PMTA PROCEDURE
ECHO *                   ==============
ECHO *  Release (with \)                      : %1
ECHO *  Name of the Database                  : %2
ECHO *  Temporary file directory              : %3
ECHO *  Volume of ASSIGN and BATCH directories  : %4
ECHO *  Volume of INPUT directory             : %5
ECHO ******************************************************
ECHO .
CALL %4:%1\BATCH\PROC\MSGPAUSE.CMD
ECHO .
REM ******************************************************
REM * Pactables : USER PARAMETER UPDATING
REM ******************************************************
CALL %4:%1\ASSIGN\%2\PAC7TD.CMD
CALL %4:%1\ASSIGN\%2\PAC7TE.CMD
CALL %4:%1\ASSIGN\%2\PAC7TG.CMD
SET  PAC7MV=%5:%1\INPUT\%2\MBPMTA
SET  PAC7NU=%3\NU
SET  PAC7ET=%3\PMTAET.100
ECHO Execution: PTA100
PTA100
IF ERRORLEVEL 1 GOTO ERR100
IF NOT ERRORLEVEL 0 GOTO ERR100
REM ******************************************************
CALL %4:%1\ASSIGN\%2\PAC7TD.CMD
CALL %4:%1\ASSIGN\%2\PAC7TG.CMD
SET  PAC7NU=%3\NU
SET  PAC7ET=%3\PMTAET.120
ECHO Execution: PTA120
PTA120
IF ERRORLEVEL 1 GOTO ERR120
IF NOT ERRORLEVEL 0 GOTO ERR120
REM ******************************************************
ECHO End of procedure
ECHO .
ECHO Deletion of the temporary file NU
DEL  %3\NU
GOTO END
REM ******************************************************
:ERR100
ECHO Error in executing PTA100
GOTO ERR
:ERR120
ECHO Error in executing PTA120
:ERR
PAUSE
:END
ECHO ON
```

17. TABLE EXTRACTION (EXTA)

17.1. INTRODUCTION

EXTA: TABLE EXTRACTION

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.

17.2. USER INPUT

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	tttttt	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	'/'

17.3. DESCRIPTION OF STEPS

EXTA: DESCRIPTION OF STEPS

INPUT RECOGNITION: PTU001

EXTRACTION OF TABLE DATA: PTA150

```
.Permanent input files:
 -Table-description file
   PAC7TD
 -Error message file
   PAC7TE
 -Table contents file
   PAC7TV
 -User parameter file
   PAC7TG

.Input transaction file:
 -Extraction requests
   PAC7MV

.Output file:
 -Extracted transactions
   PAC7EX

.Output report:
 -Transaction review
   PAC7ET
```

PRINTING OF EXTRACTED TRANSACTIONS: PTA160

```
.Permanent input file:
 -Table description file
   PAC7TD

.Input transaction file:
 -Extracted transactions
   PAC7EX

.Output report:
 -Printing of extracted data
   PAC7ET

.Output file:
 -Extracted transactions
   PAC7NU

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

17.4. EXECUTION JCL

```
ECHO OFF
CLS
ECHO .
ECHO .
ECHO ******************************************************
ECHO *                   EXTA PROCEDURE
ECHO *                   ==============
ECHO *  Release (with \)                      : %1
ECHO *  Name of the Database                  : %2
ECHO *  Temporary file directory               : %3
ECHO *  Volume of ASSIGN and BATCH directories  : %4
ECHO *  Volume of INPUT directory              : %5
ECHO ******************************************************
ECHO .
CALL %4:%1\BATCH\PROC\MSGPAUSE.CMD
ECHO .
REM ******************************************************
REM * Pactables : TABLE EXTRACTION
REM ******************************************************
CALL %4:%1\ASSIGN\%2\PAC7TD.CMD
CALL %4:%1\ASSIGN\%2\PAC7TE.CMD
CALL %4:%1\ASSIGN\%2\PAC7TV.CMD
CALL %4:%1\ASSIGN\%2\PAC7TG.CMD
SET  PAC7MV=%5:%1\INPUT\%2\MBEXTA
SET  PAC7EX=%3\EX
SET  PAC7ET=%3\EXTAET.150
ECHO Execution: PTA150
PTA150
IF ERRORLEVEL 1 GOTO ERR150
IF NOT ERRORLEVEL 0 GOTO ERR150
REM ******************************************************
SET  COBSW=\B2
CALL %4:%1\ASSIGN\%2\PAC7TD.CMD
SET  PAC7EX=%3\EX
SET  PAC7NU=%5:%1\INPUT\%2\MVEXTA
SET  PAC7ET=%3\EXTAET.160
ECHO Execution: PTA160
PTA160
IF ERRORLEVEL 1 GOTO ERR160
IF NOT ERRORLEVEL 0 GOTO ERR160
REM ******************************************************
ECHO End of procedure
ECHO .
ECHO Deletion of the temporary file EX
DEL  %3\EX
GOTO END
REM ******************************************************
:ERR150
ECHO Error in executing PTA150
GOTO ERR
:ERR160
ECHO Error in executing PTA160
:ERR
PAUSE
:END
ECHO ON
```

18. DIRECT CONSULTATION OF TABLES (TUTA)

18.1. INTRODUCTION

TUTA: DIRECT CONSULTATION OF TABLES

INTRODUCTION

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

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.

18.2. USER INPUT

USER INPUT

.One '*'-type line :

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	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.

18.3. DESCRIPTION OF STEPS

TUTA: DESCRIPTION OF STEPS

INPUT RECOGNITION: PTU001

DIRECT CONSULTATION OF TABLES: PTAU80

```
.Permanent input files:
 -Table-description file
    PAC7TD
 -Error-message file
    PAC7TE
 -Table-contents file
    PAC7TV
 -User-parameter file
    PAC7TG

.Input transaction file:
 -Request transactions
    PAC7MX

.Permanent output files:
 -Table-description file
    PAC7AD
 -Table-contents file
    PAC7AV

.Output report:
 -Transaction report
```

18.4. EXECUTION JCL

```
ECHO OFF
CLS
ECHO .
ECHO .
ECHO ******************************************************
ECHO *                   TUTA PROCEDURE
ECHO *                   ==============
ECHO *  Release (with \)                      : %1
ECHO *  Name of the Database                  : %2
ECHO *  Temporary file directory               : %3
ECHO *  Volume of ASSIGN and BATCH directories  : %4
ECHO *  Volume of INPUT directory              : %5
ECHO ******************************************************
ECHO .
CALL %4:%1\BATCH\PROC\MSGPAUSE.CMD
ECHO .
REM ******************************************************
REM * Pactables : TABLE PRODUCTION TURNOVER
REM ******************************************************
SET  COBSW=\B2
CALL %4:%1\ASSIGN\%2\PAC7TD.CMD
CALL %4:%1\ASSIGN\%2\PAC7TE.CMD
CALL %4:%1\ASSIGN\%2\PAC7TV.CMD
CALL %4:%1\ASSIGN\%2\PAC7TG.CMD
SET  PAC7MX=%5:%1\INPUT\%2\MBTUTA
CALL %4:%1\ASSIGN\%2\PAC7AD.CMD
CALL %4:%1\ASSIGN\%2\PAC7AV.CMD
SET  PAC7ET=%3\TUTAET.U80
ECHO Execution: PTAU80
PTAU80
IF ERRORLEVEL 1 GOTO ERRU80
IF NOT ERRORLEVEL 0 GOTO ERRU80
REM ******************************************************
ECHO End of procedure
GOTO END
REM ******************************************************
:ERRU80
ECHO Error in executing PTAU80
PAUSE
:END
ECHO ON
```

19. DISPATCHED TABLE MANAGEMENT (DTM OPTION)

19.1. TABLE DESCRIPTION COMPARISON (CDT1-CDT2)

DISPATCHED TABLE MANAGER (DTM)

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.

19.2. USER INPUT (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	tttttt	Table number

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

19.3. DESCRIPTION OF STEPS (CDT1)

CDT1: DESCRIPTION OF STEPS

INPUT RECOGNITION: PTU001

CHECK OF TRANSACTIONS: PTAD05

.Permanent input files:
 -'Master' table-description file
   PAC7TD
 -Error-message file
   PAC7TE
 -User-parameter file
   PAC7TG

.Input transaction file:
 -Comparison request transactions
   PAC7MV

.Output file:
 -Validated comparison request transactions
   PAC7MX

.Output report:
 -Transaction report
   PAC7ET

TABLE-DESCRIPTION COMPARISON AND EXTRACTION: PTAD10

.Permanent input files:
 -'Master' table-description file
   PAC7TD
 -Error message file
   PAC7TE
 -'Slave' table-description file
   PAC7TS

.Input transaction file:
 -Validated transactions
   PAC7MX

.Output file:
 -Comparison result to be used as input of
  the CDT2 procedure
   PAC7TX

.Output report:
 -Extraction printout
   PAC7ET

19.4. EXECUTION JCL (CDT1)

```
ECHO OFF
CLS
ECHO .
ECHO .
ECHO ******************************************************
ECHO *                   CDT1 PROCEDURE
ECHO *                   ==============
ECHO *  Please note the specific parameters
ECHO *  ---------------------------------
ECHO *  Release (with \)                      : %1
ECHO *  Name of the 'master' Database         : %2
ECHO *  Temporary file directory               : %3
ECHO *  Volume of ASSIGN and BATCH directories  : %4
ECHO *  Volume of INPUT directory              : %5
ECHO *  'Slave' file directory                 : %6
ECHO ******************************************************
ECHO .
CALL %4:%1\BATCH\PROC\MSGPAUSE.CMD
ECHO .
REM ******************************************************
REM * Pactables : DISPATCHED TABLE MANAGEMENT
REM *             TABLE DESCRIPTION COMPARISON
REM ******************************************************
SET  COBSW=\B2
CALL %4:%1\ASSIGN\%2\PAC7TD.CMD
CALL %4:%1\ASSIGN\%2\PAC7TE.CMD
CALL %4:%1\ASSIGN\%2\PAC7TG.CMD
SET  PAC7MV=%5:%1\INPUT\%2\MBCDT1
SET  PAC7MX=%3\MX
SET  PAC7ET=%3\CDT1ET.D05
ECHO Execution: PTAD05
PTAD05
IF ERRORLEVEL 1 GOTO ERRD05
IF NOT ERRORLEVEL 0 GOTO ERRD05
REM ******************************************************
CALL %4:%1\ASSIGN\%2\PAC7TD.CMD
CALL %4:%1\ASSIGN\%2\PAC7TE.CMD
SET  PAC7TS=%6\TD
SET  PAC7MX=%3\MX
SET  PAC7TX=%5:%1\INPUT\%2\MBCDT2
SET  PAC7ET=%3\CDT1ET.D10
ECHO Execution: PTAD10
PTAD10
IF ERRORLEVEL 1 GOTO ERRD10
IF NOT ERRORLEVEL 0 GOTO ERRD10
REM ******************************************************
ECHO End of procedure
ECHO .
ECHO Deletion of the temporary file MX
DEL  %3\MX
GOTO END
REM ******************************************************
:ERRD05
ECHO Error in executing PTAD05
GOTO ERR
:ERRD10
ECHO Error in executing PTAD10
:ERR
PAUSE
:END
ECHO ON
```

19.5. DESCRIPTION OF STEPS (CDT2)

CDT2: DESCRIPTION OF STEPS

UPDATE OF 'SLAVE' FILES, TABLE-DESCRIPTIONS AND
RECOGNITION OF THE FILE EXTRACTED BY CDT1: PTAD20

```
.Input files:
 -'Slave' file of table-descriptions
   PAC7TD
 -Error-message file
   PAC7TE

.Output file:
 -File of table-contents associated to the
  'slave' table-description file
   PAC7TV

.Input transaction file:
 -Result extracted from comparison in the
  CDT1 procedure
   PAC7TX

.Output report:
 -Update report
    PAC7ET
```

19.6. EXECUTION JCL (CDT2)

```
ECHO OFF
CLS
ECHO .
ECHO .
ECHO ******************************************************
ECHO *                   CDT2 PROCEDURE
ECHO *                   ==============
ECHO *  Please note the specific parameters
ECHO *  ----------------------------------
ECHO *  Release (with \)                       : %1
ECHO *  Name of the 'master' Database          : %2
ECHO *  Temporary file directory               : %3
ECHO *  Volume of ASSIGN and BATCH directories  : %4
ECHO *  Volume of INPUT directory              : %5
ECHO *  'Slave' file directory                 : %6
ECHO ******************************************************
ECHO .
CALL %4:%1\BATCH\PROC\MSGPAUSE.CMD
ECHO .
REM *******************************************************
REM * Pactables : DISPATCHED TABLE MANAGEMENT
REM *             TABLE DESCRIPTION UPDATE
REM *******************************************************
SET  COBSW=\B2
CALL %4:%1\ASSIGN\%2\PAC7TE.CMD
SET  PAC7TD=%6\TD
SET  PAC7TV=%6\TV
SET  PAC7TX=%5:%1\INPUT\%2\MBCDT2
SET  PAC7ET=%3\CDT2ET.D20
ECHO Execution: PTAD20
PTAD20
IF ERRORLEVEL 1 GOTO ERRD20
IF NOT ERRORLEVEL 0 GOTO ERRD20
REM *******************************************************
ECHO End of procedure
GOTO END
REM *******************************************************
:ERRD20
ECHO Error in executing PTAD20
PAUSE
:END
ECHO ON
```

19.7. TABLE CONTENTS UPDATE (CVTA)

CVTA: COMPARISON AND UPDATING OF TABLE CONTENTS

INTRODUCTION

The CVTA procedure extracts table 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.

19.8. USER INPUT (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 table contents to which the user ('*'-line) has access can be extracted.

19.9. DESCRIPTION OF STEPS (CVTA)

CVTA: DESCRIPTION OF STEPS

INPUT RECOGNITION: PTU001

TABLE-CONTENTS COMPARISON: PTAV10

```
.Permanent input files:
-Table-description file
   PAC7TD
-Error-message file
   PAC7TE
-Table-contents file
   PAC7TV
-User-parameter file
   PAC7TG

.Input transaction file:
-Comparison requests
   PAC7MV

.Output file:
-Comparison result
   PAC7EX

.Output report:
 -Transaction report
    PAC7ET
```

EXTRACTION OF UPDATE TRANSACTIONS: PTAV20

```
.Permanent input file:
-Table-Description file
   PAC7TD

.Input transaction file:
-Comparison result
   PAC7EX

.Output file:
-Update transactions for use as
 input of UPTA)
   PAC7NU

.Output report:
 -Printing of extracted transactions
   PAC7ET
```

19.10. EXECUTION JCL (CVTA)

```
ECHO OFF
CLS
ECHO .
ECHO .
ECHO ******************************************************
ECHO *                   CVTA PROCEDURE
ECHO *                   ==============
ECHO *  Release (with \)                      : %1
ECHO *  Name of the Database                 : %2
ECHO *  Temporary file directory              : %3
ECHO *  Volume of ASSIGN and BATCH directories  : %4
ECHO *  Volume of INPUT directory             : %5
ECHO ******************************************************
ECHO .
CALL %4:%1\BATCH\PROC\MSGPAUSE.CMD
ECHO .
REM ******************************************************
REM * Pactables : DISPATCHED TABLE MANAGEMENT
REM *             TABLE CONTENTS COMPARISON
REM ******************************************************
CALL %4:%1\ASSIGN\%2\PAC7TD.CMD
CALL %4:%1\ASSIGN\%2\PAC7TE.CMD
CALL %4:%1\ASSIGN\%2\PAC7TV.CMD
CALL %4:%1\ASSIGN\%2\PAC7TG.CMD
SET  PAC7MV=%5:%1\INPUT\%2\MBCVTA
SET  PAC7EX=%3\EX
SET  PAC7ET=%3\CVTAET.V10
ECHO Execution: PTAV10
PTAV10
IF ERRORLEVEL 1 GOTO ERRV10
IF NOT ERRORLEVEL 0 GOTO ERRV10
REM ******************************************************
SET  COBSW=\B2
CALL %4:%1\ASSIGN\%2\PAC7TD.CMD
SET  PAC7EX=%3\EX
SET  PAC7NU=%5:%1\INPUT\%2\MVCVTA
SET  PAC7ET=%3\CVTAET.V20
ECHO Execution: PTAV20
PTAV20
IF ERRORLEVEL 1 GOTO ERRV20
IF NOT ERRORLEVEL 0 GOTO ERRV20
REM ******************************************************
ECHO End of procedure
ECHO .
ECHO Deletion of the temporary file EX
DEL  %3\EX
GOTO END
REM ******************************************************
:ERRV10
ECHO Error in executing PTAV10
GOTO ERR
:ERRV20
ECHO Error in executing PTAV20
:ERR
PAUSE
:END
ECHO ON
```

20. TABLE RETRIEVAL FROM RELEASES 8.xx OR 1.2

20.1. INTRODUCTION

RETRIEVAL OF PACTABLES 8.xx OR 1.2 (RTTA) : INTRODUCTION

The RTTA procedure retrieves Pactables files from releases 8.xx and 1.2, making it possible to use the resulting files in Pactables Rel. 2.5.

It creates a Pactables database in which all information of the 'DATE' type used for the management of the database's files are converted from the DDMMYY format into the DDMMCCYY format, or from the YYMMDD format into the CCYYMMDD format, so as to integrate the century mark.

Depending on the years present in the dates of the 8.xx or 1.2 release, the century digits are added by reference to a 'pivot' year specified on a parameter line provided as input to the procedure.

The procedure's test job is delivered with the default 'pivot' year '61' (which can be changed). This means that, for a date in Rel. 1.2 whose year is less than '61', the value '20' is assigned to the century. If the year is higher than 61, the value assigned to the century is '19'.

The retrieval procedure processes only those internal dates useful to the management of the Pactables Database files, and not those belonging to user-specific data.

The retrieval of Pactables 8.xx or 1.2 includes the following steps:

. Backup in 8.xx or 1.2 format (SVTA procedure) of the TD, TV, and TG files of Release 8.xx or 1.2;

. Retrieval in 2.5 format (RTTA procedure) of the backup produced by the preceding step, so as to produce a 2.5 backup file;

. Restoration in the 2.5 format (RSTA procedure) of the database, from the backup produced by the preceding step;

. Assignment of the Administrator access level to the Database Manager '********' (PMTA).

. Execution of the 2.5 reorganization procedure (RETA), using the restored Database, in order to purge it, and to assign the sign + to data signed positive (sign missing from release 7.3), for the purpose of user programs written in Cobol II;

. Second execution of the 2.5 restoration procedure (RSTA) on the Database, using the backup produced by the preceding step.

RESULT

Pactables files ready to be used in Release 2.5.

20.2. RTTA : USER INPUT

USER INPUT

. Parameter line defining the 'pivot' year for century assignment.

Pos.	Len.	Value	Meaning
1	2	Number other than '00'	Pivot year

20.3. RTTA : DESCRIPTION OF STEPS

RTTA: DESCRIPTION OF STEPS

BACKUP RETRIEVAL: PTAR20

```
.Permanent input file:
 -1.2 backup file
    PAC7TC

.Permanent output file:
 -Temporary backup, rel. 2.5
    PAC7TR

.Input file:
 -user parameter line
    PAC7MB

.Output report:
 -Retrieval report
    PAC7ET
```

20.4. RTTA : EXECUTION JCL

```
ECHO OFF
CLS
ECHO .
ECHO .
ECHO ******************************************************
ECHO *                   RTTA PROCEDURE
ECHO *                   ==============
ECHO *  Release (with \)                      : %1
ECHO *  Name of the Database                 : %2
ECHO *  Temporary file directory              : %3
ECHO *  Volume of ASSIGN and BATCH directories  : %4
ECHO *  Volume of INPUT directory             : %5
ECHO *  Volume of SAVE directory              : %6
ECHO ******************************************************
ECHO .
CALL %4:%1\BATCH\PROC\MSGPAUSE.CMD
ECHO .
REM ******************************************************
REM * Pactables : RETRIEVAL OF A TABLES DATABASE 8.XX OR 1.2
REM ******************************************************
SET  PAC7TC=%6:%1\SAVE\%2\TC
SET  PAC7TR=%6:%1\SAVE\%2\TC.NEW
SET  PAC7MB=%5:%1\INPUT\%2\MBRTTA
SET  PAC7ET=%3\RTTAET.R20
ECHO Execution: PTAR20
PTAR20
IF ERRORLEVEL 1 GOTO ERRR20
IF NOT ERRORLEVEL 0 GOTO ERRR20
REM ******************************************************
ECHO End of procedure
ECHO .
ECHO Calling the file TCBACKUP.CMD
CALL %6:%1\SAVE\%2\TCBACKUP.CMD %6 %1 %2
GOTO END
REM ******************************************************
:ERRR20
ECHO Error in executing PTAR20
GOTO ERR
:ERR
PAUSE
:END
ECHO ON
```

21. COMPATIBILITY BETWEEN PACTABLES 2.5 AND VA PAC 1.6

COMPATIBILITY BETWEEN PACTABLES 2.5 and VA Pac 1.6

If you use Pactables 2.5 and generate table descriptions of VisualAge Pacbase from version 1.6 and higher versions (or from a former version), you need using the GETA, GETD, and GETI procedures that are supplied with the Pactables 2.5 installation tape, instead of the GETA, GETD, AND GETI procedures supplied with VisualAge Pacbase as they are not compatible with Pactables 2.5.

22. INSTALLATION

22.1. INTRODUCTION

INTRODUCTION

INSTALLATION TAPE

The installation tape contains a set of VisualAge products including the Pactables facility. The installation procedure allows, after selecting the Pactables facility, to install the Pactables servers and user workstations under Windows.

INSTALLATION PROCESS

The installation procedure includes five main steps.

. Preparing the installation,
. Installing the Pactables server(s),
. Installing the TUF-TP macro-structures,
. Installing the workstations,
. Installation tests.

PREPARING THE INSTALLATION

Before proceeding with the installation, the user must know the Pactables System's technical characteristics in order to be able to choose the values of the parameters required for the installation procedure.
Refer to Chapter 'ENVIRONMENT'.

The user must also define the resources required on the Local Network.
Refer to subchapter 'CREATION OF NETWORK RESOURCES'.

INSTALLATION

Refer to the following Subchapters:

. Installing servers
. Installing Paclink-emulated workstations

INSTALLATION TESTS

. On-line tests.
. Batch procedures tests.

Refer to subchapter 'USE TESTS' in this chapter.

22.2. CREATION OF NETWORK RESSOURCES

CREATION OF NETWORK RESOURCES

COMMUNICATION BETWEEN SERVERS AND WORKSTATIONS

The interface of communication between the workstations and the on-line servers is based on the TCP/IP network protocol.

Besides the installation, the implementation of TCP/IP requires the configuration of basic files:

. the 'hosts' file of each workstation must contain the IP address of the Pactables server with which communication is established.

The 'ping' command allows to check whether the TCP/IP network is in working order. If this is the case, the Pactables server and workstation will be able to communicate via the 'socket' interface.

```
On a Windows NT machine, the 'hosts' file is installed under the
directory:      C:\WINNT\SYSTEM32\DRIVERS\ETC
```

(supposing that C:\WINNT is the Windows NT installation directory).

```
On an OS/2 machine, the 'hosts' file is installed under the
directory:      C:\MPTN\ETC
```

(supposing that C:\MPTN is the OS/2 installation directory).

Example of 'hosts' file on the VA Pac server:

```
       192.54.9.40       VA Pac         \ server
       192.54.9.23       station 1      \ client station 1
       192.47.5.62       station 2      \ client station 2
       ...
```

GENERATION-PRINT OUTPUTS OF THE BATCH SERVER

When a workstation submits a generation-print request on-line, the request is processed by the batch server which creates the output files under the 'Release'\USERS directory.

These generation-print results can be retrieved by the user in different ways:

. by defining a resource shared on the local network,

. by using the TCP/IP File Transfer Protocol (FTP).

For more details, refer to the WINDOWS NT documentation.

22.3. INSTALLATION OF THE FIRST PACTABLES SERVER

INSTALLATION OF THE FIRST PACTABLES SERVER

1) START-UP OF THE INSTALLATION PROGRAM

After the insertion of the CD-ROM, the SETUP executable program located under the Windows directory is started up. A first dialog box allows the user to choose the installation language. A second box displays the list of the VisualAge Pacbase products available on the CD-ROM and allows to select the Pactables product.

Proceed with the installation by making the following selections:

- Type of installation :
. First server
. additional server
. Initialization of a new databse.

- Root of the installation :

Name of the disk drive (unit) and the directoryselected for the installation of Pactables.
If a former release of Pactables is detected under this directory, a reinstallation is proposed (see below).
The installation root directory is sometimes mentioned in this chapter under the name 'Release'.

- Distribution of the disk drives available:

The directory tree structure created under the root selected previously is a tree structure with fixed names. Only the volume (disk) can be parameterized. If the unit proposed by default is not satisfactory , you may go back to the previous choice. Refer to chapter 'DESCRIPTION OF THE CREATED DIRECTORIES' for the exhaustive list of all the files included in each directory and their location.

- Name of the Pactables database:

- Location of the TD file:

Refer to the end of subchapter 'User Files' in chapter PACTABLES COMPONENTS.

- On-line server socket number:

The installation requires a socket number which is used to establish the communication between the on-line server and the Paclink dumb terminal. A program group is created. It contains the icons starting up the servers (Batch, on-line), two Paclink icons (developer and administrator) and the on-line server monitor icon.

The procedure also creates:

. command files which contain the assignment of the database files and generation skeletons in the ASSIGN\'db_name' directory.

. a command file named TAPR'db_name'.CMD under the batch procedure directory, to automate the batch procedures start-up.

. a TE file, a TC test file, transaction files for batch procedures and the TOK.VER file.

Notes

1. 'release' parameter

If VisualAge Pacbase (or/or DSMS) is already installed, Pactables can be installed using the same 'release' parameter or a different one for each product.

3) LOADING OF PACTABLES TEST DATABASE

The installation procedure then proposes to initialize the Pactables database by executing the PROCRSTA.CMD procedure.

Located under the batch procedures directory, PROCRSTA.CMD enables the user to install the test database. This procedure uses a TC Database backup file (copied by INSTALL1.CMD under the directory SAVE\ 'db_name'). It creates the indexed files (TD, TV and TG) making up the Database which can be accessed on-line.

If you choose not to initialize the Pactables database at installation, the PROCRSTA.CMD procedure will have to be executed then, in order to have an operational environment.
The GOINST2.CMD procedure, located in the 'Release'\INSTALL directory, allows to start up the RSTA procedure via the TAPR'db_name'.CMD utility.

It is possible (even advised) to use the TAPR'db_name'.CMD file, created by the installation procedures under the directory 'Release' \BATCH\PROC, in order to start up the execution of RSTA. For a detailed description of this file, refer to Chapter 'BATCH PROCEDURES', Subchapter 'SUBMISSION OF PROCEDURES'.

The installation procedure (SETUP) is finished.

2) MODIFICATION OF THE SERVER PATH

The next step consists in modifying the Pactables server PATH variable to add the batch and on-line programs' paths, i.e. 'release'\TP\PGM and 'release'\BATCH\PGM.

```
ex. : C:\TABLE\TP\PGM;C:\TABLE\BATCH\PGM;
```

This PATH can be modified:

. in the AUTOEXEC.BAT file: the modification is effective whatever user starts a Windows/NT session on the Pactables server.

. in the system parameters of Windows/NT users which installs Pactables: in the Main Group, open the Control Panel, then the System folder. Add or modify the 'PATH=' line of the system environment variables. To do this, you must be connected as the Windows/NT administrator. This modification is then effective whatever user starts a Windows/NT session on the Pactables server.

. in the user parameters of Windows/NT users. You must be connected with the Windows/NT user name under which he/she wants to use Pactables. The PATH variable to be added or modified is a user environment variable. The modification is effective for this user only.

22.4. INSTALLATION OF ADDITIONAL PACTABLES SERVERS

INSTALLATION OF ADDITIONAL SERVERS ON ANOTHER COMPUTER

When the choice 'additional server' is checked, all the programs required for the server execution can be copied on another micro-computer.

This procedure creates the directories intended to receive the batch and on-line programs, the directory intended to receive the database assignment files and the temporary files directory. This procedure copies all the programs and procedures, as well as the TPARAM file. Then, it creates the assignment files of the Database files and the TAPR'db_name'.CMD file to submit Pactables batch procedures.

MODIFICATION OF THE SERVER PATH

The next step consists in modifying the server PATH variable to add the access paths to the on-line and batch programs, that is 'releasse'\TP\PGM and 'release'\BATCH\PGM, respectively.

Refer to the installation of the first Pactables server for all the details.

22.5. INSTALLATION OF TUF-TP MACRO-STRUCTURES

INSTALLATION OF TUF-TP MACRO-STRUCTURES

In order to operate, the TUF-TP facility requires macro-structures to be incorporated in VisualAge Pacbase.

These macro-structures are supplied at installation under the directory of method files ('release'\METHOD), in the MBUPDT.TUF file.

These are batch transactions intended to be entered in the VA Pac database by the PROCUPDT batch update procedure.

The PROCUPDT batch procedure takes its input transactions in a MBUPDT file located under the 'release"\INPUT\"db_name directory.

The supplied file must be copied under the method directory, in MBUPDT under the 'release'\INPUT\'db_name directory.

Once the library which should host these entities has been selected, the MBUPDT file must be modified under the editor by entering a value in the user line (* line) first in the transactions and the UPDT procedure must then be executed.

22.6. INSTALLATION OF PACLINK-EMULATED WORKSTATIONS

INSTALLATION OF PACLINK-EMULATED WORKSTATIONS

All the files required for the 'dumb' terminal workstations are copied under the PACLINK directory of the installation root when installing the first server. Two icons created in the Pactables installation program group allow to start up the Paclink Administrator and Paclink Developer respectively.
To install this workstation on a WINDOWS PC, these files must be copied onto the workstation used as a dumb terminal, and the GSWINNT.PRM and PACLINK.PRM files must be modified as described below.
These files can also be found directly on the CD- ROM, in the PT250WNT.Vxx\DATA\PACLINK directory. According to the language used (FRA for French or ENG for English), these files are respectively located in the DATA\PACLINK\FRA and DATA\PACLINK\ENG directories.

For more details about the operation mode of this terminal, refer to the 'COMMUNICATIONS MANAGER and PACLINK UTILITY' Manual.

UPDATE OF PARAMETERS FILES

Two parameters files must be modified:

GSWINNT.PRM

Specify the following elements to the GSTCPIP.EXE Communications Manager:

1. the name of the server (ex.: PACNT),
2. the on-line server socket number (ex.: 7000),
2. the application used (TABLES to access Pactables, TABPARM to access the user parameter transaction),
2. the TRACE file (optional).

```
P0 PACNT
P2 7000
P7 TABLES
SA C:\PACTABLE\SAVE.TXT
D0 0 0 0 0 1 1 1 C:\PACTABLE\GSPAC.DEB
```

The other lines do not need updating.

PACLINK.PRM

Specify the disk drive and directory where GSTCPIP.EXE ('G' line) and GSWINNT.PRM ('E' line) are installed.

```
Example : G C:\PACBASE\PACLINK\GSTCPIP.EXE
          E C:\PACBASE\PACLINK\GSWINNT.PRM
```

CREATION OF A WINDOWS ICON

In a group of your choice, create a program: 'File' menu, 'new...' choice.
The command line of this program must contain the complete access path to the PACLINK.EXE file, separated by a blank from the complete access path to the PACLINK.PRM file.

```
Example : C:\PACLINK\PACLINK\PACLINK.EXE C:\PACLINK\PACLI
NK\PACLINK.PRM
```

22.7. DESCRIPTION OF CREATED DIRECTORIES

DESCRIPTION OF CREATED DIRECTORIES

The installation of the VA PAC servers creates a directory tree under the 'Release' root directory present in each volume in use (volumes 1 à 5 represent the volume specified at installation time).

```
'Release'
    !
    !--- TPARAM
    !    TOK.VER
    !
    !               +----  PROC
    !--- TP    -----!
    !               +----  PGM
    !
    !               +----  PROC
    !--- BATCH -----!                          VOLUME 1
    !               +----  PGM
    !
    !               +---- 'db1_name'
    !--- ASSIGN ----!
    !               +---- 'db2_name'
    !
    !--- PACLINK
    !                                - - - - - - - - - - -
    !               +---- 'db1_name'
    !--- BASES -----!                          VOLUME 2
    !               +---- 'db2_name'
    !
    !                                - - - - - - - - - - -
    !               +---- 'db1_name'
    !--- SAVE ------!                          VOLUME 3
    !               +---- 'db2_name'
    !
    !                                - - - - - - - - - - -
    !               +---- 'db1_name'
    !--- INPUT -----!                          VOLUME 4
    !               +---- 'db2_name'
    !
    !--- METHOD
    !
    !--- COMMUN
    !               +---- 'User1'
    !               !                          VOLUME 5
    !--- USERS -----+---- 'User2'
    !               !
    !               !----  ...
```

PACTABLES SERVERS DIRECTORIES

These directories are created by the installation program provided on the CD-ROM.

The 'Release' directory

The TPARAM file, containing the assignments of files required for the operation of the batch server is installed under the installation's root directory called 'Release'.

The TOK.VER file, containing the technical package, hardware and number of

the installed version, is also located under this directory.

The 'Release'\TP directory

This directory contains all Transactional Processing (TP) programs ('Release'\TP\PGM) and procedures ('Release'\TP\PROC).

The PGM sub-directory includes the TP monitor (TAR00.EXE) which allows the operation of the Pactables on-line server and the monitor which allows the management of user parameters (TAPAR.EXE).

The PROC directory contains the start-up procedures of the TP server and user parameters transaction, as well as a shutdown procedure of the TP server.

```
TP  +---  PGM   --- Pactables programs
    !               TAR00
    !               TAPAR
    !
    +---  PROC  --- PROCTATP
                    STOPTATP
                    INFOTATP
                    PURGTATP
```

The 'Release'\BATCH directory

This directory contains all batch programs ('Release'\BATCH\PGM) and procedures ('Release'\BATCH\PROC).

The PGM sub-directory contains the batch monitor (TAB00) and the PURTAB00 program which is used to purge the jobs abended (execution problems) or on the contrary the jobs submitted and ended during the current session.

```
BATCH    +---  PGM   --- Pactables programs
         !               TAB00
         !
         +---  PROC  --- Pactables procedures
                         PROCTBAT
                         STOPTABA
                         TAPR'db_name'
```

All TP and batch procedures are described in this manual.

The 'Release'\METHOD directory

This directory contains the VA Pac update transactions for Macro-structures required by the TUF-TP facility.

The 'Release'\ASSIGN\'db_name' directory

The ASSIGN directory includes a subdirectory for each installed database. Each subdirectory includes all the command files which contain the assignment of the files located in standard in the 'Release'\BASES and 'Release'\BASES\'db_name' directories.
These command files are called PAC7TE.CMD, PAC7TD.CMD, ... These files are created by the installation procedure.

VA PAC DATABASES DIRECTORIES

These directories contain as many subdirectories as specification Databases, each subdirectory having the name of the corresponding Database.

The 'Release'\BASES directory

This directory contains the TE error message file which can be used by the different databases installed.

The 'Release'\BASES\'db_name'

The BASES directory has a subdirectory for each installed Database. These subdirectories contain: the indexed files that make up the Database (TV and TG), except the Table descriptions file (TD) located preferably with the VA Pac Specifications Database.

The 'Release'\SAVE\'db_name'

The SAVE directory has a subdirectory for each installed database which contains the sequential backup of the database (TC).

Also included in this directory are the command files that ensure a shift on two versions of the database sequential backup (TCBACKUP.CMD file).

the 'Release'\INPUT\'db_name'

The INPUT directory has a subdirectory for each installed Database which contains all the transaction files used as input to the batch procedures (MBPRTA, MBLDTA, MBRETA, ...) as well as all the transactions created by the extraction utilities, coded MVxxxx (MVEXTA, MVCVTA, ...).

THE SHARED DIRECTORIES

These directories are common to all Databases and are created by the installation procedure.

The 'Release'\COMMUN directory

This directory contains the TLB and TBD batch communication files.

The TLB file stores the batch requests contents, the TBD file shows the status of these requests.

The batch communication files (TLB and TBD) are prefixed with the name of the Database to which the server is connected (TEST in the above example).

The 'Release'\USERS directory

The USERS directory contains the output of jobs submitted from the LE screen (generation-print submitted on-line). It has n subdirectories, one for each user.

```
example :     USERS    +---  JOHN  --- nnnnn.INP
                        !               nnnnn.STA
                        !               nnnnn.TAB
                        !               etc
                        !---  PETER --- ppppp.INP
                        !               etc
```

where nnnnn (resp. ppppp) is the job number (see the description of the batch server start-up procedure).

THE TEMPORARY FILES DIRECTORY

The temporary files and reports from batch procedures are created in this directory, which is independent of the preceding ones.

Its location is defined by the user during the installation. Thus, it is not necessarily located under the 'Release' root. It is created on all Pactables servers by the Pactables installation procedure.

22.8. PACLINK-EMULATED WORKSTATION DIRECTORIES

PACLINK-EMULATED WORKSTATIONS DIRECTORY

Under the installation directory, the following files are created:

. PACLINK.EXE: monitor of the user workstation,

. GSTCPIP.EXE: Communications Manager,

. PACLINK.PRM: parameter file of the workstation monitor,

. GSWINNT.PRM: parameter file of the Communications Manager,

. GSANSIL.TAB: character transcoding table,

. VAPAC.FON: character font used when a screen trace is activated.

22.9. USE TESTS

USE TESTS

These test jobs include the following steps:

. On-line use tests,
. Test on batch updating, printing and reorganization,
. Test on table generation.

The test set comprises three tables:

. 'TEMPER' without historical account,
. 'CUSTOM' with two historical accounts 01/03/1985 and 15/01/1985,
. 'ARTICL' with historical account 15/01/1987.

Tests on the user parameters transaction:

Submit the Paclink Administrator transaction. The user code defined in the test Database is the manager's: user code '********' and password 'SUPER'.

Use this code to enter the transaction and define other users, then modify the Database manager's user code password.

On-line tests:

Start up an on-line server; connect it to the workstation.

Consult all the screens.

Execute the updates.

Batch tests:

Execute the PRTA procedure.

Execute the EXTA procedure.

Close the on-line server.

Execute the UPTA procedure.

Reorganization of the test table:

.Save TV and TD files (COPY under different names).

.Execute the reorganization (RETA) which comprises:
.Reorganization of TV file (Prog. PTA400 and PTA410),
.Reorganization of TD file (Prog. PTA420),
.Constitution of the TC backup file (Prog. PTA430),
.Restore the TV and TD files (RSTA),

.Execute a printing (PRTA) for verification.

.Start up the on-line server and a workstation.

Do some verification tests after reorganization.

Table generation tests (GETT procedure) :

Close the station and the on-line server.

Execute an extraction procedure (GETA or GETD).

Execute the GETT procedure.

Verify the execution.

Start up the on-line server and a workstation.

Do some verification tests.

22.10. PACTABLES DATABASES MANAGEMENT

MANAGING SEVERAL PACTABLES DATABASES

STANDARD LOCATION OF A DATABASE FILE

During a standard installation, the Pactables DATABASE NAME is required (TEST for example). It allows the creation of the subdirectories specific to the Database:

'Release'\ASSIGN\TEST
'Release'\BASES\TEST
'Release'\SAVE\TEST
'Release'\INPUT\TEST

The files specific to the TEST database are installed in each of the above directories.

The TE error message file is installed directly under 'Release'\BASES, as this file can be common to several Pactables Databases.

All the batch servers and procedures assign the files located under BASES and under BASES\'db_name' via the command files created at installation under ASSIGN\'db_name'.
This facilitates any modifications which may be performed on the standard installation.

Pactables standard architecture makes it possible to manage a multi-Database environment.

CREATING A NEW PACTABLES DATABASE

During the installation, the choice 'initialization of a new Database' allows to initialize a new Pactables Database.

This initialization assumes that Pactables was installed on the workstation. If not, an error message is displayed.

It creates the files of the new Database and installs the following files:

. under 'Release'\SAVE\REEL: the installation TC file and the TCBACKUP.CMD procedure,

. under 'Release'\INPUT\REEL: the transactions files delivered with the installation,

. under 'Release'\ASSIGN\REEL: the command files containing the Database files assignments.

. a command file named TAPR'db_name'.CMD, under the batch procedures directory. This file automates the batch procedures start-up.

Then, it initializes the new Database with the RSTA procedure.

BATCH PROCEDURES START-UP

1.Start-up via command files

Two files are created under the 'Release'\BATCH\PROC directory: TAPRTEST.CMD and TAPRREEL.CMD (using for example the TEST and REEL Databases). Each one of these is adapted to the start-up of batch procedures on a Database.

2. Start-up via an icon

It is advised to define as many 'Groups of programs' as there are Pactables Databases. These groups contain the start-up of usual procedures.

22.11. REINSTALLION OF STANDARD PACTABLES

REINSTALLING PACTABLES

Pactables must be reinstalled on receiving a version with corrections or new developments.

The new sub-version, identified by a number (for example 1.2 V01), contains:

. the Pactables CD-ROM,

. a list of corrected bugs,

. reinstallation instructions (README.TXT file on the CD-ROM)

In general, only the 'system' files (TE and batch/on-line programs) are affected by a new version.

Notes:

. It is essential to read the README.TXT file before starting a reinstallation.

. The reinstallation procedure does not create the tree structure for directories which is supposedly identical to that created during the first installation of the version.

. It does not copy the on-line and batch procedures ('Release'\TP\PROC and 'Release'\BATCH\PROC directories) if the Database manager has modified them to adapt them to the site. If they have been modified, the modifications are listed in the README.TXT file.

. The reinstallation procedure copies the TE error message file under its standard directory ('Release'\BASES). If the Pactables manager has modified the standard installation for this file, he/she will have to move it under the appropriate directory after reinstallation.