



VisualAge Pacbase



## Help to upgrade Pactables to version 2.0

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Pactables release 2.0 is year 2000-friendly. This document aims to help users to prepare and carry out the upgrade from a previous release of Pactables to the 2.0 release.

## Upgrading to Pactables 2.0

### *The 2.0 specifications*

The new specifications regarding the year 2000 included in Pactables 2.0 involve the following:

- Programs (access modules) provided with Pactables 2.0 allowing access to the tables items managed within Pactables.

The access modules have been developed in order to separate VisualAge Pacbase and Pactables upgrades.

The sub-programs provided can be used with users' programs either generated with VA Pac 2.0 (with the century handling option or without century) or a lower release (without century) to exploit the 2.0 data. Only a re-link operation of the users' programs calling these access modules is necessary.

- Pactables access via user program module xxPLNK 2.0

The module xxPLNK 2.0, allowing access to the Pactables transaction, without leaving the user's transaction, can be accessed either by 2.0 on-line generated programs (with the century handling option or without century) or a lower release (without century) to exploit the 2.0 data. Two communication area structures are provided.

- Internal dates.

The access modules determine the century of the historical account date from the date given without the century (common area), using the year 61 as a default window.

- User validation sub-programs

The user validation sub-programs called by Pactables during an update (batch or on-line) still work. However, if these sub-programs have been generated using VA Pac 2.0 with the century management option, a new version of Pactables updating programs is provided. These new programs take the place of the existing ones:

. PTA302 and PTA312 as PTA300 and PTA310 respectively of the UPTA and IMTA Batch procedures, and

. xxP512 and xxP522 as xxP510 and xxP520 respectively for on-line (where 'xx' represents the first two characters of the transaction code).

**Note :** It is not possible to have both user validation sub-programs generated with the century management option, and user validation sub-programs without century. As a result, if users want to use the second version of the Pactables updating programs, all the user validation sub-programs must have been generated with the century management option.

**Currently, no modifications have to be made within VisualAge Pacbase when upgrading to Pactables 2.0.**

## ***How to upgrade to Pactables 2.0***

The following modifications only concern Pactables:

- 1  Save the Pactables release x database (the save procedure only exists since the 8.0 release) SVTA procedure
- 2  Install Pactables 2.0
- 3  Retrieve the release x Save file in order to obtain a release 2.0 save file. During this retrieval procedure, all the internal dates of the product are modified (historical account date, last update date, ...) using the '61' window to determine the century. RTTA procedure.
- 4  Restore the save file using the 2.0 standard restore procedure (RSTA).
- 5  Update the on-line and batch libraries with the new 2.0 programs.
- 6  Massive re-link of all the programs calling the access modules in STATIC mode.

**Note:** If the Save procedure does not exist in release x, users have to use the correct retrieval procedure supplied with release 2.0.

The retrieval procedure differs according to the release users are starting from: Pactables 7.2, 7.3 or 8.0.

## Migrating User's tables managed within Pactables

Regarding the data managed within Pactables, users can choose to continue managing data without the century, or to extend the date data items. Users can make those modifications in a previous release of Pactables, but it is advised to use VisualAge Pacbase 2.0 for those modifications. If the user decides to keep the date data elements without the century, he/she has nothing to do. But, if he/she decides to extend the date data elements, the following steps must be followed:

### ***Steps to perform within VisualAge Pacbase to extend a date data item used in Pactables***

1 - Modification of the date data element format - extending it to 8-characters. There are two ways to do this:

- either modify the format at the dictionary level,
- or, change the data element with another one with an 8-chars. format into the table segment description, and everywhere the data element is called.

**Note:** If a date validation has been coded on that data element at the segment level, the value must be changed to indicate a format with century (new possibility given with VisualAge Pacbase 2.0).

2 - Generation of the table description (GETA procedure)  
3 - Generation of the programs using that segment.

### ***Steps to perform within Pactables to extend a date data item used in Pactables***

The following process is general, and the steps have to be performed in order.

1 - Extraction of the table data concerned, using the EXTA procedure. A file is obtained.  
2 - Update of the table description using the GETT procedure.

**Note:** If the format of the date data element has been modified, the table contents, regarding this date data, are kept without data changes. If the data element code has been changed, the table contents are lost. Also, if a table access key has been modified, the table data contents are lost.

3 - Writing of a program in order to update the date value, taking the file given by the EXTA procedure as an input file, and giving a file useable as an input file with UPTA procedure as an output file.

**Note:** The EXTA procedure allows to extract data from a table's historical account, taking out the unused spaces and putting in a separator between each data item of a record. So, in the retrieval program, users will have to find where the data item to be modified is located by counting the separators.

4 - Update the table data using the UPTA procedure using the previously created file as input.

**Note:** If users have defined user validation programs at the table level, before using the UPTA procedure, users have to have regenerated and recompiled those user validation programs in order to take the new description of the segment into account.

This process can be used for a table with or without historical accounts.

For a table without historical accounts, the GETT procedure replaces the old description with the new one. This means that the programs accessing Pactables must have the same description as the one described in Pactables. Otherwise, there will be a discrepancy between the data read and that given to the user.

For a table without historical accounts, the GETT procedure allows to create a new historical account table's description at a future date, so that description changes can then be prepared. The table contents will have to be retrieved by extracting the data for the date indicated on the new historic account, and during the update by creating a historical account of Table's contents at that date. Then, for all historical account of table's description where the date is greater than the date of this new historical account of table's description, extract each historical account and, after processing the retrieval program written, update each of these historical accounts.

In this process, the historical accounts whose date is lower than the newly created historical account table's description is not kept.

In the case where a table is shared between several applications, the only solution for managing two versions of descriptions at the same time, is to create a new table within Pactables.

# Installation and Procedures

## ***The changed files***

### Table description file TD

. Organization : Indexed  
. Type : Fixed  
. Recsize : 240  
. Key : 21 (Position 1)

### Table contents file TV

. Organization : Indexed  
. Type : Varies with the table size  
. Recsize : 80 to 1,100  
. Key : 35 (Position 5)

### Optimized table description file AD (TD image used in TUTA procedure)

. Organization : Indexed  
. Type : Fixed  
. Recsize : 240  
. Key : 21 (Position 1)

### Optimized table contents file AV (TV image used in TUTA procedure)

. Organization : Indexed  
. Type : Varies with the table size  
. Recsize : 80 to 1,100  
. Key : 35 (Position 5)

## ***The procedures***

### *The new procedures*

. RETA: new reorganization procedure, working with sequential files, and producing a save file. It adds the + sign, missing in the previous releases, to the data items with positive numeric values. It works with sequential files, which solve the performance problems of indexed files on certain platforms (as UFAS files on GCOS8).

. RTTA: TC 8.0.2, 1.2 -> 2.0 save file retrieval procedure to add the century. The transition year is parameterized.



### The procedures supplied within the VisualAge Pacbase 2.0 package

- . The GETA and GETD procedures have an additional step, PACT45. This one allows creates a generated file of descriptions from releases earlier than 2.0 which can be used by the GETT procedure, also from releases earlier than 2.0.
- . Two new procedures, GET1-GET2, similar to GETD-GETA reading the table description file TD of releases earlier than 2.0, allow the user to continue generating tables in releases earlier than 2.0 with VisualAge Pacbase 2.0
- . R2TA: retrieval procedure of 7.2 release. It retrieves the TG 7.2 -> 7.3 file, backs up various 1.2 release files and processes the 2.0 retrieval.
- . R3TA: retrieval procedure of 7.3 release. It backs up various 1.2 release files and processes the 2.0 retrieval.

### Input transactions

- . The 'Z' input card of procedures GETA and GETD has changed.
- . The description of the 'A' input card of the different Pactables procedures has changed. All the dates now include the century.