



HELP TO UPGRADE

VisualAge Pacbase 2.0/2.5 to 3.0/3.5

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Preamble

To take advantage of the enhancements carried out or to insure the compatibility of the produced applications and the administration procedures developed by the users, once the database retrieved in 3.0 release, users eventually have to modify their programs and their tools, before giving the repository back to the developers.

The purpose of this document is to give the changes lists since the 2.5 release of VisualAge Pacbase and to show the impacts on:

- the generated cobol, coming from the different generators (On-line, batch, DATA, SQL, DBD, CSSD),
- the dictionary, PAFprograms, batch procedures, the documentation.

Each change is stamped as follow :

- Evolution no ascending compatibility problem
- Impact problem of processing compatibility could possibly be faced, or administration problem

This document is a complement to the ' VisualAge Pacbase 3.x Installation Guide', in which you will find all the information to retrieve your 2.0/2.5 database.

VisualAge Pacbase 3.0

Change with ascending compatibility impact

Installation and procedures

VA Pacbase permanent files are now catalogued. (GCOS7 platform)(C:016707)

VisualAge Pacbase permanent files are now catalogued.
(GCOS7 platform)

Administration

New VisualAge Pacbase Administration WorkStation(C:011776)

Overview

Administration data is reorganized in the following way:
. The storage of VisualAge Pacbase parameters has changed.
. PARM procedure is suppressed.
. Parameters can be accessed only by a local workstation
(the 3270 mode is no longer available).

Physical aspects

Files

From VisualAge Pacbase release 3, the storage physical envelope is a Pacbase database, i.e. the Administration database has its own data files (GR and GY) and index file (GN).

There are also the journal file (GJ), which will be used in the case of a restore with retrieval of archived transactions, and backup files equivalent to PC and PY files.

So AG and AP files no longer exist. The generation-print commands are included in the VisualAge Pacbase database. On the contrary, the JCL lines (C4 screen), which are specific to a user and apply to each library and session, are stored in the administration database.

For more safety, users' passwords are stored apart from the administration data. Passwords are stored in a new file (GU) which only contains user codes and data used for the management of passwords.

For sites equipped with an external security system (RACF, ...) this file is useless.

Procedures

The following standard procedures for the management of a VA Pac database are available:

- . restoration: RSAD,
- . saving: SVAD,
- . archiving: ARAD,
- . reorganization: ROAD.

Besides these four procedures, two other procedures can be used:

- . UPDT, when transactions are retrieved (included in REST),
- . PUF in Batch mode.

Installation

The following data is given upon installation:

- . data descriptions
- . fixed parameters
- . initial parameters

To enable the connection the first time the Administration workstation is used, there must be at least one user with the maximum authorizations: ADMIN.
 (Warning: if there is no administrator user in the database, the '*****' user code will be considered as the administrator, in order to prevent users from being stuck).

Improvements of release 3.0

Site administrator

This concept stems from PARM authorizations. One or more person on the site must be able to define users, enter access keys, reset passwords...
 These persons are defined as site administrators ; hence they have the maximum authorizations everywhere.

List of bases

There is a new entity, called 'Base'. This entity enables, among other things, the creation of cross-references and the memorization of data used when connecting to the workstation.

Profiles

A product profile is a set of initial parameters which apply when a user uses the product.

A profile is defined by a code and a label.
 A user can only have one profile for each product.
 The authorizations assigned to a user via a profile can be overridden by authorizations specific to that user.
 In all cases, the authorizations defined specifically for a user have priority against the profile authorizations.

Password Management

Password management rules are grouped according to the following guidelines, which can be parameterized on the site:

- . Historical account: memorization of n last passwords,
- . Duration of validity: expiration after n days,
- . Restriction of contents: minimum number of characters, numeric characters,

Pac-Transfer

Pac-Transfer parameters are integrated in the administration database. So it is easy to specify them.

Differences with PARM

Network access authorizations

The only difference is the authorization levels.
 From release 3, the authorization levels apply to all sessions (current and archived):

- '0' No access
- '1' Consultation
- '2' Update
- '3' Administrator.

The definition of the level against a given context remains the same.

Procedures authorization

From now on, this authorization is binary: a user can or cannot submit a procedure. Authorizations can be defined by exception ('All, except...' or 'None, except...') by using the global level (all databases) and the specific level (for a specific database).

For all procedures which accept one identification line only (user, password), the user can or cannot submit the execution of the procedure.

For the other procedures (UPDT, GPRT,), the level is that of the network.

There is no mention here of the Administration database procedures. Only site administrator-type users can submit procedures for the management of the administration database.

Parameters authorizations

This replaces the PARM authorization. From now on, authorizations are specific to a parameter.

There is an authorization for each parameter table:

1. Table of standard error labels,
2. Table of special characters,
3. Table of empty words,
4. Table des text labels,
5. Optional job control command lines,
6. Pac Transfer parameters

ONLY SITE ADMINISTRATORS can:

- . manage users and profiles,
- . define passord management rules,
- . manage 'security' entities,
- . define databases.

Text labels: no modification.

Error labels: no modification.

Optional job control command lines: no modification.

Monitoring by DSMS control: no modification.

External security systems: no modification.

Gathering SAVE, MLIB, SASN and UXSR programs in a new procedure PACS.(C:014230)

SAVE, MLIB, SASN and UXSR: these four procedures are now gathered in a single procedure PACS.

Prohibit a less than 4-characters database code.(C:021298)

The (logical) database code, essential for connection, must not be shorter than 4 characters. The associated transaction code, if it exists, respects the same rule.

Licensees control(C:022537)

Licensees control

Management rules:

- 1 - The different licensees

The "number of users" notion is no longer used, it is replaced by the "number of licensees" notion.

. The AD Workbench developer license: defines only the users who have an AD Workbench access authorization.

. The designer license: defines only the users who have a Pacdesign-Pacbench Workstation access authorization.

. The dumb terminal license: defines users who are authorized to connect to the Repository only in a dumb terminal mode.

. The reading license is a quite new notion: it defines users with a reading authorization only, independently of their connection mode (dumb terminal, AD workbench, Workstation).

- 2 - Licenses counting

The administrator of your site defines the users who should be allocated licensees. This allocation mode contains some

restrictions:

- . no other licensee can be allocated to a user owning a reading licensee.
- . A site Administrator must own one license at least, and not a "reading" license.
- . A Developer, Designer or Dumb terminal license, should be allocated only if the number of corresponding subscribed licensees is not reached.
- . A user can be created (or modified) with no license requirement.
- . As a consequence, this user is not authorized to connect to any terminal or workstation (Dumb terminal, ...). He is however authorized to launch batch procedures, if the Administrator of his site allocated the required authorizations to this user.

3 - Authorization hierarchy

The licensees control brings in a new layer in the access controls. It is a priority among the current authorizations. By example, today an administrator has complete access.

- . Especially, a database administrator is authorized to access to all defined databases.

Henceforward, the administrator needs an 'AD Workbench Developer' license to access to all defined databases.

4 - Users issued from the Retrieval

During the retrieval, all created users are considered as "Dumb terminal" license owners.

If the expected number of "Dumb terminal" licensees is reached, a reading license is allocated.

When the expected number of reading licensees is reached, the user is created with no license requirement.

Warning: a new access key is required.

Batch System Development

Generation of VALUE and OCCURS(C:021692)

The occurred Data Elements of a Segment are generated with a VALUE ZERO or VALUE SPACE if the Segment has a '2'-type description.

BINARY usage for MVS OS/390: harmonize generators(C:022893)

BINARY usage for MVS OS/390: it was necessary to harmonize generators

Now the 'C' usage produces the BINARY clause generation as soon as the program or screen variant is Cobol II ('X' variant).

Client/Server system develop.

IMS V6 generation: the size of IO-PCB size is increased.(C:022826)

IMS V6 generation: the size of the IO-PCB increases from 52 to 100.

On-Line System Development

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Source Configuration Management

Integration of PEI in VisualAge Pacbase.(C:013607)

Integration of PEI in VisualAge Pacbase.

PEI functionalities are integrated in SCM standard bridge.

- . PEI environments are directly stored in development database as User entities of the PCM Meta-entity extension.
- . Short environment identifier is now 2 characters long, and the long identifier is 30 characters long.
- . The user benefits from functionalities of VisualAge Pacbase libraries network (including frozen sessions). PEI production sessions only, marked frozen sessions, are considered by the SCM bridge.
- . The generated objects are listed, by nature, in the different descriptions of theses U.E.
- . The production, session freeze and simulation procedures are renewed. The deletion of production sessions is made with VA Pacbase standard procedures.

Batch Procedures

Gathering SAVE, MLIB, SASN and UXSR programs in a new procedure PACS.(C:014230)

SAVE, MLIB, SASN and UXSR: these four procedures are now gathered in a single procedure PACS.

Evolution of PACX procedure(C:015055)

- All procedures:

The logical code of the base is printed on the IA report.

- CPSN

As the CPSN procedure is integrated in PACX, it is now possible to generate output transactions in UPDP format:

- enter '1' in the 34th position of the identification line ('*' line).

It is also possible to generate explicit transaction codes in the output files:

- set the formatting option to '2' instead of '1' (33rd position of the identification line for UPDT / 34th position of the identification line for UPDP).

- RMEN

Program renaming: the code of the generated program and the code for sequence of generation can be modified.

Screen renaming : the code of the generated screen and the external code of the map can be modified.

Moving a segment, report, screen or user entity to a higher level library:

if the D.S., the dialog or the meta-entity does not exist in the specified library but in a higher level library, a

message is printed.

Modification of user input:
First line - concerned entity:

```
-----  
!Pos.! Len.! Meaning                                     !  
!---+---+-----!  
! 2 ! 2 ! Constant (W2)                                     !  
! 4 ! 2 ! Processing type (RN/MV/MR/RP)                   !  
! 6 ! 1 ! Line type ( )                                     !  
! 7 ! 3 ! Entity type                                       !  
! 10 ! 30 ! Entity code                                     !  
-----
```

Second line - environment:

```
-----  
!Pos.! Len.! Meaning                                     !  
!---+---+-----!  
! 2 ! 2 ! Constant (W2)                                     !  
! 4 ! 2 ! Processing type (RN/MV/MR/RP)                   !  
! 6 ! 1 ! Line type (E)                                     !  
! 7 ! 3 ! Source library for MOVE                         !  
! 10 ! 3 ! Methodology code                               !  
! 13 ! 3 ! 'ALL'                                          !  
! 16 ! 6 ! Parent Data Element code                       !  
-----
```

Third line - new codes:

```
-----  
!Pos.! Len.! Meaning                                     !  
!---+---+-----!  
! 2 ! 2 ! Constant (W2)                                     !  
! 4 ! 2 ! Processing type (RN/MV/MR/RP)                   !  
! 6 ! 1 ! Line type (N)                                     !  
! 7 ! 30 ! New entity code                                 !  
! 37 ! 8 ! For programs and screens, new                 !  
! ! ! generated code                                     !  
! 45 ! 6 ! For programs, new code for sequence           !  
! ! ! of generation                                     !  
! 51 ! 8 ! For screens, new external name of             !  
! ! ! the map                                           !  
-----
```

Fourth line - selection for REPLACE :

```
-----  
!Pos.! Len.! Meaning                                     !  
!---+---+-----!  
! 2 ! 2 ! Constant (W2)                                     !  
! 4 ! 2 ! Processing type (RP)                             !  
! 6 ! 1 ! Line type (S)                                     !  
! 7 ! 3 ! Entity type                                       !  
! 10 ! 30 ! Entity code                                     !  
-----
```

Following lines - continuation of selection for REPLACE:

```
-----  
!Pos.! Len.! Meaning                                     !  
!---+---+-----!  
! 2 ! 2 ! Constant (W2)                                     !  
! 4 ! 2 ! Processing type (RP)                             !  
! 6 ! 1 ! Line type (*)                                     !  
! 7 ! 3 ! Entity type                                       !  
! 10 ! 30 ! Entity code                                     !  
-----
```

Last line (required):

```
-----  
!Pos.! Len.! Meaning                                     !  
!---+---+-----!  
! 2 ! 2 ! Constant (W2)                                     !  
! 4 ! 2 ! Processing type (RN/MV/MR/RP)                   !  
! 6 ! 1 ! Line type (/)                                     !  
-----
```

- EXTR

Modification of user input:

First line:

```
-----
!Pos.! Len.! Meaning                                     !
!----+----+-----!
!  2 !   1 ! Line code          (W)                       !
!  3 !   1 ! Line number       (1)                       !
!  4 !   2 ! Constant           (EX)                      !
!  6 !   1 ! Library selection code                       !
!    !   ! (U/C/+)                                       !
!  7 !  33 ! Entity to be extracted                          !
! 40 !   4 ! Extraction type   (ALL/ONLY/EXPT)             !
! 44 !   ! Table of 12 items on 3 characters              !
!    !   ! (DEL/DBD/...)                                !
-----
```

Second line:

```
-----
!Pos.! Len.! Meaning                                     !
!----+----+-----!
!  2 !   1 ! Line code          (W)                       !
!  3 !   1 ! Line number       (2)                       !
! 44 !   ! Table of 12 items on 3 characters              !
!    !   ! (DEL/DBD/...)                                !
-----
```

- EXUE

Modification of user input:

```
-----
!Pos.! Len.! Meaning                                     !
!----+----+-----!
!  2 !   4 ! Constant           (W1EX)                      !
!  6 !   1 ! '$' for extraction of client M.E.           !
!    !   ! 'Y' for extraction of extension M.E.        !
!  7 !   1 ! Library selection code                       !
!    !   ! (U/C)                                       !
!  8 !   2 ! Code of the M.E. to be extracted            !
-----
```

REST-RESY procedures : modification of the user input.(C:017095)

The input to the database restoration procedure has changed. The maximum access number having increased by one character (9999 = no limit), each input coming after shifts position (one character move to the right).

Batch update procedure: transactions recycling.(C:017140)

The batch update procedure prints the transactions as they were entered (UPDT or UPDP) and recycles the erroneous transactions.

Evolution of VINS procedure.(C:018308)

Delivery of entities extension:

- retrieval program
- Setup program:
 - . A single updating procedure available for all of the extensions provided by IBM

Security Systems Interface

PACSECU8 is rewritten in Cobol(C:021075)

New BVPRACF program

The userco/password validity is not checked any more.
The user code MUST be the same than for CICS connection.

Verify user authorizations to RACF resource made up of

library code/authorization level.

For COS version:

- EXEC CICS QUERY SECURITY order use

Check the user has authorization to the resource.

For IMS version:

- Call the 'CBLTDLI' USING AUTH system program.

Tables management

Documentation generation for tables.(C:020939)

Documentation generation for tables.

Search text calls in -GE.

Lines with C type (and no longer blank) and T type are not taken into account any more.

Miscellaneous

Frozen Sessions Management(C:017701)

It is now possible to freeze a session online in a screen called with the LCH choice (LH choice no longer available). If the connected user is not authorized, this screen is read-only.

THE FIELDS IN THE SESSION FREEZE SCREEN

SESSION NUMBER: By default, the number of the frozen session is identical to that of the original session frozen.

You may change that number provided that it is lesser than the number of the session to freeze + 100.

SESSION STATUS: This field may be modified only, in relation to an already frozen session.

- blank: Required (default) value when freezing a session. Read-Write data access allowed.
- 'N' : Read-Only data access allowed.
- 'D' : Data cannot be accessed; the session is logically deleted.

FREEZE DATE: Uneditable field.

SHORT LABEL: Default = frozen session number

This label must be unique. The LRH screen displays the list of frozen sessions sorted ascendingly on this short label.

SESSION NUMBER BEFORE COMPRESSION: Uneditable field.

USER CODE: Uneditable field.

LONG LABEL: Required input.

The LNH screen displays the list of frozen sessions sorted ascendingly on this long label.

NOTE: You may not delete a frozen session. You may modify characteristics of a frozen session.

Any update in the LCH screen must be made connected to the Inter-Library and the current session.

Generation-Print requests remodeled for V3(C:017905)

Generation-Print requests are now stored in the VA Pac

Database as User Entities. (The AG file no longer exists)

The GP screen (for online GPRT requests) has been modified:

- Order numbers no longer exists,
- The GP choice may be completed with the request command; the displayed requests list will begin with that command.
- New way to call for a Continuation Line.
- Change in OPERATION CODE.

The GP screen now follows standard rules:

- OPTION C1: Connected user's GPRT requests made in the connection Library and upper Libraries.
- OPTION I1: Connected user's GPRT requests made in all Libraries (Inter-Library).
- OPTION C2: Connected user's validated lines (GPRT requests and job command lines) made in the connection Library and upper Libraries. Uneditable screen.
- OPTION I2: Connected user's validated lines (GPRT requests and job command lines) made in all Libraries (Inter-Library). Uneditable screen.
- OPTION C4: Connected user's job command lines. Library notion irrelevant in this context. Such lines are stored in the Administration Database.
- OPTION C3: no longer exists.

Journalizing of GPRT requests

Possibility to use lowercase in continuation lines (with the 'x' action code).

Monitoring option for job output.(C:019975)

This new functionality allows the VisualAge Pacbase user to observe the job output produced by batch and TP GPRT procedures.

The new choice for TP GPRT procedure is LJOB. It displays the list of executed jobs submitted by the connected user. It is possible to display details of the execution report (it corresponds to the IA report for the batch GPRT procedure).

A new file is defined to save job output at installation: LB file.

The Report entity is no longer dependent on the Data Structure entity.(C:020271)

The Report entity has no more link to the Data Structure entity.

Type of the Input Aid(C:020893)

From now on, the type of the Input Aid is not only for documentary purposes.

The types available are:

C : for Comments (IA used for documentary purposes),

G : for generation complement (IA called by generable instances)

O : for generation option (IA used to customize SQL (accesses)).

Controls :

A C-type Input Aid cannot contain G- or O-type lines.

A G-type Input Aid can contain Comments and generation complements.

An O-type Input Aid can contain Comments and generation options.

A C-type Input Aid can be changed into an O- or a G-type IA if it is not already called. The other way round will be possible if there are no G- or O-lines in the description and if the Input Aid is not already called.

A C-type IA can be called only in -GC.

A G-type IA can be called only in -GG.

An O-type IA can be called only in -GO.

New command : LTI (list of Input Aids sequenced by type).

Change without ascending compatibility impact

Installation and procedures

New dumb terminal for VA Pacbase (Unix and Windows repository).(C:018224)

New dumb terminal for VA Pacbase (Unix & Windows)
The Pacbase Server interfaces with tn3270 protocol
available in the market place.
PACLINK interface is no longer available.
The user can thus benefit from the extended functionalities
of these products.

Batch server replaced by a Listener. (Unix and Windows repository)(C:019058)

The batch and the online servers of VisualAge Pacbase have
merged for the Windows and Unix repositories.
The generation is started by the generated flow processing
(as for IBM MVS, BULL GCOS, ... platforms).
For this, the GPRT procedure must be started in the command
lines defined for each user.

Journal Statistic Utility

ACTI Facility: changes

ACTI Facility: changes

selection on hour
 session
 version
 transaction code
new indexes taken into account.

Administration

Dynamic MLIB .

It is now possible to create "Virtual libraries" which
will then be initialized in TP or batch (MLIB) mode.
The maximum number of libraries in a network is increased
from 300 to 595.

Database locked when session number reaches 9990

To avoid a reset to 0 of the Database session number once
it has reached 9999, and to allow time to the Database
Administrator for a backup execution, before that of the
Session Compression Utility, the Database automatically
locks when its session number reaches 9990.

Virtual Libraries: improvement of their management and processing of TP deletion

VIRTUAL LIBRARIES

A virtual Library is only visible to the Administrator.
You cannot perform updates in a virtual Library.
The virtual Library is created by the MLIB procedure in the
'0001Z' session.
When first created, a virtual Library can only be 'not
initialized'. A special 'V' action code is used to transform
a virtual Library into a 'not initialized' Library.
This can only be done on line.
This update is performed in the 0001Z session.
At the same time, the Library code can also be modified.
DELETION OF A LIBRARY

The deletion of a Library is only authorized in a
current session and only if it does not have sub-Libraries.
For the Administrator, this Library remains visible in
previous frozen sessions ('*** Library deleted ***' message

displayed in 'LC*' on line command). For the non-Administrator users, this Library is no longer visible.

Batch System Development

Data generation (GCD) : management of alias and segments with quotes for replacing

Data generation (GCD) : Management of alias and segments with quotes for replacing

The data generation (GCD) now manages :

1) Alias:

DS code as A* in FOG DATA call (same functionalities as the old RP0900 program given for MVS/CICS environment).

2) Segments with quotes to make replacing:

DS code as A' in the FOG DATA call.

Client/Server system develop.

New Service : Read instances collection from a keys collection

New service introduction (coded 'RM'): Read a collection of instances from a collection of keys.

Date data element with 'display' format: the number of characters is now limited to 16.

Date data element with 'display' format for an Oracle database: the format of a date data element was limited to 14 characters. It was not possible to enter more than 14 values in the Data element description screen, on the "Date format" lines (with 'E' type). To enter the HH24 format, this limit is now 16 characters instead of 14 previously.

Depth Extractor

Deep extractor: extracting segments turned into MSP parameters.

PACX and deep extractor: when extracting a program with the ALL option selected, the segments which are now macrostructures parameters are also extracted.

On-Line System Development

Date data element with 'display' format: the number of characters is now limited to 16.

Date data element with 'display' format for an Oracle database: the format of a date data element was limited to 14 characters. It was not possible to enter more than 14 values in the Data element description screen, on the "Date format" lines (with 'E' type). To enter the HH24 format, this limit is now 16 characters instead of 14 previously.

Pacbase Access Facility

Access to SCM entities, user parameters, generation and print commands via PAF.

As a result of the new management of entities in the Repository, all data items are accessible via the PAF utility.

The SCM entities are integrated in the VisualAge Pacbase Repository. The user parameters are managed in the administration workspace.

Batch Procedures

Re-initialization of a Library

In order to avoid a fairly long sequence of jobs (MLIB or REOR for deletion of a Library, REST, MLIB for re-creation of a Library and REST), a new request of MLIB allows to clear the Library's content (same restriction as for a deletion).

Processing of virtual libraries

A virtual library is created via the MLIB procedure

with the following input type:

```
pos 1   action code
pos 2   '*'
pos 3-5 code of the virtual library
pos 6-8 code of the library to which it is associated
pos 9   'V'
```

The administrator is the only person allowed to visualize and access the virtual libraries. They can't be updated. An administrator can activate such libraries by updating their Definition via UPDT or in on-line mode.

STAT procedure: statistics file.

The STAT procedure constitutes, from the files output by the save procedure, a sequential file which can be used for statistics.

This procedure replaces SAVE statistics reports.

Evolution of EXPU procedure

Evolution of EXPU procedure:

It is now possible to extract:

- the entities which have never been used (purge via REOR),
- the entities which have not been used in the current session since a given session, that is entities which have already been used but which are now obsolete (purge via UPDT or UPDP),
- the entities which are not used in a given session (purge via UPDT or UPDP),
- the cancelled frozen sessions in order to purge them via REOR,
- the users referenced in VA Pac (GP commands) and who no longer exist in the Administration database in order to purge them via REOR,
- the cancelled libraries in order to purge them via REOR.

Options now make it possible to print the session of the last update as well as the last user who updated the entity, with the update date.

The report output by EXPU also indicates the duplicate entities in the sub-network.

EXTR of Data structures: a new option for the extraction of segments.

Data structures extraction: the segments are extracted by default.

But it is now possible to prevent the extraction of segments by using the EXPT SEG option, even for sites where there is no "in-depth extractor" module.

EXPJ: it is now possible for a specific user to select the Journal file transactions.

User entry for selection on user code:

- First line, position 80, '*' indicates a continuation line.
- Second line, selection of the user code:

```
-----!
!POS.! LEN.! VALUE  ! MEANING                               !
!-----!
! 2  ! 1  ! 'J'    ! Line code                               !
! 3  ! 1  ! '*'    !                               !
! 4  ! 8  !uuuuuuu! User code                               !
!-----!
```

PACS: MLIB with network simulation, the Database files can now stay open for Online use.

PACS: MLIB with network simulation, the Database files can now stay open for Online use.

Positioning transactions marked out by PACX

Positioning transactions :

The transaction code is set to 'P' by PACX.
 PACA05 : these transactions are not transmitted to PACA15.

Option for simulation in the UXSR procedure.

Option for simulation in the UXSR procedure available.
 (Idem for the MLIB procedure).
 WARNING : new user input required, whether the simulation
 is requested or not.

REOR: Report which lists PMS calls which might be incoherent upon expansion.

REOR: a Report lists the PMS calls which might be
 incoherent (display and generation). This helps the user
 when lines described in a PMS are lost and not always
 expanded in the calling entities.
 To request this Report, the value '2' must be entered
 in the 'D' user input line.
 To request the Report which lists duplicate indexes,
 the value '1' must be entered.
 To request both reports, the value '3' must be entered.
 These values are possible for the ROAD procedure.

Request	Dupl. indexes	Report	Potentially incoherent PMS Report
D1	yes		no
D2	no		yes
D3	yes		yes

REOR : new possibilities to purge entities.

A new command line to purge User Entities is available,
 with the following parameters :

- .the card code with 'P' value,
- .the Entity type ('\$' or 'Y')
- .the code or call type,
- .the Entity code (complete identifier),
- .the Description code to purge, nn for nn Description, **
 for all Descriptions, the '00' value being forbidden.
- .the selected Library code (***) for all Libraries),
- .either 'blank' (default value) / 'Y'= purge in
 sub-Libraries or 'N' = no purge in sub-Libraries.
- .the purge session (either a frozen session or **** for all
 sessions, current and frozen) is put in a lower bound
 and/or an upper bound, respecting the chronological order
 between these two bounds, as follows:

```

LOW.SES.   UPP.SES.   PURGE DOMAIN
  mmmmm      nnnn      all sessions between mmmmm and nnnn
  
```

with the following special cases:

```

if nnnn = mmmmm the mmmmm session only
if mmmmm = 0001 all sessions up to nnnn
if nnnn = 9999 all sessions from mmmmm
if mmmmm = 0001 all sessions
and nnnn = 9999
  
```

In the current purge request lines (E), just after the
 Library code parameter, you specify whether sub-Libraries
 are to be taken into account or not.

The total purge requests with "P" and "E" codes is limited
 to 1000.

Purging a user ("U" card) neutralizes all the operations
 carried out by this same user such as unlocking the
 Entities locked by him or her.

Notes:

- .Regarding what exists, it is possible to define
 if the purge in the specified Library (different from ***)
 is to be carried out in its sub-Libraries.
- It allows the deletion of an Entity Definition which has
 been downloaded in the sub-network. This deletion is not

possible in a standard on-line or batch update.
This notion concerns purge command lines with 'E' card
(old) and 'P' card (new).
To date, the Entity specified in the request is purged in
the Library and its sub-Libraries, and will remain
purged by default.

.A User Entity can be purged either in one specific frozen
session only or in all sessions (****), current and frozen
sessions, or up to a frozen session or between 2 frozen
sessions, or from one specific frozen session.
Whether it is lower or upper, the specified session is
always included in the purge.
In all cases, this purge only concerns unformatted
data in a User Entity description.

.The selection of sub-Libraries is not possible. You
must specify as many purge lines as Libraries in which
the relevant entity will be deleted and also specify
whether the purge is to be carried out in sub-Libraries.

.The selection of sub-Libraries is required if the
*** Library is specified (this also applies to requests
with the 'E' code).

.Any specified session which is not a frozen session
kept after the sessions purge, causes the non-processing of
the request on this session, because the purge has
already been done.

.The same applies to Libraries specified in such requests,
when they are deleted in the same purge.

.The current session cannot be purged because it cannot be
detected among sessions that are read in the REOR
procedure when the purge is running.

.The deletion of one or several data cannot be done except
for frozen sessions because the purged Entity Folder could
lose its consistency. For example, the
Definition and some Description lines can be deleted
between two sessions bounds while 'orphan' Description
lines can be kept beyond the last specified session.
This is why this kind of purge concerns unformatted data
only.

.The new purge request (where the session is specified),
only applies to User Entities Descriptions with unformatted
data or to all Descriptions including the
Definition (** Description value).
If everything is purged, the dependent Descriptions such as
comments, lock, keywords and Entities calls by relations
are also purged.

WARNING

The purge of an Entity does not take its consistency into
account i.e. in case of a purge in one Library only (no
sub-Libraries), the user must ensure that, if Descriptions
exist in one of the sub-Libraries, one Definition
at least will still exist after the purge to support
these descriptions.

Rename and move utility

Change for the RMEN procedure and locked entities.

You can forbid another user to use
the RMEN procedure for locked entities.
To make it possible, set the top "Lock management"
on the identification line (position::49, length:
1 character) to "N" value.

The RMEN procedure on locked entities is rejected for a user that has no update authorization. The RMEN procedure on an entity that is used in a locked entity is rejected for a user that has no update authorization.

Display of choice R -XP and Reports processing in RMEN.

RMEN: Reports processing.

The change of code (or replace) for a single report is not authorized.
On the other hand, it is possible to rename all the reports that have the same prefix, (two first characters) you just have to enter '*' as the third character. As a result, only the two first characters are modified.
Input format:
W2RN R xx* or W2MR R xx* or W2RP R xx*
W2RNNyy* W2MREbib W2RPNyy*
W2RN/ W2MRRyy* W2RPS
 W2MR/ W2RP/

However, it is possible to save a single report.
Input format:

W2MV R xxy
W2MVEbib
W2MV/

You can save the whole reports with the same prefix by using the following command:

W2MV R xx*
W2MVEbib
W2MV/

Choice R -XP

This choice displays:

- the explicit use of a report in the -CD screen within a program -> the third character of the report is entered in the selection field of the -CD screen.
 - the implicit use of a report in the -CD within a program -> blank in the selection field of the -CD screen. The implicit uses are displayed after the explicit uses. If a report has only implicit cross-references with the -CD within a program, they are displayed only after explicit -XP choice.
- The cross-references do not appear in the screens that are displayed when you press the Enter key successively.

Security Systems Interface

Batch proc. under RACF: controlling the authorization of the user who submitted the proc. and not of the * line user.

The control of the procedure authorization bears on the user who submitted the procedure. The procedure authorization is not controlled on the identification lines (* lines). A procedure can be submitted with different users on identification lines.

EAB complement Generator

EAB classes generation from segments description.

The GCD generation command with the C3 option enables you to generate, as comments, information used in the Service Test Facility. The data element description comes from :

- data element definition for characteristics such as element label, short label, type (character or numeric), length ..
- element description (-D) for value check, display type ...

Miscellaneous

Time-stamp on all VAP entities.

When an entity is modified, a lock-type record will be updated.

It will contain the date and the time of the update, and possibly a lock.

It will be updated, even for a deletion.

The maximum number of access possible to VisualAge Pacbase Dictionary is now limited to 9998.

The maximum number of access possible to VisualAge Pacbase Dictionary is now limited to 9998.

New choice : List of user locks.

List of user locks Screen.

The notion of technical lock (station) does not exist anymore. There are no more locks on descriptions.

With this choice, it is possible to create or delete the lock or transfer it to another user.

Input Aid Description: Online check on overall length

The overall length of parameters in an Input Aid Description cannot be longer than 450 characters.

This is now checked online as the Input Aid Description is being entered.

Search function via .S improved

The Search function .S has been improved:
lower case character strings are recognized.

The VA Pac Database logical code now appears in the sign-on screen.

The VA Pac Database logical code now appears in the sign-on screen.

TEXT : assignment on UEs whose codes exceed 6 char (B- and E-type lines) and X-references (-AT)

Two new values of the line type allow for Text Assignment (beginning and end) on all the types of entities :

- . "B" identifies the beginning of the assignment of the text which follows on the entity defined in the description part,
- . "E" identifies the end of the assignment of the current text on the entity defined in the description part.

These two types of lines, contrary to I- and J-type lines, can contain only one entity code, knowing that the length of this code can reach up to 30 characters for User Entities.

The Entity type is always left-aligned and is 3-character long whatever the entity type.

The available values for the entity type are the same as for I- and J-type lines.

Examples :

```
E  CORUB
P  PROGR
$XXUserentity
```

ENTITY CODE: blanks are allowed only at the end of an entity code (except for User Entities)

For all entities, the internal code must not contain blanks:

- . at the beginning,

- . in the middle,
- . at the end, for some entities.

Reminder on the concept of internal code:

The internal code is the (unique) code of all the Metamodel entities, except for some User Entities.

For User Entities:

The code whose length is lower than or equal to 6 characters and the short code are considered as the internal code.

The 'long' code, greater than 6 characters, can then contain blanks, whether or not it is doubled by a short code.

As for the User Entities' short codes, all the character-mode choice will have to display an & instead of each blank which is not located at the end of the code.

VisualAge Pacbase 3.5

Change with ascending compatibility impact

Batch Procedures

UPDT: Journalization optimized for input transactions longer than one record(C:023038)

Batch update (UPDT/UPDP): A number of input transactions require more than one record in the Update Input file:

- Segment Definition: line code = 2
- Screen Definition: line code = H
- Screen Description: line code = I
- Data Element Definition: line code = C
- Database Block Description - if key present:
line code = L4

Each record meant one update transaction. Now an input transaction is always one update transaction, even when several records are involved.

Available with 3.5 V00 version.

Miscellaneous

-X entity: harmonization of the x-ref screens display sequence whatever the target entity.(C:019161)

-X of entity: harmonization of the x-references screens display sequence for the program and text entities. The expanded texts will appear first as for the other entities.

The REOR procedure must be executed to re-build indexes.

Available with 3.5 V01 version.

Change without ascending compatibility impact

Installation and procedures

New extraction and update procedures for the administration database.(C:022957)

Two new procedures to manage the administration database
PAGX : Extract information in the administration database
UPGP : Batch update (PAF tables format, GY)

Available with 3.5 V01 version.

New procedure to unreference a database (Windows repository).(C:024227)

The BVPDELDATABASE procedure to unreference a database on a Windows platform is now available.

This procedure performs the following operations:

- Deletion of configuration information (CONFIG directory),
- Deletion of information specific to the database in the Windows registry,
- Deletion of the shortcuts for the database,
- renaming of the database data directories.

Available with 3.5 V01 version.

Increase the size of the socket number to 5 digits in the installation (Unix referential).(C:024526)

The size of the socket number requested in the database initialization on Unix platform, changes from 4 to 5 digits, so the port number can be higher than 9999.

Available in the 3.5 V00 version.

VisualAge-Pacbase Endeavor 3.5 (IBM MVS-CICS and IBM MVS-IMS repositories)(C:024597)

New Va-Pacbase/Endevor 3.5 interface.

The 'Va Pacbase/Endevor' interface ("Additional Configuration Management Interface / Endeavor") is now on the VA Pacbase installation media. The installation of this module is described in the "Installation Guide" of the appropriate platform.

Client/Server system develop.

eBusiness component: call of a server described in the 2.5 metamodel (O entity).(C:023596)

eBusiness component: new ODP (Objet De Persistance) type in a eBusiness elementary component to call a server described in the 2.5 metamodel (O entity).

Available with 3.5 V01 version.

Client/Server DPS8 Communication Monitor: GTEA Middleware availability(C:024165)

Client/Server DPS8 Communication Monitor:

GTEA Middleware availability

New value allowed in the Monitor's Definition for the Communication Type: GTEA.

Available with version 3.5 V00.

Date data element with 'display' format: the number of characters is now limited to 16.(C:024781)

Date data element with 'display' format for an Oracle database: the format of a date data element was limited to 14 characters. It was not possible to enter more than 14

values in the Data element description screen, on the "Date format" lines (with 'E' type).
To enter the HH24 format, this limit is now 16 characters instead of 14 previously.

ENDEVOR Interface

VisualAge-Pacbase Endeavor 3.5 (IBM MVS-CICS and IBM MVS-IMS repositories)(C:024597)

New Va-Pacbase/Endevor 3.5 interface.
The 'Va Pacbase/Endevor' interface ("Additional Configuration Management Interface / Endeavor") is now on the VA Pacbase installation media. The installation of this module is described in the "Installation Guide" of the appropriate platform.

Middleware

Client/Server DPS8 Communication Monitor: GTEA Middleware availability(C:024165)

Client/Server DPS8 Communication Monitor:
GTEA Middleware availability
New value allowed in the Monitor's Definition for the Communication Type: GTEA.

Available with version 3.5 V00.

On-Line System Development

Date data element with 'display' format: the number of characters is now limited to 16.(C:024781)

Date data element with 'display' format for an Oracle database: the format of a date data element was limited to 14 characters. It was not possible to enter more than 14 values in the Data element description screen, on the "Date format" lines (with 'E' type).
To enter the HH24 format, this limit is now 16 characters instead of 14 previously.

Pacbase Access Facility

New action code 'S' for entity complete deletion (Batch and PUF only).(C:024154)

Entity complete deletion:
New action code 'S' for entity complete deletion (UPDT/UPDP and PUF only).

A number of restrictions apply, knowing that action code 'B' is still valid in batch mode.

- . An instance defined in an upper Library may be deleted from the update Library even if this instance uses other instances.
- . An instance defined in the update Library may be deleted from the update Library only when this instance no longer uses any other instance.
- . A number of entities must not have dependent instances:
 - A Data Element must not have child Data Elements,
 - A Dialog must not have dependent Screens,
 - A Meta Entity must not have dependent User Entities.

- . A Data Structure deletion will also delete all dependent Segments. However, if at least one of these Segments is called in the DATA STRUCTURES USED IN PROGRAM screen (CH: -CD), the Data Structure will not be deleted. Please note than any other uses, eg Segments called in a Screen (CH: -CS), will be disregarded and the complete deletion will take place.

This deletion mode advantage against the 'B'-type deletion is that only one deletion transaction gets journalized. As a result, elementary transactions need no longer be written between a formatting program and the update program, the latter taking in charge the entire processing according to the Database contents.

Available with 3.5 V00 version.

Batch Procedures

EXPU and users purge: Handling of instance update locks(C:023347)

EXPU: Users owning instance update locks but no longer referenced as users in the Administration Database are now extracted for purge by the REOR procedure.

Available with 3.5 V00 version.

New action code 'S' for entity complete deletion (Batch and PUF only).(C:024154)

Entity complete deletion:
New action code 'S' for entity complete deletion (UPDT/UPDP and PUF only).

A number of restrictions apply, knowing that action code 'B' is still valid in batch mode.

- . An instance defined in an upper Library may be deleted from the update Library even if this instance uses other instances.
- . An instance defined in the update Library may be deleted from the update Library only when this instance no longer uses any other instance.
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 - A Data Element must not have child Data Elements,
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This deletion mode advantage against the 'B'-type deletion is that only one deletion transaction gets journalized. As a result, elementary transactions need no longer be written between a formatting program and the update program, the latter taking in charge the entire processing according to the Database contents.

Available with 3.5 V00 version.

AD Workbench 3.5

Change without ascending compatibility impact

Installation and procedures

'Station_All' module delivery.(C:024790)

This module covers all the Developer Workbench functionalities.

Available with 3.5 V01 version.

Administration

Details of the Build targets(C:024816)

Input of Build targets.

The Build targets are defined in the 'purchased licenses' tab of an access key.

At the first installation, all targets must be entered in this tab. But for key renewal, if the targets number of the new key is higher than the targets number of the active key, missing targets can be defined. Else, targets of the new key are obtained duplicating a part or all the targets of the active key.

For an input following an error, the process is the same than for a first installation.

Input is done in a smartguide containing only one page.

This page contains 5 comboboxes where the user can choose:

- . for all generators:
 - . the operating system,
 - . the transactional monitor,
 - . the database manager (optional).
- . for the eBusiness generator:
 - . the middleware,
 - . the object-oriented language.

Once the build target is defined, it cannot be modified or deleted.

Client/Server system develop.

Logical View/Extract Conditions: Logical View code is prefix for Data Element codes.(C:024223)

Developer workbench/eBusiness module:

Logical View extract conditions: Codes of Data Elements called by the Logical View have the Logical View code as prefix.

Extract parameters codes have the following code prefix:
2-LogicalViewCode

Available with 3.5 V00 version.

eBusiness Module

Automatic refresh of the Source tab for eBusiness entities(C:024076)

Automatic refresh of the Source tab for eBusiness entities

when changes such as adding persistent object dynamics, modifying the generation variant, adding a Logical View, etc imply changes in the source's contents.

Available with the 3.5V00 version.

Logical View/Extract Conditions: Logical View code is prefix for Data Element codes.(C:024223)

Developer workbench/eBusiness module:
Logical View extract conditions: Codes of Data Elements called by the Logical View have the Logical View code as prefix.
Extract parameters codes have the following code prefix:
2-LogicalViewCode

Available with 3.5 V00 version.

Persistency Object Transfer: Source Data Element code prefix is Segment or Logical View code(C:024224)

Persistency Object Transfer:
In transfer chart, the source Data Element code prefix is the code of the structure to which it belongs (persistency object code, generated code of the Logical View associated with the corresponding dynamics).

Available with 3.5 V00 version.

Modelling and generation tool of Web services.(C:024851)

Developer Workbench contains a Web services creation and generation module.
The web services creation uses entities which already exist in the repository (data element, segment, folder, logical view) and new entities (service, operation, message, part)
The services modeler generates a WSDL file (Web Service Description Language).

Available with 3.5 V00 version.

Generation

Modelling and generation tool of Web services.(C:024851)

Developer Workbench contains a Web services creation and generation module.
The web services creation uses entities which already exist in the repository (data element, segment, folder, logical view) and new entities (service, operation, message, part)
The services modeler generates a WSDL file (Web Service Description Language).

Available with 3.5 V00 version.

Publishing

Text entities publishing(C:023586)

Text entities publishing.

With Developer Workbench, it is now possible to publish the text entity via the "publish current entity" button.

Available with 3.5 V01 version.

Dialog (and screen) entity publishing(C:023587)

Dialog (and screen) entity publishing.

With Developer Workbench, it is now possible to publish the dialog entity via the "publish current entity" button.

Available with 3.5 V01 version.

Import/Create button implemented for Documents(C:024388)

Import/Create button implemented for Documents.

The toolbar on the Documents tab now contains the same buttons than the other tabs toolbars. In particular a Import/Create button has been added to insure the harmonization of tabs.

Available with 3.5 V00 version.

Search Function

Local search: graphic interface conform with the Servers searches(C:025058)

Local search: the graphic interface is conform with the servers searches.

The graphic interface for local search of references is the same as the servers searches one:

- . smartguide for the search selection.
- . Referencing entities list of results.
- . Detail of each result.

There is no :

- . Local search with keywords.
- . Detail of a Document-type referencing entity.
- . Opening of a WebServices entity detail panel.

Available with 3.5 V01 version.

Miscellaneous

Improvement of locks management in Developer Workbench.(C:024827)

The management of locks has been improved in the Developer Workbench.

- 1) Locks are displayed in the list and in the definition depending on the work library.
- 2) For each entity, the list of locks is displayed in a specific tab where it is possible to lock or unlock an entity.
- 3) It is possible to lock/unlock in a library where the definition does not exist.

Available with 3.5 V01 version.

Management of attached pieces by the "external file" tab.(C:025164)

The "external file" tab is re-integrated in the Batch and eBusiness modules of the Developer Workbench to manage attached pieces.

Available with 3.5 V01 version.

Compare utility for data elements, segments, DS, programs, reports, screens(C:025166)

A new compare utility is available for the data elements, segments, data structures, programs, reports, screens and the structured language part of eBusiness entities.

Available with 3.5 V01 version.

New browser for Text entity(C:025167)

A browser for Text entity is now available in Developer Workbench.
Texts created in PacDesign/Pacbench are not temporarily treated.

Available with 3.5 V00 version.

eBusiness Tools Facility

Change with ascending compatibility impact

eBusiness Module

VisualAge Pacbase Web Connection now available in the eBusiness module(C:024351)

VisualAge Pacbase Web Connection is now integrated into the eBusiness module.

This includes:

- the library used to access dialogues described in VA Pacbase and executed on the backend.
- the HTML template generator from dialogues described in VA Pacbase
- the revamping module using the access library and the HTML templates to offer an HTML view of a Pacbase TUI dialogue.

Available with 3.5 V00 version.

Pacbase Web Connection

VisualAge Pacbase Web Connection now available in the eBusiness module(C:024351)

VisualAge Pacbase Web Connection is now integrated into the eBusiness module.

This includes:

- the library used to access dialogues described in VA Pacbase and executed on the backend.
- the HTML template generator from dialogues described in VA Pacbase
- the revamping module using the access library and the HTML templates to offer an HTML view of a Pacbase TUI dialogue.

Available with 3.5 V00 version.

HTML revamping for Pacbase dialogues module (Pacbase Web Connection) used in a J2EE env.(C:024352)

The revamping module (context server) is now available as a Servlet and can be executed in a J2EE architecture only.

Available with 3.5 V00 version.

Change without ascending compatibility impact

Compatibility

Compatibility of EJB eBusiness proxies with Websphere 4.0.(C:024852)

The eBusiness proxies generated as EJB façade are in conformity with the EJB 1.1 specification implemented in Websphere 4.0.

Available with the 3.5 V01 version.

eBusiness Module

eBusiness tools (eBusiness proxies generator and Services Test Facility) are integrated into WSAD(C:024343)

The proxies generator and 'Services Test Facility' are now integrated into WSAD.

Available with 3.5 V00 version.

Proxy functionalities

eBusiness tools (eBusiness proxies generator and Services Test Facility) are integrated into WSAD(C:024343)

The proxies generator and 'Services Test Facility' are now integrated into WSAD.

Available with 3.5 V00 version.

Compatibility of EJB eBusiness proxies with Websphere 4.0.(C:024852)

The eBusiness proxies generated as EJB façade are in conformity with the EJB 1.1 specification implemented in Websphere 4.0.

Available with the 3.5 V01 version.

Service Test Facility

eBusiness tools (eBusiness proxies generator and Services Test Facility) are integrated into WSAD(C:024343)

The proxies generator and 'Services Test Facility' are now integrated into WSAD.

Available with 3.5 V00 version.

