

UNIT 12

IMS Installation and the IVP

Unit objectives

After completing this unit, you should be able to:

- Describe the IMS installation process
- Identify the functions of the IMS IVP ISPF Dialogs
- List the different phases of the IVP Dialog
- Recognize the different series of steps that are part of the Execution phase of the IVP Dialog
- Understand Version upgrade and migration tasks and procedures

...

- *IMS 11+ versus IMS 10 publications - be aware of new doc structure / naming :*

| IMS Version 11+ Titles | IMS Version 10 Titles |
|---|---------------------------------------|
| ▪ <i>Command Reference, Volume 1: IMS Commands A-M</i> | ▪ <i>Command Reference, Volume 1</i> |
| ▪ <i>Command Reference, Volume 2 : IMS Commands N-Z</i> | ▪ <i>Command Reference, Volume 2</i> |
| ▪ <i>Command Reference, Volume 3: IMS Component and z/OS Commands</i> | ▪ <i>Command Reference, Volume 3</i> |
| ▪ <i>Database Utilities</i> | ▪ <i>Database Utilities Reference</i> |
| ▪ <i>System Utilities</i> | ▪ <i>System Utilities Reference</i> |

SMP/E Installation

Distribution media

The IMS product can be distributed by a variety of methods which are as follows:

- **CBPDO**: DBS Feature distribution tapes
- **SERVERPAC**: DBS Feature pre-built SMP/E, DLIBs and TLIBs
- **SYSTEMPAC**: DBS Feature can be customized

Notes:

- **CBPDO**: DBS Feature distribution tapes.

This media contains all products and features (FMIDs) combined on one logical tape. Depending on the size, it might be multiple physical tapes. It contains the base product and service.

- **SERVERPAC**: DBS Feature.

RSU Service integrated monthly. Beyond this monthly base, HIPER and PE resolution PTFs integrated. Other service provided on service tape. Target and Distribution libraries shipped. Complete service integration twice yearly in March and September.

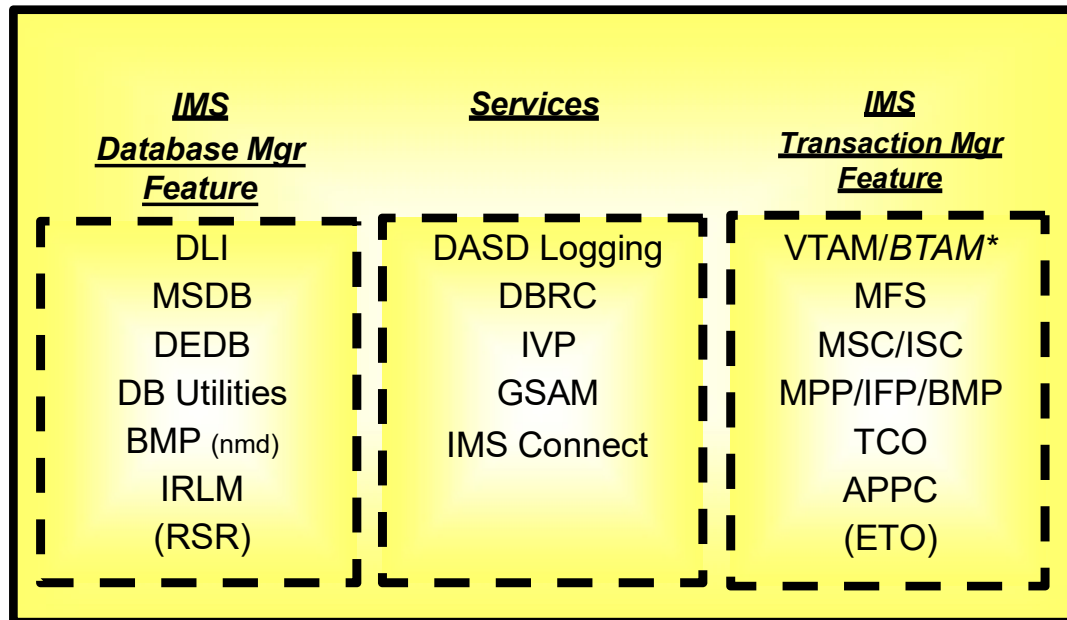
Use the CustomPac Installation dialog for installing, before

moving on with customization or to the IVP dialog.

- **ISD:** IMS distribution tapes from ISD. This media contains a separate tape for each product and feature (FMID). A separate order for service beyond the base will have to be placed. Orders often result in duplicate copies of system services FMID because separate orders are built for db and dc component. Causes customer confusion.
- **SYSTEMPAC:** DBS Feature can be customized.

Packaging overview

Program Numbers – V15.5 : PID 5635-A06



- **IMS Database Manager Feature**

- Contains the support for IMS database access including DEDB and MSDB functions
- MSDBs can only be accessed through the IMS Transaction Manager

- **IMS Transaction Manager Feature**

- Contains the code for classifying, scheduling and processing transactions
- ***BTAM** support ended

- **IMS Services**

There are certain base functions (for example, Logging, DBRC) that are provided for any kind of IMS system.

Be aware of different PIDs / FMIDs if you deal with a VUA
(Value Unit edition) ,
So f.i. an IMS V 15.3 VUE for IMS/DB has Program
Number 5655-DS5,
For IMS / TM a Program Number 5655-TM4 ;
(FMIDs : HMK1500 [JMK1501] [JMK1502] [JMK1503]
JMK1506 JMK151Z HIR2230)

Also worth to check is a separate order when under
„zNALC“ (specific conditions apply !)
... but since TFP (taylored fit pricing) there might be no
advantage anymore.

Packaging

- IMS 15 product number: 5635-A06

| FMID | Feature Description |
|---------|--------------------------------|
| HMK1500 | System Services |
| JMK1501 | Database Manager |
| JMK1502 | Transaction Manager |
| JMK1503 | Extended Terminal Option (ETO) |
| JMK1504 | Recovery Level Tracking (RSR) |
| JMK1505 | Database Level Tracking (RSR) |
| JMK1506 | IMS Java and On Demand |
| HIR2230 | IRLM 2.3 |

Transaction Manager is a prerequisite for ETO (JMK1503).
Recovery Level Tracking RSR is a prerequisite for Database Level Tracking RSR. (maybe not supported anymore ?)

SMP/E Processing (1 of 2)

- Unlike in earlier IMS Versions, SMP/E processing is like other z/OS products
 - IMS IVP Dialogs are not used until after product is installed
 - IMS INSTALL/IVP Dialog was renamed to IMS IVP Dialog in IMS8
- All FMIDs are installed using SMP/E RECEIVE -> APPLY -> ACCEPT:
 - Conform to packaging standards
 - Results in multiple SMP/E messages indicating no target library for parts defined by SYSGEN
 - Program Directory contains message IDs
 - Sample jobs provided will process service as well as FMIDs
- **Always RECEIVE current Enhanced HOLDDATA prior to SMP/E processing**
 - For complete descriptive information relating to Enhanced Holddata see Internet address:
 - <https://www.ibm.com/support/pages/enhanced-holddata-zos>

Recommended: RECEIVE HOLDDATA for all products regularly !

SMP/E Processing (2 of 2)

- Be sure to resolve PEs during processing
 - [Contact the IBM Support Center for assistance if needed](#)
- Installation Documentation Precedence:
 - [Documentation provided with CBPDO, ServerPac, a.s.o.](#)
 - [PSP Bucket , RELEASE PLANNING , ...](#)
 - Contains the latest information
 - [Program Directory](#)
 - [IMS Installation Guide](#)

Notes:

If you are not sure, check with IBM Support Center.

Note that the names of IMS Manuals sometimes change with a new version.

<https://www.ibm.com/docs/en/ims/15.5.0?topic=release-planning-ims>

<https://www.ibm.com/docs/en/ims/15.5.0?topic=155-packaging-ims>

SMP/E Setup and SMP/E Jobs: List

The following is a list of the SMP/E Setup and SMP/E sample jobs provided:

- **DFSALA:** Allocate and initialize new CSI data sets ([optional but recommended](#))
- **DFSALB:** Initialize SMP/E zones allocated ([optional but recommended](#))
- **RECEIVE:** Receive job provided by CBPDO
 - Program Directory contains instructions for obtaining the JCL
- **DFSALLOC:** Allocate target and distribution libraries
- **DFSJSMKD:** Invoke DFSJMKDR EXEC to allocate HFS paths for IMS
JAVA
- **DFSDDEF1:** Define SMP/E DDDEFs for IMS
- **DFSDDEF2:** Define SMP/E DDDEFs for IMS JAVA
- **DFSAPPLY:** SMP/E APPLY of FMID's and service (**Be sure to resolve PEs**)
- **DFSACCEP:** SMP/E ACCEPT of FMIDs and service (**Be sure to resolve PEs**)

Optional sample jobs

- Optional jobs provided to install IMS in its own unique SMP/E environment (GLOBAL Zone):
 - **DFSALA**: Allocate and initialize new CSI
 - **DFSALB**: Initialize CSI zones, allocate SMP/E data sets, build DDDEF entries for SMP/E
- Recommend using these jobs
 - If these jobs are NOT used, be sure **ACCJCLIN** is set in the IMS distribution zone prior to ACCEPT processing:
 - ACCJCLIN is set in sample job DFSALB
 - SMP/E OPTION and UTILITY entries added in sample job DFSALB

Notes:

If the ACCJCLIN option is not set, the SMP/E GENERATE function will not work properly.

SMP/E GENERATE command (1 of 2)

- Used to create JCL necessary to build non-SYSGEN parts:
 - An IMS Gen no longer builds a complete system
 - IMS product is moving away from the need to perform a SYSGEN
 - Dependent on ACCJCLIN being set up in distribution zone BEFORE processing FMIDs
- Non-SYSGEN parts are created during SMP/E APPLY processing
 - Inline (++JCLIN) provided with FMIDs used by SMP/E to accomplish this
- Used as part processing of service via ...

ACCEPT BYPASS APPLYCHECK

... or when target environment needs to be rebuilt from the distribution environment:

- Not needed when processing using RECEIVE, APPLY, ACCEPT
 - See Informational APAR II13024

Notes:

The IMS system generation process does not build a complete system. Some elements are built outside of the system generation process. These elements must be separately identified to SMP/E, and the target libraries loaded by means other than SYSGEN (for example, SMP/E APPLY).

Starting with IMS V8, non-SYSGEN elements are created during SMP/E APPLY processing. The SMP/E GENERATE command can be issued to create the JCL necessary to build the non-SYSGEN elements with the elements actually being created during SMP/E APPLY processing.

A SYSMOD can be constructed with the JCLIN necessary for its elements to be installed. In this case, the SYSMOD contains a

++JCLIN statement. When processing such a SYSMOD, SMP/E processes the JCLIN as part of the installation of the SYSMOD. During APPLY processing, and before changing any target zone entry affected by the JCLIN, a copy of that entry is stored on the SMPSCDS data set. This data is used by SMP/E in case the SYSMOD has to be RESTOREd. The target zone can then be brought back to the level it was at before the APPLY was run.

SMP/E GENERATE command (2 of 2)

- Sample command:

`SET BDY(targlib)`

`GENERATE FORFMID(HMK1510) JOBCARD(CNTL,J) REPLACE`

(**Note:** This sample requires DD CNTL to contain member 'J' which is a sample job card)

IMS SMP/E data set names (1 of 4)

Distribution (DLIB) data sets

IMS distribution libraries (DLIBs) contain the master copy of elements in IMS and can be used to restore SYSMODs in the target library or to rebuild a target environment. These data sets are maintained by SMP/E.

System services data sets ...used by the System Services component FMID:

| | | |
|--------------|--------------|--------------|
| IMS.ADFSBASE | IMS.ADFSCLST | IMS.ADFSDATA |
| IMS.ADFSEXEC | IMS.ADFSISRC | IMS.ADFSLOAD |
| IMS.ADFSMAAC | IMS.ADFSMLIB | IMS.ADFSPLIB |
| IMS.ADFSRTM | IMS.ADFSSLIB | IMS.ADFSSMPL |
| IMS.ADFSSRC | IMS.ADFSTLIB | IMS.ADFSJLIB |
| ... | | |

Database Manager data sets ...used by the Database Manager FMID:

| | | |
|--------------|--------------|--------------|
| IMS.ADFSCLST | IMS.ADFSLOAD | IMS.ADFSPLIB |
| IMS.ADFSSRC | IMS.ADFSSMPL | |

Notes:

The *old* names were applicable prior to IMS V8.

These changes were made to conform to z/OS packaging standards and to simplify IMS installation and maintenance.

GENLIB, GENLIBA and GENLIBB now have a common target library of SDFSMAAC and a common distribution library of ADFSMAAC. This nullifies the MACLIB parm on the IMSGEN macro (it will be ignored if specified).

DBSOURCE, SVSOURCE and TMSOURCE now have a distribution library of ADFSSRC.

IMS SMP/E data set names (2 of 4)

Distribution (DLIB) data sets ...

Transaction Manager data sets ...used by the Transaction Manager FMID:

IMS.ADFSEEXEC

IMS.ADFSLOAD

IMS.ADFSPLIB

IMS.ADFSSMPL

IMS.ADFSSRC

IMS Extended Terminal Option Support data sets

IMS.ADFSLOAD

IMS SOA Integration Suite (JAVA in common , incl. TMRA / IC4J a.s.o.)

IMS.ADFSJLIB

IMS.ADFSIC4J

IMS.ADFSJHFS

IMS.ADFSJRAR

IMS.ADFSJCPI

IMS.ADFSJSAM

IMS.ADFSJCIC

IMS.ADFSJCPS

zFS pathes

IMS SMP/E data set names (3 of 4)

Target (TLIB) data sets

The TLIB data sets are the IMS™ SMP/E target libraries (SYSLIBs), and are the libraries that are used to run and use IMS.

IMS data sets maintained by SMP/E

The following data sets are maintained by the SMP/E APPLY processing:

| | | |
|--------------|--------------|--------------|
| IMS.MODBLKS | IMS.SDFSBASE | IMS.SDFSCLST |
| IMS.SDFSDATA | IMS.SDFSEXEC | IMS.SDFSISRC |
| IMS.SDFSJLIB | IMS.SDFSJSID | IMS.SDFSMAC |
| IMS.SDFSMLIB | IMS.SDFSPLIB | IMS.SDFSRESL |
| IMS.SDFSRTM | IMS.SDFSSLIB | IMS.SDFSSMPL |
| IMS.SDFSSRC | IMS.SDFSTLIB | . . . |

IMS SMP/E data set names (3 of 4)

Target (TLIB) data sets ...

The following data sets residing in UNIX System Services file system are also maintained by the SMP/E APPLY processing:

SDFSJCPS
SDFSJCIC
SDFSJRAR

SDFSJTOL
SDFSJCPI
SDFSJSAM

SDFSIC4J
SDFSJHFS

IMS system definition data sets

The following data sets are initially loaded or updated by Stage 2 of the IMS system definition process:

IMS.MODBLKS

IMS.SDFSRESL

If not permanent mounted anyway, then you need to MOUNT your zfs file when running maintenance .

Additional SMP/E-managed libraries

- Distribution data sets:

- ADFSBASE: Sample jobs used for installation.
- ADFSDATA: OM translatable text file, English.
- ADFSJHF8: File system for Version 8.
- ADFSJHF9: File system for Version 9.
- ADFSJHF: File system for Version 10.
- ADFSSMPL: Samples (exit code, DBD source, ...)

- Target data sets:

- SDFSBASE: Sample jobs used for installation.
- SDFSDATA: OM translatable text file, English.
- SDFSSMPL: Samples (exit code, DBD source, ...)
- SDFSSRC: Source code Target lib created for distribution lib ADFSSRC
 - SMPSTS: No longer used. by IMS product (DDDEF still required)

IMS IVP Dialog overview – What does it do?

- IMS-provided dialog which will **build the jobs/tasks to perform Installation Verification:**
 - This includes the testing (and indirectly, the demonstration and learning) of new function added by new IMS versions
 - Of course, function added in earlier IMS versions is also tested
 - Since IMS V8, Installation Verification is only function of this dialog
 - Prior to IMS V8, SMP/E Jobs were built by the dialog
 - IMS INSTALL/IVP dialog renamed to IMS IVP dialog in IMS V8
- Additional enhancements to assist in Installation Verification are added in any new version
 - Some of these enhancements will be listed on the next few pages

IVP is constantly changing

- CQS (Shared Queues) optional samples provided
- Enhanced Command Environment samples added
 - SPOC samples with SCI and OM automatically started and without RM
- Samples for setup of IMS dump formatter and to provide example of using IMS dump formatting and processing an IMS dump
- Sample for setting up z/OS dump options
- A new and separate high-level-qualifier variable for VSAM data sets
- SMS Storage Class and SMS Management Class parameters are available for allocating all data sets
- Export/Import functions added
 - Copy variables from one release or system to another

More IVP changes

- Option to include and test RACF in sample IVP system added
- Option to include and test JAVA in sample IVP system added
- Ability to File-tailor individual members in Execution phase added
- Dynamic Resource Definition User Interface (DRD) samples
- IMS Connect added in sample IVP system
- DB setup for XQUERY
- SPOC Audit Trail
- Parallel Recon Access (PK54245 SPE)

Be careful with PRA !

It triggers the „Transactional VSAM“ feature (maybe licence charged) and forces the MVS component RRS to run the 2 two-phase-commit stuff !

IVP changes: V11+

New IVPs

- Open Database (OPDB)
- Callout application (COUT)

Help Text Cleanup

- Some new and more complete help

IVP Enhancements: V11+ (cont.)

- Repository usage for DRD is added to IVP
 - IVP provides sample JCL to create repository catalog data sets and the IMS repository
 - IVP provides sample repository server PROC and its configuration file
 - Sample JCL is provided to:
 - Add an IMS repository into the repository catalog
 - Rename a repository in the repository catalog
 - Delete a repository in the repository catalog
 - List the status information for all repositories
 - List the detailed information for a single repository
- Asynchronous and Synchronous Callout will be added to IVP
 - Added by IMS 11 APAR PK97597
 - IMS TM applications act as clients and send requests to external applications
- (Open DB function was added in IMS 11)

The implementation of the new Repository capability is done in the Ox series. There is no change in the system definition process (the Cx series).

The tasks IV_D201T, IV_D202T are updated to do the APF authorization and to place the modules into LPA. Job IV_E302J is updated to add the new repository server proc and the server configuration member into PROCLIB. Job IV_O101J is updated to create repository catalog data sets and IMS repository data sets.

The following new jobs are added:

IV_O200J Start the repository server

IV_O223J Add a Repository To The Catalog

IV_O224J List Status Information For All Repositories

IV_O225J Rename a Repository In The Catalog

APAR PK97597 did add the callout (COUT) function to the IVP.

Support is added for both asynchronous and synchronous call out. DFSASCBL is a COBOL sample application for asynchronous call out. DFSSSCBL is a COBOL application for synchronous call out. DFSSSCBL issued the DLI ICAL to send an output message and wait for the response.

IMS IVP Dialog processing

The IVP Dialog input data sets :

- IMS.SDFSISRC: Contains sample application and miscellaneous source
- IMS.SDFSCLST: Contains TSO CLISTs
- IMS.SDFSEEXEC: Contains REXX execs
- IMS.SDFSMLIB: Contains ISPF message members
- IMS.SDFSPLIB: Contains ISPF panels Contains
- IMS.SDFSSLIB:- ISPF file tailoring skeletons Contains
- IMS.SDFSTLIB: ISPF table members
- IMS.SDFSRTM: Contains description members used by the IMS IVP dialog

IMS IVP Dialog processing (cont.)

The IVP Dialog output data sets:

- **IMS.INSTALIB:** JCL for the jobs to be run
- **IMS.INSTATBL:** ISPF tables used to keep track of variables
- **ISPPROF:** ISPF profile data set

Notes:

These data sets are the only data sets updated by the IVP dialog. They will be populated during the dialog's execution. The jobs created by the IVP dialog will update other data sets when submitted.

- **IMS.INSTALIB:** JCL for the jobs to be run. This data set will be updated by the IVP dialog *File Tailoring Phase* and will contain the executable jobs as well as some sample jobs. These jobs will build the actual IMS system and test it.
- **IMS.INSTATBL:** ISPF tables used to keep track of variables. This data set is used to keep ISPF table variables. These variables not only keep track of data entered, they also keep track of the position within the

dialog (for example, the phase).

- **ISPPROF:** ISPF profile data set. This is the profile data set used by ISPF. The IVP dialog will add three members to this data set.

IVP Export

Example: 'IMS.SDFSEXEC (DFSIVPEX) '
'HLQ (IMS) '

```
                                IVP Variable Export Utility
Command ==>

Enter the following information, then press enter.

_ 1. Select the IVP Environment
    1. DBB - Database Management (Batch)
    2. DBC - Database Management (DBCTL)
    3. DBT - Database and Transaction Management (DB/DC)
    4. XRF - DB/DC with Extended Recovery Facility (DB/DC with XRF)
    5. DCC - Transaction Management (DCCTL)

2. Specify the IVP High Level Qualifier (IVP) of the INSTATBL dataset
   IMS15V5_____

3. Specify the Export Dataset. (If the dataset does not exist, you will
   be prompted to create the dataset)
   'IMS15V3.EXPORT'_____
```

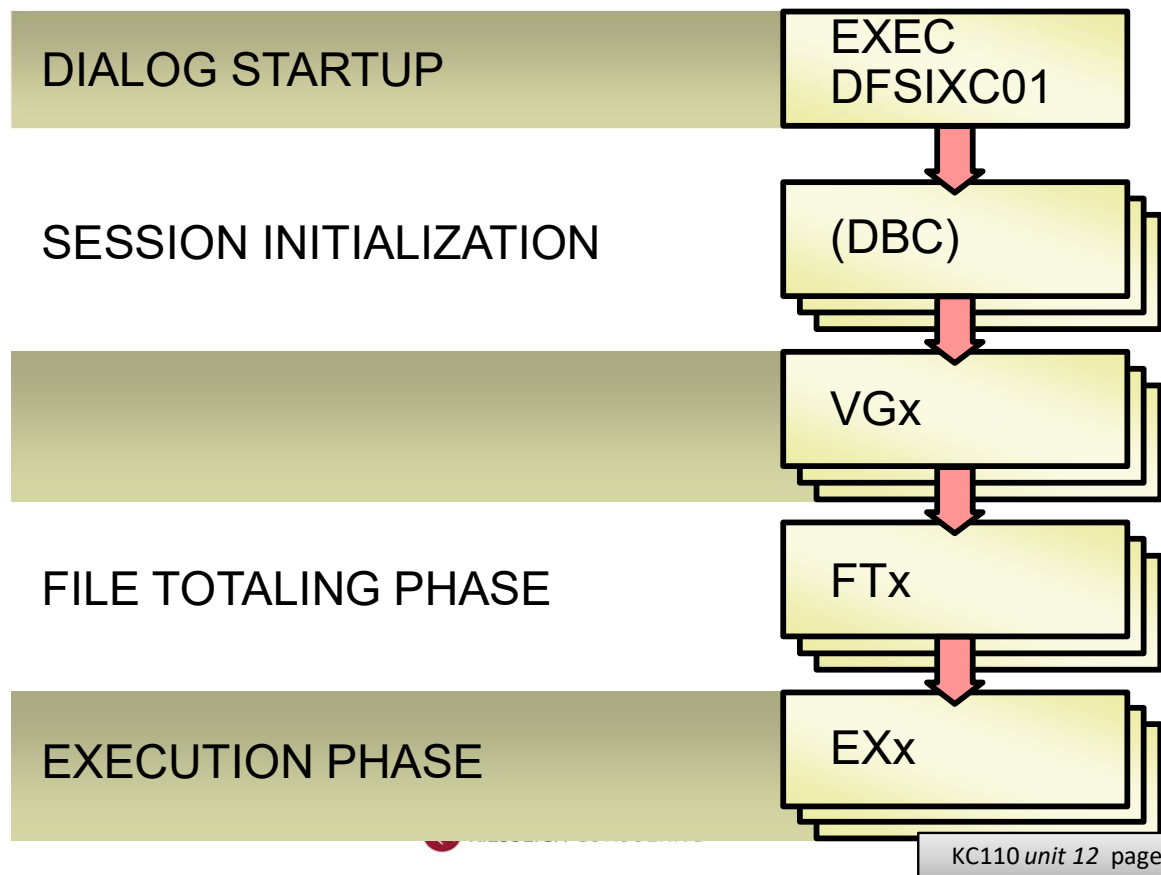
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Notes:

The purpose of the IVP Export function is to eliminate the need to re-enter system-specific variables as part of migrating to a new IMS release.

Dialog phase overview



Notes:

- Uses ISPF Dialog Manager
- One process
- Stop anywhere
- Restart at selected points
- HELP facility

Dialog Startup

The IVP dialog is started by issuing the following command from ISPF Option 6:

```
----- TSO COMMAND PROCESSOR -----  
  
ENTER TSO COMMAND, CLIST, OR REXX EXEC BELOW:  
  
==> EX 'IMS.SDFSCLST(DFSIXC01)' 'HLQIV(iii) HLQDL(hhh) HLQSY(sss)'  
  
iii - High-level qualifier for IVP output data sets  
hhh - High-level qualifier for IMS distribution library data sets  
sss - High-level qualifier for IMS system data sets  
  
The clist parm of 'DEBUG' is available  
  
Help is available for all panels by pressing 'PF1'  
  
Parm 'HLQ' can be used to identify high-level qualifier for IVP, system and distribution libraries  
  
EX 'IMS.SDFSCLST(DFSIXC01)' 'HLQ(IMS)'
```

Dialog Startup (2)

Or from the IMS APPLICATION MENU ...

====> EXEC 'user01.SDFSEEXEC(DFSAPPL)' 'HLQ(user01),
choosing 6 – IVP :

Help

IMS Application Menu

Select an application and press Enter.

- 1 Single Point of Control (SPOC)
- 2 Manage resources
- 3 Reserved for future use
- 4 HALDB Partition Definition Utility (PDU)
- 5 Syntax Checker for IMS parameters (SC)
- 6 Installation Verification Program (IVP)
- 7 IVP Export Utility (IVPEX)
- 8 IPCS with IMS Dump Formatter (IPCS)
- 9 Abend Search and Notification (ASN)

To exit the application, press F3.

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Command ====> _____

F1=Help F12=Cancel

Initial Installation Environment Options panel

- *Select the highest number representing the system you want to install*
- *The option selected will be used in determining the names for most of the members to be placed in IMS.INSTALIB*

Help

IVP IVP Environment Options IMS 15.1
Command ==>

Select the desired option and press Enter.

Option . . 3

IVP Environments

1. DBB - Database Management (Batch)
2. DBC - Database Management (DBCTL)
3. DBT - Database and Transaction Management (DB/DC)
4. XRF - DB/DC with Extended Recovery Facility (DB/DC with XRF)
5. DCC - Transaction Management (DCCTL)

Sub-Option Selection panel

[Help](#)

IVP

Sub-Option Selection -

IMS 12.1

Select the desired Sub-Options and press ENTER

/ IRLM - Use IRLM in IVP Applications
/ FP - Use Fast Path in IVP Applications
/ ETO - Use Extended Terminal Option
/ CQS - Add CQS to CSL Applications
/ RACF - Use RACF Security
/ JAVA - Use JAVA Applications and Open Database
- PRA - Use Parallel RECON Access
/ ICON - Use IMS Connect
/ REPO - Use IMSRSC Repository
- COUT - Use Callout Applications

Note: Your Sub-Option selection affects the user variables, jobs, and tasks that will be presented. If you later change your selection, you must redo the IVP Table Merge, Variable Gathering, File Tailoring, and Execution processes. RACF is required when Java sub-option is selected.

Command ==>

F1=Help

F3=Exit

F7=Backward

F8=Forward

F10=Actions

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Screenshot is from IMS V12 ...

Might be more options under V15 now.

The RACF and JAVA options were added in V10 (defaults are not selected)

The CQS option was added in V9

The FP option was added in V8

PRA / ICAL in V11

REPO in 12

(missing CATALOG !!)

Sub-Option Change Verification panel

This panel appears because CQS was changed from the default of 'N' (no '/') to 'Y' on the previous panel.

Help

Sub-Option Change Verification - DBT

Command ==>

The Sub-Options you have just chosen are not the same as the Sub-Options which were last active. If you change Sub-Options, Table Merge and the three Dialog Phases must be re-run from the beginning.

From To

| | | |
|----------|----------|---|
| Y | Y | - IRLM - Use IRLM in IVP Applications (not available for DCCTL) |
| Y | Y | - FP - Use Fast Path in IVP Applications (not available for DCCTL) |
| Y | Y | - ETO Feature Installed (not available for Batch and DBCTL) |
| N | Y | - CQS - Add CQS Applications (not available for Batch and DBCTL) |
| N | N | - RACF - Use RACF Security (not available for Batch) |

To confirm your change of Sub-Options: Press ENTER

To return to the Sub-Option Selection menu: Press END



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Table Merge Request panel

Help

IVP
Command ==>

Table Merge Request - DBT

IMS 15.1

The IVP Dialog is driven from a set of ISPF tables which contain information about the variables, JOBS, TASKs and sequence of presentation you will need to perform the verifications.

Since the tables will be updated by the dialog, working copies must be made the first time you use the dialog.

If service is applied to your IMS system, or if you decide to use the IVP dialog to build a different environment, then either the existing copies must be updated or new copies created.

Please indicate whether you wish to perform Table Merge/Create:

- 1 1. YES - Create / Update working tables from master tables.
- 2. NO - Use existing tables.

Notes:

Option 1, shown here, would normally only be selected once per system per version. With this option, we are refreshing ISPF tables associated with this IVP application.

VG Table Merge In Progress panel

IVP

VG Table Merge In Progress - DBT

IMS 15.1

Table Merge Progress Indicator

Variable Gathering Table . . : DFSIXBV3
Current Row : IXULESPC
Percent completed : 24

File Tailoring Table : DFSIXBF3
Current Row : Patience
Percent completed : 000

Execution Table : DFSIXBE3
Current Row : Patience
Percent completed : 000

Please do not interrupt this process.

Notes:

This screen will be updated to show the progress being made on the table merge. The current row will list the variable and the Percent Complete field will be updated.

The keyboard will be locked for/to you during the process. When the process is complete, you will be automatically presented with the panel shown on the next visual.

Table Merge has completed panel

When the dialog is started for the first time, the following panel will be displayed:

Help

IVP Table Merge has completed - DBT IMS 15.1
Command ==>

The Table Merge process has completed and the Phase Complete flags have been turned off for all phases.

If Table Merge has just been performed for the first time for this option, then the resetting of Phase Complete flags is of no special interest.

If Table Merge has been performed for some other reason, then the resetting of Phase Complete flags will force you to revisit each of the phases in sequence (Variable Gathering, File Tailoring, and Execution). Make use of this opportunity to examine the tables for changes (the "!" indicator will be set in the action field for items which have been added or changed by service).

Your position in each phase has been retained so that you may return to your last position after you have browsed for changes.

Press ENTER to continue.

IVP Phase Selection panel

When the dialog is started for the first time, the following panel will be displayed:

Help

IVP

IVP Phase Selection - DBT

IMS 15.1

Command ==>

Select the desired Phase and positioning option and press ENTER

1

A. Variable Export Utility (Export variables to a data set)

VG - Variable Gathering - (Define user values for variables)

1. VG1 Start/Restart from the beginning of the phase

2. VG2 Start/Restart from the last known position within the phase

FT - File Tailoring - (Create customized INSTALIB members)

3. FT1 Start/Restart from the beginning of the phase

4. FT2 Start/Restart from the last known position within the phase


5. FT3 Start/Restart from the beginning of a selected step

EX - Execution - (Run the IVP jobs)

6. EX1 Start/Restart from the beginning of the phase

7. EX2 Start/Restart from the last known position within the phase

8. EX3 Start/Restart from the beginning of a selected step

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Notes:

The default selection (**1**, in our example) will be set up depending on the results of the last dialog session. In this case since it is the first time in the dialog it is set up at **1** which is for **VG1**.

The following is a description of these phases:

- **Variable Gathering:** The user modifiable variables which will be used during the customization (file tailoring) phase of the installation will be presented for review and modification.
- **File Tailoring:** The jobs and tasks which will be used during the IVP will be customized based on the options selected and the value of the variables set in the variable gathering phase.

- **Execution:** The actual running of jobs and performance of tasks for the selected option.

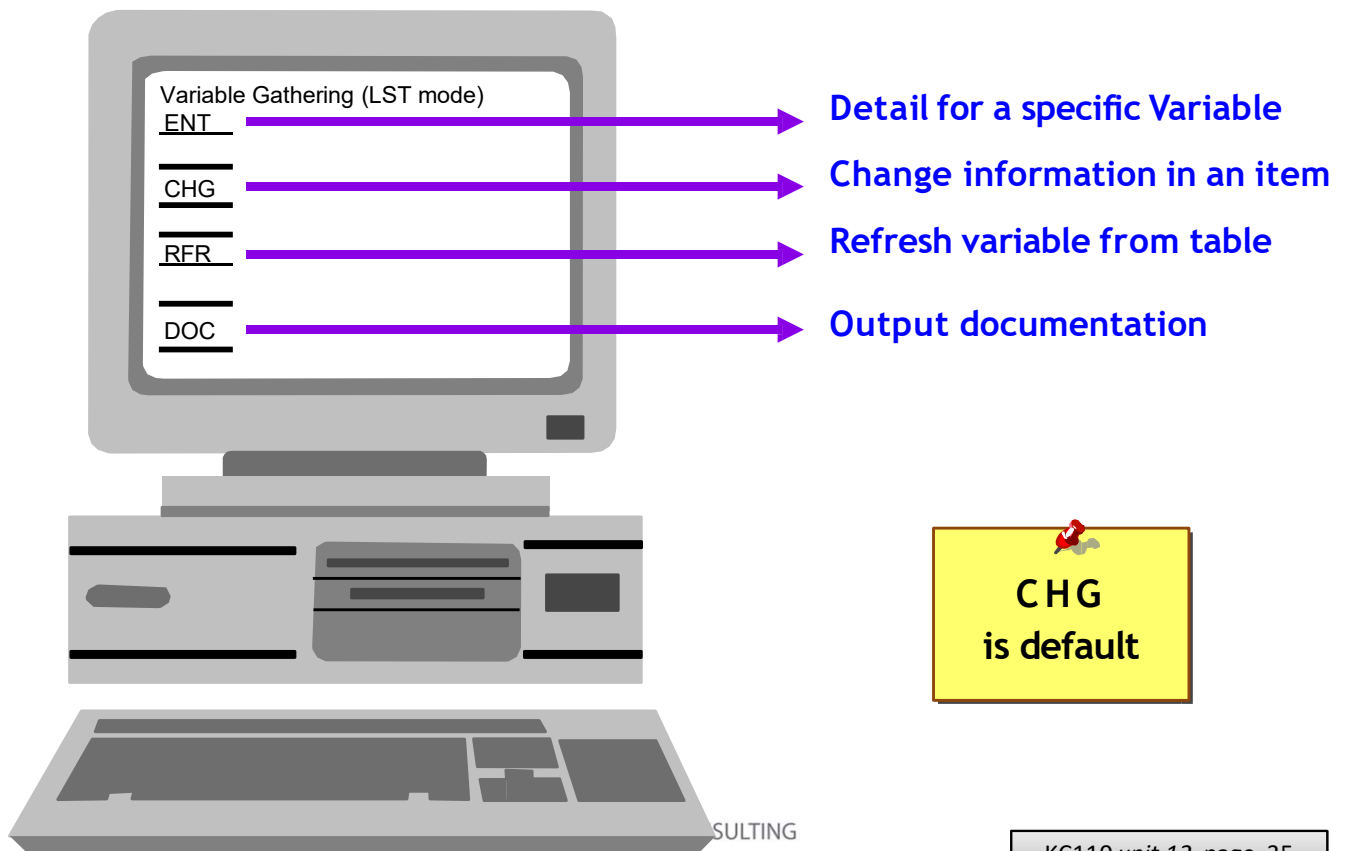
When a phase is exited this panel is returned with the default set to continue where the phase was exited (for example, if you exited *File Tailoring*, Option **4** is highlighted. Once a phase has been completed; you can, at any time, go back to it. You cannot go on to the subsequent phase until the previous ones are completed.

The phases must be completed in the order presented (for example, Variable Gathering - File Tailoring - Execution).

The allowable actions for the rest of the panels will be shown on the **ACTION** line for that panel.

With **1** in the option as shown, press **Enter** to be enter the Variable Gathering Phase described further on the next page.

Variable Gathering overview



Notes:

- Data set name high level qualifiers (HLQs)
- DASD volume serial numbers or SMS options
- Data set blocksizes
- Data set allocation parameters
- Job statement parameters
- And so on

Variable Gathering panel: LST Mode

When we specify action 1 on Phase Selection, this panel will be displayed.

```
Help
IVP      Variable Gathering (LST Mode) - DBT      .. Row 1 to 8 of 169
Command ==>      Scroll ==> CSR

Action Codes: Chg Doc eNt Rfr Imp Exp -- CHG is default if item modified
Variable = Value.....
Var-Title.....
* IXUIVPHQ = IMS
      IVP - High level DSNAME qualifier for IVP (IVP) data sets
! IXURLMHQ = IVPRLM10
      IVP - High level DSNAME qualifier for IRLM (RLM) data sets
* IXUDLBHQ = IMS
      IVP - High level DSNAME qualifier for IMS DLIB (DLB) data sets
N IXUSYSHQ = IMS
      IVP - High level DSNAME qualifier for IMS System (SYS) data sets
! IXUEXEHQ = IVPEXE10
      IVP - High level DSNAME qualifier for Execution (EXE) data sets
! IXUUTLHQ = IVPUTL10
      IVP - High level DSNAME qualifier for Utility (UTL) data sets
! IXUVSMHQ = IVPVSM10
      IVP - High level DSNAME qualifier for VSAM (VSM) data sets
! IXUSSCLS =
      SMS - Storage Class
```

Notes:

This panel displays the variables associated with the options selected. There are multiple pages of variables and by using the down (PF8) and up (PF7) actions you can page back and forth through them. You cannot do a find to get a particular variable, you have to page to it.

To change a variable, simply type in the desired value and press **Enter**.

The action field can be used to perform a certain action against a particular variable. The actions you can select are as follows:

- **CHG (or C):** Permits you to change a given variable.

You do not have to enter this action - just change the variable.

- **DOC (or D):** Allows the online documentation for variables, JOBS and TASKs to be formatted for printing via the ISPF LIST data set.
- **ENT (or N):** Displays a description of the variable. VERY USEFUL!
- **RFR (or R):** Changes a variable back to the IMS default value
- **IMP (or I):** Import all variables from an export data set.
- **EXP (or E):** Export all variables to an export data set.

After an action takes place the action field will be updated to reflect the action. The values are as follows:

- **!:** The variable has been added to the table (by service) or the **RFR** action has been done against the variable.
- *****: The variable has been changed, either by the copy startup process or changed by the user.

- **@:** The variable has been changed, either by the copy startup, a result of propagation from a change to a global variable, or by the user.
- **err:** The variable was updated but the value presented was invalid.

- VAR GATHERING panel : ENT mode :

Notes:

This panel displays the '**ENT**' information for the selected variable. This information describes what the variable is used for and the acceptable values.

Function keys PF8 and PF7 scroll within this entry.

The 'NXT' and 'PRV' options can be used to see the 'ENT' entries for the next or previous variable.

Pressing '**PF3**' or '**Lst**' will bring you back to the *Variable Gathering (LST Mode)* panel where all the variables can be viewed/updated.

IVP Selection: Start File Tailoring phase

- We returned to this panel (in this example) by ending Variable Gathering phase
- Note that the default action is now set to **3** to begin the File Tailoring phase

Help

IVP
Command ===>

IVP Phase Selection - DBT

IMS 15.1

Select the desired Phase and positioning option and press ENTER

3 A. Variable Export Utility (Export variables to a data set)

VG - Variable Gathering - (Define user values for variables)

1. VG1 Start/Restart from the beginning of the phase
2. VG2 Start/Restart from the last known position within the phase

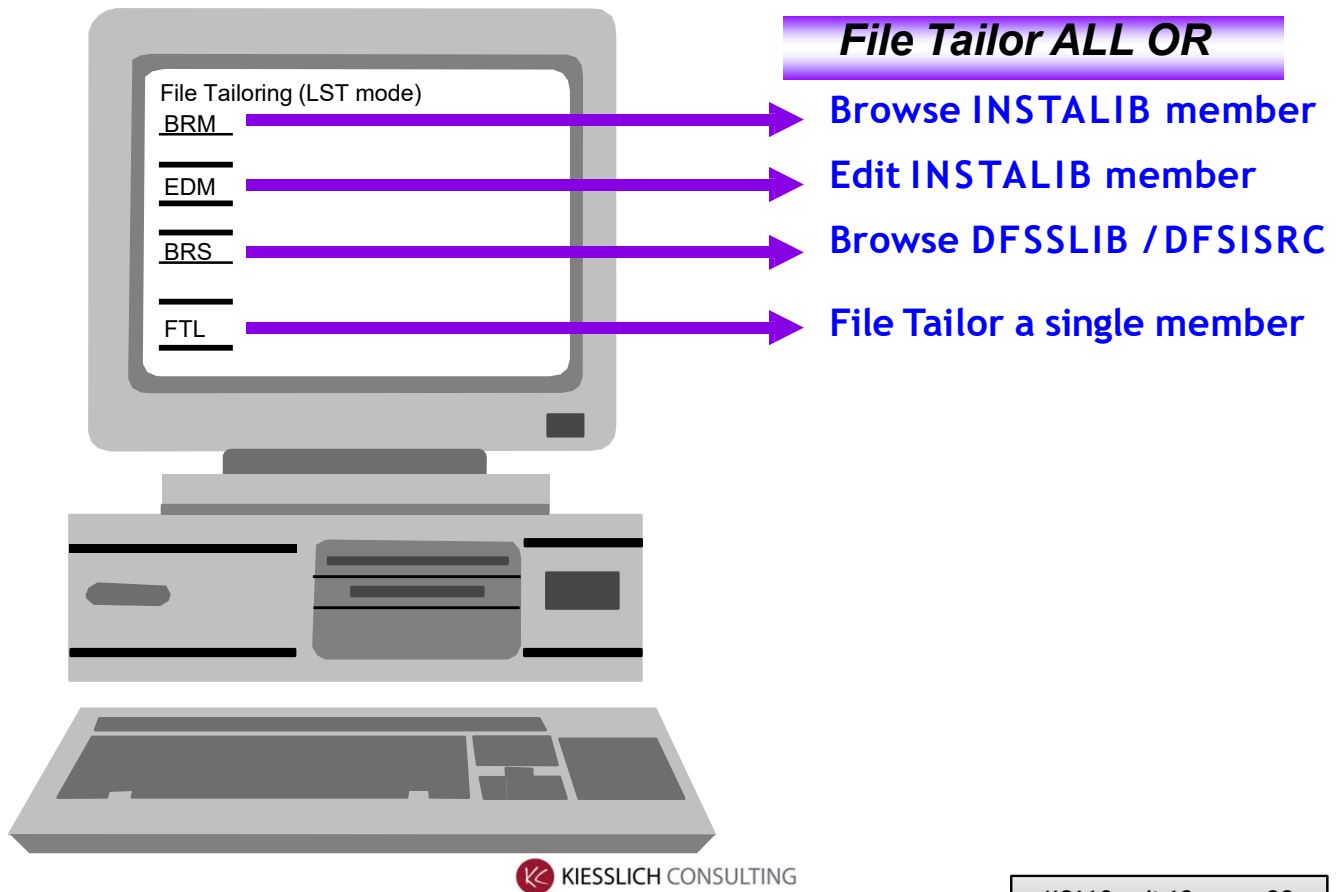
FT - File Tailoring - (Create customized INSTALIB members)

3. FT1 Start/Restart from the beginning of the phase
4. FT2 Start/Restart from the last known position within the phase
5. FT3 Start/Restart from the beginning of a selected step

EX - Execution - (Run the IVP jobs)

6. EX1 Start/Restart from the beginning of the phase
7. EX2 Start/Restart from the last known position within the phase
8. EX3 Start/Restart from the beginning of a selected step

File Tailoring overview



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Notes:

Invoke ISPF file tailoring automatically:

- Customizes INSTALIB members
- Tailor HLQs
- Tailor DASD volume serial numbers
- Tailor data set block sizes
- Tailor data set allocation parameters
- Tailor job statement parameters

This can be done for ALL members or selectively to specific members.

File Tailoring ALL Request panel

When the dialog is started for the first time the following panel will be displayed:

Help

File Tailor ALL Request - DBT

Command ==>

You are entering the File Tailoring Phase. For one of the following reasons, the File Tailoring Complete flag is not set:

- o You are entering File Tailoring for the first time.
- o You are re-entering File Tailoring and you did not cause the File Tailoring Complete flag to be set when you last exited this Phase.
- o The File Tailoring Complete flag was reset by Table Merge.

If you wish, File Tailoring will be performed for ALL JOBS at this time. Please select one of the following:

1

1. YES - Perform the ALL action before going to File Tailoring

2. NO - Go directly to the File Tailoring Panels

NOTE: YES is recommended the first time you enter File Tailoring for an Option and any time service is applied.

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Notes:

This panel presents the following options:

1. YES - Perform the ALL action before going to File Tailoring

This option will customize (file tailor) all members before presenting the File Tailoring panel. As indicated on the panel, you should do this the first time you enter File Tailoring; otherwise, your variables can not be used in the Execution phase.

Normally this will not be repeated after the initial implementation of a new IMS Version (or system); you

might need to re-do this 'YES' option if you change a variable that is used in many or most members (for example, VOLSER=?).

2. NO - Go directly to the File Tailoring Panels

This option will bring you directly to the File Tailoring panel where you can file tailor individual members. Normally used on subsequent iterations of the dialog when you have gone back to variable gathering to change a specific value and want to update the affected members with that value. Might also be needed when service has altered the dialog.

File Tailoring in Progress panel

IVP

File Tailoring in Progress - DBT

IMS 15.1

File Tailoring Progress Indicator

Current Row : IV3C201T

Percent completed . . : 1

Please do not interrupt this process.

... nach VAR Gathering and the „VG Complete Verification – DBDC“ panel !

File Tailoring panel: LST Mode

- Do not use 'Edm' from File Tailoring phase
- PF3 to get out of File Tailoring

```

Help
-----
IVP                      File Tailoring (LST Mode) - DBT                      Row 1 to 17 of 409
Command ==>                                Scroll ==> CSR

Action Codes: All brM brS Doc Edm eNt Ftl

Member..  Skeleton  Step  Title.....
!  IV3A001T  IVPA001T  A0  NOTE - Introduction - Dialog Set-up
*  IV3A301N  DFSIXSA4  A3  CLIST - Offline Formatted Dump - IVP1/2/3/4
*  IV3A302N  DFSIXSA5  A3  CLIST - Offline Dump Formatter - BATCH
*  IV3A303N  DFSIXSA6  A3  CNTRL - MSDB Load Cntrl Stmts - DBFSAMD1/DBFSA
!  IV3C001T  IVPC001T  C0  NOTE - Introduction - System Definition
*  IV3C101J  DFSIXSC0  C1  JOB - Alloc SYSDEF Data Sets
*  IV3C201T  DFSIXSC1  C2  TASK - Browse the STAGE1 Source Deck
*  IV3C202J  DFSIXSC2  C2  JOB - Run SYSDEF Preprocessor
*  IV3C203J  DFSIXSC3  C2  JOB - Run SYSDEF STAGE1
*  IV3C301J  DFSIXSC4  C3  JOB - Run SYSDEF STAGE2          >>> SEE DESCRIPT
*  IV3C401J  DFSIXSC5  C4  JOB - Run SMP/E JCLIN
!  IV3C405T  IVPC405T  C4  TASK - Edit IMS PROCLIB Members
!  IV3D001T  IVPD001T  D0  NOTE - Introduction - z/OS and VTAM Interface
*  IV3D101T  |-----|          Sets
*  IV3D201T  | DFSIX049: DFSIXX09 - "ALL" action complete |
*  IV3D203T  |-----|          xx - Authorized
*  IV3D204T  DFSIXSD4  D2  XMPL - Update IEALPaxx - MLPA Modules

```

Notes:

This panel shows all the entries file tailoring affects. The function of file tailoring is to prepare a customized set of members to be used in the Execution phase. These members which relate to jobs and sample jobs will be placed in the **ims.instalib** data set.

The following is a list of the possible actions on this panel:

- **'ALL'**: All members from this point in the table down will be customized.
- **BRM (or M)**: Use ISPF/PDF browse to browse the instalib member. If you attempt to browse a member that does not go into instalib (for example, a task) you will be given a warning and placed in 'ent' mode for that member.

- **BRS (or S):** Use ISPF/PDF browse to browse the members of SDFSSLIB and SDFSISRC that will be used to make up the instalib member.
- **DOC (or D):** Allows the online documentation for *ALL* variables, JOBS and tasks to be formatted for printing to the ISPF list data set.
- **EDM (or E):** Use the ISPF/PDF edit service to edit an instalib member. You should not alter members in this phase; rather you should do so in the Execution phase.
- **ENT (or N):** Displays a description of the member. VERY USEFUL!
- **FTL (or F):** Perform file tailoring against the specific member. This will cause the variables specified to be used to build a new member in instalib.

Whenever an action is done against a member the action field will be updated with a symbol to reflect the action. These symbols are as follows:

- **!:** The item has been added to the table (due to service). This can be blanked out by a re-running table merge.

- '*': The item has been processed by an 'all' action or a 'ftl' action.

When you are done with the file tailoring phase press 'PF3' and see the panel shown on the following visual.

Note the '**STEP**' column. We will discuss it on the next slide.

IVP JOBS / TASKs Overview

- Ax - IVP Preparation
- Cx - System definition
- Dx - Interface IMS to z/OS and VTAM
- Ex - Prepare IVP Applications and System
- Fx - IVP Execution - DBB System (Batch)
- Gx - IVP Execution - DBC System (DBCTL)
- Hx - IVP Execution - DBT System (DB/DC)
- Ix - IVP Execution - XRF System
- Jx - IVP Execution - DCC System (DCCTL)
- Nx - Partition Data Base Sample
- Ox - Common Service Layer
- ~~Px - Enhanced Command Environment (V9): No RM~~
- Qx - IMS Connect Sample
- Rx - Parallel RECON Access sample
- Sx - IMS Callout samples (ICAL) sync. & async by IMS TM Resource Adapter, IMS Enterprise Suite SOAP Gateway, or User-supplied IMS/Connect client application.
- Tx - Open Database sample application
- Ux - IMSRSC Repository sample application
- Zx - Index of additional PDS members
- ... and maybe more

<https://www.ibm.com/docs/en/ims/15.5.0?topic=information-ivp-jobs-tasks>



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FT Complete Verification panel

- If we press **Enter**, we will be returned to the Phase Selection panel and be prepared to continue into the Execution phase

Help

IVP FT Complete Verification - DBT IMS 15.1

Command ===>

You have just ENDED the File Tailoring Phase of the IVP dialog.

If you have completed your customization of the dialog jobs, you may set the File Tailoring Complete flag and proceed to the Execution Phase. You may return to File Tailoring at any time.

If you have not completed your customization of the dialog jobs, you should return to the File Tailoring Phase.

If File Tailoring is complete: Press ENTER

If File Tailoring is NOT complete: Press END

NOTE: After the phase complete flag has been set, this panel will no longer be displayed and the phase execution sequence for this phase will not be enforced.

The phase complete flags are reset by re-running Table Merge.

| DFSIX033: DFSIXX09 - File Tailoring Phase ended for "DBT" |



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Notes:

This panel will be displayed whenever **PF3** is pressed from one of the Phase panels. From this panel, you can take the following actions:

Press **Enter**: Signaling that you have completed this phase and are ready to go on to the next phase.

Press **PF3**: Signaling you have not completed this phase, but want to get out of the dialog. When you come back in, you will be positioned where you were on the preceding phase panel.

For our purposes here, press **Enter** to signify we are done with the File Tailoring phase; in which case, you will be presented once again with the IVP Phase Selection panel as shown on the next

slide.

IVP Selection: Start Execution phase

- *Note that our default option now is 6, to start the Execution phase from the beginning*

Help

IVP IVP Phase Selection - DBT IMS 15.1
Command ==>

Select the desired Phase and positioning option and press ENTER

6 A. Variable Export Utility (Export variables to a data set)

VG - Variable Gathering - (Define user values for variables)

1. VG1 Start/Restart from the beginning of the phase
2. VG2 Start/Restart from the last known position within the phase

FT - File Tailoring - (Create customized INSTALIB members)

3. FT1 Start/Restart from the beginning of the phase
4. FT2 Start/Restart from the last known position within the phase
5. FT3 Start/Restart from the beginning of a selected step

EX - Execution - (Run the IVP jobs)

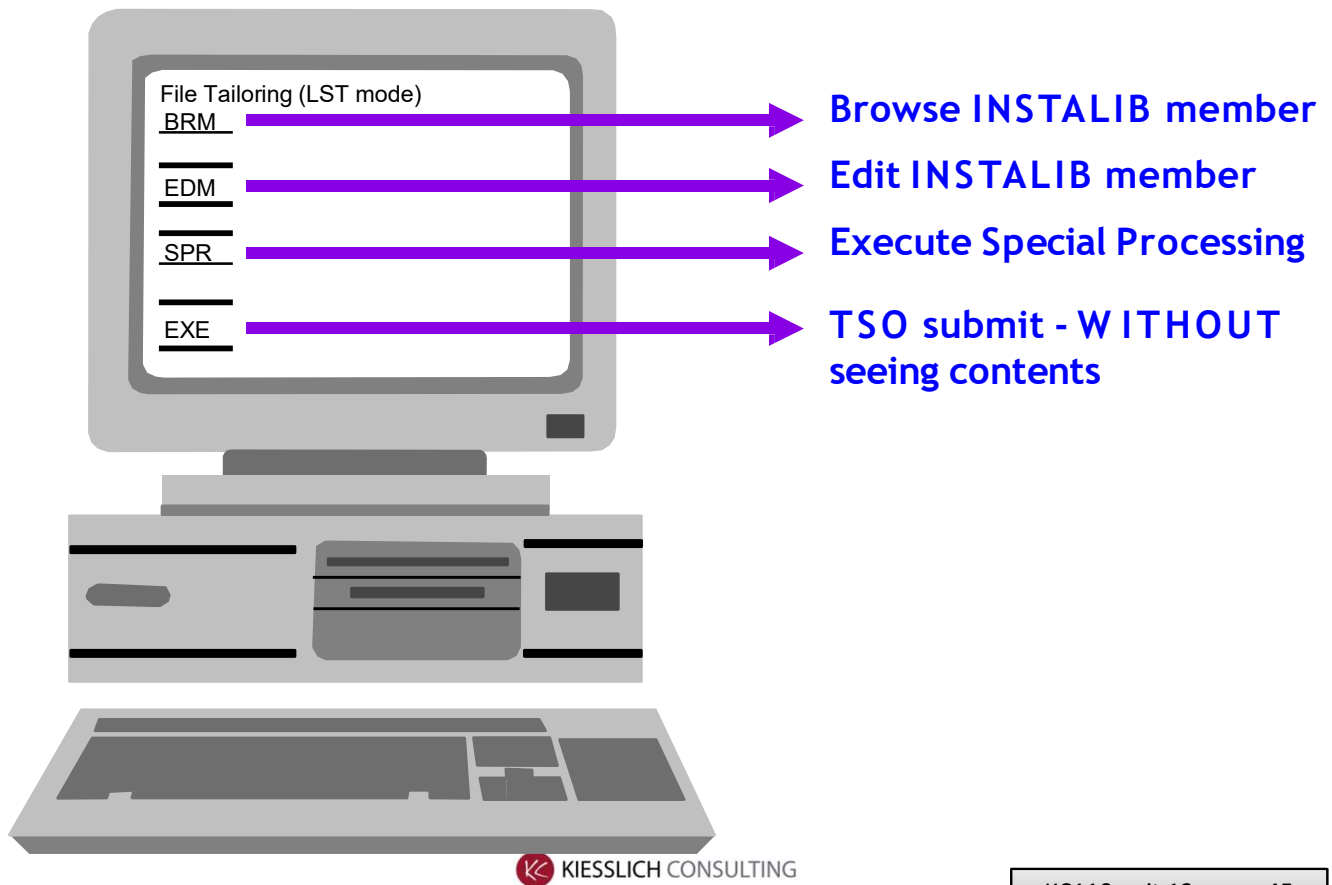
6. EX1 Start/Restart from the beginning of the phase
7. EX2 Start/Restart from the last known position within the phase
8. EX3 Start/Restart from the beginning of a selected step



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Execution phase overview



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Notes:

Submit Jobs and complete IVP tasks:

- IVP
- System definition
- Interface IMS to MVS / z/OS
- IVP execution 'DBB' system (Batch)
- IVP execution 'DBT' system (DB/DC)
- Execution of IMS sample application

Execution panel: LST Mode

Help

Execution (LST Mode) - DBT

Row 5 to 21 of 215

Command ===>

Scroll ===> PAGE

Action Codes: Brm Doc **Edm** eNt eXe Ftl spR

| | JOB/Task | Step | Title..... |
|----|----------|------|---|
| !_ | IV3C001T | C0 | NOTE - Introduction - System Definition |
| !_ | IV3C101J | C1 | JOB - Alloc SYSDEF Data Sets |
| !_ | IV3C201T | C2 | TASK - Browse the STAGE1 Source Deck |
| E_ | IV3C202J | C2 | JOB - Run SYSDEF Preprocessor |
| !_ | IV3C203J | C2 | JOB - Run SYSDEF STAGE1 |
| !_ | IV3C301J | C3 | JOB - Run SYSDEF STAGE2 >>> SEE DESCRIPTION |
| !_ | IV3C401J | C4 | JOB - Run SMP/E JCLIN |
| !_ | IV3C405T | C4 | TASK - Edit IMS PROCLIB Members |
| !_ | IV3D001T | D0 | NOTE - Introduction - z/OS and VTAM Interface |
| !_ | IV3D101T | D1 | XMPL - Allocate Interface Data Sets |
| !_ | IV3D201T | D2 | XMPL - Update JESx Procedure |
| !_ | IV3D203T | D2 | XMPL - Update IEAAPFxx or PROGxx - Authorized DSN |
| !_ | IV3D204T | D2 | XMPL - Update IEALPAXx - MLPA Modules |
| !_ | IV3D206T | D2 | XMPL - Update IEFSSNxx - RLM Subsystem Names |
| !_ | IV3D207T | D2 | XMPL - Update IEASVCxx - SVC Numbers |
| !_ | IV3D208T | D2 | XMPL - Update SCHEDxx - PPT Entries |
| !_ | IV3D209T | D2 | XMPL - Install TYPE 2 SVC |



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Notes:

The **spR** (or **R**) action results in a special processing routine being executed for the selected item. Instructions will be provided for those job/tasks that make use of this action.

The suffix for these members has the following meaning:

- **'J'**: This member is a job that must be executed.
- **'T'**: This member represents a task that must be done.
- **'N'**: Supporting materials.

Although it should seem obvious, it is important that earlier JOB/TASK members (and the actions specified) be completed **SUCCESSFULLY** before subsequent JOB/TASK members are

attempted.

The third character ('**3**', in this case) will vary depending on the environment option selected. This is represented by '_' in the manuals and is as follows:

- **1**: DBB system.
- **2**: DBC system.
- **3**: DBT system. <===== used in this class's examples because we selected "DB/DC" back on the Environment Options Panel.
- **4**: XRF system.
- **9**: DCC system.

Whenever an action is performed against a member the action field will be updated as follows:

- **!'**: The item has been added to the table (due to service). Can be blanked out by re-running table merge.
- ***'**: The item has been processed either by the subaction 'EXE' or by edit 'EDM'.

Edit Job panel

File Edit Edit_Settings Menu Utilities Compilers Test Help

```
EDIT          USER01.INSTALIB(IV3C202J) - 01.00          Columns 00001 00072
***** ***** Top of Data *****
==MSG> -Warning- The UNDO command is not available until you change
==MSG>          your edit profile using the command RECOVERY ON.
000001 //IV3C202J JOB ACTINF01,
000002 // 'PGMRNAME',
000003 // CLASS=A,
000004 // MSGCLASS=H,MSGLEVEL=(1,1),
000005 // NOTIFY=USER01,
000006 // REGION=64M
000007 //*
000008 //*
000009 //*****
000010 //* IVP IMS 12.1
000011 //*
000012 //* SKELETON: DFSIXSC2
```

DFSIX039: DFSIXX10 - ISPF/PDF Edit Recovery is not supported by INSTALL/IVP

Command ==> _____ Scroll ==> PAGE

| | | | | | |
|---------|----------|----------|-----------|--------------|-------|
| F1=Help | F2=Split | F3=Exit | F5=Rfind | F6=Rchange | F7=Up |
| F8=Down | F9=Swap | F10=Left | F11=Right | F12=retrieve | |

Notes:

This is a sample of what you encounter when the EDM (EditMember) 'E' option is selected. From here, you are in ISPF edit and can alter, submit, and so on, for this job.

Note the comment lines for this job. This is standard for all the IVP jobs. The line with **skeleton: DFSIXSC2** identifies the skeletal JCL member used to build this job. This is very useful when debugging IVP dialog problems.

Press **PF3** to get back to the Execution List panel and then **PF3** again to complete the Execution phase; in which case, you will be presented with the panel shown in the next slide.

EX Complete Verification panel

Help

EX Complete Verification - DBT

Command ==>

You have just ENDED the Execution phase of the IVP dialog.

This is done by setting the Execution Complete flag.

You may return to Execution at any time.

If Execution is complete: Press ENTER

If Execution is NOT complete: Press END

NOTE: After the phase complete flag has been set, this panel will no longer be displayed and the phase execution sequence for this phase will not be enforced.

The phase complete flags are reset by re-running Table Merge.

```
|-----|
| DFSIX046: DFSIXX10 - Execution Phase ended for "DBT" |
|-----|
```

Notes:

This panel will be displayed whenever **PF3** is pressed from one of the phase panels. From this panel, you can take the following actions:

- Press **Enter**: Signaling that you have completed this phase and are finished with this IVP dialog process.
- Press **PF3**: Signaling you have not completed this phase but want to get out of the dialog. When you come back in, you will be positioned where you were on the preceding phase panel.

When you are done with the Execution phase, you have finished the process for this dialog.

IVP 'A' Series

The items within the 'An' Series of steps are used to perform initialization for the IVP Dialog.

- There are no user-executable JOBs within these steps
- Honorable Mentions:
 - IV_A303N: This member contains statements used to load MSDBs. These statements might need to be changed to point to LTERMS in the SYSGEN if you alter the vanilla IVP SYSGEN .

IVP 'B' Series

- There are no longer any 'B Series' steps in any IMS support configuration (for example, DB/DC, DBCTL, and so on)

*(the IMS INSTALL/IVP Dialog was renamed the IVP Dialog in IMS V8 ;
since then ,B' is gone)*

IVP 'C' Series

The “Cn” Series of the IVP provides an elaborate set of examples for the system definition process built around several sample applications. The Dialog-generated system definition input will be slightly different depending on the execution environment selected – DB/DC in our class. All of the remaining Series of steps support and exercise the IVP system as defined in the C Series of steps.

- Honorable Mentions:
 - **IV_C301J: Job to run SYSDEF STAGE2**
 - Contains a dummy place holder and is filled in when SYSDEF STAGE1 is run (IV_C203J)
 - **IV_C401J: Job to run SMP/E JCLIN**
 - Should be run after every SYSGEN

IVP 'D' Series (1 of 2)

The "Dn" series of EXAMPLES identify the JOBS and TASKs which the user must perform in order to establish the interfaces between IMS, z/OS and between IMS and VTAM:

- These steps must be accounted for when upgrading releases of z/OS
- Honorable Mentions:
 - **IV_D209T: XMPL – Install TYPE 2 SVC**
 - Recommend using a different number from that being used by a previous version.
 - The TYPE 2 SVC is downward compatible. See *Release Planning Guide*.
 - If in both IEANUC0x and NML - IEANUC0x will be used .
 - See OY45706 for how to remove a CSECT from IEANUC0x
 - **IV_D210T: XMPL – Link-edit* TYPE 4 SVC**
 - Recommend using a different number from that being used by a previous version.
 - The TYPE 4 SVC is downward compatible. See *Release Planning Guide*.

* SEE SPEAKER NOTES.

Notes:

In this class, the terms **Link-edit** and **Bind** will be used interchangeably to mean a Jobs Step that specifies: "EXEC PGM=IEWL"

For the IMS SVC there is a dynamic update tool available (if you really want to use the same numbers for the new installation / version) .

IVP 'D' Series (2 of 2)

- Honorable Mentions: Continued
 - **IV_D211T: XMPL – Link-edit Resource Cleanup Module**
DFSMRCL0:
 - Not used by IMS V10+ : Provided for downward compatibility.
 - **IV_D212T: XMPL – Link-edit ABEND Formatting Module**
 - Need to use latest version. It is downward-compatible.
 - ~~**IV_D213T: XMPL – DFSMRCL0 IEAVTRML CSECT IGC0001C**~~
 - ~~Same comments as Step D211T above. Present for compatibility.~~
 - **IV_D214T: XMPL – DFSAFMD0 IEAVADFM CSECT IGC0805A**
 - **IV_D401T: TASK – IPL z/OS with MLPA or CLPA OPTION**
 - Be sure to IPL with this option to make changes effective.

Notes:

We will further discuss the Resource Cleanup module DFSMRCL0 later.

Since IMS Version 10 there is a dynamic resource cleanup module (DFSMRC20). (Replacing static / manual cleanup mod DFSMRCL0)

Some task / steps are now (V15.1 +) ease of use and not anymore that way complicated.

IVP 'E' Series

The "En" series of steps identify the JOBS and TASKs which the user must perform in order to prepare the sample applications and the sample IMS system for execution.

- Honorable Mentions:

- **IV_E203J: Job – ACBGEN**

- This is the first job to use the T2 SVC. A failure in this job quite often is due to a problem with this SVC.

- **IV_E204J: Job – MFS Language Utility**

- Might need to update DEV statements in MFS source to match appropriate device type.

- **IV_E318J: Job – Copy Staging Libraries**

- IF SYSGEN is redone, this job must be re-run as well. SYSGEN updates staging libraries. This job copies from staging to libraries used by online region.

IMS CATALOG and IMS Managed ACBs – no IVP Series for that !

Follow the DOCs for that !

IVP 'F' Series

The "Fn" series of steps identify the JOBS and TASKs which the user must perform during the execution of the "DBB" (Batch) Sample System. This sequence of items is designed to be run in the order presented and restarted only from the beginning.

- Honorable Mentions:
 - **IV_F206J: Job – FF HIDAM Update**
 - Be sure to read the instructions (action 'n') before running this job as they will ask to cancel the job
 - **IV_F207J: Job – FF HDAM Update**
 - Be sure to read the instructions (action 'n') before running this job as they will ask to cancel the job
 - **IV_F401J: Job – Scratch Data Sets:**
 - Done so this series of steps can be run again from the top
 - All following steps will contain a similar job, so be sure to run if restarting a step

IVP 'H' Series

- The "Hn" Series of steps identify the JOBS and TASKs which the user must perform during the execution of the **DBT** (DB/DC) Sample System.
- Most of the utility processing in this sequence relies upon OLDS input. The JCL for these utilities has been prepared under the assumption that the execution sequence will be run from start to finish, as documented, without additional OLDS switches, IMS restarts, and so on. If the OLDS usage sequence is altered, the utility JCL which relies upon OLDS input will have to be changed.
 - Contains jobs/tasks to start/stop the control region as well as test various recovery scenarios and utilities
 - Be sure to view the documentation associated with each job/task before performing it (Execution phase action 'n')



Migration / V2V Considerations V15

- Review the IMS 15 *Release Planning* publication
- Check PSP bucket
- Review the Program Directory
 - Available through the Info Center
- Review the installation information in Chapter 1 of the *Installation* publication
- Check the hardware prerequisites for new version
- Install prerequisite software and maintenance
 - Check your IMS tools and related products
- Apply coexistence maintenance to other IMS systems

This is an overview of the tasks for migration

As for all installations of new products the Preventive Service Planning (PSP) bucket and the Program Directory for the product should be reviewed before beginning the migration.

You should read the IMS Installation publication before beginning the migration process.

Chapter 1 should be reviewed for installation information.

Other products may need to be upgraded for use with new IMS versions. This needs to get checked with your vendors / providers , it might require maintenance or new releases as well.

You should apply DBRC (a.o.) coexistence SPEs to your IMS systems before upgrading .

Migration / V2V Considerations V15 ...

- Evaluate and update IMS exit routines
 - RECON I/O Exit Routine (DSPCEXT0)
 - DFSMSCE0 must be reassembled
 - All IMS Connect exits must be reassembled when migrating IMS Connect
 - HWSIMSO0 and HWSIMSO1 are not shipped with IMS 11
- Install IMS 11 using SMP/E installation process
 - CBPDO or ServerPac may be used
- System definition
- Install the Type 2 and Type 4 SVCs
- Upgrade RECONs
 - Specify RECON qualifier after the upgrade
- ACBGEN
- Run the IVP

The only user exit routine that must be updated (reviewed) for use with new version is the RECON I/O Exit Routine (DSPCEXT0). If you use a RECON I/O Exit Routine, you should examine it for required changes due to the change in RECON records.

The DFSMSCE0 exit must be reassembled.

Similarly, all IMS Connect exit routines must be reassembled when migrating IMS resp. IMS Connect.

The HWSSMPL0 and HWSSMPL1 exit routines provide enhanced functionality and are delivered as source code. Consider any new version code.

CBPDO is Custom-Built Product Delivery Offering. The CBPDO product package consists of one logical tape (multiple volumes). A CBPDO package that includes IMS can also include other products in

the same System Release (SREL). CBPDO also provides service for the products included with the product order. The service includes all PTFs available within one week of order fulfillment. All PTFs are identified by one or more SOURCEIDs, including PUTyymm, RSUyymm, SMCREC, and SMCCOR.

ServerPac is an entitled software delivery package. It consists of products and service for which IBM has performed the SMP/E installation steps and some of the post-SMP/E installation steps. To install the package on your system and complete the installation of the software it includes, use the CustomPac Installation Dialog, which is the same dialog used for all CustomPac offerings, including SystemPac® (dump-by-data-set format), ProductPac®, and RefreshPac. For IMS, ServerPac allocates, catalogs, and loads all the data sets; sets up the SMP/E environment; supplies a job / task to update PARMLIB (IEFSSNxx, PROGxx, IEASVCxx, and SCHEDxx) ; and directs you to start the IVP

System definition is required as with previous IMS releases. Most system definition statements from previous IMS releases are compatible ...

Supported Migrations and Coexistence V15

- IMS 13 to IMS 15
 - Apply DBRC coexistence SPE to IMS 13
 - Upgrade RECONs from IMS 13 to IMS 15
 - Any MINVERS value below 13 will get updated onto 13 now
- IMS 14 to IMS 15
 - Apply DBRC coexistence SPE to IMS 14
 - Upgrade RECONs from IMS 14 to IMS 15
 - Any MINVERS value below 13 will get updated onto 13 now

RECON Listings

- "COEXISTENCE LEVEL" in subsystem record listing
 - Added since IMS V10
 - May be used to determine if subsystems would cause an upgrade failure

```
SSYS
SSID=IMS1      LOG START=23.067 17:25:44.2
SSTYPE=ONLINE  ABNORMAL TERM=OFF  RECOVERY STARTED=NO  BACKUP=N
TRACKED=NO     TRACKER TERM=OFF   SHARING COVERED DBS=NO
IRLMID=**NULL** IRLM STATUS=NORMAL  GSGNAME=**NULL**
COEXISTENCE LEVEL=15.1
AUTHORIZED DATA BASES/AREAS=4      VERSION=14.1  XRF CAPABLE=NO
                                     ENCODED
-DBD-      -AREA-   -LEVEL-  -ACCESS INTENT-  -STATE-
PDHDOKA    **NULL**  0        UPDATE              6
...
```

- In this example the subsystem is at 14.1 but has the V15 coexistence maintenance applied

The VERSION= field indicates the IMS release level of the subsystem. The COEXISTENCE LEVEL= field indicates if the coexistence maintenance for a later release has been applied. In this example, the DBRC coexistence maintenance has been applied to the IMS system used by this subsystem IMS1.

RECON Upgrade

- RECONS are upgraded after IMS 15 is installed
 - Upgrade must use the IMS 15 DBRC utility (DSPURX00)
- Two RECONS and a spare must be available
- CHANGE.RECON UPGRADE
 - May be executed while subsystems are running
 - Upgrade fails if there is a subsystem record for an IMS 9 or IMS 10 subsystem without the DBRC coexistence SPE
 - Some utilities do not create subsystem records
 - They are not protected by the check for subsystem records
 - If they are running without the SPE, unpredictable results may occur
 - Examples: Change Accumulation, Log Archive, DSPURX00, HALDB Partition Definition Utility (PDU), some DBRC API applications
 - May be invoked using the DBRC API

RECONS are upgraded by using the DBRC CHANGE.RECON UPGRADE command with the DBRC utility (DSPURX00) from the NEW version reslib. The upgrade process requires that there are two active RECON data sets with an available spare. The upgrade process upgrades the records in COPY1 and then copies COPY1 to the spare.

The upgrade may be run while the RECONS are allocated to and being in use. Of course, these systems must be able to use the RECONS when upgraded to the new IMS Version.

The upgrade checks the RECONS to ensure that any subsystems using the RECONS are capable of using new upgraded RECONS. It does this by examining the SUBSYS records in the RECONS.

! Some IMS utilities do not create SUBSYS records. Thus, the upgrade cannot determine if they are running. Users must ensure that any IMS utility which is running at the time of the upgrade has the appropriate COEXistance maintenance on which allows it to read the new upgraded IMS Version'd RECONS.