

E58

IMS Version 8 Installation and Packaging

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St. Louis, MO

Sept. 30 - Oct. 3, 2002

Objectives



- **The objectives of this session are:**
 - **Discuss the installation and packaging changes for IMS Version 8**
 - **Provide hints and tips to aid with a smooth migration**
- **Audience participation is encouraged**

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Installation & Packaging



Installation and Packaging Changes

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Packaging and Installation Changes - Summary

- **Dataset name changes**
- **SMP/E jobs removed from Install/IVP Dialog Process**
- **New Target and Distribution datasets**
- **SMP/E Receive, Apply, Accept processing**
- **No DFSJCLIN job**
- **User exit changes**

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Dataset Name Changes



Dataset Name Changes Between Versions:

V6 Distlib	V6 Targetlib	V7 Distlib	V7 Targetlib	V8 Distlib	V8 Targetlib
GENLIB	SMPMTS	ADFSMAC	SDFSMAC	ADFSMAC	SDFSMAC
GENLIBA	MACLIB	ADFSMAC	SDFSMAC	ADFSMAC	SDFSMAC
GENLIBB	MACLIB/SMPMTS	ADFSMAC	SDFSMAC	ADFSMAC	SDFSMAC
LOAD	-	ADFSLOAD	-	ADFSLOAD	-
-	RESLIB	-	SDFSRESL	-	SDFSRESL
DBSOURCE	SMPSTS	ADFSSRC	SMPSTS	ADFSSRC	SDFSSRC
SVSOURCE	SMPSTS	ADFSSRC	SMPSTS	ADFSSRC	SDFSSRC
TMSOURCE	SMPSTS	ADFSSRC	SMPSTS	ADFSSRC	SDFSSRC
DFSCLSTA	DFSCLST	ADFSCCLST	SDFSCCLST	ADFSCCLST	SDFSCCLST
DFSEXECA	DFSEXEC	ADFSEXEC	SDFSEXEC	ADFSEXEC	SDFSEXEC
DFSISRCA	DFSISRC	ADFSISRC	SDFSISRC	ADFSISRC	SDFSISRC
DFSRTRMA	DFSRTRM	ADFSRTRM	SDFSRTRM	ADFSRTRM	SDFSRTRM
DFSMLIBA	DFSMLIB	ADFSMLIB	SDFSMLIB	ADFSMLIB	SDFSMLIB
DFSPLIBA	DFSPLIB	ADFSPLIB	SDFSPLIB	ADFSPLIB	SDFSPLIB
DFSSLIBA	DFSSLIB	ADFSLIB	SDFSSLIB	ADFSLIB	SDFSSLIB
DFSTLIBA	DFSTLIB	ADFSTLIB	SDFSTLIB	ADFSTLIB	SDFSTLIB

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Pre IMS Dialog Jobs

■ SMP/E Jobs removed from IVP Dialog Process

- To conform to packaging standards
- *IMS Install/ IVP Dialog* renamed to *IMS IVP Dialog*
 - Jobs which perform SMP/E installation and maintenance removed from the dialog
- JCL provided in Program Directory to unload sample jobs to perform SMP/E processing
 - Jobs contain instructions for customization
 - Same variables in multiple jobs so may want to save in a separate file to use copy and paste
 - ☛ C #globalcsi IMS.V8.GLOBAL.CSI all
 - ☛ C targlib IMS81T all

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Job Customization

- The following is an example of the instructions for customization of the sample jobs:

```
/* NOTES: */
/* 1) REVIEW THE SMP CONTROL STATEMENTS BEFORE SUBMITTING */
/* THIS JOB. */
/* 2) ADD A JOB CARD TO MEET YOUR SYSTEM'S REQUIREMENTS. */
/* 3) CHANGE #globalcsi TO THE DATASET NAME OF YOUR GLOBAL */
/* CSI DATA SET. */
/* 4) CHANGE targlib TO THE NAME OF YOUR TARGET ZONE. */
/* 5) REMOVE THOSE FMIDs THAT YOU DO NOT WISH TO APPLY FROM */
/* THE SELECT AND FORFMID OPERANDS OF THE APPLY STATEMENT. */
/* HMK8800 <===== FMID to be installed */
/* HIR2101 <===== FMID to be installed */
/* JMK8801 <===== FMID to be installed */
/* JMK8802 <===== FMID to be installed */
/* JMK8803 <===== FMID to be installed */
/* JMK8804 <===== FMID to be installed */
/* JMK8805 <===== FMID to be installed */
/* JMK8806 <===== FMID to be installed
```

- NOTE - The lower case characters. Be sure to specify '**CAPS ON**' as appropriate - **HFS path names need to be in lower case characters**

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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 datasets, 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**

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SMP/E Processing Changes

■ SMP/E Processing Changes

- 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 id's
 - Sample jobs provided will process service as well as FMIDs

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SMP/E Processing Changes- Cont.



- **Always RECEIVE current Enhanced HOLDDATA prior to SMP/E processing**
 - **For complete descriptive information relating to Enhanced Holddata see Internet address: <http://service.boulder.ibm.com/390holddata.html>**

- **Be sure to resolve PE's during processing**
 - **Contact the IBM Support Center for assistance as needed**

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New SMP/E Managed Libraries

■ New SMP/E Managed Libraries

● Target Datasets:

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

● Distribution Datasets:

- ADFSBASE - Sample jobs used for installation
- ADFSDATA - OM cmd, translatable text file English
- ADFSJDC7 - Java document for Version 7
- ADFSJDC8 - Java document for Version 8
- ADFSJHF7 - File system for Version 7
- ADFSJHF8 - File system for Version 8
- ADFSSMPL- Samples (exit code, DBD source,..)

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DFSJCLIN

■ **DFSJCLIN**

- **No longer provided as a job**
- **Formerly used to build non-SYSGEN elements**
- **Non-SYSGEN parts are created during SMP/E APPLY processing**
 - **Inline (++)JCLIN) provided with FMIDs used by SMP/E to Bind (link edit) Non-SYSGEN elements during APPLY processing**

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SMP/E GENERATE

■ **SMP/E GENERATE command**

● **Used to create JCL necessary to build non-SYSGEN parts**

- **DFSJCLIN no longer necessary**
- **Dependent on *ACCJCLIN* being set up in distribution zone *BEFORE* processing FMID's**
- **Sample command:**

```
SET BDY(targlib) .  
GENERATE FORFMID(HMK8800) JOBCARD(CNTL,J) REPLACE .
```

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

● **Used as part processing of service via ACCEPT BYPASS APPLYCHECK**

- **See Informational APAR II13024**

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User Exits

■ User Exits

- Optional user exits now in SDFSSMPL
- User exits created as ++SRC type part
 - Allows line updates during SMP/E processing of service as opposed to complete replacement
- Corresponding ++MOD parts (Object Code) NOT shipped
 - No MOD to LMOD relationships are created during IMS install so SMP/E will not automatically assemble and bind the parts during APPLY processing
 - If the user creates the MOD to LMOD relationship then SMP/E APPLY processing will automatically assemble and bind these exits
- Working toward all having User exits handled the same way

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Sample User Exit Technique

- The following is an example of a technique that can be used to have SMP/E Assemble and Bind one of the sample exits:

```
++ USERMOD (XYZUMOD) .
++ VER (P115)
  FMID(HMK8800) .
++ JCLIN.
//INJCLIN JOB ...
//LKED EXEC PGM=IEWL,
// PARM=('SIZE=(880K,64K)',RENT,REFR,NCAL,LET,XREF,LIST)
//ADFSLOAD DD DSN=IMS.ADFSLOAD,DISP=SHR
//SYSPUNCH DD DSN=IMS.OBJDSET,DISP=SHR
//SYSUT1 DD UNIT=(SYSDA,SEP=(SYSLMOD,SYSLIN)),SPACE=(1024,(200,20))
//SYSPRINT DD SYSOUT=A
//SYSLMOD DD DSN=IMS.SDFSRESL,DISP=SHR
//SYSLIN DD *
  INCLUDE ADFSLOAD(DFSCSI00)
  INCLUDE SYSPUNCH(DFSGMSG0)
  ENTRY DFSGMSG0
  NAME DFSGMSG0(R)
++ SRC (DFSGMSG0) SYSLIB(SDFSSMPL) DISTLIB(ADFSSMPL) .
DFSGMSG0 TITLE 'DFSGMSG0 -- GREETING MESSAGES USER EXIT'
. . .
. . .
```

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Hints & Tips



Hints and Tips

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Syslib Concatenation - V8

■ SMP/E Apply

- **IMS.OPTIONS**
- **SMPMTS**
 - Not used by IMS but should be present
- **IMS.SDFSMAC**
- **MVS Macro Libraries**
 - **ASM.SASMMAC2** (added in V7 concept 14 macros)

■ SMP/E Accept

- **IMS.OPTIONS**
- **IMS.ADFSMAC**
- **MVS Macro Libraries**
 - **ASM.SASMMAC2** (added in V7 concept 14 macros)

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IVP Changes



■ IVP Dialog Changes

- SMP/E jobs removed
- Option to exclude Fastpath from IVP jobs
- Syntax Checker sample provided
- 'O' Series of jobs/tasks added to test Common Service Layer
 - Includes SPOC samples

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IMS PSP Bucket Names



- The PSP buckets are organized by UPGRADE and SUBSET names

- IMS release 8.1 UPGRADE name= IMS810

- The SUBSET names (IMS related FMIDs):

CHG/INDEX	HIR2101/0203	HMK8800	JMK8801	JMK8802
JMK8803	JMK8804	JMK8805	JMK8806	HMK8800/GA
JMK8801/GA	JMK8802/GA	JMK8803/GA	JMK8804/GA	JMK8805/GA
JMK8806/GA	HIR2101/0036	HALDB		

- PSP buckets available via IBMLINK and software orders.

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IMS PSP UPGRADE/SUBSET Layout



- **Each UPGRADE level includes SUBSET entries for each IMS FMID within that release. The SUBSET for each installed FMID needs to be examined separately**

- **Key areas for review within each SUBSET entry include the following:**
 - **Opening Text**
 - **Change Summary**
 - **Service Recommendation Summary**
 - **Installation Information - Section 1**
 - **Documentation Changes - Section 2**
 - **General Information - Section 3**
 - **Service Recommendations - Section 4**
 - **Cross Product Dependencies - Section 5**

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Standard Migration Considerations

- **The IMS/ESA Release Planning Guide contains a chapter on Migration considerations**
 - **Considerations**
 - **Release Planning Guide for versions skipped**
 - **ACBGEN**
 - **Productivity Aids compatibility**
 - ▣ **PSP bucket contains information**
 - **PSP Buckets**
 - **Fallback Plan**

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Compatibility Migration Considerations

- **The following is a list of service needed for compatibility (see the PSP buckets for updated considerations):**

- **Considerations**

- **DBRC Migration SPE**

- ☛ **IMS 6.1 PQ54584 (UQ67709 & UQ99326 - 0207)**
 - ☛ **IMS 7.1 PQ54585/PQ63108 (UQ99327 - 0208)**
 - ☛ **APAR II13265 contains additional information**

- **OTMA Compatability**

- ☛ **IMS 6.1 PQ56971/UQ63907 - 0203**
 - ☛ **IMS 6.1 PQ58630/UQ69012 - 0208**
 - ☛ **IMS 7.1 PQ56973/UQ63910 - 0203**
 - ☛ **IMS 7.1 PQ58631/UQ69014 - 0208**

- **MSC / SMQ Compatibility**

- ☛ **IMS 6.1 PQ27555/UQ38330 - 9912**
 - ☛ **IMS 7.1 PQ32932/UQ39013 - 0001**

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Misc. Migration Considerations



- **Make sure the IMS Type 2 SVC is bound with the *SCTR* option**
 - **If not IPL will go into a wait state**

- **The following lists some key service:**
 - **OS**
 - **IMS Transaction Trace requires service for APAR OW50696**
 - **RACF**
 - **Service for APARs OW52125 and OW51755**



- **The following modules are unique to each OS390/zOS system:**
 - **DFSMRCL0 - Resource Cleanup Manager**
 - Cleans up environment after termination
 - Use the one from the highest level of IMS. Downward compatible
 - Must be zapped into module IGC0001C CSECT
IEAVTRML

 - **DFSAFMD0 - Abend Formatting Routine**
 - Online dump formatter. Not normally used depends on FMTO option specified (or defaulted to). Recommend default to FMTO=D
 - Must be zapped into module IGC0805A CSECT
IEAVADFM
 - Consider providing SYSMDUMP in JCL as opposed to SYSUDUMP/SYSABEND in the online regions

APAR SYSMOD Naming Conventions



- The prefix name for APARs is currently 'PQ'
- One APAR may result in multiple SYSMODS
- The prefix name in the actual sysmod(s) will vary depending on the FMID as follows:

IRLM 2.1		IMS 6.1		IMS 7.1		IMS 8.1	
FMID	PRE	FMID	PRE	FMID	PRE	FMID	PRE
HIR2101	Aq	HMK6600	Aq	HMK7700	Dq	HMK8800	Dq
		JMK6601	Vq	JMK7701	Aq	JMK8801	Aq
		JMK6602	Gq	JMK7702	Vq	JMK8802	Vq
		JMK6603	Wq	JMK7703	Gq	JMK8803	Gq
		JMK6604	Xq	JMK7704	Wq	JMK8804	Wq
		JMK6605	Zq	JMK7705	Xq	JMK8805	Xq
				JMK7708	Jq	JMK8806	Jq

where q represents the second character of the APAR prefix

- The prefix will be followed by the 5 digit APAR number

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APAR Naming conventions - Part 2



- The name of the APAR fix available on DLL/IBMLINK will vary depending on the IMS release as follows:
 - PQxxxxxz
 - PQ - Prefix name for the APAR
 - xxxxx - The number for the APAR
 - z - The suffix will identify the IMS release as follows:
 - ✓ L - IRLM 2.1
 - ✓ A - IMS 6.1
 - ✓ F - IMS 7.1
 - ✓ G - IMS 8.1

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USERMOD Naming Conventions on DLL/IBMLINK

■ The naming conventions for USERMODs will vary depending on the type of USERMOD as follows:

- **Fixtest for an APAR**

- **FQxxxxxz**

- ✦ **F** - Identifies this as a fixtest

- ✦ **Q** - Indicates the second character of the apar currently being used

- ✦ **xxxxx** - The number portion of the apar associated with this fixtest

- ✦ **z** - The version of this fixtest (A=1st, B=2nd, etc.)

- **Relief for an APAR**

- **RQxxxxxz**

- ✦ **R** - Identifies this as a relief

- ✦ **Q** - Indicates the second character of the apar currently being used

- ✦ **xxxxx** - The number portion of the apar associated with this fixtest

- ✦ **The version of this fixtest (A=1st, B=2nd, etc)**

- **Trap or bypass (no APAR #)**

- **The name will be determined via an internal CLIST**

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USERMOD SYSMOD Naming Conventions



- The naming conventions of the sysmod for usermods will vary depending on the type of usermod as follows:

- **Fixtest and relief for an APAR**

- **pzxxxxx**

- ☛ **p** - The apar prefix depending on the fmid/compid

- ☛ **z** - The version of this fixtest/relief (A=1st, B=2nd, etc)

- ☛ **xxxxx** - The number portion of the apar associated with this fixtest

- **Trap or bypass (no apar #)**

- **pzxxxxx**

- ☛ **p** - The apar prefix depending on the fmid/compid

- ☛ **z** - The last character of the fix name supplied by the internal CLIST

- ☛ **xxxxx** - The number portion supplied by the internal CLIST

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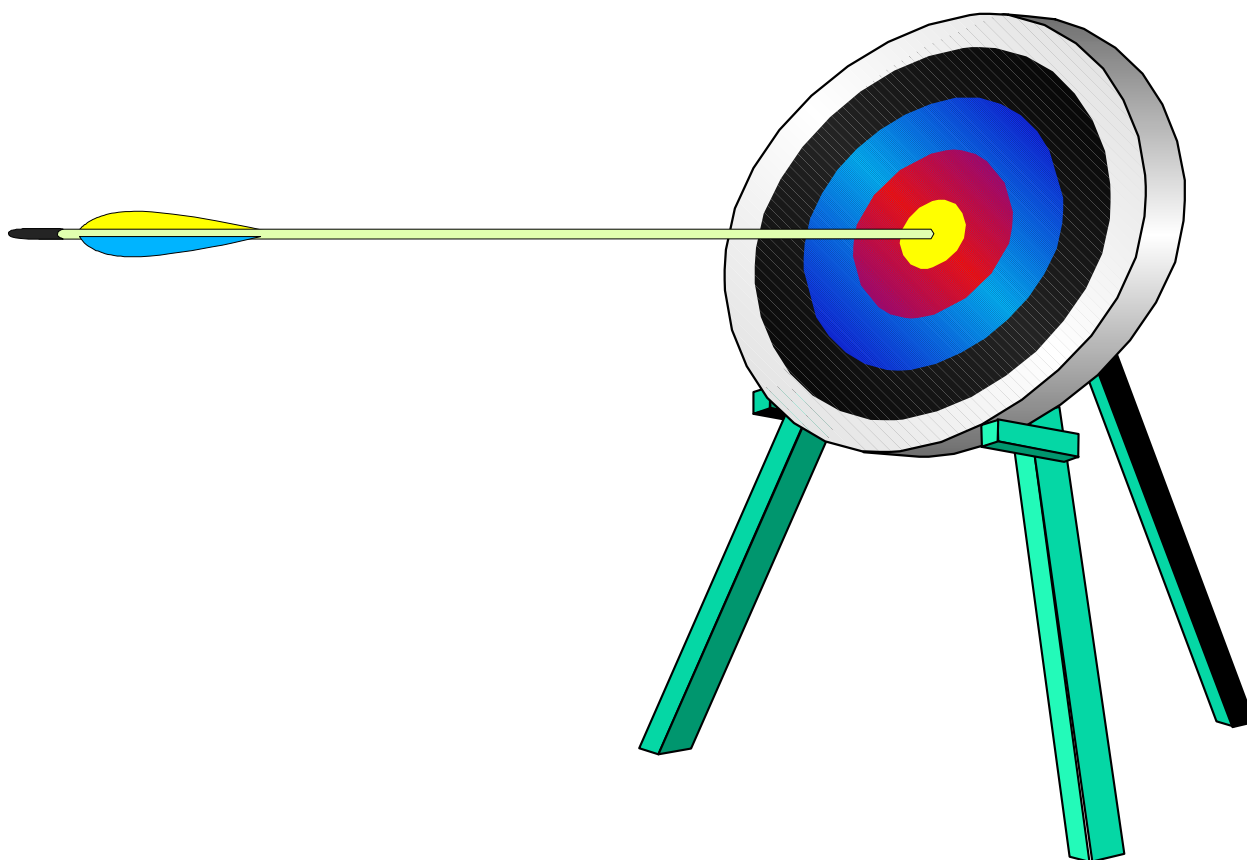
Consolidated Service Test (CST)



- **Goal: Enhance the way service is tested and delivered for OS/390 and z/OS, by providing a single coordinated service recommendation**
 - **Provides cross product testing for the following products:**
 - OS/390 BCP R9 and R10
 - z/OS V1R1
 - DFSMS
 - DB2 UDB for OS/390
 - IMS
 - MQSeries for OS/390
 - Will expand to include others
 - **This is in addition to testing that was already being performed**
 - **Standardize maintenance recommendation on OS/390 and z/OS platform**
 - **See <http://www.ibm.com/servers/eserver/zseries/zos/servicetst/> for additional information**

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Thank You



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