



**Program Directory for
DB2 Utilities Enhancement Tool for z/OS**

V02.02.00

Program Number 5655-T58

FMID H2AM220

for Use with
z/OS

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GI10-8765-01

Note

Before using this information and the product it supports, be sure to read the general information under 7.0, "Notices" on page 24.

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1.0 Introduction

This program directory is intended for system programmers who are responsible for program installation and maintenance. It contains information about the material and procedures associated with the installation of DB2 Utilities Enhancement Tool for z/OS. This publication refers to DB2 Utilities Enhancement Tool for z/OS as DB2 Utilities Enhancement Tool.

The Program Directory contains the following sections:

- 2.0, “Program Materials” on page 3 identifies the basic and optional program materials and documentation for DB2 Utilities Enhancement Tool.
- 3.0, “Program Support” on page 6 describes the IBM support available for DB2 Utilities Enhancement Tool.
- 4.0, “Program and Service Level Information” on page 8 lists the APARs (program level) and PTFs (service level) that have been incorporated into DB2 Utilities Enhancement Tool.
- 5.0, “Installation Requirements and Considerations” on page 10 identifies the resources and considerations that are required for installing and using DB2 Utilities Enhancement Tool.
- 6.0, “Installation Instructions” on page 17 provides detailed installation instructions for DB2 Utilities Enhancement Tool. It also describes the procedures for activating the functions of DB2 Utilities Enhancement Tool, or refers to appropriate publications.

Before installing DB2 Utilities Enhancement Tool, read the *CBPDO Memo To Users* and the *CBPDO Memo To Users Extension* that are supplied with this program in softcopy format and this Program Directory; then keep them for future reference. Section 3.2, “Preventive Service Planning” on page 6 tells you how to find any updates to the information and procedures in this Program Directory.

DB2 Utilities Enhancement Tool is supplied in a Custom-Built Product Delivery Offering (CBPDO, 5751-CS3). The Program Directory that is provided in softcopy format on the CBPDO tape is identical to the hardcopy format that is provided with your order. All service and HOLDDATA for DB2 Utilities Enhancement Tool are included on the CBPDO tape.

Do not use this program directory if you install DB2 Utilities Enhancement Tool with a SystemPac or ServerPac. When you use these offerings, use the jobs and documentation supplied with the offering. This program directory can point you to specific sections of it as required.

1.1 DB2 Utilities Enhancement Tool Description

IBM DB2 UTILITIES ENHANCEMENT TOOL FOR Z/OS, V2.2 (5655-T58) DB2 Utilities Enhancement Tool includes several key components, including three alternative interfaces. The key components are:

- The started task for communicating with DB2 to perform product functions
- The DSNUTILB intercept interface for implementing the enhancements for the DB2 LOAD, REORG

TABLESPACES, and CHECK DATA utilities for transparently blocking and cancelling threads on DB2 objects for DB2 utilities at runtime, for transparently enforcing DB2 utilities syntax, or for changing job return codes on DB2 messages

- The ISPF interface for displaying information about active DB2 threads, cancelling threads, and performing some product administration tasks
- The batch interface for blocking and cancelling threads on DB2 objects that are needed by applications and programs other than DSNUTILB that you run as part of a batch job
- The supervisor call (SVC) for enabling communication between the product interfaces and the started task

In addition to being able to block and cancel threads on DB2 objects that are needed by other applications and programs that you run in your environment, Version 2.2 of the DB2 Utilities Enhancement Tool continues to add value and provide new features to DB2 utilities. The DSNUTILB intercept and the LOAD utility I/O intercept, developed in version 2.1, are key technologies leveraged in this new release.

Enhancements have been made in the following areas:

- Implement IBM DB2 Sort
- Implement support for hash tables using LOAD PRESORT
- Integrate customization process with IBM Tools Customizer for z/OS
- Add utilities to the Utility Syntax Monitor
- Implement Message Monitor

1.2 DB2 Utilities Enhancement Tool FMID

DB2 Utilities Enhancement Tool consists of the following FMID:

H2AM220

2.0 Program Materials

An IBM program is identified by a program number and a feature number. The program number for DB2 Utilities Enhancement Tool is 5655-T58 and its feature number is 6000.

Basic Machine-Readable Materials are materials that are supplied under the base license and feature numbers, and are required for the use of the product. Optional Machine-Readable Materials are orderable under separate feature numbers, and are not required for the product to function.

The program announcement material describes the features supported by DB2 Utilities Enhancement Tool. Ask your IBM representative for this information if you have not already received a copy.

2.1 Basic Machine-Readable Material

The distribution medium for this program is magnetic tape or downloadable files. This program is in SMP/E RELFILE format and is installed by using SMP/E. See 6.0, "Installation Instructions" on page 17 for more information about how to install the program.

You can find information about the physical tape for the basic machine-readable materials for DB2 Utilities Enhancement Tool in the *CBPDO Memo To Users Extension*.

Figure 1. Program File Content

Name	O R G	R E C M	L R E C L	BLK SIZE
SMPMCS	SEQ	FB	80	6400
IBM.H2AM220.F1	PDS	FB	80	8800
IBM.H2AM220.F2	PDS	FB	80	8800
IBM.H2AM220.F3	PDS	FB	80	8800
IBM.H2AM220.F4	PDSE	U	0	6144
IBM.H2AM220.F5	PDS	FB	80	8800
IBM.H2AM220.F6	PDS	FB	80	8800
IBM.H2AM220.F7	PDS	FB	80	8800
IBM.H2AM220.F8	PDS	FB	80	8800
IBM.H2AM220.F9	PDS	FB	80	8800
IBM.H2AM220.F10	PDS	FB	80	8800
IBM.H2AM220.F11	PDS	FB	80	8800

2.2 Optional Machine-Readable Material

No optional machine-readable materials are provided for DB2 Utilities Enhancement Tool.

2.3 Program Publications

The following sections identify the basic and optional publications for DB2 Utilities Enhancement Tool.

2.3.1 Basic Program Publications

Figure 2 identifies the basic unlicensed program publications for DB2 Utilities Enhancement Tool. One copy of each of these publications is included when you order the basic materials for DB2 Utilities Enhancement Tool. Additional copies can be obtained from the IBM Publications Web Site at URL: <http://www.ibm.com/shop/publications/order/>. For additional information contact your IBM representative.

<i>Figure 2. Basic Material: Unlicensed Publications</i>	
Publication Title	Form Number
DB2 Utilities Enhancement Tool for z/OS License Information	GC19-1223

Figure 3 identifies the basic unlicensed or licensed publications that are not available in hardcopy format, but are available through the internet or other media for DB2 Utilities Enhancement Tool.

<i>Figure 3. Basic Material: Other Unlicensed or Licensed Publications</i>		
Publication Title	Form Number	How Available
IBM DB2 Utilities Enhancement Tool for z/OS User's Guide	SC19-3417	http://www.ibm.com/software/data/db2imstools/library.html

Publications are available in PDF and BookManager formats on CD-ROM and on DVD on the next release of software product libraries:

- *z/OS and Software Products DVD Collection, SK3T-4271**
*requires a DVD drive in DVD-9 (single-sided, dual-layer) format

2.3.2 Optional Program Publications

No optional publications are provided for DB2 Utilities Enhancement Tool.

2.4 Program Source Materials

No program source materials or viewable program listings are provided for DB2 Utilities Enhancement Tool.

2.5 Publications Useful During Installation

You might want to use the publications listed in Figure 4 during the installation of DB2 Utilities Enhancement Tool. To order copies, contact your IBM representative or visit the IBM Publications Center at <http://ehone.ibm.com/publications/servlet/pbi.wss?CTY=US>.

<i>Figure 4. Publications Useful During Installation</i>	
Publication Title	Form Number
<i>IBM SMP/E for z/OS User's Guide</i>	SA22-7773
<i>IBM SMP/E for z/OS Commands</i>	SA22-7771
<i>IBM SMP/E for z/OS Reference</i>	SA22-7772
<i>IBM SMP/E for z/OS Messages, Codes, and Diagnosis</i>	GA22-7770

3.0 Program Support

This section describes the IBM support available for DB2 Utilities Enhancement Tool.

3.1 Program Services

Contact your IBM representative for specific information about available program services.

3.2 Preventive Service Planning

Before you install DB2 Utilities Enhancement Tool, make sure that you have reviewed the current Preventive Service Planning (PSP) information. The PSP Buckets maintain current lists (which have been identified since the package was created) of any recommended or required service for the installation of this package. This service includes software PSP information that contains HIPER and required PTFs against the base release.

If you obtained DB2 Utilities Enhancement Tool as part of a CBPDO, HOLDDATA is included.

If the CBPDO for DB2 Utilities Enhancement Tool is older than two weeks old by the time you install the product materials, you should contact the IBM Support Center or use S/390 Software Xcel to obtain the latest PSP Bucket information. You can also obtain the latest PSP Bucket information by going to the following Web site:

<http://www14.software.ibm.com/webapp/set2/psearch/search?domain=psp>

For program support, access the Software Support Web site at <http://www-01.ibm.com/software/support/>.

PSP Buckets are identified by UPGRADEs, which specify product levels; and SUBSETs, which specify the FMIDs for a product level. The UPGRADE and SUBSET values for DB2 Utilities Enhancement Tool are shown as follows:

Figure 5. PSP Upgrade and Subset ID

UPGRADE	SUBSET	Description
5655T58	H2AM220	DB2 Utilities Enhancement Tool

3.3 Statement of Support Procedures

Report any problems which you feel might be an error in the product materials to your IBM Support Center. You may be asked to gather and submit additional diagnostics to assist the IBM Support Center in their analysis.

Figure 6 on page 7 identifies the component IDs (COMPID) for DB2 Utilities Enhancement Tool.

<i>Figure 6. Component IDs</i>			
FMID	COMPID	Component Name	RETAIN Release
H2AM220	5655T5800	DB2 Utilities Enhancement Tool	220

4.0 Program and Service Level Information

This section identifies the program and relevant service levels of DB2 Utilities Enhancement Tool. The program level refers to the APAR fixes that have been incorporated into the program. The service level refers to the PTFs that have been incorporated into the program.

4.1 Program Level Information

The following APAR fixes against previous releases of DB2 Utilities Enhancement Tool have been incorporated into this release. They are listed by FMID.

- FMID H2AM210

PM22318	PM07841	PK83252
PM22762	PM07090	PK81483
PM18555	PM01861	PK82042
PM19501	PM02433	PK82277
PM09829	PM03040	PK80203
PM22685	PK97415	PK80195
PM20070	PM00236	PK80841
PM20409	PM01265	PK71406
PM20708	PK97644	PK74155
PM13335	PK98817	PK71015
PM13433	PK97824	PK71023
PM13416	PK94815	PK63444
PM14041	PK89886	PK67378
PM11973	PK87686	PK67491
PM07838	PK88367	PK63232
PM09242	PK80123	PK60305
PM06520	PK86421	PK59321
PM03464	PK82128	PK58022
PM05305	PK82051	PK58033
PM06431	PK83066	PK56277
PM06433	PK83494	PK54134
PM07452	PK81180	PK53232

4.2 Service Level Information

No PTFs against this release of DB2 Utilities Enhancement Tool have been incorporated into the product tape.

It is highly recommended that you frequently check the DB2 Utilities Enhancement Tool PSP Bucket for HIPER and SPECIAL Attention PTFs against all FMIDs that you must install.

5.0 Installation Requirements and Considerations

The following sections identify the system requirements for installing and activating DB2 Utilities Enhancement Tool. The following terminology is used:

- *Driving system*: the system used to install the program; where SMP/E executes.
The program might have specific operating system or product level requirements for using processes, such as binder or assembly utilities during the installation.
- *Target system*: the system on which the program is configured and run.
The program might have specific product level requirements, such as needing access to the library of another product for link-edits. These requirements, either mandatory or optional, might directly affect the element during the installation or in its basic or enhanced operation.

In many cases, you can use a system as both a driving system and a target system. However, you can make a separate IPL-able clone of the running system to use as a target system. The clone must include copies of all system libraries that SMP/E updates, copies of the SMP/E CSI data sets that describe the system libraries, and your PARMLIB and PROCLIB.

Use separate driving and target systems in the following situations:

- When you install a new level of a product that is already installed, the new level of the product will replace the old one. By installing the new level onto a separate target system, you can test the new level and keep the old one in production at the same time.
- When you install a product that shares libraries or load modules with other products, the installation can disrupt the other products. By installing the product onto a separate target system, you can assess these impacts without disrupting your production system.

5.1 Driving System Requirements

This section describes the environment of the driving system that is required to install DB2 Utilities Enhancement Tool.

5.1.1 Machine Requirements

The driving system can run in any hardware environment that supports the required software.

5.1.2 Programming Requirements

Figure 7. Driving System Software Requirements

Program Number	Product Name	Minimum VRM	Minimum Service Level will satisfy these APARs	Included in this product's shipment?
Any one of the following:				
5694-A01	z/OS	V01.11.00	N/A	No
5655-G44	IBM SMP/E for z/OS	V03.05.00	N/A	No

Note: Installation may require migration to new z/OS releases to be service supported. See http://www-03.ibm.com/systems/z/os/zos/support/zos_eos_dates.html.

5.2 Target System Requirements

This section describes the environment of the target system that is required to install and use DB2 Utilities Enhancement Tool.

DB2 Utilities Enhancement Tool installs in the DBS (P115) SREL.

5.2.1 Machine Requirements

The target system can run in any hardware environment that supports the required software.

5.2.2 Programming Requirements

5.2.2.1 Installation Requisites: Installation requisites identify products that are required by and *must* be present on the system or products that are not required by but *should* be present on the system for the successful installation of this product.

Mandatory installation requisites identify products that are required on the system for the successful installation of this product. These products are specified as PREs or REQs.

DB2 Utilities Enhancement Tool has no mandatory installation requisites.

Conditional installation requisites identify products that are *not* required for successful installation of this product but can resolve such things as certain warning messages at installation time. These products are specified as IF REQs.

DB2 Utilities Enhancement Tool has no conditional installation requisites.

5.2.2.2 Operational Requisites: Operational requisites are products that are required by and *must* be present on the system or products that are not required by but *should* be present on the system for this product to operate all or part of its functions.

Mandatory operational requisites identify products that are required for this product to operate its basic functions. These products are specified as PREs or REQs.

<i>Figure 8. Target System Mandatory Operational Requisites</i>	
Program Number	Product Name and Minimum VRM/Service Level
5655-V93	IBM Tools Base for z/OS V01.02.00* - HTCZ110, (IBM Tools Customizer for z/OS), with APAR PM43297
Any one of the following:	
5625-DB2	DB2 UDB for z/OS V08.01.00
5697-N29	DB2 UDB for z/OS Value Unit Edition V08.01.00
5635-DB2	DB2 for z/OS V09.01.00
5697-P12	DB2 for z/OS Value Unit Edition V09.01.00
5605-DB2	DB2 for z/OS V10.01.00
5697-P31	DB2 for z/OS Value Unit Edition V10.01.00
Any one of the following:	
5655-K61	DB2 Utilities Suite for z/OS V08.01.00 or later. Requires APARs PM13963 and PM32705 if utilizing DB2 Sort
5655-N97	DB2 Utilities Suite for z/OS V09.01.00 or later. Requires APARs PM13963 and PM32705 if utilizing DB2 Sort
5655-V41	DB2 Utilities Suite for z/OS V10.01.00 or later. Requires APAR PM32705 if utilizing DB2 Sort

Note: * IBM Tools Base for z/OS, (5655-V93) is a mandatory operational requisite for DB2 Utilities Enhancement Tool. IBM Tools Base for z/OS is a no-charge product that must be separately ordered. Tools Base contains IBM Tools Customizer for z/OS, FMID HTCZ110, which must be installed in order to customize DB2 Utilities Enhancement Tool. Refer to the IBM Tools Base for z/OS, Program Directory (GI10-8819-01) for installation instructions.

Conditional operational requisites identify products that are *not* required for this product to operate its basic functions but are required at run time for this product to operate specific functions. These products are specified as IF REQs.

DB2 Utilities Enhancement Tool has no conditional operational requisites.

5.2.2.3 Toleration/Coexistence Requisites: Toleration/coexistence requisites identify products that must be present on sharing systems. These systems can be other systems in a multisystem environment (not necessarily sysplex), a shared DASD environment (such as test and production), or systems that reuse the same DASD environment at different time intervals.

DB2 Utilities Enhancement Tool has no toleration/coexistence requisites.

5.2.2.4 Incompatibility (Negative) Requisites: Negative requisites identify products that must *not* be installed on the same system as this product.

DB2 Utilities Enhancement Tool has no negative requisites.

5.2.3 DASD Storage Requirements

DB2 Utilities Enhancement Tool libraries can reside on all supported DASD types.

Figure 9 lists the total space that is required for each type of library.

<i>Figure 9. Total DASD Space Required by DB2 Utilities Enhancement Tool</i>	
Library Type	Total Space Required in 3390 Trks
Target	520 Tracks
Distribution	458 Tracks

Notes:

1. For non-RECFM U data sets, IBM recommends using system-determined block sizes for efficient DASD utilization. For RECFM U data sets, IBM recommends using a block size of 32760, which is most efficient from the performance and DASD utilization perspective.
2. Abbreviations used for data set types are shown as follows.
 - U** Unique data set, allocated by this product and used by only this product. This table provides all the required information to determine the correct storage for this data set. You do not need to refer to other tables or program directories for the data set size.
 - S** Shared data set, allocated by this product and used by this product and other products. To determine the correct storage needed for this data set, add the storage size given in this table to those given in other tables (perhaps in other program directories). If the data set already exists, it must have enough free space to accommodate the storage size given in this table.
 - E** Existing shared data set, used by this product and other products. This data set is *not* allocated by this product. To determine the correct storage for this data set, add the storage size given in this table to those given in other tables (perhaps in other program directories). If the data set already exists, it must have enough free space to accommodate the storage size given in this table.

If you currently have a previous release of this product installed in these libraries, the installation of this release will delete the old release and reclaim the space that was used by the old release and any service that had been installed. You can determine whether these libraries have enough space by deleting the old release with a dummy function, compressing the libraries, and comparing the space requirements with the free space in the libraries.

For more information about the names and sizes of the required data sets, see 6.1.8, "Allocate SMP/E Target and Distribution Libraries" on page 20.

3. All target and distribution libraries listed have the following attributes:

- The default name of the data set may be changed.
- The default block size of the data set may be changed.
- The data set may be merged with another data set that has equivalent characteristics.
- The data set may be either a PDS or a PDSE except for SABPLOAD and AABPLOAD, which must be PDSEs.

4. All target libraries listed have the following attributes:

- These data sets can be SMS-managed, but they are not required to be SMS-managed.
- These data sets are not required to reside on the IPL volume.
- The values in the "Member Type" column are not necessarily the actual SMP/E element types that are identified in the SMPMCS.

5. All target libraries that are listed and contain load modules have the following attributes:

- These data sets can be in the LNKLST.
- It is required for SABPLOAD to be APF-authorized.

The following figures describe the target and distribution libraries required to install DB2 Utilities Enhancement Tool. The storage requirements of DB2 Utilities Enhancement Tool must be added to the storage required by other programs having data in the same library.

Note: The data in these tables should be used when determining which libraries can be merged into common data sets. In addition, since some ALIAS names may not be unique, ensure that no naming conflicts will be introduced before merging libraries.

Figure 10 (Page 1 of 2). Storage Requirements for DB2 Utilities Enhancement Tool Target Libraries

Library DDNAME	Member Type	Target Volume	T Y P E	O R G	R E C O M	L R E C L	No. of 3390 Trks	No. of DIR Blks
SABPBASE	SAMPLE	Any	U	PDS	FB	80	4	2
SABPCLST	CLIST	Any	U	PDS	FB	80	4	2
SABPDBRM	MACRO	Any	U	PDS	FB	80	8	2
SABPDENU	DATA	Any	U	PDS	FB	80	16	2
SABPLOAD	LMOD	Any	U	PDSE	U	0	438	n/a

Figure 10 (Page 2 of 2). Storage Requirements for DB2 Utilities Enhancement Tool Target Libraries

Library DDNAME	Member Type	Target Volume	T Y P E	O R G	R E C F M	L R E C L	No. of 3390 Trks	No. of DIR Blks
SABPMENU	MESSAGE	Any	U	PDS	FB	80	3	2
SABPPENU	PANEL	Any	U	PDS	FB	80	26	15
SABPSAMP	SAMPLE	Any	U	PDS	FB	80	16	5
SABPSLIB	SKL	Any	U	PDS	FB	80	2	2
SABPTENU	TABLE	Any	U	PDS	FB	80	3	2

Figure 11. Storage Requirements for DB2 Utilities Enhancement Tool Distribution Libraries

Library DDNAME	T Y P E	O R G	R E C F M	L R E C L	No. of 3390 Trks	No. of DIR Blks
AABPBASE	U	PDS	FB	80	4	2
AABPCLST	U	PDS	FB	80	4	2
AABPDBRM	U	PDS	FB	80	8	2
AABPDENU	U	PDS	FB	80	16	2
AABPLOAD	U	PDSE	U	0	376	n/a
AABPMENU	U	PDS	FB	80	3	2
AABPPENU	U	PDS	FB	80	26	15
AABPSAMP	U	PDS	FB	80	16	5
AABPSLIB	U	PDS	FB	80	2	2
AABPTENU	U	PDS	FB	80	3	2

5.3 FMIDs Deleted

Installing DB2 Utilities Enhancement Tool might result in the deletion of other FMIDs. To see which FMIDs will be deleted, examine the ++VER statement in the SMPMCS of the product.

If you do not want to delete these FMIDs at this time, install DB2 Utilities Enhancement Tool into separate SMP/E target and distribution zones.

Note: These FMIDs are not automatically deleted from the Global Zone. If you want to delete these FMIDs from the Global Zone, see the SMP/E manuals for instructions.

5.4 Special Considerations

DB2 Utilities Enhancement Tool has no special considerations for the target system.

6.0 Installation Instructions

This chapter describes the installation method and the step-by-step procedures to install and to activate the functions of DB2 Utilities Enhancement Tool.

Please note the following:

- If you want to install DB2 Utilities Enhancement Tool into its own SMP/E environment, consult the SMP/E manuals for instructions on creating and initializing the SMPCSI and the SMP/E control data sets.
- You can use the sample jobs that are provided to perform part or all of the installation tasks. The SMP/E jobs assume that all DDDEF entries that are required for SMP/E execution have been defined in appropriate zones.
- You can use the SMP/E dialogs instead of the sample jobs to accomplish the SMP/E installation steps.

6.1 Installing DB2 Utilities Enhancement Tool

6.1.1 SMP/E Considerations for Installing DB2 Utilities Enhancement Tool

Use the SMP/E RECEIVE, APPLY, and ACCEPT commands to install this release of DB2 Utilities Enhancement Tool.

6.1.2 SMP/E Options Subentry Values

The recommended values for certain SMP/E CSI subentries are shown in Figure 12. Using values lower than the recommended values can result in failures in the installation. DSSPACE is a subentry in the GLOBAL options entry. PEMAX is a subentry of the GENERAL entry in the GLOBAL options entry. See the SMP/E manuals for instructions on updating the global zone.

Subentry	Value	Comment
DSSPACE	(200,200,500)	3390 DASD tracks
PEMAX	SMP/E Default	IBM recommends using the SMP/E default for PEMAX.

6.1.3 SMP/E CALLLIBS Processing

DB2 Utilities Enhancement Tool uses the CALLLIBS function that is provided in SMP/E to resolve external references during installation. When DB2 Utilities Enhancement Tool is installed, ensure that DDDEFs exist for the following libraries:

- SISPLoad
- SCEEBND2
- CSSLIB
- SCEELIB
- SCLBSID

Note: CALLLIBS uses the previous DDDEFs only to resolve the link-edit for DB2 Utilities Enhancement Tool. These data sets are not updated during the installation of DB2 Utilities Enhancement Tool.

6.1.4 Sample Jobs

The following sample installation jobs are provided as part of the product to help you install DB2 Utilities Enhancement Tool:

<i>Figure 13. Sample Installation Jobs</i>			
Job Name	Job Type	Description	RELFILE
ABPALA	SMP/E	Sample job to allocate and initialize a new SMP/E CSI data set (Optional)	IBM.H2AM220.F2
ABPALB	SMP/E	Sample job to allocate SMP/E data sets (Optional)	IBM.H2AM220.F2
ABPRECEV	RECEIVE	Sample RECEIVE job	IBM.H2AM220.F2
ABPALLOC	ALLOCATE	Sample job to allocate target and distribution libraries	IBM.H2AM220.F2
ABPDDDEF	DDDEF	Sample job to define SMP/E DDDEFs	IBM.H2AM220.F2
ABPAPPLY	APPLY	Sample APPLY job	IBM.H2AM220.F2
ABPACCEP	ACCEPT	Sample ACCEPT job	IBM.H2AM220.F2

You can access the sample installation jobs by performing an SMP/E RECEIVE and then copying the jobs from the relfiles to a work data set for editing and submission. See Figure 13 to find the appropriate relfile data set.

You can also copy the sample installation jobs from the tape or product files by submitting the following job. Depending on your distribution medium, use either the //TAPEIN or the //FILEIN DD statement and comment out or delete the other statement. Before you submit the job, add a job card and change the lowercase parameters to uppercase values to meet the requirements of your site.

```

//STEP1 EXEC PGM=IEBCOPY
//SYSPRINT DD SYSOUT=*
//*****
//* Make the //TAPEIN DD statement below active if you install*
//* from a CBPDO tape by uncommenting the DD statement below. *
//*****
//*TAPEIN DD DSN=IBM.H2AM220.F2,UNIT=tunit,
//* VOL=SER=volser,LABEL=(x,SL),
//* DISP=(OLD,KEEP)
//*****
//* Make the //TAPEIN DD statement below active if you install*
//* from a product tape received outside the CBPDO process *
//* (using the optional SMP/E RECEIVE job) by uncommenting *
//* the DD statement below. *
//*****
//*TAPEIN DD DSN=IBM.H2AM220.F2,UNIT=tunit,
//* VOL=SER=2AM220,LABEL=(3,SL),
//* DISP=(OLD,KEEP)
//*****
//* Make the //FILEIN DD statement below active for *
//* downloaded DASD files. *
//*****
//*FILEIN DD DSN=IBM.H2AM220.F2,UNIT=SYSALLDA,DISP=SHR,
//* VOL=SER=filevol
//OUT DD DSNAME=jcl-library-name,
// DISP=(NEW,CATLG,DELETE),
// VOL=SER=dasdvol,UNIT=SYSALLDA,
// SPACE=(TRK,(20,10,5))
//SYSUT3 DD UNIT=SYSALLDA,SPACE=(CYL,(1,1))
//SYSIN DD *
COPY INDD=xxxxIN,OUTDD=OUT
/*

```

See the following information to update the statements in the previous sample:

TAPEIN:

tunit is the unit value that matches the product tape.

volser is the volume serial that matches the product tape.

x is the tape file number that indicates the location of the data set name on the tape.

See the documentation that is provided by CBPDO for the location of IBM.H2AM220.F2 on the tape.

FILEIN:

filevol is the volume serial of the DASD device where the downloaded files reside.

OUT:

jcl-library-name is the name of the output data set where the sample jobs are stored.

dasdvol is the volume serial of the DASD device where the output data set resides.

SYSIN:

xxxxIN is either TAPEIN or FILEIN depending on your input DD statement.

6.1.5 Allocate SMP/E CSI (Optional)

If you are using an existing CSI, do not execute this job.

If you are allocating a new SMP/E data set for this install, edit, and submit sample job ABPALA to allocate the SMP/E data set for DB2 Utilities Enhancement Tool. Consult the instructions in the sample job for more information.

Expected Return Codes and Messages: You will receive a return code of 0 if this job runs correctly.

6.1.6 Initialize CSI zones (Optional)

Edit and submit sample job ABPALB to initialize SMP/E zones for DB2 Utilities Enhancement Tool. Consult the instructions in the sample job for more information.

Expected Return Codes and Messages: You will receive a return code of 0 if this job runs correctly.

6.1.7 Perform SMP/E RECEIVE

If you have obtained DB2 Utilities Enhancement Tool as part of a CBPDO, use the RCVPDO job in the CBPDO RIMLIB data set to receive the DB2 Utilities Enhancement Tool FMIDs, service, and HOLDDATA that are included on the CBPDO tape. For more information, see the documentation that is included in the CBPDO.

You can also choose to edit and submit sample job ABPRECEV to perform the SMP/E RECEIVE for DB2 Utilities Enhancement Tool. Consult the instructions in the sample job for more information.

Expected Return Codes and Messages: You will receive a return code of 0 if this job runs correctly.

6.1.8 Allocate SMP/E Target and Distribution Libraries

Edit and submit sample job ABPALLOC to allocate the SMP/E target and distribution libraries for DB2 Utilities Enhancement Tool. Consult the instructions in the sample job for more information.

Expected Return Codes and Messages: You will receive a return code of 0 if this job runs correctly.

6.1.9 Create DDDEF Entries

Edit and submit sample job ABPDDDEF to create DDDEF entries for the SMP/E target and distribution libraries for DB2 Utilities Enhancement Tool. Consult the instructions in the sample job for more information.

Expected Return Codes and Messages: You will receive a return code of 0 if this job runs correctly.

6.1.10 Perform SMP/E APPLY

1. Ensure that you have the latest HOLDDATA; then edit and submit sample job ABPAPPLY to perform an SMP/E APPLY CHECK for DB2 Utilities Enhancement Tool. Consult the instructions in the sample job for more information.

HOLDDATA introduces ERROR HOLDS against FMIDs for HIPER APARs. Before the installation, ensure that you have the latest HOLDDATA, which is available through several different portals, including <http://service.software.ibm.com/holdata/390holddata.html>. Install the FMIDs regardless of the status of unresolved HIPERs. However, do not deploy the software until the unresolved HIPERs are analyzed to determine applicability.

To receive the full benefit of the SMP/E Causer SYSMOD Summary Report, do *not* bypass the PRE, ID, REQ, and IFREQ on the APPLY CHECK. This is because the SMP/E root cause analysis identifies the cause only of *errors* and not of *warnings* (SMP/E treats bypassed PRE, ID, REQ, and IFREQ conditions as warnings, instead of errors).

Here is a sample to install FMIDs when ++HOLDS for HIPERs exist for the FMIDs that you install:

- a. To ensure that all recommended and critical service is installed with the FMIDs, if you have received the latest HOLDDATA, add the FIXCAT operand to the APPLY command as shown below.
- b. SMP/E V3.5 or higher:

```
APPLY S(fmid,fmid,...)
FORFMID(fmid,fmid,...)
SOURCEID(RSU*)
FIXCAT(IBM.ProductInstall-RequiredService)
GROUPEXTEND .
```

Some HIPER APARs might not have PTFs available yet. You have to analyze the symptom flags to determine if you want to bypass the specific ERROR HOLDS and continue the installation of the FMIDs.

This method requires more initial research, but can provide resolution for all HIPERs that have fixes available and are not in a PE chain. Unresolved PEs or HIPERs might still exist and require the use of BYPASS.

- c. To install the FMIDs without regard for the HIPERs, you can add a BYPASS(HOLDCLASS(HIPER)) operand to the APPLY command. In this way, you can install FMIDs even though HIPER ERROR HOLDS against them still exist. Only the HIPER ERROR HOLDS are bypassed. After the FMIDs are installed, run the SMP/E REPORT ERRSYSMODS command to identify missing HIPER maintenance.

```
APPLY S(fmid,fmid,...)
FORFMID(fmid,fmid,...)
SOURCEID(RSU*)
GROUPEXTEND
BYPASS(HOLDCLASS(HIPER)) .
..any other parameters documented in the program directory
```

This method is the quicker of the two, but requires subsequent review of the REPORT ERRSYSMODS to investigate any HIPERs. If you have received the latest HOLDDATA, you can also choose to run REPORT MISSINGFIX for Fix Category IBM.ProductInstall-RequiredService to investigate missing recommended service.

If you bypass HOLDDs during the installation of the FMIDs because PTFs are not yet available, you can be notified when the PTFs are available by using the APAR Status Tracking (AST) function of ServiceLink or the APAR Tracking function of ResourceLink.

2. After you take actions that are indicated by the APPLY CHECK, remove the CHECK operand and run the job again to perform the APPLY.

Note: The GROUPEXTEND operand indicates that SMP/E applies all requisite SYSMODs. The requisite SYSMODS might be applicable to other functions.

Expected Return Codes and Messages from APPLY CHECK: You will receive a return code of 0 if this job runs correctly.

Expected Return Codes and Messages from APPLY: You will receive a return code of 0 if this job runs correctly.

6.1.11 Perform SMP/E ACCEPT

Edit and submit sample job ABPACCEP to perform an SMP/E ACCEPT CHECK for DB2 Utilities Enhancement Tool. Consult the instructions in the sample job for more information.

To receive the full benefit of the SMP/E Causer SYSMOD Summary Report, do *not* bypass the PRE, ID, REQ, and IFREQ on the ACCEPT CHECK. This is because the SMP/E root cause analysis identifies the cause of only *errors* but not *warnings* (SMP/E treats bypassed PRE, ID, REQ, and IFREQ conditions as warnings rather than errors).

Before you use SMP/E to load new distribution libraries, it is recommended that you set the ACCJCLIN indicator in the distribution zone. In this way, you can save the entries that are produced from JCLIN in the distribution zone whenever a SYSMOD that contains inline JCLIN is accepted. For more information about the ACCJCLIN indicator, see the description of inline JCLIN in the SMP/E manuals.

After you take actions that are indicated by the ACCEPT CHECK, remove the CHECK operand and run the job again to perform the ACCEPT.

Note: The GROUPEXTEND operand indicates that SMP/E accepts all requisite SYSMODs. The requisite SYSMODS might be applicable to other functions.

Expected Return Codes and Messages from ACCEPT CHECK: You will receive a return code of 0 if this job runs correctly.

If PTFs that contain replacement modules are accepted, SMP/E ACCEPT processing will link-edits or binds the modules into the distribution libraries. During this processing, the Linkage Editor or Binder might issue messages that indicate unresolved external references, which will result in a return code of 4 during

the ACCEPT phase. You can ignore these messages, because the distribution libraries are not executable and the unresolved external references do not affect the executable system libraries.

Expected Return Codes and Messages from ACCEPT: You will receive a return code of 0 if this job runs correctly.

6.1.12 Run REPORT CROSSZONE

The SMP/E REPORT CROSSZONE command identifies requisites for products that are installed in separate zones. This command also creates APPLY and ACCEPT commands in the SMPPUNCH data set. You can use the APPLY and ACCEPT commands to install those cross-zone requisites that the SMP/E REPORT CROSSZONE command identifies.

After you install DB2 Utilities Enhancement Tool, it is recommended that you run REPORT CROSSZONE against the new or updated target and distribution zones. REPORT CROSSZONE requires a global zone with ZONEINDEX entries that describe all the target and distribution libraries to be reported on.

For more information about REPORT CROSSZONE, see the SMP/E manuals.

6.2 Activating DB2 Utilities Enhancement Tool

The publication *IBM DB2 Utilities Enhancement Tool for z/OS User's Guide, SC19-3417* contains the necessary information to customize and use DB2 Utilities Enhancement Tool.

7.0 Notices

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Program Directory for DB2 Utilities Enhancement Tool for z/OS, September 2011

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1	2	3	4	5	N	

	Satisfaction					
Ease of product installation	1	2	3	4	5	N
Contents of Program Directory	1	2	3	4	5	N
Installation Verification Programs	1	2	3	4	5	N
Time to install the product	1	2	3	4	5	N
Readability and organization of Program Directory tasks	1	2	3	4	5	N
Necessity of all installation tasks	1	2	3	4	5	N
Accuracy of the definition of the installation tasks	1	2	3	4	5	N
Technical level of the installation tasks	1	2	3	4	5	N
Ease of getting the system into production after installation	1	2	3	4	5	N

How did you order this product?

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- CustomPac
- ServerPac
- Independent
- Other

Is this the first time your organization has installed this product?

- Yes
- No

Were the people who did the installation experienced with the installation of z/OS products?

- Yes

___ No

If yes, how many years? ___

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International Business Machines Corporation
Reader's Comments
Department DTX/E269
555 Bailey Avenue
San Jose, California
USA
95141-9989

E-Mail: comments@us.ibm.com



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