Program Directory for
DB2 Utilities Suite for z/OS

V10.01.00
Program Number 5655-V41

FMID JDBAA1K

for Use with
z/OS

Document Date: October 2010

GI10-8840-00
Note

Before using this information and the product it supports, be sure to read the general information under 7.0, "Notices" on page 23.

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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 Suite for z/OS. This publication refers to DB2 Utilities Suite for z/OS as DB2 Utilities Suite.

The Program Directory contains the following sections:

- **2.0, “Program Materials” on page 4** identifies the basic and optional program materials and documentation for DB2 Utilities Suite.
- **3.0, “Program Support” on page 7** describes the IBM support available for DB2 Utilities Suite.
- **4.0, “Program and Service Level Information” on page 9** lists the APARs (program level) and PTFs (service level) that have been incorporated into DB2 Utilities Suite.
- **5.0, “Installation Requirements and Considerations” on page 10** identifies the resources and considerations that are required for installing and using DB2 Utilities Suite.
- **6.0, “Installation Instructions” on page 17** provides detailed installation instructions for DB2 Utilities Suite. It also describes the procedures for activating the functions of DB2 Utilities Suite, or refers to appropriate publications.

Before installing DB2 Utilities Suite, 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 7** tells you how to find any updates to the information and procedures in this Program Directory.

DB2 Utilities Suite 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 Suite are included on the CBPDO tape.

Do not use this program directory if you install DB2 Utilities Suite 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 Suite Description

Version 10 of DB2 Utilities Suite for z/OS supports all major new functions and structural changes in the DB2 for z/OS product. Specifically, DB2 Utilities Suite supports the following functions and enhancements:

- REORG utility enhancements for improved availability, performance, and usability
  - REORG LOB with SHRLEVEL CHANGE (now allows update access)
  - REORG SHRLEVEL CHANGE of all catalog and directory objects
- Support disparate partition ranges
- Ability for REORG to cancel blocking threads
- Allow SHRLEVEL REFERENCE or CHANGE when table space is reorg pending
- Improved support for LOB during REORG of the base table space
  - Allow movement of base rows between partitions (LOB data will follow)
  - Support REBALANCE
  - Support ALTER of limitkey
  - Support DISCARD of base rows (LOB values are deleted)

- LOAD and UNLOAD utility enhancements
  - Build a single dictionary that is used for all partitions
  - Support of spanned records for UNLOAD of LOB and XML data
  - Elapsed time reduction for LOAD of LOB and XML

- Data set level FlashCopy exploitation for backups by utilities
  - COPY - ability to create consistent backups with no availability outage
  - REORG
  - LOAD - ability to create consistent backups with no availability outage
  - REBUILD INDEX
  - COPYTOCOPY
  - RECOVER

- COPY utility enhancements
  - Allocate image copy data sets for CHANGELIMIT and incremental only if a copy will be taken
  - Use RTS for CHANGELIMIT processing when deciding between full and incremental

- RECOVER utility enhancements
  - Ability to do point in time recovery by backing out application work
  - Ability to enforce base plus auxiliary objects for point in time recovery

- CHECK DATA utility enhancements
  - Verify integrity of XML data
  - Validate XML schema
  - Resolve inconsistencies in XML data in some cases

- Overall utility enhancements
  - Improvements to utility concurrency due to removal of UTSERIAL lock
- 64 bit BSAM buffer exploitation
- UTSORTAL default changed to YES

- LISTDEF utility enhancements
  - Support added for CHECK DATA
  - Supports disparate part ranges
  - Added filtering by DEFINED YES or NO attribute

- REPORT RECOVERY utility shows system-level backup information
  - Extend RETAIN option to support multiple GDGs
  - Improved performance

- RUNSTATS utility enhancements
  - Support generation, use, and deletion of statistics profiles
  - Support auto sample rates
  - Support deletion of history information
  - Support page sampling
  - Ability to gather statistics on views
  - New default of SHRLEVEL CHANGE

## 1.2 DB2 Utilities Suite FMIDs

DB2 Utilities Suite consists of the following FMID:

JDBAA1K
2.0 Program Materials

An IBM program is identified by a program number. The program number for DB2 Utilities Suite is 5655-V41.

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 Suite. 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 Suite in the **CBPDO Memo To Users Extension**.

Figure 1 describes the program file content for DB2 Utilities Suite. You can refer to the **CBPDO Memo To Users Extension** to see where the files reside on the tape.

Notes:

1. The data set attributes in this table must be used in the JCL of jobs that read the data sets. However, because the data sets are in IEBCOPY unloaded format, their actual attributes might be different.

2. If any RELFILEs are identified as PDSEs, ensure that SMPTLIB data sets are allocated as PDSEs.

<table>
<thead>
<tr>
<th>Name</th>
<th>O</th>
<th>R</th>
<th>L</th>
<th>E</th>
<th>C</th>
<th>R</th>
<th>F</th>
<th>C</th>
<th>BLK SIZE</th>
</tr>
</thead>
<tbody>
<tr>
<td>SMPMC5S</td>
<td>SEQ</td>
<td>FB</td>
<td>80</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6400</td>
</tr>
<tr>
<td>IBM.JDBAA1K.F1</td>
<td></td>
<td>PDS</td>
<td>FB</td>
<td>80</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>8800</td>
</tr>
<tr>
<td>IBM.JDBAA1K.F2</td>
<td></td>
<td>PDS</td>
<td>FB</td>
<td>80</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>8800</td>
</tr>
<tr>
<td>IBM.JDBAA1K.F3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6144</td>
</tr>
</tbody>
</table>
2.2 Optional Machine-Readable Material

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

2.3 Program Publications

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

2.3.1 Basic Program Publications

Figure 2 identifies the basic unlicensed program publications for DB2 Utilities Suite. One copy of each of these publications is included when you order the basic materials for DB2 Utilities Suite. For additional copies, contact your IBM representative.

<table>
<thead>
<tr>
<th>Publication Title</th>
<th>Form Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2 Utilities Suite for z/OS Version 10 License Information</td>
<td>GC19-3184</td>
</tr>
</tbody>
</table>

2.3.2 Optional Program Publications

No optional publications are provided for DB2 Utilities Suite.

2.4 Program Source Materials

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

2.5 Publications Useful During Installation

You might want to use the publications listed in Figure 3 during the installation of DB2 Utilities Suite. To order copies, contact your IBM representative or visit the IBM Publications Center at www.ibm.com/shop/publications/order

<table>
<thead>
<tr>
<th>Publication Title</th>
<th>Form Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>IBM SMP/E for z/OS User's Guide</td>
<td>SA22-7773</td>
</tr>
<tr>
<td>IBM SMP/E for z/OS Commands</td>
<td>SA22-7771</td>
</tr>
<tr>
<td>Publication Title</td>
<td>Form Number</td>
</tr>
<tr>
<td>-----------------------------------------------------</td>
<td>---------------</td>
</tr>
<tr>
<td>IBM SMP/E for z/OS Reference</td>
<td>SA22-7772</td>
</tr>
<tr>
<td>IBM SMP/E for z/OS Messages, Codes, and Diagnosis</td>
<td>GA22-7770</td>
</tr>
</tbody>
</table>
3.0 Program Support

This section describes the IBM support available for DB2 Utilities Suite.

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 Suite, 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 5655V41 that contains HIPER and required PTFs against the base release.

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

If the CBPDO for DB2 Utilities Suite 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 SoftwareXcel to obtain the latest PSP Bucket information. You can also obtain the latest PSP Bucket information by going to the following Web site:


For program support, access the Software Support Web site at

www.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 Suite are shown as follows:

<table>
<thead>
<tr>
<th>UPGRADE</th>
<th>SUBSET</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>5655V41</td>
<td>JDBAA1K</td>
<td>DB2 Utilities Suite for z/OS Version 10</td>
</tr>
</tbody>
</table>
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 5 on page 8 identifies the component IDs (COMPID) for DB2 Utilities Suite.

<table>
<thead>
<tr>
<th>FMID</th>
<th>COMPID</th>
<th>Component Name</th>
<th>RETAIN Release</th>
</tr>
</thead>
<tbody>
<tr>
<td>JDBAA1K</td>
<td>5740XYR00</td>
<td>DB2 Utilities Suite for z/OS</td>
<td>A1K</td>
</tr>
</tbody>
</table>

Figure 5. Component IDs
4.0 Program and Service Level Information

This section identifies the program and relevant service levels of DB2 Utilities Suite. 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

No APARs have been incorporated into DB2 Utilities Suite.

4.2 Service Level Information

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

It is highly recommended that you frequently check the DB2 Utilities Suite 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 Suite. 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 access 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 Suite.

5.1.1 Machine Requirements

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

5.1.2 Programming Requirements
5.2 Target System Requirements

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

DB2 Utilities Suite 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.

<table>
<thead>
<tr>
<th>Program Number</th>
<th>Product Name</th>
<th>Minimum VRM</th>
<th>Minimum Service Level will satisfy these APARs</th>
<th>Included in this product's shipment?</th>
</tr>
</thead>
<tbody>
<tr>
<td>5694-A01</td>
<td>z/OS</td>
<td>01.10.00</td>
<td>N/A</td>
<td>No</td>
</tr>
<tr>
<td>5655-G44</td>
<td>IBM SMP/E for z/OS</td>
<td>V03.05.00</td>
<td>N/A</td>
<td>No</td>
</tr>
</tbody>
</table>

Note: Installation may require migration to new z/OS releases to be service supported. See: www.ibm.com/software/support/systemsz/lifecycle/
Note: Installation may require migration to new z/OS releases to be service supported. For more information, see:
www.ibm.com/software/support/systemsz/lifecycle/

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 Suite 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.

The following DB2 Version 10 Utilities use DFSORT or DB2 Sort to perform their SORT and MERGE functions:

- LOAD
- REORG TABLESPACE and REORG INDEX
- REBUILD INDEX
- RUNSTATS
- CHECK DATA, CHECK INDEX, and CHECK LOB

DB2 Version 10 Utilities can use DFSORT regardless of whether or not you have purchased a full license for DFSORT on your system. For additional information, see APARs II14047, II14213 and II13495.
**Note:** DB2 Version 10 Utilities can use the IBM DB2 Sort for z/OS V1.1 (5655-W42) product as an alternative to DFSORT for utility SORT and MERGE functions. Exploitation of DB2 Sort requires purchase of a DB2 Sort license. Refer to DB2 Sort Documentation for further details regarding this product. An overview of DB2 Sort can be found at:  
www.ibm.com/software/data/db2imstools/db2tools/db2-sort/

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.

<table>
<thead>
<tr>
<th>Program Number</th>
<th>Product Name and Minimum VRM/Service Level</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>5694-A01</td>
<td>z/OS V01.10.00, plus APAR PK85856</td>
<td>DFSORT use of zIIP</td>
</tr>
<tr>
<td>5694-A01</td>
<td>z/OS V01.10.00, DFSMSHsm, DFSMSdss and FlashCopy V02.00.00</td>
<td>Volume-based utilities and copy and recovery utilities</td>
</tr>
</tbody>
</table>
| 5694-A01      | z/OS V01.10.00, DFSMSdss (required), FlashCopy V02.00.00 (required) | The following utilities that run with SHRLEVEL CHANGE:  
- CHECK INDEX  
- CHECK DATA  
- CHECK LOB |
| 5635-DB2 and/or 5625-DB2 | DB2 for z/OS APAR PM10227 | To prepare for migration to DB2 10, from either DB2 for z/OS Version 8 or DB2 9 for z/OS |

**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 Suite 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 Suite has no negative requisites.

**5.2.3 DASD Storage Requirements**

DB2 Utilities Suite libraries can reside on all supported DASD types.

Figure 10 lists the total space that is required for each type of library.
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 6.1.5, “Allocate SMP/E Target and Distribution Libraries” on page 19.

3. Abbreviations used for the file system path type are as follows.

   - **N**: New path, created by this product.

   - **X**: Path created by this product, but may already exist from a previous release.

   - **P**: Previously existing path, created by another product.

4. 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.

<table>
<thead>
<tr>
<th>Library Type</th>
<th>Total Space Required in 3390 Trks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Target</td>
<td>20 Tracks</td>
</tr>
<tr>
<td>Distribution</td>
<td>20 Tracks</td>
</tr>
<tr>
<td>File System</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Figure 10. Total DASD Space Required by DB2 Utilities Suite
5. 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.

6. All target libraries that are listed and contain load modules have the following attributes:
   - These data sets can be in the LPA, but they are not required to be in the LPA.
   - These data sets can be in the LNKLST.
   - Some of these data sets may be required to be APF-authorized. For additional information, see the DB2 10 for z/OS Installation and Migration Guide, GC19-2974.

The following figures describe the target and distribution libraries and file system paths required to install DB2 Utilities Suite. The storage requirements of DB2 Utilities Suite must be added to the storage required by other programs having data in the same library or path.

**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 11. Storage Requirements for DB2 Utilities Suite Target Libraries

<table>
<thead>
<tr>
<th>Library DDNAME</th>
<th>Member Type</th>
<th>Target Volume</th>
<th>R E</th>
<th>L R</th>
<th>No. of 3390 Trks</th>
<th>No. of DIR Blks</th>
</tr>
</thead>
<tbody>
<tr>
<td>SDSNBASE</td>
<td>Sample</td>
<td>Any</td>
<td>E</td>
<td>M</td>
<td>80</td>
<td>2</td>
</tr>
<tr>
<td>SDSNLOAD</td>
<td>LMOD</td>
<td>Any</td>
<td>E</td>
<td>M</td>
<td>80</td>
<td>20</td>
</tr>
</tbody>
</table>

### Figure 12. Storage Requirements for DB2 Utilities Suite Distribution Libraries

<table>
<thead>
<tr>
<th>Library DDNAME</th>
<th>R E</th>
<th>L R</th>
<th>No. of 3390 Trks</th>
<th>No. of DIR Blks</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADSNBASE</td>
<td>M</td>
<td>L</td>
<td>80</td>
<td>2</td>
</tr>
<tr>
<td>ADSNLOAD</td>
<td>U</td>
<td>0</td>
<td>20</td>
<td>5</td>
</tr>
</tbody>
</table>
5.3 FMIDs Deleted

Installing DB2 Utilities Suite 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 Suite 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 Suite 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 Suite.

Please note the following:

- If you want to install DB2 Utilities Suite 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 Suite

6.1.1 SMP/E Considerations for Installing DB2 Utilities Suite

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

6.1.2 SMP/E Options Subentry Values

The recommended values for certain SMP/E CSI subentries are shown in Figure 13. 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.

<table>
<thead>
<tr>
<th>Subentry</th>
<th>Value</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>DSSPACE</td>
<td>(200,200,200)</td>
<td>3390 DASD Tracks</td>
</tr>
<tr>
<td>PEMAX</td>
<td>SMP/E Default</td>
<td>IBM recommends using the SMP/E default for PEMAX.</td>
</tr>
</tbody>
</table>

6.1.3 Sample Jobs

The following sample installation jobs are provided as part of the product to help you install DB2 Utilities Suite:
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 14 on page 17 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=/c5197
//TAPEIN DD DSN=IBM.JDBAA1K.F2,UNIT=tunit,
// VOL=SER=volser,LABEL=(x,SL),
// DISP=(OLD,KEEP)
//FILEIN DD DSN=IBM.JDBAA1K.F2,UNIT=SYSALLDA,DISP=SHR,
// VOL=SER=filevol
//OUT DD DSNNAME=jcl-library-name,
// DISP=(NEW,CATLG,DELETE),
// VOL=SER=dasdvol,UNIT=SYSALLDA,
// SPACE=(TRK,(primary,secondary,dir))
//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.JDBAA1K.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.

---

**Figure 14. Sample Installation Jobs**

<table>
<thead>
<tr>
<th>Job Name</th>
<th>Job Type</th>
<th>Description</th>
<th>RELFILE</th>
</tr>
</thead>
<tbody>
<tr>
<td>DSNRECVK</td>
<td>RECEIVE</td>
<td>Sample RECEIVE job</td>
<td>IBM.JDBAA1K.F2</td>
</tr>
<tr>
<td>DSNAPPLK</td>
<td>APPLY</td>
<td>Sample APPLY job</td>
<td>IBM.JDBAA1K.F2</td>
</tr>
<tr>
<td>DSNACCPK</td>
<td>ACCEPT</td>
<td>Sample ACCEPT job</td>
<td>IBM.JDBAA1K.F2</td>
</tr>
</tbody>
</table>

---

DB2 Utilities Suite Program Directory
6.1.4 Perform SMP/E RECEIVE

If you have obtained DB2 Utilities Suite as part of a CBPDO, use the RCVPDO job in the CBPDO RIMLIB data set to receive the DB2 Utilities Suite 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 DSNRECVK to perform SMP/E RECEIVE for DB2 Utilities Suite. 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.

6.1.5 Allocate SMP/E Target and Distribution Libraries

All data sets used by DB2 Utilities Suite are allocated by other products, so no new allocations are required.

6.1.6 Create DDDEF Entries

All DDDEFs used by DB2 Utilities Suite are created by other products, so no new DDDEFs are required.

6.1.7 Perform SMP/E APPLY

1. Ensure that you have the latest HOLDDATA; then edit and submit sample job DSNAPPLK to perform an SMP/E APPLY CHECK for DB2 Utilities Suite. 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, don't 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 are two methods 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, and have received the latest HOLDDATA, add the FIXCAT operand to the APPLY command as shown below.
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.

b. 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.

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 HOLDs during the installation of the FMIDs because PTFs are not yet available, you can make yourself 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.
6.1.8 Perform SMP/E ACCEPT

Edit and submit sample job DSNACCPK to perform an SMP/E ACCEPT CHECK for DB2 Utilities Suite. 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.

6.1.9 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 Suite, 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 Suite

The publication DB2 10 for z/OS Utilities Guide and Reference, SC19-2984, contains the step-by-step procedures to use the utilities.
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<tr>
<td>IBMLink</td>
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<tr>
<td>DB2</td>
<td>ServerPac®</td>
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</tbody>
</table>
Reader’s Comments

Program Directory for DB2 Utilities Suite for z/OS, October 2010

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<table>
<thead>
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Satisfaction

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<th>3</th>
<th>4</th>
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<td>3</td>
<td>4</td>
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<tr>
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<td>5</td>
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<tr>
<td>Readability and organization of Program Directory tasks</td>
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<td>2</td>
<td>3</td>
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<td>5</td>
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<tr>
<td>Necessity of all installation tasks</td>
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<td>5</td>
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<tr>
<td>Accuracy of the definition of the installation tasks</td>
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<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
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<tr>
<td>Technical level of the installation tasks</td>
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<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>N</td>
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<tr>
<td>Ease of getting the system into production after installation</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>N</td>
</tr>
</tbody>
</table>

How did you order this product?

__ CBPDO
__ 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? __

If you have any comments to make about your ratings above, or any other aspect of the product installation, please list them below:

_________________________________________________________________________________
_________________________________________________________________________________
_________________________________________________________________________________
_________________________________________________________________________________
_________________________________________________________________________________
_________________________________________________________________________________
_________________________________________________________________________________
_________________________________________________________________________________
_________________________________________________________________________________

Please provide the following contact information:

______________________________________________________________________________
Name and Job Title

______________________________________________________________________________
Organization

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Address

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Thank you for your participation.

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