



**Program Directory for  
IBM DB2 Buffer Pool Analyzer on z/OS**

V5.3.0

Program Number 5655-W35

for Use with  
z/OS

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**Note**

Before using this information and the product it supports, be sure to read the general information under 7.0, "Notices" on page 30.

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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 IBM DB2 Buffer Pool Analyzer on z/OS. This publication refers to IBM DB2 Buffer Pool Analyzer on z/OS as DB2 Buffer Pool Analyzer on z/OS.

The Program Directory contains the following sections:

- 2.0, “Program Materials” on page 3 identifies the basic program materials and documentation for DB2 Buffer Pool Analyzer on z/OS.
- 3.0, “Program Support” on page 5 describes the IBM support available for DB2 Buffer Pool Analyzer on z/OS.
- 4.0, “Program and Service Level Information” on page 7 lists the APARs (program level) and PTFs (service level) that have been incorporated into DB2 Buffer Pool Analyzer on z/OS.
- 5.0, “Installation Requirements and Considerations” on page 8 identifies the resources and considerations that are required for installing and using DB2 Buffer Pool Analyzer on z/OS.
- 6.0, “Installation Instructions” on page 21 provides detailed installation instructions for DB2 Buffer Pool Analyzer on z/OS. It also describes the procedures for activating the functions of DB2 Buffer Pool Analyzer on z/OS, or refers to appropriate publications.

Before installing DB2 Buffer Pool Analyzer on z/OS, 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 5 tells you how to find any updates to the information and procedures in this program directory.

DB2 Buffer Pool Analyzer on z/OS 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 if one was included with your order. All service and HOLDDATA for DB2 Buffer Pool Analyzer on z/OS are included on the CBPDO tape.

Do not use this program directory if you install DB2 Buffer Pool Analyzer on z/OS with a SystemPac or ServerPac. When you use one of those offerings, use the jobs and documentation supplied with the offering. The offering will point you to specific sections of this program directory as needed.

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## 1.1 DB2 Buffer Pool Analyzer on z/OS Description

DB2 Buffer Pool Analyzer on z/OS optimizes database performance by helping buffer pools function at their highest efficiency. It makes it easier to tune your database and substantially boost its capacity, speed, and reliability which helps you succeed in the information economy.

DB2 Buffer Pool Analyzer on z/OS provides the following support and functions:

- Data collection of virtual buffer pool activity via the DB2 IFI interface
- Comprehensive reporting of the buffer pool activity
- Simulation of buffer pool usage
- Display of report and simulation results on workstation in form of spreadsheets, graphs, and diagrams

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## 1.2 DB2 Buffer Pool Analyzer on z/OS FMIDs

DB2 Buffer Pool Analyzer on z/OS consists of the following FMIDs:

HKDB53Z  
HKDB530  
HKOB730

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## 2.0 Program Materials

An IBM program is identified by a program number. The program number for DB2 Buffer Pool Analyzer on z/OS is 5655-W35.

Basic Machine-Readable Materials are materials that are supplied under the base license and are required for the use of the product.

The program announcement material describes the features supported by DB2 Buffer Pool Analyzer on z/OS. Ask your IBM representative for this information if you have not already received a copy.

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### 2.1 Basic Machine-Readable Material

The distribution medium for this program is physical media 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 21 for more information about how to install the program.

You can find information about the physical media for the basic machine-readable materials for DB2 Buffer Pool Analyzer on z/OS in the *CBPDO Memo To Users Extension*.

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### 2.2 Optional Machine-Readable Material

No optional machine-readable materials are provided for DB2 Buffer Pool Analyzer on z/OS.

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### 2.3 Program Publications

The following sections identify the basic publications for DB2 Buffer Pool Analyzer on z/OS.

Figure 1 identifies the basic unlicensed publications for DB2 Buffer Pool Analyzer on z/OS.

The unlicensed documentation for DB2 Buffer Pool Analyzer on z/OS can be

- found on the IBM Knowledge Center at:  
[http://www.ibm.com/support/knowledgecenter/OMXEDB2PE530/com.ibm.omegamon.xe.pe\\_db2.doc\\_5.3.0/ko2welcome\\_pe.htm](http://www.ibm.com/support/knowledgecenter/OMXEDB2PE530/com.ibm.omegamon.xe.pe_db2.doc_5.3.0/ko2welcome_pe.htm)
- obtained as pdf file from the IBM Publications Center website at:  
<http://www.ibm.com/shop/publications/order>.
- obtained as pdf file from the PDFs and Techdocs on DB2 Tools Product Page, this page lists the Program Directories and the most current versions of the available product publications including updates to these books: <https://www.ibm.com/support/docview.wss?uid=swg27020910#omegaxepe-lib>

| <i>Figure 1. Basic Material: Unlicensed Publications</i> |                    |
|--|--------------------|
| <b>Publication Title</b>                                 | <b>Form Number</b> |
| <i>Buffer Pool Analyzer User's Guide</i>                 | SH12-7057          |
| <i>Buffer Pool Analyzer Configuration Guide</i>          | SH12-7058          |

The DB2 Buffer Pool Analyzer on z/OS product documentation can be found at the IBM Knowledge Center url listed below:

<http://www.ibm.com/support/knowledgecenter/SSAUBV/welcome>

Select Tivoli OMEGAMON XE for DB2 Performance Expert, select Version 5.3, scroll through the content list and find and select the respective Buffer Pool Analyzer documents.

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## 2.4 Program Source Materials

No program source materials or viewable program listings are provided for DB2 Buffer Pool Analyzer on z/OS.

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## 2.5 Publications Useful During Installation

You might want to use the publications listed in Figure 2 during the installation of DB2 Buffer Pool Analyzer on z/OS.

| <i>Figure 2. Publications Useful During Installation</i> |                    |
|--|--------------------|
| <b>Publication Title</b>                                 | <b>Form Number</b> |
| <i>IBM SMP/E for z/OS User's Guide</i>                   | SA23-2277          |
| <i>IBM SMP/E for z/OS Commands</i>                       | SA23-2275          |
| <i>IBM SMP/E for z/OS Reference</i>                      | SA23-2276          |
| <i>IBM SMP/E for z/OS Messages, Codes, and Diagnosis</i> | GA32-0883          |

These publications can be obtained from the IBM Publications Center website at <http://www.ibm.com/shop/publications/order/>.



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## 3.0 Program Support

This section describes the IBM support available for DB2 Buffer Pool Analyzer on z/OS.

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### 3.1 Program Services

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

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### 3.2 Preventive Service Planning

Before you install DB2 Buffer Pool Analyzer on z/OS, make sure that you have reviewed the current Preventive Service Planning (PSP) information. Review the PSP Bucket for General Information, Installation Documentation, and the Cross Product Dependencies sections. For the Recommended Service section, instead of reviewing the PSP Bucket, it is recommended you use the IBM.ProductInstall-RequiredService fix category in SMP/E to ensure you have all the recommended service installed. Use the **FIXCAT(IBM.ProductInstall-RequiredService)** operand on the **APPLY CHECK command**. See 6.1.10, "Perform SMP/E APPLY" on page 25 for a sample APPLY command.

If you obtained DB2 Buffer Pool Analyzer on z/OS as part of a CBPDO, HOLDDATA is included.

If the CBPDO for DB2 Buffer Pool Analyzer on z/OS is older than two weeks by the time you install the product materials, you can obtain the latest PSP Bucket information by going to the following website:

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

You can also use S/390 SoftwareXcel or contact the IBM Support Center to obtain the latest PSP Bucket information.

For program support, access the Software Support Website at <http://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 Buffer Pool Analyzer on z/OS are included in Figure 3.

| <i>Figure 3. PSP Upgrade and Subset ID</i> |         |                                      |
|--|---------|--------------------------------------|
| UPGRADE                                    | SUBSET  | Description                          |
| 5655W35                                    | HKDB53Z | DB2 Buffer Pool Analyzer License Key |
|  | HKDB530 | OMEGAMON XE for DB2 PE BASE          |
|  | HKOB730 | OMNIMON Base                         |

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### 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 4 on page 6 identifies the component IDs (COMPID) for DB2 Buffer Pool Analyzer on z/OS.

| <i>Figure 4. Component IDs</i> |               |                                      |                       |
|--------------------------------|---------------|--------------------------------------|-----------------------|
| <b>FMID</b>                    | <b>COMPID</b> | <b>Component Name</b>                | <b>RETAIN Release</b> |
| HKDB53Z                        | 5655OPE00     | DB2 Buffer Pool Analyzer License Key | 53Z                   |
| HKDB530                        | 5655OPE00     | OMEGAMON XE for DB2 PE BASE          | 530                   |
| HKOB730                        | 5608A41OB     | OMNIMON Base                         | 730                   |

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## 4.0 Program and Service Level Information

This section identifies the program and relevant service levels of DB2 Buffer Pool Analyzer on z/OS. 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.

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### 4.1 Program Level Information

The following APAR fixes against previous releases of components included with DB2 Buffer Pool Analyzer on z/OS have been incorporated into this release. They are listed by FMID.

- FMID HKDB530

PI05051 PI05440 PI05484 PI06014 PI06091 PI06314 PI06523 PI06562  
PI06838 PI06883 PI06890 PI06900 PI06913 PI06922 PI06931 PI06933  
PI06972 PI07142 PI07225 PI07326 PI07406 PI07716 PI07722 PI07798  
PI08004 PI08011 PI08012 PI08684 PI09449 PI09716 PI09778 PI10526  
PI10530 PI10641 PI10732 PI10798 PI10854 PI10863 PI11557 PI11775  
PI11811 PI11845 PI11908 PI12525 PI12690 PI12785 PI12870 PI13052  
PI13102 PI13644 PI13710 PI13916 PI14179 PI14217 PI14676 PI14840  
PI14889 PI15377 PI15680 PI15944 PI16191 PI16268 PI16762 PI16974  
PI16983 PI17560 PI17671 PI17998 PI18018 PI18063 PI18922 PI19565  
PI19949 PI19953 PI19962 PI19965 PI20056 PI20182 PI20482 PI21156  
PI21784 PI22243 PI22260 PI22392 PI22399 PI22405 PI22876 PI23278  
PI23577 PI23758 PI23803 PI24083 PI24251 PI24825 PI25281 PI25427  
PI25583 PI25914 PI25922 PI26107 PI26193 PI26282 PI26394 PI26693  
PI26854 PI27297 PI27390 PI27770 PI28211 PI28631 PI29644 PI29667  
PI29685 PI30384 PI30452 PI30822 PI31784 PI31859 PI32022 PI32302  
PI32600 PI32621 PI33200 PI33401 PI35328 PI35620 PM92604 PM93350  
PM93764 PM93767 PM93930 PM94202 PM94657 PM94773 PM94833 PM95135  
PM95251 PM95462 PM95550 PM96290 PM96398 PM96827 PM97467 PM97502  
PM98256 PM98390 PM98397 PM98407 PM98529 PM98585 PM98648 PM98699  
PM99017 PM99020 PM99038 PM99279 PM99280 PM99346 PM99429 PM99671  
PM99764

- FMID HKOB730

OA38724 OA38914 OA39194 OA39399 OA39622 OA39639 OA39649 OA39671  
OA39889 OA40088 OA40373 OA40429 OA40800 OA40853 OA40973 OA41117  
OA41153 OA41333 OA41451 OA41552 OA41669 OA41694 OA42127 OA42259  
OA42748 OA42958 OA43096 OA43163 OA43364 OA43638

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### 4.2 Service Level Information

No PTFs against this release of DB2 Buffer Pool Analyzer on z/OS have been incorporated into the product package.

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## 5.0 Installation Requirements and Considerations

The following sections identify the system requirements for installing and activating DB2 Buffer Pool Analyzer on z/OS. The following terminology is used:

- *Driving system*: the system on which SMP/E is executed to install the program.
- *Target system*: the system on which the program is configured and run.

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.

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### 5.1 Driving System Requirements

This section describes the environment of the driving system required to install DB2 Buffer Pool Analyzer on z/OS.

#### 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 5. Driving System Software Requirements

| Program Number                   | Product Name | Minimum VRM | Minimum Service Level will satisfy these APARs | Included in the shipped product? |
|----------------------------------|--------------|-------------|--|----------------------------------|
| Any <b>one</b> of the following: |              |             |  |                                  |
| 5694-A01                         | z/OS         | V01.13.00   | N/A  | No                               |
| 5650-ZOS                         | z/OS         | V02.01.00   | N/A  | No                               |

**Note:** SMP/E is a requirement for Installation and is an element of z/OS but can also be ordered as a separate product, 5655-G44, minimally V03.06.00.

**Note:** Installation might 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](http://www-03.ibm.com/systems/z/os/zos/support/zos_eos_dates.html).

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## 5.2 Target System Requirements

This section describes the environment of the target system required to install and use DB2 Buffer Pool Analyzer on z/OS.

DB2 Buffer Pool Analyzer on z/OS installs in the z/OS (Z038) 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 and *must* be present on the system or products that are not required 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.

Figure 6. Target System Mandatory Installation Requisites

| Program Number | Product Name | Minimum VRM | Minimum Service Level will satisfy these APARs | Included in the shipped product? |
|----------------|--------------|-------------|--|----------------------------------|
| 5694-A01       | z/OS         | V01.13.00   | N/A  | No                               |
| 5650-ZOS       | z/OS         | V02.01.00   | N/A  | No                               |

**Note:** Installation might 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](http://www-03.ibm.com/systems/z/os/zos/support/zos_eos_dates.html).

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 Buffer Pool Analyzer on z/OS has no conditional installation requisites.

### 5.2.2.2 Operational Requisites

Operational requisites are products that are required and *must* be present on the system or products that are not required 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.

Figure 7. Target System Mandatory Operational Requisites

| Program Number                   | Product Name and Minimum VRM/Service Level |
|----------------------------------|--|
| 5694-A01                         | z/OS V01.13.00                             |
| 5650-ZOS                         | z/OS V02.01.00                             |
| Any <b>one</b> of the following: |  |
| 5605-DB2                         | IBM DB2 for z/OS V10.01.00                 |
| 5615-DB2                         | IBM DB2 for z/OS V11.01.00                 |
| 5697-P31                         | IBM DB2 Value Unit Edition V10.01.00       |
| 5697-P43                         | IBM DB2 Value Unit Edition V11.00.00       |

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 Buffer Pool Analyzer on z/OS 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 Buffer Pool Analyzer on z/OS 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.

| <i>Figure 8. Target System Negative Requisites</i> |  |
|--|--|
| <b>Program Number</b>                              | <b>Product Name and Minimum VRM/Service Level</b>                              |
| 5655-Q08   | IBM Tivoli OMEGAMON XE for DB2 Performance Monitor on z/OS V04.01.00 or higher |
| 5655-W38   | IBM Tivoli OMEGAMON XE for DB2 Performance Monitor on z/OS V05.01.00 or higher |
| 5655-W38   | IBM Tivoli OMEGAMON XE for DB2 Performance Monitor on z/OS V05.02.00           |
| 5655-Q07   | IBM Tivoli OMEGAMON XE for DB2 Performance Expert on z/OS V04.01.00 or higher  |
| 5655-W37   | IBM Tivoli OMEGAMON XE for DB2 Performance Expert on z/OS V05.01.00 or higher  |
| 5655-W37   | IBM Tivoli OMEGAMON XE for DB2 Performance Expert on z/OS V05.02.00            |

### 5.2.3 DASD Storage Requirements

DB2 Buffer Pool Analyzer on z/OS 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 Buffer Pool Analyzer on z/OS</i> |  |
|--|--|
| <b>Library Type</b>  | <b>Total Space Required in 3390 Trks</b> |
| Target   | 4217                                     |
| Distribution   | 3926                                     |

#### Notes:

1. If you are installing into an existing environment that has the data sets in Figure 12 on page 13 and Figure 13 on page 15 already allocated, ensure sufficient disk space and directory blocks are available to support the requirement listed. This might require you to reallocate some data sets to avoid x37 abends.

2. Use system determined block sizes for efficient DASD utilization for all non-RECFM U data sets. For RECFM U data sets, a block size of 32760 is recommended, which is the most efficient from a performance and DASD utilization perspective.
3. 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 6.1.7, "Allocate SMP/E Target and Distribution Libraries" on page 24.

4. All target and distribution libraries listed have the following attributes:
  - The default name of the data set can not be changed.
  - The default block size of the data set can be changed.
  - The data set can not be merged with another data set that has equivalent characteristics.
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 not be in the LPA.
  - These data sets can be in the LNKLST except for TKANMODR and TKANMODS.

If you are installing into an existing environment, ensure the values used for the SMP/E work datasets reflect the minimum values shown in Figure 10. Check the corresponding DDDEF entries in all zones because use of values lower than these can result in failures in the installation process. Refer to the SMP/E manuals for instructions on updating DDDEF entries.



*Figure 10. Storage Requirements for SMP/E Work Data Sets*

| <b>Library<br/>DDNAME</b> | <b>T<br/>Y<br/>P<br/>E</b> | <b>O<br/>R<br/>G<br/>A<br/>N<br/>I<br/>Z<br/>A<br/>T<br/>I<br/>O<br/>N</b> | <b>R<br/>E<br/>C<br/>O<br/>R<br/>D<br/>S</b> | <b>L<br/>E<br/>N<br/>G<br/>T<br/>H</b> | <b>Prim<br/>No.<br/>of<br/>3390<br/>Trks</b> | <b>Sec<br/>No.<br/>of<br/>3390<br/>Trks</b> | <b>No.<br/>of<br/>DIR<br/>Blks</b> |
|---------------------------|----------------------------|--|--|--|--|---|------------------------------------|
| SMPWRK1                   | S                          | PDS  | FB   | 80                                     | 150  | 150   | 220                                |
| SMPWRK2                   | S                          | PDS  | FB   | 80                                     | 150  | 150   | 220                                |
| SMPWRK3                   | S                          | PDS  | FB   | 80                                     | 300  | 600   | 1320                               |
| SMPWRK4                   | S                          | PDS  | FB   | 80                                     | 150  | 150   | 220                                |
| SMPWRK6                   | S                          | PDS  | FB   | 80                                     | 300  | 1500  | 660                                |
| SYSUT1                    | S                          | SEQ  | --   | --                                     | 75   | 75  | 0                                  |
| SYSUT2                    | S                          | SEQ  | --   | --                                     | 75   | 75  | 0                                  |
| SYSUT3                    | S                          | SEQ  | --   | --                                     | 75   | 75  | 0                                  |
| SYSUT4                    | S                          | SEQ  | --   | --                                     | 75   | 75  | 0                                  |

If you are installing into an existing environment, ensure the current SMP/E support dataset allocations reflect the minimum values shown in Figure 11. Check the space and directory block allocation and reallocate the data sets, if necessary.

*Figure 11. Storage Requirements for SMP/E Data Sets*

| <b>Library<br/>DDNAME</b> | <b>T<br/>Y<br/>P<br/>E</b> | <b>O<br/>R<br/>G<br/>A<br/>N<br/>I<br/>Z<br/>A<br/>T<br/>I<br/>O<br/>N</b> | <b>R<br/>E<br/>C<br/>O<br/>R<br/>D<br/>S</b> | <b>L<br/>E<br/>N<br/>G<br/>T<br/>H</b> | <b>Prim<br/>No.<br/>of<br/>3390<br/>Trks</b> | <b>Sec<br/>No.<br/>of<br/>3390<br/>Trks</b> | <b>No.<br/>of<br/>DIR<br/>Blks</b> |
|---------------------------|----------------------------|--|--|--|--|---|------------------------------------|
| SMPLTS                    | S                          | PDSE   | U  | 0                                      | 15   | 150   | N/A                                |
| SMPMTS                    | S                          | PDS  | FB   | 80                                     | 15   | 150   | 220                                |
| SMPPTS                    | S                          | PDSE   | FB   | 80                                     | 300  | 1500  | N/A                                |
| SMPSCDS                   | S                          | PDS  | FB   | 80                                     | 15   | 150   | 220                                |
| SMPSTS                    | S                          | PDS  | FB   | 80                                     | 15   | 150   | 220                                |

Figure 12 and Figure 13 on page 15 describe the target and distribution libraries that will be allocated by this product's install jobs or that will be required for installation. The space requirements reflect what is specified in the allocation job or the space that this product will require in existing libraries. Additional tables are provided to show the specific space required for libraries that are used by each FMID. See 5.2.4, "DASD Storage Requirements by FMID" on page 16 for more information.

The storage requirements of DB2 Buffer Pool Analyzer on z/OS must be added to the storage required by other programs having data in the same library or path.

Figure 12 (Page 1 of 2). Storage Requirements for DB2 Buffer Pool Analyzer on z/OS Target Libraries

| Library<br>DDNAME | Member<br>Type | Target<br>Volume | T<br>Y<br>P<br>E | O<br>R<br>G | R<br>E<br>C<br>F<br>M | L<br>R<br>E<br>C<br>L | No.<br>of<br>3390<br>Trks | No.<br>of<br>DIR<br>Blks |
|-------------------|----------------|------------------|------------------|-------------|-----------------------|-----------------------|---------------------------|--------------------------|
| TKANCLI           | CLIST          | Any              | S                | PDS         | FB                    | 80                    | 2                         | 44                       |
| TKANCUS           | CLIST          | Any              | S                | PDS         | FB                    | 80                    | 87                        | 44                       |
| TKANDATV          | Data           | Any              | S                | PDS         | VB                    | 6160                  | 236                       | 44                       |
| TKANEXEC          | EXEC           | Any              | S                | PDS         | VB                    | 255                   | 20                        | 44                       |
| TKANHENU          | Help           | Any              | S                | PDS         | FB                    | 80                    | 172                       | 132                      |
| TKANISP           | CLIST          | Any              | S                | PDS         | FB                    | 80                    | 2                         | 44                       |
| TKANMAC           | Macro          | Any              | S                | PDS         | FB                    | 80                    | 9                         | 44                       |
| TKANMOD           | LMOD           | Any              | S                | PDS         | U                     | 0                     | 1067                      | 704                      |
| TKANMODL          | LMOD           | Any              | S                | PDS         | U                     | 0                     | 163                       | 44                       |
| TKANMODP          | LMOD           | Any              | S                | PDSE        | U                     | 0                     | 359                       | N/A                      |
| TKANMODS          | LMOD           | Any              | S                | PDS         | U                     | 0                     | 85                        | 88                       |
| TKANOSRC          | Data           | Any              | S                | PDS         | VB                    | 255                   | 3                         | 44                       |
| TKANPAR           | Parm           | Any              | S                | PDS         | FB                    | 80                    | 17                        | 44                       |
| TKANPENU          | Panel          | Any              | S                | PDS         | FB                    | 80                    | 680                       | 352                      |
| TKANPKGI          | Data           | Any              | S                | PDS         | FB                    | 80                    | 56                        | 44                       |
| TKANSAM           | Sample         | Any              | S                | PDS         | FB                    | 80                    | 12                        | 44                       |
| TKANSAMF          | Sample         | Any              | S                | PDS         | FB                    | 132                   | 11                        | 44                       |
| TKANSAMV          | Sample         | Any              | S                | PDS         | VB                    | 255                   | 11                        | 44                       |
| TKANWENU          | Panel          | Any              | S                | PDS         | FB                    | 80                    | 120                       | 132                      |
| TKOBDATF          | Data           | Any              | S                | PDS         | FB                    | 80                    | 2                         | 44                       |
| TKOBHELP          | Help           | Any              | S                | PDS         | FB                    | 80                    | 19                        | 132                      |
| TKO2DATA          | Data           | Any              | S                | PDS         | VB                    | 9072                  | 8                         | 44                       |
| TKO2DBRM          | Data           | Any              | S                | PDS         | FB                    | 80                    | 60                        | 44                       |
| TKO2EXEC          | EXEC           | Any              | S                | PDS         | FB                    | 80                    | 37                        | 44                       |
| TKO2HELP          | Help           | Any              | S                | PDS         | FB                    | 80                    | 18                        | 176                      |
| TKO2MENU          | Message        | Any              | S                | PDS         | FB                    | 80                    | 8                         | 44                       |
| TKO2PENU          | Panel          | Any              | S                | PDS         | FB                    | 80                    | 266                       | 748                      |
| TKO2PROC          | Panel          | Any              | S                | PDS         | FB                    | 80                    | 190                       | 1100                     |
| TKO2SAMP          | Sample         | Any              | S                | PDS         | FB                    | 80                    | 179                       | 88                       |

Figure 12 (Page 2 of 2). Storage Requirements for DB2 Buffer Pool Analyzer on z/OS Target Libraries

| Library DDNAME | Member Type | Target Volume | T<br>Y<br>P<br>E | O<br>R<br>G | R<br>E<br>C<br>F<br>M | L<br>R<br>E<br>C<br>L | No.<br>of<br>3390<br>Trks | No.<br>of<br>DIR<br>Blks |
|----------------|-------------|---------------|------------------|-------------|-----------------------|-----------------------|---------------------------|--------------------------|
| TKO2SLIB       | Sample      | Any           | S                | PDS         | FB                    | 80                    | 3                         | 44                       |
| TKO2TENU       | Table       | Any           | S                | PDS         | FB                    | 80                    | 10                        | 44                       |
| TKO2WS01       | Data        | Any           | S                | PDS         | VB                    | 256                   | 305                       | 44                       |

Figure 13 (Page 1 of 2). Storage Requirements for DB2 Buffer Pool Analyzer on z/OS Distribution Libraries

| Library DDNAME | T<br>Y<br>P<br>E | O<br>R<br>G | R<br>E<br>C<br>F<br>M | L<br>R<br>E<br>C<br>L | No.<br>of<br>3390<br>Trks | No.<br>of<br>DIR<br>Blks |
|----------------|------------------|-------------|-----------------------|-----------------------|---------------------------|--------------------------|
| DKANCLI        | S                | PDS         | FB                    | 80                    | 2                         | 44                       |
| DKANCUS        | S                | PDS         | FB                    | 80                    | 87                        | 44                       |
| DKANDATV       | S                | PDS         | VB                    | 6160                  | 236                       | 44                       |
| DKANEXEC       | S                | PDS         | VB                    | 255                   | 20                        | 44                       |
| DKANHENU       | S                | PDS         | FB                    | 80                    | 172                       | 132                      |
| DKANISP        | S                | PDS         | FB                    | 80                    | 2                         | 44                       |
| DKANMAC        | S                | PDS         | FB                    | 80                    | 9                         | 44                       |
| DKANMOD        | S                | PDS         | U                     | 0                     | 1071                      | 792                      |
| DKANMODL       | S                | PDS         | U                     | 0                     | 163                       | 44                       |
| DKANMODP       | S                | PDSE        | U                     | 0                     | 79                        | N/A                      |
| DKANMODS       | S                | PDS         | U                     | 0                     | 70                        | 44                       |
| DKANOSRC       | S                | PDS         | VB                    | 255                   | 3                         | 44                       |
| DKANPAR        | S                | PDS         | FB                    | 80                    | 17                        | 44                       |
| DKANPENU       | S                | PDS         | FB                    | 80                    | 680                       | 352                      |
| DKANPKGI       | S                | PDS         | FB                    | 80                    | 56                        | 44                       |
| DKANSAM        | S                | PDS         | FB                    | 80                    | 12                        | 44                       |
| DKANSAMF       | S                | PDS         | FB                    | 132                   | 11                        | 44                       |
| DKANSAMV       | S                | PDS         | VB                    | 255                   | 11                        | 44                       |
| DKANWENU       | S                | PDS         | FB                    | 80                    | 120                       | 132                      |
| DKOBDATF       | S                | PDS         | FB                    | 80                    | 2                         | 44                       |

Figure 13 (Page 2 of 2). Storage Requirements for DB2 Buffer Pool Analyzer on z/OS Distribution Libraries

| Library<br>DDNAME | T<br>Y<br>P<br>E | O<br>R<br>G | R<br>E<br>C<br>F<br>M | L<br>R<br>E<br>C<br>L | No.<br>of<br>3390<br>Trks | No.<br>of<br>DIR<br>Blks |
|-------------------|------------------|-------------|-----------------------|-----------------------|---------------------------|--------------------------|
| DKOBHELP          | S                | PDS         | FB                    | 80                    | 19                        | 132                      |
| DKO2DATA          | S                | PDS         | VB                    | 9072                  | 8                         | 44                       |
| DKO2DBRM          | S                | PDS         | FB                    | 80                    | 60                        | 44                       |
| DKO2EXEC          | S                | PDS         | FB                    | 80                    | 37                        | 44                       |
| DKO2HELP          | S                | PDS         | FB                    | 80                    | 18                        | 176                      |
| DKO2MENU          | S                | PDS         | FB                    | 80                    | 8                         | 44                       |
| DKO2PENU          | S                | PDS         | FB                    | 80                    | 266                       | 748                      |
| DKO2PROC          | S                | PDS         | FB                    | 80                    | 190                       | 1100                     |
| DKO2SAMP          | S                | PDS         | FB                    | 80                    | 179                       | 88                       |
| DKO2SLIB          | S                | PDS         | FB                    | 80                    | 3                         | 44                       |
| DKO2TENU          | S                | PDS         | FB                    | 80                    | 10                        | 44                       |
| DKO2WS01          | S                | PDS         | VB                    | 256                   | 305                       | 44                       |

## 5.2.4 DASD Storage Requirements by FMID

The tables in this section can help determine the specific space required for components not already installed in an existing environment. There is a table for each FMID included with the product.

Figure 14. Storage Requirements for HKDB53Z Libraries

| Library<br>DDNAME | Member<br>Type | Target<br>Volume | T<br>Y<br>P<br>E | O<br>R<br>G | R<br>E<br>C<br>F<br>M | L<br>R<br>E<br>C<br>L | No.<br>of<br>3390<br>Trks | No.<br>of<br>DIR<br>Blks |
|-------------------|----------------|------------------|------------------|-------------|-----------------------|-----------------------|---------------------------|--------------------------|
| TKANMOD           | LMOD           | Any              | S                | PDS         | U                     | 0                     | 1                         | 1                        |
| TKANPKGI          | Data           | Any              | S                | PDS         | FB                    | 80                    | 4                         | 2                        |
| DKANMOD           |                |                  | S                | PDS         | U                     | 0                     | 1                         | 1                        |
| DKANPKGI          |                |                  | S                | PDS         | FB                    | 80                    | 4                         | 2                        |

Figure 15 (Page 1 of 2). Storage Requirements for HKDB530 Libraries

| Library<br>DDNAME | Member<br>Type | Target<br>Volume | T<br>Y<br>P<br>E | O<br>R<br>G | R<br>E<br>C<br>F<br>M | L<br>R<br>E<br>C<br>L | No.<br>of<br>3390<br>Trks | No.<br>of<br>DIR<br>Blks |
|-------------------|----------------|------------------|------------------|-------------|-----------------------|-----------------------|---------------------------|--------------------------|
| TKANCLI           | CLIST          | Any              | S                | PDS         | FB                    | 80                    | 2                         | 1                        |
| TKANCUS           | CLIST          | Any              | S                | PDS         | FB                    | 80                    | 63                        | 6                        |
| TKANDATV          | Data           | Any              | S                | PDS         | VB                    | 6160                  | 266                       | 4                        |
| TKANEXEC          | EXEC           | Any              | S                | PDS         | VB                    | 255                   | 9                         | 10                       |
| TKANHENU          | Help           | Any              | S                | PDS         | FB                    | 80                    | 147                       | 80                       |
| TKANMOD           | LMOD           | Any              | S                | PDS         | U                     | 0                     | 823                       | 466                      |
| TKANMODL          | LMOD           | Any              | S                | PDS         | U                     | 0                     | 130                       | 11                       |
| TKANPAR           | Parm           | Any              | S                | PDS         | FB                    | 80                    | 14                        | 2                        |
| TKANPENU          | Panel          | Any              | S                | PDS         | FB                    | 80                    | 592                       | 229                      |
| TKANPKGI          | Data           | Any              | S                | PDS         | FB                    | 80                    | 34                        | 1                        |
| TKANSAM           | Sample         | Any              | S                | PDS         | FB                    | 80                    | 8                         | 4                        |
| TKANSAMF          | Sample         | Any              | S                | PDS         | FB                    | 132                   | 10                        | 5                        |
| TKANSAMV          | Sample         | Any              | S                | PDS         | VB                    | 255                   | 10                        | 15                       |
| TKANWENU          | Panel          | Any              | S                | PDS         | FB                    | 80                    | 84                        | 61                       |
| TKO2DATA          | Data           | Any              | S                | PDS         | VB                    | 9072                  | 7                         | 1                        |
| TKO2DBRM          | Data           | Any              | S                | PDS         | FB                    | 80                    | 53                        | 23                       |
| TKO2EXEC          | EXEC           | Any              | S                | PDS         | FB                    | 80                    | 33                        | 8                        |
| TKO2HELP          | Help           | Any              | S                | PDS         | FB                    | 80                    | 16                        | 103                      |
| TKO2MENU          | Message        | Any              | S                | PDS         | FB                    | 80                    | 7                         | 19                       |
| TKO2PENU          | Panel          | Any              | S                | PDS         | FB                    | 80                    | 232                       | 518                      |
| TKO2PROC          | Panel          | Any              | S                | PDS         | FB                    | 80                    | 166                       | 773                      |
| TKO2SAMP          | Sample         | Any              | S                | PDS         | FB                    | 80                    | 156                       | 49                       |
| TKO2SLIB          | Sample         | Any              | S                | PDS         | FB                    | 80                    | 3                         | 3                        |
| TKO2TENU          | Table          | Any              | S                | PDS         | FB                    | 80                    | 9                         | 3                        |
| TKO2WS01          | Data           | Any              | S                | PDS         | VB                    | 256                   | 266                       | 3                        |
| DKANCLI           |                |                  | S                | PDS         | FB                    | 80                    | 2                         | 1                        |
| DKANCUS           |                |                  | S                | PDS         | FB                    | 80                    | 63                        | 6                        |
| DKANDATV          |                |                  | S                | PDS         | VB                    | 6160                  | 206                       | 4                        |
| DKANEXEC          |                |                  | S                | PDS         | VB                    | 255                   | 9                         | 10                       |

Figure 15 (Page 2 of 2). Storage Requirements for HKDB530 Libraries

| Library<br>DDNAME | Member<br>Type | Target<br>Volume | T<br>Y<br>P<br>E | O<br>R<br>G | R<br>E<br>C<br>F<br>M | L<br>R<br>E<br>C<br>L | No.<br>of<br>3390<br>Trks | No.<br>of<br>DIR<br>Blks |
|-------------------|----------------|------------------|------------------|-------------|-----------------------|-----------------------|---------------------------|--------------------------|
| DKANHENU          |                |                  | S                | PDS         | FB                    | 80                    | 148                       | 80                       |
| DKANMOD           |                |                  | S                | PDS         | U                     | 0                     | 823                       | 466                      |
| DKANMODL          |                |                  | S                | PDS         | U                     | 0                     | 130                       | 11                       |
| DKANPAR           |                |                  | S                | PDS         | FB                    | 80                    | 14                        | 2                        |
| DKANPENU          |                |                  | S                | PDS         | FB                    | 80                    | 592                       | 229                      |
| DKANPKGI          |                |                  | S                | PDS         | FB                    | 80                    | 34                        | 1                        |
| DKANSAM           |                |                  | S                | PDS         | FB                    | 80                    | 8                         | 4                        |
| DKANSAMF          |                |                  | S                | PDS         | FB                    | 132                   | 10                        | 5                        |
| DKANSAMV          |                |                  | S                | PDS         | VB                    | 255                   | 10                        | 15                       |
| DKANWENU          |                |                  | S                | PDS         | FB                    | 80                    | 84                        | 61                       |
| DKO2DATA          |                |                  | S                | PDS         | VB                    | 9072                  | 7                         | 1                        |
| DKO2DBRM          |                |                  | S                | PDS         | FB                    | 80                    | 53                        | 23                       |
| DKO2EXEC          |                |                  | S                | PDS         | FB                    | 80                    | 33                        | 8                        |
| DKO2HELP          |                |                  | S                | PDS         | FB                    | 80                    | 16                        | 103                      |
| DKO2MENU          |                |                  | S                | PDS         | FB                    | 80                    | 7                         | 19                       |
| DKO2PENU          |                |                  | S                | PDS         | FB                    | 80                    | 232                       | 518                      |
| DKO2PROC          |                |                  | S                | PDS         | FB                    | 80                    | 166                       | 773                      |
| DKO2SAMP          |                |                  | S                | PDS         | FB                    | 80                    | 156                       | 49                       |
| DKO2SLIB          |                |                  | S                | PDS         | FB                    | 80                    | 3                         | 3                        |
| DKO2TENU          |                |                  | S                | PDS         | FB                    | 80                    | 9                         | 3                        |
| DKO2WS01          |                |                  | S                | PDS         | VB                    | 256                   | 266                       | 3                        |

Figure 16 (Page 1 of 2). Storage Requirements for HKOB730 Libraries

| Library<br>DDNAME | Member<br>Type | Target<br>Volume | T<br>Y<br>P<br>E | O<br>R<br>G | R<br>E<br>C<br>F<br>M | L<br>R<br>E<br>C<br>L | No.<br>of<br>3390<br>Trks | No.<br>of<br>DIR<br>Blks |
|-------------------|----------------|------------------|------------------|-------------|-----------------------|-----------------------|---------------------------|--------------------------|
| TKANCUS           | CLIST          | Any              | S                | PDS         | FB                    | 80                    | 13                        | 15                       |
| TKANEXEC          | EXEC           | Any              | S                | PDS         | VB                    | 255                   | 9                         | 4                        |
| TKANHENU          | Help           | Any              | S                | PDS         | FB                    | 80                    | 3                         | 4                        |

Figure 16 (Page 2 of 2). Storage Requirements for HKOB730 Libraries

| Library<br>DDNAME | Member<br>Type | Target<br>Volume | T<br>Y<br>P<br>E | O<br>R<br>G | R<br>E<br>C<br>F<br>M | L<br>R<br>E<br>C<br>L | No.<br>of<br>3390<br>Trks | No.<br>of<br>DIR<br>Blks |
|-------------------|----------------|------------------|------------------|-------------|-----------------------|-----------------------|---------------------------|--------------------------|
| TKANISP           | CLIST          | Any              | S                | PDS         | FB                    | 80                    | 1                         | 2                        |
| TKANMAC           | Macro          | Any              | S                | PDS         | FB                    | 80                    | 8                         | 3                        |
| TKANMOD           | LMOD           | Any              | S                | PDS         | U                     | 0                     | 104                       | 17                       |
| TKANMODL          | LMOD           | Any              | S                | PDS         | U                     | 0                     | 12                        | 2                        |
| TKANMODP          | LMOD           | Any              | S                | PDSE        | U                     | 0                     | 313                       | N/A                      |
| TKANMODS          | LMOD           | Any              | S                | PDS         | U                     | 0                     | 74                        | 56                       |
| TKANOSRC          | Data           | Any              | S                | PDS         | VB                    | 255                   | 3                         | 5                        |
| TKANPAR           | Parm           | Any              | S                | PDS         | FB                    | 80                    | 1                         | 2                        |
| TKANPKGI          | Data           | Any              | S                | PDS         | FB                    | 80                    | 13                        | 2                        |
| TKANSAM           | Sample         | Any              | S                | PDS         | FB                    | 80                    | 3                         | 3                        |
| TKANWENU          | Panel          | Any              | S                | PDS         | FB                    | 80                    | 21                        | 27                       |
| TKOBDATF          | Data           | Any              | S                | PDS         | FB                    | 80                    | 1                         | 2                        |
| TKOBHELP          | Help           | Any              | S                | PDS         | FB                    | 80                    | 17                        | 66                       |
| DKANCUS           |                |                  | S                | PDS         | FB                    | 80                    | 13                        | 15                       |
| DKANEXEC          |                |                  | S                | PDS         | VB                    | 255                   | 9                         | 4                        |
| DKANHENU          |                |                  | S                | PDS         | FB                    | 80                    | 3                         | 4                        |
| DKANISP           |                |                  | S                | PDS         | FB                    | 80                    | 1                         | 2                        |
| DKANMAC           |                |                  | S                | PDS         | FB                    | 80                    | 8                         | 3                        |
| DKANMOD           |                |                  | S                | PDS         | U                     | 0                     | 108                       | 88                       |
| DKANMODL          |                |                  | S                | PDS         | U                     | 0                     | 12                        | 2                        |
| DKANMODP          |                |                  | S                | PDSE        | U                     | 0                     | 69                        | N/A                      |
| DKANMODS          |                |                  | S                | PDS         | U                     | 0                     | 61                        | 3                        |
| DKANOSRC          |                |                  | S                | PDS         | VB                    | 255                   | 3                         | 5                        |
| DKANPAR           |                |                  | S                | PDS         | FB                    | 80                    | 1                         | 2                        |
| DKANPKGI          |                |                  | S                | PDS         | FB                    | 80                    | 13                        | 2                        |
| DKANSAM           |                |                  | S                | PDS         | FB                    | 80                    | 3                         | 3                        |
| DKANWENU          |                |                  | S                | PDS         | FB                    | 80                    | 21                        | 27                       |
| DKOBDATF          |                |                  | S                | PDS         | FB                    | 80                    | 1                         | 2                        |
| DKOBHELP          |                |                  | S                | PDS         | FB                    | 80                    | 17                        | 66                       |

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## 5.3 FMIDs Deleted

Installing DB2 Buffer Pool Analyzer on z/OS 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 Buffer Pool Analyzer on z/OS 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, use the SMP/E REJECT NOFMID DELETEFMID command. See the SMP/E Commands book for details.

---

## 5.4 Special Considerations

DB2 Buffer Pool Analyzer on z/OS includes several components that are referred to as common components because they are also included with other products. If you install into an existing environment, you might need to remove some of the FMID references for these components from the SMP/E installation jobs to avoid errors because they are already installed.

These common components are:

HKDB530  
HKOB730

Consider the following items when using shared CSI zones.

- You must specify the same high-level qualifier for the target and distribution libraries as the other products in the same zones for the configuration tool to work correctly.
- If you install a product into an existing CSI that contains a previous version of the same product, SMP/E deletes the previous version during the installation process. To maintain multiple product versions concurrently, they must be installed into separate CSI zones.
- If you install into an existing environment, you might need to remove data set references from the installation jobs to avoid errors because the data sets already exist.
- If you are installing into an existing environment that has the data sets already allocated, ensure sufficient space and directory blocks are available to support the requirement listed in the DASD tables. This might require you to reallocate some data sets to avoid x37 abends.



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## 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 Buffer Pool Analyzer on z/OS.

Please note the following points:

- If you want to install DB2 Buffer Pool Analyzer on z/OS 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. Additionally, to assist you in doing this, IBM has provided samples to help you create an SMP/E environment at the following url:

**<http://www.ibm.com/support/docview.wss?rs=660&context=SSZJDU&uid=swg21066230>**

- 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.

---

### 6.1 Installing DB2 Buffer Pool Analyzer on z/OS

#### 6.1.1 SMP/E Considerations for Installing DB2 Buffer Pool Analyzer on z/OS

Use the SMP/E RECEIVE, APPLY, and ACCEPT commands to install this release of DB2 Buffer Pool Analyzer on z/OS.

#### 6.1.2 SMP/E Options Subentry Values

The recommended values for certain SMP/E CSI subentries are shown in Figure 17. 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.

| <i>Figure 17. SMP/E Options Subentry Values</i> |               |   |
|---|---------------|---|
| <b>Subentry</b>                                 | <b>Value</b>  | <b>Comment</b>                                    |
| DSSPACE   | 300,1200,1200 | Use 1200 directory blocks                         |
| PEMAX   | SMP/E Default | IBM recommends using the SMP/E default for PEMAX. |

### 6.1.3 SMP/E CALLLIBS Processing

DB2 Buffer Pool Analyzer on z/OS uses the CALLLIBS function provided in SMP/E to resolve external references during installation. When DB2 Buffer Pool Analyzer on z/OS is installed, ensure that DDDEFs exist for the following libraries:

- CSSLIB
- SCEELKED
- SCEERUN
- SDSNLOAD
- SEZACMTX

**Note:** CALLLIBS uses the previous DDDEFs only to resolve the link-edit for DB2 Buffer Pool Analyzer on z/OS. These data sets are not updated during the installation of DB2 Buffer Pool Analyzer on z/OS.

### 6.1.4 Sample Jobs

The sample jobs provided expect a CSI to exist already. The sample installation jobs in Figure 18 are provided as part of the product to help you install DB2 Buffer Pool Analyzer on z/OS.

| <i>Figure 18. Sample Installation Jobs</i> |                 |  |                |
|--|-----------------|--|----------------|
| <b>Job Name</b>                            | <b>Job Type</b> | <b>Description</b>                                       | <b>RELFILE</b> |
| KDBZ1SMA                                   | Optional        | Sample job to create new SMP/E support files             | IBM.HKDB53Z.F3 |
| KDBZ3SMI                                   | Optional        | Sample job to create and prime a new SMP/E CSI           | IBM.HKDB53Z.F3 |
| KDBZ3ALO                                   | ALLOCATE        | Sample job to allocate target and distribution libraries | IBM.HKDB53Z.F3 |
| KDBZ4DDF                                   | DDDEF           | Sample job to define SMP/E DDDEFs                        | IBM.HKDB32Z.F3 |
| KDBZ5REC                                   | RECEIVE         | Sample RECEIVE job                                       | IBM.HKDB53Z.F3 |
| KDBZ6APP                                   | APPLY           | Sample APPLY job   | IBM.HKDB53Z.F3 |
| KDBZ7ACC                                   | ACCEPT          | Sample ACCEPT job  | IBM.HKDB53Z.F3 |

You can access the sample installation jobs by performing an SMP/E RECEIVE (refer to 6.1.9, “Perform SMP/E RECEIVE” on page 24) then copy the jobs from the relfiles to a work data set for editing and submission. See Figure 18 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,REGION=4M
//SYSPRINT DD SYSOUT=*
//TAPEIN DD DSN=IBM.HKDB53Z.F3,UNIT=tunit,
// VOL=SER=volser,LABEL=(x,SL),
// DISP=(OLD,KEEP)
//FILEIN DD DSN=IBM.HKDB53Z.F3,UNIT=SYSALLDA,DISP=SHR,
// VOL=SER=filevol
//OUT DD DSNAME=jcl-library-name,
// DISP=(NEW,CATLG,DELETE),
// VOL=SER=dasdvol,UNIT=SYSALLDA,
// SPACE=(TRK,(10,2,5))
//SYSUT3 DD UNIT=SYSALLDA,SPACE=(CYL,(1,1))
//SYSIN DD *
COPY INDD=xxxxIN,OUTDD=OUT
SELECT MEMBER=(KDBZ1SMA,KDBZ2SMI,KDBZ3ALO,KDBZ4DDF,KDBZ5REC)
SELECT MEMBER=(KDBZ6APP,KDBZ7ACC)
/*

```

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

**TAPEIN:**

**tunit** is the unit value that matches the product package.

**volser** is the volume serial that matches the product package.

**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.HKDB53Z.F3 is 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 Create New SMP/E Support Files - Optional

If you do not want to install into an existing environment, you can create a new environment. To allocate new SMP/E support data sets for DB2 Buffer Pool Analyzer on z/OS installation, edit and submit sample job KDBZ1SMA. Consult the instructions in the sample job for more information.

**Expected Return Codes and Messages: 0**

## 6.1.6 Create New SMP/E CSI - Optional

If you do not want to install into an existing environment, you can create a new environment. To allocate a new SMP/E CSI and prime it for DB2 Buffer Pool Analyzer on z/OS installation, edit and submit sample job KDBZ2SML. Consult the instructions in the sample job for more information.

**Expected Return Codes and Messages: 0**

## 6.1.7 Allocate SMP/E Target and Distribution Libraries

Edit and submit sample job KDBZ3ALO to allocate the SMP/E target and distribution libraries for DB2 Buffer Pool Analyzer on z/OS. Consult the instructions in the sample job for more information. Consider the following issues before submitting the job.

- If you are installing into an existing environment, you might have to remove lines for data sets that already exist.
- If you are installing into an existing environment that has the data sets already allocated, ensure sufficient space and directory blocks are available to support the requirement listed in the DASD tables. This might require you to reallocate some data sets to avoid x37 abends.

**Expected Return Codes and Messages: 0**

## 6.1.8 Create DDDEF Entries

Edit and submit sample job KDBZ4DDF to create DDDEF entries for the SMP/E target and distribution libraries for DB2 Buffer Pool Analyzer on z/OS. Consult the instructions in the sample job for more information. If you are installing into an existing environment, you might have to remove lines for data sets that already exist.

**Expected Return Codes and Messages: 0**

## 6.1.9 Perform SMP/E RECEIVE

If you have obtained DB2 Buffer Pool Analyzer on z/OS as part of a CBPDO, use the RCVPDO job in the CBPDO RIMLIB data set to receive the DB2 Buffer Pool Analyzer on z/OS FMIDs, service, and HOLDDATA that are included on the CBPDO package. For more information, see the documentation that is included in the CBPDO.

You can also choose to edit and submit sample job KDBZ5REC to perform the SMP/E RECEIVE for DB2 Buffer Pool Analyzer on z/OS. Consult the instructions in the sample job for more information.

**Expected Return Codes and Messages: 0**

## 6.1.10 Perform SMP/E APPLY

Ensure that you have the latest HOLDDATA, then edit and submit sample job KDBZ6APP to perform an SMP/E APPLY CHECK for DB2 Buffer Pool Analyzer on z/OS. Consult the instructions in the sample job for more information.

The latest HOLDDATA is available through several different portals, including <http://service.software.ibm.com/holddata/390holddata.html>. The latest HOLDDATA may identify HIPER and FIXCAT APARs for the FMIDs you will be installing. An APPLY CHECK will help you determine if any HIPER or FIXCAT APARs are applicable to the FMIDs you are installing. If there are any applicable HIPER or FIXCAT APARs, the APPLY CHECK will also identify fixing PTFs that will resolve the APARs, if a fixing PTF is available.

You should install the FMIDs regardless of the status of unresolved HIPER or FIXCAT APARs. However, do not deploy the software until the unresolved HIPER and FIXCAT APARs have been analyzed to determine their applicability. That is, before deploying the software either ensure fixing PTFs are applied to resolve all HIPER or FIXCAT APARs, or ensure the problems reported by all HIPER or FIXCAT APARs are not applicable to your environment.

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. 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 sample APPLY commands:

1. To ensure that all recommended and critical service is installed with the FMIDs, receive the latest HOLDDATA and use the APPLY CHECK command as follows

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

Some HIPER APARs might not have fixing PTFs available yet. You should analyze the symptom flags for the unresolved HIPER APARs to determine if the reported problem is applicable to your environment and if you should bypass the specific ERROR HOLDS in order to continue the installation of the FMIDs.

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

2. To install the FMIDs without regard for unresolved HIPER APARs, you can add the BYPASS(HOLDCLASS(HIPER)) operand to the APPLY CHECK command. This will allow you to install FMIDs even though one or more unresolved HIPER APARs exist. After the FMIDs are installed, use the SMP/E REPORT ERRSYSMODS command to identify unresolved HIPER APARs and any fixing PTFs.

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

This method is quicker, but requires subsequent review of the Exception SYSMOD report produced by the REPORT ERRSYSMODS command to investigate any unresolved HIPERs. If you have received the latest HOLDDATA, you can also choose to use the REPORT MISSINGFIX command and specify Fix Category IBM.ProductInstall-RequiredService to investigate missing recommended service.

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

### Expected Return Codes and Messages from APPLY CHECK: 0

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.

If you process a PTF with a ++HOLD statement, you will receive a return code of 4 and the following message when the BYPASS operand is used.

```
GIM42001W THE FOLLOWING CONDITIONS FOR SYSMOD sysmod
          WERE NOT SATISFIED, BUT WERE IGNORED BECAUSE THE
          BYPASS OPERAND WAS SPECIFIED. PROCESSING CONTINUES.
```

If the BYPASS operand is not included in the control statement when processing a PTF with a ++HOLD statement, the job will get a return code of 12 and the following message.

```
GIM30206E command PROCESSING FAILED FOR SYSMOD sysmod.
          HOLD REASON IDS WERE NOT RESOLVED.
```

### Expected Return Codes and Messages from APPLY: 4

You can receive many of the following messages depending on your environment. These messages can be ignored, because they will not affect product execution.

```
GIM23913W LINK-EDIT PROCESSING FOR SYSMOD aaaaaaa
          WAS SUCCESSFUL FOR MODULE bbbbbbbb IN
          LMOD ccccccc IN THE dddddddd LIBRARY. THE
          RETURN CODE WAS ee. DATE yy.ddd -- TIME
          hh:mm:ss -- SEQUENCE NUMBER nnnnnn --
          SYSPRINT FILE ffffffff.
```

```
IEW2454W SYMBOL symbo1 UNRESOLVED. NO AUTOCALL (NCAL) SPECIFIED.
```

Figure 19 on page 27 contains a list of elements that might be marked as not selected during the APPLY and ACCEPT processes. This might occur because a VERSION parameter was supplied in an FMID indicating that it contained a higher level version of the same element provided by another FMID being processed at the same time. The higher version element is selected for processing and the lower version is not selected for processing. It might also occur because maintenance is being installed at the same time as the FMIDs.

| <i>Figure 19. SMP/E Elements Not Selected</i> |           |           |           |           |           |
|---|-----------|-----------|-----------|-----------|-----------|
| KCCDGN  | KCCENV    | KCCIDC    | KCCMSG    | KCCRTR    | KCCTAB    |
| KCCTDS  | KCCTDT    | KCCTIM    | KCCTRC    | KCCUCB4   | KCCVCT    |
| KCNCPYRM                                      | KCNMAINM  | KCNUTLIM  | KOBAG2    | KOBBASEM  | KOBCATTC  |
| KOBCBLK\$                                     | KOBCBLK@  | KOBCBLKQ  | KOBCENV\$ | KOBCENV@  | KOBCENVG  |
| KOBCENVV                                      | KOBCIOBE  | KOBCIOST  | KOBCLOCK  | KOBCMAP\$ | KOBCMAP@  |
| KOBCMAPI                                      | KOBCRACF  | KOBCSOC\$ | KOBCSOC@  | KOBCSOCK  | KOBCSTIO  |
| KOBCTHR\$                                     | KOBCTHR@  | KOBCTHRD  | KOBCTIME  | KOBCTRAC  | KOBCTREE  |
| KOBCUNIS                                      | KOBCUXIO  | KOBCVSTG  | KOBCWTOL  | KOBCZDIO  | KOBENUS   |
| KOBGATW0                                      | KOBGWCND  | KOBGWCV\$ | KOBGWCV#  | KOBGWCV@  | KOBGWCV\$ |
| KOBGWLPA                                      | KOBGWOBV  | KOBGWRE\$ | KOBGWRE@  | KOBGWREG  | KOBHISTC  |
| KOBHLAUT                                      | KOBHLREF  | KOBHTTP\$ | KOBHTTP#  | KOBHTTP@  | KOBHTTPL  |
| KOBHTTTPS                                     | KOBHTTTPW | KOBINITM  | KOBJCM0   | KOBJLG0   | KOBLGINI  |
| KOBLGSND                                      | KOBLGSRV  | KOBLGTBL  | KOBLISTN  | KOBLOFLT  | KOBOBVA\$ |
| KOBOBVA@                                      | KOBOBVAP  | KOBODIL\$ | KOBODIL@  | KOBODILD  | KOBODISC  |
| KOBODUTL                                      | KOBOMIOM  | KOBPDHST  | KOBPRFAU  | KOBRRUI\$ | KOBRRUI@  |
| KOBRRUIA                                      | KOBRRWK\$ | KOBRRWK@  | KOBRRWKR  | KOBRSMG1  | KOBRZFNL  |
| KOBRZHST                                      | KOBSUB#M  | KOBTCBFA  | KOBTCCL\$ | KOBTCCLA  | KOBTHRMT  |
| KOBTHRSH                                      | KOBUICS0  | KOBUIEP0  | KOBUIFD0  | KOBUIGD0  | KOBUIGL0  |
| KOBUIGO0                                      | KOBUIGP0  | KOBUIGS0  | KOBUIHL0  | KOBUIHS0  | KOBUILG0  |
| KOBUILO0                                      | KOBUIMC0  | KOBUIMG0  | KOBUIML0  | KOBUIM10  | KOBUIM20  |
| KOBUIM30                                      | KOBUIM40  | KOBUIM50  | KOBUIM60  | KOBUIM70  | KOBUINI0  |
| KOBUINV0                                      | KOBUIPA0  | KOBUIPS0  | KOBUIPT0  | KOBUISC0  | KOBUISD0  |
| KOBUITK0                                      | KOBVDRVM  | KOBVLOGM  |           |           |           |

After installing new function, you should perform two operations:

1. Create a backup of the updated data sets, including any SMP/E data sets affected, in case something happens to the data sets during the next phase.
2. Do some testing before putting the new function into production.

After you are satisfied that an applied SYSMOD has performed reliably in your target system, you can install it in your distribution libraries using the ACCEPT process.

Another good practice is to accept most SYSMODs, particularly FMIDs, before performing another APPLY process. This provides you the ability to use the RESTORE process of SMP/E and to support the scenario where SMP/E needs to create a new load module from the distribution libraries during the APPLY process.

### 6.1.11 Perform SMP/E ACCEPT

Edit and submit sample job KDBZ7ACC to perform an SMP/E ACCEPT CHECK for DB2 Buffer Pool Analyzer on z/OS. 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. The SMP/E root cause analysis identifies the cause of *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 Commands book for details.

#### Expected Return Codes and Messages from ACCEPT CHECK: 0

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.

If you process a PTF with a ++HOLD statement, you will receive a return code of 4 and the following message when the BYPASS operand is used.

```
GIM42001W THE FOLLOWING CONDITIONS FOR SYSMOD sysmod
        WERE NOT SATISFIED, BUT WERE IGNORED BECAUSE THE
        BYPASS OPERAND WAS SPECIFIED. PROCESSING CONTINUES.
```

If the BYPASS operand is not included in the control statement when processing a PTF with a ++HOLD statement, the job will get a return code of 12 and the following message.

```
GIM30206E command PROCESSING FAILED FOR SYSMOD sysmod.
        HOLD REASON IDS WERE NOT RESOLVED.
```

If PTFs that contain replacement modules are accepted, SMP/E ACCEPT processing will link-edit or bind 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: 4

Figure 19 on page 27 contains a list of elements that might be marked as not selected during the APPLY and ACCEPT processes. This might occur because a VERSION parameter was supplied in an FMID indicating that it contained a higher level version of the same element provided by another FMID being processed at the same time. The higher version element is selected for processing and the lower version is not selected for processing. It might also occur because maintenance is being installed at the same time as the FMIDs.

---

## 6.2 Activating DB2 Buffer Pool Analyzer on z/OS

Prior to activating DB2 Buffer Pool Analyzer on z/OS, IBM recommends you review the Quick Start guide as well as the Planning and Configuration guides if you have not already done so. This documentation focuses on the things you will need to know for a successful installation and configuration of this product.

The *Buffer Pool Analyzer Configuration Guide* documentation contains the step-by-step procedures to activate the functions of DB2 Buffer Pool Analyzer on z/OS.

This documentation can be found online at:

**[http://www.ibm.com/support/knowledgecenter/OMXEDB2PE530/  
com.ibm.omegamon.xe.pe\\_db2.doc\\_5.3.0/ko2welcome\\_pe.htm](http://www.ibm.com/support/knowledgecenter/OMXEDB2PE530/com.ibm.omegamon.xe.pe_db2.doc_5.3.0/ko2welcome_pe.htm)**

Select Tivoli OMEGAMON XE for DB2 Performance Expert, select Version 5.3, scroll through the content list and find and select the respective Buffer Pool Analyzer documents.

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APAR numbers are provided in this document to assist in locating PTFs that may be required. Ongoing problem reporting may result in additional APARs being created. Therefore, the APAR lists in this document may not be complete. To obtain current service recommendations and to identify current product service requirements, always contact the IBM Customer Support Center or use S/390 SoftwareXcel to obtain the current "PSP Bucket".

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