Note

Before using this information and the product it supports, be sure to read the general information under 7.0, "Notices" on page 25.

A form for reader's comments appears at the back of this publication. When you send information to IBM, you grant IBM a nonexclusive right to use or distribute the information in any way it believes appropriate without incurring any obligation to you.

© Copyright International Business Machines Corporation 1997, 2015. All rights reserved.
US Government Users Restricted Rights – Use, duplication or disclosure restricted by GSA ADP Schedule Contract with IBM Corp.
Contents

1.0 Introduction ......................................................... 1
  1.1 IBM 31-bit SDK for z/OS, V8R0 Description ....................... 1
  1.2 IBM 31-bit SDK for z/OS, V8R0 FMIDs .......................... 2

2.0 Program Materials .................................................. 3
  2.1 Basic Machine-Readable Material ................................ 3
  2.2 Optional Machine-Readable Material ............................. 3
  2.3 Program Publications ........................................... 3
    2.3.1 Basic Program Publications ................................ 3
    2.3.2 Optional Program Publications ................................ 3
  2.4 Program Source Materials ....................................... 4
  2.5 Publications Useful During Installation ........................ 4

3.0 Program Support .................................................... 5
  3.1 Program Services ................................................ 5
  3.2 Preventive Service Planning ..................................... 5
  3.3 Statement of Support Procedures ................................ 6

4.0 Program and Service Level Information .......................... 7
  4.1 Program Level Information ....................................... 7
  4.2 Service Level Information ...................................... 7

5.0 Installation Requirements and Considerations .................... 9
  5.1 Driving System Requirements .................................... 9
    5.1.1 Machine Requirements ........................................ 9
    5.1.2 Programming Requirements ................................... 9
  5.2 Target System Requirements .................................... 10
    5.2.1 Machine Requirements ........................................ 10
    5.2.2 Programming Requirements ................................... 10
      5.2.2.1 Installation Requisites .................................. 11
      5.2.2.2 Operational Requisites .................................. 11
      5.2.2.3 Tolerance/Coexistence Requisites ......................... 12
      5.2.2.4 Incompatibility (Negative) Requisites ...................... 12
    5.2.3 DASD Storage Requirements .................................. 12
  5.3 FMIDs Deleted .................................................. 14
  5.4 Special Considerations ......................................... 15

6.0 Installation Instructions .......................................... 17
  6.1 Installing IBM 31-bit SDK for z/OS, V8R0 ....................... 17
    6.1.1 SMP/E Considerations for Installing IBM 31-bit SDK for z/OS, V8R0 17
    6.1.2 SMP/E Options Subentry Values ................................ 17
    6.1.3 Sample Jobs ................................................ 17
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 31-bit SDK for z/OS, Java Technology Edition, V8R0. This publication refers to IBM 31-bit SDK for z/OS, Java Technology Edition, V8R0 as IBM 31-bit SDK for z/OS, V8R0.

The Program Directory contains the following sections:

- **2.0, “Program Materials” on page 3** identifies the basic and optional program materials and documentation for IBM 31-bit SDK for z/OS, V8R0.
- **3.0, “Program Support” on page 5** describes the IBM support available for IBM 31-bit SDK for z/OS, V8R0.
- **4.0, “Program and Service Level Information” on page 7** lists the APARs (program level) and PTFs (service level) that have been incorporated into IBM 31-bit SDK for z/OS, V8R0.
- **5.0, “Installation Requirements and Considerations” on page 9** identifies the resources and considerations that are required for installing and using IBM 31-bit SDK for z/OS, V8R0.
- **6.0, “Installation Instructions” on page 17** provides detailed installation instructions for IBM 31-bit SDK for z/OS, V8R0. It also describes the procedures for activating the functions of IBM 31-bit SDK for z/OS, V8R0, or refers to appropriate publications.

Before installing IBM 31-bit SDK for z/OS, V8R0, 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.

IBM 31-bit SDK for z/OS, V8R0 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 IBM 31-bit SDK for z/OS, V8R0 are included on the CBPDO tape.

Do not use this program directory if you install IBM 31-bit SDK for z/OS, V8R0 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.

1.1 IBM 31-bit SDK for z/OS, V8R0 Description

The IBM 31-bit SDK for z/OS, Java Technology Edition, V8R0 product is IBM’s port of Oracle’s Java Software Development Kit (SDK) to the z/OS zSeries platform. The IBM 31-bit SDK for z/OS, Java Technology Edition, V8R0 product at the SDK 8 level is certified as a fully compliant Java product. IBM has successfully executed the Java Certification Kit (JCK) provided by Oracle.
The IBM 31-bit SDK for z/OS, Java Technology Edition, V8R0 is operational within the z/OS V1.13 or z/OS V2.1 operating system. It provides a Java execution environment equivalent to that available on any other server platform.

For more information about the IBM 31-bit SDK for z/OS, Java Technology Edition, V8R0 product, as well as general information about Java, visit our web site at:


1.2 IBM 31-bit SDK for z/OS, V8R0 FMIDs

IBM 31-bit SDK for z/OS, V8R0 consists of the following FMID:

HJVA800
2.0 Program Materials

An IBM program is identified by a program number. The program number for IBM 31-bit SDK for z/OS, V8R0 is 5655-DGG.

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 IBM 31-bit SDK for z/OS, V8R0. 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 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 17 for more information about how to install the program.

You can find information about the physical media for the basic machine-readable materials for IBM 31-bit SDK for z/OS, V8R0 in the CBPDO Memo To Users Extension.

2.2 Optional Machine-Readable Material

No optional machine-readable materials are provided for IBM 31-bit SDK for z/OS, V8R0.

2.3 Program Publications

The following sections identify the basic and optional publications for IBM 31-bit SDK for z/OS, V8R0.

2.3.1 Basic Program Publications

No basic publications are provided for IBM 31-bit SDK for z/OS, V8R0. Information about the IBM 31-bit SDK for z/OS, V8R0 product is available at our web site http://www.ibm.com/systems/z/os/zos/tools/java/

2.3.2 Optional Program Publications

No optional publications are provided for IBM 31-bit SDK for z/OS, V8R0.
2.4 Program Source Materials

No program source materials or viewable program listings are provided for IBM 31-bit SDK for z/OS, V8R0.

2.5 Publications Useful During Installation

You might want to use the publications listed in Figure 1 during the installation of IBM 31-bit SDK for z/OS, V8R0. To order copies, contact your IBM representative or visit the IBM Publications Center at http://www-05.ibm.com/e-business/linkweb/publications/servlet/pbi.wss

<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>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>
<tr>
<td>IBM Online Library: Software Products DVD Collection</td>
<td>SK3T-4271</td>
</tr>
<tr>
<td>z/OS Information Roadmap</td>
<td>SA22-7500</td>
</tr>
</tbody>
</table>
3.0 Program Support

This section describes the IBM support available for IBM 31-bit SDK for z/OS, V8R0.

3.1 Program Services

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

3.2 Preventive Service Planning

Before you install IBM 31-bit SDK for z/OS, V8R0, 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 6.1.8, “Perform SMP/E APPLY” on page 19 for a sample APPLY command.

Although SW, HW, and functional PSP Buckets might have overlap, review all that apply to this package to ensure that you identify all the known service that is required for your installation of this package.

If you obtained IBM 31-bit SDK for z/OS, V8R0 as part of a CBPDO, HOLDDATA is included.

If the CBPDO for IBM 31-bit SDK for z/OS, V8R0 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:


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-01.ibm.com/software/support/.

PSP Buckets are identified by UPGRADEs, which specify product levels; and SUBSETs, which specify the FMIDs for a product level. The UPGRADE and SUBSET values for IBM 31-bit SDK for z/OS, V8R0 are included in Figure 2.

<table>
<thead>
<tr>
<th>UPGRADE</th>
<th>SUBSET</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>JAVAOS390</td>
<td>HJVA800</td>
<td>IBM 31-bit SDK for z/OS, V8R0</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 3 on page 6 identifies the component IDs (COMPID) for IBM 31-bit SDK for z/OS, V8R0.

<table>
<thead>
<tr>
<th>FMID</th>
<th>COMPID</th>
<th>Component Name</th>
<th>RETAIN Release</th>
</tr>
</thead>
<tbody>
<tr>
<td>HJVA800</td>
<td>620700105</td>
<td>31-Bit SDK for z/OS Java Technology Edition</td>
<td>800</td>
</tr>
</tbody>
</table>
4.0 Program and Service Level Information

This section identifies the program and relevant service levels of IBM 31-bit SDK for z/OS, V8R0. The program level refers to the APAR fixes that have been incorporated into the program. The service level refers to the PTFs that have been incorporated into the program.

4.1 Program Level Information

The following APAR fixes against previous releases of IBM 31-bit SDK for z/OS, V8R0 have been incorporated into this release. They are listed by FMID.

- FMID HJVA800

PI15137 PI15138 PI16784 PI21738 PI21739 PI27139 PI27140

4.2 Service Level Information

No PTFs against this release of IBM 31-bit SDK for z/OS, V8R0 have been incorporated into the product package.

Frequently check the IBM 31-bit SDK for z/OS, V8R0 PSP Bucket for HIPER and SPECIAL attention PTFs against all FMIDs that you must install. You can also receive the latest HOLDDATA, then add the FIXCAT(IBM.ProductInstall-RequiredService) operand on your APPLY CHECK command. This will allow you to review the recommended and critical service that should be installed with your FMIDs.
5.0 Installation Requirements and Considerations

The following sections identify the system requirements for installing and activating IBM 31-bit SDK for z/OS, V8R0. The following terminology is used:

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

  The program might have specific operating system or product level requirements for using processes, such as binder or assembly utilities during the installation.

- **Target system**: the system on which the program is configured and run.

  The program might have specific product level requirements, such as needing access to the library of another product for link-edits. These requirements, either mandatory or optional, might directly affect the element during the installation or in its basic or enhanced operation.

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

Use separate driving and target systems in the following situations:

- When you install a new level of a product that is already installed, the new level of the product will replace the old one. By installing the new level onto a separate target system, you can test the new level and keep the old one in production at the same time.

- When you install a product that shares libraries or load modules with other products, the installation can disrupt the other products. By installing the product onto a separate target system, you can assess these impacts without disrupting your production system.

5.1 Driving System Requirements

This section describes the environment of the driving system required to install IBM 31-bit SDK for z/OS, V8R0.

5.1.1 Machine Requirements

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

5.1.2 Programming Requirements
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 V3.6.

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.

IBM 31-bit SDK for z/OS, V8R0 invokes UNIX shell scripts during installation. The userid under which the job executes, must have the following:

- UID(0) or READ access or higher to the BPX.SUPERUSER facility class
- be connected to a group that has a GID
- have READ access or higher to the BPX.FILEATTR.PROGCTL and BPX.FILEATTR.APF and BPX.FILEATTR.SHARELIB facility classes
- have WRITE access to the "usr/lpp/java/J8.0" and "usr/lpp/java/J8.0/IBM" paths

### 5.2 Target System Requirements

This section describes the environment of the target system required to install and use IBM 31-bit SDK for z/OS, V8R0.

IBM 31-bit SDK for z/OS, V8R0 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.

<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 the shipped product?</th>
</tr>
</thead>
<tbody>
<tr>
<td>5694-A01</td>
<td>z/OS</td>
<td>V1.13</td>
<td>N/A</td>
<td>No</td>
</tr>
<tr>
<td>5650-ZOS</td>
<td>z/OS</td>
<td>V2.1</td>
<td>N/A</td>
<td>No</td>
</tr>
</tbody>
</table>

**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.

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.

IBM 31-bit SDK for z/OS, V8R0 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.

<table>
<thead>
<tr>
<th>Program Number</th>
<th>Product Name and Minimum VRM/Service Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>5694-A01</td>
<td>z/OS V1.13</td>
</tr>
<tr>
<td>5650-ZOS</td>
<td>z/OS V2.1 or higher</td>
</tr>
</tbody>
</table>

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.

IBM 31-bit SDK for z/OS, V8R0 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.

IBM 31-bit SDK for z/OS, V8R0 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.

IBM 31-bit SDK for z/OS, V8R0 has no negative requisites.

5.2.3 DASD Storage Requirements

IBM 31-bit SDK for z/OS, V8R0 libraries can reside on all supported DASD types.

Figure 7 lists the total space that is required for each type of library.

<table>
<thead>
<tr>
<th>Library Type</th>
<th>Total Space Required in 3390 Trks</th>
<th>File System Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Target</td>
<td>18</td>
<td></td>
</tr>
<tr>
<td>Distribution</td>
<td>4326</td>
<td></td>
</tr>
<tr>
<td>File System(s)</td>
<td>9600</td>
<td>IBM 31-bit SDK for z/OS, V8R0 file system</td>
</tr>
</tbody>
</table>

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.

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 18.

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 might 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 can be changed.
   - The default block size of the data set can be changed.
   - The data set can be merged with another data set that has equivalent characteristics.
   - The data set can be either a PDS or a PDSE.

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.
   - These data sets are not required to be APF-authorized.

The following figures describe the target and distribution libraries and file system paths required to install IBM 31-bit SDK for z/OS, V8R0. The storage requirements of IBM 31-bit SDK for z/OS, V8R0 must be added to the storage required by other programs that have data in the same library or path.

**Note:** Use the data in these tables to determine 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.

<table>
<thead>
<tr>
<th>Library DDNAME</th>
<th>Member Type</th>
<th>Target Volume</th>
<th>T E</th>
<th>R E</th>
<th>L Trks</th>
<th>No. of DIR</th>
<th>No. of Blks</th>
</tr>
</thead>
<tbody>
<tr>
<td>PROCLIB</td>
<td>PROC</td>
<td>TVOL1 E</td>
<td>PDS FB 80</td>
<td>2 2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SAJV SMP1</td>
<td>Sample</td>
<td>TVOL2 S</td>
<td>PDS FB 80</td>
<td>4 2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SAMPLIB</td>
<td>Sample</td>
<td>TVOL2 E</td>
<td>PDS FB 80</td>
<td>2 2</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Note: If you are installing into a zone other than the z/OS zone, you will need to allocate separate libraries for PROCLIB, SAMPLIB, SIEALNKE, APROCLIB, ASAMPLIB, and AIEALNKE. You will need to define new DDDEFs for these libraries also. You can model the libraries and DDDEFs after the ones in the z/OS zone.

If you plan to install IBM 64-bit SDK for z/OS, Java Technology Edition, V8R0 in the same libraries as IBM 31-bit SDK for z/OS, Java Technology Edition, V8R0, the storage requirements for both products must be added together when allocating the target and distribution libraries.

### 5.3 FMIDs Deleted

No FMIDs are deleted by this product.
5.4 Special Considerations

IBM 31-bit SDK for z/OS, V8R0 has no special considerations for the target system.

For service installation, please be aware that service installs may replace all files in the Java HFS or zFS directory. Before installing service, ensure any modified files are saved.

Examples:

- The JCE Unlimited Strength Jurisdiction Policy files may need to be copied from the /demo/jce/policy-files/unrestricted directory to the /lib/security directory to change to unrestricted mode of use.

- The java.security and java.policy files in the /lib/security directory may need to be restored or updated after the installation of service if modifications have been made.
6.0 Installation Instructions

This chapter describes the installation method and the step-by-step procedures to install and to activate the functions of IBM 31-bit SDK for z/OS, V8R0.

Please note the following points:

- If you want to install IBM 31-bit SDK for z/OS, V8R0 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 IBM 31-bit SDK for z/OS, V8R0

6.1.1 SMP/E Considerations for Installing IBM 31-bit SDK for z/OS, V8R0

Use the SMP/E RECEIVE, APPLY, and ACCEPT commands to install this release of IBM 31-bit SDK for z/OS, V8R0.

6.1.2 SMP/E Options Subentry Values

The recommended values for certain SMP/E CSI subentries are shown in Figure 11. 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>6200,1500,2600</td>
<td></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 IBM 31-bit SDK for z/OS, V8R0:
You can access the sample installation jobs by performing an SMP/E RECEIVE (refer to 6.1.4, “Perform SMP/E RECEIVE” on page 18) then copy the jobs from the RELFILES to a work data set for editing and submission. See Figure 12 on page 17 to find the appropriate relfile data set.

6.1.4 Perform SMP/E RECEIVE

If you have obtained IBM 31-bit SDK for z/OS, V8R0 as part of a CBPDO, use the RCVPDO job in the CBPDO RIMLIB data set to receive the IBM 31-bit SDK for z/OS, V8R0 FMIDs, service, and HOLDDATA that are included on the CBPDO package. For more information, see the documentation that is included in the CBPDO.

6.1.5 Allocate SMP/E Target and Distribution Libraries

Edit and submit sample job AJVMALC to allocate the SMP/E target and distribution libraries for IBM 31-bit SDK for z/OS, V8R0. Consult the instructions in the sample job for more information.

If you plan to install IBM 64-bit SDK for z/OS, Java Technology Edition, V8R0 in the same libraries as IBM 31-bit SDK for z/OS, Java Technology Edition, V8R0, the storage requirements for the target and distribution libraries in sample job AJVMALC must be increased to allow the installation of both products in the same libraries.

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

6.1.6 Allocate File system Paths

The target system HFS or zFS data set must be mounted on the driving system when running the sample AJVMMKD job since the job will create paths in the HFS or zFS.

Before running the sample job to create the paths in the file system, you must ensure that OMVS is active on the driving system and that the target system's HFS or zFS file system is mounted to the driving system. zFS must be active on the driving system if you are installing IBM 31-bit SDK for z/OS, V8R0 into a file system that is zFS.

<table>
<thead>
<tr>
<th>Figure 12. Sample Installation Jobs</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Job Name</strong></td>
</tr>
<tr>
<td>AJVMALC</td>
</tr>
<tr>
<td>AJVMMKD</td>
</tr>
<tr>
<td>AJVMDDDD</td>
</tr>
<tr>
<td>AJVMHFS</td>
</tr>
<tr>
<td>AJVMZFS</td>
</tr>
</tbody>
</table>
If you plan to install IBM 31-bit SDK for z/OS, V8R0 into a new HFS or zFS file system, you must create the mountpoint and mount the new file system to the driving system for IBM 31-bit SDK for z/OS, V8R0.

The recommended mountpoint is `usr/lpp/java/J8.0`.

If your installation is using an HFS, edit and submit sample job AJVMHFS to allocate the file system for IBM 31-bit SDK for z/OS, V8R0. Consult the instructions in the sample job for more information.

If your installation is using a zFS, edit and submit sample job AJVMZFS to allocate the file system for IBM 31-bit SDK for z/OS, V8R0. Consult the instructions in the sample job for more information.

The space requirement for the file system to install the product's FMID is shown in the sample jobs AJVMHFS and AJVMZFS. You may increase the space requirement for the file system in the sample jobs to accommodate future growth due to the installation of service.

If you plan to install IBM 64-bit SDK for z/OS, Java Technology Edition, V8R0 in the same file system as IBM 31-bit SDK for z/OS, Java Technology Edition, V8R0, the file system storage requirements for the two products must be added together, and the sample job AJVMHFS or AJVMZFS must be updated to increase the space allocation for the file system.

If you create a new file system for this product, consider updating the BPXPRMxx PARMLIB member to mount the new file system at IPL time. This action can be helpful if an IPL occurs before the installation is completed.

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

### 6.1.7 Create DDDEF Entries

Edit and submit sample job AJVMDDD to create DDDEF entries for the SMP/E target and distribution libraries for IBM 31-bit SDK for z/OS, V8R0. Consult the instructions in the sample job for more information.

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

### 6.1.8 Perform SMP/E APPLY

1. Perform an SMP/E APPLY CHECK for IBM 31-bit SDK for z/OS, V8R0.

   The latest HOLDDATA is available through several different portals, including [http://service.software.ibm.com/holdata/390holddata.html](http://service.software.ibm.com/holdata/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:

a. 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/c5197)
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.

b. 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/c5197)
FIXCAT(IBM.ProductInstall-RequiredService)
GROUPEXTEND
BYPASS(HOLDCLASS(HIPER)) .
```

This method is the 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.
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.

Figure 13 shows a sample job that you can use to perform an SMP/E APPLY CHECK for IBM 31-bit
SDK for z/OS, V8R0.

```
//AJVAPLY JOB <job parameters>
//STEP1 EXEC PGM=GIMSMP,REGION=/zerodotM,TIME=NOLIMIT
//SMPCSI DD DSN=csiname,DISP=SHR
//SMPCNTL DD *
   SET BOUNDARY(targetzone) .
   APPLY CHECK XZREQ
   FORFMID(HJVA800)
   SELECT(HJVA800)
   GROUPEXTEND(NOAPARS,NOUSERMDS)
   FIXCAT(IBM.ProductInstall-RequiredService)
   BYPASS(HOLDSYSTEM,
       HOLDUSER,HOLDCALL(UCLREL,ERREL,HIPER)) .
/*
```

**Figure 13. Sample SMP/E APPLY Job**

### Required Updates

1. Update the job parameters.
2. Replace csiname on the SMPCSI DD statement with your CSI name.
3. Replace targetzone with your target zone name.

**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.

### 6.1.9 Perform SMP/E ACCEPT

Perform an SMP/E ACCEPT CHECK for IBM 31-bit SDK for z/OS, V8R0.

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 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 Commands book for details.

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

```
//AJVACPT JOB <job parameters>
//STEP1 EXEC PGM=GIMSMP,REGION=OM,TIME=NOLIMIT
//SMPCSI DD DSN=csiname,DISP=SHR
//SMPCNTL DD *
  SET BOUNDARY(dlibzone).
  ACCEPT CHECK XZREQ
  FORFMID(HJVA800)
  SELECT(HJVA800)
  GROUPEXTEND(NOAPARS,NouserMODS)
  FIXCAT(IBM.ProductInstall-RequiredService)
  BYPASS(HOLDSYSTEM,
     HOLDUSER,HOLDCALL((UCLREL,ERREL,HIER)).
/*
```

Figure 14. Sample SMP/E ACCEPT Job

### Required Updates

1. Update the job parameters.
2. Replace csiname on the SMPCSI DD statement with your CSI name.
3. Replace dlibzone with your distribution zone name.

**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-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:** You will receive a return code of 0 if this job runs correctly.
6.1.10 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 IBM 31-bit SDK for z/OS, V8R0, 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 IBM 31-bit SDK for z/OS, V8R0

IBM 31-bit SDK for z/OS, V8R0 is fully operational after the SMP/E installation is completed. You do not have to do further customization to activate this function.
7.0 Notices

This information was developed for products and services offered in the U.S.A. IBM may not offer the products, services, or features discussed in this document in other countries. Consult your local IBM representative for information on the products and services currently available in your area. Any reference to an IBM product, program, or service is not intended to state or imply that only that IBM product, program, or service may be used. Any functionally equivalent product, program, or service that does not infringe any IBM intellectual property right may be used instead. However, it is the user's responsibility to evaluate and verify the operation of any non-IBM product, program, or service.

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".

IBM may have patents or pending patent applications covering subject matter in this document. The furnishing of this document does not give you any license to these patents. You can send license inquiries, in writing, to the

IBM Director of Licensing
IBM Corporation
North Castle Drive
Armonk, New York 10504-1785
USA

For license inquiries regarding double-byte (DBCS) information, contact the IBM Intellectual Property Department in your country or send inquiries, in writing, to:

Intellectual Property Licensing
Legal and Intellectual Property Law
IBM Japan, Ltd.
19-21, Nihonbashi-Hakozakicho, Chuo-ku
Tokyo 103-8510, Japan

7.1 Trademarks

IBM, the IBM logo, and ibm.com are trademarks or registered trademarks of International Business Machines Corp., registered in many jurisdictions worldwide. Other product and service names might be trademarks of IBM or other companies. A current list of IBM trademarks is available on the Web at "Copyright and trademark information" at www.ibm.com/legal/copytrade.shtml.
Reader's Comments


We appreciate your input on this publication. Feel free to comment on the clarity, accuracy, and completeness of the information or give us any other feedback that you might have.

Use one of the following methods to send us your comments:

1. Send an email to comments@us.ibm.com
2. Use the form on the Web at:
   www.ibm.com/software/data/rcf/

When you send information to IBM, you grant IBM a nonexclusive right to use or distribute the information in any way it believes appropriate without incurring any obligation to you.

IBM or any other organizations will only use the personal information that you supply to contact you about the issues that you submit.

Thank you for your participation.
Communicating Your Comments to IBM

IBM 31-bit SDK for z/OS, Java Technology Edition Version 8 Release 0
z/OS V1.13 or higher

Publication No. GI11-9828-02

If you especially like or dislike anything about this book, please use one of the methods listed below to send your comments to IBM. Whichever method you choose, make sure you send your name, address, and telephone number if you would like a reply.

Feel free to comment on specific errors or omissions, accuracy, organization, subject matter, or completeness of this book. However, the comments you send should pertain to only the information in this manual and the way in which the information is presented. To request additional publications, or to ask questions or make comments about the functions of IBM products or systems, you should talk to your IBM representative or to your IBM authorized remarketer.

When you send comments to IBM, you grant IBM a nonexclusive right to use or distribute your comments in any way it believes appropriate without incurring any obligation to you.

If you are mailing a reader's comment form (RCF) from a country other than the United States, you can give the RCF to the local IBM branch office or IBM representative for postage-paid mailing.

- If you prefer to send comments by mail, use the RCF at the back of this book.
- If you prefer to send comments by FAX, use this number:
  - FAX: (International Access Code)+1+845+432-9405
- If you prefer to send comments electronically, use the following e-mail address:
  - mhvrdfs@us.ibm.com

Make sure to include the following in your note:
- Title and publication number of this book
- Page number or topic to which your comment applies

Optionally, if you include your telephone number, we will be able to respond to your comments by phone.
Reader's Comments — We'd Like to Hear from You

IBM 31-bit SDK for z/OS, Java Technology Edition Version 8 Release 0
z/OS V1.13 or higher

Publication No. GI11-9828-02

You may use this form to communicate your comments about this publication, its organization, or subject matter, with the understanding that IBM may use or distribute whatever information you supply in any way it believes appropriate without incurring any obligation to you. Your comments will be sent to the author's department for whatever review and action, if any, are deemed appropriate.

Note: Copies of IBM publications are not stocked at the location to which this form is addressed. Please direct any requests for copies of publications, or for assistance in using your IBM system, to your IBM representative or to the IBM branch office serving your locality.

Today's date: ________________________________

What is your occupation?

Newsletter number of latest Technical Newsletter (if any) concerning this publication:

How did you use this publication?

[ ] As an introduction [ ] As a reference manual [ ] For another purpose (explain)
[ ] As a text (student) [ ] As a text (instructor)

Is there anything you especially like or dislike about the organization, presentation, or writing in this manual? Helpful comments include general usefulness of the book; possible additions, deletions, and clarifications; specific errors and omissions.

Page Number: Comment:

Name

Address

Company or Organization

Phone No.