



**Program Directory for  
IBM DB2 Analytics Accelerator Loader for z/OS**

V02.01.00

Program Number 5639-OLE

FMIDs HHLO210, HALE210, H25F132

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 Analytics Accelerator Loader for z/OS. This publication refers to IBM DB2 Analytics Accelerator Loader for z/OS as Analytics Accelerator Loader.

The Program Directory contains the following sections:

- 2.0, “Program Materials” on page 4 identifies the basic program materials and documentation for Analytics Accelerator Loader.
- 3.0, “Program Support” on page 8 describes the IBM support available for Analytics Accelerator Loader.
- 4.0, “Program and Service Level Information” on page 10 lists the APARs (program level) and PTFs (service level) that have been incorporated into Analytics Accelerator Loader.
- 5.0, “Installation Requirements and Considerations” on page 11 identifies the resources and considerations that are required for installing and using Analytics Accelerator Loader.
- 6.0, “Installation Instructions” on page 22 provides detailed installation instructions for Analytics Accelerator Loader. It also describes the procedures for activating the functions of Analytics Accelerator Loader, or refers to appropriate publications.

Before installing Analytics Accelerator Loader, 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 8 tells you how to find any updates to the information and procedures in this program directory.

Analytics Accelerator Loader 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 Analytics Accelerator Loader are included on the CBPDO tape.

Do not use this program directory if you install Analytics Accelerator Loader 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 Analytics Accelerator Loader Description

**IBM DB2 Analytics Accelerator Loader for z/OS, V2.1 (5639-OLE)** is a new version that includes all the core capabilities of the previously announced IBM DB2 Analytics Accelerator Loader for z/OS, V1.1 (5639-OLA) product. It also provides more sophisticated capability for automating the process of mapping and loading non-DB2 data sources into the DB2 Analytics Accelerator.

The DB2 Analytics Accelerator Loader for z/OS can help users to load non-DB2 data in a more streamlined and efficient manner. In addition to DB2 for z/OS, it can help users to load data from non-DB2 and remote DB2 for z/OS sources into the Accelerator with less effort and time.

The DB2 Analytics Accelerator Loader for z/OS will allow SQL access to many data sources on and off z/OS for the purposes of loading data into the Accelerator. The initial list of supported data sources include DB2, VSAM data sets, physical sequential data sets, and distributed relational database architecture (DRDA) data sources such as Oracle. The data that matches the SQL result set is extracted directly from the data sources and converted into the required format in memory and loaded into the Accelerator in one step. This eliminates the manual process required in the previously announced DB2 Analytics Accelerator Loader for z/OS product.

The entire process of reading the source data, converting it to the necessary format, and loading the data to the Accelerator is performed without landing or staging the data into intermediate datasets. This in-memory process can help to lower the cost of loading data to the Accelerator.

All of the DB2 features from the first DB2 Analytics Accelerator Loader for z/OS product are available from the enhanced and improved task-based ISPF panel interface. Users will still be able to load data directly into the DB2 Analytics Accelerator from a flat file that users created for external data. Users will also still be able to load historic data or consistent data into the DB2 Analytics Accelerator without impacting production objects.

Support for LOAD RESUME and Change Data Capture (CDC) are among the features included in this new product. The additional non-DB2 data sources are supported from a modern graphical user interface (GUI).

LOAD RESUME support has been added to enable appending data to tables on the DB2 Analytics Accelerator en masse. This capability can help to reduce CPU consumption and elapsed time involved without reloading all table data into the DB2 Analytics Accelerator.

Integration with CDC has been implemented to enable replicated tables to be loaded in a more streamlined manner. This process improvement enables DBAs to administer all of their tables on the DB2 Analytics Accelerator in the same manner without treating these tables with exception.

### **Automated load for non-DB2 and off z/OS data**

With DB2 Analytics Accelerator Loader for z/OS, users will be able to load data from sources other than DB2, and from platforms other than z/OS. Using the DB2 Analytics Accelerator Loader GUI, users will be able to quickly and efficiently select the data source, map it to the table on the DB2 Analytics Accelerator, and generate JCL to load the data.

### **Enhanced load from an external file**

With DB2 Analytics Accelerator Loader for z/OS, users will still be able to use a file created by an UNLOAD utility for DB2 data, in addition to a file compatible with the LOAD utility containing data from an external source as input into the load process via the ISPF panels. Users will still be able to optionally load DB2 in parallel with the DB2 Analytics Accelerator for z/OS. DB2 Analytics Accelerator Loader for

z/OS removes the requirement to first load the data into DB2 before loading the data onto the DB2 Analytics Accelerator, which can result in less CPU consumption.

### **Consistent Data Load and Historic Data Load**

Users will still be able to use the Consistent Data Load and Historic Data Load features via the ISPF panels. Users will be able to use the last full image copy of an object on DB2 and apply log records up to the current time or to a consistent historical time for multiple objects. DB2 Analytics Accelerator Loader for z/OS loads the data without stopping update activity to production tables.

Loading from an image copy has been extended to allow loading from a regular full image copy (SHRLEVEL REFERENCE) that originated from a DB2 for z/OS system that is not connected to the Accelerator that is to be loaded. This can help users to consolidate data from different DB2 for z/OS systems into the Accelerator without expending additional resources to first unload the data, and to reuse existing recovery assets.

### **A solution from end to end**

DB2 Analytics Accelerator Loader for z/OS provides an automated solution which can help users to quickly load data from DB2 and non-DB2 sources onto the DB2 Analytics Accelerator without interrupting access to production objects. This is accomplished while reducing the complexities of the extract and load process, and can help reduce CPU consumption and elapsed time.

The DB2 Analytics Accelerator Loader for z/OS can help users to load non-DB2 data in a more streamlined and efficient manner. In addition to DB2 for z/OS, it can help users to load data from non-DB2 and remote DB2 for z/OS sources into the Accelerator with less effort and time.

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## **1.2 Analytics Accelerator Loader FMIDs**

Analytics Accelerator Loader consists of the following FMIDs:

HHLO210  
HALE210  
H25F132

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## 2.0 Program Materials

An IBM program is identified by a program number. The program number for Analytics Accelerator Loader is 5639-OLE.

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 Analytics Accelerator Loader. 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 22 for more information about how to install the program.

You can find information about the physical media for the basic machine-readable materials for Analytics Accelerator Loader in the *CBPDO Memo To Users Extension*.

Figure 1, Figure 2 on page 5, and Figure 3 on page 6, describes the program file contents for Analytics Accelerator Loader. You can refer to the *CBPDO Memo To Users Extension* to see where the files reside on the tape.

#### Notes:

1. The data set attributes in this table must be used in the JCL of jobs that read the data sets. However, because the data sets are in IEBCOPY unloaded format, their actual attributes might be different.
2. If any RELFILEs are identified as PDSEs, ensure that SMPTLIB data sets are allocated as PDSEs.

Figure 1 (Page 1 of 2). Program File Content - HHLO210

| Name           | ORG  | RECFM | RECL | BLK SIZE |
|----------------|------|-------|------|----------|
| SMPMCS         | SEQ  | FB    | 80   | 6400     |
| IBM.HHLO210.F1 | PDS  | FB    | 80   | 8800     |
| IBM.HHLO210.F2 | PDS  | FB    | 80   | 8800     |
| IBM.HHLO210.F3 | PDS  | FB    | 80   | 8800     |
| IBM.HHLO210.F4 | PDS  | FB    | 80   | 8800     |
| IBM.HHLO210.F5 | PDSE | U     | 0    | 6144     |



Figure 1 (Page 2 of 2). Program File Content - HHLO210

| <b>Name</b>     | <b>O<br/>R<br/>G</b> | <b>R<br/>E<br/>C<br/>F<br/>M</b> | <b>L<br/>R<br/>E<br/>C<br/>L</b> | <b>BLK<br/>SIZE</b> |
|-----------------|----------------------|----------------------------------|----------------------------------|---------------------|
| IBM.HHLO210.F6  | PDS                  | FB                               | 80                               | 8800                |
| IBM.HHLO210.F7  | PDS                  | FB                               | 80                               | 8800                |
| IBM.HHLO210.F8  | PDS                  | FB                               | 80                               | 8800                |
| IBM.HHLO210.F9  | PDS                  | FB                               | 80                               | 8800                |
| IBM.HHLO210.F10 | PDS                  | FB                               | 80                               | 8800                |

Figure 2 (Page 1 of 2). Program File Content - HALE210

| <b>Name</b>     | <b>O<br/>R<br/>G</b> | <b>R<br/>E<br/>C<br/>F<br/>M</b> | <b>L<br/>R<br/>E<br/>C<br/>L</b> | <b>BLK<br/>SIZE</b> |
|-----------------|----------------------|----------------------------------|----------------------------------|---------------------|
| SMPMCS          | SEQ                  | FB                               | 80                               | 6400                |
| IBM.HALE210.F1  | PDS                  | FB                               | 80                               | 8800                |
| IBM.HALE210.F2  | PDS                  | VB                               | 256                              | 27998               |
| IBM.HALE210.F3  | PDS                  | FB                               | 80                               | 8800                |
| IBM.HALE210.F4  | PDS                  | FB                               | 80                               | 8800                |
| IBM.HALE210.F5  | PDS                  | FB                               | 80                               | 8800                |
| IBM.HALE210.F6  | PDSE                 | U                                | 0                                | 6144                |
| IBM.HALE210.F7  | PDS                  | FB                               | 2048                             | 30720               |
| IBM.HALE210.F8  | PDS                  | FB                               | 80                               | 8800                |
| IBM.HALE210.F9  | PDS                  | FB                               | 80                               | 8800                |
| IBM.HALE210.F10 | PDS                  | FB                               | 80                               | 8800                |
| IBM.HALE210.F11 | PDSE                 | U                                | 0                                | 6144                |
| IBM.HALE210.F12 | PDS                  | FB                               | 80                               | 8800                |
| IBM.HALE210.F13 | PDS                  | FB                               | 80                               | 8800                |
| IBM.HHLO210.F14 | PDS                  | FB                               | 2048                             | 30720               |
| IBM.HALE210.F15 | PDS                  | FB                               | 80                               | 8800                |
| IBM.HALE210.F16 | PDS                  | FB                               | 80                               | 8800                |
| IBM.HALE210.F17 | PDS                  | FB                               | 80                               | 8800                |
| IBM.HALE210.F18 | PDS                  | FB                               | 80                               | 8800                |

Figure 2 (Page 2 of 2). Program File Content - HALE210

| <b>Name</b>     | <b>O<br/>R<br/>G</b> | <b>R<br/>E<br/>C<br/>F<br/>M</b> | <b>L<br/>R<br/>E<br/>C<br/>L</b> | <b>BLK<br/>SIZE</b> |
|-----------------|----------------------|----------------------------------|----------------------------------|---------------------|
| IBM.HALE210.F19 | PDS                  | FB                               | 80                               | 8800                |
| IBM.HALE210.F20 | PDS                  | FB                               | 80                               | 8800                |
| IBM.HALE210.F21 | PDS                  | FB                               | 80                               | 8800                |

Figure 3. Program File Content - H25F132

| <b>Name</b>    | <b>O<br/>R<br/>G</b> | <b>R<br/>E<br/>C<br/>F<br/>M</b> | <b>L<br/>R<br/>E<br/>C<br/>L</b> | <b>BLK<br/>SIZE</b> |
|----------------|----------------------|----------------------------------|----------------------------------|---------------------|
| SMPMCS         | SEQ                  | FB                               | 80                               | 6400                |
| IBM.H25F132.F1 | PDS                  | FB                               | 80                               | 3120                |
| IBM.H25F132.F2 | PDS                  | U                                | 0                                | 6144                |
| IBM.H25F132.F3 | PDS                  | FB                               | 80                               | 27920               |
| IBM.H25F132.F4 | PDS                  | FB                               | 80                               | 27920               |
| IBM.H25F132.F5 | PDS                  | FB                               | 80                               | 27920               |
| IBM.H25F132.F6 | PDS                  | FB                               | 80                               | 27920               |

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## 2.2 Optional Machine-Readable Material

No optional machine-readable materials are provided for Analytics Accelerator Loader.

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## 2.3 Program Publications

The following sections identify the basic publications for Analytics Accelerator Loader.

Figure 4 identifies the basic unlicensed publications for Analytics Accelerator Loader. Those that are in softcopy format publications can be obtained from the IBM Publications Center website at:

<http://www.ibm.com/shop/publications/order/>

Figure 4. Basic Material: Unlicensed

| Publication Title   | Form Number | Media Format  |
|---|-------------|---|
| IBM DB2 Analytics Accelerator Loader for z/OS License Information | GC27-6776   | <a href="http://www.ibm.com/software/sla/sladb.nsf">http://www.ibm.com/software/sla/sladb.nsf</a>                           |
| IBM DB2 Analytics Accelerator Loader for z/OS User's Guide        | SC27-6777   | <a href="http://www.ibm.com/support/docview.wss?uid=swg27020942">http://www.ibm.com/support/docview.wss?uid=swg27020942</a> |

### 2.3.1 Optional Program Publications

No optional publications are provided for Analytics Accelerator Loader.

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## 2.4 Program Source Materials

No program source materials or viewable program listings are provided for Analytics Accelerator Loader.

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## 2.5 Publications Useful During Installation

You might want to use the publications listed in Figure 5 during the installation of Analytics Accelerator Loader.

Figure 5. Publications Useful During Installation

| Publication Title  | Form Number | Media Format  |
|--|-------------|---|
| <i>IBM SMP/E for z/OS User's Guide</i>                   | SA23-2277   | <a href="http://www.ibm.com/shop/publications/order/">http://www.ibm.com/shop/publications/order/</a> |
| <i>IBM SMP/E for z/OS Commands</i>                       | SA23-2275   | <a href="http://www.ibm.com/shop/publications/order/">http://www.ibm.com/shop/publications/order/</a> |
| <i>IBM SMP/E for z/OS Reference</i>                      | SA23-2276   | <a href="http://www.ibm.com/shop/publications/order/">http://www.ibm.com/shop/publications/order/</a> |
| <i>IBM SMP/E for z/OS Messages, Codes, and Diagnosis</i> | GA32-0883   | <a href="http://www.ibm.com/shop/publications/order/">http://www.ibm.com/shop/publications/order/</a> |

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## 3.0 Program Support

This section describes the IBM support available for Analytics Accelerator Loader.

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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 Analytics Accelerator Loader, 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 26 for a sample APPLY command.

If you obtained Analytics Accelerator Loader as part of a CBPDO, HOLDDATA is included.

If the CBPDO for Analytics Accelerator Loader 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-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 Analytics Accelerator Loader are included in Figure 6.

*Figure 6. PSP Upgrade and Subset ID*

| UPGRADE | SUBSET  | Description                         |
|---------|---------|-------------------------------------|
| 5639OLA | HHLO210 | Analytics Accelerator Loader        |
| 5639OLE | HALE210 | Analytics Accelerator Loader Server |
| 5697P45 | H25F132 | DB2 Change Accumulation Tool        |

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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 7 on page 9 identifies the component IDs (COMPID) for Analytics Accelerator Loader.

| <i>Figure 7. Component IDs</i> |               |                                     |                       |
|--------------------------------|---------------|-------------------------------------|-----------------------|
| <b>FMID</b>                    | <b>COMPID</b> | <b>Component Name</b>               | <b>RETAIN Release</b> |
| HHLO210                        | 5639OLA00     | Analytics Accelerator Loader        | 210                   |
| HALE210                        | 5639OLE01     | Analytics Accelerator Loader Server | 210                   |
| H25F132                        | 5655F5504     | DB2 Change Accumulation Tool        | 132                   |

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## 4.0 Program and Service Level Information

This section identifies the program and relevant service levels of Analytics Accelerator Loader. 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 Analytics Accelerator Loader have been incorporated into this release. They are listed by FMID.

- FMID HHLO110

|         |         |         |         |         |
|---------|---------|---------|---------|---------|
| PI10223 | PI17152 | PI23235 | PI28756 | PI36438 |
| PI11182 | PI17174 | PI23913 | PI29265 | PI36607 |
| PI11188 | PI19369 | PI23919 | PI29613 | PI37792 |
| PI11753 | PI19652 | PI25551 | PI30719 | PI37901 |
| PI12417 | PI19657 | PI25805 | PI30724 | PI38006 |
| PI13308 | PI19810 | PI26556 | PI31439 | PI38175 |
| PI14162 | PI19931 | PI27130 | PI31668 | PI39181 |
| PI14869 | PI20691 | PI27302 | PI32676 | PI41420 |
| PI15111 | PI20713 | PI27665 | PI33017 | PI42259 |
| PI15216 | PI21353 | PI28314 | PI33018 | PI44081 |
| PI16437 | PI21811 | PI28336 | PI33019 | PI44112 |
| PI16447 | PI21972 | PI28344 | PI33021 | PI45040 |
| PI16533 | PI21976 | PI28349 | PI35344 | PI46317 |
| PI17069 | PI22365 | PI28352 | PI35791 | PI46324 |
| PI17087 | PI23234 | PI28571 | PI36400 | PI49227 |

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### 4.2 Service Level Information

No PTFs against this release of Analytics Accelerator Loader have been incorporated into the product package.

Frequently check the Analytics Accelerator Loader 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-REQUIRESERVICE)** operand on your APPLY CHECK command. This will allow you to review the recommended and critical service that should be installed with your FMIDs.

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## 5.0 Installation Requirements and Considerations

The following sections identify the system requirements for installing and activating Analytics Accelerator Loader. 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.

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### 5.1 Driving System Requirements

This section describes the environment of the driving system required to install Analytics Accelerator Loader.

#### 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 8. 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 Analytics Accelerator Loader.

Analytics Accelerator Loader installs in the DBS (P115) SREL.

### 5.2.1 Machine Requirements

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

### 5.2.2 Programming Requirements

**5.2.2.1 Installation Requisites:** Installation requisites identify products that are required 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.



Figure 9. Target System Mandatory Installation Requisites

| Program Number  | Product Name   | Minimum VRM   | Minimum Service Level will satisfy these APARs | Included in the shipped product? |
|---|--|---|--|----------------------------------|
| N/A   | FEC Common Code (FMID H25F132) at the latest maintenance level | V01.03.02<br>(Requires PTF UK35560)                                       | N/A  | Yes *                            |
| Any <b>one</b> of the following:  |  |   |  |                                  |
| 5694-A01  | z/OS   | V01.13.00 or higher (With PTFs UA75045, UA75272)                          | N/A  | No                               |
| 5650-ZOS  | z/OS   | V02.01.00 or higher (z/OS V02.01.00 requires PTFs UA75046, UA75273)       | N/A  | No                               |
| Any <b>one</b> of the following:  |  |   |  |                                  |
| 5605-DB2  | DB2 for z/OS   | V10.01.00   | N/A  | No                               |
| 5697-P31  | DB2 Value Unit Edition for z/OS                                | V10.01.00<br>(With APAR/PTFs AI25214, PI10162, PM93789, UI24307, UI24305) | N/A  | No                               |
| 5615-DB2  | DB2 for z/OS   | V11.01.00   | N/A  | No                               |
| 5697-P43  | DB2 Value Unit Edition for z/OS                                | V11.01.00<br>(With APAR/PTFs AI26321, PI10162, UI24306, UI24308)          | N/A  | No                               |
| <b>Note:</b> *H25F132 has been included in this shipment for your convenience. You may already have this FMID from another product which ships this FMID. |  |   |  |                                  |

**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.

Analytics Accelerator Loader 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.

| <i>Figure 10. Target System Mandatory Operational Requisites</i> |   |
|--|---|
| <b>Program Number</b>  | <b>Product Name and Minimum VRM/Service Level</b>                                       |
| 5655-V41   | IBM DB2 Utilities Suite for z/OS, V10.01.00 or higher                                   |
| 5724-DST   | IBM Data Studio for z/OS, V04.01.00   |
| 5655-V93   | IBM Tools Base for z/OS V01.04.00 or higher* - HTCZ110, (IBM Tools Customizer for z/OS) |
| Any <b>one</b> of the following:                                 |   |
| 5605-DB2   | DB2 for z/OS V10.01.00  |
| 5697-P31   | DB2 for z/OS value Unit Edition V10.01.00   |
| 5615-DB2   | DB2 for z/OS V11.01.00  |
| 5697-P43   | DB2 for z/OS value Unit Edition V11.01.00   |
| Any <b>one</b> of the following:                                 |   |
| 5697-DAA   | IBM DB2 Analytics Accelerator for z/OS V03.01.00  |
| 5697-DAB   | IBM DB2 Analytics Accelerator for z/OS V04.01.00  |
| 5697-DA5   | IBM DB2 Analytics Accelerator for z/OS V05.01.00  |

**Note:** \*IBM Tools Base for z/OS, (5655-V93) is a mandatory operational requisite for Analytics Accelerator Loader. IBM Tools Base for z/OS is a no-charge product that must be separately ordered. Tools Base contains IBM Tools Customizer for z/OS, FMID HTCZ110, which must be installed with the most current maintenance level in order to customize Analytics Accelerator Loader. Refer to the IBM Tools Base for z/OS, Program Directory (GI10-8819) for installation instructions.

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

| <i>Figure 11. Target System Conditional Operational Requisites</i> |   |  |
|--|---|--|
| <b>Program Number</b>  | <b>Product Name and Minimum VRM/Service Level</b>     | <b>Function</b>  |
| Any <b>one</b> of the following:                                   |   |  |
| 5725-L47   | IBM DB2 Advanced Enterprise Server Edition, V10.05.00 | Load data from distributed relational database architecture (DRDA) sources |
| 5724-N97   | IBM InfoSphere Federation Server, V09.07.00           | Load data from distributed relational database architecture (DRDA) sources |
| 5725-C09   | IBM InfoSphere BigInsights (IBM Big SQL), V01.00.00   | Load data from distributed relational database architecture (DRDA) sources |

**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.

Analytics Accelerator Loader 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.

Analytics Accelerator Loader has no negative requisites.

## 5.2.3 DASD Storage Requirements

Analytics Accelerator Loader libraries can reside on all supported DASD types.

Figure 12 lists the total space that is required for each type of library.

| <i>Figure 12. Total DASD Space Required by Analytics Accelerator Loader</i> |  |
|---|--|
| <b>Library Type</b>   | <b>Total Space Required in 3390 Trks</b> |
| Target  | 7666                                     |
| Distribution  | 7666                                     |

| <i>Figure 13. Total DASD Space Required by FEC Common Code</i> |  |
|--|--|
| <b>Library Type</b>  | <b>Total Space Required in 3390 Trks</b> |
| Target   | 96                                       |
| Distribution   | 97                                       |

**Notes:**

1. For non-RECFM U data sets, IBM recommends using system-determined block sizes for efficient DASD utilization. For RECFM U data sets, IBM recommends using a block size of 32760, which is most efficient from the performance and DASD utilization perspective.
2. Abbreviations used for data set types are shown as follows.

- U** Unique data set, allocated by this product and used by only this product. This table provides all the required information to determine the correct storage for this data set. You do not need to refer to other tables or program directories for the data set size.
- S** Shared data set, allocated by this product and used by this product and other products. To determine the correct storage needed for this data set, add the storage size given in this table to those given in other tables (perhaps in other program directories). If the data set already exists, it must have enough free space to accommodate the storage size given in this table.
- E** Existing shared data set, used by this product and other products. This data set is *not* allocated by this product. To determine the correct storage for this data set, add the storage size given in this table to those given in other tables (perhaps in other program directories). If the data set already exists, it must have enough free space to accommodate the storage size given in this table.

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

For more information about the names and sizes of the required data sets, see 6.1.8, “Allocate SMP/E Target and Distribution Libraries” on page 26.

3. 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, except for AHLOLOAD, SHLOLOAD, AHLVLOAD, SHLVLOAD, AHLVRPC, and SHLVRPC, which must be PDSEs.
4. All target libraries listed have the following attributes:
  - These data sets can be SMS-managed, but they are not required to be SMS-managed.
  - These data sets are not required to reside on the IPL volume.
  - The values in the "Member Type" column are not necessarily the actual SMP/E element types that are identified in the SMPMCS.
5. All target libraries that are listed and contain load modules have the following attributes:
  - These data sets can be in the LPA, but they are not required to be in the LPA.
  - These data sets can be in the LNKLIST.
  - It is required for SHLOLOAD, SHLVLOAD, and SFECLOAD to be APF-authorized.

- Analytics Accelerator Loader requires that the SMPLTS data set must be a PDSE. If your existing SMPLTS is a PDS, you will need to allocate a new PDSE and copy you existing SMPLTS into it and then change the SMPLTS DDDEF entry to indicate the new PDSE data set.

The following figures describe the target and distribution libraries required to install Analytics Accelerator Loader. The storage requirements of Analytics Accelerator Loader must be added to the storage required by other programs that have data in the same library.

**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.

*Figure 14 (Page 1 of 2). Storage Requirements for Analytics Accelerator Loader 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 |
|-------------------|----------------|------------------|------------------|-------------|-----------------------|-----------------------|---------------------------|--------------------------|
| SHLOBASE          | SAMP           | any              | U                | PDS         | FB                    | 80                    | 15                        | 5                        |
| SHLODBRM          | MAC            | any              | U                | PDS         | FB                    | 80                    | 45                        | 15                       |
| SHLODENU          | DATA5          | any              | U                | PDS         | FB                    | 80                    | 25                        | 5                        |
| SHLOLOAD          | MOD            | any              | U                | PDSE        | U                     | 0                     | 1800                      | n/a                      |
| SHLOMENU          | MSGENU         | any              | U                | PDS         | FB                    | 80                    | 10                        | 10                       |
| SHLOPENU          | PNLENU         | any              | U                | PDS         | FB                    | 80                    | 60                        | 35                       |
| SHLOSAMP          | SAMP           | any              | U                | PDS         | FB                    | 80                    | 12                        | 5                        |
| SHLOSLIB          | SKL            | any              | U                | PDS         | FB                    | 80                    | 5                         | 5                        |
| SHLOTENU          | TBL            | any              | U                | PDS         | FB                    | 80                    | 5                         | 5                        |
| SHLVBIN           | DATA           | any              | U                | PDS         | VB                    | 256                   | 375                       | 5                        |
| SHLVCNTL          | DATA           | any              | U                | PDS         | FB                    | 80                    | 30                        | 10                       |
| SHLVDBRM          | MAC            | any              | U                | PDS         | FB                    | 80                    | 5                         | 5                        |
| SHLVEXEC          | EXEC           | any              | U                | PDS         | FB                    | 80                    | 30                        | 5                        |
| SHLVLOAD          | MOD            | any              | U                | PDSE        | U                     | 0                     | 3750                      | n/a                      |
| SHLVMAP           | DATA           | any              | U                | PDS         | FB                    | 2048                  | 20                        | 10                       |
| SHLVMENU          | MSGENU         | any              | U                | PDS         | FB                    | 80                    | 10                        | 5                        |
| SHLVOBJX          | DATA           | any              | U                | PDS         | FB                    | 80                    | 35                        | 5                        |
| SHLVPENU          | PNLENU         | any              | U                | PDS         | FB                    | 80                    | 12                        | 10                       |
| SHLVRPC           | MOD            | any              | U                | PDSE        | U                     | 0                     | 125                       | n/a                      |
| SHLVSAMP          | SAMP           | any              | U                | PDS         | FB                    | 80                    | 30                        | 15                       |
| SHLVSLIB          | SKL            | any              | U                | PDS         | FB                    | 80                    | 5                         | 5                        |

Figure 14 (Page 2 of 2). Storage Requirements for Analytics Accelerator Loader 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 |
|-------------------|----------------|------------------|------------------|-------------|-----------------------|-----------------------|---------------------------|--------------------------|
| SHLVSMAP          | DATA           | any              | U                | PDS         | FB                    | 2048                  | 1200                      | 30                       |
| SHLVXTENU         | TBL            | any              | U                | PDS         | FB                    | 80                    | 5                         | 5                        |
| SHLVXATH          | DATA           | any              | U                | PDS         | FB                    | 80                    | 15                        | 10                       |
| SHLVXCMD          | DATA           | any              | U                | PDS         | FB                    | 80                    | 10                        | 10                       |
| SHLVXEXC          | EXEC           | any              | U                | PDS         | FB                    | 80                    | 12                        | 10                       |
| SHLVXSQL          | DATA           | any              | U                | PDS         | FB                    | 80                    | 10                        | 5                        |
| SHLVXTOD          | DATA           | any              | U                | PDS         | FB                    | 80                    | 5                         | 5                        |
| SHLVXVTB          | DATA           | any              | U                | PDS         | FB                    | 80                    | 5                         | 5                        |

Figure 15. Storage Requirements for FEC Common Code 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 |
|-------------------|----------------|------------------|------------------|-------------|-----------------------|-----------------------|---------------------------|--------------------------|
| SFECDBRM          | Macro          | any              | S                | PDS         | FB                    | 80                    | 6                         | 5                        |
| SFECLOAD          | LMOD           | any              | S                | PDS         | U                     | 0                     | 42                        | 20                       |
| SFECMENU          | MSG            | any              | S                | PDS         | FB                    | 80                    | 6                         | 5                        |
| SFECPENU          | Panel          | any              | S                | PDS         | FB                    | 80                    | 51                        | 15                       |
| SFECXSAMP         | Sample         | any              | S                | PDS         | FB                    | 80                    | 6                         | 2                        |

Figure 16 (Page 1 of 2). Storage Requirements for Analytics Accelerator Loader 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 |
|-------------------|------------------|-------------|-----------------------|-----------------------|---------------------------|--------------------------|
| AHLOBASE          | U                | PDS         | FB                    | 80                    | 15                        | 5                        |
| AHLODBRM          | U                | PDS         | FB                    | 80                    | 45                        | 15                       |
| AHLODENU          | U                | PDS         | FB                    | 80                    | 25                        | 5                        |
| AHLOLOAD          | U                | PDSE        | U                     | 0                     | 1800                      | n/a                      |
| AHLOMENU          | U                | PDS         | FB                    | 80                    | 10                        | 10                       |

Figure 16 (Page 2 of 2). Storage Requirements for Analytics Accelerator Loader Distribution Libraries

| <b>Library<br/>DDNAME</b> | <b>T<br/>Y<br/>P<br/>E</b> | <b>O<br/>R<br/>G</b> | <b>R<br/>E<br/>C<br/>F<br/>M</b> | <b>L<br/>R<br/>E<br/>C<br/>L</b> | <b>No.<br/>of<br/>3390<br/>Trks</b> | <b>No.<br/>of<br/>DIR<br/>Blks</b> |
|---------------------------|----------------------------|----------------------|----------------------------------|----------------------------------|-------------------------------------|------------------------------------|
| AHLOPENU                  | U                          | PDS                  | FB                               | 80                               | 60                                  | 35                                 |
| AHLOSAMP                  | U                          | PDS                  | FB                               | 80                               | 12                                  | 5                                  |
| AHLOSLIB                  | U                          | PDS                  | FB                               | 80                               | 5                                   | 5                                  |
| AHLOTENU                  | U                          | PDS                  | FB                               | 80                               | 5                                   | 5                                  |
| AHLVBIN                   | U                          | PDS                  | VB                               | 256                              | 375                                 | 5                                  |
| AHLVCNTL                  | U                          | PDS                  | FB                               | 80                               | 30                                  | 10                                 |
| AHLVDBRM                  | U                          | PDS                  | FB                               | 80                               | 5                                   | 5                                  |
| AHLVEXEC                  | U                          | PDS                  | FB                               | 80                               | 30                                  | 5                                  |
| AHLVLOAD                  | U                          | PDSE                 | U                                | 0                                | 3750                                | n/a                                |
| AHLVMAP                   | U                          | PDS                  | FB                               | 2048                             | 20                                  | 10                                 |
| AHLVMENU                  | U                          | PDS                  | FB                               | 80                               | 10                                  | 5                                  |
| AHLVOBJX                  | U                          | PDS                  | FB                               | 80                               | 35                                  | 5                                  |
| AHLVPENU                  | U                          | PDS                  | FB                               | 80                               | 12                                  | 10                                 |
| AHLVRPC                   | U                          | PDSE                 | U                                | 0                                | 125                                 | n/a                                |
| AHLVSAMP                  | U                          | PDS                  | FB                               | 80                               | 30                                  | 15                                 |
| AHLVSLIB                  | U                          | PDS                  | FB                               | 80                               | 5                                   | 5                                  |
| AHLVSMAP                  | U                          | PDS                  | FB                               | 2048                             | 1200                                | 30                                 |
| AHLVTENU                  | U                          | PDS                  | FB                               | 80                               | 5                                   | 5                                  |
| AHLVXATH                  | U                          | PDS                  | FB                               | 80                               | 15                                  | 10                                 |
| AHLVXCMD                  | U                          | PDS                  | FB                               | 80                               | 10                                  | 10                                 |
| AHLVXEXC                  | U                          | PDS                  | FB                               | 80                               | 12                                  | 10                                 |
| AHLVXSQL                  | U                          | PDS                  | FB                               | 80                               | 10                                  | 5                                  |
| AHLVXTOD                  | U                          | PDS                  | FB                               | 80                               | 5                                   | 5                                  |
| AHLVXVTB                  | U                          | PDS                  | FB                               | 80                               | 5                                   | 5                                  |

Figure 17. Storage Requirements for FEC Common Code 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 |
|-------------------|------------------|-------------|-----------------------|-----------------------|---------------------------|--------------------------|
| AFECDBRM          | S                | PDS         | FB                    | 80                    | 6                         | 5                        |
| AFECLOAD          | S                | PDS         | U                     | 0                     | 41                        | 20                       |
| AFECMENU          | S                | PDS         | FB                    | 80                    | 6                         | 5                        |
| AFECPENU          | S                | PDS         | FB                    | 80                    | 38                        | 15                       |
| AFECSAMP          | S                | PDS         | FB                    | 80                    | 6                         | 2                        |

### 5.3 FMIDs Deleted

Installing Analytics Accelerator Loader 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 Analytics Accelerator Loader 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

#### FEC Common Code

##### FMID H25F132 Considerations:

1. It is strongly recommended to install all the DB2 tools that share the same common code FMID into the same SMP/E target and distribution zones. Several of the DB2 tools will be delivering common code, shipping the same FMID. You will only be required to install the common code FMID once. If you use different SMP/E target and distribution zones, you will have to install and maintain multiple instances of the same FMID, which will increase your maintenance and DASD requirements.

##### PDSE Considerations:

Analytics Accelerator Loader uses the "partitioned data set extended" or PDSE format for the SHLOLOAD, SHLVLOAD, and SHLVRPC target libraries. There are some operational differences between PDS and PDSE data sets. The PDS format may be shared by more than one z/OS system and no special



precautions are necessary. However the PDSE format may only be shared by z/OS systems which are part of a sysplex or which are connected using Global Resource Serialization (are in a GRS complex). If z/OS systems share use of a PDSE data set outside of a sysplex or GRS environment, you may experience severe problems when the data set is updated. This is due to the fact that PDSE directory information is cached in storage, and when the data set is updated from one system the other system(s) have no knowledge of the update, and their cached directory information will be incorrect.

You must take care not to share these PDSE data sets between z/OS systems unless they are in a sysplex or are connected in a GRS complex. If you need to share the content of these data sets, a separate copy must be created for each z/OS system.

---

## 6.0 Installation Instructions

This chapter describes the installation method and the step-by-step procedures to install and to activate the functions of Analytics Accelerator Loader.

Please note the following points:

- If you want to install Analytics Accelerator Loader 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 Analytics Accelerator Loader

#### 6.1.1 SMP/E Considerations for Installing Analytics Accelerator Loader

Use the SMP/E RECEIVE, APPLY, and ACCEPT commands to install this release of Analytics Accelerator Loader.

#### 6.1.2 SMP/E Options Subentry Values

The recommended values for certain SMP/E CSI subentries are shown in Figure 18. 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.

*Figure 18. SMP/E Options Subentry Values*

| Subentry | Value         | Comment   |
|----------|---------------|---|
| DSSPACE  | (500,250,300) | 3390 DASD tracks                                  |
| PEMAX    | SMP/E Default | IBM recommends using the SMP/E default for PEMAX. |

### 6.1.3 SMP/E CALLLIBS Processing

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

- CSSLIB
- SCLBSID
- SCEEBND2
- SCEECPP
- SCEELIB
- SCEELKED
- SCEELKEX
- SDSNLOAD
- SISPLOAD
- SCCNOBJ
- SEZATCP

**Note:** CALLLIBS uses the previous DDDEFs only to resolve the link-edit for Analytics Accelerator Loader. These data sets are not updated during the installation of Analytics Accelerator Loader.

### 6.1.4 Sample Jobs

The following sample installation jobs are provided as part of the product to help you install Analytics Accelerator Loader:

*Figure 19 (Page 1 of 2). Sample Installation Jobs*

| Job Name | Job Type | Description  | RELFILE        |
|----------|----------|--|----------------|
| HLOALA   | SMP/E    | Sample job to allocate and initialize a new SMP/E CSI data set <b>(Optional)</b> | IBM.HHLO210.F2 |
| HLOALB   | SMP/E    | Sample job to allocate SMP/E data sets <b>(Optional)</b>                         | IBM.HHLO210.F2 |
| HLORECEV | RECEIVE  | Sample RECEIVE job (FMID HHLO210)  | IBM.HHLO210.F2 |
| HLORECV2 | RECEIVE  | Sample RECEIVE job (FMID HALE210)  | IBM.HHLO210.F2 |
| HLORECV1 | RECEIVE  | Sample RECEIVE job for FEC Common Code (FMID H25F132)                            | IBM.HHLO210.F2 |
| HLOALLOC | ALLOCATE | Sample job to allocate target and distribution libraries                         | IBM.HHLO210.F2 |
| HLOALLO1 | ALLOCATE | Sample job to allocate target and distribution libraries for FEC Common Code     | IBM.HHLO210.F2 |
| HLODDDEF | DDDEF    | Sample job to define SMP/E DDDEFs  | IBM.HHLO210.F2 |
| HLODDEF1 | DDDEF    | Sample job to define SMP/E DDDEFs for FEC Common Code                            | IBM.HHLO210.F2 |

Figure 19 (Page 2 of 2). Sample Installation Jobs

| Job Name | Job Type | Description       | RELFILE        |
|----------|----------|-------------------|----------------|
| HLOAPPLY | APPLY    | Sample APPLY job  | IBM.HHLO210.F2 |
| HLOACCEP | ACCEPT   | Sample ACCEPT job | IBM.HHLO210.F2 |

You can access the sample installation jobs by performing an SMP/E RECEIVE (refer to 6.1.7, “Perform SMP/E RECEIVE” on page 25) then copy the jobs from the RELFILES to a work data set for editing and submission. See Figure 19 on page 23 to find the appropriate relfile data set.

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

```
//STEP1 EXEC PGM=IEBCOPY
//SYSPRINT DD SYSOUT=*
//*****
/* Make the //TAPEIN DD statement below active if you install*
/* from a CBPDO tape by uncommenting the DD statement below. *
//*****
/*TAPEIN DD DSN=IBM.HHLO210.F2,UNIT=tunit,
/* VOL=SER=volser,LABEL=(x,SL),
/* DISP=(OLD,KEEP)
//*****
/* Make the //TAPEIN DD statement below active if you install*
/* from a product tape received outside the CBPDO process *
/* (using the optional SMP/E RECEIVE job) by uncommenting *
/* the DD statement below. *
//*****
/*TAPEIN DD DSN=IBM.HHLO210.F2,UNIT=tunit,
/* VOL=SER=HL0210,LABEL=(3,SL),
/* DISP=(OLD,KEEP)
//*****
/* Make the //FILEIN DD statement below active for *
/* downloaded DASD files. *
//*****
/*FILEIN DD DSN=IBM.HHLO210.F2,UNIT=SYSALLDA,DISP=SHR,
/* VOL=SER=filevol
//OUT DD DSNAME=jc1-library-name,
// DISP=(NEW,CATLG,DELETE),
// VOL=SER=dasdvol,UNIT=SYSALLDA,
// SPACE=(TRK,(20,10,5))
//SYSUT3 DD UNIT=SYSALLDA,SPACE=(CYL,(1,1))
//SYSIN DD *
COPY INDD=xxxxIN,OUTDD=OUT
/*
```

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

TAPEIN:

**tunit** is the unit value that matches the product 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.HHLO210.F2 on the tape.

FILEIN:

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

OUT:

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

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

SYSIN:

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

## 6.1.5 Allocate SMP/E CSI (Optional)

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

If you are allocating a new SMP/E data set for this install, edit and submit sample job HLOALA to allocate the SMP/E data set for Analytics Accelerator Loader. Consult the instructions in the sample job for more information.

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

## 6.1.6 Initialize CSI zones (Optional)

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

Edit and submit sample job HLOALB to initialize SMP/E zones for Analytics Accelerator Loader. Consult the instructions in the sample job for more information.

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

## 6.1.7 Perform SMP/E RECEIVE

**Note:** FEC Common Code, H25F132, is a mandatory installation and operational requisite for Analytics Accelerator Loader. If you have already installed FEC Common Code, H25F132, **do not** receive this FMID again.

If you have obtained Analytics Accelerator Loader as part of a CBPDO, use the RCVPDO job in the CBPDO RIMLIB data set to receive the Analytics Accelerator Loader 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 jobs HLORECEV, and HLORECV2, to perform the SMP/E RECEIVE for Analytics Accelerator Loader. 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.

If needed, you can edit and submit the sample job HLORECV1 to perform the SMP/E RECEIVE for the FEC Common Code. Consult the instructions in the sample job for more information.

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

### 6.1.8 Allocate SMP/E Target and Distribution Libraries

Edit and submit sample job HLOALLOC to allocate the SMP/E target and distribution libraries for Analytics Accelerator Loader. 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.

If you are installing FEC Common Code, edit and submit sample job HLOALLO1 to allocate the SMP/E target and distribution libraries for FEC Common Code. Consult the instructions in the sample job for more information.

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

### 6.1.9 Create DDDEF Entries

Edit and submit sample job HLODDDEF to create DDDEF entries for the SMP/E target and distribution libraries for Analytics Accelerator Loader. 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.

If you are installing FEC Common Code, edit and submit sample job HLODDEF1 to create DDDEF entries for the SMP/E target and distribution libraries for FEC Common Code. Consult the instructions in the sample job for more information.

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

### 6.1.10 Perform SMP/E APPLY

1. Ensure that you have the latest HOLDDATA; then edit and submit sample job HLOAPPLY to perform an SMP/E APPLY CHECK for Analytics Accelerator Loader. 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/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*)
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*)
FIXCAT(IBM.ProductInstall-RequiredService)
GROUPEXTEND
BYPASS(HOLDCLASS(HIPER),HOLDFIXCAT) .
..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.

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

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

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

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

### 6.1.11 Perform SMP/E ACCEPT

Edit and submit sample job HLOACCEP to perform an SMP/E ACCEPT CHECK for Analytics Accelerator Loader. 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.

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

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

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

If you accept PTF s for H25F132, you may see IEW2454W/ GIM23903W messages with a RC=4. These messages are acceptable for ACCEPT processing.

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.

If you accept PTF s for H25F132, you may see IEW2454W/ GIM23903W messages with a RC=4. These messages are acceptable for ACCEPT processing.

## 6.1.12 Run REPORT CROSSZONE

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

After you install Analytics Accelerator Loader, 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.

## 6.1.13 Cleaning Up Obsolete Data Sets, Paths, and DDDEFs

The following data sets, which were allocated and used by previous releases of this product, are no longer used in this release. You can delete these obsolete data sets after you delete the previous release from your system.

- AHLOEXP
- SHLOEXP

The following DDDEF entries, which were created and used by previous releases of this product, are no longer used in this release. You can delete these obsolete DDDEF entries after you delete the previous release from your system.

- AHLOEXP
- SHLOEXP

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## 6.2 Activating Analytics Accelerator Loader

### 6.2.1 Product Customization

The publication *IBM DB2 Analytics Accelerator Loader for z/OS User's Guide (SC27-6777)* contains the necessary information to customize and use Analytics Accelerator Loader.

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## 7.0 Notices

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## Reader's Comments

### Program Directory for IBM DB2 Analytics Accelerator Loader for z/OS, February 2016

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