



**Program Directory for  
IBM Application Delivery Foundation  
for z/OS**

V3.2.2

Program Number 5655-AC6

for Use with  
z/OS V02.02.00 or later

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G113-4538-05

**Note**

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

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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 Application Delivery Foundation for z/OS. This publication refers to

- *IBM Application Delivery Foundation for z/OS as Application Delivery Foundation*
- *IBM Developer for z/OS Enterprise Edition as Developer for z/OS EE*
- *IBM z/OS Explorer Extensions as z/OS Explorer Extensions*
- *IBM z/OS Source Code Analysis as z/OS Source Code Analysis*
- *IBM Dependency Based Build as Dependency Based Build*
- *IBM Z Open Automation Utilities as Z Open Automation Utilities*
- *IBM z/OS Dynamic Test Runner as z/OS Dynamic Test Runner*
- *IBM z/OS Debugger as z/OS Debugger*
- *IBM COBOL and CICS Command Level Conversion Aid for OS/390 & MVS & VM as CCCA*
- *IBM COBOL and CICS Command Level Conversion Aid for OS/390 & MVS & VM Japanese National Language Feature as CCCA Japanese NLF*
- *IBM Explorer for z/OS as z/OS Explorer*
- *IBM Remote System Explorer API as RSEAPI*
- *IBM Fault Analyzer for z/OS as Fault Analyzer*
- *IBM File Manager for z/OS as File Manager*
- *IBM Application Delivery Foundation for z/OS Common Components as ADFz Common Components*
- *IBM Application Performance Analyzer for z/OS as Application Performance Analyzer*

The Program Directory contains the following sections:

- 2.0, “Program Materials” on page 5 identifies the basic program materials and documentation for Application Delivery Foundation.
- 3.0, “Program Support” on page 8 describes the IBM support available for Application Delivery Foundation.
- 4.0, “Program and Service Level Information” on page 11 lists the APARs (program level) and PTFs (service level) that have been incorporated into Application Delivery Foundation.
- 5.0, “Installation Requirements and Considerations” on page 13 identifies the resources and considerations that are required for installing and using Application Delivery Foundation.
- 6.0, “Installation Instructions” on page 22 provides detailed installation instructions for Application Delivery Foundation. It also describes the procedures for activating the functions of Application Delivery Foundation, or refers to appropriate publications.

Before installing Application Delivery Foundation, 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; after which, keep the documents for your 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.

Application Delivery Foundation is supplied in a Custom-Built Product Delivery Offering (CBPDO, 5751-CS3). The program directory that is provided in softcopy format on the CBPDO is identical to the hardcopy format if one was included with your order. All service and HOLDDATA for Application Delivery Foundation are included on the CBPDO.

Do not use this program directory if you install Application Delivery Foundation 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 Application Delivery Foundation Description

IBM Application Delivery Foundation for z/OS V3.2.2 includes the following development tools:

- IBM Developer for z/OS Enterprise Edition V14.2
- IBM Explorer for z/OS V3.1
- IBM Fault Analyzer for z/OS V14.1
- IBM File Manager for z/OS V14.1
- IBM Application Performance Analyzer for z/OS V14.2

These products can be obtained as a solution bundle or individually:

- IBM Developer for z/OS Enterprise Edition V14.2 includes FMIDs IBM z/OS Explorer Extensions V14.2, IBM z/OS Source Code Analysis V14.2, IBM Dependency Based Build V1.0, IBM Z Open Automation Utilities V1.0, IBM z/OS Dynamic Test Runner V1.0, IBM z/OS Debugger V14.2, and IBM COBOL and CICS Command Level Conversion Aid for OS/390 & MVS & VM V2.1. This product provides a comprehensive development and debugging solution for z/OS application developers.
- IBM Explorer for z/OS V3.1 includes FMIDs IBM Explorer for z/OS V3.1, and IBM Remote System Explorer API V3.1. This product is the strategic integration platform for IBM's Eclipse-based offering for z/OS application developers and system programmers.
- IBM Fault Analyzer for z/OS V14.1 improves developer productivity and decreases deployment costs by helping to analyze and correct application failures quickly.
- IBM File Manager for z/OS V14.1 allows you to manipulate production, test, and development data in a variety of data stores, including DB2, IMS, CICS, MQ, data sets, and z/OS UNIX files.
- IBM Application Performance Analyzer for z/OS V14.2 identifies z/OS application performance and response time problems, and assists in reducing resource consumption.

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## 1.2 Application Delivery Foundation FMIDs

Application Delivery Foundation consists of the following FMIDs:

- Developer for z/OS EE:
  - z/OS Explorer Extensions:  
HHOPE20
  - z/OS Source Code Analysis:  
HAKGE20
  - Dependency Based Build:  
HBGZ100
  - Z Open Automation Utilities:  
HAL5100
  - z/OS Dynamic Test Runner:  
HAL6100
  - z/OS Debugger:  
HADRE20  
JADRE2J  
JADRE2K
  - CCCA:  
H09F210  
J09F210
- z/OS Explorer:  
HALG310  
HAMA100
- Fault Analyzer:  
HADQE10  
JADQE1J  
JADQE1K
- File Manager:  
HADLE10  
JADLE11  
JADLE12  
JADLE13  
JADLE14  
JADLE15  
JADLE16  
JADLE17  
JADLE1A  
JADLE1B  
JADLE1C  
JADLE1D

- ADFz Common Components:
  - HVWR180
  - JVWR181
  - JVWR182
- Application Performance Analyzer:
  - HAD0E20
  - JAD0E2J
  - JAD0E2K

## 2.0 Program Materials

An IBM program is identified by a program number. The program number for Application Delivery Foundation is 5655-AC6.

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 Application Delivery Foundation. 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 22 for more information about how to install the program.

Figure 1 describes the program file content for Application Delivery Foundation. You can refer to the *CBPDO Memo To Users Extension* to see where the files reside on the image.

**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.

<i>Figure 1. Program File Content for HCDT32Z - Application Delivery Foundation Identifier</i>				
Name	O R G	R E C F M	L R E C L	BLK SIZE
<b>Note:</b> Application Delivery Foundation does not have an FMID that is not described in a program directory of the products that constitute Application Delivery Foundation.				

Additionally to view the Program File Content of the other products that constitute Application Delivery Foundation, refer to the following Program Directories that are supplied with the product.

- Publication number GI11-8298 for z/OS Explorer Extensions
- Publication number GI13-2864 for z/OS Source Code Analysis
- Publication number GI13-4566 for Dependency Based Build
- Publication number GI13-4927 for Z Open Automation Utilities
- Publication number GI13-4928 for z/OS Dynamic Test Runner
- Publication number GI13-4540 for z/OS Debugger

- Publication number GI10-5080 for CCCA
- Publication number GI10-6976 for CCCA Japanese NLF
- Publication number GI13-4314 for z/OS Explorer
- Publication number GI13-5400 for RSEAPI
- Publication number GI10-8967 for Fault Analyzer
- Publication number GI10-8968 for File Manager
- Publication number GI10-8969 for ADFz Common Components
- Publication number GI13-4303 for Application Performance Analyzer

## 2.2 Program Publications

The following sections identify the basic publications for Application Delivery Foundation.

Figure 2 identifies the basic unlicensed publications for Application Delivery Foundation. Those that are in softcopy format publications can be obtained from the IBM Publications Center website at: <https://www.shop/publications/order>

<i>Figure 2. Basic Material: Unlicensed Publications</i>	
<b>Publication Title</b>	<b>Form Number</b>
<i>IBM Application Delivery Foundation for z/OS Agreements and License Information</i>	GI13-4539
<i>Program Directory for IBM z/OS Explorer Extensions</i>	GI11-8298
<i>Program Directory for IBM z/OS Source Code Analysis</i>	GI13-2864
<i>Program Directory for IBM Dependency Based Build</i>	GI13-4566
<i>Program Directory for IBM Z Open Automation Utilities</i>	GI13-4927
<i>Program Directory for IBM z/OS Dynamic Test Runner</i>	GI13-4928
<i>Program Directory for IBM z/OS Debugger</i>	GI13-4540
<i>Program Directory for IBM COBOL and CICS Command Level Conversion Aid for OS/390 &amp; MVS &amp; VM</i>	GI10-5080
<i>Program Directory for IBM COBOL and CICS Command Level Conversion Aid for OS/390 &amp; MVS &amp; VM Japanese National Language Feature</i>	GI10-6976
<i>Program Directory for IBM Explorer for z/OS</i>	GI13-4314
<i>Program Directory for IBM Remote System Explorer API</i>	GI13-5400
<i>Program Directory for IBM Fault Analyzer for z/OS</i>	GI10-8967
<i>Program Directory for IBM File Manager for z/OS</i>	GI10-8968
<i>Program Directory for IBM Application Delivery Foundation for z/OS Common Components</i>	GI10-8969
<i>Program Directory for IBM Application Performance Analyzer for z/OS</i>	GI13-4303

To view the unlicensed publications content of the products that constitute Application Delivery Foundation, refer to the following Program Directories that are supplied with the product.

- Publication number GI11-8298 for z/OS Explorer Extensions
- Publication number GI13-2864 for z/OS Source Code Analysis
- Publication number GI13-4566 for Dependency Based Build
- Publication number GI13-4927 for Z Open Automation Utilities
- Publication number GI13-4928 for z/OS Dynamic Test Runner
- Publication number GI13-4540 for z/OS Debugger
- Publication number GI10-5080 for CCCA
- Publication number GI10-6976 for CCCA Japanese NLF
- Publication number GI13-4314 for z/OS Explorer
- Publication number GI13-5400 for RSEAPI
- Publication number GI10-8967 for Fault Analyzer
- Publication number GI10-8968 for File Manager
- Publication number GI10-8969 for ADFz Common Components
- Publication number GI13-4303 for Application Performance Analyzer

## 2.2.1 Optional Program Publications

No optional publications are provided for Application Delivery Foundation.

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## 2.3 Program Source Materials

No program source materials or viewable program listings are provided for Application Delivery Foundation.

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## 2.4 Publications Useful During Installation

You might want to use the publications listed in Figure 3 during the installation of Application Delivery Foundation.

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

**Note:** IBM Publications Center <https://www.shop/publications/order>

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## 3.0 Program Support

This section describes the IBM support available for Application Delivery Foundation.

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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 Application Delivery Foundation, 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-REQUIRESERVICE fix category in SMP/E to ensure you have all the recommended service installed. Use the **FIXCAT(IBM.PRODUCTINSTALL-REQUIRESERVICE)** operand on the **APPLY CHECK** command. See 6.1.9, “Perform SMP/E APPLY” on page 24 for a sample APPLY command

If you obtained Application Delivery Foundation Identifier as part of a CBPDO, HOLDDATA is included.

If the CBPDO for Application Delivery Foundation is older than two weeks by the time you install the product materials, you can obtain the latest PSP Bucket information by going to the following website:

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

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

For program support, access the Software Support Website at <http://www.ibm.com/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 Application Delivery Foundation Identifier are included in Figure 4

UPGRADE	SUBSET	Description
5655AC6	HCDT32Z	Application Delivery Foundation Identifier

To view the Preventive Service Planning (PSP) for the products that constitute Application Delivery Foundation, refer to the following Program Directories that are supplied with the product.

- Publication number GI11-8298 for z/OS Explorer Extensions
- Publication number GI13-2864 for z/OS Source Code Analysis
- Publication number GI13-4566 for Dependency Based Build
- Publication number GI13-4927 for Z Open Automation Utilities
- Publication number GI13-4928 for z/OS Dynamic Test Runner
- Publication number GI13-4540 for z/OS Debugger
- Publication number GI10-5080 for CCCA
- Publication number GI10-6976 for CCCA Japanese NLF
- Publication number GI13-4314 for z/OS Explorer
- Publication number GI13-5400 for RSEAPI
- Publication number GI10-8967 for Fault Analyzer
- Publication number GI10-8968 for File Manager
- Publication number GI10-8969 for ADFz Common Components
- Publication number GI13-4303 for Application Performance Analyzer

### 3.3 Statement of Support Procedures

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

Figure 5 identifies the component IDs (COMPID) for Application Delivery Foundation Identifier.

<i>Figure 5. Component IDs</i>			
<b>FMID</b>	<b>COMPID</b>	<b>Component Name</b>	<b>RETAIN Release</b>
<b>Note:</b> Application Delivery Foundation does not have an FMID that is not described in a program directory of the products that constitute Application Delivery Foundation.			

To identify the component IDs (COMPID) for the products that constitute Application Delivery Foundation, refer to the following Program Directories that are supplied with the product.

- Publication number GI11-8298 for z/OS Explorer Extensions
- Publication number GI13-2864 for z/OS Source Code Analysis
- Publication number GI13-4566 for Dependency Based Build
- Publication number GI13-4927 for Z Open Automation Utilities
- Publication number GI13-4928 for z/OS Dynamic Test Runner
- Publication number GI13-4540 for z/OS Debugger
- Publication number GI10-5080 for CCCA
- Publication number GI10-6976 for CCCA Japanese NLF
- Publication number GI13-4314 for z/OS Explorer
- Publication number GI13-5400 for RSEAPI
- Publication number GI10-8967 for Fault Analyzer
- Publication number GI10-8968 for File Manager

- Publication number GI10-8969 for ADFz Common Components
- Publication number GI13-4303 for Application Performance Analyzer

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## 4.0 Program and Service Level Information

This section identifies the program and relevant service levels of Application Delivery Foundation. 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

All resolved APARs of previous releases of Application Delivery Foundation Identifier have been incorporated into Application Delivery Foundation Identifier.

To view the list of APAR fixes against the previous releases of the products that constitute Application Delivery Foundation, refer to the following Program Directories that are supplied with the product.

- Publication number GI11-8298 for z/OS Explorer Extensions
- Publication number GI13-2864 for z/OS Source Code Analysis
- Publication number GI13-4566 for Dependency Based Build
- Publication number GI13-4927 for Z Open Automation Utilities
- Publication number GI13-4928 for z/OS Dynamic Test Runner
- Publication number GI13-4540 for z/OS Debugger
- Publication number GI10-5080 for CCCA
- Publication number GI10-6976 for CCCA Japanese NLF
- Publication number GI13-4314 for z/OS Explorer
- Publication number GI13-5400 for RSEAPI
- Publication number GI10-8967 for Fault Analyzer
- Publication number GI10-8968 for File Manager
- Publication number GI10-8969 for ADFz Common Components
- Publication number GI13-4303 for Application Performance Analyzer

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### 4.2 Service Level Information

No PTFs against this release of Application Delivery Foundation Identifier have been incorporated into the product package.

Frequently check the Application Delivery Foundation 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 recommended and critical service that should be installed with your FMIDs.

To view the Service Level Information of the products that constitute Application Delivery Foundation, refer to the following Program Directories that are supplied with the product.

- Publication number GI11-8298 for z/OS Explorer Extensions

- Publication number GI13-2864 for z/OS Source Code Analysis
- Publication number GI13-4566 for Dependency Based Build
- Publication number GI13-4927 for Z Open Automation Utilities
- Publication number GI13-4928 for z/OS Dynamic Test Runner
- Publication number GI13-4540 for z/OS Debugger
- Publication number GI10-5080 for CCCA
- Publication number GI10-6976 for CCCA Japanese NLF
- Publication number GI13-4314 for z/OS Explorer
- Publication number GI13-5400 for RSEAPI
- Publication number GI10-8967 for Fault Analyzer
- Publication number GI10-8968 for File Manager
- Publication number GI10-8969 for ADFz Common Components
- Publication number GI13-4303 for Application Performance Analyzer

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## 5.0 Installation Requirements and Considerations

The following sections identify the system requirements for installing and activating Application Delivery Foundation. 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 Application Delivery Foundation.

#### 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 6. Driving System Software Requirements

Program Number	Product Name	Minimum VRM	Minimum Service Level will satisfy these APARs	Included in the shipped product?
5650-ZOS	z/OS	V02.02.00	N/A	No
<b>Note:</b> The minimum z/OS level is either what is listed in the table, or the currently minimum supported OS level, whichever is the most recent.				

**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 [https://www-01.ibm.com/software/support/lifecycle/index\\_z.html](https://www-01.ibm.com/software/support/lifecycle/index_z.html).

## 5.2 Target System Requirements

This section describes the environment of the target system required to install and use Application Delivery Foundation.

Application Delivery Foundation 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.

Application Delivery Foundation Identifier (FMID HCDD32Z) has no mandatory installation requisites.

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

Application Delivery Foundation Identifier (FMID HCDD32Z) has no conditional installation requisites.

To view the installation requisites of the additional products that constitute Application Delivery Foundation, refer to the following Program Directories that are supplied with the product.

- Publication number GI11-8298 for z/OS Explorer Extensions
- Publication number GI13-2864 for z/OS Source Code Analysis
- Publication number GI13-4566 for Dependency Based Build
- Publication number GI13-4927 for Z Open Automation Utilities
- Publication number GI13-4928 for z/OS Dynamic Test Runner
- Publication number GI13-4540 for z/OS Debugger
- Publication number GI10-5080 for CCCA
- Publication number GI10-6976 for CCCA Japanese NLF
- Publication number GI13-4314 for z/OS Explorer
- Publication number GI13-5400 for RSEAPI
- Publication number GI10-8967 for Fault Analyzer
- Publication number GI10-8968 for File Manager
- Publication number GI10-8969 for ADFz Common Components
- Publication number GI13-4303 for Application Performance Analyzer

### 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.

Application Delivery Foundation Identifier (FMID HC3T3Z) has no mandatory operational requisites.

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.

Application Delivery Foundation Identifier (FMID HC3T3Z) has no conditional operational requisites.

To view the operational requisites of the additional products that constitute Application Delivery Foundation, refer to the following Program Directories that are supplied with the product.

- Publication number GI11-8298 for z/OS Explorer Extensions
- Publication number GI13-2864 for z/OS Source Code Analysis
- Publication number GI13-4566 for Dependency Based Build
- Publication number GI13-4927 for Z Open Automation Utilities
- Publication number GI13-4928 for z/OS Dynamic Test Runner
- Publication number GI13-4540 for z/OS Debugger
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- Publication number GI13-5400 for RSEAPI
- Publication number GI10-8967 for Fault Analyzer

- Publication number GI10-8968 for File Manager
- Publication number GI10-8969 for ADFz Common Components
- Publication number GI13-4303 for Application Performance Analyzer

### 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.

Application Delivery Foundation Identifier (FMID HCCT32Z) has no toleration/coexistence requisites.

To view the toleration/coexistence requisites of the additional products that constitute Application Delivery Foundation, refer to the following Program Directories that are supplied with the product.

- Publication number GI11-8298 for z/OS Explorer Extensions
- Publication number GI13-2864 for z/OS Source Code Analysis
- Publication number GI13-4566 for Dependency Based Build
- Publication number GI13-4927 for Z Open Automation Utilities
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- Publication number GI10-8968 for File Manager
- Publication number GI10-8969 for ADFz Common Components
- Publication number GI13-4303 for Application Performance Analyzer

### 5.2.2.4 Incompatibility (Negative) Requisites

Negative requisites identify products that must *not* be installed on the same system as this product.

Application Delivery Foundation Identifier (FMID HCCT32Z) has no negative requisites.

To view the negative requisites of the additional products that constitute Application Delivery Foundation, refer to the following Program Directories that are supplied with the product.

- Publication number GI11-8298 for z/OS Explorer Extensions
- Publication number GI13-2864 for z/OS Source Code Analysis
- Publication number GI13-4566 for Dependency Based Build
- Publication number GI13-4927 for Z Open Automation Utilities
- Publication number GI13-4928 for z/OS Dynamic Test Runner
- Publication number GI13-4540 for z/OS Debugger
- Publication number GI10-5080 for CCCA

- Publication number GI10-6976 for CCCA Japanese NLF
- Publication number GI13-4314 for z/OS Explorer
- Publication number GI13-5400 for RSEAPI
- Publication number GI10-8967 for Fault Analyzer
- Publication number GI10-8968 for File Manager
- Publication number GI10-8969 for ADFz Common Components
- Publication number GI13-4303 for Application Performance Analyzer

### 5.2.3 DASD Storage Requirements

Application Delivery Foundation libraries can reside on all supported DASD types.

Additionally Figure 7 lists the total space that is required for each type of library for Application Delivery Foundation Identifier.

<i>Figure 7. Total DASD Space Required by HCDD32Z - Application Delivery Foundation Identifier</i>		
<b>Library Type</b>	<b>Total Space Required in 3390 Trks</b>	<b>Description</b>
<b>Note:</b> Application Delivery Foundation does not have an FMID that is not described in a program directory of the products that constitute Application Delivery Foundation.		

To review the total DASD storage requirements of each of the products that constitute Application Delivery Foundation, refer to the following Program Directories that are supplied with the product.

- Publication number GI11-8298 for z/OS Explorer Extensions
- Publication number GI13-2864 for z/OS Source Code Analysis
- Publication number GI13-4566 for Dependency Based Build
- Publication number GI13-4927 for Z Open Automation Utilities
- Publication number GI13-4928 for z/OS Dynamic Test Runner
- Publication number GI13-4540 for z/OS Debugger
- Publication number GI10-5080 for CCCA
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- Publication number GI10-8967 for Fault Analyzer
- Publication number GI10-8968 for File Manager
- Publication number GI10-8969 for ADFz Common Components
- Publication number GI13-4303 for Application Performance Analyzer

**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 6.1.7, "Allocate SMP/E Target and Distribution Libraries" on page 23.

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, with some exceptions. If the value in the "ORG" column specifies "PDS", the data set must be a PDS. If the value in "DIR Blks" column specifies "N/A", the data set must be a PDSE.

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 not be in the LPA, with some exceptions. If the value in the "Member Type" column specifies "LPA", it is advised to place the data set in the LPA.
- These data sets can be in the LNKLST.
- These data sets are not required to be APF-authorized, with some exceptions. If the value in the "Member Type" column specifies "APF", the data set must be APF-authorized.

The following figures describe the target and distribution libraries required to install Application Delivery Foundation. The storage requirements of Application Delivery Foundation 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.

<i>Figure 8. Storage Requirements for HCDDT32Z - Application Delivery Foundation Identifier Target Libraries</i>								
Library DDNAME	Member Type	Target Volume	T Y P E	O R G	R E C F M	L R E C L	No. of 3390 Trks	No. of DIR Blks
<b>Note:</b> Application Delivery Foundation does not have an FMID that is not described in a program directory of the products that constitute Application Delivery Foundation.								

<i>Figure 9. Storage Requirements for HCDDT32Z - Application Delivery Foundation Identifier Distribution Libraries</i>								
Library DDNAME			T Y P E	O R G	R E C F M	L R E C L	No. of 3390 Trks	No. of DIR Blks
<b>Note:</b> Application Delivery Foundation does not have an FMID that is not described in a program directory of the products that constitute Application Delivery Foundation.								

To review the DASD storage requirements for Target and Distribution libraries of each of the products that constitute Application Delivery Foundation, refer to the following Program Directories that are supplied with the product.

- Publication number GI11-8298 for z/OS Explorer Extensions
- Publication number GI13-2864 for z/OS Source Code Analysis
- Publication number GI13-4566 for Dependency Based Build
- Publication number GI13-4927 for Z Open Automation Utilities
- Publication number GI13-4928 for z/OS Dynamic Test Runner
- Publication number GI13-4540 for z/OS Debugger
- Publication number GI10-5080 for CCCA
- Publication number GI10-6976 for CCCA Japanese NLF
- Publication number GI13-4314 for z/OS Explorer
- Publication number GI13-5400 for RSEAPI
- Publication number GI10-8967 for Fault Analyzer
- Publication number GI10-8968 for File Manager
- Publication number GI10-8969 for ADFz Common Components
- Publication number GI13-4303 for Application Performance Analyzer

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## 5.3 FMIDs Deleted

Installing any of the products that constitute Application Delivery Foundation, may 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 Application Delivery Foundation 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.

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## 5.4 Special Considerations

### 5.4.1 Subcapacity Reporting Tool Registration

Products purchased as part of Application Delivery Foundation are required to be registered to run under the Application Delivery Foundation program ID, 5655-AC6.

PARMLIB member IFAPRDxx needs to be updated to include a PRODUCT entry as follows:

```
PRODUCT OWNER('IBM CORP')
NAME('IBM APP DLIV FND')
ID(5655-AC6)
VERSION(*) RELEASE(*) MOD(*)
FEATURENAME(*)
STATE(ENABLED)
```

After you have updated IFAPRDxx, issue the SET PROD=xx operator command.

This PRODUCT entry is valid for all products that constitute Application Delivery Foundation. To view product registration instructions of each of the products that constitute Application Delivery Foundation, refer to the following Program Directories that are supplied with the product.

- Publication number GI11-8298 for z/OS Explorer Extensions
- Publication number GI13-2864 for z/OS Source Code Analysis
- Publication number GI13-4566 for Dependency Based Build
- Publication number GI13-4927 for Z Open Automation Utilities
- Publication number GI13-4928 for z/OS Dynamic Test Runner
- Publication number GI13-4540 for z/OS Debugger
- Publication number GI10-5080 for CCCA
- Publication number GI10-6976 for CCCA Japanese NLF
- Publication number GI13-4314 for z/OS Explorer
- Publication number GI13-5400 for RSEAPI
- Publication number GI10-8967 for Fault Analyzer

- Publication number GI10-8968 for File Manager
- Publication number GI10-8969 for ADFz Common Components
- Publication number GI13-4303 for Application Performance Analyzer

These Program Directories might refer you to the related product customization guide, whose publication number and name is documented in the "Product Customization" section of that Program Directory.

## 5.4.2 Special Considerations for the individual products

To view the special considerations of the products that constitute Application Delivery Foundation, refer to the following Program Directories that are supplied with the product.

- Publication number GI11-8298 for z/OS Explorer Extensions
- Publication number GI13-2864 for z/OS Source Code Analysis
- Publication number GI13-4566 for Dependency Based Build
- Publication number GI13-4927 for Z Open Automation Utilities
- Publication number GI13-4928 for z/OS Dynamic Test Runner
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## 6.0 Installation Instructions

This chapter describes the installation method and the step-by-step procedures to install and to activate the functions of Application Delivery Foundation.

Please note the following points:

- If you want to install Application Delivery Foundation 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.

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### 6.1 Installing Application Delivery Foundation

#### 6.1.1 SMP/E Considerations for Installing Application Delivery Foundation

Use the SMP/E RECEIVE, APPLY, and ACCEPT commands to install this release of Application Delivery Foundation.

To view the SMP/E installation instructions of each of the products that constitute Application Delivery Foundation, refer to the following Program Directories that are supplied with the product.

- Publication number GI11-8298 for z/OS Explorer Extensions
- Publication number GI13-2864 for z/OS Source Code Analysis
- Publication number GI13-4566 for Dependency Based Build
- Publication number GI13-4927 for Z Open Automation Utilities
- Publication number GI13-4928 for z/OS Dynamic Test Runner
- Publication number GI13-4540 for z/OS Debugger
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- Publication number GI10-8968 for File Manager
- Publication number GI10-8969 for ADFz Common Components
- Publication number GI13-4303 for Application Performance Analyzer

Additionally you should perform the following steps to install Application Delivery Foundation Identifier (FMID HCDT32Z).

## 6.1.2 SMP/E Options Subentry Values

The recommended values for certain SMP/E CSI subentries are shown in Figure 10. Using values lower than the recommended values can result in failures in the installation. DSSPACE is a subentry in the GLOBAL options entry. PEMAX is a subentry of the GENERAL entry in the GLOBAL options entry. See the SMP/E manuals for instructions on updating the global zone.

<i>Figure 10. SMP/E Options Subentry Values</i>		
Subentry	Value	Comment
DSSPACE	(500,500,500)	3390 DASD tracks
PEMAX	SMP/E Default	IBM recommends using the SMP/E default for PEMAX.

## 6.1.3 Sample Jobs

**Note:** Application Delivery Foundation does not have an FMID that is not described in a program directory of the products that constitute Application Delivery Foundation.

## 6.1.4 Allocate SMP/E CSI (Optional)

**Note:** Application Delivery Foundation does not have an FMID that is not described in a program directory of the products that constitute Application Delivery Foundation.

## 6.1.5 Initialize CSI zones (Optional)

**Note:** Application Delivery Foundation does not have an FMID that is not described in a program directory of the products that constitute Application Delivery Foundation.

## 6.1.6 Perform SMP/E RECEIVE

**Note:** Application Delivery Foundation does not have an FMID that is not described in a program directory of the products that constitute Application Delivery Foundation.

## 6.1.7 Allocate SMP/E Target and Distribution Libraries

**Note:** Application Delivery Foundation does not have an FMID that is not described in a program directory of the products that constitute Application Delivery Foundation.

## 6.1.8 Create DDDEF Entries

**Note:** Application Delivery Foundation does not have an FMID that is not described in a program directory of the products that constitute Application Delivery Foundation.

### 6.1.9 Perform SMP/E APPLY

**Note:** Application Delivery Foundation does not have an FMID that is not described in a program directory of the products that constitute Application Delivery Foundation.

### 6.1.10 Perform SMP/E ACCEPT

**Note:** Application Delivery Foundation does not have an FMID that is not described in a program directory of the products that constitute Application Delivery Foundation.

### 6.1.11 Run REPORT CROSSZONE

**Note:** Application Delivery Foundation does not have an FMID that is not described in a program directory of the products that constitute Application Delivery Foundation.

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## 6.2 Activating Application Delivery Foundation

There are no additional activation tasks for Application Delivery Foundation Identifier (FMID HCDDT32Z).

To activate the individual products that constitute Application Delivery Foundation, refer to their Program Directories which are supplied with the product, and follow the instructions in the corresponding section(s).

- Publication number GI11-8298 for z/OS Explorer Extensions
- Publication number GI13-2864 for z/OS Source Code Analysis
- Publication number GI13-4566 for Dependency Based Build
- Publication number GI13-4927 for Z Open Automation Utilities
- Publication number GI13-4928 for z/OS Dynamic Test Runner
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## Reader's Comments

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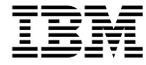
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