

# **Program Directory for**

# IBM WebSphere

# **Transformation Extender**

# for z/OS

V08.03.00

Program Number 5655-R95

FMIDs HDTX830, JDTX831, JDTX832, JDTX833, JDTX834

for Use with z/OS V1.10.00 and higher

Document Date: October 2010

GI11-2870-03

- 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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VI Transformation Extender for z/OS Program Directory

## **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 WebSphere Transformation Extender. This publication refers to IBM WebSphere Transformation Extender for z/OS.

The Program Directory contains the following sections:

- 2.0, "Program Materials" on page 3 identifies the basic and optional program materials and documentation for Transformation Extender for z/OS.
- 3.0, "Program Support" on page 8 describes the IBM support available for Transformation Extender for z/OS.
- 4.0, "Program and Service Level Information" on page 10 lists the APARs (program level) and PTFs (service level) that have been incorporated into Transformation Extender for z/OS.
- 5.0, "Installation Requirements and Considerations" on page 12 identifies the resources and considerations that are required for installing and using Transformation Extender for z/OS.
- 6.0, "Installation Instructions" on page 20 provides detailed installation instructions for Transformation Extender for z/OS. It also describes the procedures for activating the functions of Transformation Extender for z/OS, or refers to appropriate publications.

Before installing Transformation Extender for z/OS, read the *CBPDO Memo To Users* and the *CBPDO Memo To Users* 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.

Transformation Extender for z/OS is supplied in a Custom-Built Product Delivery Offering (CBPDO, 5751-CS3). The Program Directory that is provided in softcopy format on the CBPDO tape is identical to the hardcopy format that is provided with your order. All service and HOLDDATA for Transformation Extender for z/OS are included on the CBPDO tape.

Do not use this program directory if you install Transformation Extender for z/OS with a SystemPac or ServerPac. When you use these offerings, use the jobs and documentation supplied with the offering. This program directory can point you to specific sections of it as required.

#### 1.1 Transformation Extender for z/OS Description

Transformation Extender for z/OS offers the following benefits:

Achieve complex data integration in transactional and operational environments across the enterprise.

Implement and re-use integration and business logic without low level coding.

Leverage the value of legacy systems in enterprise applications.

Meet project-based, enterprise-wide needs for transactional and operational integration.

Comply with industry and regulatory standards for exchange of complex data.

Transformation Extender for z/OS consists of the following FMIDs:

HDTX830 JDTX831 JDTX832 JDTX833 JDTX834

Figure 1. FMID descriptions						
FMID	Description	Comment				
HDTX830 Transformation		Contains the configuration, setup, and runtime components common to the				
	Extender - Common	Transformation Extender for Application Programming,				
	Components	Transformation Extender with Command Servers,				
		Transformation Extender with Launcher,				
		Transformation Extender for Integration Servers				
JDTX831	Transformation Extender with Command Servers	Contains the runtime and the examples for the Batch Command Server.				
JDTX832	Transformation Extender for Application Programming	Contains the configuration, setup, examples and runtime for the z/OS development kit, UNIX System Services development kit, and the IMS/TM and CICS execution environments.				
JDTX833	Transformation Extender for Integration Servers	Contains the configuration, setup, and runtime for the WTX interfaces with WebSphere Message Broker, WebSphere Process Server and WebSphere Enterprise Service Bus.				
JDTX834	Transformation Extender with Launcher	Contains the configuration, setup and run time for the z/OS launcher.				

# 2.0 Program Materials

An IBM program is identified by a program number. The program number for Transformation Extender for z/OS is 5655-R95.

Basic Machine-Readable Materials are materials that are supplied under the base license and feature numbers, and are required for the use of the product. Optional Machine-Readable Materials are orderable under separate feature numbers, and are not required for the product to function.

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

#### 2.1 Basic Machine-Readable Material

The distribution medium for this program is magnetic tape or downloadable files. This program is in SMP/E RELFILE format and is installed by using SMP/E. See 6.0, "Installation Instructions" on page 20 for more information about how to install the program.

You can find information about the physical tape for the basic machine-readable materials for Transformation Extender for z/OS in the *CBPDO Memo To Users Extension*.

Figure 2 describes the program file content for Transformation Extender for z/OS. 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 2. Program File Content for HDTX830				
	0	R E C	L R E	
Name	R G	F M	C L	BLK SIZE
SMPMCS	SEQ	FB	80	8800
IBM.HDTX830.F1	PDSE	VB	128	6144
IBM.HDTX830.F2	PDSE	U	0	6144
IBM.HDTX830.F3	PDSE	FB	80	8800
IBM.HDTX830.F4	PDSE	U	0	6144

Figure 3. Program File Content for JDTX831				
	O R	R E C F	L R E C	BLK
Name	G	M	L	SIZE
SMPMCS	SEQ	FB	80	8800
IBM.JDTX831.F1	PDSE	FB	80	8800
IBM.JDTX831.F2	PDSE	VB	256	3860
IBM.JDTX831.F3	PDSE	U	0	
IBM.JDTX831.F4	PDSE	U	0	6144

Figure 4. Program File Content for JDTX832				
		R	L	
	ο	E C	R E	
	R	F	C	BLK
Name	G	М	L	SIZE
SMPMCS	SEQ	FB	80	8800
IBM.JDTX832.F1	PDSE	U	0	6144
IBM.JDTX832.F2	PDSE	FB	80	8800
IBM.JDTX832.F3	PDSE	VB	256	3860
IBM.JDTX832.F4	PDSE	VB	128	6144
IBM.JDTX832.F5	PDSE	U	0	6144
IBM.JDTX832.F6	PDSE	U	0	6144

Figure 5. Program File Content for JDTX833				
		R	L	
		Е	R	
	0	С	E	
	R	F	С	BLK
Name	G	М	L	SIZE
SMPMCS	SEQ	FB	80	8800
IBM.JDTX833.F1	PDSE	VB	128	6144

Figure 6. Program File Content for JDTX834				
		R	L	
	0	E C	R E	
	R	F	c	BLK
Name	G	М	L	SIZE
SMPMCS	SEQ	FB	80	8800
IBM.JDTX834.F1	PDSE	FB	80	8800
IBM.JDTX834.F2	PDSE	VB	1024	31744
IBM.JDTX834.F3	PDSE	VB	128	6144
IBM.JDTX834.F4	PDSE	U	0	6144

## 2.2 Optional Machine-Readable Material

No optional machine-readable materials are provided for Transformation Extender for z/OS.

#### 2.3 **Program Publications**

The following sections identify the basic and optional publications for Transformation Extender for z/OS.

#### 2.3.1 Basic Program Publications

Figure 7 identifies the basic unlicensed program publications for Transformation Extender for z/OS. One copy of each of these publications is included when you order the basic materials for Transformation Extender for z/OS. For additional copies, contact your IBM representative.

The following publications are available on CD only as part of publication LCD8-0592-02

Figure 7 (Page 1 of 2). Basic Material: Unlicensed Publications	
Publication Title	Form Number
IBM WebSphere Transformation Extender CICS Adapter	1105.pdf
IBM WebSphere Transformation Extender Command Server	1010.pdf
IBM WebSphere Transformation Extender DB2 (z/OS ODBC) Adapter	1053.pdf
IBM WebSphere Transformation Extender DB2 (z/OS) Adapter	1055.pdf
IBM WebSphere Transformation Extender Execution Commands	1007.pdf
IBM WebSphere Transformation Extender FTP adapter	1056.pdf
IBM WebSphere Transformation Extender IBM WebSphere MQ Adapter	1059.pdf

Figure 7 (Page 2 of 2). Basic Material: Unlicensed Publications	
Publication Title	Form Number
IBM WebSphere Transformation Extender IMS/DC Execution Option	1103.pdf
IBM WebSphere Transformation Extender Launcher	1011.pdf
IBM WebSphere Transformation Extender Performance Recommendations	1120.pdf
IBM WebSphere Transformation Extender Platform API	1020.pdf
IBM WebSphere Transformation Extender Utility Commands	1118.pdf
IBM WebSphere Transformation Extender What's New	1030.pdf
IBM WebSphere Transformation Extender z/OS Configuration Guide	1145.pdf

There are no licensed publications for Transformation Extender for z/OS.

## 2.3.2 Optional Program Publications

No optional publications are provided for Transformation Extender for z/OS.

#### 2.4 Program Source Materials

No program source materials or viewable program listings are provided for Transformation Extender for z/OS.

#### 2.5 Publications Useful During Installation

You might want to use the publications listed in Figure 8 during the installation of Transformation Extender for z/OS. To order copies, contact your IBM representative or visit the IBM Publications Center at http://www.ibm.com/shop/publications/order.

Figure 8 (Page 1 of 2). Publications Useful During Installation	
Publication Title	Form Number
IBM SMP/E for z/OS User's Guide	SA22-7773
IBM SMP/E for z/OS Commands	SA22-7771
IBM SMP/E for z/OS Reference	SA22-7772
IBM SMP/E for z/OS Messages, Codes, and Diagnosis	GA22-7770
CICS Customization Guide	SC34-6429
CICS Resource Definition Guide	SC34-6430

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Figure 8 (Page 2 of 2). Publications Useful During Installation	
Publication Title	Form Number
z/OS Communications Server IP CICS Sockets Guide	SC31-8776
UNIX System Services Planning	GA22-7809
UNIX System Services Command Reference	SA22-7802
DB2 UDB for z/OS Administration Guide	SC18-7413
DB2 UDB for z/OS ODBC Guide and Reference	SC18-7423
IMS Planning and Customization	SC18-7817
WebSphere MQ for z/OS System Administration Guide	SC34-6585

# 3.0 Program Support

This section describes the IBM support available for Transformation Extender for z/OS.

#### 3.1 Program Services

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

#### 3.2 Preventive Service Planning

Before you install Transformation Extender for z/OS, make sure that you have reviewed the current Preventive Service Planning (PSP) information. The PSP Buckets maintain current lists (which have been identified since the package was created) of any recommended or required service for the installation of this package. This service includes software PSP information that contains HIPER and required PTFs against the base release.

If you obtained Transformation Extender for z/OS as part of a CBPDO, HOLDDATA is included.

If the CBPDO for Transformation Extender for z/OS is older than two weeks old by the time you install the product materials, you should view:

https://techsupport.services.ibm.com/server/390.psp390

For program support, access the Software Support Web site at http://www.ibm.com/software/support/.

PSP Buckets are identified by UPGRADEs, which specify product levels; and SUBSETs, which specify the FMIDs for a product level. The UPGRADE and SUBSET values for Transformation Extender for z/OS are shown as follows:

Figure 9. PSP Upgrade and Subset ID				
UPGRADE	SUBSET	Description		
ТХ	HDTX830	Transformation Extender-Common Components		
ТХ	JDTX831	Transformation Extender with Command Server		
ТХ	JDTX832	Transformation Extender for Application Programming		
ТХ	JDTX833	Transformation Extender for Integration Servers		
ТХ	JDTX834	Transformation Extender with Launcher		

## 3.3 Statement of Support Procedures

Report any problems which you feel might be an error in the product materials

Figure 10 on page 9 identifies the component IDs (COMPID) for Transformation Extender for z/OS.

Figure 10. Component IDs				
FMID	COMPID	Component Name	RETAIN Release	
HDTX830	5655R9500	Transformation Extender - Common Components	830	
JDTX831	5655R9501	Transformation Extender with Command Servers	831	
JDTX832	5655R9502	Transformation Extender for Application Programming	832	
JDTX833	5655R9503	Transformation Extender for Integration Servers	833	
JDTX834	5655R9504	Transformation Extender with Launcher	834	

# 4.0 Program and Service Level Information

This section identifies the program and relevant service levels of Transformation Extender for z/OS. The program level refers to the APAR fixes that have been incorporated into the program. The service level refers to the PTFs that have been incorporated into the program.

## 4.1 Program Level Information

The following APAR fixes against previous releases of Transformation Extender for z/OS have been incorporated into this release.

Figure 11. APARs Fixed in This Release

3			
PK80194	PK83917	PK83985	PK84071
PK84228	PK84642	PK84931	PK84932
PK84961	PK84820	PK85163	PK85352
PK85593	PK85763	PK85778	PK85850
PK85878	PK86573	PK86604	PK86664
PK86908	PK87000	PK87105	PK87198
PK87217	PK87260	PK87263	PK87301
PK87302	PK87316	PK87555	PK87747
PK87764	PK87786	PK88137	PK88286
PK88357	PK88417	PK88559	PK89096
PK89177	PK89198	PK89388	PK89641
PK89672	PK89714	PK89778	PK89787
PK89814	PK89943	PK89966	PK90066
PK90068	PK90762	PK90871	PK90942
PK90944	PK90976	PK90178	PK91000
PK91468	PK91488	PK91518	PK91607
PK91748	PK91750	PK91996	PK92160
PK92244	PK92411	PK92705	PK92711
PK93010	PK93275	PK93354	PK93508
PK93596	PK93739	PK93812	PK94960
PK95153	PK95165	PK95349	PK95906
PK96417	PK96656	PK96837	PK97062
PK97187	PK97583	PK97666	PK97754
PK97820	PK97817	PK97977	PK98212
PK98268	PK98570	PK98701	PK98706
PK98936	PK99243	PK99264	PM00005

## 4.2 Service Level Information

No PTFs against this release of Transformation Extender for z/OS have been incorporated into the product tape.

It is highly recommended that you frequently check the Transformation Extender for z/OS PSP Bucket for HIPER and SPECIAL Attention PTFs against all FMIDs that you must install.

# 5.0 Installation Requirements and Considerations

The following sections identify the system requirements for installing and activating Transformation Extender for z/OS. The following terminology is used:

• Driving system: the system used to install the program; where SMP/E executes.

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

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

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

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

Use separate driving and target systems in the following situations:

- When you install a new level of a product that is already installed, the new level of the product will replace the old one. By installing the new level onto a separate target system, you can test the new level and keep the old one in production at the same time.
- When you install a product that shares libraries or load modules with other products, the installation can disrupt the other products. By installing the product onto a separate target system, you can access these impacts without disrupting your production system.

## 5.1 Driving System Requirements

This section describes the environment of the driving system that is required to install Transformation Extender for z/OS.

#### 5.1.1 Machine Requirements

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

#### 5.1.2 Programming Requirements

Figure 12. Drivi	ng System Software	Requirements		
Program Number	Product Name	Minimum VRM	Minimum Service Level will satisfy these APARs	Included in this product's shipment?
Any one of the f	ollowing:			
5694-A01	z/OS	V01.10.00	N/A	No
5655-G44	IBM SMP/E for z/OS	V03.04.00	N/A	No

**Note:** Installation may require migration to new z/OS releases to be service supported. See http://www-03.ibm.com/systems/z/os/zos/support/zos\_eos\_da

Transformation Extender for z/OS invokes UNIX shell scripts during installation. These shell scripts require the default system shell "bin/sh".

Transformation Extender for z/OS is installed into a file system, either HFS or zFS. Before installing Transformation Extender for z/OS, you must ensure that the target system file system data sets are available for processing on the driving system. OMVS must be active on the driving system and the target system file system data sets must be mounted on the driving system.

If you plan to install Transformation Extender for z/OS in a zFS file system, this requires that zFS be active on the driving system. Information on activating and using zFS can be found in z/OS Distributed File Service zSeries File System Administration, SC24-5989.

#### 5.2 Target System Requirements

This section describes the environment of the target system that is required to install and use Transformation Extender for z/OS.

Transformation Extender for z/OS installs in the z/OS (Z038) SREL.

#### 5.2.1 Machine Requirements

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

#### 5.2.2 Programming Requirements

#### 5.2.2.1 Installation Requisites

Installation requisites identify products that are required by and *must* be present on the system or products that are not required by but *should* be present on the system for the successful installation of this product.

Mandatory installation requisites identify products that are required on the system for the successful installation of this product. These products are specified as PREs or REQs.

Figure 13. Target System Mandatory Installation Requisites					
Program Number	Product Name	Minimum VRM	Minimum Service Level will satisfy these APARs	Included in this product's shipment?	
5694-A01	z/OS	V01.10.00 or higher	N/A	No	

**Note:** Installation may require migration to new z/OS releases to be service supported. See http://www-03.ibm.com/systems/z/os/zos/support/zos\_eos\_da

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

Transformation Extender for z/OS has no conditional installation requisites.

#### 5.2.2.2 Operational Requisites

Operational requisites are products that are required by and *must* be present on the system or products that are not required by but *should* be present on the system for this product to operate all or part of its functions.

Mandatory operational requisites identify products that are required for this product to operate its basic functions. These products are specified as PREs or REQs.

Figure 14. Targ	Figure 14. Target System Mandatory Operational Requisites (all FMIDs)			
Program Number	Product Name and Minimum VRM/Service Level			
5694-A01	z/OS V01.10.00 or later			
5655-J51	XML Toolkit for z/OS V01.10 or later (all FMIDs should be installed)			

Figure 15. Mar	Figure 15. Mandatory Operational Requisites Transformation Extender for Integration Servers (FMID JDTX833)			
Program     Product Name and       Number     Minimum VRM/Service Level				
Any one of the following				
5655-V60 WebSphere Message Broker & Toolkit V07.00.00 or later				
5655-W09 WebSphere Enterprise Server Bus and Integration Developer V07.00.00 or later				
5655-W05 WebSphere Process Server and Integration Developer V07.00.00 or later				

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

Figure 16. Target System Conditional Operational Requisites					
Program Number	Product Name and Minimum VRM/Service Level	Function			
5655-M15	CICS Transaction Server for z/OS V3.1 or later	CICS with XPLINK support			
5655-B01	IMS V10.0 or later	IMS support			
5655-R36	WebSphere MQ for z/OS V7.0.1 or later	MQ support			
5694-A01	USS on z/OS V1.10 or later	Unix System Services must be active			
Any one of the fe	ollowing:				
5625-DB2	DB2 for z/OS V8.01.00 or later	DB2			
5697-N29	DB2 VUE for z/OS V8.1	DB2			
5635-DB2	DB2 for z/OS V9.01.00 or later	DB2 (REQUIRED for 64-bit support)			
5697-P12	DB2 VUE for z/OS V9.1	DB2			

Figure 17. Condit	Figure 17. Conditional Operational Requisites Transformation Extender with Launcher (FMID JDTX824)			
Program Number	Product Name and Minimum VRM/Service Level			
Any one of the fol	Any one of the following:			
5655-R31	IBM JAVA SDK for z/OS V1.6 SR6 or later			
5655-R32	IBM 64-bitJAVA SDK for z/OS V1.6 SR6 or later			

#### 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.

Transformation Extender for z/OS has no toleration/coexistence requisites.

#### 5.2.2.4 Incompatibility (Negative) Requisites

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

Transformation Extender for z/OS has no negative requisites.

#### 5.2.3 DASD Storage Requirements

Transformation Extender for z/OS libraries can reside on all supported DASD types.

Figure 18 lists the total space that is required for each type of library.

Figure 18. T	Figure 18. Total DASD Space Required by Transformation Extender for z/OS			
Library Type	Total Space Required in 3390 Trks			
Target	1700			
Distribution	2200			
File System	1690			

#### Notes:

- 1. For non-RECFM U data sets, IBM recommends using system-determined block sizes for efficient DASD utilization. For RECFM U data sets, IBM recommends using a block size of 32760, which is most efficient from the performance and DASD utilization perspective.
- 2. Abbreviations used for data set types are shown as follows.
  - **U** Unique data set, allocated by this product and used by only this product. This table provides all the required information to determine the correct storage for this data set. You do not need to refer to other tables or program directories for the data set size.
  - **S** Shared data set, allocated by this product and used by this product and other products. To determine the correct storage needed for this data set, add the storage size given in this table to those given in other tables (perhaps in other program directories). If the data set already exists, it must have enough free space to accommodate the storage size given in this table.

E Existing shared data set, used by this product and other products. This data set is *not* allocated by this product. To determine the correct storage for this data set, add the storage size given in this table to those given in other tables (perhaps in other program directories). If the data set already exists, it must have enough free space to accommodate the storage size given in this table.

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

For more information about the names and sizes of the required data sets, see 6.1.5, "Allocate SMP/E Target and Distribution Libraries" on page 21.

- 3. Abbreviations used for the file system path type are as follows.
  - **N** New path, created by this product.
  - **X** Path created by this product, but may already exist from a previous release.
  - P Previously existing path, created by another product.
- 4. All target and distribution libraries listed have the following attributes:
  - The default name of the data set may be changed.
  - The default block size of the data set may be changed.
  - The data set may be merged with another data set that has equivalent characteristics.
  - The data set may be either a PDS or a PDSE.
- 5. All target libraries listed have the following attributes:
  - These data sets can be SMS-managed, but they are not required to be SMS-managed.
  - These data sets are not required to reside on the IPL volume.
  - The values in the "Member Type" column are not necessarily the actual SMP/E element types that are identified in the SMPMCS.
- 6. All target libraries that are listed and contain load modules have the following attributes:
  - These data sets can be in the LPA, but they are not required to be in the LP
  - These data sets can be in the LNKLST.
  - These data sets are not required to be APF-authorized.

Figure 19 (Page 1 of 2). Storage Requirements for SMP/E Data Sets						
	T Y	0	R E C	L R E	No. of	No. of
Library DDNAME	P E	R G	F M	C L	3390 Trks	DIR BIks
SMPLTS	Е	PDS	U	0	3	2
SMPMTS	Е	PDS	FB	80	2	2
SMPPTS**	Е	PDSE	FB	80	15000	N/A

Figure 19 (Page 2 of 2). Storage Requirements for S	SMP/E D	ata Sets				
			R	L		
	Т		E	R	No.	No.
	Y	0	С	Е	of	of
Library	Р	R	F	С	3390	DIR
DDNAME	Е	G	М	L	Trks	Blks
SMPSCDS	Е	PDS	FB	80	2	2
SMPSTS	Е	PDS	FB	80	2	2

**Note:** \*\*It is recommended that you now allocate the SMPPTS as a PDSE (Partitioned Data Set Extended) for better usability and performance.

The following figures describe the target and distribution libraries and file system paths required to install Transformation Extender for z/OS. The storage requirements of Transformation Extender for z/OS must be added to the storage required by other programs having data in the same library or path.

**Note:** The data in these tables should be used when determining which libraries can be merged into common data sets. In addition, since some ALIAS names may not be unique, ensure that no naming conflicts will be introduced before merging libraries.

Figure 20. Stor	age Requirements fo	or Transformation Ext	tender	for z/OS Ta	rget Librai	ries		
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
SDTXCLST	Sample	TVOL2	U	PDSE	FB	80	2	-
SDTXCNFG	Sample	TVOL2	U	PDSE	VB	1024	2	-
SDTXLOAD	LMOD	TVOL1	U	PDSE	U	0	1400	-
SDTXLOD2	LMOD	TVOL1	U	PDSE	U	0	600	-
SDTXMAPS	Sample	TVOL2	U	PDSE	VB	256	9	-
SDTXPENU	Sample	TVOL2	U	PDSE	FB	80	4	-
SDTXSAMP	Sample	TVOL2	U	PDSE	FB	80	50	-
SGTXLOAD	LMOD	TVOL1	U	PDSE	U	0	650	-

Figure 21. Transformation Extender for z/OS File System Paths						
	т					
	Y					
	Р					
DDNAME	Е	Path Name				
SDTXHFS	Ν	/usr/lpp/dtx/V8R3M0/IBM				

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Figure 22. Storage Requirements for Tra	ansformation Extende	er for z/OS E	Distribution I	Libraries		
	т		R E	L R	No.	No.
Library	Y P	O R	C F	E C	of 3390	of DIR
DDNAME	E	G	M	L	Trks	Blks
ADTXCLST	U	PDSE	FB	80	2	-
ADTXCNFG	U	PDSE	VB	1024	2	-
ADTXHFS	U	PDSE	VB	256	600	-
ADTXLOAD	U	PDSE	U	0	1400	-
ADTXLOD2	U	PDSE	U	0	600	-
ADTXMAPS	U	PDSE	VB	256	9	-
ADTXPENU	U	PDSE	FB	80	4	-
ADTXSAMP	U	PDSE	FB	80	50	-
AGTXLOAD	U	PDSE	U	0	650	-

## 5.3 FMIDs Deleted

Installing Transformation Extender for z/OS might result in the deletion of other FMIDs. To see which FMIDs will be deleted, examine the ++VER statement in the SMPMCS of the product.

If you do not want to delete these FMIDs at this time, install Transformation Extender for z/OS into separate SMP/E target and distribution zones.

**Note:** These FMIDs are not automatically deleted from the Global Zone. If you want to delete these FMIDs from the Global Zone, see the SMP/E manuals for instructions.

#### 5.4 Special Considerations

Transformation Extender for z/OS has no special considerations for the target system.

# 6.0 Installation Instructions

This chapter describes the installation method and the step-by-step procedures to install and to activate the functions of Transformation Extender for z/OS.

Please note the following:

- If you want to install Transformation Extender for z/OS into its own SMP/E environment, consult the SMP/E manuals for instructions on creating and initializing the SMPCSI and the SMP/E control data sets.
- 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 Transformation Extender for z/OS

# 6.1.1 SMP/E Considerations for Installing Transformation Extender for z/OS

Use the SMP/E RECEIVE, APPLY, and ACCEPT commands to install this release of Transformation Extender for z/OS.

## 6.1.2 SMP/E Options Subentry Values

The recommended values for certain SMP/E CSI subentries are shown in Figure 23. 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 23. SMP/E Options Subentry Values					
Subentry Value Comment					
DSSPACE	(800,500,100)	Specifies the primary and secondary (in Tracks) and the number of directory blocks to be allocated for each SMPTLIB dataset.			
PEMAX	SMP/E Default	IBM recommends using the SMP/E default for PEMAX.			

#### 6.1.3 Sample Jobs

The following sample installation jobs are provided as part of the product to help you install Transformation Extender for z/OS:

Figure 24. Sample Installation Jobs						
Job Name	Job Type	Description	RELFILE			
DTXALLOC	IBM.HDTX830.F3					
DTXISMKD	MKDIR	Sample job to invoke the supplied DTXMKDIR EXEC to allocate file system paths	IBM.HDTX830.F3			
DTXDDDEFDDDEFSample job to define SMP/E DDDEFsDTXAPPLYAPPLYSample APPLY job		IBM.HDTX830.F3				
		Sample APPLY job	IBM.HDTX830.F3			
DTXACCPT	ACCEPT	Sample ACCEPT job	IBM.HDTX830.F3			

You can access the sample installation jobs by performing an SMP/E RECEIVE and then copying the jobs from the relfiles to a work data set for editing and submission. See Figure 24 to find the appropriate relfile data set.

#### 6.1.4 Perform SMP/E RECEIVE

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

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

Edit and submit sample job DTXALLOC to allocate the SMP/E target and distribution libraries for Transformation Extender for z/OS. Consult the instructions in the sample job for more information.

#### Expected Return Codes and Messages:

The job is successful if RC=0 is received.

## 6.1.6 Allocate File system Paths

Mount the file system data set of the target system on the driving system when you run the sample DTXISMKD job because the job will create paths in the file system.

Before you run the sample job to create the paths in the file system, ensure that OMVS is active on the driving system, and that the file system of the target system is mounted to the driving system. If you install Transformation Extender for z/OS into a zFS file system, zFS must be active on the driving system.

If you plan to install Transformation Extender for z/OS into a new file system, create the mountpoint and mount the new file system to the driving system. For Transformation Extender for z/OS, the recommended mountpoint is /usr/lpp/dtx/V8R3M0/IBM.

Edit and submit sample job DTXISMKD to allocate the file system for Transformation Extender for z/OS. Consult the instructions in the sample job for more information.

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

#### **Expected Return Codes and Messages:**

The job is successful if RC=0 is received.

#### 6.1.7 Create DDDEF Entries

Edit and submit sample job DTXDDDEF to create DDDEF entries for the SMP/E target and distribution libraries for Transformation Extender for z/OS. Consult the instructions in the sample job for more information.

#### **Expected Return Codes and Messages:**

The job is successful if RC=0 is received.

#### 6.1.8 Perform SMP/E APPLY

**Note:** You must APPLY the base FMID, HDTX830. APPLY only the dependent FMIDs that you have SMP/E RECEIVED. An error will result if you APPLY an FMID you did not RECEIVE.

1. Ensure that you have the latest HOLDDATA; then edit and submit sample job DTXAPPLY to perform an SMP/E APPLY CHECK for Transformation Extender for z/OS. Consult the instructions in the sample job for more information.

HOLDDATA introduces ERROR HOLDs against FMIDs for HIPER APARs. Before the installation, ensure that you have the latest HOLDDATA, which is available through several different portals, including http://service.software.ibm.com/holdata/390holddata.html. Install the FMIDs regardless of the status of unresolved HIPERs. However, don't deploy the software until the unresolved HIPERs are analyzed to determine applicability.

To receive the full benefit of the SMP/E Causer SYSMOD Summary Report, do *not* bypass the PRE, ID, REQ, and IFREQ on the APPLY CHECK. This is because the SMP/E root cause analysis identifies the cause only of *errors* and not of *warnings* (SMP/E treats bypassed PRE, ID, REQ, and IFREQ conditions as warnings, instead of errors).

Here are two methods to install FMIDs when ++HOLDs for HIPERs exist for the FMIDs that you install:

a. To ensure that all recommended and critical service is installed with the FMIDs, if you are using SMP/E 3.5 or higher and have received the latest HOLDDATA, add the FIXCAT operand to the

APPLY command as shown below. If you are using a prior release of SMP/E, add the SOURCEID(HIPER,RSU\*) operand to the APPLY command.

```
If using SMP/E V3.5 or higher:
APPLY S(fmid,fmid,...)
FORFMID(fmid,fmid,...)
SOURCEID(RSU*)
FIXCAT(IBM.ProductInstall-RequiredService)
GROUPEXTEND .
If using SMP/E V3.4 or prior:
APPLY S(fmid,fmid,...)
FORFMID(fmid,fmid,...)
SOURCEID(HIPER,RSU*)
GROUPEXTEND .
```

Some HIPER APARs might not have PTFs available yet. You have to analyze the symptom flags to determine if you want to bypass the specific ERROR HOLDs and continue the installation of the FMIDs.

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

b. To install the FMIDs without regard for the HIPERs, you can add a

BYPASS(HOLDCLASS(HIPER)) operand to the APPLY command. In this way, you can install FMIDs even though HIPER ERROR HOLDs against them still exist. Only the HIPER ERROR HOLDs are bypassed. After the FMIDs are installed, run the SMP/E REPORT ERRSYSMODS command to identify missing HIPER maintenance.

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

This method is the quicker of the two, but requires subsequent review of the REPORT ERRSYSMODS to investigate any HIPERs. If you are running SMP/E V3.5 or higher and have received the latest HOLDDATA, you can also choose to run REPORT MISSINGFIX for Fix Category IBM.ProductInstall-RequiredService to investigate missing recommended service.

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

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

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

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

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

#### 6.1.9 Perform SMP/E ACCEPT

Edit and submit sample job DTXACCPT to perform an SMP/E ACCEPT CHECK for Transformation Extender for z/OS. Consult the instructions in the sample job for more information.

To receive the full benefit of the SMP/E Causer SYSMOD Summary Report, do *not* bypass the PRE, ID, REQ, and IFREQ on the ACCEPT CHECK. This is because the SMP/E root cause analysis identifies the cause of only *errors* but not *warnings* (SMP/E treats bypassed PRE, ID, REQ, and IFREQ conditions as warnings rather than errors).

Before you use SMP/E to load new distribution libraries, it is recommended that you set the ACCJCLIN indicator in the distribution zone. In this way, you can save the entries that are produced from JCLIN in the distribution zone whenever a SYSMOD that contains inline JCLIN is accepted. For more information about the ACCJCLIN indicator, see the description of inline JCLIN in the SMP/E manuals.

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

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

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

The job is successful if RC=0 is received.

If PTFs that contain replacement modules are accepted, SMP/E ACCEPT processing will link-edits or binds the modules into the distribution libraries. During this processing, the Linkage Editor or Binder might issue messages that indicate unresolved external references, which will result in a return code of 4 during the ACCEPT phase. You can ignore these messages, because the distribution libraries are not executable and the unresolved external references do not affect the executable system libraries.

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

The job is successful if RC=0 is received.

#### 6.1.10 Run REPORT CROSSZONE

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

After you install Transformation Extender for z/OS, it is recommended that you run REPORT CROSSZONE against the new or updated target and distribution zones. REPORT CROSSZONE requires a global zone with ZONEINDEX entries that describe all the target and distribution libraries to be reported on.

For more information about REPORT CROSSZONE, see the SMP/E manuals.

## 6.2 Activating Transformation Extender for z/OS

If you mount the file system in which you have installed Transformation Extender for z/OS in read-only mode during execution, then you do not have to take further actions to activate Transformation Extender for z/OS.

Transformation Extender for z/OS is fully operational after the SMP/E installation is completed. You do not have to do further customization to activate this function.

#### 6.3 General Information

The following sections describe general notes as well as configuration steps for each Transformation Extender for z/OS feature you have installed.

#### 6.3.1 References

The IBM WebSphere Transformation Extender z/OS Configuration Guide is available on the product Web site (http://www.ibm.com/software/integration/wdatastagetx/). IBM WebSphere Transformation Extender z/OS Configuration Guide contains the most current information about the release, including additional requirements, configuration instructions, and known issues.

For information about other Transformation Extender for z/OS products that you have installed, see the readme files, IBM WebSphere Transformation Extender z/OS Configuration Guide and the documentation for those specific products. You can view the Information Center, included with the IBM WebSphere Transformation Extender products that are installed on your Windows environments, as well as the books, included in the online library CD.

For detailed information about using the adapters, see the IBM WebSphere Transformation Extender adapter-specific documentation.

## 6.4 HDTX830 Transformation Extender - Common Components

## 6.4.1 Configuration requirements

For the configuration instructions required for the Transformation Extender for z/OS Common Components, see the Configuration steps section under Transformation Extender for z/OS - Common Components in the IBM WebSphere Transformation Extender z/OS Configuration Guide that are posted on the product Web site (http://www.ibm.com/software/integration/wdatastagetx/).

## 6.4.2 Installation Verification Program (IVP) steps

There are no required IVP steps.

## 6.5 JDTX831 Transformation Extender with Command Servers

#### 6.5.1 Configuration requirements

The files that are installed with the Transformation Extender for z/OS with Command Server do not require you to do any configuration steps.

## 6.5.2 Installation Verification Program (IVP) steps

There are several IVP steps that you can do. The IVP steps are described in the following example readme files installed in the DTX.SDTXSAMP PDS and are used to test the various feature components.

#### 6.5.2.1 For your Batch environment:

DTXBMRME

- Burst Map example
- used to verify that the feature installation was successful
- The job is successful if RC=0 is received.

DTXDMRME (Optional)

- DB2 Map example
- run only if you will be using the DB2 adapter
- The job is successful if RC=0 is received.

DTXMQRME (Optional)

- WebSphere MQ example
- run only if you will be using the IBM WebSphere MQ adapter
- The job is successful if RC=0 is received.

DTXMSRME (Optional)

- Resource Registry example
- run only if you will be using the Resource Registry Names to make calls.
- The job is successful if RC=0 is received.

## 6.6 JDTX832 Transformation Extender for Application Programming

#### 6.6.1 CICS environment

#### 6.6.1.1 Configuration requirements for the CICS environment

For the configuration instructions required for using the Transformation Extender for z/OS on your CICS environment, see the Configuration steps for the CICS environment section in the IBM WebSphere Transformation Extender z/OS Configuration Guide that is posted on the product Web site (http://www.ibm.com/software/integration/wdatastagetx/).

#### 6.6.1.2 Installation Verification Program (IVP) steps for the CICS environment

There are several IVP steps that you can do. The IVP steps are described in the following example readme files installed in the DTX.SDTXSAMP PDS and are used to test the various feature components. For the configuration steps required to run the examples to verify that the installation was successful, see the Loading maps section in the IBM WebSphere Transformation Extender z/OS Configuration Guide that is available on the product Web site (http://www.ibm.com/software/integration/wdatastagetx/).

#### DTXRVRME

- Burst Map example
- used to verify that the feature installation was successful and to confirm that the feature components were installed into the target libraries and correctly defined to CICS
- The job is successful if RC=0 is received.

DTXCDRME (Optional)

- DB2 Map example
- run only if you will be using the DB2 adapter and the DB2 plan
- The job is successful if RC=0 is received.

#### DTXCMRME (Optional)

- WebSphere MQ example
- run only if you will be using the IBM WebSphere MQ adapter
- The job is successful if RC=0 is received.

#### DTXCRRME (Optional)

- Resource Registry example
- run only if you will be using the Resource Registry
- for configuration requirements, see the (Optional) Defining and loading the Resource Name file section in the IBM WebSphere Transformation Extender z/OS Configuration Guide that is available on the product Web site (http://www.ibm.com/software/integration/wdatastagetx/)
- The job is successful if RC=0 is received.

#### 6.7 IMS environment and z/OS Software Development Kit

#### 6.7.1 Configuration requirements for the IMS environment

Depending on how the features will be used, there might be additonal configuration instructions required. For system administration and set up prerequisites that have not already been done in your IMS environment, see the Configuration steps for the IMS environment section in the Transformation Extender for z/OS release notes that are posted on the product Web site (http://www.ibm.com/software/integration/wdatastagetx/).

There are several IVP steps that you can do. The IVP steps are described in the following example readme files installed in the DTX.SDTXSAMP PDS and are used to test the various feature components. Run either one of the JCL jobs referenced in the these readme files.

#### DTXTARME

- Test API example using C program
- run to see how to call the Transformation Extender for z/OS Platform API
- The job is successful if RC=0 is received.

#### DTXTCRME

- Test API example using COBOL program
- run to see how to call the Transformation Extender for z/OS z/OS Software Development Kit functions as a DLL
- The job is successful if RC=0 is received.

#### 6.8 UNIX Systems Services environment

# 6.8.1 Configuration requirements for the UNIX System Services environment

For additional configuration steps that are common to other Transformation Extender for z/OS features installed on UNIX System Services, see the Additional configuration on UNIX System Services section in the IBM WebSphere Transformation Extender z/OS Configuration Guide that are posted on the product Web site (http://www.ibm.com/software/integration/wdatastagetx/).

# 6.9 Installation Verification Program (IVP) steps for the UNIX System Services environment

There are no required IVP steps.

## 6.10 JDTX833 Transformation Extender for Integration Servers

#### 6.10.1 Configuration requirements

The files that are installed with the Transformation Extender for z/OS for Message Broker require you to do some configuration steps. For configuration and usage instructions, see the Transformation Extender for z/OS for Integration Server Release Notes that are posted on the product Web site (http://www.ibm.com/software/integration/wdatastagetx/).

#### 6.11 Installation Verification Program (IVP) steps

There are no required IVP steps.

#### 6.12 JDTX834 Transformation Extender with Launcher

#### 6.12.1 Configuration requirements

The files that are installed with the Transformation Extender for z/OS with Launcher require you to do some configuration steps. For configuration and usage instructions, see the IBM WebSphere Transformation Extender z/OS Configuration Guide, posted on the product Web site (http://www.ibm.com/software/integration/wdatastagetx/).

## 6.12.2 Installation Verification Program (IVP) steps

There are no required IVP steps.

# 7.0 Notices

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

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#### Program Directory for IBM WebSphere Transformation Extender, October 2010

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Г

very				very	not	
satisfied	<=====		=====>	dissatisfied	applicable	
1	2	3	4	5	Ν	

	Satisfaction						
Ease of product installation	1	2	3	4	5	Ν	
Contents of Program Directory	1	2	3	4	5	Ν	
Installation Verification Programs	1	2	3	4	5	Ν	
Time to install the product	1	2	3	4	5	Ν	
Readability and organization of Program Directory tasks	1	2	3	4	5	Ν	
Necessity of all installation tasks	1	2	3	4	5	Ν	
Accuracy of the definition of the installation tasks	1	2	3	4	5	Ν	
Technical level of the installation tasks	1	2	3	4	5	Ν	
Ease of getting the system into production after installation	1	2	3	4	5	Ν	

How did you order this product?

- \_\_\_\_ CustomPac
- \_\_\_\_ ServerPac
- \_\_\_\_ Independent
- \_\_\_ Other

Is this the first time your organization has installed this product?

\_\_\_ Yes

\_\_\_\_ No

Were the people who did the installation experienced with the installation of z/OS products?

\_\_\_ Yes

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\_\_\_\_ No

If yes, how many years? \_\_\_\_

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

Please provide the following contact information:

Name and Job Title

Organization

Address

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Thank you for your participation.

Please send the completed form to (or give to your IBM representative who will forward it to the IBM WebSphere Transformation Extender Development group):

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