IBM

Program Directory for

IBM Problem Determination Tools Common Component

V01.07.00

Program Number 5655-Q12

FMIDs HVWR170, JVWR171, and JVWR172

for use with
z/OS

Document Date: November 2013

GI10-8969-01

> **Note**
>
> Before using this information and the product it supports, be sure to read the general information under 7.0, "Notices" on page 27.

Contents

Figures

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 Problem Determination Tools Common Component. This publication refers to IBM Problem Determination Tools Common Component as PDTCC.

The Program Directory contains the following sections:

- 2.0, "Program Materials" on page 3 identifies the basic program materials and documentation for PDTCC.

- 3.0, "Program Support" on page 7 describes the IBM support available for PDTCC.

- 4.0, "Program and Service Level Information" on page 9 lists the APARs (program level) and PTFs (service level) that have been incorporated into PDTCC.

- 5.0, "Installation Requirements and Considerations" on page 10 identifies the resources and considerations that are required for installing and using PDTCC.

- 6.0, "Installation Instructions" on page 18 provides detailed installation instructions for PDTCC. It also describes the procedures for activating the functions of PDTCC, or refers to appropriate publications.

Before installing PDTCC, read the *CBPDO Memo To Users* and the *CBPDO Memo To Users Extension* that are supplied with this program in softcopy format and this Program Directory; then keep them for future reference. Section 3.2, "Preventive Service Planning" on page 7 tells you how to find any updates to the information and procedures in this Program Directory.

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

Do not use this program directory if you install PDTCC with a SystemPac or ServerPac. When you use one of those offerings, use the jobs and documentation supplied with the offering. The offering will point you to specific sections of this program directory as needed.

1.1 PDTCC Description

PDTCC delivers common components used in some of the IBM Problem Determination Tools (which consists of IBM Application Performance Analyzer for z/OS, IBM Fault Analyzer for z/OS, IBM File Manager for z/OS, IBM Debug Tool for z/OS, and IBM Application Performance Analyzer for Z/OS). PDTCC is automatically included in your order when you order IBM Fault Analyzer for z/OS, IBM File Manager for z/OS, IBM Debug Tool for z/OS, or IBM Application Performance Analyzer for Z/OS.

1.2 PDTCC FMIDs

PDTCC consists of the following FMIDs:

    HVWR170
    JVWR171
    JVWR172

2.0 Program Materials

The program number for PDTCC is 5655-Q12 and the feature numbers are 6004, 6002, and 6003.

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.

The program announcement material describes the features supported by PDTCC. 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 18 for more information about how to install the program.

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

Figure 1 describes the program file content for PDTCC.

 Figure 2 on page 4describes the program file content for PDTCC Japanese component.

Figure 3 on page 4 describes the program file content for PDTCC Korean component. You can refer to the *CBPDO Memo To Users Extension* to see where the files reside on the tape.

Notes:

1. The data set attributes in this table must be used in the JCL of jobs that read the data sets. However, because the data sets are in IEBCOPY unloaded format, their actual attributes might be different.

2. If any RELFILEs are identified as PDSEs, ensure that SMPTLIB data sets are allocated as PDSEs.

Figure 1 (Page 1 of 2). Program File Content for PDTCC				
Name	O R G	R E C F M	L R E C L	BLK SIZE
SMPMCS	SEQ	FB	80	6400
IBM.HVWR170.F1	PDS	FB	80	8800
IBM.HVWR170.F2	PDS	FB	80	8800
IBM.HVWR170.F3	PDS	U	0	6144

Name	ORG	RECFM	LRECL	BLK SIZE
Figure 1 (Page 2 of 2). Program File Content for PDTCC				
IBM.HVWR170.F4	PDS	FB	80	8800
IBM.HVWR170.F5	PDS	FB	80	8800
IBM.HVWR170.F6	PDS	FB	80	8800
IBM.HVWR170.F7	PDS	VB	4096	27998
IBM.HVWR170.F8	PDSE	U	0	6144
IBM.HVWR170.F9	PDS	U	0	6144

Name	ORG	RECFM	LRECL	BLK SIZE
Figure 2. Program File Content for PDTCC - Japanese				
SMPMCS	SEQ	FB	80	6400
IBM.JVWR171.F1	PDS	FB	80	8800
IBM.JVWR171.F2	PDS	FB	80	8800
IBM.JVWR171.F3	PDS	U	0	6144
IBM.JVWR171.F4	PDS	FB	80	8800
IBM.JVWR171.F5	PDS	FB	80	8800
IBM.JVWR171.F6	PDS	FB	80	8800

Name	ORG	RECFM	LRECL	BLK SIZE
Figure 3 (Page 1 of 2). Program File Content for PDTCC - Korean				
SMPMCS	SEQ	FB	80	6400
IBM.JVWR172.F1	PDS	FB	80	8800
IBM.JVWR172.F2	PDS	FB	80	8800
IBM.JVWR172.F3	PDS	U	0	6144
IBM.JVWR172.F4	PDS	FB	80	8800

Figure 3 (Page 2 of 2). Program File Content for PDTCC - Korean				
Name	**O R G**	**R E C F M**	**L R E C L**	**BLK SIZE**
IBM.JVWR172.F5	PDS	FB	80	8800
IBM.JVWR172.F6	PDS	FB	80	8800

2.2 Optional Machine-Readable Material

No optional machine-readable materials are provided for PDTCC.

2.3 Program Publications

The following sections identify the basic publications for PDTCC.

Figure 4. Basic Material: Unlicensed		
Publication Title	**Form Number**	**Media Format**
IBM Problem Determination Tools for z/OS Common Component Customization Guide and User Guide	SC19-4159	www.ibm.com/software/awdtools/filemanager/library/

2.3.1 Optional Program Publications

No optional publications are provided for PDTCC.

2.4 Program Source Materials

No program source materials or viewable program listings are provided for PDTCC.

2.5 Publications Useful During Installation

You might want to use the publications listed in Figure 5 during the installation of PDTCC.

Figure 5. Publications Useful During Installation		
Publication Title	**Form Number**	**Media Format**
IBM SMP/E for z/OS User's Guide	SA22-7773	PDF and BookManager
IBM SMP/E for z/OS Commands	SA22-7771	PDF and BookManager
IBM SMP/E for z/OS Reference	SA22-7772	PDF and BookManager
IBM SMP/E for z/OS Messages, Codes, and Diagnosis	GA22-7770	PDF and BookManager

3.0 Program Support

This section describes the IBM support available for PDTCC.

3.1 Program Services

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

3.2 Preventive Service Planning

Before you install PDTCC, make sure that you have reviewed the current Preventive Service Planning (PSP) information. Review the PSP Bucket for General Information, Installation Documentation, and the Cross Product Dependencies sections. For the Recommended Service section, instead of reviewing the PSP Bucket, it is recommended you use the IBM.ProductInstall-RequiredService fix category in SMP/E to ensure you have all the recommended service installed. Use the **FIXCAT(IBM.ProductInstall-RequiredService)** operand on the **APPLY CHECK command**. See 6.1.9, "Perform SMP/E APPLY" on page 23 for a sample APPLY command

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

For a complete list of available PTFs (both HIPER and non-HIPER PTFs) and the relevant APARs, refer to: www.ibm.com/support/docview.wss?rs=274&context=SSXJAV&dc=DB520&uid=swg21170609

The PSP bucket information for PDTCC is shown in Figure 6.

If you obtained PDTCC as part of a CBPDO, HOLDDATA is included.

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

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

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

For program support, access the Software Support Website at http://www-01.ibm.com/software/support/.

PSP Buckets are identified by UPGRADEs, which specify product levels; and SUBSETs, which specify the FMIDs for a product level. The UPGRADE and SUBSET values for PDTCC are included in Figure 6

Figure 6. PSP Upgrade and Subset ID		
UPGRADE	**SUBSET**	**Description**
IBMPDTOOLSCC	HVWR170	IBM PDTCC 01.07.00 English
IBMPDTOOLSCC	JVWR171	IBM PDTCC 01.07.00 Japanese
IBMPDTOOLSCC	JVWR172	IBM PDTCC 01.07.00 Korean

3.3 Statement of Support Procedures

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

Figure 7 identifies the component IDs (COMPID) for PDTCC.

Figure 7. Component IDs			
FMID	**COMPID**	**Component Name**	**RETAIN Release**
HVWR170	5655IPV00	PDTCC	170
JVWR171	5655IPV00	IBM PDTCC - JPN	171
JVWR172	5655IPV00	IBM PDTCC - KOR	172

4.0 Program and Service Level Information

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

- FMID HVWR160

PM87148	PM69462	PM81985
PM87449	PM72789	PM82975
PM87150	PM74584	PM83598
PM92954	PM74585	PM84986
PM92944	PM74586	PM86203
PM93063	PM74587	PM88764
PM93824	PM74588	PM90173
PM92425	PM76089	PM94499
PM67623	PM76879	PM94541
PM68806	PM80985	PM96306

4.2 Service Level Information

No PTFs against this release of PDTCC have been incorporated into the product package.

Frequently check the PDTCC PSP Bucket for HIPER and SPECIAL attention PTFs against all FMIDs that you must install. You can also receive the latest HOLDDATA, then ensure the **FIXCAT(IBM.PRODUCTINSTALL-REQUIREDSERVICE)** operand is on your APPLY CHECK command. This will allow you to review the recommended and critical service that should be installed with your FMIDs.

5.0 Installation Requirements and Considerations

The following sections identify the system requirements for installing and activating PDTCC. The following terminology is used:

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

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

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

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

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

Use separate driving and target systems in the following situations:

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

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

5.1 Driving System Requirements

This section describes the environment of the driving system required to install PDTCC.

5.1.1 Machine Requirements

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

5.1.2 Programming Requirements

Figure 8. Driving System Software Requirements				
Program Number	**Product Name**	**Minimum VRM**	**Minimum Service Level will satisfy these APARs**	**Included in the shipped product?**
Any **one** of the following:				
5694-A01	z/OS	V01.12.00	N/A	No
5650-ZOS	z/OS	V02.01.00	N/A	No
5655-G44	IBM SMP/E for z/OS	V03.05.00	N/A	No

Note: Installation might require migration to new z/OS releases to be service supported. See http://www-03.ibm.com/systems/z/os/zos/support/zos_eos_dates.html.

5.2 Target System Requirements

This section describes the environment of the target system required to install and use PDTCC.

PDTCC 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.

PDTCC 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.

PDTCC has no conditional installation requisites.

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

Mandatory operational requisites identify products that are required for this product to operate its basic functions.

PDTCC 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.

PDTCC has no conditional operational requisites.

5.2.2.3 Toleration/Coexistence Requisites: Toleration/coexistence requisites identify products that must be present on sharing systems. These systems can be other systems in a multisystem environment (not necessarily sysplex), a shared DASD environment (such as test and production), or systems that reuse the same DASD environment at different time intervals.

PDTCC 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.

PDTCC has no negative requisites.

5.2.3 DASD Storage Requirements

PDTCC libraries can reside on all supported DASD types.

Figure 9 lists the total space that is required for each type of library.

Figure 9. Total DASD Space Required by PDTCC	
Library Type	**Total Space Required in 3390 Trks**
Target	620
Distribution	620

Figure 10 (Page 1 of 2). Total DASD Space Required by PDTCC Japanese component	
Library Type	**Total Space Required in 3390 Trks**
Target	18 tracks

Figure 10 (Page 2 of 2). Total DASD Space Required by PDTCC Japanese component	
Library Type	Total Space Required in 3390 Trks
Distribution	18 tracks

Figure 11. Total DASD Space Required by PDTCC Korean component	
Library Type	Total Space Required in 3390 Trks
Target	18 tracks
Distribution	18 tracks

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 the exception of SIPVMODA, and AIPVMODA, which must be PDSEs.

4. All target libraries listed have the following attributes:

- These data sets can be SMS-managed, but they are not required to be SMS-managed.
- These data sets are not required to reside on the IPL volume.
- The values in the "Member Type" column are not necessarily the actual SMP/E element types that are identified in the SMPMCS.

5. All target libraries that are listed and contain load modules have the following attributes:

- These data sets can be in the LPA, but they are not required to be in the LPA.
- These data sets can be in the LNKLST.
- These data sets are not required to be APF-authorized, except for SIPVMODA which must be APF authorized.
- PDTCC requires that the SMPLTS data set must be a PDSE. If your existing SMPLTS is a PDS, you will need to allocate a new PDSE and copy your existing SMPLTS into it and then change the SMPLTS DDDEF entry to indicate the new PDSE data set.

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

Note: Use the data in these tables to determine which libraries can be merged into common data sets. In addition, since some ALIAS names may not be unique, ensure that no naming conflicts will be introduced before merging libraries.

Figure 12. Storage Requirements for PDTCC Target Libraries								
Library DDNAME	Member Type	Target Volume	TYPE	ORG	RECFM	LRECL	No. of 3390 Trks	No. of DIR Blks
SIPVBIN1	Binary (zipped) file	ANY	U	PDS	VB	4096	15	2
SIPVLPA1	LMOD	ANY	U	PDS	U	0	50	2
SIPVMENU	Message	ANY	U	PDS	FB	80	5	5
SIPVMODA	LMOD	ANY	U	PDSE	U	0	500	n/a
SIPVMOD1	LMOD	ANY	U	PDS	U	0	30	10
SIPVPENU	Panel	ANY	U	PDS	FB	80	8	5
SIPVSAM1	Sample	ANY	U	PDS	FB	80	7	5
SIPVTENU	Table	ANY	U	PDS	FB	80	5	2

Figure 13. Storage Requirements for PDTCC Japanese component Target Libraries								
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
SIPVPJPN	Panel	ANY	U	PDS	FB	80	8	5
SIPVMJPN	Message	ANY	U	PDS	FB	80	5	5
SIPVTJPN	Table	ANY	U	PDS	FB	80	5	2

Figure 14. Storage Requirements for PDTCC Korean component Target Libraries								
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
SIPVPKOR	Panel	ANY	U	PDS	FB	80	8	5
SIPVMKOR	Message	ANY	U	PDS	FB	80	5	5
SIPVTKOR	Table	ANY	U	PDS	FB	80	5	2

Figure 15. Storage Requirements for PDTCC Distribution Libraries						
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
AIPVBIN1	U	PDS	VB	4096	15	2
AIPVLPA1	U	PDS	U	0	50	2
AIPVMENU	U	PDS	FB	80	5	5
AIPVMODA	U	PDSE	U	0	500	n/a
AIPVMOD1	U	PDS	U	0	30	20
AIPVPENU	U	PDS	FB	80	8	5
AIPVSAM1	U	PDS	FB	80	7	5
AIPVTENU	U	PDS	FB	80	5	2

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**
Figure 16. Storage Requirements for PDTCC Japanese component Distribution Libraries						
AIPVPJPN	U	PDS	FB	80	8	5
AIPVMJPN	U	PDS	FB	80	5	5
AIPVTJPN	U	PDS	FB	80	5	2

Library DDNAME	**T** **Y** **P** **E**	**O** **R** **G**	**R** **E** **C** **F** **M**	**L** **:br;R** **E** **C** **L**	**No.** **of** **3390** **Trks**	**No.** **of** **DIR** **Blks**
Figure 17. Storage Requirements for PDTCC Korean component Distribution Libraries						
AIPVPKOR	U	PDS	FB	80	8	5
AIPVMKOR	U	PDS	FB	80	5	5
AIPVTKOR	U	PDS	FB	80	5	2

5.3 FMIDs Deleted

Installing PDTCC 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 PDTCC into separate SMP/E target and distribution zones.

Note: These FMIDs are not automatically deleted from the Global Zone. If you want to delete these FMIDs from the Global Zone, use the SMP/E REJECT NOFMID DELETEFMID command. See the SMP/E Commands book for details.

5.4 Special Considerations

PDSE Considerations:

PDTCC uses the "partitioned data set extended" or PDSE format for the SIPVMODA target library. There are some operational differences between PDS and PDSE data sets. The PDS format may be shared by more than one z/OS system and no special precautions are necessary. However the PDSE format may only be shared by z/OS systems which are part of a sysplex or which are connected using Global Resource Serialization (are in a GRS complex). If z/OS systems share use of a PDSE data set outside of

a sysplex or GRS environment, you may experience severe problems when the data set is updated. This is due to the fact that PDSE directory information is cached in storage, and when the data set is updated from one system the other system(s) have no knowledge of the update, and their cached directory information will be incorrect.

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

6.0 Installation Instructions

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

Please note the following points:

- If you want to install PDTCC 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 PDTCC

6.1.1 SMP/E Considerations for Installing PDTCC

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

6.1.2 SMP/E Environment

Sample jobs are provided to assist you in installing PDTCC. After the RECEIVE steps for PDTCC have been completed, the sample jobs can be found in SMPTLIB: **hlq1.HVWR170.F2** where hlq1 is the high level qualifier as defined in the DSPREFIX in the CSI.

If you have received the PDTCC Japanese component, sample jobs can be found in **hlq2.JVWR171.F2**, where hlq2 is the high level qualifier as defined in the DSPREFIX in the CSI.

If you have received the PDTCC Korean component, sample jobs can be found in **hlq3.JVWR172.F2**, where hlq3 is the high level qualifier as defined in the DSPREFIX in the CSI.

Make a copy of these jobs in your own library and modify them for use during the installation of PDTCC. These sample jobs are described in Figure 19 on page 19, Figure 20 on page 19, and Figure 21 on page 20.

Alternatively, these sample jobs may be directly unloaded from the product tape. See 6.1.4, "Sample Jobs" on page 19.

All SMP/E installation jobs provided assume that all necessary DD statements for the execution of SMP/E are defined using DDDEFs.

In the sample SMP/E jobs provided, the name of the SMP/E CSI is `#globalcsi`. The global zone name in the SMP/E CSI is `GLOBAL`. The distribution zone name is `#dzone`. The target zone name is `#tzone`. The sample jobs should be updated to reflect the CSI and zone names used at your installation.

6.1.3 SMP/E Options Subentry Values

The recommended values for certain SMP/E CSI subentries are shown in Figure 18. Using values lower than the recommended values can result in failures in the installation. DSSPACE is a subentry in the GLOBAL options entry. PEMAX is a subentry of the GENERAL entry in the GLOBAL options entry. See the SMP/E manuals for instructions on updating the global zone.

Figure 18. SMP/E Options Subentry Values		
Subentry	**Value**	**Comment**
DSSPACE	(600,100,500)	3390 DASD tracks
PEMAX	SMP/E Default	IBM recommends using the SMP/E default for PEMAX.

6.1.4 Sample Jobs

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

Figure 19. Sample Installation Jobs for PDTCC			
Job Name	**Job Type**	**Description**	**RELFILE**
IPVWSMPE (optional)	SMP/E	Sample job to define an SMP/E environment	IBM.HVWR170.F2
IPVWRECV	RECEIVE	Sample RECEIVE job	IBM.HVWR170.F2
IPVWALOC	ALLOCATE	Sample job to allocate target and distribution libraries	IBM.HVWR170.F2
IPVWDDEF	DDDEF	Sample job to define SMP/E DDDEFs	IBM.HVWR170.F2
IPVWAPLY	APPLY	Sample APPLY job	IBM.HVWR170.F2
IPVWACPT	ACCEPT	Sample ACCEPT job	IBM.HVWR170.F2

Figure 20 (Page 1 of 2). Sample Installation Jobs for PDTCC Japanese component			
Job Name	**Job Type**	**Description**	**RELFILE**
IPVWRCVJ	RECEIVE	Sample RECEIVE job for Japanese component	IBM.JVWR171.F2
IPVWALOJ	ALLOCATE	Sample job to allocate target and distribution libraries for Japanese component	IBM.JVWR171.F2
IPVWDDFJ	DDDEF	Sample job to define SMP/E DDDEFs for Japanese component	IBM.JVWR171.F2

Figure 20 (Page 2 of 2). Sample Installation Jobs for PDTCC Japanese component			
Job Name	**Job Type**	**Description**	**RELFILE**
IPVWAPLJ	APPLY	Sample APPLY job for Japanese component	IBM.JVWR171.F2
IPVWACPJ	ACCEPT	Sample ACCEPT job for Japanese component	IBM.JVWR171.F2

Figure 21. Sample Installation Jobs for Korean component			
Job Name	**Job Type**	**Description**	**RELFILE**
IPVWRCVK	RECEIVE	Sample RECEIVE job for Korean component	IBM.JVWR172.F2
IPVWALOK	ALLOCATE	Sample job to allocate target and distribution libraries for Korean component	IBM.JVWR172.F2
IPVWDDFK	DDDEF	Sample job to define SMP/E DDDEFs for Korean component	IBM.JVWR172.F2
IPVWAPLK	APPLY	Sample APPLY job for Korean component	IBM.JVWR172.F2
IPVWACPK	ACCEPT	Sample ACCEPT job for Korean component	IBM.JVWR172.F2

You can access the sample installation jobs by performing an SMP/E RECEIVE (refer to 6.1.6, "Perform SMP/E RECEIVE" on page 22) then copy the jobs from the RELFILEs to a work data set for editing and submission. See Figure 19 on page 19 to find the appropriate relfile data set.

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

To copy the sample jobs for the PDTCC English component, use this JCL.

```
//STEP1    EXEC PGM=IEBCOPY
//SYSPRINT DD SYSOUT=*
//************************************************************
//* Make the //TAPEIN DD statement below active if you install*
//* from a CBPDO tape or if you install from a product tape   *
//* received outside the CBPDO process.                       *
//************************************************************
//*TAPEIN   DD DSN=IBM.HVWR170.F2,UNIT=tunit,
//*         VOL=SER=volser,LABEL=(x,SL),
//*         DISP=(OLD,KEEP)
//************************************************************
//* Make the //FILEIN DD statement below active for          *
//* downloaded DASD files.                                    *
//************************************************************
//*FILEIN   DD DSN=IBM.HVWR170.F2,UNIT=SYSALLDA,DISP=SHR,
//*         VOL=SER=filevol
//OUT      DD DSNAME=jcl-library-name,
//         DISP=(NEW,CATLG,DELETE),
```

```
//          VOL=SER=dasdvol,UNIT=SYSALLDA,
//          SPACE=(8800,(5,2,5))
//SYSUT3   DD UNIT=SYSALLDA,SPACE=(CYL,(1,1))
//SYSIN    DD *
    COPY INDD=xxxxIN,OUTDD=OUT
    SELECT MEMBER=(IPVWSMPE,IPVWRECV,IPVWALOC)
    SELECT MEMBER=(IPVWDDEF,IPVWAPLY,IPVWACPT)
/*
```

To copy the sample jobs for the Japanese component, use this JCL.

```
//STEP1    EXEC PGM=IEBCOPY
//SYSPRINT DD SYSOUT=*
//TAPEIN   DD DSN=IBM.JVWR171.F2,UNIT=tunit,
//          VOL=SER=volser,LABEL=(x,SL),
//          DISP=(OLD,KEEP)
//FILEIN   DD DSN=IBM.JVWR171.F2,UNIT=SYSALLDA,DISP=SHR,
//          VOL=SER=filevol
//OUT      DD DSNAME=jcl-library-name,
//          DISP=(NEW,CATLG,DELETE),
//          VOL=SER=dasdvol,UNIT=SYSALLDA,
//          SPACE=(8800,(5,2,5))
//SYSUT3   DD UNIT=SYSALLDA,SPACE=(CYL,(1,1))
//SYSIN    DD *
    COPY INDD=xxxxIN,OUTDD=OUT
    SELECT MEMBER=(IPVWRCVJ,IPVWALOJ,IPVWDDFJ,IPVWAPLJ,IPVWACPJ)
/*
```

To copy the sample jobs for the Korean component, use this JCL.

```
//STEP1    EXEC PGM=IEBCOPY
//SYSPRINT DD SYSOUT=*
//TAPEIN   DD DSN=IBM.JVWR172.F2,UNIT=tunit,
//          VOL=SER=volser,LABEL=(x,SL),
//          DISP=(OLD,KEEP)
//FILEIN   DD DSN=IBM.JVWR172.F2,UNIT=SYSALLDA,DISP=SHR,
//          VOL=SER=filevol
//OUT      DD DSNAME=jcl-library-name,
//          DISP=(NEW,CATLG,DELETE),
//          VOL=SER=dasdvol,UNIT=SYSALLDA,
//          SPACE=(8800,(5,2,5))
//SYSUT3   DD UNIT=SYSALLDA,SPACE=(CYL,(1,1))
//SYSIN    DD *
    COPY INDD=xxxxIN,OUTDD=OUT
    SELECT MEMBER=(IPVWRCVK,IPVWALOK,IPVWDDFK,IPVWAPLK,IPVWACPK)
/*
```

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

TAPEIN:
   tunit is the unit value that matches the product package.

volser is the volume serial that matches the product package.

x is the tape file number that indicates the location of the data set name on the tape. See the documentation that is provided by CBPDO for the location of IBM.HVWR170.F2 , IBM.JVWR171.F2, and IBM.JVWR172.F2 on the tape.

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

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

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

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

6.1.5 Create the SMP/E environment (optional)

To create an SMP/E environment for PDTCC, edit and submit the sample job IPVWSMPE. This job will define and populate a global zone, a target and a distribution zone. Consult the instructions in the sample job for information about statements you will need to change to meet your requirements.

Expected Return Codes and Messages: This job should issue a return code of zero and no error messages.

6.1.6 Perform SMP/E RECEIVE

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

You can also choose to edit and submit sample job IPVWRECV to perform the SMP/E RECEIVE for PDTCC. Consult the instructions in the sample job for more information.

You can also choose to edit and submit sample job IPVWRCVJ to perform the SMP/E RECEIVE for PDTCC Japanese component. Consult the instructions in the sample job for more information.

You can also choose to edit and submit sample job IPVWRCVK to perform the SMP/E RECEIVE for PDTCC Korean component. Consult the instructions in the sample job for more information.

Expected Return Codes and Messages: You will receive a return code of 0 if these jobs run correctly.

6.1.7 Allocate SMP/E Target and Distribution Libraries

Edit and submit sample job IPVWALOC to allocate the SMP/E target and distribution libraries for PDTCC. Consult the instructions in the sample job for more information.

Edit and submit sample job IPVWALOJ to allocate the SMP/E target and distribution libraries for PDTCC Japanese component. Consult the instructions in the sample job for more information.

Edit and submit sample job IPVWALOK to allocate the SMP/E target and distribution libraries for PDTCC Korean component. Consult the instructions in the sample job for more information.

Expected Return Codes and Messages: You will receive a return code of 0 if these jobs run correctly.

6.1.8 Create DDDEF Entries

Edit and submit sample job IPVWDDEF to create DDDEF entries for the SMP/E target and distribution libraries for PDTCC. Consult the instructions in the sample job for more information.

Edit and submit sample job IPVWDDFJ to create DDDEF entries for the SMP/E target and distribution libraries for PDTCC Japanese component. Consult the instructions in the sample job for more information.

Edit and submit sample job IPVWDDFK to create DDDEF entries for the SMP/E target and distribution libraries for PDTCC Korean component. Consult the instructions in the sample job for more information.

Expected Return Codes and Messages: You will receive a return code of 0 if these jobs run correctly.

6.1.9 Perform SMP/E APPLY

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

    If you have received the PDTCC Japanese component, edit and submit the sample job IPVWAPLJ to perform an SMP/E APPLY CHECK for this component. Consult the instructions in the sample job for more information.

    If you have received the PDTCC Korean component, edit and submit the sample job IPVWAPLK to perform an SMP/E APPLY CHECK for this component. Consult the instructions in the sample job for more information.

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

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

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

Here are sample APPLY commands:

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

```
APPLY S(fmid,fmid,...) CHECK
FORFMID(fmid,fmid,...)
SOURCEID(RSU*)
FIXCAT(IBM.ProductInstall-RequiredService)
GROUPEXTEND(NOAPARS,NOUSERMODS)
RETRY(YES)
BYPASS(HOLDSYSTEM,HOLDUSER).
```

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

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

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

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

This method is the quicker, but requires subsequent review of the Exception SYSMOD report produced by the REPORT ERRSYSMODS command to investigate any unresolved HIPERs. If you have received the latest HOLDDATA, you can also choose to use the REPORT MISSINGFIX

command and specify Fix Category IBM.ProductInstall-RequiredService to investigate missing recommended service.

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

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

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 these jobs run correctly.

Expected Return Codes and Messages from APPLY: You will receive a return code of 0 if these jobs run correctly.

6.1.10 Perform SMP/E ACCEPT

Edit and submit sample job IPVWACPT to perform an SMP/E ACCEPT CHECK for PDTCC. Consult the instructions in the sample job for more information.

Edit and submit sample job IPVWACPJ to perform an SMP/E ACCEPT CHECK for PDTCC Japanese component. Consult the instructions in the sample job for more information.

Edit and submit sample job IPVWACPK to perform an SMP/E ACCEPT CHECK for PDTCC Korean component. Consult the instructions in the sample job for more information.

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

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

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

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

Expected Return Codes and Messages from ACCEPT CHECK: You will receive a return code of 0 if these jobs run correctly.

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

Expected Return Codes and Messages from ACCEPT: You will receive a return code of 0 if these jobs run correctly.

6.1.11 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 PDTCC, 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 PDTCC

The publication *IBM Problem Determination Tools for z/OS Common Component Customization Guide and User Guide, SC19-4159* contains the necessary information to customize and use PDTCC.

7.0 Notices

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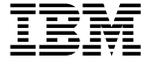
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