



Program Directory for IBM ISPF Productivity Tool

V7.1.0

Program Number 5655-SPF

FMID HIQI710

for Use with
z/OS

Document Date: July, 2012

GI13-2238-00

Note

Before using this information and the product it supports, be sure to read the general information under 7.0, "Notices" on page 20.

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1.0 Introduction

This program directory is intended for system programmers who are responsible for program installation and maintenance. It contains information about the material and procedures associated with the installation of IBM ISPF Productivity Tool. This publication refers to IBM ISPF Productivity Tool as ISPF Productivity Tool.

The Program Directory contains the following sections:

- 2.0, “Program Materials” on page 3 identifies the basic and optional program materials and documentation for ISPF Productivity Tool.
- 3.0, “Program Support” on page 5 describes the IBM support available for ISPF Productivity Tool.
- 4.0, “Program and Service Level Information” on page 7 lists the APARs (program level) and PTFs (service level) that have been incorporated into ISPF Productivity Tool.
- 5.0, “Installation Requirements and Considerations” on page 8 identifies the resources and considerations that are required for installing and using ISPF Productivity Tool.
- 6.0, “Installation Instructions” on page 14 provides detailed installation instructions for ISPF Productivity Tool. It also describes the procedures for activating the functions of ISPF Productivity Tool, or refers to appropriate publications.

Before installing ISPF Productivity Tool, read the *CBPDO Memo To Users* and the *CBPDO Memo To Users Extension* that are supplied with this program in softcopy format and this Program Directory; then keep them for future reference. Section 3.2, “Preventive Service Planning” on page 5 tells you how to find any updates to the information and procedures in this Program Directory.

ISPF Productivity Tool 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 ISPF Productivity Tool are included on the CBPDO tape.

Do not use this program directory if you install ISPF Productivity Tool 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 ISPF Productivity Tool Description

ISPF Productivity Tool is an enhancement to TSO/ISPF that improves its productivity and performance. ISPF Productivity Tool integrates seamlessly into the most frequently used ISPF functions, including BROWSE, EDIT, VIEW, and DSLIST. ISPF Productivity Tool extends the functions provided by ISPF for standard data sets to other objects, including VSAM files, Librarian/Panvalet libraries, UNIX System Services (USS) files, PC files, DB2 tables, as well as other object classes. Along with this support, ISPF

Productivity Tool provides a powerful object browser called OLIST that has the look, feel, and functionality of DSLIST.

ISPF Productivity Tool combines separately provided ISPF utility functions and new ISPF Productivity Tool features into the Member List and the OLIST/DSLISL. The resulting Member, data set, and Object Lists become powerful platforms where you can perform many tasks without navigating to other utilities.

ISPF Productivity Tool extends the ISPF Action Bar with options that provide access to new functionality so you will not have to learn new commands or syntax.

ISPF Productivity Tool provides extensive search capabilities that are fast and intuitive. You can easily search for volumes, data sets, members, and text within members. ISPF Productivity Tool also furnishes automatic drill-down system navigation to pinpoint volumes, data sets, and members. In addition to the ISPF point-and-shoot capabilities, ISPF Productivity Tool has facilities that prompt actions upon cursor selection:

- Hotbars (user-defined fields that execute commands)
- Field-sensitive areas in Member Selection Lists and Object Lists
- Automatic recognition of a data set name on any ISPF panel as a parameter to BROWSE, EDIT, VIEW, or parameters within any TSO command

ISPF Productivity Tool provides integrated and enhanced SCLM support within the standard member and data set lists. SCLM is a source library management component of ISPF that provides change control, multiple source versions, auditing, a built-in make facility, and automatic check-in/sign-out using standard libraries (PDS, PDSE).

All ISPF Productivity Tool functions are totally integrated. ISPF Productivity Tool can perform almost any activity within ISPF, or internally invoke the function that can perform the task.

After ISPF Productivity Tool is installed on your system, the ISPF Primary Option Menu is changed only slightly. The main menu does not look much different. If you are already familiar with ISPF, you can become productive immediately.

When you start using the enhanced features of ISPF Productivity Tool to perform standard BROWSE, EDIT, VIEW functions, as well as most of the ISPF capabilities, you will find almost every ISPF capability has been enhanced and new capabilities added.

1.2 ISPF Productivity Tool FMIDs

ISPF Productivity Tool consists of the following FMIDs:

HIQI710

2.0 Program Materials

An IBM program is identified by a program number. The program number for ISPF Productivity Tool is 5655-SPF.

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 ISPF Productivity Tool. 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 14 for more information about how to install the program.

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

2.2 Optional Machine-Readable Material

2.3 Program Publications

The following sections identify the basic and optional publications for ISPF Productivity Tool.

<i>Figure 1. Basic Material: Unlicensed Publications</i>	
Publication Title	Form Number
IBM ISPF Productivity Tool for z/OS: Users' Guide	SC19-3848
IBM ISPF Productivity Tool for z/OS: Installation and Configuration Guide	SC19-3847

The ISPF Productivity Tool product manuals and program directory can be found at the url listed below:
<http://www-306.ibm.com/software/awdtools/ispfproductivitytool/library/>

2.3.1 Optional Program Publications

No optional publications are provided for ISPF Productivity Tool.

2.4 Program Source Materials

No program source materials or viewable program listings are provided for ISPF Productivity Tool.

2.5 Publications Useful During Installation

You might want to use the publications listed in Figure 2 during the installation of ISPF Productivity Tool. To order copies, contact your IBM representative or visit the IBM Publications Center at: <http://www.ibm.com/e-business/linkweb/publications/servlet/pbi.wss>

Figure 2. Publications Useful During Installation

Publication Title	Form Number
<i>IBM SMP/E for z/OS User's Guide</i>	SA22-7773
<i>IBM SMP/E for z/OS Commands</i>	SA22-7771
<i>IBM SMP/E for z/OS Reference</i>	SA22-7772
<i>IBM SMP/E for z/OS Messages, Codes, and Diagnosis</i>	GA22-7770

3.0 Program Support

This section describes the IBM support available for ISPF Productivity Tool.

3.1 Program Services

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

3.2 Preventive Service Planning

Before you install ISPF Productivity Tool, make sure that you have reviewed the current Preventive Service Planning (PSP) information. Review the PSP Bucket for General Information, Installation Documentation, and the Cross Product Dependencies sections. For the Recommended Service section, instead of reviewing the PSP Bucket, it is recommended you use the IBM.ProductInstall-RequiredService fix category in SMP/E to ensure you have all the recommended service installed. Use the **FIXCAT(IBM.ProductInstall-RequiredService)** operand on the **APPLY CHECK** command. See 6.1.8, "Perform SMP/E APPLY" on page 16 for a sample APPLY command.

If you obtained ISPF Productivity Tool as part of a CBPDO, HOLDDATA is included.

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

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

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

For program support, access the Software Support Website at <http://www.ibm.com/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 ISPF Productivity Tool are included in Figure 3.

Figure 3. PSP Upgrade and Subset ID

UPGRADE	SUBSET	Description
ISPFPROTOOL	HIQI710	ISPF Productivity Tool

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 4 on page 6 identifies the component IDs (COMPID) for ISPF Productivity Tool.

<i>Figure 4. Component IDs</i>			
FMID	COMPID	Component Name	RETAIN Release
HIQI710	5698A8100	ISPF Prod Tool	710

4.0 Program and Service Level Information

This section identifies the program and relevant service levels of ISPF Productivity Tool. 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 ISPF Productivity Tool have been incorporated into this release.

OA28465	OA31365	OA32926	OA36121
OA28530	OA31481	OA33069	OA36279
OA28753	OA31597	OA33429	OA36581
OA29039	OA31722	OA33808	OA36968
OA29135	OA31794	OA33946	OA37120
OA29412	OA31932	OA34795	OA37551
OA29624	OA32054	OA34995	OA37822
OA30047	OA32203	OA35259	OA38278
OA30495	OA32268	OA35457	OA38877
OA30977	OA32512	OA35609	OA39147
OA31154	OA32669	OA35777	OA39224
OA31217	OA32779	OA36042	OA39590
OA31338	OA32805		

4.2 Service Level Information

No PTFs against this release of ISPF Productivity Tool have been incorporated into the product package.

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

5.0 Installation Requirements and Considerations

The following sections identify the system requirements for installing and activating ISPF Productivity Tool. 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 ISPF Productivity Tool.

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 5. Driving System Software Requirements

Program Number	Product Name and Minimum VRM/Service Level
5694-A01	z/OS 1.11 or later

5.2 Target System Requirements

This section describes the environment of the target system required to install and use ISPF Productivity Tool.

ISPF Productivity Tool 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. These products are specified as PREs or REQs.

<i>Figure 6. Mandatory Installation Requisites</i>	
Program Number	Product Name and Minimum VRM/Service Level
5694-A01	z/OS V1.11.0 or later

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.

ISPF Productivity Tool 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. These products are specified as PREs or REQs.

ISPF Productivity Tool 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. These products are specified as IF REqs.

ISPF Productivity Tool 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.

ISPF Productivity Tool 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.

ISPF Productivity Tool has no negative requisites.

5.2.3 DASD Storage Requirements

ISPF Productivity Tool libraries can reside on all supported DASD types.

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

Library Type	Total Space Required in 3390 Trks
Target	343 3390 Tracks
Distribution	343 3390 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 6.1.6, “Allocate SMP/E Target and Distribution Libraries” on page 16.

3. Abbreviations used for the file system path type are as follows.

- N** New path, created by this product.
- X** Path created by this product, but might already exist from a previous release.
- P** Previously existing path, created by another product.

4. All target and distribution libraries listed have the following attributes:

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

5. All target libraries listed have the following attributes:

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

6. Target libraries that are listed and contain load modules have the following attributes:

- Modules in SIQILPA can be in the LPA, but they are not required to be in the LPA.
- Modules in SIQILPA and SIQILOAD can be in the LNKST.
- Modules in SIQILPA and SIQILOAD should not be APF-authorized.

The following figures describe the target and distribution libraries and file system paths required to install ISPF Productivity Tool. The storage requirements of ISPF Productivity Tool must be added to the storage required by other programs that have data in the same library or path.

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

Figure 8. Storage Requirements for ISPF Productivity Tool 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
SIQIINST	Sample	ANY	U	PDS	FB	80	4	2
SIQICLIB	CLIST	ANY	U	PDS	FB	80	15	5
SIQICLBV	CLIST	ANY	U	PDS	VB	251	12	5
SIQILOAD	LMOD	ANY	U	PDS	U	0	61	3
SIQILPA	LMOD	ANY	U	PDS	U	0	119	23
SIQIMLIB	Message	ANY	U	PDS	FB	80	3	3
SIQIPLIB	Panel	ANY	U	PDS	FB	80	121	73
SIQISLIB	SKEL	ANY	U	PDS	FB	80	2	2
SIQITLIB	Table	ANY	U	PDS	FB	80	6	6

Figure 9. Storage Requirements for ISPF Productivity Tool 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
AIQIINST	U	PDS	FB	80	4	2
AIQICLIB	U	PDS	FB	80	15	5
AIQICLBV	U	PDS	VB	251	12	5
AIQILOAD	U	PDS	U	0	61	3
AIQILPA	U	PDS	U	0	119	23
AIQIMLIB	U	PDS	FB	80	3	3
AIQIPLIB	U	PDS	FB	80	121	73
AIQISLIB	U	PDS	FB	80	2	2
AIQITLIB	U	PDS	FB	80	6	6

5.3 FMIDs Deleted

Installing ISPF Productivity Tool 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 ISPF Productivity Tool 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

ISPF Productivity Tool 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 ISPF Productivity Tool.

Please note the following points:

- If you want to install ISPF Productivity Tool 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. Additionally, to assist you in doing this, IBM has provided samples to help you create an SMP/E environment at the following url:
<http://www.ibm.com/support/docview.wss?rs=660&context=SSZJDU&uid=swg21066230>
- 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 ISPF Productivity Tool

6.1.1 SMP/E Considerations for Installing ISPF Productivity Tool

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

6.1.2 SMP/E Options Subentry Values

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

Figure 10. SMP/E Options Subentry Values

Subentry	Value	Comment
DSSPACE	20,20,60	Space allocation for the SMPTLIB data sets
PEMAX	SMP/E Default	IBM recommends using the SMP/E default for PEMAX.

6.1.3 SMP/E CALLLIBS Processing

ISPF Productivity Tool does not use the CALLLIBS function provided by SMP/E.

6.1.4 Sample Jobs

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

Job Name	Job Type	Description	RELFILE
IQIJRECV	RECEIVE	Sample RECEIVE job	IBM.HIQI710.F1
IQIJALIB	ALLOCATE	Sample job to allocate target and distribution libraries	IBM.HIQI710.F1
IQIJDDDF	DDDEF	Sample job to define SMP/E DDDEFs	IBM.HIQI710.F1
IQIJAPLY	APPLY	Sample APPLY job	IBM.HIQI710.F1
IQIJACPT	ACCEPT	Sample ACCEPT job	IBM.HIQI710.F1

You can access the sample installation jobs by performing a SMP/E RECEIVE (refer to 6.1.5, “Perform SMP/E RECEIVE” on page 16) then copy the jobs from the RELFILES to a work data set for editing and submission. See Figure 11 to find the appropriate relfile data set.

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

```
//STEP1 EXEC PGM=IEBCOPY
//SYSPRINT DD SYSOUT=*
//TAPEIN DD DSN=IBM.HIQI710.F1,UNIT=tunit,
// VOL=SER=volser,LABEL=(x,SL),
// DISP=(OLD,KEEP)
//FILEIN DD DSN=IBM.HIQI710.F1,UNIT=SYSALLDA,DISP=SHR,
// VOL=SER=filevol
//OUT DD DSNAME=jc1-library-name,
// DISP=(NEW,CATLG,DELETE),
// VOL=SER=dasdvol,UNIT=SYSALLDA,
// SPACE=(TRK,(5,1,3))
//SYSUT3 DD UNIT=SYSALLDA,SPACE=(CYL,(1,1))
//SYSIN DD *
COPY INDD=xxxxIN,OUTDD=OUT
/*
```

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

TAPEIN:

tunit is the unit value that matches the product package.

volser is the volume serial that matches the product package.

x is the tape file number that indicates the location of the data set name on the tape.

See the documentation that is provided by CBPDO for the location of IBM.fmid.Fy 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 Perform SMP/E RECEIVE

If you have obtained ISPF Productivity Tool as part of a CBPDO, use the RCVPDO job in the CBPDO RIMLIB data set to receive the ISPF Productivity Tool 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 IQIJRECV to perform the SMP/E RECEIVE for ISPF Productivity Tool. Consult the instructions in the sample job for more information.

Expected Return Codes and Messages: The job is considered successful if a return code of 0 is received.

6.1.6 Allocate SMP/E Target and Distribution Libraries

Edit and submit sample job IQIJALIB to allocate the SMP/E target and distribution libraries for ISPF Productivity Tool. Consult the instructions in the sample job for more information.

Expected Return Codes and Messages: The job is considered successful if a return code of 0 is received.

6.1.7 Create DDDEF Entries

Edit and submit sample job IQIJDDDF to create DDDEF entries for the SMP/E target and distribution libraries for ISPF Productivity Tool. Consult the instructions in the sample job for more information.

Expected Return Codes and Messages: The job is considered successful if a return code of 0 is received.

6.1.8 Perform SMP/E APPLY

Edit and submit sample job IQIJAPLY to perform an SMP/E APPLY CHECK for ISPF Productivity Tool. 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:

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

```
APPLY S(fmid,fmid,...) CHECK
FORFMID(fmid,fmid,...)
SOURCEID(RSU*)
FIXCAT(IBM.ProductInstall-RequiredService)
GROUPEXTEND .
```

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

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

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

```
APPLY S(fmid,fmid,...) CHECK
FORFMID(fmid,fmid,...)
SOURCEID(RSU*)
FIXCAT(IBM.ProductInstall-RequiredService)
GROUPEXTEND
BYPASS(HOLDCLASS(HIPER)) .
..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.

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.

After installing new function, you should perform two operations:

1. Create a backup of the updated data sets, including any SMP/E data sets affected, in case something happens to the data sets during the next phase.
2. Do some testing before putting the new function into production.

After you are satisfied that an applied SYSMOD has performed reliably in your target system, you can install it in your distribution libraries using the ACCEPT process.

Another good practice is to accept most SYSMODs, particularly FMIDs, before performing another APPLY process. This provides you the ability to use the RESTORE process of SMP/E and to support the scenario where SMP/E needs to create a new load module from the distribution libraries during the APPLY process.

6.1.9 Perform SMP/E ACCEPT

Edit and submit sample job IQIJACPT to perform an SMP/E ACCEPT CHECK for ISPF Productivity Tool. 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 this job runs correctly.

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

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

6.1.10 Run REPORT CROSSZONE

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

After you install ISPF Productivity Tool, 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 ISPF Productivity Tool

To make ISPF Productivity Tool fully operational after the SMP/E installation, post SMP/E work needs to be done. Instructions can be found in the IBM ISPF Productivity Tool for z/OS: Installation and Configuration Guide (SC19-3847) which can be found at <http://www-306.ibm.com/software/awdtools/ispfproductivitytool/library/>.

Once you have completed the steps in the documentation, you're ready to move on and test out your installation.

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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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Printed in USA

G113-2238-00

