IBM

Program Directory for

IBM Z Decision Support for Capacity Planning

V2.01.00

Program Number 5698-AS1

for Use with
z/OS

Document Date: January 2020

GI13-4907-01

Note

Before using this information and the product it supports, be sure to read the general information under 7.0, "Notices" on page 29.

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 Z Decision Support for Capacity Planning. This publication refers to IBM Z Decision Support for Capacity Planning as IBM Z Decision Support for Capacity Planning.

The Program Directory contains the following sections:

- 2.0, "Program Materials" on page 4 identifies the basic program materials and documentation for IBM Z Decision Support for Capacity Planning.

- 3.0, "Program Support" on page 8 describes the IBM support available for IBM Z Decision Support for Capacity Planning.

- 4.0, "Program and Service Level Information" on page 11 lists the APARs (program level) and PTFs (service level) that have been incorporated into IBM Z Decision Support for Capacity Planning.

- 5.0, "Installation Requirements and Considerations" on page 12 identifies the resources and considerations that are required for installing and using IBM Z Decision Support for Capacity Planning.

- 6.0, "Installation Instructions" on page 21 provides detailed installation instructions for IBM Z Decision Support for Capacity Planning. It also describes the procedures for activating the functions of IBM Z Decision Support for Capacity Planning, or refers to appropriate publications.

Before installing IBM Z Decision Support for Capacity Planning, read the *CBPDO Memo To Users* and the *CBPDO Memo To Users Extension* that are supplied with this program in softcopy format and this program directory; after which, keep the documents for your reference. Section 3.2, "Preventive Service Planning" on page 8 tells you how to find any updates to the information and procedures in this program directory.

IBM Z Decision Support for Capacity Planning 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 IBM Z Decision Support for Capacity Planning are included on the CBPDO tape.

Do not use this program directory if you install IBM Z Decision Support for Capacity Planning 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 IBM Z Decision Support for Capacity Planning Description

IBM Z Decision Support for Capacity Planning is a reporting system that collects performance data logged by computer systems, summarizes the data, and presents it in a variety of forms for use in systems management.

Use this Program Directory when installing IBM Z Decision Support for Capacity Planning. The features are:

- IBM Z Decision Support BASE (Base)
- IBM Z Decision Support Capacity Planning (CAP)
- IBM Z Decision Support System Performance (SP)
- IBM Z Decision Support IMS Performance (IMS)
- IBM Z Decision Support CICS Performance (CICS)
- IBM Z Decision Support Network Performance (NP)

The abbreviations in the list above are used only in this document and in jobs related to the IBM Z Decision Support for Capacity Planning installation.

1.2 IBM Z Decision Support for Capacity Planning FMIDs

IBM Z Decision Support for Capacity Planning consists of the following FMIDs:

The CAP feature consists of the following FMIDs:

    JLJ09A8

The Base feature consists of the following FMIDs:

    HLJ0901
    JLJ09B2

The SP feature consists of the following FMIDs:

    JLJ09A0
    JLJ09C2
    JLJ09A4
    JLJ09G2
    JLJ09A5
    JLJ09H2

The IMS feature consists of the following FMIDs:

    JLJ09A1
    JLJ09D2

The CICS feature consists of the following FMIDs:

JLJ09A2
JLJ09E2

The NP feature consists of the following FMIDs:

JLJ09A3
JLJ09F2

2.0 Program Materials

An IBM program is identified by a program number. The program number for IBM Z Decision Support for Capacity Planning is 5698-AS1.

Basic Machine-Readable Materials are materials that are supplied under the base license and are required for the use of the product.

The program announcement material describes the features supported by IBM Z Decision Support for Capacity Planning. 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 21 for more information about how to install the program.

You can find information about the physical media for the basic machine-readable materials for IBM Z Decision Support for Capacity Planning in the *CBPDO Memo To Users Extension*.

Figure 1 describes the program file content for IBM Z Decision Support for Capacity Planning. 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.

VOLSER	Name	ORG	RECFM	LRECL	BLK SIZE
Figure 1 (Page 1 of 2). Program File Content					
LJ0901	SMPMCS	SEQ	FB	80	6400
(BASE)	IBM.HLJ0901.F1	PDS	FB	80	8800
	IBM.HLJ0901.F2	PDSE	U	0	6144
	IBM.HLJ0901.F3	PDS	VB	255	8800
	IBM.HLJ0901.F4	PDS	FB	80	8800
	IBM.HLJ0901.F5	PDS	FB	80	8800
	IBM.HLJ0901.F6	PDS	FB	80	8800
	IBM.HLJ0901.F7	PDS	FB	128	8960
	IBM.HLJ0901.F8	PDS	VB	27920	27998
	IBM.JLJ09B2.F1	PDS	FB	400	8800
	IBM.JLJ09B2.F2	PDS	VB	255	8800
	IBM.JLJ09B2.F3	PDS	FB	80	8800
	IBM.JLJ09B2.F4	PDS	VB	80	8800
	IBM.JLJ09B2.F5	PDS	FB	80	8800
	IBM.JLJ09B2.F6	PDS	FB	80	8800
LJ09A2	SMPMCS	SEQ	FB	80	6400
(CICS)	IBM.JLJ09A2.F1	PDS	VB	255	8800
	IBM.JLJ09E2.F1	PDS	VB	255	8800
LJ09A1	SMPMCS	SEQ	FB	80	6400
(IMS)	IBM.JLJ09A1.F1	PDS	VB	255	8800
	IBM.JLJ09A1.F2	PDS	FB	80	8800
	IBM.JLJ09D2.F1	PDS	VB	255	8800
LJ09A3	SMPMCS	SEQ	FB	80	6400
(NP)	IBM.JLJ09A3.F1	PDS	FB	80	8800
	IBM.JLJ09A3.F2	PDS	VB	255	8800
	IBM.JLJ09F2.F1	PDS	FB	80	8800
	IBM.JLJ09F2.F2	PDS	FB	80	8800
	IBM.JLJ09F2.F3	PDS	FB	80	8800
	IBM.JLJ09F2.F4	PDS	VB	255	8800
LJ09A0	SMPMCS	SEQ	FB	80	6400
(SP)	IBM.JLJ09A0.F1	PDS	VB	255	8800
	IBM.JLJ09A0.F2	PDS	FB	80	8800
	IBM.JLJ09A0.F3	PDS	FB	128	8960
	IBM.JLJ09C2.F1	PDS	VB	255	8800
	IBM.JLJ09A4.F1	PDS	FB	128	8960
	IBM.JLJ09A4.F2	PDS	VB	255	8800
	IBM.JLJ09G2.F1	PDS	VB	255	8800
	IBM.JLJ09G2.F2	PDS	FB	400	8800
	IBM.JLJ09A5.F1	PDS	FB	80	8800
	IBM.JLJ09A5.F2	PDS	VB	255	8800
	IBM.JLJ09H2.F1	PDS	VB	255	8800

Figure 1 (Page 2 of 2). Program File Content					
VOLSER	**Name**	**O R G**	**R E C F M**	**L R E C L**	**BLK SIZE**
LJ09A8	SMPMCS	SEQ	FB	80	8800
(CAP)	IBM.JLJ09A8.F1	PDS	FB	80	8800
	IBM.JLJ09A8.F2	PDS	VB	255	8800
	IBM.JLJ09A8.F3	PDS	FB	400	8800
	IBM.JLJ09A8.F4	PDS	FB	128	8960
	IBM.JLJ09A8.F5	PDS	VB	255	8800

2.2 Program Publications

The following sections identify the basic publications for IBM Z Decision Support for Capacity Planning.

Figure 2 identifies the basic unlicensed publications for IBM Z Decision Support for Capacity Planning. The publications are available in PDF and XHTML format at the IBM Knowledge Center at the URL listed below:

http://www.ibm.com/support/knowledgecenter/

Figure 2 (Page 1 of 2). Basic Material: Unlicensed Publications	
Publication Title	**Form Number**
Administration Guide and Reference	SC27-9055
IBM Z Decision Support Language Guide and Reference	GI13-4376
Guide to Reporting	SC27-9066
Resource Accounting for z/OS	SH19-4495
Messages and Problem Determination	GC27-9056
Usage and Accounting Collector User Guide	SC27-9064
System Performance Feature Guide	SH19-6818
System Performance Feature Reference Vol I	SC27-9062
System Performance Feature Reference Vol II	SC27-9063
Distributed Systems Performance Feature Guide and Reference	SC27-9059
AS/400 System Performance Feature Guide and Reference	SC27-9060
IMS CSQ Feature Guide and Reference	SC27-9058
CICS Performance Feature Guide and Reference	SC27-9057

Figure 2 (Page 2 of 2). Basic Material: Unlicensed Publications	
Publication Title	**Form Number**
Network Performance Feature Reports	SH19-6821
Network Performance Feature Reference	SH19-6822
Network Performance Feature Installation and Administration	SH19-6901
IBM Z Decision Support for Capacity Planning, Capacity Planning Guide and Reference	SC27-9406

2.2.1 Optional Program Publications

No optional publications are provided for IBM Z Decision Support for Capacity Planning.

2.3 Program Source Materials

No program source materials or viewable program listings are provided for IBM Z Decision Support for Capacity Planning.

2.4 Publications Useful During Installation

You might want to use the publications listed in Figure 3 during the installation of IBM Z Decision Support for Capacity Planning.

Figure 3. Publications Useful During Installation		
Publication Title	**Form Number**	**Media Format**
IBM SMP/E for z/OS User's Guide	SA23-2277	http://www.ibm.com/shop/publications/order/
IBM SMP/E for z/OS Commands	SA23-2275	http://www.ibm.com/shop/publications/order/
IBM SMP/E for z/OS Reference	SA23-2276	http://www.ibm.com/shop/publications/order/
IBM SMP/E for z/OS Messages, Codes, and Diagnosis	GA32-0883	http://www.ibm.com/shop/publications/order/

3.0 Program Support

This section describes the IBM support available for IBM Z Decision Support for Capacity Planning.

3.1 Program Services

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

3.2 Preventive Service Planning

Before you install IBM Z Decision Support for Capacity Planning, make sure that you have reviewed the current Preventive Service Planning (PSP) information. Review the PSP Bucket for General Information, Installation Documentation, and the Cross Product Dependencies sections. For the Recommended Service section, instead of reviewing the PSP Bucket, it is recommended you use the IBM.PRODUCTINSTALL-REQUIREDSERVICE fix category in SMP/E to ensure you have all the recommended service installed. Use the **FIXCAT(IBM.PRODUCTINSTALL-REQUIREDSERVICE)** operand on the **APPLY CHECK**command. See 6.1.10, "Perform SMP/E APPLY" on page 25 for a sample APPLY command.

If you obtained IBM Z Decision Support for Capacity Planning as part of a CBPDO, HOLDDATA is included.

If the CBPDO for IBM Z Decision Support for Capacity Planning is older than two weeks by the time you install the product materials, you can obtain the latest PSP Bucket information by going to the following website:

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

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

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

PSP Buckets are identified by UPGRADEs, which specify product levels; and SUBSETs, which specify the FMIDs for a product level. The UPGRADE and SUBSET values for IBM Z Decision Support for Capacity Planning are included in Figure 4.

UPGRADE	SUBSET	Description
Figure 4 (Page 1 of 2). PSP Upgrade and Subset ID		
IZDSCP210	HLJ0901	Base Function
	JLJ09A2	CICS Performance

UPGRADE	SUBSET	Description
Figure 4 (Page 2 of 2). PSP Upgrade and Subset ID		
	JLJ09A1	IMS Performance
	JLJ09A3	Network Performance
	JLJ09A0	System Performance
	JLJ09A4	Distributed Systems Performance
	JLJ09A5	AS/400 System Performance
	JLJ09B2	Base Function
	JLJ09C2	System Performance (English)
	JLJ09D2	IMS Performance (English)
	JLJ09E2	CICS Performance (English)
	JLJ09F2	Network Performance (English)
	JLJ09G2	Distributed Systems Performance (English)
	JLJ09H2	AS/400 System Performance (English)
	JLJ09A8	Base Function Capacity Planning (additional elements)

3.3 Statement of Support Procedures

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

Figure 5 identifies the component IDs (COMPID) for IBM Z Decision Support for Capacity Planning.

FMID	COMPID	Component Name	RETAIN Release
Figure 5 (Page 1 of 2). Component IDs			
HLJ0901	569510100	Base Function	901
JLJ09A2	569510100	CICS Performance	9A2
JLJ09A1	569510100	IMS Performance	9A1
JLJ09A3	569510100	Network Performance	9A3
JLJ09A0	569510100	System Performance	9A0
JLJ09A4	569510100	Distributed Systems Performance	9A4
JLJ09A5	569510100	AS/400 System Performance	9A5
JLJ09B2	569510100	Base Function (English)	9B2

			RETAIN
FMID	COMPID	Component Name	Release
JLJ09C2	569510100	System Performance (English)	9C2
JLJ09D2	569510100	IMS Performance (English)	9D2
JLJ09E2	569510100	CICS Performance (English)	9E2
JLJ09F2	569510100	Network Performance (English)	9F2
JLJ09G2	569510100	Distributed Systems Performance (English)	9G2
JLJ09H2	569510100	AS/400 System Performance (English)	9H2
JLJ09A8	569510100	Base Function Capacity Planning (additional elements)	9A8

Figure 5 (Page 2 of 2). Component IDs

4.0 Program and Service Level Information

This section identifies the program and relevant service levels of IBM Z Decision Support for Capacity Planning. 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

No APARs have been incorporated into IBM Z Decision Support for Capacity Planning.

4.2 Service Level Information

No PTFs against this release of IBM Z Decision Support for Capacity Planning have been incorporated into the product package.

Frequently check the IBM Z Decision Support for Capacity Planning PSP Bucket for HIPER and SPECIAL attention PTFs against all FMIDs that you must install. You can also receive the latest HOLDDATA, then add the **FIXCAT(IBM.PRODUCTINSTALL-REQUIREDSERVICE)** operand on your **APPLY CHECK** command. This will allow you to 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 IBM Z Decision Support for Capacity Planning. 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 IBM Z Decision Support for Capacity Planning.

5.1.1 Machine Requirements

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

5.1.2 Programming Requirements

Figure 6. Driving System Software Requirements				
Program Number	Product Name	Minimum VRM	Minimum Service Level will satisfy these APARs	Included in the shipped product?
5650-ZOS	z/OS	V02.02.00	N/A	No

Note: SMP/E is a requirement for Installation and is an element of z/OS but can also be ordered as a separate product, 5655-G44, minimally V03.06.00.

Note: Installation might require migration to new z/OS releases to be service supported. See https://www-01.ibm.com/software/support/lifecycle/index_z.html.

5.2 Target System Requirements

This section describes the environment of the target system required to install and use IBM Z Decision Support for Capacity Planning.

IBM Z Decision Support for Capacity Planning 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.

Figure 7. Target System Mandatory Installation Requisites				
Program Number	**Product Name**	**Minimum VRM**	**Minimum Service Level will satisfy these APARs**	**Included in the shipped product?**
5650-ZOS	z/OS	V02.02.00 or higher	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.

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.

IBM Z Decision Support for Capacity Planning 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.

Figure 8. Target System Mandatory Operational Requisites	
Program Number	**Product Name and Minimum VRM/Service Level**
Any **one** of the following:	
5615-DB2	DB2 for z/OS V11.01.00
5650-DB2	DB2 for z/OS V12.01.00
5697-P43	DB2 VUE for z/OS V11.01.00
5770-AF3	DB2 VUE for z/OS V12.01.00

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 9. Target System Conditional Operational Requisites		
Program Number	**Product Name and Minimum VRM/Service Level**	**Function**
5698-ABJ	IBM Common Data Provider for z V01.01.00	Data Streaming off-platform
5695-167	Graphical Data Display Manager (GDDM) V03.02.00	Graphical reports
5668-812	GDDM-PGF V02.01.04	Graphical reports
5655-AA1	DB2 HPU (High Performance Unload for z/OS) V04.03.00	Unload DB2 data enhancement
5698-ABJ	Common Data Provider V01.01.00	Data Streaming off Platform

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.

IBM Z Decision Support for Capacity Planning 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.

IBM Z Decision Support for Capacity Planning has no negative requisites.

5.2.3 DASD Storage Requirements

IBM Z Decision Support for Capacity Planning libraries can reside on all supported DASD types.

Figure 10 lists the total space that is required for each type of library.

Figure 10. Total DASD Space Required by IBM Z Decision Support for Capacity Planning		
Library Type	**Total Space Required in 3390 Trks**	**File System Description**
Target	3989	
Distribution	3844	
File System(s)	75	/usr/lpp/IBM/IDSz/v1r9m0/

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 24.

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

   - The default name of the data set can be changed.
   - The default block size of the data set can be changed.
   - The data set can be merged with another data set that has equivalent characteristics.
   - The data set can be either a PDS or a PDSE, with some exceptions. If the value in the "ORG" column specifies "PDS", the data set must be a PDS. If the value in "DIR Blks" column specifies "N/A", the data set must be a PDSE.

4. All target libraries listed have the following attributes:

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

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

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

- IBM Z Decision Support for Capacity Planning 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 IBM Z Decision Support for Capacity Planning. The storage requirements of IBM Z Decision Support for Capacity Planning 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.

Library DDNAME	Member Type	Target Volume	TYPE	ORG	RECFM	LRECL	No. of 3390 Trks	No. of DIR Blks
SDRLA400	Data	ANY	U	PDS	FB	80	80	3
SDRLCNTL	Data	ANY	U	PDS	FB	80	270	35
SDRLDEFS	Data	ANY	U	PDS	VB	255	1300	120
SDRLEXEC	EXEC	ANY	U	PDS	FB	80	360	12
SDRLFENU	Data	ANY	U	PDS	FB	400	20	12
SDRLLOAD	LMOD	ANY	U	PDSE	U	0	390	n/a
SDRLEXTR	APF	ANY	U	PDSE	U	0	40	n/a
SDRLMENU	Message	ANY	U	PDS	FB	80	12	10
SDRLPENU	Panel	ANY	U	PDS	FB	80	230	130
SDRLRENU	Data	ANY	U	PDS	VB	255	260	320
SDRLSKEL	SKEL	ANY	U	PDS	FB	80	12	5
SDRLTENU	Table	ANY	U	PDS	FB	80	15	5
SDRLWS	Data	ANY	U	PDS	FB	128	1000	5

Figure 11. Storage Requirements for IBM Z Decision Support for Capacity Planning Target Libraries

DDNAME	TYPE	Path Name
SDRLIDM	N	/usr/lpp/IBM/IDSz/v1r9m0/IBM/

Figure 12. IBM Z Decision Support for Capacity Planning File System Paths

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
ADRLA400	U	PDS	FB	80	80	3
ADRLCNTL	U	PDS	FB	80	270	35
ADRLDEFS	U	PDS	VB	255	1300	120
ADRLEXEC	U	PDS	FB	80	360	12
ADRLIDM	U	PDS	FB	128	10	5
ADRLFENU	U	PDS	FB	400	20	12
ADRLLOAD	U	PDSE	U	0	250	n/a
ADRLEXTR	U	PDSE	U	0	25	n/a
ADRLMENU	U	PDS	FB	80	12	10
ADRLPENU	U	PDS	FB	80	230	130
ADRLRENU	U	PDS	VB	255	260	320
ADRLSKEL	U	PDS	FB	80	12	5
ADRLTENU	U	PDS	FB	80	15	5
ADRLWS	U	PDS	FB	128	1000	5

Figure 13. Storage Requirements for IBM Z Decision Support for Capacity Planning Distribution Libraries

The following figures list data sets that are not used by SMP/E, but are required for IBM Z Decision Support for Capacity Planning to run.

Data Set Name	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
LOCAL.ADMCFORM	U	PDS	FB	400	20	20
LOCAL.CHARTS	U	PDS	FB	400	20	20
LOCAL.CNTL	U	PDS	FB	80	10	20
LOCAL.DEFS	U	PDS	VB	255	20	20
LOCAL.EXEC	U	PDS	FB	80	20	20
LOCAL.MESSAGES	U	PDS	FB	80	20	20
LOCAL.REPORTS	U	PDS	FBA	133	20	20

Figure 14 (Page 1 of 2). Storage Requirements for IBM Z Decision Support for Capacity Planning Non-SMP/E Data Sets

Data Set Name	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 14 (Page 2 of 2). Storage Requirements for IBM Z Decision Support for Capacity Planning Non-SMP/E Data Sets						
LOCAL.USER.DEFS	U	PDS	VB	255	20	20

5.3 FMIDs Deleted

Installing IBM Z Decision Support for Capacity Planning 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 IBM Z Decision Support for Capacity Planning 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:

IBM Z Decision Support for Capacity Planning uses the "partitioned data set extended" or PDSE format for the SDRLLOAD & SDRLEXTR libraries. There are some operational differences between PDS and PDSE data sets. The PDS format may be shared by more than one z/OS system and no special precautions are necessary. However the PDSE format may only be shared by z/OS systems which are part of a sysplex or which are connected using Global Resource Serialization (are in a GRS complex). If z/OS systems share use of a PDSE data set outside of a sysplex or GRS environment, you may experience severe problems when the data set is updated. This is due to the fact that PDSE directory information is cached in storage, and when the data set is updated from one system the other system(s) have no knowledge of the update, and their cached directory information will be incorrect.

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

Cognos Analytics Reporting:

IBM Z Decision Support for Capacity Planning uses Cognos Analytics as a strategic reporting platform. A limited use licensed version of Cognos Analytics 11.0.13 and Cognos Framework Manager is supplied as part of the supporting installation materials on DVD.

The Tivoli Common Reporting (TCR) platform may also be used as a reporting platform for older reports based on BIRT technology. The Jazz for Service Management V1.1.3 supplied as part of the installation materials on DVD includes TCR 3.1.3.0

SYSPROC/SYSEXEC:

When you are installing the base function (FMID HLJ0901) of IBM Z Decision Support for Capacity Planning, check what DCB attributes your system is using for SYSPROC/SYSEXEC. The exec library of IBM Z Decision Support for Capacity Planning is supplied with DCB attributes of FB/80/8800. If your SYSPROC/SYSEXEC DCB attributes are different, then change the DCB attributes of the SDRLEXEC DD statement in the allocation job DRLJAALE (see 6.1.6, "Allocate SMP/E Target and Distribution Libraries" on page 24) according to the attributes for your SYSPROC/SYSEXEC.

Log Collector Exits:

If you intend to use C/370* Library Version 2 Release 1 (5688-188) to write your own exits to the IBM Z Decision Support for Capacity Planning Log Collector, ensure that PTF UN37741 (for APAR PN35668) is installed for C/370.

5.4.1 Migration Considerations

If you are migrating from an earlier version of IBM Z Decision Support (pre Version 1.9.0), you should perform some migration actions. These migration actions are described here:

https://www-01.ibm.com/support/docview.wss?uid=ibm10731075

6.0 Installation Instructions

This chapter describes the installation method and the step-by-step procedures to install and to activate the functions of IBM Z Decision Support for Capacity Planning.

Please note the following points:

- If you want to install IBM Z Decision Support for Capacity Planning 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 IBM Z Decision Support for Capacity Planning

6.1.1 SMP/E Considerations for Installing IBM Z Decision Support for Capacity Planning

Use the SMP/E RECEIVE, APPLY, and ACCEPT commands to install this release of IBM Z Decision Support for Capacity Planning.

6.1.2 SMP/E Options Subentry Values

The recommended values for certain SMP/E CSI subentries are shown in Figure 15. 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 15. SMP/E Options Subentry Values		
Subentry	**Value**	**Comment**
DSSPACE	(200,200,500)	3390 DASD tracks
PEMAX	SMP/E Default	IBM recommends using the SMP/E default for PEMAX.

6.1.3 SMP/E CALLLIBS Processing

IBM Z Decision Support for Capacity Planning uses the CALLLIBS function provided in SMP/E to resolve external references during installation. When IBM Z Decision Support for Capacity Planning is installed, ensure that DDDEFs exist for the following libraries:

- SCEELKED
- SCEESPC

Note: CALLLIBS uses the previous DDDEFs only to resolve the link-edit for IBM Z Decision Support for Capacity Planning. These data sets are not updated during the installation of IBM Z Decision Support for Capacity Planning.

6.1.4 Sample Jobs

The following sample installation jobs are provided as part of the product to help you install IBM Z Decision Support for Capacity Planning:

Figure 16. Sample Installation Jobs			
Job Name	**Job Type**	**Description**	**RELFILE**
DRLJZRCV	RECEIVE	Sample RECEIVE job for Base	IBM.JLJ09A8.F1
DRLJZAAL	ALLOCATE	Sample job to allocate target and distribution libraries	IBM.JLJ09A8.F1
DRLJZDDD	DDDEF	Sample job to define SMP/E DDDEFs	IBM.JLJ09A8.F1
DRLJZAPP	APPLY	Sample APPLY job	IBM.JLJ09A8.F1
DRLJZACC	ACCEPT	Sample ACCEPT job	IBM.JLJ09A8.F1
DRLJZFSZ	ALLOMZFS	Sample job to allocate a zFS data set (optional)	IBM.JLJ09A8.F1
DRLJZSMK	MKDIR	Sample job to invoke the supplied DRLJZMKD EXEC to allocate file system mount point	IBM.JLJ09A8.F1

If you have already installed a Japanese (Kanji) version of IBM Z Decision Support V1.9.0, you must modify the provided sample jobs in order to remove the language-independent statements, since it is assumed that you have already run them during Japanese installation. Refer to each sample job for more detailed information.

You can access the sample installation jobs by performing an SMP/E RECEIVE (refer to 6.1.5, "Perform SMP/E RECEIVE" on page 23) then copy the jobs from the RELFILES to a work data set for editing and submission. See Figure 16 to find the appropriate relfile data set.

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

```
//STEP1    EXEC PGM=IEBCOPY
//SYSPRINT DD SYSOUT=*
//*************************************************************
//* Make the //FILEIN DD statement below active for           *
//* downloaded DASD files.                                    *
//*************************************************************
//FILEIN    DD DSN=IBM.JLJ09A8.F1,UNIT=SYSALLDA,DISP=SHR,
//          VOL=SER=filevol
//OUT       DD DSNAME=jcl-library-name,
//          DISP=(NEW,CATLG,DELETE),
//          VOL=SER=dasdvol,UNIT=SYSALLDA,
//          SPACE=(TRK,(20,10,5))
//SYSUT3    DD UNIT=SYSALLDA,SPACE=(CYL,(1,1))
//SYSIN     DD *
   COPY INDD=xxxxIN,OUTDD=OUT
   SELECT MEMBER=(DRLJZAAL,DRLJZACC,DRLJZAPP,DRLJZDDD,DRLJZFSZ)
   SELECT MEMBER=(DRLJZMKD,DRLJZRCV,DRLJZSMK)
/*
```

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

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:
   FILEIN is your input DD statement.

6.1.5 Perform SMP/E RECEIVE

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

Note!

If you have already installed IBM Z Decision Support, there is no need to receive the common FMIDs
already installed.

You should remove common FMIDs from the RECEIVE job.

If you are installing the IBM Z Decision Support for Capacity Planning Base Feature, you can choose to
edit and submit sample job DRLJZRCV to perform the SMP/E RECEIVE. Consult the instructions in the
sample jobs for more information.

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

6.1.6 Allocate SMP/E Target and Distribution Libraries

Edit and submit sample job DRLJZAAL to allocate the SMP/E target and distribution libraries for IBM Z Decision Support for Capacity Planning. Consult the instructions in the sample job for more information.

Note: The LOCAL libraries, allocated by *DRLJZAAL*, will be filled during the IBM Z Decision Support for Capacity Planning customization.

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

6.1.7 Allocate, create and mount ZFS Files (Optional)

This job allocates, creates a mountpoint, and mounts zFS data sets.

If you plan to install IBM Z Decision Support for Capacity Planning into a new z/OS UNIX file system, you can edit and submit the optional DRLJZFSZ job to perform the following tasks:

- Create the z/OS UNIX file system
- Create a mount point
- Mount the z/OS UNIX file system on the mountpoint

Consult the instructions in the sample job for more information.

The recommended z/OS UNIX file system type is *zFS*. The recommended mountpoint is */usr/lpp/IBM/IDSz/v1r9m0/*.

Before running the sample job to create the z/OS UNIX file system, you must ensure that OMVS is active on the driving system. zFS must be active on the driving system if you are installing IBM Z Decision Support for Capacity Planning into a file system that is zFS.

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.

```
 MOUNT FILESYSTEM('#dsn')
 MOUNTPOINT('/usr/lpp/IBM/IDSz/v1r9m0/')
 MODE(RDWR)        /* can be MODE(READ) */
  TYPE(ZFS) PARM('AGGRGROW') /* zFS, with extents */
```

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

   #dsn is the name of the data set holding the z/OS UNIX file system.
   /usr/lpp/IBM/IDSz/v1r9m0/ is the name of the mountpoint where the z/OS UNIX file system will be mounted.

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

6.1.8 Allocate File System Paths

The target system HFS or zFS data set must be mounted on the driving system when running the sample DRLJZSMK job since the job will create paths in the HFS or zFS.

Before running the sample job to create the paths in the file system, you must ensure that OMVS is active on the driving system and that the target system's HFS or zFS file system is mounted to the driving system. zFS must be active on the driving system if you are installing IBM Z Decision Support for Capacity Planning into a file system that is zFS.

If you plan to install IBM Z Decision Support for Capacity Planning into a new HFS or zFS file system, you must create the mountpoint and mount the new file system to the driving system for IBM Z Decision Support for Capacity Planning.

The recommended mountpoint is */usr/lpp/IBM/IDSz/v1r9m0/*.

Edit and submit sample job DRLJZSMK to allocate the HFS or zFS paths for IBM Z Decision Support for Capacity Planning. 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: You will receive a return code of 0 if this job runs correctly.

6.1.9 Create DDDEF Entries

Edit and submit sample job DRLJZDDD to create DDDEF entries for the SMP/E target and distribution libraries for IBM Z Decision Support for Capacity Planning. Consult the instructions in the sample job for more information.

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

6.1.10 Perform SMP/E APPLY

1. Ensure that you have the latest HOLDDATA; then edit and submit sample job DRLJZAPP to perform an SMP/E APPLY CHECK for IBM Z Decision Support for Capacity Planning. Consult the instructions in the sample job for more information.

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

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

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

Here are sample APPLY commands:

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

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

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

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

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

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

This method is quicker, but requires subsequent review of the Exception SYSMOD report produced by the REPORT ERRSYSMODS command to investigate any unresolved HIPERs. If you have received the latest HOLDDATA, you can also choose to use the REPORT MISSINGFIX command and specify Fix Category IBM.PRODUCTINSTALL-REQUIREDSERVICE to investigate missing recommended service.

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

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

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

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

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

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.

6.1.11 Perform SMP/E ACCEPT

Edit and submit sample job DRLJZACC to perform an SMP/E ACCEPT CHECK for IBM Z Decision Support for Capacity Planning. Consult the instructions in the sample job for more information.

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

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

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

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

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

If 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.

6.1.12 Run REPORT CROSSZONE

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

After you install IBM Z Decision Support for Capacity Planning, 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 IBM Z Decision Support for Capacity Planning

6.2.1 File System Execution

If you mount the file system in which you have installed IBM Z Decision Support for Capacity Planning in read-only mode during execution, then you do not have to take further actions to activate IBM Z Decision Support for Capacity Planning.

6.3 Product Customization

Before you start to put IBM Z Decision Support for Capacity Planning into operational status, you should ensure that appropriate PTFs for IBM Z Decision Support for Capacity Planning have been applied (see 5.4, "Special Considerations" on page 19).

Detailed steps to put the program into operational status are defined in the *Administration Guide and Reference*, SC27-9055. When you put each function of IBM Z Decision Support for Capacity Planning into operation, you also need the books listed in Section 2 that are relevant to your installation.

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