Program Directory for

IBM Z Backup Resiliency

Japanese

V2.1.0

Program Number 5698-BR3

FMID HBRN210, JBRN21J and HCKK210

for Use with
z/OS

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GI13-5939-00

Note

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

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 Backup Resiliency V2.1.0 Japanese. This publication refers to IBM Z Backup Resiliency V2.1.0 Japanese as IZBR JPN.

The Program Directory contains the following sections:

- 2.0, “Program Materials” on page 3 identifies the basic program materials and documentation for IZBR JPN.
- 3.0, “Program Support” on page 6 describes the IBM support available for IZBR JPN.
- 4.0, “Program and Service Level Information” on page 7 lists the APARs (program level) and PTFs (service level) that have been incorporated into IZBR JPN.
- 5.0, “Installation Requirements and Considerations” on page 8 identifies the resources and considerations that are required for installing and using IZBR JPN.
- 6.0, “Installation Instructions” on page 16 provides detailed installation instructions for IZBR JPN. It also describes the procedures for activating the functions of IZBR JPN, or refers to appropriate publications.

Before installing IZBR JPN, 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 6 tells you how to find any updates to the information and procedures in this Program Directory.

IZBR JPN 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 IZBR JPN are included on the CBPDO tape.

Do not use this program directory if you install IZBR JPN 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 IZBR JPN Description

IBM Z Backup Resiliency V2.1.0 Japanese helps safeguard data in IBM z/OS environments by integrating near real-time analytics into the backup and recovery process. Continuous monitoring of batch processing and data set backup repositories provides immediate insights into application dependencies and vulnerabilities. By analyzing data usage patterns and maintaining a comprehensive inventory of critical information, including batch applications and data backups, IBM Z Backup Resiliency enables automated

recovery of mainframe data for operational use or disaster recovery, regardless of the backup methodology, all without requiring extensive application expertise.

1.2 IZBR JPN FMIDs

IZBR JPN consists of the following FMIDs:

HBRN210
JBRN21J
HCKK210

2.0 Program Materials

An IBM program is identified by a program number. The program number for IZBR JPN is 5698-BR3.

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 IZBR JPN. 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 16 for more information about how to install the program.

Figure 1 describes the program file content for IZBR JPN. 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

Name	ORG	RECFM	LRECL	BLK SIZE
SMPMCS	SEQ	FB	80	8800
IBM.HBRN210.F1	PDSE	FB	80	8800
IBM.HBRN210.F2	PDSE	FB	80	8800
IBM.HBRN210.F3	PDS	VB	255	28050
IBM.HBRN210.F4	PDSE	FBA	133	14630
IBM.HBRN210.F5	PDS	FB	80	8800
IBM.HBRN210.F6	PDSE	U	0	6144
IBM.HBRN210.F7	PDSE	FB	80	8800
IBM.HBRN210.F7	PDS	FB	80	8800

Figure 1 (Page 2 of 2). Program File Content

Name	ORG	RECFM	LRECL	BLK SIZE
IBM.HBRN210.F8	PDS	VB	259	28490
IBM.HBRN210.F9	PDS	FB	80	8800
IBM.HBRN210.F10	PDSE	U	0	6144
IBM.HBRN210.F11	PDSE	FB	80	8800
IBM.HBRN210.F12	PDSE	FB	80	8800
IBM.HBRN210.F13	PDSE	FB	80	8800
IBM.HBRN210.F14	PDSE	FB	80	8800
IBM.HBRN210.F15	PDSE	FB	80	8800
IBM.HBRN210.F16	PDSE	VB	255	28050
IBM.JBRN21J.F1	PDSE	FB	80	8800
IBM.JBRN21J.F2	PDSE	VB	255	28050
IBM.JBRN21J.F3	PDSE	FB	80	8800
IBM.JBRN21J.F4	PDSE	FB	80	8800
IBM.JBRN21J.F5	PDSE	FB	80	8800
IBM.JBRN21J.F6	PDS	VB	259	28490
IBM.HCKK210.F1	PDS	FB	80	8800
IBM.HCKK210.F2	PDS	FB	80	8800
IBM.HCKK210.F3	PDSE	U	0	6144

2.2 Optional Machine-Readable Material

No optional machine-readable materials are provided for IZBR JPN.

2.3 Program Publications

The following sections identify the basic and optional publications for IZBR JPN.

2.3.1 Basic Program Publications

Figure 2 on page 5 identifies the basic unlicensed program publications for IZBR JPN. One copy of each of these publications is included when you order the basic materials for IZBR JPN. Additional copies can be obtained from the IBM Publications Website at URL:

https://www.ibm.com/docs/ja

Figure 2. Basic Material: Unlicensed Publications

Publication Title	Form Number
IBM Z Backup Resiliency V2.1.0 Japanese License Information CD	LC28-8480
IBM Z Backup Resiliency V2.1.0 Japanese User's Guide and Reference	GC43-9999

2.3.2 Optional Program Publications

No optional publications are provided for IZBR JPN.

2.4 Program Source Materials

No program source materials or viewable program listings are provided for IZBR JPN.

2.5 Publications Useful During Installation

You might want to use the publications listed in Figure 3 during the installation of IZBR JPN. These publications can be found in IBM Documentation. Use a web browser with internet access to refer to: https://www.ibm.com/docs/en/zos/2.5.0?topic=zos-smpe

Figure 3. Publications Useful During Installation

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

3.0 Program Support

This section describes the IBM support available for IZBR JPN.

This section describes the IBM support available for IZBR JPN.

3.1 Program Services

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

3.2 Preventive Service Planning

Before you install IZBR JPN, make sure that you review the PSP bucket information for IBM Z products document https://www.ibm.com/support. It contains the latest information concerning the installation of IBM products, including the latest service recommendations and cross-product dependencies. This information was previously available in traditional PSP buckets, which are no longer published for IBM Z products.

For support, access the Software Support Website at: https://www.ibm.com/mysupport/

Figure 4. PSP Upgrade and Subset ID

UPGRADE	SUBSET	Description
IZBR	HBRN210	IBM Z Backup Resiliency ENU
IZBR	JBRN21J	IBM Z Backup Resiliency JPN
IZBR Infra	HCKK210	IBM Z Backup Resiliency Infrastructure

Figure 5 identifies the component IDs (COMPID) for IZBR JPN.

Figure 5. Component IDs

FMID	COMPID	Component Name	RETAIN Release
HBRN210	5698BR100	IBM Z Backup Resiliency	210
JBRN21J	5698BR100	IBM Z Backup Resiliency Japanese	21J
HCKK210	5698BR101	IBM Z Backup Resiliency Infrastructure	210

4.0 Program and Service Level Information

This section identifies the program and relevant service levels of IZBR JPN. 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 IZBR JPN.

4.2 Service Level Information

No PTFs have been incorporated into IZBR JPN.

Frequently check the IZBR JPN 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 IZBR JPN. 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 IZBR JPN.

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	V02.05.00	N/A	No

Note: Installation might require migration to new z/OS releases to be service supported. See https://www.ibm.com/support/pages/lifecycle/.

5.2 Target System Requirements

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

IZBR JPN 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.

Figure 7 (Page 1 of 2). Target System Mandatory Installation Requisites

Program Number	Product Name	Minimum VRM	Minimum Service Level will satisfy these APARs	Included in the shipped product?
5698-BR3	IBM Z Backup Resiliency Infrastructure (HCKK210)	V2.1.0	N/A	YES

Figure 7 (Page 2 of 2). Target System Mandatory Installation Requisites

Program Number	Product Name	Minimum VRM	Minimum Service Level will satisfy these APARs	Included in the shipped product?
5698-BR3	IBM Z Batch Resiliency Japanese (JBRN12J)	V2.1.0	N/A	YES

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.

IZBR JPN 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.

IZBR JPN has no mandatory operational requisites.

Figure 8. Target System Mandatory Operational Requisites

Program Number	Product Name and Minimum VRM/Service Level
Any **one** of the following:	
5650-DB2	IBM DB2 for z/OS 12.1.0
5698-DB2	IBM Db2 13 for z/OS 13.1.0
5770-AF3	IBM DB2 Value Unit Edition 12.1.0
5698-DBV	IBM Db2 13 for z/OS Value Unit Edition 13.1.0

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.

Figure 9 (Page 1 of 2). Target System Conditional Operational Requisites

Program Number	Product Name and Minimum VRM/Service Level	Function
5655-UA1	Semeru Runtime Java z/OS 17	IZBR Web UI

Figure 9 (Page 2 of 2). Target System Conditional Operational Requisites		
Program Number	**Product Name and Minimum VRM/Service Level**	**Function**
Any **one** of the following:		
5650-ZOS	z/OS V2.5.0 with APAR OA61850	z/OS SVC Open/Close Exits
5655-ZOS	z/OS V3 or higher	z/OS SVC Open/Close Exits

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.

IZBR JPN 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.

IZBR JPN has no negative requisites.

5.2.3 DASD Storage Requirements

IZBR JPN 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 IZBR JPN	
Library Type	**Total Space Required in 3390 Trks**
Target	3695 TRACKS
Distribution	4975 TRACKS
zFS	1500 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 19.

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.
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 SBRNLOAD and SCKKLOAD which are required to be APF-authorized.

If your existing SMPLTS is a PDS, you must allocate a new PDSE and copy your SMPLTS into it; 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 IZBR JPN. The storage requirements of IZBR JPN 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 11. Storage Requirements for IZBR JPN Target Libraries

Library DDNAME	Member Type	Target Volume	TYPE	ORG	RECFM	LRECL	No. of 3390 Trks	No. of DIR Blks
SBRNDENU	Tables	ANY	U	PDS	VB	255	15	10
SBRNDOC	Documentation	ANY	U	PDS	FBA	133	15	10
SBRNEXEC	REXX Execs	ANY	U	PDS	FB	80	60	20
SBRNINST	Installation	ANY	U	PDS	FB	80	5	5
SBRNLOAD	Load Modules	ANY	U	PDSE	U	0	1800	n/a
SBRNMENU	ISPF Messages	ANY	U	PDS	FB	80	15	10
SBRNOENU	Tables	ANY	U	PDS	VB	259	15	5
SBRNPENU	ISPF Panels	ANY	U	PDS	FB	80	120	100
SBRNSKEL	DLIB Input	ANY	U	PDS	FB	80	75	75
SBRNSLIB	ISPF Skeletons	ANY	U	PDS	FB	80	15	10
SBRNSRCE	Source	ANY	U	PDS	FB	80	75	100
SBRNTENU	ISPF Tables	ANY	U	PDS	FB	80	15	5
SBRNUMAC	Macros	ANY	U	PDS	FB	80	450	200
SBRNDJPN	Tables	ANY	U	PDS	VB	255	15	10
SBRNMJPN	ISPF Messages	ANY	U	PDS	FB	80	15	10
SBRNOJPN	Tables	ANY	U	PDS	VB	259	15	5
SBRNPJPN	ISPF Panels	ANY	U	PDS	FB	80	120	100
SBRNTJPN	ISPF Panels	ANY	U	PDS	FB	80	15	5
SCKKINST	Installation	ANY	U	PDS	FB	80	5	5
SCKKLOAD	Modules	ANY	U	PDSE	U	0	90	n/a

Figure 12. IZBR JPN File System Paths

DDNAME	TYPE	Path Name
SBRNZFS	N	/usr/lpp/IBM/izbr/V2R1M0/IBM

Figure 13. Storage Requirements for IZBR JPN Distribution Libraries

Library DDNAME	TYPE	ORG	RECFM	LRECL	No. of 3390 Trks	No. of DIR Blks
ABRNDENU	U	PDS	VB	255	15	10
ABRNDOC	U	PDS	FBA	133	15	10
ABRNEXEC	U	PDS	FB	80	90	10
ABRNINST	U	PDS	FB	80	5	5
ABRNLOAD	U	PDSE	U	0	600	n/a
ABRNMENU	U	PDS	FB	80	15	10
ABRNOENU	U	PDS	VB	259	15	5
ABRNPENU	U	PDS	FB	80	620	100
ABRNPGM	U	PDSE	U	0	1875	n/a
ABRNSKEL	U	PDS	FB	80	75	75
ABRNSLIB	U	PDS	FB	80	15	10
ABRNSRCE	U	PDS	FB	80	75	100
ABRNTENU	U	PDS	FB	80	15	5
ABRNUMAC	U	PDS	FB	80	3000	200
ABRNZFS	U	PDS	VB	255	650	5
ABRNDJPN	U	PDS	VB	255	15	10
ABRNMJPN	U	PDS	FB	80	15	10
ABRNOJPN	U	PDS	VB	259	15	5
ABRNPJPN	U	PDS	FB	80	120	100
ABRNTJPN	U	PDS	FB	80	15	5
ACKKINST	U	PDS	FB	80	5	5
ACKKLOAD	U	PDSE	U	0	90	n/a

5.3 FMIDs Deleted

Installing IZBR JPN 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 IZBR JPN 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

IZBR JPN 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 IZBR JPN.

Please note the following points:

- If you want to install IZBR JPN 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 IZBR JPN

6.1.1 SMP/E Considerations for Installing IZBR JPN

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

6.1.2 SMP/E Options Subentry Values

The recommended values for certain SMP/E CSI subentries are shown in Figure 14. 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 14. SMP/E Options Subentry Values

Subentry	Value	Comment
DSSPACE	300,50,100	Space allocation for SMPTLIB datasets
PEMAX	SMP/E Default	IBM recommends using the SMP/E default for PEMAX.

6.1.3 SMP/E CALLLIBS Processing

IZBR JPN uses the CALLLIBS function provided in SMP/E to resolve external references during installation. When IZBR JPN is installed, ensure that DDDEFs exist for the following libraries:

- CSSLIB
- SEZATCP
- SCCNOBJ

Note: CALLLIBS uses the previous DDDEFs only to resolve the link-edit for IZBR JPN. These data sets are not updated during the installation of IZBR JPN.

6.1.4 Sample Jobs

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

Figure 15. Sample Installation Jobs

Job Name	Job Type	Description	RELFILE
BRNJALO	ALLOCATE	Sample job to allocate target and distribution libraries	IBM.HBRN210.F2
BRNJDDF	DDDEF	Sample job to define SMP/E DDDEFs	IBM.HBRN210.F2
BRNJMKMP	MKDIR	Sample JCL job to create directory paths	IBM.HBRN210.F2
BRNJMKMR	MKDIR	REXX exec called by BRNJMKMP job to create product directories	IBM.HBRN210.F2
BRNJZFS	ZFS	Sample job to create zFS data set	IBM.HBRN210.F2
BRNJALO1	ALLOCATE	Sample job to allocate target and distribution libraries Japanese	IBM.JBRN21J.F1
BRNJDDF1	DDDEF	Sample job to define SMP/E DDDEFs Japanese	IBM.JBRN21J.F1
CKKJALO	ALLOCATE	Sample job to allocate target and distribution libraries	IBM.HCKK210.F2
CKKJDDF	DDDEF	Sample job to define SMP/E DDDEFs	IBM.HCKK210.F2

You can access the sample installation jobs by performing a SMP/E RECEIVE (refer to 6.1.5, “Perform SMP/E RECEIVE” on page 18) then copy the jobs from the RELFILES to a work data set for editing and submission. See Figure 15 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=*
//FILEIN   DD DSN=IBM.HBRN210.F2,UNIT=SYSALLDA,DISP=SHR,
//         VOL=SER=filevol
//OUT      DD DSNAME=jcl-library-name,
//         DISP=(NEW,CATLG,DELETE),
//         VOL=SER=dasdvol,UNIT=SYSALLDA,
//         SPACE=(TRK,(15,5,4))
//SYSUT3   DD UNIT=SYSALLDA,SPACE=(CYL,(1,1))
//SYSIN    DD *
    COPY INDD=FILEIN,OUTDD=OUT
```

```
     SELECT MEMBER=(BRNJALO,BRNJDDF,BRNJMKMP,BRNJMKMR,BRNJZFS)
/*
//STEP2    EXEC PGM=IEBCOPY
//SYSPRINT DD SYSOUT=*
//FILEIN   DD DSN=IBM.JBRN21J.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,(15,5,4))
//SYSUT3   DD UNIT=SYSALLDA,SPACE=(CYL,(1,1))
//SYSIN    DD *
    COPY INDD=FILEIN,OUTDD=OUT
     SELECT MEMBER=(BRNJALO1,BRNJDDF1)
/*
//STEP2    EXEC PGM=IEBCOPY
//SYSPRINT DD SYSOUT=*
//FILEIN   DD DSN=IBM.HCKK210.F2,UNIT=SYSALLDA,DISP=SHR,
//         VOL=SER=filevol
//OUT      DD DSNAME=jcl-library-name,
//         DISP=(NEW,CATLG,DELETE),
//         VOL=SER=dasdvol,UNIT=SYSALLDA,
//         SPACE=(TRK,(15,5,4))
//SYSUT3   DD UNIT=SYSALLDA,SPACE=(CYL,(1,1))
//SYSIN    DD *
    COPY INDD=FILEIN,OUTDD=OUT
     SELECT MEMBER=(CKKJALO,CKKJDDF)
/*
```

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.

6.1.5 Perform SMP/E RECEIVE

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

Edit and submit JCL to perform the SMP/E RECEIVE for IZBR JPN

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

6.1.6 Allocate SMP/E Target and Distribution Libraries

Edit and submit sample job CKKJALO, BRNJALO and BRNJALO1 to allocate the SMP/E target and distribution libraries for IZBR JPN. 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.

6.1.7 Create DDDEF Entries

Edit and submit sample job CKKJDDF, BRNJDDF and BRNJDDF1 to create DDDEF entries for the SMP/E target and distribution libraries for IZBR JPN. 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.

6.1.8 Allocate File System Paths

Before you run the sample job BRNJZFS to create the paths in the file system, ensure that UNIX system services is active on the driving system, and that the file system of the target system is mounted to the driving system. If you install IZBR JPN into a zFS file system, the zFS address space must be active on the driving system.

If you plan to install IZBR JPN into a new file system, create the mountpoint, and mount the new file system to the driving system. You can use the BRNJMKMP job to create the mount point. The BRNJMKMP job must be run by a user ID that has SAF READ access to BPX.SUPERUSER resource. For IZBR JPN, the recommended mountpoint is <PathPrefix>/usr/lpp/IBM/izbr/V2R1M0/IBM

Note: Use this same <PathPrefix> value when you edit the BRNJDDF job. The default value in IZBR JPN is null. Remember that path names in USS are case sensitive.

Expected Return Codes and Messages: The BRNJMKMP job is successful if you receive a return code of 0.

6.1.9 Allocate File System Data Sets (Optional)

If you plan to allocate a new file system, edit and submit the sample BRNJZFS job to allocate a separate zFS data set. This data set is mounted to the root file system and is used as the location into which the IZBR JPN Unix System Services code is installed. For more information on the BRNJZFS job, see the instructions in the job.

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

Expected Return Codes and Messages: The BRNJZFS job is successful if you receive a return code of 0.

6.1.10 Perform SMP/E APPLY

Ensure that you have the latest HOLDDATA; then edit and submit JCL to perform an SMP/E APPLY CHECK for IZBR JPN.

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.

6.1.11 Perform SMP/E ACCEPT

Edit and submit JCL to perform an SMP/E ACCEPT CHECK for IZBR JPN. 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.

6.1.12 Cleaning Up Obsolete Data Sets, Paths, and DDDEFs

The following data sets, which were allocated and used by previous releases of this product, are no longer used in this release. You can delete these obsolete data sets after you delete the previous release from your system.

- SBRNCNTL
- SBRNMLIB
- SBRNPLIB
- SBRNSENU
- SBRNSLIB

- SBRNTLIB
- SBRNTLOD
- SCKKCLIB
- SCKKCNTL
- SCKKUMAC
- ABRNMLIB
- ABRNPLIB
- ABRNSENU
- ABRNSLIB
- ABRNTLIB
- ABRNTLOD
- ACKKCLIB
- ACKKCNTL
- ACKKUMAC
- ACKKPGM
- ACKKTPGM

The following DDDEF entries, which were created and used by previous release this product, are no longer used in this release. You can delete these obsolete DDDEF entries after you delete the previous

- SBRNCNTL
- SBRNMLIB
- SBRNPLIB
- SBRNSENU
- SBRNSLIB
- SBRNTLIB
- SBRNTLOD
- SCKKCLIB
- SCKKCNTL
- SCKKUMAC
- ABRNMLIB
- ABRNPLIB
- ABRNSENU
- ABRNSLIB

- ABRNTLIB
- ABRNTLOD
- ACKKCLIB
- ACKKCNTL
- ACKKUMAC
- ACKKPGM
- ACKKTPGM

6.2 Activating IZBR JPN

The publication IBM Z Backup Resiliency 2.1.0 User's Guide and Reference (GC27-9554) contains the necessary information to customize and use IZBR.

7.0 Notices

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

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