IBM

Program Directory for

Device Support Facilities (ICKDSF)

Release 17

Program Number 5684-042

for Use with
z/VM version 6 release 2
or higher

Document Date: November 2017

GI10-4514-04

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

Contents

Figures

1.0 Introduction

This program directory is intended for the system programmer responsible for program installation and maintenance. It contains information concerning the material and procedures associated with the installation of ICKDSF. You should read all of this program directory before installing the program and then keep it for future reference.

The program directory contains the following sections:

- 2.0, "Program Materials" on page 2 identifies the basic and optional program materials and documentation for ICKDSF.

- 3.0, "Program Support" on page 5 describes the IBM support available for ICKDSF.

- 4.0, "Program and Service Level Information" on page 6 lists the APARs (program level) and PTFs (service level) incorporated into ICKDSF.

- 5.0, "Installation Requirements and Considerations" on page 8 identifies the resources and considerations for installing and using ICKDSF.

- 6.0, "Installation Instructions" on page 11 provides detailed installation instructions for ICKDSF.

- 7.0, "Service Instructions" on page 17 provides detailed servicing instructions for ICKDSF.

- 8.0, "The Stand-Alone Program" on page 19 provides detailed Stand-alone instructions for ICKDSF.

- Appendix A, "Moving ICKDSF to SFS Directories and Creating a PPF Override" on page 22 provides detailed information on moving ICKDSF into the shared file system (SFS) and overriding the default Product Parameter File (PPF).

Before installing ICKDSF, read 3.1, "Preventive Service Planning" on page 5. This section tells you how to find any updates to the information and procedures in this program directory.

1.1 Program Description

The CMS version of ICKDSF is used to initialize, use, and maintain IBM direct storage access devices (DASD) in the z/VM® environment.

2.0 Program Materials

An IBM program is identified by a program number and a feature code. The program number for Device Support Facilities (ICKDSF) is 5684-042.

The program announcement material describes the features supported by ICKDSF. Ask your IBM marketing representative for this information if you have not already received a copy.

The following sections identify:

- basic and optional program materials available with this program.

- publications useful during installation.

2.1 Basic Machine-Readable Material

ICKDSF is distributed pre-installed as a prerequisite no-charge product on the z/VM base system deliverable. When ordering z/VM, you must already be licensed for ICKDSF or a separate order must be placed for it. Refer to the z/VM Software announcement for information on ordering z/VM and licensing ICKDSF.

2.2 Optional Machine-Readable Material

There are no optional machine-readable materials for ICKDSF.

2.3 Program Publications

The following sections identify the basic publications for ICKDSF.

2.3.1 Basic Program Publications

The following publication is part of your order for ICKDSF but it is only available as softcopy.

Figure 1. Basic Material: Unlicensed Publications

Publication Title	Form Number
Program Directory for Device Support Facilities (ICKDSF)	GI10-4514-04

The ICKDSF program directory is available in Adobe Portable Document Format from the z/VM Library pages on the World Wide Web; the URL for this home page is:

   www.vm.ibm.com/library

2.3.2 Base Program Publications

IBM no longer ships hardcopy publications for ICKDSF. You can download the ICKDSF publications at http://www.ibm.com/support/knowledgecenter/SSB27U

Figure 2. Basic Material: Unlicensed Publications

Publication Title	Form Number
Device Support Facilities User's Guide and Reference Release 17	GC35-0033-42
Device Support Facilities Release 17 System Control Programming Specifications	GC26-3946-21

2.3.3 Softcopy Publications

The ICKDSF publications are supplied softcopy as part of the *IBM Online Library: z/VM Collection* in Adobe® Portable Document Format (PDF) and in BookManager® format. ICKDSF publications, except the Program Directory, are also available in the z/VM library in the IBM Knowledge Center web site:

   http://www.ibm.com/support/knowledgecenter/SSB27U

In addition, the ICKDSF softcopy publications, including this Program Directory, are available in Adobe Portable Document Format from the z/VM internet library home page on the World Wide Web; the URL for this home page is:

   www.vm.ibm.com/library/

2.4 Program Source Materials

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

2.5 Publications Useful During Installation

The publications listed in Figure 3 may be useful during the installation of ICKDSF.

Figure 3 (Page 1 of 2). Publications Useful During Installation / Service on z/VM version 6

Publication Title	Form Number
z/VM: Service Guide	GC24-6247
z/VM: VMSES/E Introduction and Reference	GC24-6243
z/VM: CP Planning and Administration	SC24-6178
z/VM: CP Commands and Utilities Reference	SC24-6175
z/VM: CMS Commands and Utilities Reference	SC24-6166
z/VM: I/O Configuration	SC24-6198

Figure 3 (Page 2 of 2). Publications Useful During Installation / Service on z/VM version 6

Publication Title	Form Number
z/VM: CMS File Pool Planning, Administration, and Operation	SC24-6167
z/VM: Installation Guide	GC24-6246
z/VM: CP Messages and Codes	GC24-6177
z/VM: CMS and REXX/VM Messages and Codes	GC24-6161
z/VM: Other Components Messages and Codes	GC24-6207

3.0 Program Support

This section describes the IBM support available for ICKDSF.

3.1 Preventive Service Planning

Before installing ICKDSF, check with your IBM Support Center or use IBMLink™ (ServiceLink) to see whether there is additional Preventive Service Planning (PSP) information. To obtain this information, specify the following UPGRADE and SUBSET values:

Figure 4. PSP Upgrade and Subset ID

RETAIN®			
COMPID	**Release**	**Upgrade**	**Subset**
565899201	H14	ICKDSF017	CMS0H14

Visit http://www.ibmlink.ibm.com/ to get worldwide IBM products and services information.

3.2 Statement of Support Procedures

Report any difficulties you have using this program to your IBM Support Center. If an APAR is required, the Support Center will tell you where to send any needed documentation.

Figure 5 identifies the component ID (COMPID), Retain Release, and Field Engineering Service Number (FESN) for ICKDSF.

Figure 5. Component IDs

Retain			
COMPID	**Release**	**Component Name**	**FESN**
565899201	H14	ICKDSF R17	5499201

4.0 Program and Service Level Information

This section identifies the program and any relevant service levels of ICKDSF. The program level refers to the APAR fixes incorporated into the program. The service level refers to the PTFs shipped with this product. Information about the cumulative service tape is also provided.

4.1 Program Level Information

The following APAR fixes against the previous release of ICKDSF have been incorporated into this release.

PN60520	PN67080	PN76862	PN87929	PQ11919	PQ38921
PN60881	PN68358	PN76939	PN88014	PQ13687	PQ42534
PN61480	PN69166	PN77249	PN89166	PQ18005	PQ43495
PN62330	PN69797	PN79757	PN89905	PQ18393	PQ44667
PN62342	PN70013	PN80327	PN91223	PQ20390	PQ46396
PN62444	PN70767	PN80879	PQ00652	PQ20391	PQ47472
PN63044	PN71101	PN83877	PQ02288	PQ23131	PQ49243
PN63507	PN71972	PN84194	PQ03341	PQ24114	PQ50940
PN64655	PN72104	PN84489	PQ05231	PQ24577	PQ53196
PN64868	PN73132	PN84759	PQ07015	PQ26800	PQ53326
PN65609	PN74048	PN85067	PQ08691	PQ29648	PQ56431
PN66540	PN74223	PN85631	PQ10899	PQ32380	PQ62077
PN66541	PN76727	PN86705	PQ11775	PQ37791	

4.2 Service Level Information

ICKDSF is shipped at a particular ESO service level on the z/VM system deliverable.

To find out the ESO level of ICKDSF you can enter the command:

```
SERVICE ICKDSF STATUS
```

To find out the PTFs associated with the shipped level check with the IBM Support Center or using IBMLink (ServiceLink).

Before you use ICKDSF you should review the ICKDSF017 PSP (Preventive Service Planning) bucket for updated installation information that you should be aware of, or for information about PTFs that should be installed.

4.3 Cumulative Service Tape

Cumulative service for ICKDSF Release 17 is available through a monthly corrective service tape, Expanded Service Option, ESO. When ordering an ESO, you need to specify the PRODID for the product. ICKDSF's PRODID is 5684042J.

5.0 Installation Requirements and Considerations

The following sections identify the system requirements for installing and activating ICKDSF.

5.1 Hardware Requirements

There are no special hardware requirements for ICKDSF.

5.2 Program Considerations

The following sections list the programming considerations for installing and activating ICKDSF.

5.2.1 Operating System Requirements

ICKDSF supports the following VM operating systems:

*   z/VM version 6

5.2.2 Other Program Product Requirements

No other products are required for ICKDSF.

5.2.3 Program Installation and Service Considerations

This section describes items that should be considered before you install or service ICKDSF.

*   ICKDSF is pre-installed on the z/VM system deliverable.

*   With the packaging changes introduced with z/VM version 6 release 2 to provide support for a z/VM single system image (SSI), note that **all ICKDSF service activity now must be performed using user ID MAINT*vrm* (e.g. MAINT640).**

*   VMSES/E is required to install and service this product.

*   If you modify or eliminate any of the IBM-supplied user IDs, minidisk addresses or SFS directory names that are associated with ICKDSF, you **must** create an appropriate PPF override for the **SERVP2P $PPF** file.

    Note: The ICKDSF Product Parameter File, 5684042J $PPF, has not been updated to use the new VMSES/E SSI function but the ICKDSF component in the SERVP2P $PPF has been updated.

    You also must use the **VMFUPDAT SYSSUF** command to update the VM SYSSUF Software Inventory file, so that your PPF override for SERVP2P PPF is used for automated service processing. For more information about PPF overrides, see the *VMSES/E Introduction and Reference*.

- If you choose to move ICKDSF from minidisk to SFS after initial z/VM installation, or if you want to change from the default SFS file pool or directories, then you will need to follow the steps in Appendix A, "Moving ICKDSF to SFS Directories and Creating a PPF Override" on page 22. These steps help you create the SFS directories, move the files to the SFS directories and create a PPF override file.

5.3 DASD Storage and User ID Requirements

Figure 6 lists the user IDs, minidisks and default SFS directory names that are used to install and service ICKDSF.

Important Installation Notes:

- All user IDs and minidisks are listed here so that you can get an idea of the resources required by ICKDSF. They are already defined and allocated on the z/VM System deliverable, as ICKDSF is pre-installed.

- The 5684042J user ID is defined using a single-configuration virtual machine definition. See *z/VM: CP Planning and Administration* for information on single-configuration and multiconfiguration virtual machine definitions.

Figure 6 (Page 1 of 2). DASD Storage Requirements for Target Minidisks						
Minidisk owner (user ID)	**Default Address**	**Storage in Cylinders**		**FB-512 Blocks**	**SFS 4K Blocks**	**Usage**
		DASD	**CYLS**			**Default SFS Directory Name**
5684042J	2B2	3390	8	10800	1350	Contains all the base code shipped with ICKDSF: **VMPSFS:5684042J.ICKDSF.OBJECT**
5684042J	2C2	3390	2	2400	300	Contains customization files. This disk may also be used for local modifications: **VMPSFS:5684042J.ICKDSF.LOCAL**
5684042J	2D2	3390	20	28800	3600	Contains serviced files: **VMPSFS:5684042J.ICKDSF.DELTA**
5684042J	2A6	3390	2	2400	300	Contains AUX files and software inventory tables that represent the test service level of ICKDSF: **VMPSFS:5684042J.ICKDSF.ALTAPPLY**
5684042J	2A2	3390	2	2400	300	Contains AUX files and software inventory tables that represent the service level of ICKDSF that is currently in production: **VMPSFS:5684042J.ICKDSF.PRDAPPLY**
Note: Cylinder values defined in this table are based on a 4K block size. FB-512 block and SFS values are derived from the 3380 cylinder values in this table. The FBA blocks are listed as 1/2K but should be CMS formatted at 1K size. A total of 10,350 4K blocks are needed for SFS install.						

| Minidisk owner (user ID) | Default Address | Storage in Cylinders | | FB-512 Blocks | SFS 4K Blocks | Usage |
		DASD	CYLS			Default SFS Directory Name
5684042J	29E	3390	15	21600	2700	Test build disk. This code is copied to the MAINT 19E production disk. **Note:** In an SSI environment the MAINT 19E minidisks on each member have the ICKDSF production code. **VMPSFS:5684042J.ICKDSF.TEST**
5684042J	191	3390	9 2	2400	300	5684042J user ID's HELP minidisk: **VMPSFS:5684042J.ICKDSF.BUILDHLP**

Figure 6 (Page 2 of 2). DASD Storage Requirements for Target Minidisks

Note: Cylinder values defined in this table are based on a 4K block size. FB-512 block and SFS values are derived from the 3380 cylinder values in this table. The FBA blocks are listed as 1/2K but should be CMS formatted at 1K size. A total of 10,350 4K blocks are needed for SFS install.

6.0 Installation Instructions

ICKDSF is pre-installed on the z/VM System deliverable.

Where to next?

If you are performing an initial z/VM system installation ICKDSF does not require any additional installation steps in order for you to use it so there is nothing more you need to do.

If you received a Service Delivery Option (SDO) Licensed Product Service Refresh install media for ICKDSF then you need to follow the instructions in section 6.1, "ICKDSF SDO Service Refresh Installation Instructions."

6.1 ICKDSF SDO Service Refresh Installation Instructions

This section describes the installation methods and the step-by-step procedures to install and activate ICKDSF if you have an SDO Service Refresh install media for ICKDSF.

The step-by-step procedures are in two column format. The steps to be performed are in bold large numbers. Commands for these steps are on the left hand side of the page in bold print. Additional information for a command may exist to the right of the command.

Each step of the installation instructions must be followed. Do not skip any step unless directed to do so.

Throughout these instructions, the use of IBM-supplied default minidisk addresses and user IDs is assumed. If you use different user IDs, minidisk addresses, or SFS directories to install ICKDSF, adapt these instructions as needed for your environment.

6.1.1 VMSES/E Installation Process Overview

The following is a brief description of the main steps in installing ICKDSF using VMSES/E.

- Install the ICKDSF Product

  Use the VMFINS command to load the ICKDSF product files from tape to the test BUILD and BASE minidisks/directories. VMFINS is then used to update the VM SYSBLDS file used by VMSES/E for software inventory management.

- Place ICKDSF Files into Production

  Once the product files have been tailored and the operation of ICKDSF is satisfactory, the product files are copied from the test BUILD disk(s) to production BUILD disk(s).

  If running in an SSI cluster the place into production steps must be repeated on each member.

For a complete description of all VMSES/E installation options refer to *VMSES/E Introduction and Reference*.

6.1.2 Install ICKDSF

The *ppfname* used throughout these installation instructions is **SERVP2P**. If you have your own PPF override file to SERVP2P, you should use your file's *ppfname* instead of **SERVP2P** throughout the rest of this procedure.

1 Logon to **MAINT640**

2 If the Software Inventory disk (51D) was accessed R/O (read only) then establish write access to the Software Inventory disk.

Note: If the MAINT640 51D minidisk was accessed R/O, you will need to have the user who has it linked R/W link it as R/O. You then can issue the following commands to obtain R/W access to it.

link MAINT640 51d 51d mr
access 51d d

3 Have the ICKDSF installation tape mounted and attached to MAINT640 at virtual address 181. The VMFINS EXEC requires the tape drive to be at virtual address 181.

- OR -

If you have a product envelope SERVLINK file make sure it is available on the A-disk or any work disk that is accessed as file mode C, such as MAINT640's 500 disk.

4 Install ICKDSF.

a If installing from **tape**

vmfins install ppf servp2p {ickdsf | ickdsfsfs} (nomemo link

Use **ickdsf** for installing on minidisks or **ickdsfsfs** for installing in Shared File System directories.

The LINK option indicates that you want VMFINS to link to the appropriate minidisks so they can be accessed.

b If installing from a product **envelope** file

vmfins install ppf servp2p {ickdsf | ickdsfsfs} (nomemo link env *envfilename*

Use **ickdsf** for installing on minidisks or **ickdsfsfs** for installing in Shared File System directories.

envfilename is the file name of the product envelope file. The file type must be SERVLINK.

The LINK option indicates that you want VMFINS to link to the appropriate minidisks so they can be accessed.

```
VMFINS2767I Reading VMFINS DEFAULTS B for additional options
VMFINS2760I VMFINS processing started
VMFINS2601R Do you want to create an override for :PPF SERVP2P ICKDSF :
            5684042J%ICKDSF?
            Enter 0 (No), 1 (Yes) or 2 (Exit)
0
VMFINS2603I Processing product :PPF SERVP2P ICKDSF :PRODID 5684042J%ICK
VMFREQ2805I Product :PPF SERVP2P ICKDSF :PRODID 5684042J%ICKDSF has pas
            requisite checking
VMFINT2603I Installing product :PPF SERVP2P ICKDSF :PRODID 5684042J%ICK
VMFSET2760I VMFSETUP processing started for SERVP2P ICKDSF
VMFSET2204I Linking 5684042J 2C2 as 2C2 with link mode MR
VMFSET2204I Linking 5684042J 2D2 as 2D2 with link mode MR
VMFSET2204I Linking 5684042J 2A6 as 2A6 with link mode MR
VMFSET2204I Linking 5684042J 2A2 as 2A2 with link mode MR
VMFSET2204I Linking 5684042J 29E as 29E with link mode MR
VMFSET2204I Linking 5684042J 2B2 as 2B2 with link mode MR
VMFSET2204I Linking 5684042J 29D as 29D with link mode MR
VMFUTL2205I Minidisk|Directory Assignments:
            String    Mode  Stat  Vdev  Label/Directory
VMFUTL2205I LOCALSAM  E     R/W   2C2   ICK2C2
VMFUTL2205I APPLY     F     R/W   2A6   ICK2A6
VMFUTL2205I           G     R/W   2A2   ICK2A2
VMFUTL2205I DELTA     H     R/W   2D2   ICK2D2
VMFUTL2205I BUILD0    I     R/W   29E   ICK29E
VMFUTL2205I BUILD2    J     R/W   29D   ICK29D
VMFUTL2205I BASE1     K     R/W   2B2   ICK2B2
VMFUTL2205I --------  A     R/W   191   ICK191
VMFUTL2205I --------  B     R/O   5E5   MNT5E5
VMFUTL2205I --------  D     R/W   51D   MNT51D
VMFUTL2205I --------  S     R/O   190   MNT190
VMFUTL2205I --------  Y/S   R/O   19E   MNT19E
VMFSET2760I VMFSETUP processing completed successfully
VMFREC2760I VMFREC processing started
VMFREC1852I Volume 1 of 1 of INS TAPE 0200
VMFREC1851I (1 of 8) VMFRCAXL processing AXLIST
VMFRCX2159I Loading n part(s) to DELTA 2D2 (H)
VMFREC1851I (2 of 8) VMFRCPTF processing PARTLST
VMFRCP2159I Loading n part(s) to DELTA 2D2 (H)
VMFREC1851I (3 of 8) VMFRCCOM processing DELTA
VMFRCC2159I Loading n part(s) to DELTA 2D2 (H)
VMFREC1851I (4 of 8) VMFRCALL processing APPLY
VMFRCA2159I Loading part(s) to APPLY 2A6 (F)
VMFRCA2159I Loaded nn part(s) to APPLY 2A6 (F)
VMFREC1851I (5 of 8) VMFRCALL processing BASE
VMFRCA2159I Loading part(s) to BASE1 2B2 (K)
VMFRCA2159I Loaded nn part(s) to BASE1 2B2 (K)
VMFREC1851I (6 of 8) VMFRCALL processing SAMPLE
VMFRCA2159I Loading part(s) to LOCALSAM 2C2 (E)
VMFRCA2159I Loaded n part(s) to LOCALSAM 2C2 (E)
VMFREC1851I (7 of 8) VMFRCALL processing BUILD
VMFRCA2159I Loading part(s) to BUILD0 29E (I)
VMFRCA2159I Loaded n part(s) to BUILD0 29E (I)
VMFREC1851I (8 of 8) VMFRCALL processing BUILDHLP
VMFRCA2159I Loading part(s) to BUILD2 29D (J)
VMFRCA2159I Loaded nn part(s) to BUILD2 29D (J)
VMFREC2760I VMFREC processing completed successfully
VMFINT2603I Product installed
VMFINS2760I VMFINS processing completed successfully
```

5 Review the install message log ($VMFINS $MSGLOG). If necessary, correct any problems before going on. For information about handling specific error messages, see the appropriate VM *System Messages and Codes*, or use on-line HELP.

vmfview install

6.1.3 Place ICKDSF Into Production

```
┌─ NOTE! ──────────────────────────────────────────────────────────────┐
│                                                                       │
│  If running in an SSI cluster you need to repeat the following steps on each member.  │
│                                                                       │
└───────────────────────────────────────────────────────────────────────┘
```

6.1.3.1 Copy ICKDSF Files Into Production

1 Logon to MAINT640 to place ICKDSF general use code on the 'Y' disk (product code or MAINT's 19E disk).

a If installing using minidisks, issue the following command:

link 5684042J 29e 29e rr	The VMFCOPY command will update the VMSES
link MAINT 19e 19e mr	PARTCAT file on the MAINT 19E disk.
access 29e e	
access 19e f	
vmfcopy * * e = = f2 (prodid 5684042J%ickdsf olddate replace	

b If installing using Shared File System, issue the following command:

access 5684042J.ickdsf.test e	The VMFCOPY command will update the VMSES
link MAINT 19e 19e mr	PARTCAT file on the MAINT 19E disk.
access 19e f	
vmfcopy * * e = = f2 (prodid 5684042J%ickdsf olddate replace	

2 Logon to MAINT640 to put ICKDSF help files on the system AMENG Help (MAINT 19D) disk and make them generally available.

a If installing using minidisks, issue the following command:

link 5684042J 29d 29d rr   The VMFCOPY command will update the VMSES
link MAINT 19d 19d mr   PARTCAT file on the AMENG Help (MAINT 19D)
access 29d e   disk and make them generally available.
acc 19d f
vmfcopy * * e = = f (prodid 5684042J%ickdsf olddate replace

b If installing using Shared File System, issue the following command:

access 5684042J.ickdsf.buildhlp e   The VMFCOPY command will update the VMSES
link MAINT 19d 19d mr   PARTCAT file on the AMENG Help (MAINT 19D)
acc 19d f   disk and make them generally available.

vmfcopy * * e = = f (prodid 5684042J%ickdsf olddate replace

3 Rebuild the CMS saved system, to return the Y-disk (MAINT's 19E disk) to 'shared' status.

put2prod savecms

4 Rebuild the CMS HELP logical saved segment, to include ICKDSF's help files from the AMENG Help (MAINT's 19D) disk (Optional). The AMENG HELP segment was removed from the default system with z/VM V6 R3. If you have not re-installed the segment, skip this step.

put2prod segments helpseg

ICKDSF is now reinstalled and built on your system.

7.0 Service Instructions

┌─ **Note - z/VM Automated Service Procedure** ─────────────────────────────

The z/VM automated service procedure (use of the **SERVICE** and **PUT2PROD** commands) is *required* for applying service to ICKDSF.
└──

7.1 Servicing ICKDSF

Use the service procedure documented in the *z/VM: Service Guide* to receive, apply, build and place ICKDSF into production.

7.1.1 Updating the IPLable module ICKSADSF MODULE

Beginning with APAR PI85112 the ICKSADSF COREIMAG file can be updated through service. This file is used to generate the stand alone IPLable ICKDSF utility, ICKSADSF MODULE. Once you have completed SERVICE and PUT2PROD for ICKDSF the following instructions should be used to create a new ICKSADSF MODULE and put it into production on the MAINT CF1 and MAINT 19E minidisks. This only needs to be done if the ICKSADSF COREIMAG file was serviced.

1 Log on to MAINT*vrm* to create the new ICKSADSF MODULE

a Access the ICKDSF service disks

vmfsetup servp2p {ickdsf | ickdsfsfs}   Use **ickdsf** if installed to minidisks or **ickdsfsfs** if installed to shared file system (SFS)

b The ICKDSF test build disk will be accessed as filemode I. This is where the updated COREIMAG file will be located. Use the ICKGENSA command to generate the new module

ickgensa icksadsf coreimag i
ICKSADSF MODULE A Created
Ready;

2 Copy the new ICKSADSF MODULE to the ICKDSF test build disk

copy icksadsf module a = = i (olddate replace

17

3 Copy the new ICKSADSF MODULE file to its production disks (the MAINT 19E and CF1 minidisks.)

a Link and access the MAINT 19E and CF1 minidisks.

link maint 19e 19e mr
access 19e y
cprelease a
link maint cf1 cf1 mr
access cf1 z

b Copy the new ICKSADSF MODULE to the MAINT 19E and CF1 minidisks.

copy icksadsf module a = = y (olddate replace
copy icksadsf module a = = z (olddate replace

c Return the MAINT CF1 disk to CP

release z (detach
cpaccess maint cf1 a

4 Re-save the CMS segment

put2prod savecms

Note: If you are running in an SSI cluster you should log on to MAINT*vrm* on each member of your cluster and perform Steps 3 and 4.

Once the new module has been copied to the production disks (on all members, if running in an SSI cluster) you should erase the ICKSADSF MODULE from the A-disk of MAINT*vrm*.

8.0 The Stand-Alone Program

After ICKDSF has been installed on your system, the ICKSADSF COREIMAG CMS file on your product disk is the Stand-Alone version of ICKDSF.

The Stand-Alone ICKDSF can be executed by punching the ICKSADSF COREIMAG to a virtual reader and IPLing the file from the virtual reader. The Stand-Alone ICKDSF can also be copied to a tape with which you may also IPL.

8.1.1 Creating the Stand-Alone Tape

The following is a sample EXEC with which you can copy the Stand-Alone program code to an unlabeled tape.

```
/* THIS EXEC COPIES THE STAND-ALONE DEVICE SUPPORT FACILITIES */
/* FROM CMS FILE 'ICKSADSF COREIMAG' TO AN IPLABLE TAPE.      */
/* THE TAPE MUST BE ATTACHED AS VIRTUAL ADDRESS '181'.        */
/* THE PRODUCT DISK CONTAINING FILE 'ICKSADSF COREIMAG'       */
/* SHOULD BE ACCESSED AS 'I', OR CHANGE THE FILEMODE IN THE   */
/* FILEDEF STATEMENT ACCORDINGLY.                             */
Address 'COMMAND'
'CP REWIND 181'
If rc = 0 then
  Do
    'FILEDEF INMOVE DISK ICKSADSF COREIMAG I (LRECL 80 RECFM F'
    'FILEDEF OUTMOVE TAP1 (LRECL 80 RECFM F BLOCK 80'
    'MOVEFILE'
   If rc = 0 then
     Do
       Say '*** STAND-ALONE ICKDSF SUCCESSFULLY GENERATED ***'
       Exit 0
     End
   Else
     Do
       Say 'ERROR LOADING CMS FILE TO TAPE'
       Exit 10
     End
  End
Else
  Do
    Say 'TAPE 181 NOT ATTACHED OR NOT READY'
    Exit 20
  End
```

8.1.2 Loading the Stand-Alone Tape

Refer to Chapter 7. in the *Device Support Facilities User's Guide and Reference* for additional information.

Note: The Stand-Alone ICKDSF is also available on CD-ROM. The CD can be loaded by processors that have the 'Load From Removable Media or Server' task. See the ICKDSF INFOAPAR II14711 for more information.

8.1.3 Verifying the Stand-Alone Tape

Enter the following command after the tape has been IPL'd:

```
ANALYZE unit(ccuu) NODRIVE SCAN CYLR(1,2)
```

8.1.4 Maintenance of the Stand-Alone Program

Periodically, a PTF that contains the latest Stand-Alone ICKDSF will be issued. Maintenance for Stand-Alone ICKDSF is cumulative and will always involve complete replacement of the program. Corrective maintenance will consist of a tape with the Stand-Alone ICKDSF product in IPL-able form.

Note: Starting with APAR PI85112 the ICKSADSF COREIMAG file is now installable with VMSES/E.

Contact the IBM Support Center to order the latest Stand-Alone ICKDSF PTF.

This PTF is not installable with VMSES/E. Although it is an IPL-able tape, you can use it to replace the CMS file, ICKSADSF COREIMAG, on the test and production disks for ICKDSF. You can use the following CMS commands to take the file from the tape and put it on the disk:

- FILEDEF INMOVE
- FILEDEF OUTMOVE
- MOVEFILE

The following is an example of the CMS commands:

```
FILEDEF INMOVE TAP1 (LRECL 80 RECFM F BLOCK 80
FILEDEF OUTMOVE DISK ICKSADSF COREIMAG I (LRECL 80 RECFM F
MOVEFILE
```

The above example assumes that a VMFSETUP has been done and that the test build disk, 29E, is accessed as 'I'. Once the MOVEFILE command has completed, you need to use the VMFCOPY command to copy the ICKSADSF COREIMAG file from the test build disk to the production build disk (MAINT 19E). You also need to re-save the CMS named saved segment.

Following are the steps to do the VMFCOPY and rebuild CMS saved system.

Note: If running in an SSI cluster you need to execute the following steps on every member.

1 Log on to **MAINT640** user ID. (This user ID has privilege class E authority and has access to the VMSES/E code disk (default MAINT640 5E5) and VMSES/E Software Inventory disk (default MAINT640 51D)).

If running in an SSI cluster you can log on to any member.

2 If the Software Inventory disk (51D) was accessed R/O (read only) then establish write access to the Software Inventory disk.

Note: If the MAINT640 51D minidisk was accessed R/O, you will need to have the user who has it linked R/W link it as R/O. You can then issue the following command to obtain write access to it. **Do not use** *mw* **mode.** Do not continue with these procedures until a R/W link is established to the 51D minidisk.

link MAINT640 51d 51d mr   The 51D minidisk is where the VMSES/E Software
access 51d d   Inventory files and other product dependent files
                                             reside.

3 Establish the ICKDSF correct access order.

vmfsetup servp2p {ickdsf | ickdsfsfs}   Use **ickdsf** for installing on minidisks or **ickdsfsfs**
                                             for installing in Shared File System directories.

4 Copy the ICKSADSF COREIMAG file from test build disk to production build disk as itself and IPL ICKDSF.

link maint 19e 19e mr
acc 19e f
vmfcopy ickdsfsf coreimag i = = f2 (prodid 5684042J%ickdsf olddate replace
vmfcopy icksadsf coreimag i ipl ickdsf f2 (prodid 5684042J%ickdsf olddate replace

5 Rebuild the CMS saved system, to return the Y-disk (MAINT's 19E disk) to 'shared' status.

put2prod savecms

Appendix A. Moving ICKDSF to SFS Directories and Creating a PPF Override

By default, Device Support Facilities is installed to minidisks as part of the z/VM System deliverable unless you choose to install ICKDSF to SFS during the initial z/VM installation. If you did not install ICKDSF into SFS directories and want to move it now, you can. Refer to Figure 6 on page 9 to see which minidisks can reside in SFS. You can use either the default file pool, VMPSFS, or a file pool of your choosing. If you are running in an SSI cluster then this new file pool needs to be accessible to all members. This can be accomplished by specifying the SSI startup parameter in the file pool server DMSPARMS file.

A summary of the steps that are needed to place ICKDSF into SFS are:

- Allocate space in the user-defined or default file pool

- Provide the user IDs 5684042J and MAINT640 with access to the file pool

- Create the necessary ICKDSF subdirectories

- Copy files from the minidisks to the new SFS subdirectories

- Create a PPF override, if not using the default file pool or subdirectory names.

Where to next

You need to do one of the following:

- If you want to place ICKDSF into SFS directories **using the defaults defined in the 5684042J PPF file** and you are running in a non-SSI or a single member SSI environment, you can use the **MOVE2SFS** command, as documented in the *z/VM: CP Commands and Utilities Reference* manual.

- If you want to place ICKDSF into your **own user-defined file pool or SFS directories** or want to use the default SFS directories and you are running in a multiple member SSI environment, continue with the instructions in A.1, "Setup SFS File Pool and Directories" on page 23.

- If you **only need to create a PPF override**, continue with the instructions in A.3, "Create Product Parameter File (PPF) Override" on page 25.

If you were pointed to this appendix from another section and you have completed the steps required (whether provided in this appendix or in the *z/VM: CP Commands and Utilities Reference*) you should now return to your original section to continue.

A.1 Setup SFS File Pool and Directories

Notes:

1. The steps that follow help you determine the ICKDSF file pool space requirements, file pool enrollment, and SFS directory definitions. If not all of these steps are required - for example, if you are changing only SFS directory or subdirectory names - adapt these instructions as needed for your environment.

2. The steps that follow assume that a user-defined SFS file pool name is being used. If you will be using the VM default file pool name, VMPSFS, substitute it in any place you see the text 'user-defined file pool' or variable *userfilepool*.

3. For more information about planning for, generating and managing a file pool and server, see *z/VM: CMS File Pool Planning, Administration and Operation*.

1 Determine the number of 4k blocks that are required for the SFS directories, for each user ID, by adding up the 4K blocks required for each SFS directory you plan to use.

If you intend to use all of the default ICKDSF SFS directories, the 4K block requirements for each directory are summarized in Figure 6 on page 9.

This information will be used when the 5684042J user ID is enrolled in the user-defined file pool.

2 Enroll user 5684042J in the user-defined file pool using the ENROLL USER command:

```
ENROLL USER 5684042J userfilepool: (BLOCKS blocks
```

where *blocks* is the number of 4k blocks that you calculated in the previous step.

Note: This must be done from a user ID that is an administrator for the user-defined file pool.

3 Make the system maintenance user ID, MAINT640, a file pool administrator for the user-defined file pool so that it can update files on the ICKDSF service directories by adding the MAINT640 user ID to the ADMIN startup parameter in the user-defined file pool DMSPARMS file.

4 Determine if there are enough blocks available in the file pool to install ICKDSF. This information can be obtained from the QUERY FILEPOOL STORGRP command. The output from this command is a list of storage groups and the number of 4K blocks free. If the number of blocks free is smaller than the total 4K blocks needed (refer to Figure 6 on page 9 to obtain total blocks needed) to install ICKDSF you need to add space to the

file pool. See *z/VM: CMS File Pool Planning, Administration, and Operation* manual for information on adding space to a file pool.

5 Create the necessary subdirectories using the CREATE DIRECTORY command.

Note: All of the ICKDSF subdirectories are shown in the create directory commands. If you are not planning to create all of them, then just enter the commands for the ones you are planning to create.

A complete list of default ICKDSF SFS directories is provided in Figure 6 on page 9.

If you have changed any of the default SFS directory names then use your new name in place of the old name in the create directory command.

set filepool *userfilepool***:**
create directory *userfilepool***:5684042J.ickdsf**
create directory *userfilepool***:5684042J.ickdsf.object**
create directory *userfilepool***:5684042J.ickdsf.local**
create directory *userfilepool***:5684042J.ickdsf.delta**
create directory *userfilepool***:5684042J.ickdsf.altapply**
create directory *userfilepool***:5684042J.ickdsf.prdapply**
create directory *userfilepool***:5684042J.ickdsf.test**
create directory *userfilepool***:5684042J.ickdsf.buildhlp**

If necessary, see the *z/VM: CMS Commands and Utilities Reference: manual* for more information about the CREATE DIRECTORY command.

6 If you intend to use an SFS directory as the work space for the 5684042J user ID, update the IPL control statement in the 5684042J CP user directory entry to look like:

```
IPL CMS PARM FILEPOOL userfilepool
```

This will cause CMS to automatically access 5684042J's top directory as file mode A. Refer to the *z/VM:CP Planning and Administration* for information on updating the CP user directory.

A.2 Copy Minidisk (or SFS) Files to SFS Directories

1 Copy the files from the ICKDSF minidisks (or from the VMPSFS file pool if ICKDSF is already installed there) to your new user-defined SFS file pool and directories using the VMFCOPY command.

Note: Repeat the ACCESS and VMFCOPY commands, that follow, for each disk or SFS directory you need to copy. Refer to Figure 6 on page 9 for the default minidisk and SFS directory names for ICKDSF.

access *vdev* **e**
access *dirid* **f**
vmfcopy * * e = = f (prodid 5684042J%ICKDSF olddate

- *vdev* is the minidisk you are copying files from. If you are copying from SFS then substitute the default SFS directory name in place of *vdev*.

- *dirid* is the name of the (target) SFS directory that you are copying files to.

- 5684042J%ICKDSF is the PRODID defined within the 5684042J PPF file for the minidisk and SFS ICKDSF components.

The VMFCOPY command will update the VMSES PARTCAT file on the target directory.

A.3 Create Product Parameter File (PPF) Override

This section provides information to help you create a product parameter file (PPF) override. The example used in this section shows how to change the shared file system (SFS) file pool where ICKDSF files reside.

Note: Do **not** modify the product supplied $PPF or PPF or the SERVP2P $PPF or SERVP2P PPF files to change the file pool name or any other installation parameters. If the product $PPF file is serviced, the existing $PPF file will be replaced, and any changes to that file will be lost. By creating your own $PPF override, your updates will be preserved.

The following process describes changing the default file pool name, VMPSFS, to MYPOOL1:

1 Create a new $PPF override file, or edit an existing override file, for the SERVP2P $PPF file.

xedit *overname* **$PPF** *fm***2**

overname is the PPF override file name (such as 'myickdsf') that you want to use.

fm is an appropriate file mode. If you create this file yourself, specify a file mode of A.

If you modify an existing override file, specify a file mode of A or D, based on where the file currently resides (A being the file mode of a R/W 191 minidisk, or equivalent; D, that of the MAINT640 51D minidisk).

2 Create (or modify as required) the Variable Declarations (:DCL.) section for the **ickdsfsfs** and **ickdsfsfsp2p** override areas, so that it resembles the :DCL. section shown below. This override will be used for the installation of ICKDSF.

Note: The PPF file used by the SERVICE, PUT2PROD and LOCALMOD commands is SERVP2P PPF therefore this example shows an override to the SERVP2P $PPF file. Modifications needed are denoted in **bold** print.

```
:OVERLST. ICKDSFSFS ICKDSFSFSP2P
*
* ==================================================================== *
* Override Section for Initial Installation (Using SFS Directories)   *
* ==================================================================== *
:ICKDSFSFS. ICKDSFSFS SERVP2P
:DCL. REPLACE
&191     DIR MYPOOL1:5684042J.
&BAS1Z   DIR MYPOOL1:5684042J.ICKDSF.OBJECT
&SAMPZ   DIR MYPOOL1:5684042J.ICKDSF.LOCAL
&DELTZ   DIR MYPOOL1:5684042J.ICKDSF.DELTA
&APPLX   DIR MYPOOL1:5684042J.ICKDSF.ALTAPPLY
&APPLZ   DIR MYPOOL1:5684042J.ICKDSF.PRDAPPLY
&BLD0Z   DIR MYPOOL1:5684042J.ICKDSF.TEST
&DISK9   DIR MYPOOL1:5684042J.ICKDSF.BUILDHLP
&ICKID1  USER  5684042J
:EDCL.
:END.
*
:ICKDSFSFSP2P. ICKDSFSFSP2P SERVP2P
:DCL. REPLACE
&191     DIR MYPOOL1:5684042J.
&BAS1Z   DIR MYPOOL1:5684042J.ICKDSF.OBJECT
&SAMPZ   DIR MYPOOL1:5684042J.ICKDSF.LOCAL
&DELTZ   DIR MYPOOL1:5684042J.ICKDSF.DELTA
&APPLX   DIR MYPOOL1:5684042J.ICKDSF.ALTAPPLY
&APPLZ   DIR MYPOOL1:5684042J.ICKDSF.PRDAPPLY
&BLD0Z   DIR MYPOOL1:5684042J.ICKDSF.TEST
&DISK9   DIR MYPOOL1:5684042J.ICKDSF.BUILDHLP
&ICKID1  USER  5684042J
:EDCL.
:END.
*
```

(This override will replace the :DCL. section of the **ICKDSFSFS** and
ICKDSFSFSP2P override areas of the SERVP2P $PPF file.)

3 If your $PPF override file was created at file mode A, copy it to file mode
D—the Software Inventory minidisk (MAINT640 51D). Then erase it from file
mode A.

file
copyfile *overname* **$PPF** *fm* **= = d (olddate**
erase *overname* **$PPF** *fm*

4 Compile your changes to create the usable *overname* PPF file.

vmfppf *overname* *   where *overname* is the file name of your $PPF
                                                              override file.

> **5** Update the VM SYSSUF Software Inventory table. Since you created a PPF
> override to the SERVP2P $PPF file you need to make sure that the override
> name you created is reflected in the PPF tags for ICKDSF in the VM
> SYSSUF table. Type in the command VMFUPDAT SYSSUF. This will bring
> up a panel so that you can change the PPF names stored in the VM
> SYSSUF file. Locate 5684042J under the 'Prodid' column. Replace the PPF
> name for INSTPPF, BLDPPF and P2PPPF for 5684042J with your new PPF
> override file name. Use PF5 to process your changes.

Now that the *overname* PPF file has been created, you should specify *overname*
instead of SERVP2P or 5684042J as the PPF name to be used for those VMSES/E
commands that require a PPF name.

Notices

This information was developed for products and services offered in the U.S.A.

IBM may not offer the products, services, or features discussed in this document in other countries. Consult your local IBM representative for information on the products and services currently available in your area. Any reference to an IBM product, program, or service is not intended to state or imply that only that IBM product, program, or service may be used. Any functionally equivalent product, program, or service that does not infringe any IBM intellectual property right may be used instead. However, it is the user's responsibility to evaluate and verify the operation of any non-IBM product, program, or service.

IBM may have patents or pending patent applications covering subject matter described in this document. The furnishing of this document does not give you any license to these patents. You can send license inquiries, in writing, to:

```
IBM Director of Licensing
IBM Corporation
North Castle Drive
Armonk, NY 10504-1785
U.S.A.
```

For license inquiries regarding double-byte (DBCS) information, contact the IBM Intellectual Property Department in your country or send inquiries, in writing, to:

```
Intellectual Property Licensing
Legal and Intellectual Property Law
IBM Japan Ltd.
19-21, Nihonbashi-Hokozakicho, Chuo-ku
Tokyo, 103-8510, Japan
```

The following paragraph does not apply to the United Kingdom or any other country where such provisions are inconsistent with local law: INTERNATIONAL BUSINESS MACHINES CORPORATION PROVIDES THIS PUBLICATION "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Some

states do not allow disclaimer of express or implied warranties in certain transactions, therefore, this statement may not apply to you.

This information could include technical inaccuracies or typographical errors. Changes are periodically made to the information herein; these changes will be incorporated in new editions of the publication. IBM may make improvements and/or changes to the product(s) and/or the program(s) described in this publication at any time without notice.

Any references in this information to non-IBM Web sites are provided for convenience only and do not in any manner serve as an endorsement of those Web sites. The materials at those Web sites are not part of the materials for this IBM product and use of those Web sites is at your own risk.

IBM may use or distribute any of the information you supply in any way it believes appropriate without incurring any obligation to you.

Licensees of this program who wish to have information about it for the purpose of enabling: (i) the exchange of information between independently created programs and other programs (including this one) and (ii) the mutual use of the information which has been exchanged, should contact:

```
IBM Corporation
Information Enabling Requests
Dept. DZWA
5600 Cottle Road
San Jose, CA 95193 U.S.A.
```

Such information may be available, subject to appropriate terms and conditions, including in some cases, payment of a fee.

The licensed program described in this document and all licensed material available for it are provided by IBM under terms of the IBM Customer Agreement, IBM International Program License Agreement or any equivalent agreement between us.

Any performance data contained herein was determined in a controlled environment. Therefore, the results obtained in other operating environments may vary

significantly. Some measurements may have been made on development-level systems and there is no guarantee that these measurements will be the same on generally available systems. Furthermore, some measurement may have been estimated through extrapolation. Actual results may vary. Users of this document should verify the applicable data for their specific environment.

Information concerning non-IBM products was obtained from the suppliers of those products, their published announcements or other publicly available sources. IBM has not tested those products and cannot confirm the accuracy of performance, compatibility or any other claims related to non-IBM products. Questions on the capabilities on non-IBM products should be addressed to the suppliers of those products.

All statements regarding IBM's future direction or intent are subject to change or withdrawal without notice, and represent goals and objectives only.

This information contains examples of data and reports used in daily business operations. To illustrate them as completely as possible, the examples include the names of individuals, companies, brands, and products. All of these names are fictitious and any similarity to the names and addresses used by an actual business enterprise is entirely coincidental.

COPYRIGHT LICENSE:

This information contains sample application programs in source language, which illustrates programming techniques on various operating platforms. You may copy, modify, and distribute these sample programs in any form without payment to IBM, for the purposes of developing, using, marketing or distributing application programs conforming to the IBM programming interfaces. These examples have not been thoroughly tested under all conditions. IBM, therefore, cannot guarantee or imply reliability, serviceability, or function of these programs. The sample programs are provided "AS IS", without warranty of any kind. IBM shall not be liable for any damages arising out of your use of the sample programs.

Trademarks

IBM, the IBM logo, and ibm.com are trademarks or registered trademarks of International Business Machines Corp., registered in many jurisdictions worldwide. Other product and service names might be trademarks of IBM or other companies. A current list of IBM trademarks is available on the web at IBM copyright and trademark information - United States:

www.ibm.com/legal/us/en/copytrade.shtml

Adobe, the Adobe logo, PostScript and the PostScript logo are either registered trademarks or trademarks of Adobe Systems Incorporated in the United States, and/or other countries.

Reader's Comments

Device Support Facilities Release 17

You may use this form to comment about this document, its organization, or subject matter. Please understand that your feedback is of importance to IBM, but IBM makes no promises to always provide a response to your feedback.

For each of the topics below please indicate your satisfaction level by circling your choice from the rating scale. If a statement does not apply, please circle N.

RATING SCALE					
very satisfied	<--------------------------------->			very dissatisfied	not applicable
1	2	3	4	5	N

	Satisfaction					
Ease of product installation	1	2	3	4	5	N
Time required to install the product	1	2	3	4	5	N
Contents of program directory	1	2	3	4	5	N
Readability and organization of program directory tasks	1	2	3	4	5	N
Necessity of all installation tasks	1	2	3	4	5	N
Accuracy of the definition of the installation tasks	1	2	3	4	5	N
Technical level of the installation tasks	1	2	3	4	5	N
Installation verification procedure	1	2	3	4	5	N
Ease of customizing the product	1	2	3	4	5	N
Ease of migrating the product from a previous release	1	2	3	4	5	N
Ease of putting the system into production after installation	1	2	3	4	5	N
Ease of installing service	1	2	3	4	5	N

- If this product was ordered as part of a package, what type of package was ordered?

  □ System Delivery Offering (SDO)
  □ CustomPac
  □ Other - Please specify type: _____

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

  □ Yes
  □ No

- Were the people who did the installation experienced with the installation of VM products using VMSES/E?

  □ Yes

  How many years of experience do they have? _____

  □ No

- How long did it take to install this product? _____

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

  _____

  _____

  _____

  _____

  _____

  _____

Please provide the following contact information:

_____

Name and Job Title

_____

Organization

_____

Address

_____

Telephone

Thank you for your participation.

Please send the completed form to the following address, or give to your IBM representative who will forward it to the Device Support Facilities Development group:

International Business Machines Corporation
RCF Processing, Department M86/50
5600 Cottle Road
San Jose, CA 95193-0001
United States of America

FAX Number

United States 1-800-426-6209

Other countries: (+ 1) + 408 + 256-7896

E-Mail:

IBMLink from United States: starpubs@us.ibm.com

IBMlink from Canada: STARPUBS at TORIBM

IBM Mail Exchange: USIB3VVD at IBMMAIL

IBM ®

Program Number: 5684-042

Printed in U.S.A.